AMERICAN FORK CITY COUNCIL
JUNE 30, 2020
PUBLIC HEARING, SPECIAL SESSION AGENDA

***NOTICE OF ELECTRONIC MEETING***

***Pursuant to COVID-19 Federal Guidelines, this meeting will be conducted electronically. You may watch the meeting live-streamed at https://www.afcity.org/AgendaCenter. Email public comments to zoompubliccomment@afcity.net prior to 5:00 p.m. the day of the meeting for them to be read into record.***

The American Fork City Council will hold a public hearing in conjunction with a special session on Tuesday, June 30, 2020, electronically, commencing at 7:00 p.m. The agenda shall be as follows:

PUBLIC HEARING

-Receiving public comment on the declaration of a 1998 Ambulance to be surplus and disposed of.

-Receiving public comment on the Fiscal Year Ending 2021 (July 1, 2020, to June 30, 2021) city budget.

SPECIAL SESSION

1. Pledge of Allegiance; Invocation by Council Member Shelton; roll call.
2. Twenty-minute public comment period - limited to two minutes per person.
3. City Administrator's Report
4. Council Reports
5. Mayor's Report

COMMON CONSENT AGENDA

(*Common Consent* is that class of Council action that requires no further discussion or which is routine in nature. All items on the Common Consent Agenda are adopted by a single motion unless removed from the Common Consent Agenda.)

1. Approval of the June 2, 2020, work session minutes.
2. Approval of the June 9, 2020, city council minutes.
3. Approval of the June 16, 2020, special session minutes.
4. Approval of the authorization to release the Improvements Durability Retainer of $962.25 for BROMLEY MEADOWS PLAT C, located at 85 West Timpview Drive.
5. Approval of the authorization to release the Improvements Construction Guarantee in the amount of $33,198.00 and issue a Notice of Acceptance for the KESLER SUBDIVISION construction of public improvements located at 435 East 200 North.
6. Approval of the authorization to release the Improvements Durability Retainer of $42,610.40 for MITCHELL FARMS PLAT A, located at 780 West 700 North.

ACTION ITEMS

1. Ratification of city payments (June 2, 2020 to June 23, 2020) and approval of purchase requests over $25,000.
2. Review and action on an appeal of the American Fork City Planning Commission’s action regarding the commercial site plan for American Eagle Ready Mix, located in the area of 1700 South 500 East in the I-1 Industrial zone.
3. Review and action on a resolution adopting the American Fork City budget for fiscal year ending June 30, 2021.

4. Review and action on a resolution approving the 2020 General Fee Schedule.
5. Review and action on approval of a Class B beer license for EATT Holdings, LLC, (DBA Burgers and Barley) located at 529 South 500 East, Unit A.
6. Review and action of an Amended Reimbursement Agreement for Red Pine Construction for improvements on the 900 West Phase I project.
7. Review and action on a connector's agreement (aka pioneering agreement) with Ardero.
8. Review and action on an agreement with Pleasant Grove City for Installation of a Water Line in 50 South.
9. Review and action on subdivisions, commercial projects, condominiums, and PUD's including 1) plat approval; 2) method of satisfaction of water rights requirements; 3) posting of an improvement bond or setting of a time frame for improvement installation; and 4) authorization to sign the final plat and acceptance of all dedications to the public and to have the plat recorded.
    a. Review and action on the final plats of Lakeshore Landing A-J in the area of 900 West 350 South.
    b. Review and action on the final plat of Mitchell Farms Plat C, located in the area of 780 West 800 North, in the R-1-12,000 Residential zone.
    c. Review and action on the final plat for Peak Meadows Plat A, located in the area of 1200 East 300 North, in the R-1-9,000 Residential zone.
10. Review and action on an agreement with UDOT for an Access Control Plan including Intersection Spacing along 100 East (SR-74).
11. Review and action on an ordinance amending Section 17.5.131 to the American Fork City Municipal Code, a relating to culinary water, pressurized irrigation and sewer connection.
12. Review and action on a resolution declaring items to be surplus and disposed of.
13. Review and action on the renewal of a Janitorial Contract for city buildings.
14. Review and action on an ordinance amending Section 17.1.400 of the city code relating to water rights conveyance.
15. Review and action on a resolution executing an interlocal agreement between American Fork City and Utah County for disbursement from the Coronovirus Relief fund.
16. Consideration for adoption of a resolution of the City Council of American Fork City, Utah, authorizing the issuance and sale of not more than $29,500,000 aggregate principal amount of water revenue and refunding bonds, Series 2020; and related matters.
17. Review and action on the termination of the right-of-way access agreement with UTOPIA.
18. Adjournment.

Dated this 25 day of June, 2020.

Terilyn Lurker

Terilyn Lurker
City Recorder

- In accordance with the Americans with Disabilities Act, the City of American Fork will make reasonable accommodations to participate in the meeting. Requests for assistance can be made by contacting the City Recorder at 801-763-3000 at least 48 hours in advance of the meeting.
- The order of agenda items may be changed to accommodate the needs of the City Council, staff, and the public.

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Public Works **Director Approval** *Scott Sensanbaugher*

**AGENDA ITEM** Common Consent consideration regarding authorization to release the Improvements Durability Retainer of $962.25 for BROMLEY MEADOWS PLAT C , located at 85 West Timpview Drive.

**SUMMARY RECOMMENDATION** The City Engineer recommends that the Improvements Durability Retainer be released. The improvements were found in a condition meeting City standards for workmanship and performance after one (1) year of service.

**BACKGROUND** Pursuant to the terms of Sections 17.9.100 and 17.9.403 of the City Development Code, the City Council may authorize the release of the Improvements Durability Retainer following the one (1) year durability testing period. The release is based on a finding that the quality of construction and materials have endured without evidence of unusual depreciation, wear, non-conformance of City standards or need for remedial action.

**BUDGET IMPACT** Following the release of the Improvements Durability Retainer, the City is responsible for all future maintenance and replacement costs for any publicly-owned property or improvement. In developments with Home-Owners or Unit-Owners Associations, all common area maintenance and replacement responsibilities will then fall to the Association. All privately-owned improvements will be the responsibility of the owner of the given parcel.

**SUGGESTED MOTION** Move to authorize the City Engineer to issue documents and/or payments to release the Improvements Durability Retainer of $962.25 for BROMLEY MEADOWS PLAT C. Find that the quality of construction and materials have endured without evidence of unusual depreciation, wear, non-conformance of City standards, or need for remedial action.

**SUPPORTING DOCUMENTS**

Bond Release Request - Bromley Meadows Plat C (PDF)
Bromley Subdivision Performance Guarantee (XLSX)
Durability_Release_Authorization - Bromley Meadows Plat C (PDF)

AMERICAN FORK
1853

# BOND RELEASE REQUEST

**Development Name:** Bromley Meadows Plat C Lot

**Development Address:** 85 W. Timpview Dr.

*All outstanding fees must be paid prior to any release.

☐ Partial Improvement Assurance Release ☐ Final Improvement Assurance Release ☒ Improvement Warranty Release (10% Durability Release)

| Description of Item | Quantity | Units | Unit Price | Total | Inspector Use Only Complete? Yes/No |
|---|---|---|---|---|---|
| 10% Durability Warranty | 1 | 1 | 962.25 | 962.25 | |
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| | | | Total | $962.25 | |

Bond Type: ☒ Cash Deposit ☐ Escrow Account ☐ Letter of Credit ☐ Surety Bond

Please send check/bank letter to:

Name: Ryan Bromley

Bank (if applicable):

Address: 85 W. Timpview Drive

City: American Fork State: Utah Zip: 84003

Phone: 801-404-6015 Email: rbromley@sprinklersupplyco.com

Signature: [signature] Date: 6/15/20

City Official Use Only

☒ Fees paid and current

Administrative Signature: Carolyn Lloyd Date: 6-17-20

Inspector Signature: [signature] Date: 6/17/20



Attachment: Bond Release Request - Bromley Meadows Plat C (Durability Release - BROMLEY MEADOWS PLAT C)

**Name of Development:** Bromley Subdivision

| | Date | | Date | | Date | | Date | | Date | | Date | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1/8/2019 | | 7/9/2019 | | | | | | | | | | |

| | Description of Item | Quantity | Unit | Unit Price | Total | Release #1 | Amount Requested | Release #2 | Amount Requested | Release #3 | Amount Requested | Release #4 | Amount Requested | Release #5 | Amount Requested | Release #6 | Amount Requested | Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SEWER** | | | | | | | | | | | | | | | | | |
| | Sanitary Sewer Lateral Connection | 1 | Each | $900.00 | $900.00 | 1 | $900.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | **CULINARY WATER** | | | | | | | | | | | | | | | | | |
| | 1" Water Service Lateral | 1 | Each | $1,250.00 | $1,250.00 | 1 | $1,250.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | **STREETS** | | | | | | | | | | | | | | | | | |
| | Asphalt 3" - Standard Road | 900 | SF | $1.40 | $1,260.00 | 900 | $1,260.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | Roadbase 8" Hauled, Placed & Compacted | 900 | SF | $0.65 | $585.00 | 900 | $585.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | 24" Curb & Gutter (4" untreated base course included) | 90 | LF | $15.00 | $1,350.00 | 90 | $1,350.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | Sidewalk 4" Thick (4"untreated base course included) | 360 | SF | $4.00 | $1,440.00 | 360 | $1,440.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | Saw Cutting | 90 | LF | $1.25 | $112.50 | 90 | $112.50 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | Driveway Apron (6" concrete over 6" untreated base course) | 150 | SF | $6.50 | $975.00 | 150 | $975.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | **CONSTRUCTION MANAGEMENT/MISC.** | | | | | | | | | | | | | | | | | |
| | As Builts Mylar & Disks | 1 | Each | $250.00 | $250.00 | 0 | $0.00 | 1 | $250.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | Testing, Cleaning, Inspections | 1 | LS | $1,500.00 | $1,500.00 | 0 | $0.00 | 1 | $1,500.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | $0.00 |
| | | | | | $9,622.50 | | $7,872.50 | | $1,750.00 | | $0.00 | | $0.00 | | $0.00 | | $0.00 | **$0.00** |

10% Durability - retained at ICG release $962.25 Released 6.30.20 $962.25

**ICG Amount** **$10,584.75**

**Fees** **$0.00**

Attachment: Bromley Subdivision Performance Guarantee (Durability Release - BROMLEY MEADOWS PLAT C)

# IMPROVEMENTS DURABILITY RETAINER RELEASE AUTHORIZATION

The City Council of American Fork City, a Municipal Corporation and Body Politic in the State of Utah, hereby authorizes the release of the Improvements Durability Retainer for BROMLEY MEADOWS PLAT C pursuant to the terms of Section 17.9.100 and 17.9.403 of the City Development Code. The City Council finds that the quality of construction and materials have endured without evidence of unusual depreciation, wear, non-conformance to City standards, or need for remedial action.

The City Council hereby authorizes the City Engineer to issue a letter to the financial guarantee institution authorizing release of the Improvements Durability Retainer or to issue an authorized City check as appropriate for the type of guarantee provided.

Amount Released: $962.25

PASSED THIS 30 DAY OF JUNE, 2020.

_____
City Representative, American Fork City

ATTEST:

_____
Terilyn Lurker, City Recorder

Attachment: Durability_Release_Authorization - Bromley Meadows Plat C (Durability Release - BROMLEY MEADOWS PLAT C)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Public Works **Director Approval** *Scott Sensanbaugher*

**AGENDA ITEM** (Common Consent Agenda) - Consideration regarding authorization to release the Improvements Construction Guarantee in the amount of $33,198.00 and issue a Notice of Acceptance for the KESLER SUBDIVISION construction of public improvements located at 435 East 200 North.

**SUMMARY RECOMMENDATION** The City Engineer recommends that the Improvements Construction Guarantee (ICG) be released. The improvements were found in a condition meeting City standards and specifications and in conformance with the approved project construction plans.

**BACKGROUND** Pursuant to the terms of Sections 17.9.100 and 17.9.304 of the City Development Code, the City Council may authorize the release of the ICG and issue a "Notice of Acceptance" of the project improvements. Following the issuance of the Notice of Acceptance, the City accepts ownership of the project improvements. The project will then enter the one (1) year Durability Testing Period as specified in section 17.9.400 of the City Development Code.

In issuing a Notice of Acceptance, the City Council finds that:

- The condition of the improvements are found to be satisfactory.
- All liens have been released, all outstanding fees paid, costs of administration paid, and reimbursement payments to prior developers (if any) have been made.
- The project clean-up is found to be satisfactory.

The City may request a current title report or other such measures or reports as deemed appropriate by the City as a means of determining the existence of any unreported liens or other claims upon the project. All financial information (if any) provided by the developer is attached. The Council may request additional information as deemed necessary.

**BUDGET IMPACT** Following the release of the ICG, there is a one (1) year Durability Testing Period wherein ten percent (10%) of the total ICG is held to ensure the durability of the constructed improvements.

**SUGGESTED MOTION** Move to accept the improvements and authorize the Mayor to execute the Notice of Acceptance for the KESLER SUBDIVISION public improvements located at 435 East 200 North. To authorize the issuance of documents and/or payments to

release the Improvement Construction Guarantee (ICG). Commence the Durability Testing Period by retaining ten percent (10%) of the ICG. To find that the project improvements are in a condition meeting City ordinances, standards, and specifications and are in conformance with the approved project construction plans.

*Note: With passage of the Common Consent Agenda items, the City Council will enact the motion and findings as noted in the "Suggested Motion" heading found above.*

**SUPPORTING DOCUMENTS**

Bond Release Request-Kesler-Final (PDF)
Notice of Completion-Kesler Subdivision (PDF)
Notice of Acceptance-Kesler Subdivision (PDF)
Performance Guarantee - Kesler Subdivision (PDF)

DocuSign Envelope ID: 5FD301C4-1500-41A2-90D5-0080DBA2EE69

# BOND RELEASE REQUEST

**Development Name:** Kesler Subdivision

**Development Address:** 435 E 200 N, American Fork, UT 84003

*All outstanding fees must be paid prior to any release.

☐ Partial Improvement Assurance Release ☒ Final Improvement Assurance Release ☐ Improvement Warranty Release (10% Durability Release)

| Description of Item | Quantity | Units | Unit Price | Total | Inspector Use Only Complete? Yes/No |
|---|---|---|---|---|---|
| **Improvement** | 1 | | | **$33,198.00** | |
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| | | | **Total** | **$33,198.00** | |

Bond Type: ☐ Cash Deposit ☐ Escrow Account ☒ Letter of Credit ☐ Surety Bond

Please send check/bank letter to:

Name: **Chad Patten**

Bank (if applicable): **CCBank**

Address: **49 W University Parkway**

City: **Orem** State: **UT** Zip: **84058**

Phone: **801-705-4368** Email: **chad.patten@ccbankutah.com**

Signature: _____ Date: _____

City Official Use Only

☒ Fees paid and current

Administrative Signature: Carolyn Lloyd Date: 6-9-20

Inspector Signature: [signature] Date: 6/15/20



Attachment: Bond Release Request-Kesler-Final (Final Bond Release - KESLER SUBDIVISION)

DocuSign Envelope ID: 5FD301C4-1500-41A2-90D5-0080DBA2EE69

AMERICAN FORK
— 1853 —

# NOTICE OF COMPLETION AND REQUEST FOR RELEASE

*Projects and/or subdivisions completed within the corporate limits of American Fork City*

Mayor of American Fork
51 East Main
American Fork, UT 84003

Re: **Kesler Subdivision**

Dear Mayor:

As the project and/or subdivision construction has now been completed in full, I request that the Improvement Construction Guarantee (ICG) be released in full up to one hundred percent (100%) of the initial construction costs. Following the release of the ICG, I understand that the one (1) year Durability Testing Period will commence wherein ten percent (10%) of the total ICG is held to ensure the durability of the constructed improvements per City Ordinance Section 17.9.

I, **Jean Shoaee**, the owner, developer, and authorized representative of **Kesler** Subdivision/Project, do hereby request the release of the Improvement Construction Guarantee. I certify that all liens have been released, all outstanding fees paid, costs of administration paid, and reimbursement payments to prior developers (if any) have been made, and the project clean-up is complete.

Project: **Kesler Subdivision**

Address: **435 E 200 N, American Fork, UT 84003**

Requested ICG Amount: **$36,517.80**

DocuSigned by:
Jean Shoaee
1EADAB11062E434

Owner/Developer

**6/8/2020 | 13:55 MDT**
Date

Attachment: Notice of Completion-Kesler Subdivision (Final Bond Release - KESLER SUBDIVISION)

# NOTICE OF ACCEPTANCE AND IMPROVEMENTS CONSTRUCTION GUARANTEE RETAINER RELEASE AUTHORIZATION

The City Council of American Fork City, a Municipal Corporation and Body Politic in the State of Utah, hereby authorizes the release of the Improvements Construction Guarantee for KESLER SUBDIVISION pursuant to the terms of Section 17.9.100 and 17.9.304 of the City Development Code. The City Council accepts the improvements completed with the finding that said improvements are in a condition meeting City ordinances, standards, and specifications, are in conformance with the approved project construction plans, and all conditions for release as detailed in section 17.9.304 of the City Code have been satisfied.

The City Council hereby authorizes the issuance of a letter to the financial guarantee institution authorizing release of the Improvements Construction Guarantee, or to issue an authorized City check as appropriate for the type of guarantee provided. Upon issuance of this Notice of Acceptance, the Durability Testing Period shall commence as detailed in section 17.9.400 of the City Development Code. An amount totaling ten percent (10%) of the Improvements Construction Guarantee funds will be held as the Durability Retainer pursuant to the City Performance Guarantee ordinance.

Amount Released: $ 33,198.00

PASSED THIS 30 DAY OF JUNE, 2020.

_____
City Representative, American Fork City

ATTEST:

_____
Terilyn Lurker, City Recorder

Attachment: Notice of Acceptance-Kesler Subdivision (Final Bond Release - KESLER SUBDIVISION)

# Name of Development: Kesler Subdivision

| | Description of Item | Quantity | Unit | Unit Price | Total |
|---|---|---|---|---|---|
| | **SITE PREPARATION** | | | | |
| | Mobilization | 1 | LS | $700.00 | $700.00 |
| | | | | | $0.00 |
| | **UTILITIES (CULINARY, PI, & SEWER)** | | | | |
| | Utility excavation, include road restoration for cut to acces tie-ins | 1 | LS | $8,155.00 | $8,155.00 |
| | | | | | $0.00 |
| | **STREETS** | | | | |
| | Prep and install 4" asphalt | 1 | LS | $8,896.00 | $8,896.00 |
| | 24" Curb & Gutter (4" untreated base course included) | 100 | LF | $52.64 | $5,264.00 |
| | | | | | $0.00 |
| | **STORM DRAINAGE** | | | | |
| | Sump and storm drain | 1 | LS | $8,683.00 | $8,683.00 |
| | | | | | $0.00 |
| | **CONSTRUCTION MANAGEMENT/MISC.** | | | | |
| | As Builts | 1 | Each | $500.00 | $500.00 |
| | Traffic Control | 1 | LS | $500.00 | $500.00 |
| | Testing, Cleaning, Inspections | 1 | LS | $500.00 | $500.00 |
| | | | | | $0.00 |

| | |
|---|---|
| | $33,198.00 |
| 10% Durability - retained at ICG release | $3,319.80 |
| **ICG Amount** | **$36,517.80** |

Attachment: Performance Guarantee - Kesler Subdivision (Final Bond Release - KESLER SUBDIVISION)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Public Works **Director Approval** *Scott Sensanbaugher*

**AGENDA ITEM** Common Consent Consideration regarding authorization to release the Improvements Durability Retainer of $42,610.40 for MITCHELL FARMS PLAT A, located at 780 West 700 North.

**SUMMARY RECOMMENDATION** The City Engineer recommends that the Improvements Durability Retainer be released. The improvements were found in a condition meeting City standards for workmanship and performance after one (1) year of service.

**BACKGROUND** Pursuant to the terms of Sections 17.9.100 and 17.9.403 of the City Development Code, the City Council may authorize the release of the Improvements Durability Retainer following the one (1) year durability testing period. The release is based on a finding that the quality of construction and materials have endured without evidence of unusual depreciation, wear, non-conformance of City standards or need for remedial action.

**BUDGET IMPACT** Following the release of the Improvements Durability Retainer, the City is responsible for all future maintenance and replacement costs for any publicly-owned property or improvement. In developments with Home-Owners or Unit-Owners Associations, all common area maintenance and replacement responsibilities will then fall to the Association. All privately-owned improvements will be the responsibility of the owner of the given parcel.

**SUGGESTED MOTION** Move to authorize the City Engineer to issue documents and/or payments to release the Improvements Durability Retainer of $42,610.40 for MITCHELL FARMS PLAT A. Find that the quality of construction and materials have endured without evidence of unusual depreciation, wear, non-conformance of City standards, or need for remedial action.

**SUPPORTING DOCUMENTS**

Bond Release Request-Mitchell Farms A-Durability (PDF)
Mitchell Farms Plat A Performance Guarantee (XLSX)
Durability_Release_Authorization-Mitchell Farms Plat A (PDF)

# BOND RELEASE REQUEST

**Development Name:** Mitchell Farms A

**Development Address:** 780 W. 700 N.

*All outstanding fees must be paid prior to any release.

☐ Partial Improvement Assurance Release

☐ Final Improvement Assurance Release

☑ Improvement Warranty Release (10% Durability Release)

| Description of Item | Quantity | Units | Unit Price | Total | Inspector Use Only Complete? Yes/No |
|---|---|---|---|---|---|
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| | | | **Total** | 42,610.40 | |

Bond Type: ☐ Cash Deposit ☐ Escrow Account ☑ Letter of Credit ☐ Surety Bond

Please send check/bank letter to:

Name: Kelly Palmer

Bank (if applicable): Altabank

Address: 113 S. Main St.

City: Alpine State: Ut Zip: 84004

Phone: 801-756-2921 Email: kelly.palmer@altabank.com

Signature: [signature] Date: 5-21-20

**City Official Use Only**

☒ Fees paid and current

Administrative Signature: Carolyn Floyd Date: 6-8-20

Inspector Signature: [signature] Date: 6/8/20



Attachment: Bond Release Request-Mitchell Farms A-Durability (Durability Release- MITCHELL FARMS PLAT A)

**Name of Development:** Mitchell Farms Plat "A"

| | Description of Item | Quantity | Unit | Unit Price | Total | Release #1 | Date | Amount Requested | Release #2 | Date | Amount Requested | Release #3 | Date | Amount Requested | Release #4 | Date | Amount Requested | Release #5 | Date | Amount Requested | Release #6 | Date | Amount Requested | Balance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SITE PREPARATION** | | | | | | | | | | | | | | | | | | | | | | | |
| | Mobilization | 1 | LS | $5,000.00 | $5,000.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $5,000.00 |
| | **SWPPP** | | | | | | | | | | | | | | | | | | | | | | | |
| | SWPPP BMP Installation and Maintenance | 1 | LS | $5,000.00 | $5,000.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $5,000.00 |
| | **SEWER** | | | | | | | | | | | | | | | | | | | | | | | |
| | 8" PVC Sewer Line | 1200 | LF | $28.00 | $33,600.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $33,600.00 |
| | 4' Sewer Manhole Precast | 1 | Each | $2,600.00 | $2,600.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $2,600.00 |
| | 5' Sewer Manhole Precast | 4 | Each | $3,250.00 | $13,000.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $13,000.00 |
| | Sanitary Sewer Lateral Connection | 12 | Each | $900.00 | $10,800.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $10,800.00 |
| | Cover Collar for Sewer Manhole Lids | 5 | Each | $460.00 | $2,300.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $2,300.00 |
| | Connect to Existing | 1 | Each | $2,000.00 | $2,000.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $2,000.00 |
| | **CULINARY WATER** | | | | | | | | | | | | | | | | | | | | | | | |
| | 8" DI Culinary Water | 1097 | LF | $35.00 | $38,395.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $38,395.00 |
| | 8" Gate Valve | 7 | Each | $1,100.00 | $7,700.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $7,700.00 |
| | 8" Tee | 3 | Each | $413.00 | $1,239.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $1,239.00 |
| | Connect to Existing Water | 1 | Each | $3,200.00 | $3,200.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $3,200.00 |
| | Fire Hydrant Assembly | 2 | Each | $4,200.00 | $8,400.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $8,400.00 |
| | 1" Water Service Lateral | 12 | Each | $1,250.00 | $15,000.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $15,000.00 |
| | 2" Blowoff | 3 | Each | $1,600.00 | $4,800.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $4,800.00 |
| | Cover Collar for Water Valve Boxes | 7 | Each | $200.00 | $1,400.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $1,400.00 |
| | **PRESSURIZED IRRIGATION** | | | | | | | | | | | | | | | | | | | | | | | |
| | 6" PVC Pipe | 1043 | LF | $20.00 | $20,860.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $20,860.00 |
| | 6" Gate Valve | 7 | Each | $950.00 | $6,650.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $6,650.00 |
| | 2" Blowoff Pressurized Irrigation | 3 | Each | $1,300.00 | $3,900.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $3,900.00 |
| | 1" Irrigation Service | 12 | Each | $1,100.00 | $13,200.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $13,200.00 |
| | Connect to Existing PI | 1 | Each | $2,800.00 | $2,800.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $2,800.00 |
| | 6" Tee w/ Thrust Block | 2 | Each | $450.00 | $900.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $900.00 |
| | **STREETS** | | | | | | | | | | | | | | | | | | | | | | | |
| | Asphalt 3" - Standard Road | 39000 | SF | $1.40 | $54,600.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $54,600.00 |
| | Roadbase 8" Hauled, Placed & Compacted | 44060 | SF | $0.65 | $28,639.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $28,639.00 |
| | Sub Base 8" Hauled, Placed & Compacted | 44060 | SF | $0.45 | $19,827.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $19,827.00 |
| | 24" Curb & Gutter (4" untreated base course included) | 2075 | LF | $15.00 | $31,125.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $31,125.00 |
| | Sidewalk 4" Thick (4"untreated base course included) | 10375 | SF | $4.00 | $41,500.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $41,500.00 |
| | ADA Ramp (6" concrete 6" base course included) | 6 | Each | $1,500.00 | $9,000.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $9,000.00 |
| | **STORM DRAINAGE** | | | | | | | | | | | | | | | | | | | | | | | |
| | 15" RCP Storm Drain | 179 | LF | $36.00 | $6,444.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $6,444.00 |
| | Curb Inlet 2' x 3' x 4' | 7 | Each | $1,800.00 | $12,600.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $12,600.00 |
| | Storm Drain Sump | 4 | Each | $3,600.00 | $14,400.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $14,400.00 |
| | **CONSTRUCTION MANAGEMENT/MISC.** | | | | | | | | | | | | | | | | | | | | | | | |
| | As Builts Mylar & Disks | 1 | Each | $250.00 | $250.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $250.00 |
| | Testing, Cleaning, Inspections | 1 | LS | $2,500.00 | $2,500.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $2,500.00 |
| | Street Sign | 3 | Each | $225.00 | $675.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $675.00 |
| | Traffic Sign | 3 | Each | $300.00 | $900.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $900.00 |
| | Subdivision Monument | 2 | Each | $450.00 | $900.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | $900.00 |
| | | | | | $426,104.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | | | $0.00 | **$426,104.00** Available for Release |
| | 10% Durability - retained at ICG release | | | | $42,610.40 | Released 6.23/20 | | | | | | | | | | | | | | | | | | $42,610.40 Durability Period |

**ICG Amount** **$468,714.40**

**Street Lights** **$15,000.00**

**Fees** **$3,692.00**

Attachment: Mitchell Farms Plat A Performance Guarantee (Durability Release- MITCHELL FARMS PLAT A)

# IMPROVEMENTS DURABILITY RETAINER RELEASE AUTHORIZATION

The City Council of American Fork City, a Municipal Corporation and Body Politic in the State of Utah, hereby authorizes the release of the Improvements Durability Retainer for MITCHELL FARMS PLAT A pursuant to the terms of Section 17.9.100 and 17.9.403 of the City Development Code. The City Council finds that the quality of construction and materials have endured without evidence of unusual depreciation, wear, non-conformance to City standards, or need for remedial action.

The City Council hereby authorizes the City Engineer to issue a letter to the financial guarantee institution authorizing release of the Improvements Durability Retainer or to issue an authorized City check as appropriate for the type of guarantee provided.

Amount Released: $42,610.40

PASSED THIS 30 DAY OF JUNE, 2020.

_____
City Representative, American Fork City

ATTEST:

_____
Terilyn Lurker, City Recorder

Attachment: Durability_Release_Authorization-Mitchell Farms Plat A (Durability Release- MITCHELL FARMS PLAT A)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Planning **Director Approval** *Adam Olsen*

**AGENDA ITEM** Review and action on an appeal of the American Fork City Planning Commission's action regarding the commercial site plan for American Eagle Ready Mix, located in the area of 1700 South 500 East in the I-1 Industrial zone.

**SUMMARY RECOMMENDATION** The planning commission, acting as the land use authority, denied the commercial site plan for American Eagle Ready Mix, located in the area of 1700 South 500 East in the I-1 Industrial zone as stated in the attached minutes of the May 6, 2020 planning commission meeting. Previous actions to table were taken on April 8 and April 22, 2020.

**BACKGROUND** The applicant proposes a site plan for a concrete batch plant in the recently approved Lakeland Industrial Park subdivision. The application was tabled during the April 8, 2020 and April 22, 2020 planning commission meetings and denied at the May 6, 2020 Planning Commission meeting. The site plan was forwarded to the City Council because the applicant filed an appeal from the planning commission action as the land use authority in the I-1 zone. The minutes of all three meetings have been added to the RCA and convey the concerns that have culminated in the denial of the project. For further analysis, please refer to the attached appeal, site plan, staff report and planning commission minutes.

**BUDGET IMPACT** No direct budgetary impact is anticipated as a result of this approval.

**SUGGESTED MOTION** I motion to deny the appeal of the American Fork City Planning Commission's action regarding the commercial site plan for American Eagle Ready Mix, located in the area of 1700 South 500 East in the I-1 Industrial zone.

**SUPPORTING DOCUMENTS**

1. Appeal (PDF)
2. Site Plan (PDF)
3. Staff Report (PDF)
4. Minutes (PDF)

AERM - Letter to AF City Council (PDF)
2020.06.19 Roderick Enterprises Brief to City Council (PDF)

**From:** **Adam Olsen** AOlsen@afcity.net
**Subject:** FW: AERM - Appeal
**Date:** May 13, 2020 at 8:59 AM
**To:** Wendelin Knobloch Wendelin@afcity.net

Below is the request for appeal.

---

**From:** Ozuna, McKay <mozuna@swlaw.com>
**Sent:** Thursday, May 7, 2020 8:17 AM
**To:** Adam Olsen <AOlsen@afcity.net>
**Subject:** AERM - Appeal

Adam,

Unsurprisingly, my client, American Eagle Ready Mix, and ourselves are not happy with the outcome of last night's Planning Commission meeting. As such, we would like to file an appeal to the City Council. The City Code is fairly vague on how to go about filing an appeal, but in past conversations you've mentioned we just needed to send you an email. For the appeal, I'm curious what is sent to the City Council and when must any additional materials be submitted by?

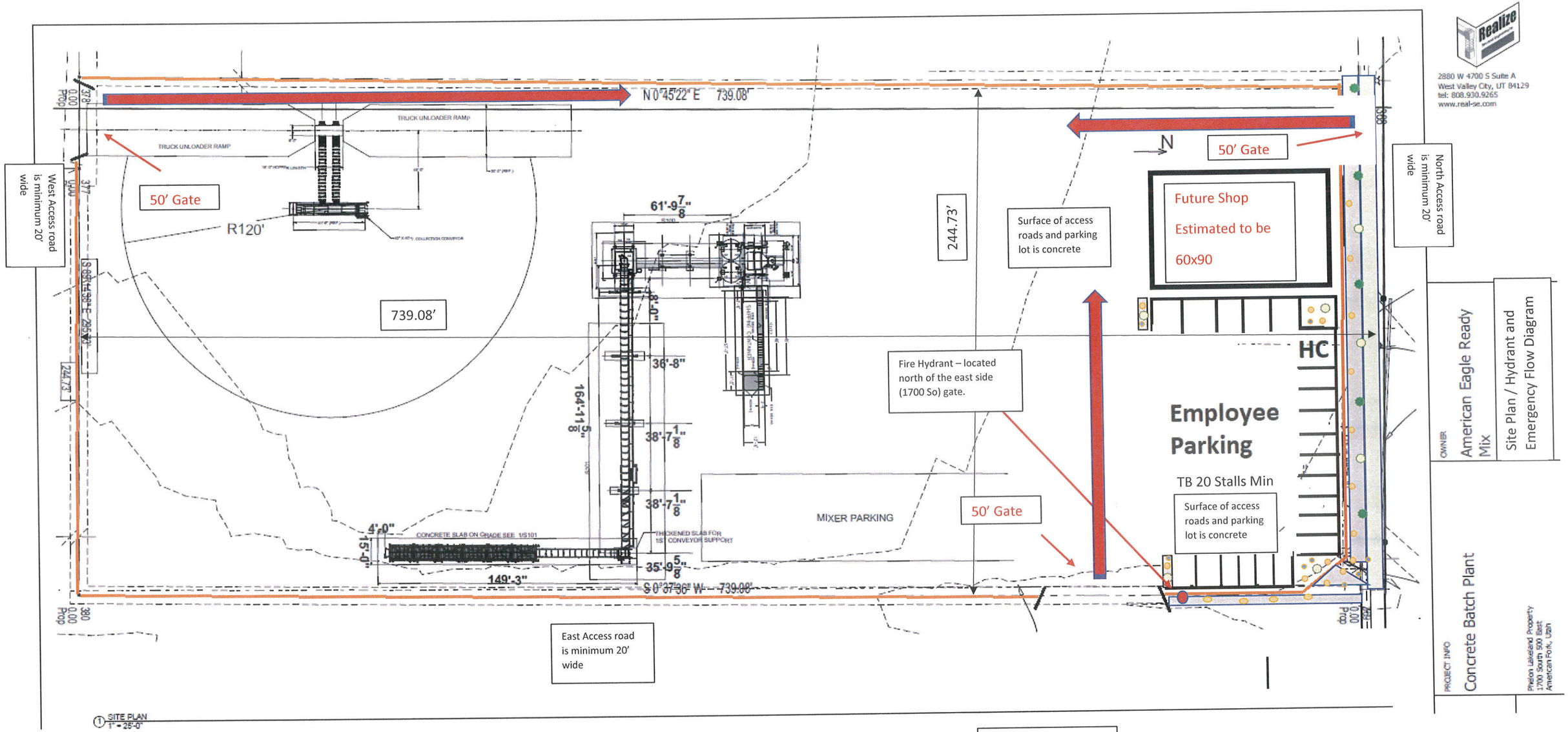
Thanks,

**McKay Ozuna**
Snell & Wilmer L.L.P.
15 W. South Temple, Suite 1200
Salt Lake City, UT 84101
Direct: 801.257.1807
mozuna@swlaw.com www.swlaw.com

Snell & Wilmer

Denver | Salt Lake City | Las Vegas | Reno | Los Angeles | Orange County | Phoenix | Tucson | Albuquerque | Boise | Washington, D.C. | Los Cabos, Mexico

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① SITE PLAN
1" = 25'-0"

- Fire Hydrant

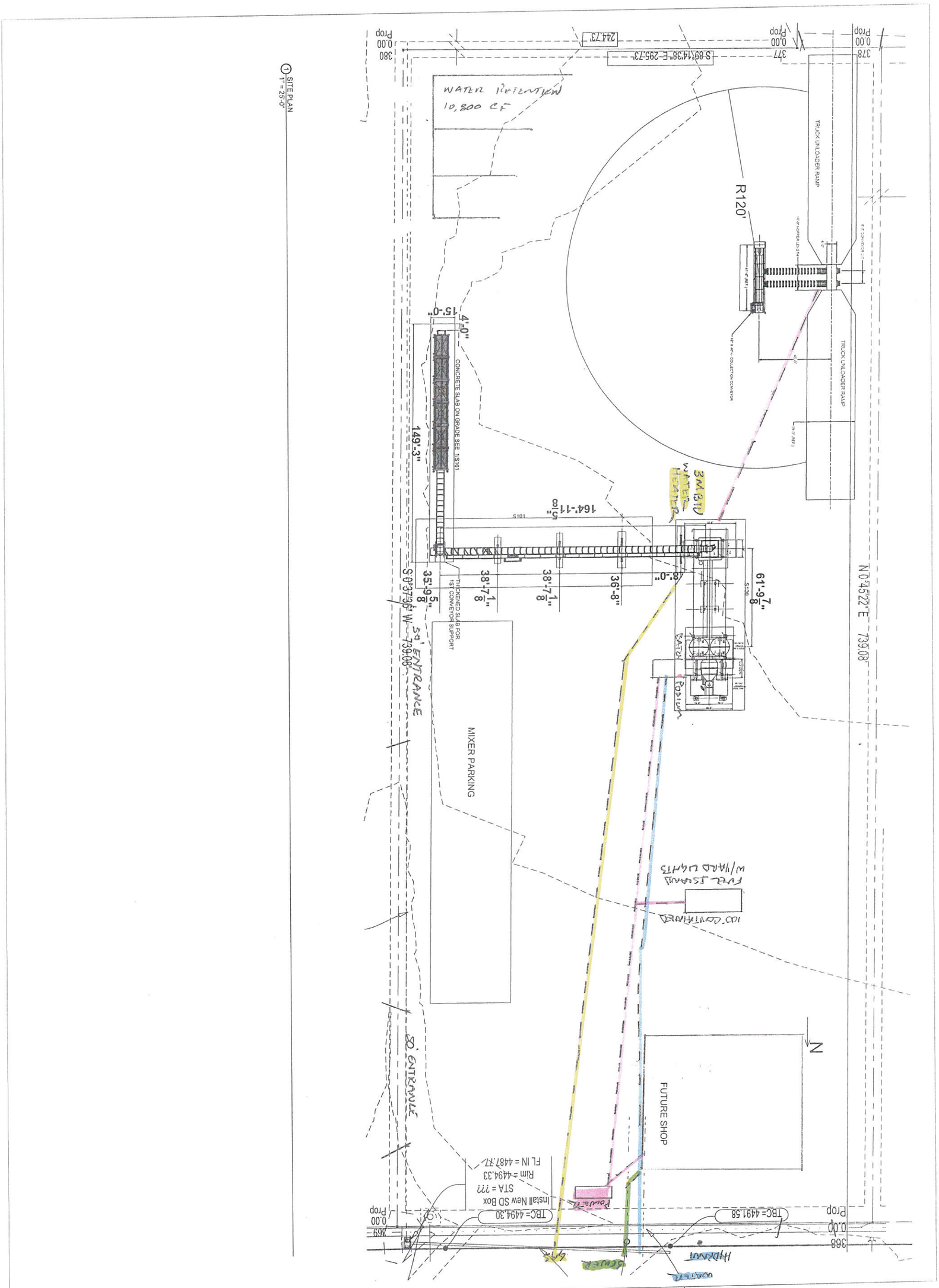
- Fire and Emergency Access

- 20 - Shrub
- 8 - Aspen Tree
- 5 – Pine Tree
- 10 – 12 1'- 1 ½' Boulder
- Precast Concrete Fence Entire Perimeter
- 3/4" Grey Rock
- Turf

Note:

All rock ground cover will have weed resistant barrier installed.

Attachment: 2. Site Plan (American Eagle Appeal)




SHEET NUMBER: S000

SHEET NAME
SITE PLAN

ISSUE DATE: Sep 10, 2019
ISSUE TYPE: Review Set
PROJECT NUMBER: 19039

DRAWN BY: MNB
DESIGNED BY: Designer
CHECKED BY: Checker

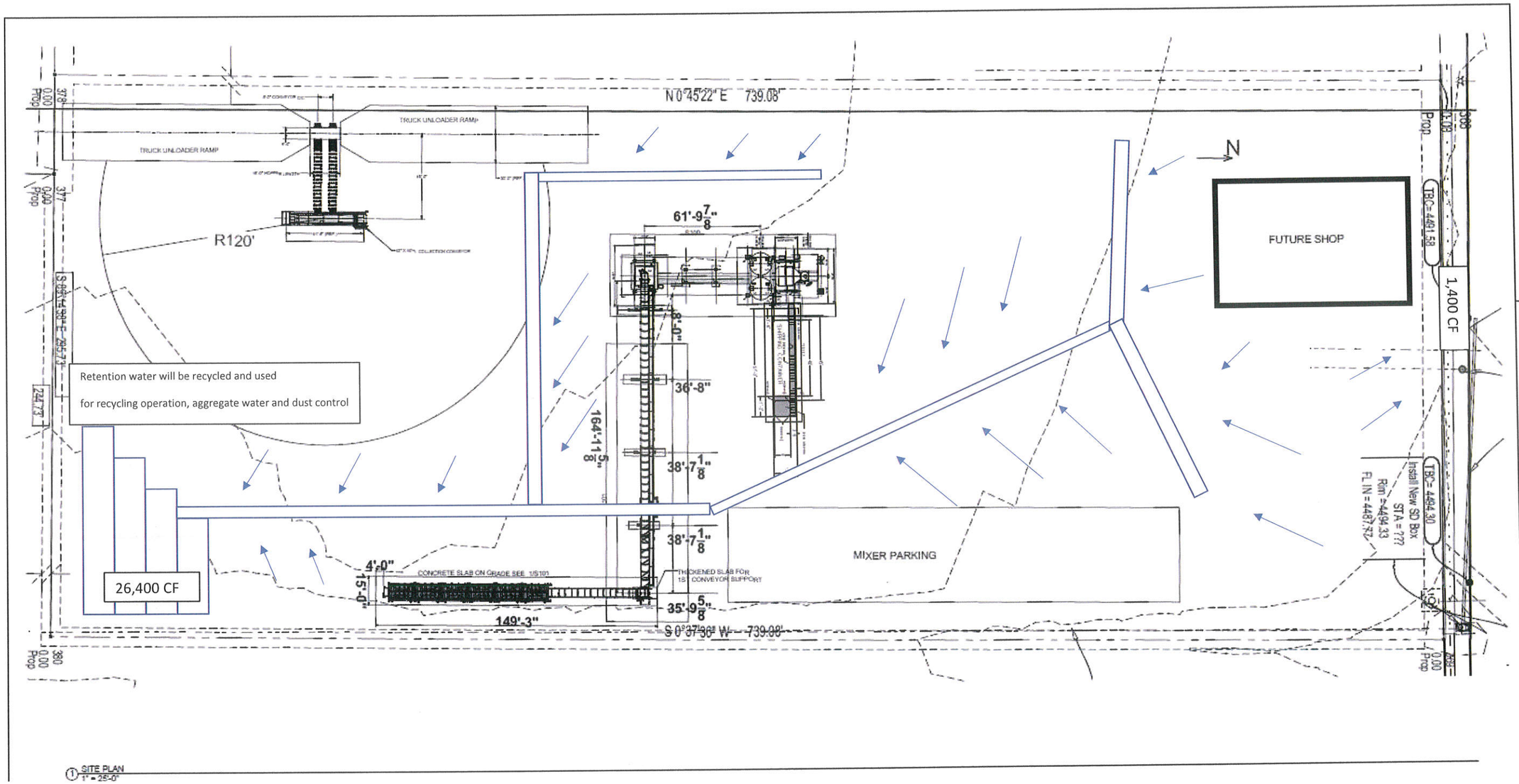
PROJECT INFO
Concrete Batch Plant

Phelon Lakeland Property
1700 South 500 East
American Fork, Utah

UTILITIES

OWNER
American Eagle Ready Mix

2380 W 4700 S Suite A
West Valley City, UT 84129
tel: 801.930.9255
www.real-se.com




① SITE PLAN
1" = 25'-0"

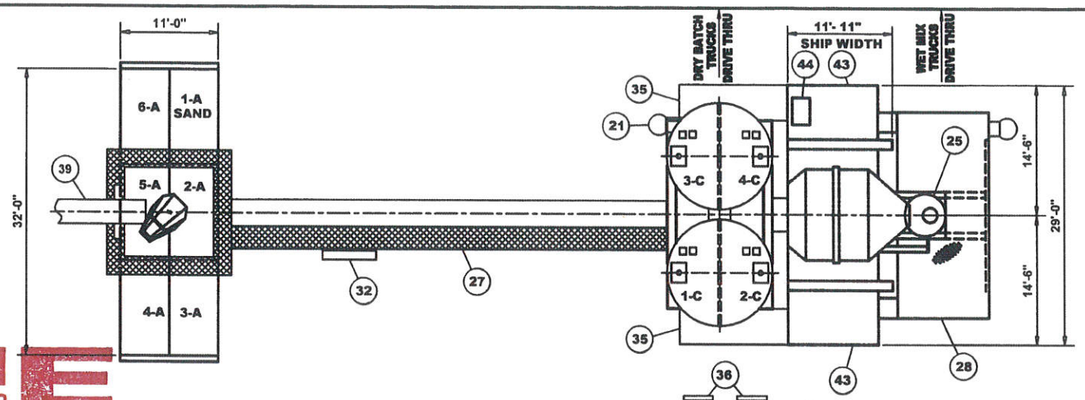
Realize
2880 W 4700 S Suite A
West Valley City, UT 84129
tel: 808.930.9265
www.real-se.com

OWNER
American Eagle Ready Mix

Drainage Plan

PROJECT INFO
Concrete Batch Plant

Preston Lakeland Property
1700 South 500 East
American Fork, Utah




ERIE STRAYER

**◀APPROVAL PRINT▶**

**Please complete & return the signed drawing.**
**If necessary, indicate required changes.**

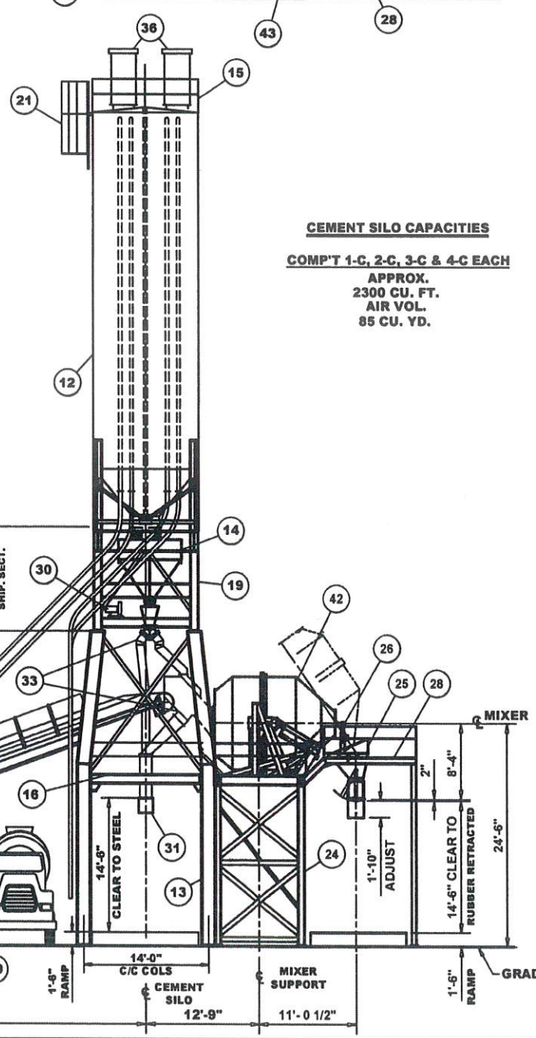
**DATE:** 6/11/2019

**PRINT NAME:** Tyler Clements

**SIGNATURE:** Tyler C.

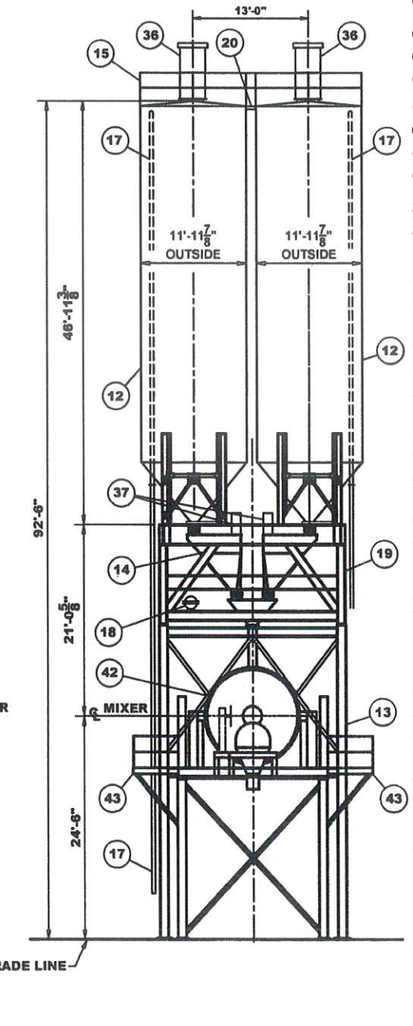
**APPROVED WITHOUT CHANGES** ☐

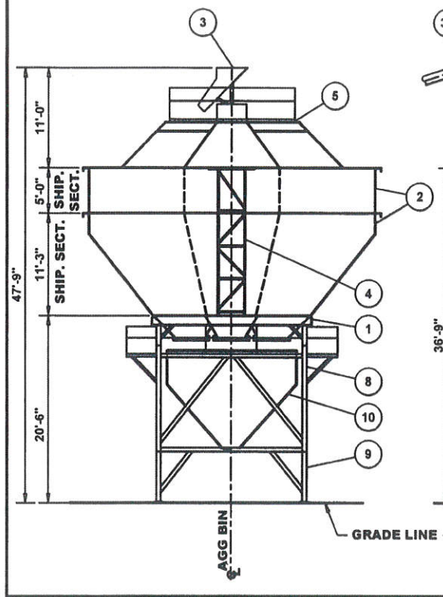
**CHANGES AS NOTED** ☐

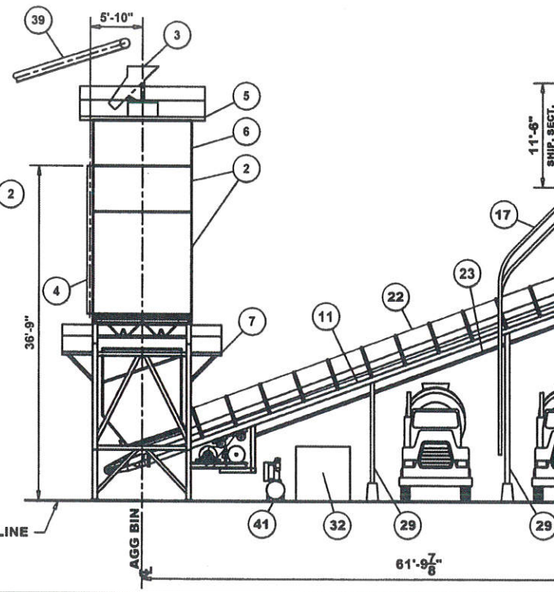



**CEMENT SILO CAPACITIES**

**COMP'T 1-C, 2-C, 3-C & 4-C EACH**
APPROX.
2300 CU. FT.
AIR VOL.
85 CU. YD.




## BY ERIE STRAYER CO.

### MP-11T & C

1. AGGREGATE BIN 6 COMPARTMENT (PATT. A-222) 215 CU. YD. HEAPED CAPACITY
2. REMOVABLE BIN EXTENSIONS
3. ROTARY DISTRIBUTOR
4. CONVEYOR HEAD END SUPPORT
5. ROTARY DISTRIBUTOR MAINTENANCE PLATFORM
6. PARTITION EXTENSIONS & HEAP PLATES
7. BIN HOPPER MAINTENANCE PLATFORM W/ HANDRAILS
8. AGG SUPPORT FRAME
9. LOWER COLUMNS & BRACING (AGG)
10. 12 CU. YD. AGG BATCHER
11. 48" INCLINED BATCH TRANSFER CONVEYOR 71'- 8" C. TO C. W/ 100 H.P. DRIVE
12. CS2-1150 CEMENT SILO SPLIT 1/2-1/2 W/ DOUBLE WALL DIVIDER 1150 BBL. MAX. CAPACITY (2 REQ'D)
13. LOWER COLUMNS & BRACING (CEMENT)
14. 12 CU. YD. CEM BATCHER (2 REQ'D)
15. SILO ROOF HANDRAILS (2 SETS REQ'D)
16. MIXER LEVEL SERVICE PLATFORM W/ HANDRAILS
17. AIR LOADING PIPING 5" - (6 REQ'D) (2 IN EA. COMP'T)
18. 4" WATER METER
19. CEMENT BATCHER UNITIZED SECTION W/ MAINTENANCE PLATFORM WITH HANDRAILS
20. WALKWAY BETWEEN SILOS @ ROOF
21. LADDER W/ SAFETY CAGE FROM GRADE TO MIXER LEVEL MAINTENANCE PLATFORM, BATCHER MAINTENANCE PLATFORM, & SILO ROOF
22. CONVEYOR BELT COVER
23. CONVEYOR DRIP PAN
24. MIXER COLUMNS & BRACING
25. CONCRETE DIRECTIONAL CHUTE W/ TELESCOPIC CHUTE & DRIP PAN
26. PIVOTING MIXER DUST PLUG
27. CONVEYOR WALKWAY
28. CONCRETE DIRECTIONAL CHUTE SERVICE PLATFORM
29. CONVEYOR SUPPORTS
30. 5 H.P. AERATION BLOWER
31. TRUCK CHARGING CHUTE W/ 1'- 8" EXTENSION
32. PLANT MOTOR CONTROL PANEL
33. CEMENT & AGGREGATE TWO-WAY CHUTING
34. LADDER W/ SAFETY CAGE FROM GRADE TO ROTARY DISTRIBUTOR MAINTENANCE PLATFORM W/ ACCESS TO BIN HOPPER MAINTENANCE PLATFORM
35. WALKWAY W/ HANDRAILS FROM MIXER PLATFORM TO MIXER LEVEL SERVICE PLATFORM (2 REQ'D)

## BY CONAGGBIT

36. CEMENT SILO FILTER VENT (4 REQ'D)
37. CEMENT BATCHER FILTER VENT (2 REQ'D)
38. DUST COLLECTION SYSTEM FOR MIXER & DRY BATCH TRUCK CHARGING CHUTE
39. BIN CHARGING CONVEYOR

## BY OTHERS

40. CONTROL SYSTEM
41. 25 H.P. AIR COMPRESSOR W/120 GAL. TANK

## EXISTING EQUIPMENT

(FROM CONTRACT TM-9199)

42. 12 CU. YD. ERIE TILT MIXER
43. MIXER PLATFORM (2 REQ'D)
44. HYDRAULIC POWER UNIT

FOR ANCHOR BOLT PLAN SEE DWG. 4A-262987

**GENERAL NOTES BELOW APPLY TO EQUIPMENT SHOWN ON THIS DRAWING.**

- **AGGREGATE BINS AND BIN COMPARTMENTS**
  HEAPED CAPACITIES OF AGGREGATE BINS AND BIN COMPARTMENTS ARE AS SHOWN AND ARE BASED ON HEAPING TO AN ANGLE OF 40° FROM THE HORIZONTAL WITH MATERIAL WEIGHING 110# PER CU. FT. OR APPROXIMATELY ONE AND ONE HALF TONS PER CU. YD.
- **CEMENT BINS, BIN COMPARTMENTS AND SILOS**
  MINIMUM BARREL BIN, BIN COMPARTMENT AND SILO CAPACITIES AS SHOWN ARE BASED ON BULKING OF 20% OR 0.8 CU. FT. PER BARREL.
- **ELECTRIC MOTORS**
  UNLESS INDICATED OTHERWISE, ALL ELECTRIC MOTORS ARE WIRED FOR 230/460 VOLT, 3 PHASE, 60 CYCLE CURRENT. STARTING EQUIPMENT WILL BE FURNISHED TO OPERATE ON 460 VOLTS UNLESS OTHERWISE STATED.
- **POWER REQUIREMENT FOR CONTROLS**
  VOLTAGE SHALL BE 120 VOLTS (+- 5%) 60 CYCLE PER SECOND.
- **MODIFICATIONS OR ADDITIONS**
  ALL FIELD CHANGES TO THE EQUIPMENT SHOWN HEREIN, OR ANY ENCLOSURE, WALKWAY, PLATFORM, HOUSING OR OTHER ADDITION TO THIS EQUIPMENT ARE THE RESPONSIBILITY OF THE BUYER, WHO AGREES TO HOLD ERIE STRAYER COMPANY HARMLESS AGAINST LIABILITY FOR THE SAME.
- **NOT FOR CONSTRUCTION**
  THE DIMENSIONS SHOWN HEREON ARE GENERAL AND OUTLINE DIMENSIONS ONLY AND ARE NOT INTENDED FOR USE AS DETAIL DIMENSIONS FOR MAKING MODIFICATIONS OR ADDITIONS, SUCH AS ENCLOSURES, WALKWAYS, PLATFORMS OR HOUSINGS TO THE EQUIPMENT SHOWN.

**EQUIPMENT CONFORMS TO CPMB, PMMD, & CSMD STANDARDS**

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 1 | UPDATE SILO HEIGHT | DAP | 3/7/2019 |

**ERIE STRAYER CO.**
1851 Rudolph Ave. Erie, PA 16502
Phone: (814) 456-7001 Fax: (814) 452-3422
Website: www.eriestrayer.com

| DWG BY | DATE | CHK BY | DATE | APP BY | DATE |
|---|---|---|---|---|---|
| DAP | 1/9/2019 | | | | |

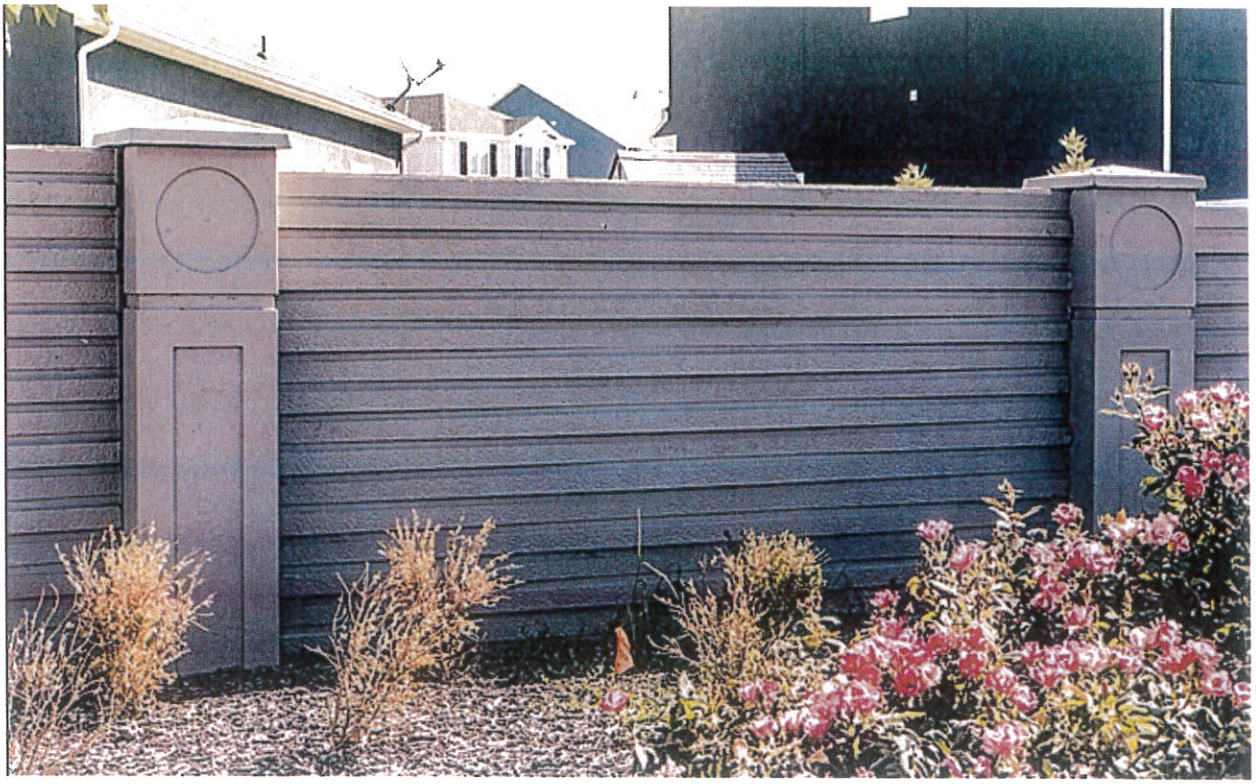
**PLANT POWER** 460V - 3PH - 60HZ
**CONTROL POWER** 120V - 1PH - 60HZ

**ERIE STRAYER CO.**
LOW PROFILE TRANSIT & CENTRAL MIX PLANT
GENERAL ARRANGEMENT
AMERICAN EAGLE

| CONTRACT NO. | SCALE | DWG NO. |
|---|---|---|
| MP-9214 | 1/8"=1'-0" | 4A-262986-1 |

American Eagle - American Fork Ready Mix Plant-

Perimeter Fence



Attachment: 2. Site Plan (American Eagle Appeal)





**MCDONALD FIELDING** PLLC
2100 W. PLEASANT GROVE BLVD., SUITE 250
PLEASANT GROVE, UTAH 84062
PHONE: 801-610-0010

DANIEL J. MCDONALD E-MAIL: dan@mcdonaldfielding.com

March 16, 2020

American Fork City Planning Commission
c/o Adam Olsen, Senior Planner
Via Email: aolsen@afcity.net

RE: American Eagle Ready Mix Site Plan Application
American Fork City Planning Commission Regular Session – March 18, 2020

Honorable Members of the Planning Commission:

This firm represents Roderick Enterprises, which owns the Catalyst Business Park consisting of nine Class A buildings totaling over 1.2 million square feet located immediately north and across the street from the proposed American Eagle Ready Mix operation. *See* **Exhibit 1.** The Planning Commission should deny the site plan application for the reasons set forth below.

## I. Concrete Batching Plants are Illegal in the I-1 Industrial Zone

The American Eagle site is located in the City's I-1 Industrial Zone. As the following subsections show, concrete batching plants such as American Eagle's violate the intent and express provisions of the I-1 Industrial Zone according to I-1 zoning regulations found in Section 17.4.503 of the City Code.

### A. American Eagle's proposed operation violates the intent of the zone.

The American Eagle operation violates the stated intent of the I-1 Industrial Zone. The intent of this zone is explained in the City Code as follows:

> "The I-1 light industrial zone has been established for the purpose of providing a place where firms engaged in the ***light*** manufacturing, processing, warehousing and fabrication of goods and materials can locate ***with minimum conflict or deleterious effect on surrounding properties*** and uses and with a high degree of protection from encroachment of residential, retail commercial and other incompatible uses….
>
> ….
>
> Representative of the uses within the zone are structures utilized for ***light*** manufacturing, fabrication, processing, storage, warehousing and wholesale

Attachment: 2. Site Plan (American Eagle Appeal)

> distribution, ***under conditions which limit the generation of noise, vibration, smoke, odor, dust***, fumes, or hazard from explosion."

City Code § 17.4.503.A (emphasis added).

As explained more fully below, American Eagle's operation could not by any stretch of the imagination be characterized as "light" industrial. Moreover, **it is well documented in both the regulatory and scientific literature that such operations generate substantial noise, vibration and dust that migrates to neighboring properties**.

**B. American Eagle's operation violates express zoning provisions.**

Section 17.4.503.B. of the I-1 zoning ordinance provides, "[t]he following buildings, structures and uses of land shall be permitted upon compliance with the standards and requirements set forth in this code[,]" but **the code does not expressly list a concrete batching plant as a permitted or conditional use**. City Code § 17.4.503.B

"Uses of land which are not expressly permitted within a zone are hereby declared to be expressly prohibited therein, except as may be permitted by action of the planning commission or city council, pursuant to express authority given under terms of this code." City Code § 17.1.200. Nothing in the City Code gives the planning commission the authority to rewrite the law so that concrete batching plants are authorized.

The closest the I-1 zoning ordinance comes to allowing anything remotely similar to a batching plant is the description found in Section 17.4.503.B.1 of "[s]tructures and areas used for the manufacturing, compounding, processing[,] fabrication and warehousing of goods and materials[.]" Admittedly, this is a fairly broad category. However, the very next subsection further refines the type of uses allowed by providing, "***[n]one of the activities carried out on the premises shall produce any noxious odor or any fumes, smoke, noise, vapor, vibration, glare or similar condition which is harmful to persons*** or which is readily discernible beyond the boundary of the zone ***or create an adverse visual impact readily discernible from the public roads***." *Id.* § 17.4.503.B.1.a (emphasis added).

As explained more fully below, **American Eagle's operation produces noise, vibration, fugitive dust and toxic particulates that are harmful to persons. It also creates an eyesore that is readily discernible from E 1700 South Street.**

Finally, American Eagle's proposed operation violates the "special provisions" section of the I-1 zoning ordinance, which provides, "***All uses shall be conducted within a fully enclosed building***, except those uses deemed by the city to be customarily and appropriately conducted in the open." City Code § 17.4.503.I.1 (emphasis added). "All materials and vehicles used in the conduct of the business activity shall be stored ***within an enclosed building*** or within an area designated for such use as shown on the approved site plan." *Id.* § 17.4.503.I.2 (emphasis added).

**American Eagle's operation will not be conducted within a fully-enclosed building and cannot be appropriately conducted in the open** without violating the intent of the I-1

Attachment: 2. Site Plan (American Eagle Appeal)

zoning regulations due to the fugitive dust, noise and vibrations the operation will created, as explained more fully below.

## II. It is Globally Recognized That Operations Such as American Eagle's Create Fugitive Dust, Particulate Matter, Noise and Vibrations, Which are Incompatible With the I-1 Zoning Regulations.

The fact that operations such as American Eagle's concrete batching plant cause fugitive dust, toxins, particulate matter (PM), noise and vibrations is globally recognized by regulatory agencies, governments and scholars.

**EPA's Cement Manufacturing Enforcement Initiative**

For example, the United States Environmental Protection Agency's Cement Manufacturing Enforcement Initiative (found at https://www.epa.gov/enforcement/cement-manufacturing-enforcement-initiative ), attached as **Exhibit 2**, states as follows:

> **Cement plants are a significant source of sulfur dioxide, nitrogen oxide and carbon monoxide**, which are associated with the following health and environmental impacts:
>
> - Nitrogen oxide (NOx) can cause or contribute to a variety of health problems and adverse environmental impacts, such as **ground-level ozone, acid rain, global warming, water quality deterioration, and visual impairment**. Affected populations include children, people with lung diseases such as asthma, and exposure to these conditions can cause **damage to lung tissue** for people who work or exercise outside.
>
> - Sulfur dioxide (SO2) in high concentrations **can affect breathing** and may **aggravate existing respiratory and cardiovascular disease**. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children, and the elderly. SO2 is also **a primary contributor to acid deposition, or acid rain**.
>
> - Carbon monoxide (CO) can cause harmful health effects by **reducing oxygen delivery to the body's organs and tissues**, as well as adverse effects on the cardiovascular and central nervous systems. CO also **contributes to the formation of smog (ground-level ozone)**, which can cause respiratory problems.

Ex. 2 (emphasis added). The EPA is actively prosecuting cement plants for Clean Air Act violations due to the hazards and dangers these operations pose to the environment and human health and safety. *See id.*

**EPA's Emission Factor Documentation for Concrete Batching Plants**

Attachment: 2. Site Plan (American Eagle Appeal)

The EPA's Emission Factor Documentation for AP-42 Section 11.12 – Concrete Batching – Final Section (found at https://www3.epa.gov/ttn/chief/ap42/ch11/index.html ), attached hereto as **Exhibit 3**, has documented that **concrete batching plants cause the dissemination of particulate matter and other contaminants such as arsenic, lead and mercury**. *See, e.g., id.* at pp. 24-48. "Particulate matter, consisting primarily of cement and pozzolan dust but including some aggregate and sand dust emissions, is the primary pollutant of concern. In addition, there are emissions of metals that are associated with this particulate matter. All but one of the emission points are fugitive in nature…." *Id.* at p. 2. The fugitive nature of PM means that it will migrate into Utah Lake, surrounding farms, Roderick Enterprises' property and elsewhere.

**OSHA Warnings**

The United States Occupational Safety and Health Administration has recognized "[e]ye, skin and respiratory tract irritation from exposure to cement dust" as a known hazard for workers in concrete manufacturing. *See* **Exhibit 4.** According to OSHA, "[e]xposure to cement dust can irritate eyes, nose, throat and the upper respiratory system. Skin contact may result in moderate irritation to thickening/cracking of skin to severe skin damage from chemical burns. **Silica exposure can lead to lung injuries including silicosis and lung cancer**." *Id.*

**Scholarly Research**

A recent review of the scholarly literature published in the *Journal of Physics: Conference Series* reviewed the worldwide research on cement production and processing and notes, "**Emissions from cement industries include heavy metals, $CO_2$, NOx, $SO_2$, VOCs, PM, noise, dust and bad odor** …." (Emetere and Dania, 2019) (emphasis added), attached as **Exhibit 5,** at p. 4 (citing (Zimwara et al., 2012)). "Particulate matter (PM), a mix of solid and liquid droplets are high from cement plants and affects humans greatly…. **Most components of these aerosols are cytotoxic and carcinogenic**." *Id.* (citing McNeill, 2019) (emphasis added). Another study notes, "Enormous quantities of air pollutants are emitted from cement production, including $SO_2$, NOx, CO, and PM, and result in significant regional and global environmental problems." (Lei, et al., 2011), attached as **Exhibit 6**.

"The direct effects of cement dust pollution are the **alkanization of the ecosystem and the changing of the chemical composition of soils**." (Bilen, 2010 (citing Mandre, 1995)) (emphasis added), attached as **Exhibit 7**. "The pollutant particles can enter into soil as dry, humid or occult deposits and can undermine its physicochemical properties." *Id.* (citing Lay and Sellegri, 2003). Soil microorganism activity is negatively affected by fugitive cement dust. *See id.* at p. 2423.

This research on the ecological and biological impact of cement dust pollution is particularly appropriate because, of course, the American Eagle project site is immediately adjacent to the shoreline of Utah Lake, which the City has already recognized, in its SP Shoreline Preservation Zone ordinance is "generally unsuited for general development and environmentally fragile[.]" City Code § 17.4.604.A. While we realize that this property was recently re-zoned

Attachment: 2. Site Plan (American Eagle Appeal)

from SP to I-1 that doesn't change the geographic and environmental realities previously recognized in the code. Specifically, the code recognized that "[u]ses which tend to produce a hazardous condition or otherwise degrade or militate against the preservation of the shoreline are not permitted" and "uses within the zone are limited to uses which will not significantly degrade the environment of the lake shore area." *Id.* Moreover, even the current I-1 zoning designation provides that the intent of the I-1 zone is that uses have "***minimum conflict or deleterious effect on surrounding properties***." City Code § 17.4.503.A (emphasis added). Obviously, the negative effects of cement dust pollution and the release of heavy metal toxins from American Eagle into Utah Lake will not change simply because the zoning designation has been altered.

According to a meta-analysis of scholarly research contained in the Utah Physicians for a Healthy Environment's 2019 Report on Air Pollution and Health Research, attached as **Exhibit 8**, "increases of just 1 µg/m3 of PM2.5 chronic exposure **increases community death[] rates about 1%**." *Id.* at p. 1, n.3 (emphasis added) (citing Pope CA, et al., *Fine Particulate Air Pollution and Human Mortality: 25+ Years of Cohort Studies*, Environmental Research). Pollution particles contaminate human brain tissue, embed in the lining of blood vessels and even placentas of pregnant mothers. *Id.* at p. 2. One study found "that 99% of the deaths related to air pollution occur in populations where the air pollution meets the EPA's standards[,]" suggesting that EPA and governmental regulatory standards should not be used as the benchmark for assessing adverse impacts to human health and safety. *Id.* at p 3.

The Planning Commission should seriously consider the research accumulated by the UPHE. In a recent report by the Utah Department of Health, Bureau of Epidemiology's Environment Epidemiology Program (EEP), attached as **Exhibit 9**, the Bureau of Epidemiology commented, "we applaud the work done by UPHE. They have been able to address concerns much more broadly than the EEP has been authorized to do. We encourage policymakers to consider their work in parallel with ours." *Id.* at p. 13.

That same EEP report concluded, after undergoing its own meta-analysis of the scholarly literature on rc-silica, "Based on our literature review, the EEP cannot state that exposure to rc-silica is 'safe.' Indeed, long-term exposures at or above 1000 µg/m$^3$-year have an increasing risk approximately twice that of an unexposed community." *Id.* at p. 16.

**Documented Noise Levels of Concrete Batching Plants and Equipment**

The United States Department of Transportation Federal Highway Administration's Roadway Construction Noise Model (RCNM) Construction Noise Handbook[1] and FHWA Roadway Construction Noise Model User's Guide, **Exhibit 10**, measured the specified/anticipated and actual emission levels for various construction operations, including concrete batch plants, concrete mixers, and concrete pump trucks, based on hundreds of emission measurements from the nation's largest road project. The RCNM is "the most comprehensive

[1] This document can be found at the following link:
https://www.fhwa.dot.gov/ENVIRONMENT/noise/construction_noise/handbook/handbook09.cfm

Attachment: 2. Site Plan (American Eagle Appeal)

noise specification ever developed in the United States" and its noise prediction calculations are intended to "benefit other state and local governments[.]" *Id.* at p. 1.

According to the RCNM Noise Emission Reference Levels and Usage Factors, *id.* at p. 3, and the Construction Noise Handbook, *see* n. 1, concrete batch plants, concrete mixer trucks, and concrete pump trucks, operate at an A-weighted decibel spec level of 83, 85 and 82 dBA, respectively. Ex. 10 at p. 3. To give you an idea of how loud that it is, according to the very same noise prediction model, these machines should be expected to come within the same noise range as chain saws, compressors, jackhammers, and pneumatic tools. *See id.* The actual measured noise range of mixer trucks and pump trucks were 79 and 81 dBA, respectively, which is in the same actual measured range as air compressors, drill rig trucks, drum mixers, front end loaders, generators, rivet buster/chipping guns, and rock drills. *See id.*

**Anecdotal and Documentary Evidence**

The *Guide to Air Quality Permitting for Concrete Batch Plants*, attached as **Exhibit 11**, published by the University of Texas School of Law Environmental Clinic, notes that "[n]eighbors most commonly complain about dust and particulate matter (PM) emissions from concrete batch plants." *Id.* at p. 4. Other reported issues include the following:

> Noise: Noise is sometimes a problem for concrete plant neighbors. Large concrete trucks, those with the roughly cone-shaped mixing barrels on their backs, often arrive before dawn to pick up loads of concrete to take to construction sites, and the idling of these early-morning arrivals and their reverse warning sounds can be noisy, in addition to spreading diesel fumes throughout the neighborhood.
>
> ….
>
> Polluted wastewater runoff: The site stockpiles and dusty roads can contribute sediment to rain that falls on them, causing muddy runoff to the nearby neighborhood, if the runoff is not well-controlled by the plant.

*Id.* at p. 5.

These are not just academic, speculative or remote concerns. In fact, a recent site visit by Roderick Enterprises to American Eagle's concrete batching plant in Magna demonstrates how American Eagle's proposed operation will violate the I-1 zoning regulations.

**Exhibits 12-15** show American Eagle's Magna Facility. As you can see, **American Eagle will stockpile large amounts of product in outdoor containment areas, which will inevitably lead to migrating dust and PM**. Additionally, there will be constant operation of heavy machinery and equipment, as well as idling cement mixer vehicles. Finally, there will be constant noise from the rotary distributors, conveyor belts, telescopic chutes, aeration blowers, and air compressor, which are all part of the Erie Strayer MP-11T & C shown in American Eagle's site plan and depicted in the Exhibits 12-15.

Attachment: 2. Site Plan (American Eagle Appeal)

**Other Considerations**

In a good economy, concrete batching plants **can operate 24 hours a day, 7 days a week**, resulting in potentially huge traffic and road impacts for the city and its residents. The fact that American Eagle has not submitted any type of traffic impact study to support its application is reason, alone, to deny to the application. Further, **heavy equipment such as concrete trucks will further burden and impact the roads in and around the batching plant, causing road damage, increased road repairs and other impacts for the city.** Such heavy equipment will emit diesel fuel.

Finally, concrete recycling businesses are usually operated in tandem with concrete batching plants. In fact, it is our understanding that Dunn Recycling is in the preliminary stages of reviewing with city staff a concrete recycling facility right next door to American Eagle's operation. Approval of American Eagle's application would set a precedent and **open the floodgates for heavy industrial processing and crushing businesses** like American Eagle and Dunn Recycling to operate in portions of unincorporated Utah County to be annexed into the city. The planning commission should set the tone for what it will allow and not allow with this application because it is sure to have long-ranging implications and repercussions for the city and its residents.

## IV. Impact upon Roderick Enterprises

Roderick's various Business Park along the Wasatch Front (Logan to Springville) are designed to attract Fortune 500 companies and other large local companies that demand best in class facilities that portray a very high end professional image.

Roderick has already delivered this strategy to American Fork City with 3 buildings consisting of 372,977 square feet in the North Pointe Business Park as shown on Exhibit 1. Corporate Tenants secured by Roderick in North Pointe include Seagull Books / Covenant Communications (Corporate HQ/Division of LDS Church) Ancestry- (DNA Depository Lab) Vivint Solar-Better Body Foods- KT- Tape ( Corp HQ )- CED (600 unit Electrical Supply company.) Goodman (national HVAC supply house headquartered in Japan )

In 2019 these 3 buildings generated $315,470 in property tax revenue as well as millions in taxable sales.

Catalyst Business Park upon completion of all buildings will generate approximately $1.1mm in property taxes, millions in taxable sales and will generate approximately 3000 jobs.

For a complete list of Roderick Projects and Corporate Tenants please visit www.roderickrealty.com .

If this batch plant is approved, **Roderick Enterprises will likely lose the top-end tenants it usually attracts due to the dirty, hazardous and unsightly operation of the American Eagle batch plant right across the street**. Compare the beautiful projects

Attachment: 2. Site Plan (American Eagle Appeal)

constructed by Roderick Enterprises in Exhibit 1 with the unsightly operations of American Eagle in Exhibit 18. Roderick's tenants will take one look at the concrete batching plant and realize that they will constantly be disturbed by noise dust and toxic particles. Roderick has many contacts in the technology, medical and food services industries. These industries will likely not even consider this site if the batch plant is allowed. Obviously, what American Eagle plans to introduce "***create[s] an adverse visual impact readily discernible from the public roads***." City Code § 17.4.503.B.1.a (emphasis added).

Instead of looking out at the beautiful Utah Lake, Roderick's tenants will have an unsightly view of the concrete batching plant. And each day as they leave work the tenants will have to dust off their cars from the particulate matter (PM), silica, dust and other toxic chemicals that will settle on their vehicles due to American Eagle's operations and wonder if their constant inhalation of this dust day after day is causing them damage. In short, the concrete batching plant is a huge deterrent to potential tenants and the type of clientele that Roderick Enterprises usually attracts.

## V. American Eagle Cannot Be Trusted to Maintain Mitigating Measures

Undoubtedly, American Eagle will try to convince the Planning Commission that it can implement mitigating measures such as a dust control plan. First, there is no good science or documentation presented that any such mitigating measures work. If they did, concrete batch plants wouldn't be on the EPA's watch list and among its enforcement priorities. Second, American Eagle cannot be trusted to maintain compliance with the law. For example, **American Eagle constructed its facility prior to ever seeking a building permit or zoning clearance from the City and only stopped its operations after being red-tagged by the City's code enforcement officers**.

American Eagle constructed everything you see in **Exhibits 16-18** without a building permit or zoning clearance. These pictures were taken from 1700 South and demonstrate the adverse visual impact readily discernible from the public roads. If American Eagle tried to fly under the radar when it came into the City, what will it do if the Planning Commission approves its site plan? Unfortunately, American Eagle has already demonstrated that it refuses to play by the rules and cannot be trusted to comply with them. Thus any mitigating measure imposed by the Planning Commission are likely to be ignored and ineffective.

## VI. Conclusion

The Planning Commission should deny American Eagle's site plan for at least the following reasons:

- American Eagle's operation violates City Code § 17.4.503.A because it is not engaged in "light" manufacturing and processing "with minimum conflict or deleterious effect on surrounding properties"

Attachment: 2. Site Plan (American Eagle Appeal)

- American Eagle's operation violates City Code § 17.4.503.A because it does not operate "under conditions which limit the generation of noise, vibration, smoke, odor, dust, fumes, or hazard"
- American Eagle's operation violates City Code §§ 17.4.503.B and City Code § 17.1.200 because the code does not expressly list a concrete batching plant as a permitted or conditional use—it is a prohibited use
- American Eagle's operation violates City Code § 17.4.503.B.1.a because it produces noxious odors, fumes, smoke, noise, vapors, vibrations, and conditions which are harmful to persons
- American Eagle's operation violates City Code § 17.4.503.B.1.a because it creates an adverse visual impact readily discernible from the public roads
- American Eagle violates City Code § 17.4.503.I.1 because most of its operations are not conducted within a fully enclosed building and its outdoor uses cannot be customarily and appropriately conducted in the open

Due to the significant, multi-million-dollar investment Roderick Enterprises has made in reliance upon the City's zoning laws, it will do what is necessary to ensure that American Eagle complies with the law. Roderick Enterprises will exhaust any and all administrative remedies that it has under the City Code and seek relief on appeal in the district court, if necessary, pursuant to Utah Code Ann. § 10-9a-801(3)(b)-(c) based upon the fact that, among other things, any approval of American Eagle's project would be "illegal" and "not supported by substantial evidence in the record." Accordingly, we respectfully request that you deny American Eagle's application.

Sincerely,

**MCDONALD FIELDING**

Daniel J. McDonald

Attachment: 2. Site Plan (American Eagle Appeal)

**Enclosures**

Ex. 1 – Aerial Map
Ex. 2 – EPA's Cement Manufacturing Enforcement Initiative
Ex. 3 – EPA's Emmission Factor Documentation – Concrete Batching
Ex. 4 – OSHA Concrete Manufacturing Pamphlet
Ex. 5 – Scholarly research – *Journal of Physics: Conference Series*
Ex. 6 – Scholarly research – *Atmospheric Environment*
Ex. 7 – Scholarly research – *African Journal of Microbiology Research*
Ex. 8 – UPHE 2019 Report on Air Pollution and Health Research
Ex. 9 – Utah Dept. of Health, Burea of Epidemiology Assessment – Silicosis and Lung Cancer
Ex. 10 – FHWA Roadway Construction Noise Model User's guide
Ex. 11 - Scholarly research – University of Texas School of Law
Ex. 12 – Image 1 – American Eagle's Magna Facility
Ex. 13 – Image 2 – American Eagle's Magna Facility
Ex. 14 – Image 3 – American Eagle's Magna Facility
Ex. 15 – Image 4 – American Eagle's Magna Facility
Ex. 16 – Image 1 – Illegally-constructed American Fork Facility
Ex. 17 – Image 2 – Illegally-constructed American Fork Facility
Ex. 18 – Image 3 – Illegally-constructed American Fork Facility

Attachment: 2. Site Plan (American Eagle Appeal)

# Exhibit 1

Roderick Enterprises
North Pointe Class 'A' Business Park
±400,000 SF

Roderick Enterprises
Catalyst Class 'A' Business Park
+1.2 Million SF



American Eagle
Proposed Batch Plant

Attachment: 2. Site Plan (American Eagle Appeal)

100 East

1500 South

BLDG 9
145,364 SF

150 East

BLDG 8
139,984 SF

BLDG 2
136,436 SF

400 East

BLDG 1
169,948 SF

500 East

1600 South

BLDG 7
90,627 SF

BLDG 6
96,401 SF

BLDG 5
136,502 SF

BLDG 4
162,545 SF

BLDG 3
154,689 SF

1700 South

aeurbia
architects and engineers



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Attachment: 2. Site Plan (American Eagle Appeal)




Attachment: 2. Site Plan (American Eagle Appeal)




Attachment: 2. Site Plan (American Eagle Appeal)

5.2.b

Exhibit 2

An official website of the United States government.

Close

We've made some changes to EPA.gov. If the information you are looking for is not here, you may be able to find it on the EPA Web Archive or the January 19, 2017 Web Snapshot.

# Cement Manufacturing Enforcement Initiative

The cement manufacturing industry was an EPA New Source Review/Prevention of Significant Deterioration (NSR/PSD) national enforcement initiative in fiscal years 2008-2010 and was continued as a Reducing Air Pollution from the Largest Sources national enforcement initiative for fiscal years 2011-2013. The cement sector is the third largest industrial source of pollution, emitting more than 500,000 tons per year of sulfur dioxide, nitrogen oxide, and carbon monoxide. Beginning in 2008, EPA has pursued a coordinated, integrated compliance and enforcement strategy to address Clean Air Act New Source Review compliance issues at the nation's cement manufacturing facilities.

On this page:


- Health and Environmental Effects of Cement Plant Emissions
- Cement Plant Settlements
- Cement Plant Lawsuit


## Health and Environmental Effects of Cement Plant Emissions

Cement plants are a significant source of sulfur dioxide, nitrogen oxide and carbon monoxide, which are associated with the following health and environmental impacts:

- Nitrogen oxide ($NO_x$) can cause or contribute to a variety of health problems and adverse environmental impacts, such as ground-level ozone, acid rain, global warming, water quality deterioration, and visual impairment. Affected populations include children, people with lung diseases such as asthma, and exposure to these conditions can cause damage to lung tissue for people who work or exercise outside.
- Sulfur dioxide ($SO_2$) in high concentrations can affect breathing and may aggravate existing respiratory and cardiovascular disease. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children, and the elderly. $SO_2$ is also a primary contributor to acid deposition, or acid rain.

Attachment: 2. Site Plan (American Eagle Appeal)

- Carbon monoxide (CO) can cause harmful health effects by reducing oxygen delivery to the body's organs and tissues, as well as adverse effects on the cardiovascular and central nervous systems. CO also contributes to the formation of smog (ground-level ozone), which can cause respiratory problems.

# Cement Plant Settlements

- Lone Star Industries, Inc. (Buzzi) (8/01/16)
- Cemex, Inc., (07/27/16)
- Ash Grove (6/19/13)
- Holcim Hagerstown Maryland (7/11/13)
- Cemex Inc. (Lyons) (4/19/13)
- Essroc Cement Company (12/29/11)
- California Portland Cement Company (12/15/11)
- CEMEX Fairborn Plant (2/10/11)
- Lafarge North America, Inc. (1/21/10)
- Cemex (California) (1/15/09)
- St. Mary's Cement (Illinois) (9/08/08)

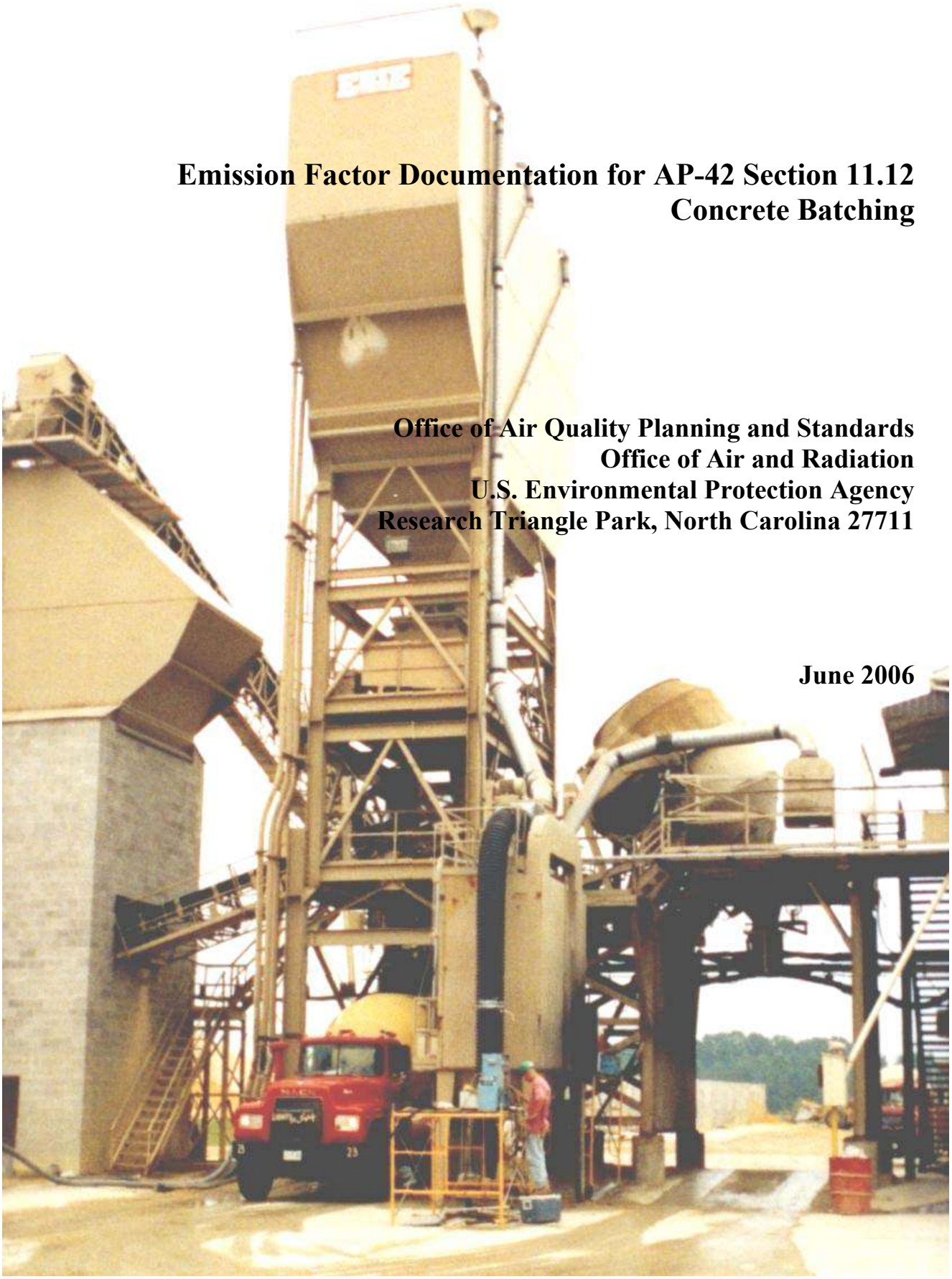
# Cement Plant Lawsuits

- Cemex Complaint

LAST UPDATED ON AUGUST 14, 2019

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# Exhibit 3



## Emission Factor Documentation for AP-42 Section 11.12 Concrete Batching

Office of Air Quality Planning and Standards
Office of Air and Radiation
U.S. Environmental Protection Agency
Research Triangle Park, North Carolina 27711

June 2006

Attachment: 2. Site Plan (American Eagle Appeal)

Table of Contents


Section 1 Introduction ..... 1
Section 2 AP-42 Description of the Concrete Batching Industry ..... 2

Section 3 Quality Rating System ..... 7
3.1 Emission Data Quality Rating System ..... 7
3.2 Emission Factor Quality Rating System ..... 8
References for Section 3 ..... 8

Section 4 Emission Factors' Development ..... 9
4.1 Reference 1 ..... 9
4.2 Reference 2 ..... 34
4.3 Reference 3 ..... 49
4.4 Reference 4 ..... 50
4.5 Reference 5 ..... 52
4.6 Information Useful for Estimating Emission Factors for Traversing Paved and Unpaved Roads and for Loading Aggregate and Sand to Elevated Bins ..... 52
4.7 Reference 6 ..... 57
References for Section 4 ..... 74

Section 5 Final Emission Factors ..... 75
5.1 Truck Mix Loading Emission Factors ..... 75
5.1.1 General Emission Factors ..... 79
5.1.2 Site Specific Equations ..... 80
5.2 Truck Mix and Central Loading Emission Factors ..... 104
5.3 Emission Factor Values ..... 108
5.4 Notes for Final Emission Factors ..... 114

Appendix A Technical Notes for Reference 1 Tables ..... 115

Appendix B Technical Notes for Reference 2 Tables ..... 117


Attachment: 2. Site Plan (American Eagle Appeal)

List of Tables


Table 1.1 $PM_{10}$ Emission Factors For Concrete Batching ..... 12
Table 1.2 $PM_{10}$ Emission Factors For Concrete Batching ..... 13
Table 1.3 $PM_{10}$ Emission Factors For Concrete Batching ..... 14

Table 2.1 Controlled $PM_{10}$ Emission Factors For Concrete Batching ..... 15
Table 2.2 Controlled $PM_{10}$ Emission Factors For Concrete Batching ..... 16
Table 2.3 Controlled $PM_{10}$ Emission Factors For Concrete Batching ..... 17

Table 3.1 PM Emission Factors For Concrete Batching ..... 18
Table 3.2 PM Emission Factors For Concrete Batching ..... 19
Table 3.3 PM Emission Factors For Concrete Batching ..... 20

Table 4.1 Controlled PM Emission Factors For Concrete Batching ..... 21
Table 4.2 Controlled PM Emission Factors For Concrete Batching ..... 22
Table 4.3 Controlled PM Emission Factors For Concrete Batching ..... 23

Table 5.1 Metal Emission Factors For Concrete Batching ..... 24
Table 5.2 Metal Emission Factors For Concrete Batching ..... 25
Table 5.3 Metal Emission Factors For Concrete Batching ..... 26
Table 5.4 Metal Emission Factors For Concrete Batching ..... 27
Table 5.5 Metal Emission Factors For Concrete Batching ..... 28

Table 6.1 Controlled Metal Emission Factors For Concrete Batching ..... 29
Table 6.2 Controlled Metal Emission Factors For Concrete Batching ..... 30
Table 6.3 Controlled Metal Emission Factors For Concrete Batching ..... 31
Table 6.4 Controlled Metal Emission Factors For Concrete Batching ..... 32
Table 6.5 Controlled Metal Emission Factors For Concrete Batching ..... 33

Table 7 $PM_{10}$ Emission Factors For Concrete Batching ..... 37
Table 8 Controlled $PM_{10}$ Emission Factors For Concrete Batching ..... 38
Table 9 PM Emission Factors For Concrete Batching ..... 39
Table 10 Controlled PM Emission Factors For Concrete Batching ..... 40
Table 11 Controlled Cement Silo Filling Emission Factors ..... 41
Table 12 Controlled Emission Factors For Fly Ash Silo Filling ..... 42
Table 13.1 Metal Emission Factors For Concrete Batching ..... 43
Table 13.2 Metal Emission Factors For Concrete Batching ..... 44
Table 13.3 Average Of Metal Emission Factors For Concrete Batching ..... 45

Table 14.1 Controlled Metal Emission Factors For Concrete Batching ..... 46
Table 14.2 Controlled Metal Emission Factors For Concrete Batching ..... 47
Table 14.3 Controlled Metal Emission Factors For Concrete Batching ..... 48

Table 15.1 Percent Silt & Silt Loading Of Road Surfaces ..... 53


Attachment: 2. Site Plan (American Eagle Appeal)

Table 16.1 Silt & Moisture Content Of Aggregate & Sand ..... 54
Table 16.2 Batch Formulation Summary Statistics ..... 55
Table 16.3 Emission Factors For Aggregate & Sand Transfer To Elevated Bins ..... 56

Table 17.1 Reference 6 Truck Mix Emission Factor Test Results ..... 60
Table 17.2 Reference 6 Central Mix Emission Factor Test Results ..... 60
Table 17.3 Truck Mix Uncontrolled Emission Factor Test Results ..... 61
Table 17.4 Central Mix Uncontrolled Emission Factor Test Results ..... 61
Table 17.5 Wake Forest RMCC Truck Mix Emissions Data ..... 62
Table 17.6 Wake Forest RMCC Central Mix Emissions Data ..... 63
Table 17.7 S.T. Wooten Central Mix Emissions Data ..... 64
Table 17.8 Chandler Concrete, Troutville Truck Mix Emissions Data ..... 65
Table 17.9 Concrete Supply, Rock Hill Truck Mix Emissions Data ..... 66
Table 17.10 RMC Carolina Materials Central Mix Emissions Data ..... 67
Table 17.11 Wake Forest, RMCC Truck Mix Production Data ..... 68
Table 17.12 Wake Forest, RMCC Central Mix Production Data ..... 69
Table 17.13 S.T. Wooten Concrete Central Mix Production Data ..... 70
Table 17.14 Chandler Concrete Truck Mix Production Data ..... 70
Table 17.15 Concrete Supply Truck Mix Production Data ..... 71
Table 17.16 RMC Carolina Materials Central Mix Production Data ..... 71
Table 17.17 Raw Material Particle Size Distribution, Moisture Levels and Silt Contents ..... 72
Table 17.18 Wind Speed Averages ..... 73

Table 18.1 Central Mix Loading Operation (Controlled) Emission Factor Data ..... 75
Table 18.2 Truck Mix Loading Operation (Controlled) Emission Factor Data ..... 76
Table 18.3 Central Mix Loading Operation (Uncontrolled) Emission Factor Data ..... 77
Table 18.4 Truck Mix Loading Operation (Uncontrolled) Emission Factor Data ..... 78
Table 18.5 General Emission Factors, Loading Operations, Controlled ..... 79
Table 18.6 General Emission Factors, Loading Operations, Uncontrolled ..... 80
Table 18.7 Regression Output for Air Velocity and Moisture for Uncontrolled PM for Truck Mix Operations ..... 83
Table 18.8 Regression Output for Air Velocity and Moisture for Uncontrolled $PM_{10}$ Emissions from Truck Mix Operations ..... 84
Table 18.9 Regression Output for Air Velocity and Moisture for Uncontrolled $PM_{2.5}$ Emissions from Truck Mix Operations ..... 85
Table 18.10 Regression Output for Air Velocity and Moisture for Controlled PM Emissions from Truck Mix Operations ..... 86
Table 18.11 Regression Output for Slope and Intercept Coefficients for Controlled PM for Truck Mix Operations ..... 87
Table 18.12 Regression Output for Moisture and Air Velocity Exponents for Controlled $PM_{10}$ Emissions From Truck Mix Operations ..... 88
Table 18.13 Regression Output for Moisture and Air Velocity Exponents for Controlled $PM_{2.5}$ Emissions From Truck Mix Operations ..... 89



Attachment: 2. Site Plan (American Eagle Appeal)

Table 18.14 Regression Output for Moisture and Air Velocity for Uncontrolled PM Emissions From Central Mix Operations ..... 90
Table 18.15 Regression Output for Moisture and Air Velocity for Controlled PM Emissions From Central Mix Operations ..... 91

Table 18.16 Regression Output for Slope and Intercept Coefficients for Uncontrolled PM Emissions for Central Mix Operations ..... 92
Table 18.17 Regression Output for Moisture and Air Velocity for Controlled PM Emissions from Central Mix Operations ..... 93
Table 18.18 Regression Output for Moisture and Air Velocity for Uncontrolled $PM_{10}$ Emissions from Central Mix Operations ..... 94
Table 18.19 Regression Output for Moisture and Air Velocity for Controlled $PM_{10}$ Emissions from Central Mix Operations ..... 95
Table 18.20 Regression Output for Slope and Intercept Coefficients for Uncontrolled $PM_{10}$ Emissions for Central Mix Operations ..... 96
Table 18.21 Regression Output for Slope and Intercept Coefficients for Controlled $PM_{10}$ Emissions for Central Mix Operations ..... 97
Table 18.22 Regression Output for Moisture and Air Velocity for Uncontrolled $PM_{2.5}$ Emissions from Central Mix Operations ..... 98
Table 18.23 Regression Output for Moisture and Air Velocity for Controlled $PM_{2.5}$ Emissions from Central Mix Operations ..... 99

Table 18.24 Equation Parameters for Controlled Truck Mix Operations ..... 101
Table 18.25 Equation Parameters for Central Mix Operations ..... 101
Table 18.26 Truck Mix Loading Metals Emission Factors ..... 105
Table 18.27 Central Mix Loading Metals Emission Factors ..... 107

Table 19.1 Cement Silo Filling Emission Factors ..... 109
Table 19.2 Cement Supplement Silo Filling Emission Factors ..... 110
Table 19.3 Emission Factor for Aggregate & Sand Transfer to Elevated Bins ..... 111
Table 19.4 Weigh Hopper Loading Emission Factors ..... 112
Table 19.5 Plant Wide Emission Factors ..... 113

Attachment: 2. Site Plan (American Eagle Appeal)

List of Figures

Figure 1 Figure 11.12-1. Typical Concrete Batching Process .....4

Figure 5.1 Truck Mix Emission Factor Data, EPA AP-42 Section 11.12, References 1 and 2 .....81
Figure 5.2 Central Mix Emission Factor Data, EPA AP-42 Section 11.12, Reference 1 .....81
Figure 5.3 Truck Mix Emission Factor Data, Reference 6 .....82
Figure 5.4 Controlled Particulate Matter Emissions from Truck Mix Operations....101
Figure 5.5 Uncontrolled Particulate Matter Emissions for Central Mix Operations.102
Figure 5.6 Controlled Particulate Matter Emissions for Central Mix Operations.....102
Figure 5.7 Uncontrolled $PM_{10}$ Emissions from Central Mix Operations.....103
Figure 5.8 Controlled $PM_{10}$ Emissions from Central Mix Operations.....103

Attachment: 2. Site Plan (American Eagle Appeal)

# 1. INTRODUCTION

The document "Compilation of Air Pollutant Emissions Factors" (AP-42) has been published by the U.S. Environmental Protection Agency (EPA) since 1972. Supplements to AP-42 have been routinely published to add new emission source categories and to update existing emission factors. AP-42 is routinely updated by EPA to respond to new emission factor needs of EPA, state and local air pollution control programs and industry.

An emission factor relates the quantity (weight) of pollutants emitted to a unit of activity of the source. With differing levels of accuracy, the uses of the emission factors reported in AP-42 include:

- Estimates of area-wide emissions;
- Estimates of emissions from a specific facility; and
- Evaluation of emissions relative to ambient air quality.

The purpose of this report is to document the development of the emission factors presented in AP-42 Section 11.12 Concrete Batching.

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## 2. AP-42 DESCRIPTION OF THE CONCRETE BATCHING INDUSTRY

AP-42 11.12-1 Process Description [1-5]

Concrete is composed essentially of water, cement, sand (fine aggregate) and coarse aggregate. Coarse aggregate may consist of gravel, crushed stone or iron blast furnace slag. Some specialty aggregate products could be either heavyweight aggregate (of barite, magnetite, limonite, ilmenite, iron or steel) or lightweight aggregate (with sintered clay, shale, slate, diatomaceous shale, perlite, vermiculite, slag pumice, cinders, or sintered fly ash). Supplementary cementitious materials, also called mineral admixtures or pozzolan minerals may be added to make the concrete mixtures more economical, reduce permeability, increase strength, or influence other concrete properties. Typical examples are natural pozzolans, fly ash, ground granulated blast-furnace slag, and silica fume, which can be used individually with portland or blended cement or in different combinations. Chemical admixtures are usually liquid ingredients that are added to concrete to entrain air, reduce the water required to reach a required slump, retard or accelerate the setting rate, to make the concrete more flowable or other more specialized functions.

Approximately 75 percent of the U.S. concrete manufactured is produced at plants that store, convey, measure and discharge these constituents into trucks for transport to a job site. At most of these plants, sand, aggregate, cement and water are all gravity fed from the weight hopper into the mixer trucks. The concrete is mixed on the way to the site where the concrete is to be poured. At some of these plants, the concrete may also be manufactured in a central mix drum and transferred to a transport truck. Most of the remaining concrete manufactured are products cast in a factory setting. Precast products range from concrete bricks and paving stones to bridge girders, structural components, and panels for cladding. Concrete masonry, another type of manufactured concrete, may be best known for its conventional 8 x 8 x 16-inch block. In a few cases concrete is dry batched or prepared at a building construction site. Figure 11.12-1 is a generalized process diagram for concrete batching.

The raw materials can be delivered to a plant by rail, truck or barge. The cement is transferred to elevated storage silos pneumatically or by bucket elevator. The sand and coarse aggregate are transferred to elevated bins by front end loader, clam shell crane, belt conveyor, or bucket elevator. From these elevated bins, the constituents are fed by gravity or screw conveyor to weigh hoppers, which combine the proper amounts of each material.

11.12-2 Emissions and Controls [6-8]

Particulate matter, consisting primarily of cement and pozzolan dust but including some aggregate and sand dust emissions, is the primary pollutant of concern. In addition, there are emissions of metals that are associated with this particulate matter. All but one of the emission points are fugitive in nature. The only point sources are the transfer of cement and pozzolan material to silos, and these are usually vented to a fabric filter or "sock". Fugitive



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sources include the transfer of sand and aggregate, truck loading, mixer loading, vehicle traffic, and wind erosion from sand and aggregate storage piles. The amount of fugitive emissions generated during the transfer of sand and aggregate depends primarily on the surface moisture content of these materials. The extent of fugitive emission control varies widely from plant to plant. Particulate emission factors for concrete batching are give in Tables 11.12-1 and 11.12-2.

Types of controls used may include water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, central duct collection systems, and the like. A major source of potential emissions, the movement of heavy trucks over unpaved or dusty surfaces in and around the plant, can be controlled by good maintenance and wetting of the road surface.

Predictive equations that allow for emission factor adjustment based on plant specific conditions are given in the Background Document for Chapter 11.12 and Chapter 13. Whenever plant specific data are available, they should be used with these predictive equations (e.g. Equations 11.12-1 through 11.12-3) in lieu of the general fugitive emission factors presented in Table 11.12-1, 11.12-2, and 11.12-5 through11.12-8 in order to adjust to site specific conditions, such as moisture levels and localized wind speeds.

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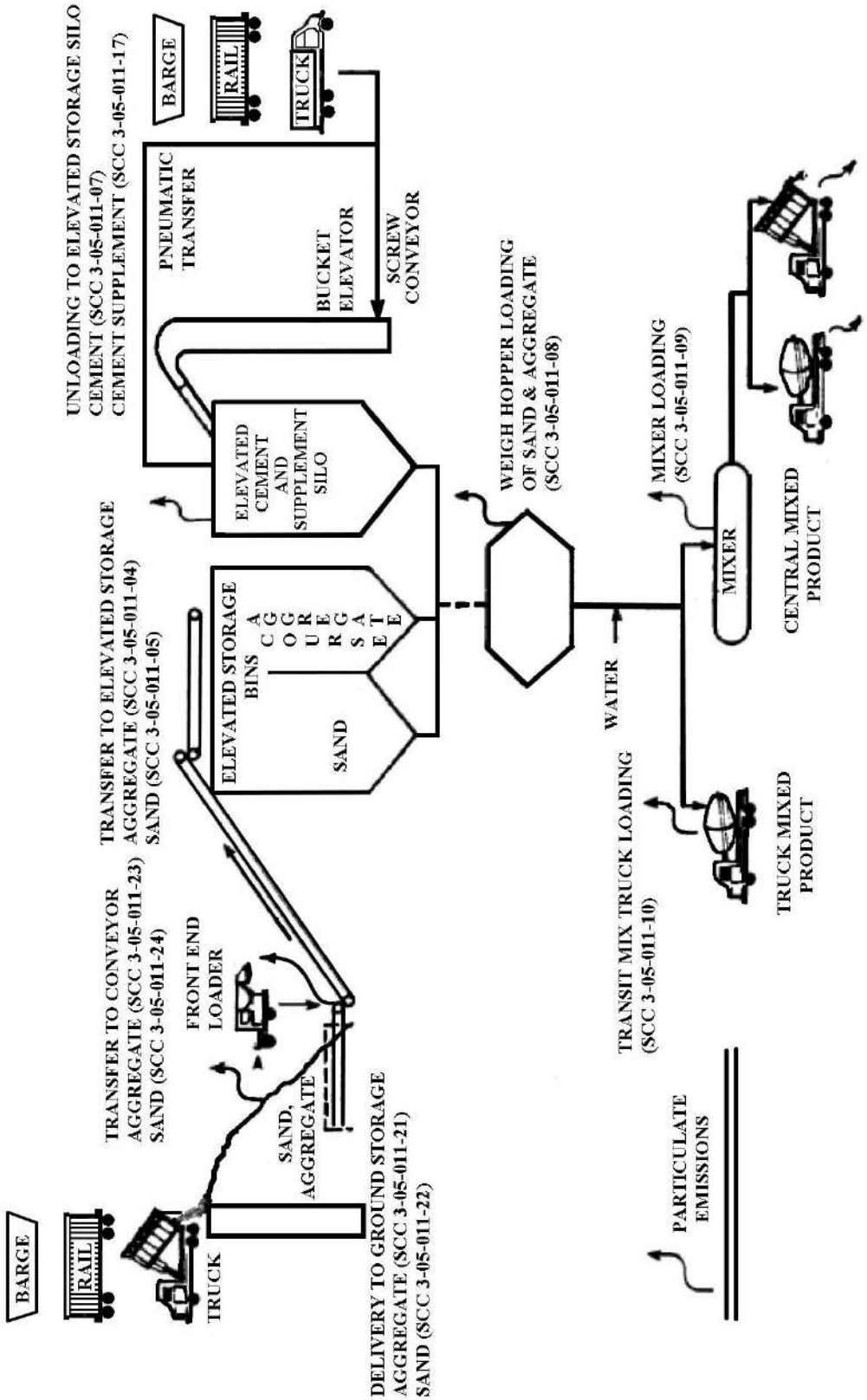



Figure 11.12-1. Typical Concrete Batching Process.



Attachment: 2. Site Plan (American Eagle Appeal)

## References for Section 11.12

1. *Air Pollutant Emission Factors*, APTD-0923, U.S. Environmental Protection Agency, Research Triangle Park, NC, April 1970

2. *Air Pollution Engineering Manual*, 2nd Edition, AP-40, U.S. Environmental Protection Agency, Research Triangle Park, NC, 1974. Out of Print.

3. Telephone and written communication between Edwin A. Pfetzing, PEDCo Environmental., Inc., Cincinnati, OH, and Richards Morris and Richard Meininger, National Ready Mix Concrete Association, Silver Spring, MD, May 1984.

4. *Development Document for Effluent Limitations Guidelines and Standards of Performance, The Concrete Products Industries, Draft*, U.S. Environmental Protection Agency, Washington, DC, August 1975.

5. Portland Cement Association. (2001). Concrete Basics. Retrieved August 27, 2001 from the World Wide Web: http://www.portcement.org/cb/

6. *Technical Guidance for Control of Industrial Process Fugitive Particulate Emissions*, EPA-450/3-77-010, U.S. Environmental Protection Agency, Research Triangle Park, NC, March 1977

7. *Fugitive Dust Assessment at Rock and Sand Facilities in the South Coast Air Basin*, Southern California Rock Products Association and Southern California Ready Mix Concrete Association, Santa Monica, CA, November 1979.

8. Telephone communication between T.R. Blackwood, Monsanto Research Corp., Dayton, OH, and John Zoller, PEDCo Environmental, Inc., Cincinnati, OH, October 18, 1976.

9. *Final Test Report for USEPA* [sic] *Test Program Conducted at Chaney Enterprises Cement Plant*, ETS, Inc., Roanoke, VA April 1994

10. *Final Test Report for USEPA* [sic] *Test Program Conducted at Concrete Ready Mixed Corporation*, ETS, Inc., Roanoke, VA April 1994

11. *Emission Test for Tiberi Engineering Company*, Alar Engineering Corporation, Burbank, IL, October, 1972.

12. *Stack Test "Confidential"* (Test obtained from State of Tennessee), Environmental Consultants, Oklahoma City, OK, February 1976.

Attachment: 2. Site Plan (American Eagle Appeal)

13. Source Sampling Report, Particulate Emissions from Cement Silo Loading, Specialty Alloys Corporation, Gallaway, Tennessee, Reference number 24-00051-02, State of Tennessee, Department of Health and Environment, Division of Air Pollution Control, June 12, 1984.

14. Richards, J. and T. Brozell. "*Ready Mixed Concrete Emission Factors, Final Report*" Report to the Ready Mixed Concrete Research Foundation, Silver Spring, Maryland. August 2004.

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# *3. QUALITY RATING SYSTEMS*

## 3.1 Emission Data Quality System

The rating system specified by the Emission Factor and Inventory Group (EFIG) for preparing AP-42 sections was used as a general guide in rating the emission data used in this report. The rating system is as follows:

**A** Multiple tests that were preformed on the same source using sound methodology and reported in enough detail for adequate validation. These tests do not necessarily conform to the methodology specified in EPA reference test methods, although these methods were used as a guide for the methodology actually used.

**B** Tests that were preformed by a generally sound methodology but lack enough detail for adequate validation.

**C** Tests that were based on an untested or new methodology or that lacked a significant amount of background data.

**D** Tests that were based on a generally unacceptable method but may provide an order-of-magnitude value for the source.

The following criteria were used to evaluate source test reports for sound methodology and adequate detail:

1. Source operation. The manner in which the source was operated is well documented in the report. The source was operating within typical parameters during the test.
2. Sampling procedures. The sampling procedures conformed to a generally acceptable methodology. If actual procedures deviated from accepted method, the deviations are well documented. When this occurred, an evaluation was made of the extent to which such alternative procedures could influence the test results
3. Sampling and process data. Adequate sampling and process data are documented in the report, and any variations in the sampling and process operations are noted. If a large spread between test results cannot be explained by information contained in the test report, the data are suspect and were given a lower rating.
4. Analysis and calculations. The test reports contain original raw data sheets. The nomenclature and equations used were compared to those (if any) specified by EPA to establish equivalency. The depth of review of the calculation was dictated by the reviewer's confidence in the ability and conscientiousness of the tester, which in turn was based on factors such as consistency of results and completeness of other areas of the report.



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## 3.2 Emission Factor Quality Rating System

The quality rating of each of the final emission factors was guided by the following general criteria:

A Excellent: Developed only from A-rated test data taken from many randomly chosen facilities in the industry population. The source category is specific enough so that variability within the source category population may be minimized

B Above Average: Developed only from A-rated test data from a reasonable number of facilities. Although no specific bias is evident, it is not clear if the facilities tested represent a random sample of the industries. The source category is specific enough so that variability within the source category population may be minimized.

C Average: Developed only from A- and B-rated test data from a reasonable number of facilities. Although no specific bias is evident, it is not clear if the facilities tested represent a random sample of the industry. In addition, the source category is specific enough so that variability within the source category population may be minimized.

D Below Average: The emission factor was developed only from A- and B-rated test data from a small number of facilities, and there is reason to suspect that these facilities do not represent a random sample of the industry. There also may be evidence of variability within the source category population. Limitations on the use of the emission factor are noted in the emission factor table.

E Poor: The emission factor was developed from C- and D-rated test data, and there is reason to suspect that the facilities tested do not represent a random sample of the industry. There also may be evidence of variability within the source category population. Limitations on the use of these factors are always noted.

## References for Section 3

1. *Procedures for Preparing Emission Factor Documents*, EPA-454/R-95-015, Office of Air Quality Planning Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC, November 1997.

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# 4. EMISSION FACTOR DEVELOPMENT

Six emission test reports were used to develop emission factors for AP-42 Section 11.12, Concrete Batching. Two of the tests (References 1 and 2) were sponsored by EPA in order to add $PM_{10}$ emission factors and to improve the quality of the other concrete batching emission factors. The third test report (Reference 3) was produced by a company that sold a control device for silo filling operations. The fourth test report (Reference 4) was produced by a consulting firm to determine whether a facility was in compliance with Oklahoma regulations. The fifth test report (Reference 5) was produced by a State agency to evaluate the performance of a non commercial silo filling emissions control device. Information from AP-42 Section 13.2.4, *Aggregate Handling And Storage Piles* was used to provide the basis for material transfer operations that occur at but were not measured at concrete batch plants. The sixth set of test reports (Reference 6) were sponsored by The Ready Mixed Concrete Research Foundation (RMC Research Foundation) at six ready mixed concrete facilities located in North Carolina, Virginia, and South Carolina. The purpose of the RMC Research Foundation project was to improve concrete batching plant emissions factors for total particulate matter, $PM_{10}$, $PM_{10-2.5}$, $PM_{2.5}$, and arsenic from truck mix and central mix process operations at ready mixed concrete plants.

## 4.1 Reference 1

This report (Reference 1 presents the results of emission testing on a typical concrete batching operation performed at Chaney Enterprises in Waldorf, Maryland. This reference includes measurements of the amounts of PM, $PM_{10}$ and then select metals that were released during truck mix loadings, central mix loadings, and silo fillings. In addition, tests were conducted on process material samples and road surface samples.

Several kinds of tests and test methods were used:

- EPA Reference Test Method 201A was used to collect emissions released during the truck loadings and the silo fillings. In addition to the usual recovering and weighing of collected $PM_{10}$, larger particulate (greater than ten micrometers) collected in the probe and the cyclone was also recovered and weighed.
- Sieve and moisture analyses were conducted on the process materials (aggregates) and the road materials.
- Laboratory tests were conducted on the emissions collected during the tests as well as the material collected for the sieve analysis to determine the amount of each of the ten metals that were contained in these materials.

Emissions resulting from the truck mix and central mix loadings were controlled with a shroud connected to a centrally located pulse-jet type baghouse (C & W Model No. RA 140-S). In order to develop both controlled and uncontrolled emission factors, tests were conducted at both the inlet and outlet of the dust collector. Also, visual estimates of the capture efficiency of the control device were made during the individual truck mix loadings and central mix operations. This information made it possible to estimate the emission not captured during the test.

Emissions due to the loading of silos were also controlled by the central dust collector. As a consequence of the frequency of the truck loadings, only one test run captured emissions due solely to silo fillings. In the other silo emission tests, an attempt was made to subtract out the emissions from the truck loadings. Unfortunately, the resulting values are significantly different from the silo only emission test and therefore are not used for emission factor development.



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Most of the emission data that were used to develop the controlled and the uncontrolled PM and $PM_{10}$ emission factors for truck mix loading and central mix loading warrant an A rating. However, the methodology used to estimate the capture efficiencies of the control device is qualitative rather than quantitative. This issue is significant since the uncontrolled and controlled emission factors for truck loading depend significantly on the capture efficiency estimates. Due to the subjective nature of the capture efficiency estimates, the emission data set for the truck loading emission factors is **rated B**.

The emission data from run number 7 that were used to develop the usable controlled and uncontrolled, PM, $PM_{10}$ and metal emission factors for cement silo fillings are generally of the same quality as the aforementioned test data. However, since only one test run was used to develop each of these emission factor types, this test data set is **rated C**

The data sets used to develop the emission factors for batching by central mixing are **rated A**, since the methodology used to collect the data was sound and the dependence on capture efficiency estimates are minimal.

The following tables present the data that were used to develop the emission factors for Reference 1 as well as the emission factors themselves (with the exception of the data and emission factors associated with traversing paved and unpaved roads and for loading aggregate and sand to elevated bins). The layouts of the tables make the methods used to develop these emission factors largely self-evident (see the technical notes in Appendix A for more information).

Note that "fines" stands for cement, cement supplement, and the silt from sand and course aggregate.

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# Reference 1
# Emission Factor Tables

| Tables | Emission Factor Types |
|---|---|
| 1.1 - 1.3 | $PM_{10}$ Emission Factors |
| 2.1 - 2.3 | Controlled $PM_{10}$ Emission Factors |
| 3.1 - 3.3 | PM Emission Factors |
| 4.1 - 4.3 | Controlled PM Emission Factors |
| 5.1 - 5.5 | Metal Emission Factors |
| 6.1 - 6.5 | Controlled Metal Emission Factors |

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## Table 1.1

# *PM-10 EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | PM-10 per hour IN INLET (lb) | TIME (min) | PM-10 IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL PM-10 (lb) | CONCRETE MADE ($yd^3$) | PM-10 per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM-10 per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM-10 per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE (lb) | SILT FROM AGGR. ** (lb) | PM-10 per 1000 lb Solid Raw Material (lb) | PM-10 per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | |
| RUN 2 | 4.013 | 30.2 | 2.020 | 72 | 2.805 | 41.5 | 0.06760 | 16,950 | 0.16551 | 12,250 | 0.09607 | 59,950 | 1,343.94 | 130,020 | 320.69 | 0.01280 | 0.09089 |
| RUN 4 | 2.970 | 30.0 | 1.485 | 79 | 1.880 | 54.0 | 0.03481 | 27,840 | 0.06752 | 0 | 0.06752 | 73,600 | 1,649.94 | 173,150 | 427.07 | 0.00685 | 0.06283 |
| RUN 9 | 1.588 | 30.1 | 0.797 | 78 | 1.021 | 69.0 | 0.01480 | 39,110 | 0.02611 | 0 | 0.02611 | 104,910 | 2,351.84 | 218,940 | 540.02 | 0.00281 | 0.02432 |
| RUN 14 | 4.971 | 22.1 | 1.831 | 56 | 3.270 | 41.0 | 0.07975 | 19,180 | 0.17047 | 10,220 | 0.11121 | 54,120 | 1,213.24 | 127,300 | 313.99 | 0.01551 | 0.10572 |
| RUN 15 | 4.477 | 30.0 | 2.239 | 64 | 3.498 | 59.5 | 0.05878 | 32,650 | 0.10713 | 3,100 | 0.09784 | 80,240 | 1,798.79 | 187,330 | 462.05 | 0.01153 | 0.09202 |
| RUN 16 | 3.470 | 30.0 | 1.735 | 58 | 2.991 | 41.5 | 0.07208 | 22,010 | 0.13591 | 0 | 0.13591 | 57,510 | 1,289.24 | 133,660 | 329.67 | 0.01403 | 0.12660 |
| **AVG.** | | | | **68** | | | **0.05464** | | 0.11211 | | **0.08911** | | | | | 0.01059 | 0.08373 |
| **STD. DEV.** | | | | **10** | | | **0.02490** | | 0.05698 | | **0.03805** | | | | | 0.00482 | 0.03580 |
| ***CENTRAL MIX LOADING*** | | | | | | | | | | | | | | | | | |
| RUN 10 | 1.529 | 30.1 | 0.767 | 90 | 0.850 | 45.0 | 0.01890 | 16,280 | 0.05224 | 13,900 | 0.02818 | 68,130 | 1,527.32 | 143,470 | 353.87 | 0.00352 | 0.02652 |
| RUN 11 | 1.622 | 30.2 | 0.816 | 84 | 0.972 | 49.8 | 0.01952 | 22,340 | 0.04351 | 8,870 | 0.03114 | 70,770 | 1,586.50 | 158,600 | 391.19 | 0.00373 | 0.02929 |
| RUN 12 | 0.309 | 30.2 | 0.156 | 99 | 0.157 | 45.0 | 0.00349 | 22,130 | 0.00710 | 9,300 | 0.00500 | 59,080 | 1,324.44 | 141,640 | 349.36 | 0.00068 | 0.00475 |
| RUN 13 | 3.422 | 29.9 | 1.705 | 99 | 1.723 | 44.0 | 0.03915 | 19,240 | 0.08953 | 8,770 | 0.06150 | 66,750 | 1,496.38 | 138,830 | 342.42 | 0.00737 | 0.05771 |
| RUN 17 | 6.708 | 27.2 | 3.041 | 99 | 3.072 | 72.0 | 0.04266 | 30,950 | 0.09925 | 13,900 | 0.06849 | 104,850 | 2,350.49 | 228,760 | 564.24 | 0.00812 | 0.06431 |
| **AVG.** | | | | **94** | | | **0.02474** | | 0.05832 | | **0.03886** | | | | | 0.00468 | 0.03651 |
| **STD. DEV.** | | | | **7** | | | **0.01614** | | 0.03718 | | **0.02603** | | | | | 0.00306 | 0.02441 |

* AVG. % SILT CONTENT OF SAND : **2.2418**

** AVG. % SILT CONTENT OF AGGREGATE : **0.2467**



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## Table 1.2

# *PM-10 EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | PM-10 per hour IN INLET (lb) | TIME (min) | PM-10 IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL PM-10 (lb) | CONCRETE MADE ($yd^3$) | PM-10 per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM-10 per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM-10 per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND (lb) | COURSE AGGRE-GATE (lb) | SILT FROM AGGR. (lb) | PM-10 per 1000 lb Solid Raw Material (lb) | PM-10 per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING & CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 1 | 8.655 | 56.8 | 8.193 | 71 | 11.548 | 95.0 | 0.12156 | 48,620 | 0.23752 | 11,240 | 0.19292 | 135,290 | 3,032.89 | 281,640 | 694.67 | 0.02422 | 0.18161 |
| RUN 3 | 16.990 | 30.0 | 8.495 | 70 | 12.136 | 50.0 | 0.24271 | 27,880 | 0.43528 | 0 | 0.43528 | 67,530 | 1,513.87 | 157,500 | 388.47 | 0.04798 | 0.40748 |
| RUN 8 | 17.574 | 27.8 | 8.143 | 72 | 11.309 | 27.0 | 0.41886 | 14,170 | 0.79811 | 0 | 0.79811 | 36,030 | 807.71 | 86,430 | 213.18 | 0.08277 | 0.74447 |
| **AVG.** | | | | **71** | | | 0.26104 | | 0.49030 | | 0.47544 | | | | | 0.05166 | **0.44452** |
| **STD. DEV.** | | | | **1** | | | 0.14950 | | 0.28432 | | 0.30459 | | | | | 0.02945 | **0.28325** |
| ***CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 7 | 14.608 | 30.2 | 7.353 | 100 | 7.353 | | | 37,775 | 0.19465 | | | | | | | | |
| RUN 1 EST. | | | | | 6.224 | | | 40,299 | 0.15444 | | | | | | | | |
| RUN 3 EST. | | | | | 9.642 | | | 34,268 | 0.28138 | | | | | | | | |
| RUN 8 EST. | | | | | 10.037 | | | 31,722 | 0.31641 | | | | | | | | |
| **AVG.** | | | | | | | | | **0.23672** | | | | | | | | |
| **STD. DEV.** | | | | | | | | | **0.07502** | | | | | | | | |
| ***TRUCK MIX LOADING & NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 5 | 41.768 | 30.1 | 20.954 | 79 | 26.524 | 51.0 | 0.52007 | 11,340 | 2.33894 | 0 | 2.33894 | 26,550 | 595.19 | 158,280 | 390.40 | 0.13521 | 2.15191 |
| RUN 18 | 23.287 | 29.9 | 11.605 | 65 | 17.853 | 5.0 | 3.57067 | 1,800 | 9.91854 | 2,380 | 4.27114 | 7,260 | 162.75 | 16,570 | 40.87 | 0.63739 | 4.07274 |
| **AVG.** | | | | **72** | | | 2.04537 | | 6.12874 | | 3.30504 | | | | | 0.38630 | **3.11233** |
| **STD. DEV.** | | | | **10** | | | 2.15710 | | 5.35959 | | 1.36627 | | | | | 0.35510 | **1.35823** |
| ***NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 5 EST. | | | | | 25.492 | | | | | 30,096 | 0.84701 | | | | | | |
| RUN 18 EST. | | | | | 17.486 | | | | | 39,276 | 0.44522 | | | | | | |
| **AVG.** | | | | | | | | | | | **0.64611** | | | | | | |
| **STD. DEV.** | | | | | | | | | | | **0.28411** | | | | | | |

* AVG. % SILT CONTENT OF SAND : **2.2418**

** AVG. % SILT CONTENT OF AGGREGATE : **0.2467**



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## Table 1.3

# *PM-10 EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | PM-10 per hour IN INLET (lb) | TIME (min) | PM-10 IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL PM-10 (lb) | CONCRETE MADE ($yd^3$) | PM-10 per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM-10 per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM-10 per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE (lb) | ** SILT FROM AGGR. (lb) | PM-10 per 1000 lb Solid Raw Material (lb) | PM-10 per 1000 lb ``FINES" (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***GENERAL*** | | | | | | | | | | | | | | | | | |
| ***SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 7 | 14.608 | 30.2 | 7.353 | 100 | 7.353 | | | 37,775 | | 0 | 0.19465 | | | | | | |
| RUN 1 EST. | | | | | 6.224 | | | 40,299 | | 0 | 0.15444 | | | | | | |
| RUN 3 EST. | | | | | 9.642 | | | 34,268 | | 0 | 0.28138 | | | | | | |
| RUN 5 EST. | | | | | 25.492 | | | 0 | | 30,096 | 0.84701 | | | | | | |
| RUN 8 EST. | | | | | 10.037 | | | 31,722 | | 0 | 0.31641 | | | | | | |
| RUN 18 EST. | | | | | 17.486 | | | 0 | | 39,276 | 0.44522 | | | | | | |
| **AVG.** | | | | | | | | | | | **0.37318** | | | | | | |
| **STD. DEV.** | | | | | | | | | | | **0.25341** | | | | | | |



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 2.1**

## *CONTROLLED PM-10 EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | PM-10 per hour IN INLET (lb) | PM-10 per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | PM-10 ESCAPED INLET (lb) | PM-10 OUT OUTLET (lb) | TOTAL PM-10 RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM-10 per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM-10 per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM-10 per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE LOADED (lb) | SILT FROM AGGR. ** (lb) | PM-10 per 1000 lbs Solid Raw Material (lb) | PM-10 per 1000 lbs ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| RUN 2 | 4.013 | 0.00450 | 30.2 | 72 | 0.78551 | 0.00227 | 0.78777 | 41.5 | 0.01898 | 16,950 | 0.04648 | 12,250 | 0.02698 | 59,950 | 1,344 | 130,020 | 321 | 0.00359 | 0.02552 |
| RUN 4 | 2.970 | 0.00450 | 30.0 | 79 | 0.39475 | 0.00225 | 0.39700 | 54.0 | 0.00735 | 27,840 | 0.01426 | 0 | 0.01426 | 73,600 | 1,650 | 173,150 | 427 | 0.00145 | 0.01327 |
| RUN 9 | 1.588 | 0.00450 | 30.1 | 78 | 0.22470 | 0.00226 | 0.22695 | 69.0 | 0.00329 | 39,110 | 0.00580 | 0 | 0.00580 | 104,910 | 2,352 | 218,940 | 540 | 0.00063 | 0.00540 |
| RUN 14 | 4.971 | 0.00450 | 22.1 | 56 | 1.43863 | 0.00166 | 1.44029 | 41.0 | 0.03513 | 19,180 | 0.07509 | 10,220 | 0.04899 | 54,120 | 1,213 | 127,300 | 314 | 0.00683 | 0.04657 |
| RUN 15 | 4.477 | 0.00450 | 30.0 | 64 | 1.25916 | 0.00225 | 1.26141 | 59.5 | 0.02120 | 32,650 | 0.03863 | 3,100 | 0.03528 | 80,240 | 1,799 | 187,330 | 462 | 0.00416 | 0.03319 |
| RUN 16 | 3.470 | 0.00450 | 30.0 | 58 | 1.25638 | 0.00225 | 1.25863 | 41.5 | 0.03033 | 22,010 | 0.05718 | 0 | 0.05718 | 57,510 | 1,289 | 133,660 | 330 | 0.00590 | 0.05327 |
| **AVG.** | | | | **68** | | | | | **0.01938** | | 0.03958 | | **0.03142** | | | | | 0.00376 | 0.02954 |
| **STD. DEV.** | | | | **10** | | | | | **0.01245** | | 0.02608 | | **0.01979** | | | | | 0.00242 | 0.01860 |
| ***CENTRAL MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| RUN 10 | 1.529 | 0.00450 | 30.1 | 90 | 0.08334 | 0.00226 | 0.08560 | 45.0 | 0.00190 | 16,280 | 0.00526 | 13,900 | 0.00284 | 68,130 | 1,527 | 143,470 | 354 | 0.00035 | 0.00267 |
| RUN 11 | 1.622 | 0.00450 | 30.2 | 84 | 0.15551 | 0.00227 | 0.15777 | 49.8 | 0.00317 | 22,340 | 0.00706 | 8,870 | 0.00506 | 70,770 | 1,586 | 158,600 | 391 | 0.00061 | 0.00475 |
| RUN 12 | 0.309 | 0.00450 | 30.2 | 99 | 0.00157 | 0.00227 | 0.00384 | 45.0 | 0.00009 | 22,130 | 0.00017 | 9,300 | 0.00012 | 59,080 | 1,324 | 141,640 | 349 | 0.00002 | 0.00012 |
| RUN 13 | 3.422 | 0.00450 | 29.9 | 99 | 0.01723 | 0.00224 | 0.01947 | 44.0 | 0.00044 | 19,240 | 0.00101 | 8,770 | 0.00070 | 66,750 | 1,496 | 138,830 | 342 | 0.00008 | 0.00065 |
| RUN 17 | 6.708 | 0.00450 | 27.2 | 99 | 0.03072 | 0.00204 | 0.03276 | 72.0 | 0.00045 | 30,950 | 0.00106 | 13,900 | 0.00073 | 104,850 | 2,350 | 228,760 | 564 | 0.00009 | 0.00069 |
| **AVG.** | | | | **94** | | | | | **0.00121** | | 0.00291 | | **0.00189** | | | | | 0.00023 | 0.00178 |
| **STD. DEV.** | | | | **7** | | | | | **0.00130** | | 0.00305 | | **0.00205** | | | | | 0.00025 | 0.00193 |

* AVG. % SILT CONTENT OF SAND **2.24177**

** AVG. % SILT CONTENT OF AGGREGATE : **0.24665**



Attachment: 2. Site Plan (American Eagle Appeal)

## Table 2.2

# *CONTROLLED PM-10 EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | PM-10 per hour IN INLET (lb) | PM-10 per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | PM-10 ESCAPED INLET (lb) | PM-10 OUT OUTLET (lb) | TOTAL PM-10 RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM-10 per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM-10 per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM-10 per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | PM-10 per 1000 lbs Solid Raw Material (lb) | PM-10 per 1000 lbs ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING & CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 1 | 8.655 | 0.00450 | 56.8 | 71 | 3.35473 | 0.00426 | 3.35899 | 95.0 | 0.03536 | 48,620 | 0.06909 | 11,240 | 0.05611 | 135,290 | 3,033 | 281,640 | 695 | 0.00705 | 0.05282 |
| RUN 3 | 16.990 | 0.00450 | 30.0 | 70 | 3.64071 | 0.00225 | 3.64296 | 50.0 | 0.07286 | 27,880 | 0.13067 | 0 | 0.13067 | 67,530 | 1,514 | 157,500 | 388 | 0.01440 | 0.12232 |
| RUN 8 | 17.574 | 0.00450 | 27.8 | 72 | 3.16657 | 0.00209 | 3.16866 | 27.0 | 0.11736 | 14,170 | 0.22362 | 0 | 0.22362 | 36,030 | 808 | 86,430 | 213 | 0.02319 | 0.20859 |
| **AVG.** | | | | **71** | | | | | **0.07519** | | **0.14112** | | **0.13680** | | | | | **0.01488** | **0.12791** |
| **STD. DEV.** | | | | **1** | | | | | **0.04105** | | **0.07779** | | **0.08392** | | | | | **0.00808** | **0.07803** |
| ***CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 7 | 14.608 | 0.00450 | 30.2 | 100 | 0.00000 | 0.00227 | 0.00227 | | | 37,775 | 0.00006 | | | | | | | | |
| RUN 1 EST. | | | | | | | 1.48084 | | | 40,299 | 0.03675 | | | | | | | | |
| RUN 3 EST. | | | | | | | 2.76330 | | | 34,268 | 0.08064 | | | | | | | | |
| RUN 8 EST. | | | | | | | 2.71997 | | | 31,722 | 0.08574 | | | | | | | | |
| **AVG.** | | | | | | | | | | | **0.05080** | | | | | | | | |
| **STD. DEV.** | | | | | | | | | | | **0.04035** | | | | | | | | |
| ***TRUCK MIX LOADING & NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 5 | 41.768 | 0.00450 | 30.1 | 79 | 5.56995 | 0.00226 | 5.57221 | 51.0 | 0.10926 | 11,340 | 0.49138 | 0 | 0.49138 | 26,550 | 595 | 158,280 | 390 | 0.02840 | 0.45208 |
| RUN 18 | 23.287 | 0.00450 | 29.9 | 65 | 6.24868 | 0.00224 | 6.25092 | 5.0 | 1.25018 | 1,800 | 3.47273 | 2,380 | 1.49544 | 7,260 | 163 | 16,570 | 41 | 0.22317 | 1.42597 |
| **AVG.** | | | | **72** | | | | | **0.67972** | | **1.98205** | | **0.99341** | | | | | **0.12579** | **0.93903** |
| **STD. DEV.** | | | | **10** | | | | | **0.80676** | | **2.10814** | | **0.70998** | | | | | **0.13772** | **0.68864** |
| ***NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 5 EST. | | | | | | | 5.20815 | | | | | 30,096 | 0.17305 | | | | | | |
| RUN 18 EST. | | | | | | | 6.12144 | | | | | 39,276 | 0.15586 | | | | | | |
| **AVG.** | | | | | | | | | | | | | **0.16445** | | | | | | |
| **STD. DEV.** | | | | | | | | | | | | | **0.01216** | | | | | | |

* AVG. % SILT CONTENT OF SAND **2.24177**

** AVG. % SILT CONTENT OF AGGREGATE : **0.24665**



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 2.3**

## *CONTROLLED PM-10 EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | PM-10 per hour IN INLET (lb) | PM-10 per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | PM-10 ESCAPED INLET (lb) | PM-10 OUT OUTLET (lb) | TOTAL PM-10 RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM-10 per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM-10 per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM-10 per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE LOADED (lb) | SILT FROM AGGR. ** (lb) | PM-10 per 1000 lbs Solid Raw Material (lb) | PM-10 per 1000 lbs ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***GENERAL*** | | | | | | | | | | | | | | | | | | | |
| ***SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 7 | 14.608 | 0.00450 | 30.2 | 100 | 0.00000 | 0.00227 | 0.00227 | | | 37,775 | | 0 | 0.00006 | | | | | | |
| RUN 1 EST. | | | | | | | 1.48084 | | | 40,299 | | 0 | 0.03675 | | | | | | |
| RUN 3 EST. | | | | | | | 2.76330 | | | 34,268 | | 0 | 0.08064 | | | | | | |
| RUN 5 EST. | | | | | | | 5.20815 | | | 0 | | 30,096 | 0.17305 | | | | | | |
| RUN 8 EST. | | | | | | | 2.71997 | | | 31,722 | | 0 | 0.08574 | | | | | | |
| RUN 18 EST. | | | | | | | 6.12144 | | | 0 | | 39,276 | 0.15586 | | | | | | |
| **AVG.** | | | | | | | | | | | | | **0.08868** | | | | | | |
| **STD. DEV.** | | | | | | | | | | | | | **0.06672** | | | | | | |



Attachment: 2. Site Plan (American Eagle Appeal)

## Table 3.1

# *PM EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | PM per hour IN INLET (lb) | TIME (min) | PM IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL PM (lb) | CONCRETE MADE (yd³) | PM per yard³ CONCRETE (lb) | CEMENT LOADED (lb) | PM per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE (lb) | SILT FROM AGGR. ** (lb) | PM per 1000 lb Solid Raw Material (lb) | PM per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | |
| RUN 2 | 5.358 | 30.2 | 2.697 | 72 | 3.746 | 41.5 | 0.09026 | 16,950 | 0.22098 | 12,250 | 0.12828 | 59,950 | 1,343.94 | 130,020 | 320.69 | 0.01709 | 0.12136 |
| RUN 4 | 4.112 | 30.0 | 2.056 | 79 | 2.603 | 54.0 | 0.04820 | 27,840 | 0.09348 | 0 | 0.09348 | 73,600 | 1,649.94 | 173,150 | 427.07 | 0.00948 | 0.08699 |
| RUN 9 | 3.583 | 30.1 | 1.797 | 78 | 2.304 | 69.0 | 0.03340 | 39,110 | 0.05892 | 0 | 0.05892 | 104,910 | 2,351.84 | 218,940 | 540.02 | 0.00635 | 0.05487 |
| ! RUN 14 | 144.524 | 22.1 | 53.233 | 56 | 95.059 | 41.0 | 2.31851 | 19,180 | 4.95615 | 10,220 | 3.23330 | 54,120 | 1,213.24 | 127,300 | 313.99 | 0.45090 | 3.07363 |
| RUN 15 | 40.027 | 30.0 | 20.014 | 64 | 31.271 | 59.5 | 0.52556 | 32,650 | 0.95777 | 3,100 | 0.87472 | 80,240 | 1,798.79 | 187,330 | 462.05 | 0.10310 | 0.82269 |
| RUN 16 | 15.351 | 30.0 | 7.676 | 58 | 13.234 | 41.5 | 0.31888 | 22,010 | 0.60125 | 0 | 0.60125 | 57,510 | 1,289.24 | 133,660 | 329.67 | 0.06208 | 0.56006 |
| **AVG.** | | | | **70** | | | **0.20326** | | 0.38648 | | **0.35133** | | | | | 0.03962 | 0.32919 |
| **STD. DEV.** | | | | **9** | | | **0.21384** | | 0.38504 | | **0.36679** | | | | | 0.04200 | 0.34422 |
| ***CENTRAL MIX LOADING*** | | | | | | | | | | | | | | | | | |
| RUN 10 | 2.154 | 30.1 | 1.081 | 90 | 1.198 | 45.0 | 0.02662 | 16,280 | 0.07359 | 13,900 | 0.03969 | 68,130 | 1,527.32 | 143,470 | 353.87 | 0.00495 | 0.03737 |
| RUN 11 | 6.320 | 30.2 | 3.181 | 84 | 3.787 | 49.8 | 0.07604 | 22,340 | 0.16952 | 8,870 | 0.12134 | 70,770 | 1,586.50 | 158,600 | 391.19 | 0.01453 | 0.11411 |
| RUN 12 | 14.119 | 30.2 | 7.107 | 99 | 7.178 | 45.0 | 0.15952 | 22,130 | 0.32437 | 9,300 | 0.22839 | 59,080 | 1,324.44 | 141,640 | 349.36 | 0.03092 | 0.21684 |
| RUN 13 | 4.600 | 29.9 | 2.292 | 99 | 2.315 | 44.0 | 0.05262 | 19,240 | 0.12035 | 8,770 | 0.08267 | 66,750 | 1,496.38 | 138,830 | 342.42 | 0.00991 | 0.07757 |
| RUN 17 | 8.274 | 27.2 | 3.751 | 99 | 3.789 | 72.0 | 0.05262 | 30,950 | 0.12242 | 13,900 | 0.08448 | 104,850 | 2,350.49 | 228,760 | 564.24 | 0.01001 | 0.07932 |
| **AVG.** | | | | **94** | | | **0.07349** | | 0.16205 | | **0.11131** | | | | | 0.01407 | 0.10504 |
| **STD. DEV.** | | | | **7** | | | **0.05117** | | 0.09688 | | **0.07155** | | | | | 0.01001 | 0.06815 |

* AVG. % SILT CONTENT OF SAND : **2.2418**

** AVG. % SILT CONTENT OF AGGREGATE : **0.2467**

! Test Run 14 is not used to calculate the means or standard deviations because it is a statistical outlier (see Appendix A).



Attachment: 2. Site Plan (American Eagle Appeal)

## Table 3.2

# *PM EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | PM per hour IN INLET (lb) | TIME (min) | PM IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL PM (lb) | CONCRETE MADE ($yd^3$) | PM per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE (lb) | SILT FROM AGGR. ** (lb) | PM per 1000 lb Solid Raw Material (lb) | PM per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING & CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 1 | 10.020 | 56.8 | 9.486 | 71 | 13.369 | 95.0 | 0.14073 | 48,620 | 0.27498 | 11,240 | 0.22334 | 135,290 | 3,032.89 | 281,640 | 694.67 | 0.02804 | 0.21025 |
| RUN 3 | 19.456 | 30.0 | 9.728 | 70 | 13.897 | 50.0 | 0.27794 | 27,880 | 0.49846 | 0 | 0.49846 | 67,530 | 1,513.87 | 157,500 | 388.47 | 0.05495 | 0.46662 |
| RUN 8 | 31.730 | 27.8 | 14.702 | 72 | 20.419 | 27.0 | 0.75625 | 14,170 | 1.44099 | 0 | 1.44099 | 36,030 | 807.71 | 86,430 | 213.18 | 0.14945 | 1.34415 |
| **AVG.** | | | | **71** | | | **0.39164** | | **0.73814** | | **0.72093** | | | | | **0.07748** | **0.67368** |
| **STD. DEV.** | | | | **1** | | | **0.32313** | | **0.61886** | | **0.63858** | | | | | **0.06376** | **0.59463** |
| ***CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 7 | 18.004 | 30.2 | 9.062 | 100 | 9.062 | | | 37,775 | 0.23990 | | | | | | | | |
| RUN 1 EST. | | | | | -- | | | 40,299 | -- | | | | | | | | |
| RUN 3 EST. | | | | | -- | | | 34,268 | -- | | | | | | | | |
| RUN 8 EST. | | | | | 15.418 | | | 31,722 | 0.48604 | | | | | | | | |
| **AVG.** | | | | | | | | | **0.36297** | | | | | | | | |
| **STD. DEV.** | | | | | | | | | **0.17405** | | | | | | | | |
| ***TRUCK MIX LOADING & NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 5 | 72.339 | 30.1 | 36.290 | 79 | 45.937 | 51.0 | 0.90072 | 11,340 | 4.05086 | 0 | 4.05086 | 26,550 | 595.19 | 158,280 | 390.40 | 0.23417 | 3.72695 |
| RUN 18 | 91.223 | 29.9 | 45.459 | 65 | 69.938 | 5.0 | 13.98753 | 1,800 | 38.85424 | 2,380 | 16.73149 | 7,260 | 162.75 | 16,570 | 40.87 | 2.49688 | 15.95430 |
| **AVG.** | | | | **72** | | | **7.44412** | | **21.45255** | | **10.39118** | | | | | **1.36552** | **9.84062** |
| **STD. DEV.** | | | | **10** | | | **9.25377** | | **24.60970** | | **8.96656** | | | | | **1.59998** | **8.64605** |
| ***NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 5 EST. | | | | | 41.879 | | | | | 30,096 | 1.39152 | | | | | | |
| RUN 18 EST. | | | | | 68.495 | | | | | 39,276 | 1.74394 | | | | | | |
| **AVG.** | | | | | | | | | | | **1.56773** | | | | | | |
| **STD. DEV.** | | | | | | | | | | | **0.24920** | | | | | | |

* AVG. % SILT CONTENT OF SAND : **2.2418**

** AVG. % SILT CONTENT OF AGGREGATE : **0.2467**



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 3.3**

# *PM EMISSION FACTORS FOR CONCRETE BATCHING*

## *CHANEY ENTERPRISES CEMENT PLANT*

## *WALDORF, MD*

| | PM per hour IN INLET (lb) | TIME (min) | PM IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL PM (lb) | CONCRETE MADE ($yd^3$) | PM per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE (lb) | SILT FROM AGGR. ** (lb) | PM per 1000 lb Solid Raw Material (lb) | PM per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***GENERAL*** | | | | | | | | | | | | | | | | | |
| ***SILO FILLING*** | | | | | | | | | | | | | | | | | |
| RUN 7 | 18.004 | 30.2 | 9.062 | 100 | 9.062 | | | 37,775 | | 0 | 0.23990 | | | | | | |
| RUN 1 EST. | | | | | -- | | | 40,299 | | 0 | -- | | | | | | |
| RUN 3 EST. | | | | | -- | | | 34,268 | | 0 | -- | | | | | | |
| RUN 5 EST. | | | | | 41.879 | | | 0 | | 30,096 | 1.39152 | | | | | | |
| RUN 8 EST. | | | | | 15.418 | | | 31,722 | | 0 | 0.48604 | | | | | | |
| RUN 18 EST. | | | | | 68.495 | | | 0 | | 39,276 | 1.74394 | | | | | | |
| **AVG.** | | | | | | | | | | | **0.96535** | | | | | | |
| **STD. DEV.** | | | | | | | | | | | **0.71737** | | | | | | |



Attachment: 2. Site Plan (American Eagle Appeal)

## Table 4.1

# *CONTROLLED PM EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | | PM per hour IN INLET (lb) | PM per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | PM ESCAPED INLET (lb) | PM OUT OUTLET (lb) | TOTAL PM RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM10 per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | PM per 1000 lb Solid Raw Material (lb) | PM per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | | | | | |
| RUN 2 | | 5.358 | 0.00850 | 30.2 | 72 | 1.04878 | 0.00428 | 1.05306 | 41.5 | 0.02537 | 16,950 | 0.06213 | 12,250 | 0.03606 | 59,950 | 1,343.94 | 130,020 | 320.69 | 0.00480 | 0.03412 |
| RUN 4 | | 4.112 | 0.00850 | 30.0 | 79 | 0.54653 | 0.00425 | 0.55078 | 54.0 | 0.01020 | 27,840 | 0.01978 | 0 | 0.01978 | 73,600 | 1,649.94 | 173,150 | 427.07 | 0.00201 | 0.01841 |
| RUN 9 | | 3.583 | 0.00850 | 30.1 | 78 | 0.50698 | 0.00426 | 0.51124 | 69.0 | 0.00741 | 39,110 | 0.01307 | 0 | 0.01307 | 104,910 | 2,351.84 | 218,940 | 540.02 | 0.00141 | 0.01217 |
| ! | RUN 14 | 144.524 | 0.00850 | 22.1 | 56 | 41.82593 | 0.00313 | 41.82906 | 41.0 | 1.02022 | 19,180 | 2.18087 | 10,220 | 1.42276 | 54,120 | 1,213.24 | 127,300 | 313.99 | 0.19841 | 1.35250 |
| RUN 15 | | 40.027 | 0.00850 | 30.0 | 64 | 11.25759 | 0.00425 | 11.26184 | 59.5 | 0.18927 | 32,650 | 0.34493 | 3,100 | 0.31502 | 80,240 | 1,798.79 | 187,330 | 462.05 | 0.03713 | 0.29628 |
| RUN 16 | | 15.351 | 0.00850 | 30.0 | 58 | 5.55812 | 0.00425 | 5.56237 | 41.5 | 0.13403 | 22,010 | 0.25272 | 0 | 0.25272 | 57,510 | 1,289.24 | 133,660 | 329.67 | 0.02609 | 0.23541 |
| **AVG.** | | | | | **70** | | | | | **0.07326** | | 0.13853 | | **0.12733** | | | | | 0.01429 | 0.11928 |
| **STD. DEV.** | | | | | **9** | | | | | **0.08330** | | 0.15109 | | **0.14483** | | | | | 0.01634 | 0.13575 |
| ***CENTRAL MIX LOADING*** | | | | | | | | | | | | | | | | | | | | | |
| RUN 10 | | 2.154 | 0.00850 | 30.1 | 90 | 0.11740 | 0.00426 | 0.12167 | 45.0 | 0.00270 | 16,280 | 0.00747 | 13,900 | 0.00403 | 68,130 | 1,527.32 | 143,470 | 353.87 | 0.00050 | 0.00379 |
| RUN 11 | | 6.320 | 0.00850 | 30.2 | 84 | 0.60592 | 0.00428 | 0.61020 | 49.8 | 0.01225 | 22,340 | 0.02731 | 8,870 | 0.01955 | 70,770 | 1,586.50 | 158,600 | 391.19 | 0.00234 | 0.01839 |
| RUN 12 | | 14.119 | 0.00850 | 30.2 | 99 | 0.07178 | 0.00428 | 0.07606 | 45.0 | 0.00169 | 22,130 | 0.00344 | 9,300 | 0.00242 | 59,080 | 1,324.44 | 141,640 | 349.36 | 0.00033 | 0.00230 |
| RUN 13 | | 4.600 | 0.00850 | 29.9 | 99 | 0.02315 | 0.00424 | 0.02739 | 44.0 | 0.00062 | 19,240 | 0.00142 | 8,770 | 0.00098 | 66,750 | 1,496.38 | 138,830 | 342.42 | 0.00012 | 0.00092 |
| RUN 17 | | 8.274 | 0.00850 | 27.2 | 99 | 0.03789 | 0.00385 | 0.04174 | 72.0 | 0.00058 | 30,950 | 0.00135 | 13,900 | 0.00093 | 104,850 | 2,350.49 | 228,760 | 564.24 | 0.00011 | 0.00087 |
| **AVG.** | | | | | **94** | | | | | **0.00357** | | 0.00820 | | **0.00558** | | | | | 0.00068 | 0.00525 |
| **STD. DEV.** | | | | | **7** | | | | | **0.00493** | | 0.01097 | | **0.00791** | | | | | 0.00094 | 0.00744 |

* AVG. % SILT CONTENT OF SAND : **2.24177**

** AVG. % SILT CONTENT OF AGGREGATE : **0.24665**

! Test Run 14 is not used to calculate the means or standard deviations because it is a statistical outlier (see Appendix A).



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 4.2**

## *CONTROLLED PM EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | PM per hour IN INLET (lb) | PM per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | PM ESCAPED INLET (lb) | PM OUT OUTLET (lb) | TOTAL PM RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM10 per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | PM per 1000 lb Solid Raw Material (lb) | PM per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING & CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 1 | 10.020 | 0.00850 | 56.8 | 71 | 3.88382 | 0.00805 | 3.89186 | 95.0 | 0.04097 | 48,620 | 0.08005 | 11,240 | 0.06502 | 135,290 | 3,032.89 | 281,640 | 694.67 | 0.00816 | 0.06120 |
| RUN 3 | 19.456 | 0.00850 | 30.0 | 70 | 4.16914 | 0.00425 | 4.17339 | 50.0 | 0.08347 | 27,880 | 0.14969 | 0 | 0.14969 | 67,530 | 1,513.87 | 157,500 | 388.47 | 0.01650 | 0.14013 |
| RUN 8 | 31.730 | 0.00850 | 27.8 | 72 | 5.71728 | 0.00394 | 5.72121 | 27.0 | 0.21190 | 14,170 | 0.40376 | 0 | 0.40376 | 36,030 | 807.71 | 86,430 | 213.18 | 0.04187 | 0.37662 |
| **AVG.** | | | | **71** | | | | | 0.11211 | | 0.21116 | | 0.20615 | | | | | 0.02218 | 0.19265 |
| **STD. DEV.** | | | | **1** | | | | | 0.08899 | | 0.17039 | | 0.17629 | | | | | 0.01756 | 0.16414 |
| ***CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 7 | 18.004 | 0.00850 | 30.2 | 100 | -- | 0.00428 | 0.00428 | | | 37,775 | 0.00011 | | | | | | | | |
| RUN 1 EST. | | | | | | | -- | | | 40,299 | -- | | | | | | | | |
| RUN 3 EST. | | | | | | | -- | | | 34,268 | -- | | | | | | | | |
| RUN 8 EST. | | | | | | | 3.90929 | | | 31,722 | 0.12324 | | | | | | | | |
| **AVG.** | | | | | | | | | | | **0.06167** | | | | | | | | |
| **STD. DEV.** | | | | | | | | | | | **0.07544** | | | | | | | | |
| ***TRUCK MIX LOADING & NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 5 | 72.339 | 0.00850 | 30.1 | 79 | 9.64673 | 0.00426 | 9.65099 | 51.0 | 0.18924 | 11,340 | 0.85106 | 0 | 0.85106 | 26,550 | 595.19 | 158,280 | 390.40 | 0.04920 | 0.78300 |
| RUN 18 | 91.223 | 0.00850 | 29.9 | 65 | 24.47817 | 0.00424 | 24.48241 | 5.0 | 4.89648 | 1,800 | 13.60134 | 2,380 | 5.85704 | 7,260 | 162.75 | 16,570 | 40.87 | 0.87406 | 5.58497 |
| **AVG.** | | | | **72** | | | | | 2.54286 | | 7.22620 | | 3.35405 | | | | | 0.46163 | 3.18399 |
| **STD. DEV.** | | | | **10** | | | | | 3.32853 | | 9.01581 | | 3.53976 | | | | | 0.58327 | 3.39550 |
| ***NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 5 EST. | | | | | | | 8.18083 | | | | | 30,096 | 0.27182 | | | | | | |
| RUN 18 EST. | | | | | | | 23.95954 | | | | | 39,276 | 0.61004 | | | | | | |
| **AVG.** | | | | | | | | | | | | | **0.44093** | | | | | | |
| **STD. DEV.** | | | | | | | | | | | | | **0.23915** | | | | | | |

* AVG. % SILT CONTENT OF SAND : **2.24177**

** AVG. % SILT CONTENT OF AGGREGATE : **0.24665**



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 4.3**

## *CONTROLLED PM EMISSION FACTORS FOR CONCRETE BATCHING*

***CHANEY ENTERPRISES CEMENT PLANT***
***WALDORF, MD***

| | PM per hour IN INLET (lb) | PM per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | PM ESCAPED INLET (lb) | PM OUT OUTLET (lb) | TOTAL PM RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | PM10 per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE LOADED (lb) | SILT FROM AGGR. ** (lb) | PM per 1000 lb Solid Raw Material (lb) | PM per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***GENERAL*** | | | | | | | | | | | | | | | | | | | |
| ***SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| RUN 7 | 18.004 | 0.00850 | 30.2 | 100 | -- | 0.00428 | 0.00428 | | | 37,775 | | 0 | 0.00011 | | | | | | |
| RUN 1 EST. | | | | | | | -- | | | 40,299 | | 0 | -- | | | | | | |
| RUN 3 EST. | | | | | | | -- | | | 34,268 | | 0 | -- | | | | | | |
| RUN 5 EST. | | | | | | | 8.18083 | | | 0 | | 30,096 | 0.27182 | | | | | | |
| RUN 8 EST. | | | | | | | 3.90929 | | | 31,722 | | 0 | 0.12324 | | | | | | |
| RUN 18 EST. | | | | | | | 23.95954 | | | 0 | | 39,276 | 0.61004 | | | | | | |
| **AVG.** | | | | | | | | | | | | | **0.25130** | | | | | | |
| **STD. DEV.** | | | | | | | | | | | | | **0.26370** | | | | | | |



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 5.1**

# *METAL EMISSION FACTORS FOR CONCRETE BATCHING*

***CHANEY ENTERPRISES CEMENT PLANT***
***WALDORF, MD***

| | METAL per hour IN INLET (lb) | TIME (min) | METAL IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL METAL (lb) | CONCRETE MADE (yd³) | METAL per yard³ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | METAL per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE LOADED (lb) | SILT FROM AGGR. ** (lb) | METAL per 1000 lb Solid Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUNS 2, 4, 9, 14, 15 & 16 TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | |
| ARSENIC | 1.71E-005 | 172.4 | 4.91E-005 | 68 | 7.23E-005 | 306.5 | **2.36E-007** | 157,740 | 4.58E-007 | 25,570 | **3.94E-007** | 430,330 | 9,646.99 | 970,400 | 2393.49 | 4.56E-008 | 3.70E-007 |
| BERYLLIUM | 1.56E-006 | 172.4 | 4.48E-006 | 68 | 6.59E-006 | 306.5 | **2.15E-008** | 157,740 | 4.18E-008 | 25,570 | **3.60E-008** | 430,330 | 9,646.99 | 970,400 | 2393.49 | 4.16E-009 | 3.37E-008 |
| CADMIUM | 8.62E-007 | 172.4 | 2.48E-006 | 68 | 3.64E-006 | 306.5 | **1.19E-008** | 157,740 | 2.31E-008 | 25,570 | **1.99E-008** | 430,330 | 9,646.99 | 970,400 | 2393.49 | 2.30E-009 | 1.86E-008 |
| CHROMIUM | 3.05E-004 | 172.4 | 8.76E-004 | 68 | 1.29E-003 | 306.5 | **4.20E-006** | 157,740 | 8.17E-006 | 25,570 | **7.03E-006** | 430,330 | 9,646.99 | 970,400 | 2393.49 | 8.14E-007 | 6.60E-006 |
| LEAD | 2.39E-005 | 172.4 | 6.87E-005 | 68 | 1.01E-004 | 306.5 | **3.29E-007** | 157,740 | 6.40E-007 | 25,570 | **5.51E-007** | 430,330 | 9,646.99 | 970,400 | 2393.49 | 6.38E-008 | 5.17E-007 |
| MANGANESE | 2.00E-003 | 172.4 | 5.75E-003 | 68 | 8.45E-003 | 306.5 | **2.76E-005** | 157,740 | 5.36E-005 | 25,570 | **4.61E-005** | 430,330 | 9,646.99 | 970,400 | 2393.49 | 5.34E-006 | 4.33E-005 |
| MERCURY | -- | 172.4 | -- | 68 | -- | 306.5 | -- | 157,740 | -- | 25,570 | -- | 430,330 | 9,646.99 | 970,400 | 2393.49 | | -- |
| NICKEL | 2.38E-004 | 172.4 | 6.84E-004 | 68 | 1.01E-003 | 306.5 | **3.28E-006** | 157,740 | 6.38E-006 | 25,570 | **5.49E-006** | 430,330 | 9,646.99 | 970,400 | 2393.49 | 6.35E-007 | 5.15E-006 |
| PHOSPHORUS | 8.35E-004 | 172.4 | 2.40E-003 | 68 | 3.53E-003 | 306.5 | **1.15E-005** | 157,740 | 2.24E-005 | 25,570 | **1.92E-005** | 430,330 | 9,646.99 | 970,400 | 2393.49 | 2.23E-006 | 1.81E-005 |
| SELENIUM | -- | 172.4 | -- | 68 | -- | 306.5 | -- | 157,740 | -- | 25,570 | -- | 430,330 | 9,646.99 | 970,400 | 2393.49 | | -- |
| ***RUNS 10, 11, 12, 13 & 17 CENTRAL MIX LOADING*** | | | | | | | | | | | | | | | | | |
| ARSENIC | 7.37E-006 | 147.6 | 1.81E-005 | 94 | 1.93E-005 | 255.8 | **7.54E-008** | 110,940 | 1.74E-007 | 54,740 | **1.16E-007** | 369,580 | 8,285.12 | 811,300 | 2001.07 | 1.43E-008 | 1.10E-007 |
| BERYLLIUM | -- | 147.6 | -- | 94 | -- | 255.8 | -- | 110,940 | -- | 54,740 | -- | 369,580 | 8,285.12 | 811,300 | 2001.07 | | -- |
| CADMIUM | 3.75E-007 | 147.6 | 9.23E-007 | 94 | 9.81E-007 | 255.8 | **3.84E-009** | 110,940 | 8.85E-009 | 54,740 | **5.92E-009** | 369,580 | 8,285.12 | 811,300 | 2001.07 | 7.29E-010 | 5.58E-009 |
| CHROMIUM | 4.50E-005 | 147.6 | 1.11E-004 | 94 | 1.18E-004 | 255.8 | **4.60E-007** | 110,940 | 1.06E-006 | 54,740 | **7.11E-007** | 369,580 | 8,285.12 | 811,300 | 2001.07 | 8.75E-008 | 6.69E-007 |
| LEAD | 1.21E-005 | 147.6 | 2.98E-005 | 94 | 3.17E-005 | 255.8 | **1.24E-007** | 110,940 | 2.85E-007 | 54,740 | **1.91E-007** | 369,580 | 8,285.12 | 811,300 | 2001.07 | 2.35E-008 | 1.80E-007 |
| MANGANESE | 1.94E-003 | 147.6 | 4.77E-003 | 94 | 5.08E-003 | 255.8 | **1.98E-005** | 110,940 | 4.58E-005 | 54,740 | **3.06E-005** | 369,580 | 8,285.12 | 811,300 | 2001.07 | 3.77E-006 | 2.89E-005 |
| MERCURY | -- | 147.6 | -- | 94 | -- | 255.8 | -- | 110,940 | -- | 54,740 | -- | 369,580 | 8,285.12 | 811,300 | 2001.07 | | -- |
| NICKEL | 1.04E-004 | 147.6 | 2.56E-004 | 94 | 2.72E-004 | 255.8 | **1.06E-006** | 110,940 | 2.45E-006 | 54,740 | **1.64E-006** | 369,580 | 8,285.12 | 811,300 | 2001.07 | 2.02E-007 | 1.55E-006 |
| PHOSPHORUS | 6.37E-004 | 147.6 | 1.57E-003 | 94 | 1.67E-003 | 255.8 | **6.52E-006** | 110,940 | 1.50E-005 | 54,740 | **1.01E-005** | 369,580 | 8,285.12 | 811,300 | 2001.07 | 1.24E-006 | 9.47E-006 |
| SELENIUM | -- | 147.6 | -- | 94 | -- | 255.8 | -- | 110,940 | -- | 54,740 | -- | 369,580 | 8,285.12 | 811,300 | 2001.07 | | -- |

* AVG. % SILT CONTENT OF SAND : **2.24177**

** AVG. % SILT CONTENT OF AGGREGATE : **0.24665**



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 5.2**

## *METAL EMISSION FACTORS FOR CONCRETE BATCHING*

***CHANEY ENTERPRISES CEMENT PLANT***
***WALDORF, MD***

| | METAL per hour IN INLET (lb) | TIME (min) | METAL IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL METAL (lb) | CONCRETE MADE ($yd^3$) | METAL per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | METAL per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | SILT FROM AGGR. (lb) | METAL per 1000 lb Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUN 7 CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | |
| ARSENIC | 6.29E-005 | 30.2 | 3.17E-005 | 100 | 3.17E-005 | | | 37,775 | **8.38E-007** | | | | | | | | |
| BERYLLIUM | 6.73E-007 | 30.2 | 3.39E-007 | 100 | 3.39E-007 | | | 37,775 | **8.97E-009** | | | | | | | | |
| CADMIUM | 8.75E-006 | 30.2 | 4.40E-006 | 100 | 4.40E-006 | | | 37,775 | **1.17E-007** | | | | | | | | |
| CHROMIUM | 9.42E-006 | 30.2 | 4.74E-006 | 100 | 4.74E-006 | | | 37,775 | **1.26E-007** | | | | | | | | |
| LEAD | 2.76E-005 | 30.2 | 1.39E-005 | 100 | 1.39E-005 | | | 37,775 | **3.68E-007** | | | | | | | | |
| MANGANESE | 7.61E-003 | 30.2 | 3.83E-003 | 100 | 3.83E-003 | | | 37,775 | **1.01E-004** | | | | | | | | |
| MERCURY | -- | 30.2 | -- | 100 | -- | | | 37,775 | -- | | | | | | | | |
| NICKEL | 6.63E-004 | 30.2 | 3.34E-004 | 100 | 3.34E-004 | | | 37,775 | **8.83E-006** | | | | | | | | |
| PHOSPHORUS | 4.41E-003 | 30.2 | 2.22E-003 | 100 | 2.22E-003 | | | 37,775 | **5.88E-005** | | | | | | | | |
| SELENIUM | -- | 30.2 | -- | 100 | -- | | | 37,775 | -- | | | | | | | | |



Attachment: 2. Site Plan (American Eagle Appeal)

## Table 5.3

# *METAL EMISSION FACTORS FOR CONCRETE BATCHING*

***CHANEY ENTERPRISES CEMENT PLANT***
***WALDORF, MD***

| | METAL per hour IN INLET (lb) | TIME (min) | METAL IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL METAL (lb) | CONCRETE MADE (yd³) | METAL per yard³ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | METAL per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | METAL per 1000 lb Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUN 5 TRUCK MIX LOADING & NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | |
| ARSENIC | 1.46E-005 | 30.1 | 7.32E-006 | 79 | 9.27E-006 | 51.0 | 1.82E-007 | 11,340 | **8.18E-007** | 0 | **8.18E-007** | 26,550 | 595.19 | 158,280 | 390.40 | 4.73E-008 | **7.52E-007** |
| BERYLLIUM | -- | 30.1 | -- | 79 | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | | -- |
| CADMIUM | -- | 30.1 | -- | 79 | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | | -- |
| CHROMIUM | 3.91E-005 | 30.1 | 1.96E-005 | 79 | 2.48E-005 | 51.0 | 4.87E-007 | 11,340 | **2.19E-006** | 0 | **2.19E-006** | 26,550 | 595.19 | 158,280 | 390.40 | 1.27E-007 | **2.01E-006** |
| LEAD | -- | 30.1 | -- | 79 | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | | -- |
| MANGANESE | 7.67E-002 | 30.1 | 3.85E-002 | 79 | 4.87E-002 | 51.0 | 9.55E-004 | 11,340 | **4.30E-003** | 0 | **4.30E-003** | 26,550 | 595.19 | 158,280 | 390.40 | 2.48E-004 | **3.95E-003** |
| MERCURY | -- | 30.1 | -- | 79 | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | | -- |
| NICKEL | 1.30E-004 | 30.1 | 6.52E-005 | 79 | 8.26E-005 | 51.0 | 1.62E-006 | 11,340 | **7.28E-006** | 0 | **7.28E-006** | 26,550 | 595.19 | 158,280 | 390.40 | 4.21E-007 | **6.70E-006** |
| PHOSPHORUS | -- | 30.1 | -- | 79 | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | | -- |
| SELENIUM | -- | 30.1 | -- | 79 | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | | -- |

| | | | |
|---|---|---|---|
| ***RUN 5 ESTIMATED NEWCEM SILO FILLING*** | | | |
| ARSENIC | 4.71E-006 | 30,096 | **1.57E-007** |
| BERYLLIUM | -- | 30,096 | -- |
| CADMIUM | -- | 30,096 | -- |
| CHROMIUM | -- | 30,096 | -- |
| LEAD | -- | 30,096 | -- |
| MANGANESE | 4.82E-002 | 30,096 | **1.60E-003** |
| MERCURY | -- | 30,096 | -- |
| NICKEL | 1.91E-005 | 30,096 | **6.35E-007** |
| PHOSPHORUS | -- | 30,096 | -- |
| SELENIUM | -- | 30,096 | -- |

* AVG. % SILT CONTENT OF SAND : 2.24177

** AVG. % SILT CONTENT OF AGGREGATE 0.24665



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 5.4**

# *METAL EMISSION FACTORS FOR CONCRETE BATCHING*

***CHANEY ENTERPRISES CEMENT PLANT***
***WALDORF, MD***

| | METAL per hour IN INLET (lb) | TIME (min) | METAL IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL METAL (lb) | CONCRETE MADE ($yd^3$) | METAL per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | METAL per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE LOADED (lb) | SILT FROM AGGR. ** (lb) | METAL per 1000 lb Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUN 18 TRUCK MIX LOADING & NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | |
| ARSENIC | 8.31E-006 | 29.9 | 4.14E-006 | 65 | 6.37E-006 | 5.0 | **1.27E-006** | 1,800 | **3.54E-006** | 2,380 | **1.52E-006** | 7,260 | 162.75 | 16,570 | 40.87 | 2.27E-007 | **1.45E-006** |
| BERYLLIUM | 1.33E-006 | 29.9 | 6.63E-007 | 65 | 1.02E-006 | 5.0 | **2.04E-007** | 1,800 | **5.66E-007** | 2,380 | **2.44E-007** | 7,260 | 162.75 | 16,570 | 40.87 | 3.64E-008 | **2.33E-007** |
| CADMIUM | -- | 29.9 | -- | 65 | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | | -- |
| CHROMIUM | -- | 29.9 | -- | 65 | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | | -- |
| LEAD | -- | 29.9 | -- | 65 | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | | -- |
| MANGANESE | 3.48E-002 | 29.9 | 1.73E-002 | 65 | 2.67E-002 | 5.0 | **5.34E-003** | 1,800 | **1.48E-002** | 2,380 | **6.38E-003** | 7,260 | 162.75 | 16,570 | 40.87 | 9.53E-004 | **6.09E-003** |
| MERCURY | -- | 29.9 | -- | 65 | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | | -- |
| NICKEL | 1.14E-004 | 29.9 | 5.68E-005 | 65 | 8.74E-005 | 5.0 | **1.75E-005** | 1,800 | **4.86E-005** | 2,380 | **2.09E-005** | 7,260 | 162.75 | 16,570 | 40.87 | 3.12E-006 | **1.99E-005** |
| PHOSPHORUS | -- | 29.9 | -- | 65 | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | | -- |
| SELENIUM | -- | 29.9 | -- | 65 | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | | -- |

| | | | |
|---|---|---|---|
| ***RUN 18 ESTIMATED NEWCEM SILO FILLING*** | | | |
| ARSENIC | 4.75E-006 | 39,276 | **1.21E-007** |
| BERYLLIUM | 8.72E-007 | 39,276 | **2.22E-008** |
| CADMIUM | -- | 39,276 | -- |
| CHROMIUM | -- | 39,276 | -- |
| LEAD | -- | 39,276 | -- |
| MANGANESE | 2.65E-002 | 39,276 | **6.74E-004** |
| MERCURY | -- | 39,276 | -- |
| NICKEL | 6.48E-005 | 39,276 | **1.65E-006** |
| PHOSPHORUS | -- | 39,276 | -- |
| SELENIUM | -- | 39,276 | -- |

* AVG. % SILT CONTENT OF SAND : 2.24177

** AVG. % SILT CONTENT OF AGGREGATE 0.24665



Attachment: 2. Site Plan (American Eagle Appeal)

# Table 5.5 METAL EMISSION FACTORS FOR CONCRETE BATCHING
CHANEY ENTERPRISES CEMENT PLANT, WALDORF, MD

| | AVG. METAL per 1000 lb CEMENT & NEWCEM (lb) | STD. DEVIATION (lb) |
|---|---|---|
| ***AVG. RUN 5 & 18*** | | |
| ***ESTIMATED NEWCEM SILO FILLING*** | | |
| ARSENIC | **1.39E-07** | 2.52E-08 |
| BERYLLIUM | **2.22E-08** | -- |
| CADMIUM | -- | -- |
| CHROMIUM | -- | -- |
| LEAD | -- | -- |
| MANGANESE | **1.14E-03** | 6.55E-04 |
| MERCURY | -- | -- |
| NICKEL | **1.14E-06** | 7.18E-07 |
| PHOSPHORUS | -- | -- |
| SELENIUM | -- | -- |
| ***AVG. RUN 5, 7, 18*** | | |
| ***ESTIMATED GENERAL SILO FILLING*** | | |
| ARSENIC | **3.72E-07** | 4.04E-07 |
| BERYLLIUM | **1.56E-08** | 9.35E-09 |
| CADMIUM | **1.17E-07** | -- |
| CHROMIUM | **1.26E-07** | -- |
| LEAD | **3.68E-07** | -- |
| MANGANESE | **7.92E-04** | 7.57E-04 |
| MERCURY | -- | -- |
| NICKEL | **3.71E-06** | 4.47E-06 |
| PHOSPHORUS | **5.88E-05** | -- |
| SELENIUM | -- | -- |

Attachment: 2. Site Plan (American Eagle Appeal)

**Table 6.1**

## *CONTROLLED METAL EMISSION FACTORS FOR CONCRETE BATCHING*
### *CHANEY ENTERPRISES CEMENT PLANT*
### *WALDORF, MD*

| | METAL per hour IN INLET (lb) | METAL per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | METAL ESCAPED INLET (lb) | METAL OUT OUTLET (lb) | TOTAL METAL (lb) | CONCRETE MADE ($yd^3$) | METAL per yard $^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | METAL per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | METAL per 1000 lb Solid Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUNS 2, 4, 9, 14 15 & 16 TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 1.71E-005 | 1.59E-007 | 172.4 | 68 | 2.31E-005 | 4.57E-007 | 2.36E-005 | 306.5 | **7.69E-008** | 157,740 | 1.49E-007 | 25,570 | **1.29E-007** | 430,330 | 9,646.99 | 970,400 | 2,393.49 | 1.49E-008 | 1.21E-007 |
| BERYLLIUM | 1.56E-006 | -- | 172.4 | 68 | 2.11E-006 | -- | 2.11E-006 | 306.5 | **6.88E-009** | 157,740 | 1.34E-008 | 25,570 | **1.15E-008** | 430,330 | 9,646.99 | 970,400 | 2,393.49 | 1.33E-009 | 1.08E-008 |
| CADMIUM | 8.62E-007 | -- | 172.4 | 68 | 1.17E-006 | -- | 1.17E-006 | 306.5 | **3.80E-009** | 157,740 | 7.39E-009 | 25,570 | **6.36E-009** | 430,330 | 9,646.99 | 970,400 | 2,393.49 | 7.36E-010 | 5.97E-009 |
| CHROMIUM | 3.05E-004 | 1.40E-006 | 172.4 | 68 | 4.12E-004 | 4.02E-006 | 4.16E-004 | 306.5 | **1.36E-006** | 157,740 | 2.64E-006 | 25,570 | **2.27E-006** | 430,330 | 9,646.99 | 970,400 | 2,393.49 | 2.63E-007 | 2.13E-006 |
| LEAD | 2.39E-005 | 4.62E-007 | 172.4 | 68 | 3.23E-005 | 1.33E-006 | 3.36E-005 | 306.5 | **1.10E-007** | 157,740 | 2.13E-007 | 25,570 | **1.84E-007** | 430,330 | 9,646.99 | 970,400 | 2,393.49 | 2.12E-008 | 1.72E-007 |
| MANGANESE | 2.00E-003 | 3.72E-006 | 172.4 | 68 | 2.70E-003 | 1.07E-005 | 2.72E-003 | 306.5 | **8.86E-006** | 157,740 | 1.72E-005 | 25,570 | **1.48E-005** | 430,330 | 9,646.99 | 970,400 | 2,393.49 | 1.71E-006 | 1.39E-005 |
| MERCURY | -- | -- | 172.4 | 68 | -- | -- | -- | 306.5 | -- | 157,740 | -- | 25,570 | -- | 430,330 | 9,646.99 | 970,400 | 2,393.49 | -- | -- |
| NICKEL | 2.38E-004 | 1.69E-006 | 172.4 | 68 | 3.22E-004 | 4.85E-006 | 3.27E-004 | 306.5 | **1.07E-006** | 157,740 | 2.07E-006 | 25,570 | **1.78E-006** | 430,330 | 9,646.99 | 970,400 | 2,393.49 | 2.06E-007 | 1.67E-006 |
| PHOSPHORUS | 8.35E-004 | -- | 172.4 | 68 | 1.13E-003 | -- | 1.13E-003 | 306.5 | **3.68E-006** | 157,740 | 7.16E-006 | 25,570 | **6.16E-006** | 430,330 | 9,646.99 | 970,400 | 2,393.49 | 7.13E-007 | 5.78E-006 |
| SELENIUM | -- | -- | 172.4 | 68 | -- | -- | -- | 306.5 | -- | 157,740 | -- | 25,570 | -- | 430,330 | 9,646.99 | 970,400 | 2,393.49 | | -- |
| ***RUNS 10, 11, 12 13 & 17 CENTRAL MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 7.37E-006 | 1.59E-007 | 147.6 | 94 | 1.16E-006 | 3.91E-007 | 1.55E-006 | 255.8 | **6.05E-009** | 110,940 | 1.40E-008 | 54,740 | **9.35E-009** | 369,580 | 8,285.12 | 811,300 | 2,001.07 | 1.15E-009 | 8.80E-009 |
| BERYLLIUM | -- | -- | 147.6 | 94 | -- | -- | -- | 255.8 | -- | 110,940 | -- | 54,740 | -- | 369,580 | 8,285.12 | 811,300 | 2,001.07 | -- | -- |
| CADMIUM | 3.75E-007 | -- | 147.6 | 94 | 5.89E-008 | -- | 5.89E-008 | 255.8 | **2.30E-010** | 110,940 | 5.31E-010 | 54,740 | **3.55E-010** | 369,580 | 8,285.12 | 811,300 | 2,001.07 | 4.37E-011 | 3.35E-010 |
| CHROMIUM | 4.50E-005 | 1.40E-006 | 147.6 | 94 | 7.07E-006 | 3.44E-006 | 1.05E-005 | 255.8 | **4.11E-008** | 110,940 | 9.47E-008 | 54,740 | **6.34E-008** | 369,580 | 8,285.12 | 811,300 | 2,001.07 | 7.81E-009 | 5.97E-008 |
| LEAD | 1.21E-005 | 4.62E-007 | 147.6 | 94 | 1.90E-006 | 1.14E-006 | 3.04E-006 | 255.8 | **1.19E-008** | 110,940 | 2.74E-008 | 54,740 | **1.83E-008** | 369,580 | 8,285.12 | 811,300 | 2,001.07 | 2.25E-009 | 1.73E-008 |
| MANGANESE | 1.94E-003 | 3.72E-006 | 147.6 | 94 | 3.05E-004 | 9.15E-006 | 3.14E-004 | 255.8 | **1.23E-006** | 110,940 | 2.83E-006 | 54,740 | **1.89E-006** | 369,580 | 8,285.12 | 811,300 | 2,001.07 | 2.33E-007 | 1.78E-006 |
| MERCURY | -- | -- | 147.6 | 94 | -- | -- | -- | 255.8 | -- | 110,940 | -- | 54,740 | -- | 369,580 | 8,285.12 | 811,300 | 2,001.07 | -- | -- |
| NICKEL | 1.04E-004 | 1.69E-006 | 147.6 | 94 | 1.63E-005 | 4.15E-006 | 2.05E-005 | 255.8 | **8.01E-008** | 110,940 | 1.85E-007 | 54,740 | **1.24E-007** | 369,580 | 8,285.12 | 811,300 | 2,001.07 | 1.52E-008 | 1.16E-007 |
| PHOSPHORUS | 6.37E-004 | -- | 147.6 | 94 | 1.00E-004 | -- | 1.00E-004 | 255.8 | **3.91E-007** | 110,940 | 9.02E-007 | 54,740 | **6.04E-007** | 369,580 | 8,285.12 | 811,300 | 2,001.07 | 7.43E-008 | 5.68E-007 |
| SELENIUM | -- | -- | 147.6 | 94 | -- | -- | -- | 255.8 | -- | 110,940 | -- | 54,740 | -- | 369,580 | 8,285.12 | 811,300 | 2,001.07 | -- | -- |

* AVG. % SILT CONTENT OF SAND : **2.24177**

** AVG. % SILT CONTENT OF AGGREGATE **0.24665**



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 6.2**

## *CONTROLLED METAL EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | METAL per hour IN INLET (lb) | METAL per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | METAL ESCAPED INLET (lb) | METAL OUT OUTLET (lb) | TOTAL METAL (lb) | CONCRETE MADE ($yd^3$) | METAL per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | METAL per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | SILT FROM AGGR. (lb) | METAL per 1000 lb Solid Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUN 7 CEMENT SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 6.29E-005 | 1.59E-007 | 30.2 | 100 | -- | 8.00E-008 | 8.00E-008 | | | 37,775 | **2.12E-009** | | | | | | | | |
| BERYLLIUM | 6.73E-007 | -- | 30.2 | 100 | -- | -- | -- | | | 37,775 | -- | | | | | | | | |
| CADMIUM | 8.75E-006 | -- | 30.2 | 100 | -- | -- | -- | | | 37,775 | -- | | | | | | | | |
| CHROMIUM | 9.42E-006 | 1.40E-006 | 30.2 | 100 | -- | 7.05E-007 | 7.05E-007 | | | 37,775 | **1.87E-008** | | | | | | | | |
| LEAD | 2.76E-005 | 4.62E-007 | 30.2 | 100 | -- | 2.33E-007 | 2.33E-007 | | | 37,775 | **6.16E-009** | | | | | | | | |
| MANGANESE | 7.61E-003 | 3.72E-006 | 30.2 | 100 | -- | 1.87E-006 | 1.87E-006 | | | 37,775 | **4.96E-008** | | | | | | | | |
| MERCURY | -- | -- | 30.2 | 100 | -- | -- | -- | | | 37,775 | -- | | | | | | | | |
| NICKEL | 6.63E-004 | 1.69E-006 | 30.2 | 100 | -- | 8.50E-007 | 8.50E-007 | | | 37,775 | **2.25E-008** | | | | | | | | |
| PHOSPHORUS | 4.41E-003 | -- | 30.2 | 100 | -- | -- | -- | | | 37,775 | -- | | | | | | | | |
| SELENIUM | -- | -- | 30.2 | 100 | -- | -- | -- | | | 37,775 | -- | | | | | | | | |



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 6.3**

## *CONTROLLED METAL EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | METAL per hour IN INLET (lb) | METAL per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | METAL ESCAPED INLET (lb) | METAL OUT OUTLET (lb) | TOTAL METAL (lb) | CONCRETE MADE ($yd^3$) | METAL per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | METAL per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | METAL per 1000 lb Solid Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUN 5 TRUCK MIX LOADING & NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 1.46E-005 | 1.59E-007 | 30.1 | 79 | 1.95E-006 | 7.98E-008 | 2.03E-006 | 51.0 | **3.97E-008** | 11,340 | **1.79E-007** | 0 | **1.79E-007** | 26,550 | 595.19 | 158,280 | 390.40 | **1.03E-008** | **1.64E-007** |
| BERYLLIUM | -- | -- | 30.1 | 79 | -- | -- | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | -- | -- |
| CADMIUM | -- | -- | 30.1 | 79 | -- | -- | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | -- | -- |
| CHROMIUM | 3.91E-005 | 1.40E-006 | 30.1 | 79 | 5.21E-006 | 7.02E-007 | 5.92E-006 | 51.0 | **1.16E-007** | 11,340 | **5.22E-007** | 0 | **5.22E-007** | 26,550 | 595.19 | 158,280 | 390.40 | **3.02E-008** | **4.80E-007** |
| LEAD | -- | 4.62E-007 | 30.1 | 79 | -- | 2.32E-007 | 2.32E-007 | 51.0 | **4.54E-009** | 11,340 | **2.04E-008** | 0 | **2.04E-008** | 26,550 | 595.19 | 158,280 | 390.40 | **1.18E-009** | **1.88E-008** |
| MANGANESE | 7.67E-002 | 3.72E-006 | 30.1 | 79 | 1.02E-002 | 1.87E-006 | 1.02E-002 | 51.0 | **2.01E-004** | 11,340 | **9.02E-004** | 0 | **9.02E-004** | 26,550 | 595.19 | 158,280 | 390.40 | **5.21E-005** | **8.30E-004** |
| MERCURY | -- | -- | 30.1 | 79 | -- | -- | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | -- | -- |
| NICKEL | 1.30E-004 | 1.69E-006 | 30.1 | 79 | 1.73E-005 | 8.47E-007 | 1.82E-005 | 51.0 | **3.57E-007** | 11,340 | **1.60E-006** | 0 | **1.60E-006** | 26,550 | 595.19 | 158,280 | 390.40 | **9.27E-008** | **1.48E-006** |
| PHOSPHORUS | -- | -- | 30.1 | 79 | -- | -- | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | -- | -- |
| SELENIUM | -- | -- | 30.1 | 79 | -- | -- | -- | 51.0 | -- | 11,340 | -- | 0 | -- | 26,550 | 595.19 | 158,280 | 390.40 | -- | -- |

| | | | |
|---|---|---|---|
| ***RUN 5 ESTIMATED NEWCEM SILO FILLING*** | | | |
| ARSENIC | 5.39E-007 | 30,096 | **1.79E-008** |
| BERYLLIUM | -- | 30,096 | -- |
| CADMIUM | -- | 30,096 | -- |
| CHROMIUM | -- | 30,096 | -- |
| LEAD | -- | 30,096 | -- |
| MANGANESE | 1.01E-002 | 30,096 | **3.34E-004** |
| MERCURY | -- | 30,096 | -- |
| NICKEL | -- | 30,096 | -- |
| PHOSPHORUS | -- | 30,096 | -- |
| SELENIUM | -- | 30,096 | -- |

* AVG. % SILT CONTENT OF SAND : **2.24177**

** AVG. % SILT CONTENT OF AGGREGATE 0.24665



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 6.4**

## *CONTROLLED METAL EMISSION FACTORS FOR CONCRETE BATCHING*

### *CHANEY ENTERPRISES CEMENT PLANT*

### *WALDORF, MD*

| | METAL per hour IN INLET (lb) | METAL per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | METAL ESCAPED INLET (lb) | METAL OUT OUTLET (lb) | TOTAL METAL (lb) | CONCRETE MADE ($yd^3$) | METAL per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | NEWCEM LOADED (lb) | METAL per 1000 lb CEMENT & NEWCEM (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | METAL per 1000 lb Solid Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUN 18 TRUCK MIX LOADING & NEWCEM SILO FILLING*** | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 8.31E-006 | 1.59E-007 | 29.9 | 65 | 2.23E-006 | 7.92E-008 | 2.31E-006 | 5.0 | 4.62E-007 | 1,800 | 1.28E-006 | 2,380 | 5.52E-007 | 7,260 | 162.75 | 16,570 | 40.87 | 8.24E-008 | 5.27E-007 |
| BERYLLIUM | 1.33E-006 | -- | 29.9 | 65 | 3.57E-007 | -- | 3.57E-007 | 5.0 | 7.14E-008 | 1,800 | 1.98E-007 | 2,380 | 8.54E-008 | 7,260 | 162.75 | 16,570 | 40.87 | 1.27E-008 | 8.14E-008 |
| CADMIUM | -- | -- | 29.9 | 65 | -- | -- | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | -- | -- |
| CHROMIUM | -- | 1.40E-006 | 29.9 | 65 | -- | 6.98E-007 | 6.98E-007 | 5.0 | 1.40E-007 | 1,800 | 3.88E-007 | 2,380 | 1.67E-007 | 7,260 | 162.75 | 16,570 | 40.87 | 2.49E-008 | 1.59E-007 |
| LEAD | -- | 4.62E-007 | 29.9 | 65 | -- | 2.30E-007 | 2.30E-007 | 5.0 | 4.60E-008 | 1,800 | 1.28E-007 | 2,380 | 5.51E-008 | 7,260 | 162.75 | 16,570 | 40.87 | 8.22E-009 | 5.25E-008 |
| MANGANESE | 3.48E-002 | 3.72E-006 | 29.9 | 65 | 9.34E-003 | 1.85E-006 | 9.34E-003 | 5.0 | 1.87E-003 | 1,800 | 5.19E-003 | 2,380 | 2.23E-003 | 7,260 | 162.75 | 16,570 | 40.87 | 3.33E-004 | 2.13E-003 |
| MERCURY | -- | -- | 29.9 | 65 | -- | -- | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | -- | -- |
| NICKEL | 1.14E-004 | 1.69E-006 | 29.9 | 65 | 3.06E-005 | 8.41E-007 | 3.14E-005 | 5.0 | 6.29E-006 | 1,800 | 1.75E-005 | 2,380 | 7.52E-006 | 7,260 | 162.75 | 16,570 | 40.87 | 1.12E-006 | 7.17E-006 |
| PHOSPHORUS | -- | -- | 29.9 | 65 | -- | -- | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | -- | -- |
| SELENIUM | -- | -- | 29.9 | 65 | -- | -- | -- | 5.0 | -- | 1,800 | -- | 2,380 | -- | 7,260 | 162.75 | 16,570 | 40.87 | -- | -- |

| | | | |
|---|---|---|---|
| ***RUN 18 ESTIMATED NEWCEM SILO FILLING*** | | | |
| ARSENIC | 1.78E-006 | 39,276 | **4.53E-008** |
| BERYLLIUM | 3.10E-007 | 39,276 | **7.88E-009** |
| CADMIUM | -- | 39,276 | -- |
| CHROMIUM | -- | 39,276 | -- |
| LEAD | -- | 39,276 | -- |
| MANGANESE | 9.28E-003 | 39,276 | **2.36E-004** |
| MERCURY | -- | 39,276 | -- |
| NICKEL | 2.41E-005 | 39,276 | **6.14E-007** |
| PHOSPHORUS | -- | 39,276 | -- |
| SELENIUM | -- | 39,276 | -- |

* AVG. % SILT CONTENT OF SAND : 2.24177

** AVG. % SILT CONTENT OF AGGREGATE 0.24665



Attachment: 2. Site Plan (American Eagle Appeal)

Table 6.5 CONTROLLED METAL EMISSION FACTORS FOR CONCRETE BATCHING
CHANEY ENTERPRISES CEMENT PLANT, WALDORF, MD

| | AVG. METAL per 1000 lbs CEMENT & NEWCEM (lbs) | STD. DEVIATION (lbs) |
|---|---|---|
| ***AVG. RUN 5 & 18*** | | |
| ***ESTIMATED NEWCEM SILO FILLING*** | | |
| ARSENIC | **3.16E-08** | 1.94E-08 |
| BERYLLIUM | **7.88E-009** | -- |
| CADMIUM | -- | -- |
| CHROMIUM | -- | -- |
| LEAD | -- | -- |
| MANGANESE | **2.85E-04** | 6.93E-05 |
| MERCURY | -- | -- |
| NICKEL | **6.14E-07** | 0.00E+00 |
| PHOSPHORUS | -- | -- |
| SELENIUM | -- | -- |
| ***AVG. RUN 5, 7, 18*** | | |
| ***ESTIMATED GENERAL SILO FILLING*** | | |
| ARSENIC | **2.18E-008** | |
| BERYLLIUM | **3.94E-009** | |
| CADMIUM | -- | -- |
| CHROMIUM | **1.87E-008** | -- |
| LEAD | **6.16E-009** | -- |
| MANGANESE | **1.90E-004** | |
| MERCURY | -- | -- |
| NICKEL | **2.12E-007** | |
| PHOSPHORUS | -- | -- |
| SELENIUM | -- | -- |

Attachment: 2. Site Plan (American Eagle Appeal)

## 4.2 Reference 2

This report (Reference 2) presents the results of emission testing on a typical concrete batching operation performed at Concrete Ready Mixed Corporation in Roanoke, VA. This test report includes measurements of the amounts of PM, $PM_{10}$, and ten select metals that were released during truck mix loadings and silo fillings. In addition, tests were conducted on process material samples and road surface samples.

Several kinds of test and test methods were used:

- EPA Reference Test Method 201A was used to collect emission released during the truck loadings and the silo fillings. In addition to recovering and weighing collected $PM_{10}$, larger particulate (greater than ten micrometers) collected in the probe and the cyclone was also recovered and weighed.
- Ambient air monitors were set up at upwind and downwind locations to measure background concentrations of suspended particulate matter resulting form both the traversal of paved and unpaved roads in and around the plant and the release of fugitive emissions from concrete batching operations.
- Sieve and moisture analyses were conducted on the process materials (aggregates) and the road materials.
- Laboratory tests were conducted on the emissions collected during the tests as well as the material collected for the sieve analyses to determine the amount of each of the ten metals that were contained in these materials.

Emissions resulting from the truck mix loadings were controlled with a hood system located above the truck delivery chute. This hood was connected to a central dust collector (Griffin Environmental Model JA-360DA). In order to develop both controlled and uncontrolled emission factors, tests were conducted at both the inlet and outlet of the dust collector. Also, visual estimates of the capture efficiency of the control device were made during each of the truck loadings. This information made it possible to estimate the amount of emissions that were not captured during the tests.

Emissions due to the pneumatic loading of silos were controlled with dust collectors located on the top of each of the silos. The dust collectors used fabric filters to clean air being displaced during the loading of cement or fly ash. Since emission tests were only conducted at the outlet of the dust collectors, no uncontrolled silo filling emission factors were developed.

Most of the emission data that were used to develop emission factors for truck mix loading warrants an A rating. However, the methodology used to estimate the capture efficiencies of the control device is qualitative rather than quantitative. This issue is significant since the uncontrolled and controlled emission factors from truck loading depend significantly on the capture efficiency estimates. Due to the subjective nature of the capture efficiency estimates, the emission data set for the truck loading emission factors is rated B.

The emission data set used to develop the controlled PM and controlled $PM_{10}$ emission factors for cement and cement supplement silo filling is **rated A**, since it is sound and does not involve the subjective control efficiency estimations.

The emission data for the controlled metal emission factors for cement and cement supplement silo filling are generally of the same caliber as the controlled PM and controlled $PM_{10}$ emission factors



Attachment: 2. Site Plan (American Eagle Appeal)

for cement and cement supplement silo filling. However, only one emission rate was obtained for each of the ten metal types. Consequently, this emission data set is **rated B**.

The following tables present the data that were used to develop the emission factors for Reference 2. The layouts of the table make the method used to develop these emission factors largely self-evident (see the technical notes in Appendix B for more information).

Note that "fines" stands for cement, cement supplement, and the silt from sand and course aggregate.

Attachment: 2. Site Plan (American Eagle Appeal)

# Reference 2
# Emission Factor Tables

| Tables | Emission Factor Types |
|---|---|
| 7 | $PM_{10}$ Emission Factors |
| 8 | Controlled $PM_{10}$ Emission Factors |
| 9 | PM Emission Factors |
| 10 | Controlled PM Emission Factors |
| 11 | Controlled Cement Silo Filling Emission Factors |
| 12 | Controlled Fly Ash Silo Filling Emission Factors |
| 13.1 - 13.3 | Metal Emission Factors |
| 14.1 - 14.3 | Controlled Metal Emission Factors |

Attachment: 2. Site Plan (American Eagle Appeal)

## Table 7

### *PM-10 EMISSION FACTORS FOR CONCRETE BATCHING*

***CONCRETE READY MIXED CORPORATION***

***ROANOKE, VA***

| | PM-10 per hour IN INLET (lb) | TIME (min) | PM-10 IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL PM-10 RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM-10 per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM-10 per 1000 lb CEMENT (lb) | FLY ASH LOADED (lb) | PM-10 per 1000 lb CEMENT & FLY ASH (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGRE-GATE (lb) | PM-10 per 1000 lb RAW MATERIAL (lb) | PM-10 per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | |
| RUN 1 | 0.878 | 120 | 1.756 | 83 | 2.11566 | 60.5 | 0.03497 | 28,786 | 0.07350 | 4,932 | 0.06275 | 87,240 | 1,764.87 | 97,920 | 89.11 | 0.00967 | 0.05948 |
| RUN 2 | 1.440 | 120 | 2.880 | 85 | 3.38824 | 71.5 | 0.04739 | 32,424 | 0.10450 | 8,124 | 0.08356 | 97,457 | 1,971.56 | 99,930 | 90.94 | 0.01424 | 0.07952 |
| RUN 3 | 1.146 | 119 | 2.273 | 84 | 2.70583 | 70.5 | 0.03838 | 29,574 | 0.09149 | 7,644 | 0.07270 | 95,720 | 1,936.42 | 113,100 | 102.92 | 0.01100 | 0.06893 |
| RUN 4 | 0.628 | 120 | 1.256 | 83 | 1.51325 | 61.5 | 0.02461 | 27,598 | 0.05483 | 6,248 | 0.04471 | 77,418 | 1,566.17 | 69,412 | 63.16 | 0.00838 | 0.04266 |
| RUN 5 | 0.604 | 120 | 1.208 | 84 | 1.43810 | 47.5 | 0.03028 | 17,742 | 0.08106 | 5,922 | 0.06077 | 61,680 | 1,247.79 | 75,270 | 68.50 | 0.00895 | 0.05757 |
| RUN 6 | 1.275 | 120 | 2.550 | 54 | 4.72222 | 44.5 | 0.10612 | 13,572 | 0.34794 | 7,890 | 0.22003 | 52,440 | 1,060.86 | 45,990 | 41.85 | 0.03939 | 0.20927 |
| RUN 7 | 1.002 | 120 | 2.004 | 72 | 2.78333 | 100.2 | 0.02778 | 53,790 | 0.05174 | 4,200 | 0.04800 | 143790 | 2,908.87 | 167,940 | 152.83 | 0.00753 | 0.04559 |
| RUN 8 | 0.052 | 120 | 0.104 | 56 | 0.18571 | 84.5 | 0.00220 | 46,116 | 0.00403 | 6,474 | 0.00353 | 67800 | 1,371.59 | 145,680 | 132.57 | 0.00070 | 0.00343 |
| RUN 9 | 0.050 | 122 | 0.102 | 61 | 0.16667 | 67.25 | 0.00248 | 30,618 | 0.00544 | 6,600 | 0.00448 | 90750 | 1,835.87 | 123,930 | 112.78 | 0.00066 | 0.00426 |
| RUN 10 | 0.050 | 120 | 0.100 | 80 | 0.12500 | 50.0 | 0.00250 | 28,554 | 0.00438 | 4,554 | 0.00378 | 53,460 | 1,081.50 | 57,690 | 52.50 | 0.00087 | 0.00365 |
| **AVG.** | | | | **74** | | | **0.03167** | | 0.08189 | | **0.06043** | | | | | 0.01014 | 0.05743 |
| **STD. DEV.** | | | | **13** | | | **0.03070** | | 0.10056 | | **0.06337** | | | | | 0.01130 | 0.06025 |

* AVG. % SILT CONTENT OF SAND : **2.0230**

** AVG. % SILT CONTENT OF AGGREGATE : **0.0910**



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 8**

# *CONTROLLED PM-10 EMISSION FACTORS FOR CONCRETE BATCHING*

## *CONCRETE READY MIXED CORPORATION*

## *ROANOKE, VA*

| | PM-10 per hour IN INLET (lb) | PM-10 per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | PM-10 ESCAPED INLET (lb) | PM-10 OUT OUTLET (lb) | TOTAL PM-10 RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM-10 per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM-10 per 1000 lb CEMENT (lb) | FLY ASH LOADED (lb) | PM-10 per 1000 lb CEMENT & FLY ASH (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | PM-10 per 1000 lb Raw Material (lb) | PM-10 per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| RUN 1 | 0.878 | 0.07947 | 120 | 83 | 0.360 | 0.15893 | 0.51859 | 60.5 | 0.00857 | 28,786 | 0.01802 | 4,932 | 0.01538 | 87,240 | 1,764.87 | 97,920 | 89.11 | 0.00237 | 0.01458 |
| RUN 2 | 1.440 | 0.08302 | 120 | 85 | 0.508 | 0.16603 | 0.67427 | 71.5 | 0.00943 | 32,424 | 0.02080 | 8,124 | 0.01663 | 97,457 | 1,971.56 | 99,930 | 90.94 | 0.00283 | 0.01582 |
| RUN 3 | 1.146 | 0.03952 | 119 | 84 | 0.433 | 0.07838 | 0.51131 | 70.5 | 0.00725 | 29,574 | 0.01729 | 7,644 | 0.01374 | 95,720 | 1,936.42 | 113,100 | 102.92 | 0.00208 | 0.01302 |
| RUN 4 | 0.628 | 0.02351 | 120 | 83 | 0.257 | 0.04703 | 0.30428 | 61.5 | 0.00495 | 27,598 | 0.01103 | 6,248 | 0.00899 | 77,418 | 1,566.17 | 69,412 | 63.16 | 0.00168 | 0.00858 |
| RUN 5 | 0.604 | 0.02289 | 120 | 84 | 0.230 | 0.04577 | 0.27587 | 47.5 | 0.00581 | 17,742 | 0.01555 | 5,922 | 0.01166 | 61,680 | 1,247.79 | 75,270 | 68.50 | 0.00172 | 0.01104 |
| RUN 6 | 1.275 | 0.02331 | 120 | 54 | 2.172 | 0.04662 | 2.21884 | 44.5 | 0.04986 | 13,572 | 0.16349 | 7,890 | 0.10338 | 52,440 | 1,060.86 | 45,990 | 41.85 | 0.01851 | 0.09833 |
| RUN 7 | 1.002 | 0.02902 | 120 | 72 | 0.779 | 0.05805 | 0.83738 | 100.2 | 0.00836 | 53,790 | 0.01557 | 4,200 | 0.01444 | 143790 | 2,908.87 | 167,940 | 152.83 | 0.00226 | 0.01372 |
| RUN 8 | 0.052 | 0.03163 | 120 | 56 | 0.082 | 0.06327 | 0.14498 | 84.5 | 0.00172 | 46,116 | 0.00314 | 6,474 | 0.00276 | 67800 | 1,371.59 | 145,680 | 132.57 | 0.00054 | 0.00268 |
| RUN 9 | 0.050 | 0.03175 | 122 | 61 | 0.065 | 0.06455 | 0.12955 | 67.25 | 0.00193 | 30,618 | 0.00423 | 6,600 | 0.00348 | 90750 | 1,835.87 | 123,930 | 112.78 | 0.00051 | 0.00331 |
| RUN 10 | 0.050 | 0.03115 | 120 | 80 | 0.025 | 0.06231 | 0.08731 | 50.0 | 0.00175 | 28,554 | 0.00306 | 4,554 | 0.00264 | 53,460 | 1,081.50 | 57,690 | 52.50 | 0.00061 | 0.00255 |
| **AVG.** | | | | **74** | | | | | **0.00996** | | 0.02722 | | **0.01931** | | | | | 0.00331 | 0.01836 |
| **STD. DEV.** | | | | **13** | | | | | **0.01432** | | 0.04833 | | **0.03003** | | | | | 0.00540 | 0.02855 |

* AVG. % SILT CONTENT OF SAND : **2.0230**

** AVG. % SILT CONTENT OF AGGREGATE : **0.0910**



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 9**

## *PM EMISSION FACTORS FOR CONCRETE BATCHING*

### *CONCRETE READY MIXED CORPORATION*

### *ROANOKE, VA*

| | PM per hour IN INLET (lb) | TIME (min) | PM IN INLET (lb) | ESTIMATED CAPTURE EFFICIENCY (%) | TOTAL PM RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM per 1000 lb CEMENT (lb) | FLY ASH LOADED (lb) | PM per 1000 lb CEMENT & FLY ASH (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGRE-GATE (lb) | PM per 1000 lb Raw Material (lb) | PM per 1000 lb ``FINES" (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | |
| RUN 1 | 3.500 | 120 | 7.000 | 83 | 8.43373 | 60.5 | 0.13940 | 28,786 | 0.29298 | 4,932 | 0.25013 | 87,240 | 1,764.87 | 97,920 | 89.11 | 0.03853 | 0.23709 |
| RUN 2 | 7.079 | 120 | 14.158 | 85 | 16.65647 | 71.5 | 0.23296 | 32,424 | 0.51371 | 8,124 | 0.41078 | 97,457 | 1,971.56 | 99,930 | 90.94 | 0.07000 | 0.39090 |
| RUN 3 | 5.124 | 119 | 10.163 | 84 | 12.09833 | 70.5 | 0.17161 | 29,574 | 0.40909 | 7,644 | 0.32507 | 95,720 | 1,936.42 | 113,100 | 102.92 | 0.04917 | 0.30818 |
| RUN 4 | 3.322 | 120 | 6.644 | 83 | 8.00482 | 61.5 | 0.13016 | 27,598 | 0.29005 | 6,248 | 0.23651 | 77,418 | 1,566.17 | 69,412 | 63.16 | 0.04430 | 0.22564 |
| RUN 5 | 2.468 | 120 | 4.936 | 84 | 5.87619 | 47.5 | 0.12371 | 17,742 | 0.33120 | 5,922 | 0.24832 | 61,680 | 1,247.79 | 75,270 | 68.50 | 0.03659 | 0.23523 |
| RUN 6 | 6.163 | 120 | 12.326 | 54 | 22.82593 | 44.5 | 0.51294 | 13,572 | 1.68184 | 7,890 | 1.06355 | 52,440 | 1,060.86 | 45,990 | 41.85 | 0.19039 | 1.01158 |
| RUN 7 | 1.029 | 120 | 2.058 | 72 | 2.85833 | 100.2 | 0.02853 | 53,790 | 0.05314 | 4,200 | 0.04929 | 143,790 | 2,908.87 | 167,940 | 152.83 | 0.00773 | 0.04682 |
| RUN 8 | 0.063 | 120 | 0.126 | 56 | 0.22500 | 84.5 | 0.00266 | 46,116 | 0.00488 | 6,474 | 0.00428 | 67,800 | 1,371.59 | 145,680 | 132.57 | 0.00085 | 0.00416 |
| RUN 9 | 0.101 | 122 | 0.205 | 61 | 0.33667 | 67.25 | 0.00501 | 30,618 | 0.01100 | 6,600 | 0.00905 | 90,750 | 1,835.87 | 123,930 | 112.78 | 0.00134 | 0.00860 |
| RUN 10 | 0.099 | 120 | 0.198 | 80 | 0.24750 | 50.0 | 0.00495 | 28,554 | 0.00867 | 4,554 | 0.00748 | 53,460 | 1,081.50 | 57,690 | 52.50 | 0.00172 | 0.00723 |
| **AVG.** | | | | **74** | | | **0.13519** | | 0.35965 | | **0.26044** | | | | | 0.04406 | 0.24754 |
| **STD. DEV.** | | | | **13** | | | **0.15514** | | 0.49989 | | **0.31798** | | | | | 0.05677 | 0.30241 |

* AVG. % SILT CONTENT OF SAND : **2.0230**

** AVG. % SILT CONTENT OF AGGREGATE **0.0910**



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 10**

# *CONTROLLED PM EMISSION FACTORS FOR CONCRETE BATCHING*

## *CONCRETE READY MIXED CORPORATION*

## *ROANOKE, VA*

| | PM per hour IN INLET (lb) | PM per hour OUT OUTLET (lb) | TIME (min) | ESTIMATED CAPTURE EFFICIENCY (%) | PM ESCAPED INLET (lbs) | PM OUT OUTLET (lb) | TOTAL PM RELEASED (lb) | CONCRETE MADE ($yd^3$) | PM per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | PM per 1000 lb CEMENT (lb) | FLY ASH LOADED (lb) | PM per 1000 lb CEMENT & FLY ASH (lb) | SAND LOADED (lb) | SILT FROM SAND * (lb) | COURSE AGGRE-GATE LOADED (lb) | SILT FROM AGGR. ** (lb) | PM per 1000 lb Raw Material (lb) | PM per 1000 lb ``FINES" (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| RUN 1 | 3.500 | 0.11321 | 120 | 83 | 1.434 | 0.22642 | 1.66016 | 60.5 | 0.02744 | 28,786 | 0.05767 | 4,932 | 0.04924 | 87,240 | 1,764.87 | 97,920 | 89.11 | 0.00758 | 0.04667 |
| RUN 2 | 7.079 | 0.11827 | 120 | 85 | 2.498 | 0.23654 | 2.73501 | 71.5 | 0.03825 | 32,424 | 0.08435 | 8,124 | 0.06745 | 97,457 | 1,971.56 | 99,930 | 90.94 | 0.01149 | 0.06419 |
| RUN 3 | 5.124 | 0.05200 | 119 | 84 | 1.936 | 0.10313 | 2.03886 | 70.5 | 0.02892 | 29,574 | 0.06894 | 7,644 | 0.05478 | 95,720 | 1,936.42 | 113,100 | 102.92 | 0.00829 | 0.05194 |
| RUN 4 | 3.322 | 0.03755 | 120 | 83 | 1.361 | 0.07511 | 1.43593 | 61.5 | 0.02335 | 27,598 | 0.05203 | 6,248 | 0.04243 | 77,418 | 1,566.17 | 69,412 | 63.16 | 0.00795 | 0.04048 |
| RUN 5 | 2.468 | 0.03655 | 120 | 84 | 0.940 | 0.07310 | 1.01329 | 47.5 | 0.02133 | 17,742 | 0.05711 | 5,922 | 0.04282 | 61,680 | 1,247.79 | 75,270 | 68.50 | 0.00631 | 0.04056 |
| RUN 6 | 6.163 | 0.03722 | 120 | 54 | 10.500 | 0.07445 | 10.57437 | 44.5 | 0.23763 | 13,572 | 0.77913 | 7,890 | 0.49270 | 52,440 | 1,060.86 | 45,990 | 41.85 | 0.08820 | 0.46862 |
| RUN 7 | 1.029 | 0.04160 | 120 | 72 | 0.800 | 0.08320 | 0.88353 | 100.2 | 0.00882 | 53,790 | 0.01643 | 4,200 | 0.01524 | 143,790 | 2,908.87 | 167,940 | 152.83 | 0.00239 | 0.01447 |
| RUN 8 | 0.063 | 0.04534 | 120 | 56 | 0.099 | 0.09068 | 0.18968 | 84.5 | 0.00224 | 46,116 | 0.00411 | 6,474 | 0.00361 | 67,800 | 1,371.59 | 145,680 | 132.57 | 0.00071 | 0.00351 |
| RUN 9 | 0.101 | 0.04550 | 122 | 61 | 0.131 | 0.09252 | 0.22382 | 67.25 | 0.00333 | 30,618 | 0.00731 | 6,600 | 0.00601 | 90,750 | 1,835.87 | 123,930 | 112.78 | 0.00089 | 0.00571 |
| RUN 10 | 0.099 | 0.04465 | 120 | 80 | 0.050 | 0.08930 | 0.13880 | 50.0 | 0.00278 | 28,554 | 0.00486 | 4,554 | 0.00419 | 53,460 | 1,081.50 | 57,690 | 52.50 | 0.00096 | 0.00405 |
| **AVG.** | | | | **74** | | | | | **0.03941** | | 0.11319 | | **0.07785** | | | | | 0.01348 | 0.07402 |
| **STD. DEV.** | | | | **13** | | | | | **0.07078** | | 0.23581 | | **0.14760** | | | | | 0.02652 | 0.14038 |

* AVG. % SILT CONTENT OF SAND : **2.0230**

** AVG. % SILT CONTENT OF AGGREGATE : **0.0910**



Attachment: 2. Site Plan (American Eagle Appeal)

# Table 11

## *CONTROLLED CEMENT SILO FILLING EMISSION FACTORS*
### *CONCRETE READY MIXED CORPORATION*
### *ROANOKE, VA*

### *PM-10*

| | PM-10 per hour OUT OUTLET (lb) | TIME (min) | PM-10 OUT OUTLET (lb) | CEMENT LOADED (lb) | PM-10 per 1000 lb CEMENT (lb) |
|---|---|---|---|---|---|
| ***CEMENT SILO FILLING*** | | | | | |
| RUN 1 | 0.016 | 123 | 0.033 | 147,920 | 2.22E-004 |
| RUN 2 | 0.016 | 125 | 0.033 | 97,660 | 3.41E-004 |
| RUN 3 | 0.013 | 185 | 0.040 | 146,310 | 2.74E-004 |
| **AVG.** | | | | | **2.79E-004** |
| **STD. DEV.** | | | | | **5.99E-005** |

### *PM*

| | PM per hour OUT OUTLET (lb) | TIME (min) | PM OUT OUTLET (lb) | CEMENT LOADED (lb) | PM per 1000 lb CEMENT (lb) |
|---|---|---|---|---|---|
| ***CEMENT SILO FILLING*** | | | | | |
| RUN 1 | 0.023 | 123 | 0.047 | 147,920 | 3.19E-004 |
| RUN 2 | 0.021 | 125 | 0.044 | 97,660 | 4.48E-004 |
| RUN 3 | 0.016 | 185 | 0.049 | 146,310 | 3.37E-004 |
| **AVG.** | | | | | **3.68E-004** |
| **STD. DEV.** | | | | | **6.99E-005** |

### *METALS*

| | METAL per hour OUT OUTLET (lb) | TIME (min) | METAL OUT OUTLET (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) |
|---|---|---|---|---|---|
| ***RUNS 1, 2 & 3 CEMENT SILO FILLING*** | | | | | |
| ARSENIC | -- | 433 | -- | 391,890 | -- |
| BERYLLIUM | 1.32E-008 | 433 | 9.53E-008 | 391,890 | **2.43E-010** |
| CADMIUM | -- | 433 | -- | 391,890 | -- |
| CHROMIUM | 5.53E-007 | 433 | 3.99E-006 | 391,890 | **1.02E-008** |
| LEAD | 2.58E-007 | 433 | 1.86E-006 | 391,890 | **4.75E-009** |
| MANGANESE | 3.68E-006 | 433 | 2.66E-005 | 391,890 | **6.78E-008** |
| MERCURY | -- | 433 | -- | 391,890 | -- |
| NICKEL | 1.05E-006 | 433 | 7.58E-006 | 391,890 | **1.93E-008** |
| PHOSPHORUS | -- | 433 | -- | 391,890 | -- |
| SELENIUM | -- | 433 | -- | 391,890 | -- |

Attachment: 2. Site Plan (American Eagle Appeal)

# Table 12

## *CONTROLLED EMISSION FACTORS FOR FLY ASH SILO FILLING*
### *CONCRETE READY MIXED CORPORATION*
### *ROANOKE, VA*

### *PM-10*

| | PM-10 per hour OUT OUTLET (lb) | TIME (min) | PM-10 OUT OUTLET (lb) | FLY ASH LOADED (lb) | PM-10 per 1000 lb FLY ASH (lb) |
|---|---|---|---|---|---|
| ***FLY ASH SILO FILLING*** | | | | | |
| RUN 1 | 0.204 | 62 | 0.211 | 50,820 | 4.15E-003 |
| RUN 2 | 0.078 | 60 | 0.078 | 50,820 | 1.53E-003 |
| RUN 3 | 0.081 | 61 | 0.082 | 50,820 | 1.62E-003 |
| **AVG.** | | | | | **2.43E-003** |
| **STD. DEV.** | | | | | **1.48E-003** |

### *PM*

| | PM per hour OUT OUTLET (lb) | TIME (min) | PM OUT OUTLET (lb) | FLY ASH LOADED (lb) | PM per 1000 lb FLY ASH (lb) |
|---|---|---|---|---|---|
| ***FLY ASH SILO FILLING*** | | | | | |
| RUN 1 | 0.221 | 62 | 0.228 | 50,820 | 4.49E-003 |
| RUN 2 | 0.887 | 60 | 0.887 | 50,820 | 1.75E-002 |
| RUN 3 | 0.091 | 61 | 0.093 | 50,820 | 1.82E-003 |
| **AVG.** | | | | | **7.92E-003** |
| **STD. DEV.** | | | | | **8.36E-003** |

### *METALS*

| | METAL per hour OUT OUTLET (lb) | TIME (min) | METAL OUT OUTLET (lb) | FLY ASH LOADED (lb) | METAL per 1000 lb FLY ASH (lb) |
|---|---|---|---|---|---|
| ***RUNS 1, 2 & 3 FLY ASH SILO FILLING*** | | | | | |
| ARSENIC | 2.51E-005 | 183 | 7.66E-005 | 152,460 | **5.02E-007** |
| BERYLLIUM | 2.26E-006 | 183 | 6.89E-006 | 152,460 | **4.52E-008** |
| CADMIUM | 4.96E-007 | 183 | 1.51E-006 | 152,460 | **9.92E-009** |
| CHROMIUM | 3.05E-005 | 183 | 9.30E-005 | 152,460 | **6.10E-007** |
| LEAD | 1.30E-005 | 183 | 3.97E-005 | 152,460 | **2.60E-007** |
| MANGANESE | 6.40E-006 | 183 | 1.95E-005 | 152,460 | **1.28E-007** |
| MERCURY | -- | 183 | -- | 152,460 | -- |
| NICKEL | 5.70E-005 | 183 | 1.74E-004 | 152,460 | **1.14E-006** |
| PHOSPHORUS | 8.85E-005 | 183 | 2.70E-004 | 152,460 | **1.77E-006** |
| SELENIUM | 1.81E-006 | 183 | 5.52E-006 | 152,460 | **3.62E-008** |



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 13.1**

## *METAL EMISSION FACTORS FOR CONCRETE BATCHING*

### *CONCRETE READY MIXED CORPORATION*

### *ROANOKE, VA*

| | METAL per hour IN INLET (lb) | TIME (min) | METAL IN INLET (lb) | EST. CAPTURE EFFI-CIENCY (%) | TOTAL METAL (lb) | CONCRETE MADE ($yd^3$) | METAL per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | FLY ASH LOADED (lb) | METAL per 1000 lb CEMENT & FLY ASH (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | METAL per 1000 lb Solid Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***PRELIMINARY RUN TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | |
| ARSENIC | 1.96E-005 | 120.1 | 3.92E-005 | 53 | 7.40E-005 | 24 | **3.08E-006** | 9,486 | 7.80E-006 | 2,694 | **6.08E-006** | 33,810 | 683.98 | 44,400 | 40.40 | 8.19E-007 | 5.74E-006 |
| BERYLLIUM | 2.12E-006 | 120.1 | 4.24E-006 | 53 | 8.01E-006 | 24 | **3.34E-007** | 9,486 | 8.44E-007 | 2,694 | **6.57E-007** | 33,810 | 683.98 | 44,400 | 40.40 | 8.86E-008 | 6.20E-007 |
| CADMIUM | -- | 120.1 | -- | 53 | -- | 24 | -- | 9,486 | -- | 2,694 | -- | 33,810 | 683.98 | 44,400 | 40.40 | | -- |
| CHROMIUM | 3.92E-005 | 120.1 | 7.85E-005 | 53 | 1.48E-004 | 24 | **6.17E-006** | 9,486 | 1.56E-005 | 2,694 | **1.22E-005** | 33,810 | 683.98 | 44,400 | 40.40 | 1.64E-006 | 1.15E-005 |
| LEAD | 2.74E-005 | 120.1 | 5.48E-005 | 53 | 1.03E-004 | 24 | **4.31E-006** | 9,486 | 1.09E-005 | 2,694 | **8.50E-006** | 33,810 | 683.98 | 44,400 | 40.40 | 1.14E-006 | 8.02E-006 |
| MANGANESE | 1.16E-004 | 120.1 | 2.32E-004 | 53 | 4.38E-004 | 24 | **1.83E-005** | 9,486 | 4.62E-005 | 2,694 | **3.60E-005** | 33,810 | 683.98 | 44,400 | 40.40 | 4.85E-006 | 3.39E-005 |
| MERCURY | -- | 120.1 | -- | 53 | -- | 24 | -- | 9,486 | -- | 2,694 | -- | 33,810 | 683.98 | 44,400 | 40.40 | | -- |
| NICKEL | 5.71E-005 | 120.1 | 1.14E-004 | 53 | 2.16E-004 | 24 | **8.99E-006** | 9,486 | 2.27E-005 | 2,694 | **1.77E-005** | 33,810 | 683.98 | 44,400 | 40.40 | 2.39E-006 | 1.67E-005 |
| PHOSPHORUS | -- | 120.1 | -- | 53 | -- | 24 | -- | 9,486 | -- | 2,694 | -- | 33,810 | 683.98 | 44,400 | 40.40 | | -- |
| SELENIUM | -- | 120.1 | -- | 53 | -- | 24 | -- | 9,486 | -- | 2,694 | -- | 33,810 | 683.98 | 44,400 | 40.40 | | -- |
| ***RUNS 1, 2 & 3 TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | |
| ARSENIC | 2.70E-005 | 359 | 1.62E-004 | 84 | 1.92E-004 | 202.5 | **9.50E-007** | 90,784 | 2.12E-006 | 20,700 | **1.73E-006** | 280,417 | 5,672.84 | 310,950 | 282.96 | 2.74E-007 | 1.64E-006 |
| BERYLLIUM | 6.58E-007 | 359 | 3.94E-006 | 84 | 4.69E-006 | 202.5 | **2.31E-008** | 90,784 | 5.16E-008 | 20,700 | **4.20E-008** | 280,417 | 5,672.84 | 310,950 | 282.96 | 6.67E-009 | 3.99E-008 |
| CADMIUM | 4.93E-007 | 359 | 2.95E-006 | 84 | 3.51E-006 | 202.5 | **1.73E-008** | 90,784 | 3.87E-008 | 20,700 | **3.15E-008** | 280,417 | 5,672.84 | 310,950 | 282.96 | 5.00E-009 | 2.99E-008 |
| CHROMIUM | 3.45E-005 | 359 | 2.06E-004 | 84 | 2.46E-004 | 202.5 | **1.21E-006** | 90,784 | 2.71E-006 | 20,700 | **2.20E-006** | 280,417 | 5,672.84 | 310,950 | 282.96 | 3.50E-007 | 2.09E-006 |
| LEAD | 2.04E-005 | 359 | 1.22E-004 | 84 | 1.45E-004 | 202.5 | **7.18E-007** | 90,784 | 1.60E-006 | 20,700 | **1.30E-006** | 280,417 | 5,672.84 | 310,950 | 282.96 | 2.07E-007 | 1.24E-006 |
| MANGANESE | 2.13E-004 | 359 | 1.27E-003 | 84 | 1.52E-003 | 202.5 | **7.49E-006** | 90,784 | 1.67E-005 | 20,700 | **1.36E-005** | 280,417 | 5,672.84 | 310,950 | 282.96 | 2.16E-006 | 1.29E-005 |
| MERCURY | -- | 359 | -- | 84 | -- | 202.5 | -- | 90,784 | -- | 20,700 | -- | 280,417 | 5,672.84 | 310,950 | 282.96 | | -- |
| NICKEL | 5.48E-005 | 359 | 3.28E-004 | 84 | 3.90E-004 | 202.5 | **1.93E-006** | 90,784 | 4.30E-006 | 20,700 | **3.50E-006** | 280,417 | 5,672.84 | 310,950 | 282.96 | 5.55E-007 | 3.32E-006 |
| PHOSPHORUS | -- | 359 | -- | 84 | -- | 202.5 | -- | 90,784 | -- | 20,700 | -- | 280,417 | 5,672.84 | 310,950 | 282.96 | | -- |
| SELENIUM | 1.64E-006 | 359 | 9.81E-006 | 84 | 1.17E-005 | 202.5 | **5.77E-008** | 90,784 | 1.29E-007 | 20,700 | **1.05E-007** | 280,417 | 5,672.84 | 310,950 | 282.96 | 1.66E-008 | 9.95E-008 |

* AVG. % SILT CONTENT OF SAND : **2.0230**

** AVG. % SILT CONTENT OF AGGREGATE **0.0910**



Attachment: 2. Site Plan (American Eagle Appeal)

## Table 13.2

# *METAL EMISSION FACTORS FOR CONCRETE BATCHING*

### *CONCRETE READY MIXED CORPORATION*

### *ROANOKE, VA*

| | METAL per hour IN INLET (lb) | TIME (min) | METAL IN INLET (lb) | EST. CAPTURE EFFI-CIENCY (%) | TOTAL METAL (lb) | CONCRETE MADE ($yd^3$) | METAL per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | FLY ASH LOADED (lb) | METAL per 1000 lb CEMENT & FLY ASH (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | METAL per 1000 lb Solid Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUNS 4, 5 & 6 TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | |
| ARSENIC | 2.53E-005 | 360 | 1.52E-004 | 74 | 2.06E-004 | 153.5 | **1.34E-006** | 58,912 | 3.50E-006 | 20,060 | **2.61E-006** | 191,538 | 3,874.81 | 190,672 | 173.51 | 4.47E-007 | 2.48E-006 |
| BERYLLIUM | 1.21E-006 | 360 | 7.26E-006 | 74 | 9.86E-006 | 153.5 | **6.42E-008** | 58,912 | 1.67E-007 | 20,060 | **1.25E-007** | 191,538 | 3,874.81 | 190,672 | 173.51 | 2.14E-008 | 1.19E-007 |
| CADMIUM | 1.05E-007 | 360 | 6.30E-007 | 74 | 8.55E-007 | 153.5 | **5.57E-009** | 58,912 | 1.45E-008 | 20,060 | **1.08E-008** | 191,538 | 3,874.81 | 190,672 | 173.51 | 1.85E-009 | 1.03E-008 |
| CHROMIUM | 2.37E-005 | 360 | 1.42E-004 | 74 | 1.93E-004 | 153.5 | **1.26E-006** | 58,912 | 3.28E-006 | 20,060 | **2.44E-006** | 191,538 | 3,874.81 | 190,672 | 173.51 | 4.19E-007 | 2.33E-006 |
| LEAD | 2.00E-005 | 360 | 1.20E-004 | 74 | 1.63E-004 | 153.5 | **1.06E-006** | 58,912 | 2.77E-006 | 20,060 | **2.06E-006** | 191,538 | 3,874.81 | 190,672 | 173.51 | 3.53E-007 | 1.96E-006 |
| MANGANESE | 6.79E-005 | 360 | 4.07E-004 | 74 | 5.53E-004 | 153.5 | **3.60E-006** | 58,912 | 9.39E-006 | 20,060 | **7.00E-006** | 191,538 | 3,874.81 | 190,672 | 173.51 | 1.20E-006 | 6.66E-006 |
| MERCURY | -- | 360 | -- | 74 | -- | 153.5 | -- | 58,912 | -- | 20,060 | -- | 191,538 | 3,874.81 | 190,672 | 173.51 | | -- |
| NICKEL | 4.05E-005 | 360 | 2.43E-004 | 74 | 3.30E-004 | 153.5 | **2.15E-006** | 58,912 | 5.60E-006 | 20,060 | **4.18E-006** | 191,538 | 3,874.81 | 190,672 | 173.51 | 7.15E-007 | 3.97E-006 |
| PHOSPHORUS | -- | 360 | -- | 74 | -- | 153.5 | -- | 58,912 | -- | 20,060 | -- | 191,538 | 3,874.81 | 190,672 | 173.51 | | -- |
| SELENIUM | 3.68E-005 | 360 | 2.21E-004 | 74 | 3.00E-004 | 153.5 | **1.95E-006** | 58,912 | 5.09E-006 | 20,060 | **3.80E-006** | 191,538 | 3,874.81 | 190,672 | 173.51 | 6.50E-007 | 3.61E-006 |
| ***RUNS 7, 8, 9 & 10 TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | |
| ARSENIC | 1.17E-005 | 120 | 2.34E-005 | 67 | 3.48E-005 | 301.95 | **1.15E-007** | 159,078 | 2.19E-007 | 21,828 | **1.92E-007** | 355,800 | 7,197.83 | 495,240 | 450.67 | 3.37E-008 | 1.85E-007 |
| BERYLLIUM | 3.15E-007 | 120 | 6.30E-007 | 67 | 9.37E-007 | 301.95 | **3.10E-009** | 159,078 | 5.89E-009 | 21,828 | **5.18E-009** | 355,800 | 7,197.83 | 495,240 | 450.67 | 9.08E-010 | 4.97E-009 |
| CADMIUM | 3.94E-008 | 122 | 8.01E-008 | 67 | 1.19E-007 | 301.95 | **3.95E-010** | 159,078 | 7.49E-010 | 21,828 | **6.59E-010** | 355,800 | 7,197.83 | 495,240 | 450.67 | 1.15E-010 | 6.32E-010 |
| CHROMIUM | 4.49E-005 | 120 | 8.98E-005 | 67 | 1.34E-004 | 301.95 | **4.42E-007** | 159,078 | 8.39E-007 | 21,828 | **7.38E-007** | 355,800 | 7,197.83 | 495,240 | 450.67 | 1.29E-007 | 7.08E-007 |
| LEAD | 2.56E-005 | 120 | 5.12E-005 | 67 | 7.61E-005 | 301.95 | **2.52E-007** | 159,078 | 4.79E-007 | 21,828 | **4.21E-007** | 355,800 | 7,197.83 | 495,240 | 450.67 | 7.38E-008 | 4.04E-007 |
| MANGANESE | 1.97E-004 | 120 | 3.94E-004 | 67 | 5.86E-004 | 301.95 | **1.94E-006** | 159,078 | 3.68E-006 | 21,828 | **3.24E-006** | 355,800 | 7,197.83 | 495,240 | 450.67 | 5.68E-007 | 3.11E-006 |
| MERCURY | -- | 120 | -- | 67 | -- | 301.95 | -- | 159,078 | -- | 21,828 | -- | 355,800 | 7,197.83 | 495,240 | 450.67 | | -- |
| NICKEL | 3.31E-005 | 120 | 6.62E-005 | 67 | 9.84E-005 | 301.95 | **3.26E-007** | 159,078 | 6.19E-007 | 21,828 | **5.44E-007** | 355,800 | 7,197.83 | 495,240 | 450.67 | 9.54E-008 | 5.22E-007 |
| PHOSPHORUS | -- | 120 | -- | 67 | -- | 301.95 | -- | 159,078 | -- | 21,828 | -- | 355,800 | 7,197.83 | 495,240 | 450.67 | | -- |
| SELENIUM | 1.58E-006 | 120 | 3.16E-006 | 67 | 4.70E-006 | 301.95 | **1.56E-008** | 159,078 | 2.95E-008 | 21,828 | **2.60E-008** | 355,800 | 7,197.83 | 495,240 | 450.67 | 4.55E-009 | 2.49E-008 |

* AVG. % SILT CONTENT OF SAND : **2.0230**

** AVG. % SILT CONTENT OF AGGREGATE **0.0910**



Attachment: 2. Site Plan (American Eagle Appeal)

## Table 13.3

### *AVERAGE OF METAL EMISSION FACTORS FOR CONCRETE BATCHING*

***CONCRETE READY MIXED CORPORATION***

***ROANOKE, VA***

| | AVG. METAL per yard³ CONCRETE (lb) | STD. DEV. METAL per yard³ CONCRETE (lb) | AVG. METAL per 1000 lb CEMENT (lb) | STD. DEV. METAL per 1000 lb CEMENT (lb) | AVG. METAL per 1000 lb CEMENT & FLY ASH (lb) | STD. DEV. METAL per 1000 lb CEMENT & FLY ASH (lb) | | AVG. METAL per 1000 lb Solid Raw Material (lb) | STD. DEV. METAL per 1000 lb Solid Raw Material (lb) | AVG. METAL per 1000 lb ``FINES" (lb) | STD. DEV. METAL per 1000 lb ``FINES" (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | | |
| ARSENIC | **1.37E-006** | **1.25E-006** | 3.41E-006 | 3.22E-006 | **2.65E-006** | 2.49E-006 | | 3.93E-007 | 3.30E-007 | 2.51E-006 | 2.35E-006 |
| BERYLLIUM | **1.06E-007** | **1.54E-007** | 2.67E-007 | 3.91E-007 | **2.07E-007** | 3.04E-007 | | 2.94E-008 | 4.04E-008 | 1.96E-007 | 2.87E-007 |
| CADMIUM | **7.77E-009** | **8.68E-009** | 1.80E-008 | 1.92E-008 | **1.43E-008** | 1.57E-008 | | 2.32E-009 | 2.47E-009 | 1.36E-008 | 1.49E-008 |
| CHROMIUM | **2.27E-006** | **2.63E-006** | 5.61E-006 | 6.75E-006 | **4.39E-006** | 5.23E-006 | | 6.34E-007 | 6.81E-007 | 4.15E-006 | 4.93E-006 |
| LEAD | **1.59E-006** | **1.85E-006** | 3.94E-006 | 4.74E-006 | **3.07E-006** | 3.68E-006 | | 4.45E-007 | 4.81E-007 | 2.91E-006 | 3.47E-006 |
| MANGANESE | **7.82E-006** | **7.33E-006** | 1.90E-005 | 1.89E-005 | **1.50E-005** | 1.47E-005 | | 2.19E-006 | 1.89E-006 | 1.42E-005 | 1.38E-005 |
| MERCURY | -- | -- | -- | -- | -- | -- | | -- | -- | -- | -- |
| NICKEL | **3.35E-006** | **3.85E-006** | 8.31E-006 | 9.84E-006 | **6.48E-006** | 7.65E-006 | | 9.38E-007 | 1.00E-006 | 6.13E-006 | 7.21E-006 |
| PHOSPHORUS | -- | -- | -- | -- | -- | -- | | -- | -- | -- | -- |
| SELENIUM | **6.75E-007** | **1.11E-006** | 1.75E-006 | 2.89E-006 | **1.31E-006** | 2.15E-006 | | 2.24E-007 | 3.69E-007 | 1.24E-006 | 2.05E-006 |



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 14.1**

## *CONTROLLED METAL EMISSION FACTORS FOR CONCRETE BATCHING*

### *CONCRETE READY MIXED CORPORATION*

### *ROANOKE, VA*

| | METAL per hour IN INLET (lb) | METAL per hour OUT OUTLET (lb) | TIME (min) | EST. CAPTURE EFFI-CIENCY (%) | METAL ESCAPED INLET (lb) | METAL OUT OUTLET (lb) | TOTAL METAL RELEASED (lb) | CONCRETE MADE ($yd^3$) | METAL per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | FLY ASH LOADED (lb) | METAL per 1000 lb CEMENT & FLY ASH (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | METAL per 1000 lb Solid Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***PRELIMINARY RUN TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 1.96E-005 | 6.62E-007 | 120.1 | 53 | 3.48E-005 | 1.32E-006 | 3.61E-005 | 24 | **1.50E-006** | 9,486 | 3.81E-006 | 2,694 | **2.97E-006** | 33,810 | 683.98 | 44,400 | 40.40 | 4.00E-007 | 2.80E-006 |
| BERYLLIUM | 2.12E-006 | 4.40E-008 | 120.1 | 53 | 3.76E-006 | 8.81E-008 | 3.85E-006 | 24 | **1.60E-007** | 9,486 | 4.06E-007 | 2,694 | **3.16E-007** | 33,810 | 683.98 | 44,400 | 40.40 | 4.26E-008 | 2.98E-007 |
| CADMIUM | -- | -- | 120.1 | 53 | -- | -- | -- | 24 | **--** | 9,486 | -- | 2,694 | -- | 33,810 | 683.98 | 44,400 | 40.40 | -- | -- |
| CHROMIUM | 3.92E-005 | 1.10E-006 | 120.1 | 53 | 6.96E-005 | 2.21E-006 | 7.18E-005 | 24 | **2.99E-006** | 9,486 | 7.57E-006 | 2,694 | **5.89E-006** | 33,810 | 683.98 | 44,400 | 40.40 | 7.94E-007 | 5.56E-006 |
| LEAD | 2.74E-005 | 1.71E-006 | 120.1 | 53 | 4.86E-005 | 3.42E-006 | 5.21E-005 | 24 | **2.17E-006** | 9,486 | 5.49E-006 | 2,694 | **4.27E-006** | 33,810 | 683.98 | 44,400 | 40.40 | 5.76E-007 | 4.03E-006 |
| MANGANESE | 1.16E-004 | 6.94E-006 | 120.1 | 53 | 2.06E-004 | 1.39E-005 | 2.20E-004 | 24 | **9.16E-006** | 9,486 | 2.32E-005 | 2,694 | **1.80E-005** | 33,810 | 683.98 | 44,400 | 40.40 | 2.43E-006 | 1.70E-005 |
| MERCURY | -- | -- | 120.1 | 53 | -- | -- | -- | 24 | -- | 9,486 | -- | 2,694 | -- | 33,810 | 683.98 | 44,400 | 40.40 | -- | -- |
| NICKEL | 5.71E-005 | 4.40E-006 | 120.1 | 53 | 1.01E-004 | 8.81E-006 | 1.10E-004 | 24 | **4.59E-006** | 9,486 | 1.16E-005 | 2,694 | **9.04E-006** | 33,810 | 683.98 | 44,400 | 40.40 | 1.22E-006 | 8.54E-006 |
| PHOSPHORUS | -- | -- | 120.1 | 53 | -- | -- | -- | 24 | -- | 9,486 | -- | 2,694 | -- | 33,810 | 683.98 | 44,400 | 40.40 | -- | -- |
| SELENIUM | -- | -- | 120.1 | 53 | -- | -- | -- | 24 | **--** | 9,486 | -- | 2,694 | -- | 33,810 | 683.98 | 44,400 | 40.40 | -- | -- |
| ***RUNS 1, 2 & 3 TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 2.81E-005 | 6.62E-007 | 359 | 84 | 3.20E-005 | 3.96E-006 | 3.60E-005 | 202.5 | **1.78E-007** | 90,784 | 3.96E-007 | 20,700 | **3.23E-007** | 280,417 | 5,672.84 | 310,950 | 282.96 | 5.12E-008 | 3.06E-007 |
| BERYLLIUM | 7.68E-007 | 4.40E-008 | 359 | 84 | 8.75E-007 | 2.63E-007 | 1.14E-006 | 202.5 | **5.62E-009** | 90,784 | 1.25E-008 | 20,700 | **1.02E-008** | 280,417 | 5,672.84 | 310,950 | 282.96 | 1.62E-009 | 9.69E-009 |
| CADMIUM | 4.93E-007 | -- | 359 | 84 | 5.62E-007 | -- | 5.62E-007 | 202.5 | **2.77E-009** | 90,784 | 6.19E-009 | 20,700 | **5.04E-009** | 280,417 | 5,672.84 | 310,950 | 282.96 | 7.99E-010 | 4.78E-009 |
| CHROMIUM | 3.45E-005 | 1.10E-006 | 359 | 84 | 3.93E-005 | 6.59E-006 | 4.59E-005 | 202.5 | **2.27E-007** | 90,784 | 5.06E-007 | 20,700 | **4.12E-007** | 280,417 | 5,672.84 | 310,950 | 282.96 | 6.53E-008 | 3.91E-007 |
| LEAD | 2.04E-005 | 1.71E-006 | 359 | 84 | 2.32E-005 | 1.02E-005 | 3.35E-005 | 202.5 | **1.65E-007** | 90,784 | 3.69E-007 | 20,700 | **3.00E-007** | 280,417 | 5,672.84 | 310,950 | 282.96 | 4.76E-008 | 2.85E-007 |
| MANGANESE | 2.13E-004 | 6.94E-006 | 359 | 84 | 2.43E-004 | 4.15E-005 | 2.84E-004 | 202.5 | **1.40E-006** | 90,784 | 3.13E-006 | 20,700 | **2.55E-006** | 280,417 | 5,672.84 | 310,950 | 282.96 | 4.04E-007 | 2.42E-006 |
| MERCURY | -- | -- | 359 | 84 | -- | -- | -- | 202.5 | -- | 90,784 | -- | 20,700 | -- | 280,417 | 5,672.84 | 310,950 | 282.96 | -- | -- |
| NICKEL | 6.58E-005 | 4.40E-006 | 359 | 84 | 7.50E-005 | 2.63E-005 | 1.01E-004 | 202.5 | **5.00E-007** | 90,784 | 1.12E-006 | 20,700 | **9.09E-007** | 280,417 | 5,672.84 | 310,950 | 282.96 | 1.44E-007 | 8.63E-007 |
| PHOSPHORUS | -- | -- | 359 | 84 | -- | -- | -- | 202.5 | -- | 90,784 | -- | 20,700 | -- | 280,417 | 5,672.84 | 310,950 | 282.96 | -- | -- |
| SELENIUM | 2.74E-006 | -- | 359 | 84 | 3.12E-006 | -- | 3.12E-006 | 202.5 | **1.54E-008** | 90,784 | 3.44E-008 | 20,700 | **2.80E-008** | 280,417 | 5,672.84 | 310,950 | 282.96 | 4.44E-009 | 2.66E-008 |

* AVG. % SILT CONTENT OF SAND : **2.0230**

** AVG. % SILT CONTENT OF AGGREGATE : **0.0910**



Attachment: 2. Site Plan (American Eagle Appeal)

**Table 14.2**

## *CONTROLLED METAL EMISSION FACTORS FOR CONCRETE BATCHING*

### *CONCRETE READY MIXED CORPORATION*

### *ROANOKE, VA*

| | METAL per hour IN INLET (lb) | METAL per hour OUT OUTLET (lb) | TIME (min) | EST. CAPTURE EFFI-CIENCY (%) | METAL ESCAPED INLET (lb) | METAL OUT OUTLET (lb) | TOTAL METAL RELEASED (lb) | CONCRETE MADE ($yd^3$) | METAL per $yard^3$ CONCRETE (lb) | CEMENT LOADED (lb) | METAL per 1000 lb CEMENT (lb) | FLY ASH LOADED (lb) | METAL per 1000 lb CEMENT & FLY ASH (lb) | SAND LOADED (lb) | * SILT FROM SAND (lb) | COURSE AGGRE-GATE LOADED (lb) | ** SILT FROM AGGR. (lb) | METAL per 1000 lb Solid Raw Material (lb) | METAL per 1000 lb ``FINES'' (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***RUNS 4, 5 & 6 TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 2.63E-005 | 6.62E-007 | 360 | 74 | 5.64E-005 | 3.97E-006 | 6.04E-005 | 153.5 | **3.93E-007** | 58,912 | 1.02E-006 | 20,060 | **7.65E-007** | 191,538 | 3,874.81 | 190,672 | 173.51 | 1.31E-007 | 7.27E-007 |
| BERYLLIUM | 1.32E-006 | 4.40E-008 | 360 | 74 | 2.83E-006 | 2.64E-007 | 3.10E-006 | 153.5 | **2.02E-008** | 58,912 | 5.25E-008 | 20,060 | **3.92E-008** | 191,538 | 3,874.81 | 190,672 | 173.51 | 6.71E-009 | 3.73E-008 |
| CADMIUM | 1.05E-007 | -- | 360 | 74 | 2.25E-007 | -- | 2.25E-007 | 153.5 | **1.47E-009** | 58,912 | 3.82E-009 | 20,060 | **2.85E-009** | 191,538 | 3,874.81 | 190,672 | 173.51 | 4.88E-010 | 2.71E-009 |
| CHROMIUM | 2.37E-005 | 1.10E-006 | 360 | 74 | 5.08E-005 | 6.61E-006 | 5.74E-005 | 153.5 | **3.74E-007** | 58,912 | 9.75E-007 | 20,060 | **7.27E-007** | 191,538 | 3,874.81 | 190,672 | 173.51 | 1.25E-007 | 6.92E-007 |
| LEAD | 2.00E-005 | 1.71E-006 | 360 | 74 | 4.29E-005 | 1.02E-005 | 5.31E-005 | 153.5 | **3.46E-007** | 58,912 | 9.02E-007 | 20,060 | **6.73E-007** | 191,538 | 3,874.81 | 190,672 | 173.51 | 1.15E-007 | 6.40E-007 |
| MANGANESE | 6.79E-005 | 6.94E-006 | 360 | 74 | 1.46E-004 | 4.16E-005 | 1.87E-004 | 153.5 | **1.22E-006** | 58,912 | 3.18E-006 | 20,060 | **2.37E-006** | 191,538 | 3,874.81 | 190,672 | 173.51 | 4.06E-007 | 2.26E-006 |
| MERCURY | -- | -- | 360 | 74 | -- | -- | -- | 153.5 | -- | 58,912 | -- | 20,060 | -- | 191,538 | 3,874.81 | 190,672 | 173.51 | -- | -- |
| NICKEL | 5.10E-005 | 4.40E-006 | 360 | 74 | 1.09E-004 | 2.64E-005 | 1.36E-004 | 153.5 | **8.85E-007** | 58,912 | 2.30E-006 | 20,060 | **1.72E-006** | 191,538 | 3,874.81 | 190,672 | 173.51 | 2.94E-007 | 1.64E-006 |
| PHOSPHORUS | -- | -- | 360 | 74 | -- | -- | -- | 153.5 | -- | 58,912 | -- | 20,060 | -- | 191,538 | 3,874.81 | 190,672 | 173.51 | -- | -- |
| SELENIUM | 4.73E-006 | -- | 360 | 74 | 1.01E-005 | -- | 1.01E-005 | 153.5 | **6.61E-008** | 58,912 | 1.72E-007 | 20,060 | **1.28E-007** | 191,538 | 3,874.81 | 190,672 | 173.51 | 2.20E-008 | 1.22E-007 |
| ***RUNS 7, 8, 9 & 10 TRUCK MIX LOADING*** | | | | | | | | | | | | | | | | | | | |
| ARSENIC | 1.25E-005 | 6.62E-007 | 120 | 67 | 1.22E-005 | 1.32E-006 | 1.35E-005 | 301.95 | **4.47E-008** | 159,078 | 8.49E-008 | 21,828 | **7.46E-008** | 355,800 | 7,197.83 | 495,240 | 450.67 | 1.31E-008 | 7.16E-008 |
| BERYLLIUM | 3.94E-007 | 4.40E-008 | 120 | 67 | 3.84E-007 | 8.80E-008 | 4.72E-007 | 301.95 | **1.56E-009** | 159,078 | 2.97E-009 | 21,828 | **2.61E-009** | 355,800 | 7,197.83 | 495,240 | 450.67 | 4.57E-010 | 2.50E-009 |
| CADMIUM | 3.94E-008 | -- | 122 | 67 | 3.90E-008 | -- | 3.90E-008 | 301.95 | **1.29E-010** | 159,078 | 2.45E-010 | 21,828 | **2.16E-010** | 355,800 | 7,197.83 | 495,240 | 450.67 | 3.78E-011 | 2.07E-010 |
| CHROMIUM | 4.49E-005 | 1.10E-006 | 120 | 67 | 4.37E-005 | 2.20E-006 | 4.59E-005 | 301.95 | **1.52E-007** | 159,078 | 2.89E-007 | 21,828 | **2.54E-007** | 355,800 | 7,197.83 | 495,240 | 450.67 | 4.45E-008 | 2.44E-007 |
| LEAD | 2.56E-005 | 1.71E-006 | 120 | 67 | 2.49E-005 | 3.41E-006 | 2.83E-005 | 301.95 | **9.39E-008** | 159,078 | 1.78E-007 | 21,828 | **1.57E-007** | 355,800 | 7,197.83 | 495,240 | 450.67 | 2.75E-008 | 1.50E-007 |
| MANGANESE | 1.97E-004 | 6.94E-006 | 120 | 67 | 1.92E-004 | 1.39E-005 | 2.06E-004 | 301.95 | **6.81E-007** | 159,078 | 1.29E-006 | 21,828 | **1.14E-006** | 355,800 | 7,197.83 | 495,240 | 450.67 | 1.99E-007 | 1.09E-006 |
| MERCURY | -- | -- | 120 | 67 | -- | -- | -- | 301.95 | -- | 159,078 | -- | 21,828 | -- | 355,800 | 7,197.83 | 495,240 | 450.67 | -- | -- |
| NICKEL | 4.10E-005 | 4.40E-006 | 120 | 67 | 3.99E-005 | 8.80E-006 | 4.87E-005 | 301.95 | **1.61E-007** | 159,078 | 3.06E-007 | 21,828 | **2.69E-007** | 355,800 | 7,197.83 | 495,240 | 450.67 | 4.72E-008 | 2.58E-007 |
| PHOSPHORUS | -- | -- | 120 | 67 | -- | -- | -- | 301.95 | -- | 159,078 | -- | 21,828 | -- | 355,800 | 7,197.83 | 495,240 | 450.67 | -- | -- |
| SELENIUM | 2.37E-006 | -- | 120 | 67 | 2.31E-006 | -- | 2.31E-006 | 301.95 | **7.64E-009** | 159,078 | 1.45E-008 | 21,828 | **1.28E-008** | 355,800 | 7,197.83 | 495,240 | 450.67 | 2.24E-009 | 1.22E-008 |

* AVG. % SILT CONTENT OF SAND : **2.0230**

** AVG. % SILT CONTENT OF AGGREGATE : **0.0910**



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## Table 14.3

### *AVERAGE OF CONTROLLED METAL EMISSION FACTORS FOR CONCRETE BATCHING*
### *CONCRETE READY MIXED CORPORATION*
### *ROANOKE, VA*

| | AVG. METAL per yard³ CONCRETE (lb) | STD. DEV. METAL per yard³ CONCRETE (lb) | AVG. METAL per 1000 lb CEMENT (lb) | STD. DEV. METAL per 1000 lb CEMENT (lb) | AVG. METAL per 1000 lb CEMENT & FLY ASH (lb) | STD. DEV. METAL per 1000 lb CEMENT & FLY ASH (lb) | AVG. METAL per 1000 lb Solid Raw Material (lb) | STD. DEV. METAL per 1000 lb Solid Raw Material (lb) | AVG. METAL per 1000 lb ``FINES" (lb) | STD. DEV. METAL per 1000 lb ``FINES" (lb) |
|---|---|---|---|---|---|---|---|---|---|---|
| ***TRUCK MIX LOADING*** | | | | | | | | | | |
| ARSENIC | **5.30E-007** | **6.65E-007** | 1.33E-006 | 1.70E-006 | **1.03E-006** | **1.32E-006** | 1.49E-007 | 1.74E-007 | 9.76E-007 | 1.25E-006 |
| BERYLLIUM | **4.70E-008** | **7.61E-008** | 1.19E-007 | 1.93E-007 | **9.21E-008** | **1.50E-007** | 1.28E-008 | 2.00E-008 | 8.70E-008 | 1.42E-007 |
| CADMIUM | **1.46E-009** | **1.32E-009** | 3.42E-009 | 2.99E-009 | **2.70E-009** | **2.42E-009** | 3.31E-010 | 3.83E-010 | 2.57E-009 | 2.29E-009 |
| CHROMIUM | **9.36E-007** | **1.37E-006** | 2.33E-006 | 3.50E-006 | **1.82E-006** | **2.72E-006** | 2.57E-007 | 3.60E-007 | 1.72E-006 | 2.57E-006 |
| LEAD | **6.94E-007** | **9.89E-007** | 1.73E-006 | 2.52E-006 | **1.35E-006** | **1.96E-006** | 1.92E-007 | 2.59E-007 | 1.28E-006 | 1.85E-006 |
| MANGANESE | **3.12E-006** | **4.04E-006** | 7.69E-006 | 1.04E-005 | **6.03E-006** | **8.04E-006** | 8.60E-007 | 1.05E-006 | 5.70E-006 | 7.58E-006 |
| MERCURY | **--** | **--** | -- | -- | -- | -- | | | -- | -- |
| NICKEL | **1.53E-006** | **2.06E-006** | 3.84E-006 | 5.25E-006 | **2.99E-006** | **4.08E-006** | 4.26E-007 | 5.38E-007 | 2.82E-006 | 3.85E-006 |
| PHOSPHORUS | **--** | **--** | -- | -- | -- | -- | | | -- | -- |
| SELENIUM | **2.97E-008** | **3.17E-008** | 7.37E-008 | 8.59E-008 | **5.64E-008** | **6.29E-008** | 7.17E-009 | 1.01E-008 | 5.37E-008 | 5.98E-008 |



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## 4.3 Reference 3

This test report (Reference 3) presents the results of emission testing on the pneumatic transfer of cement to a silo at Allied Concrete Supply, Chicago Illinois on October 17, 1972. The emissions resulting from the silo filling were controlled with two baghouses (Tiberi Engineering Company dust collectors) located on the top of the silo. Because of the low flow rates from the dust collectors, a temporary six inch diameter stack of four feet length was added to one of the collectors. As a result, the emission testing quantified only particulate emissions from one of the two dust collectors. Consequently, the actual amount of total controlled emissions was assumed to be twice the measured amount.

The test method used to collect the emissions appears to be similar to EPA's Test Method Number 5. Explicit isokinetic calculations are not present in the test report. However based upon the 3/8 inch nozzle diameter and 13.67 cubic foot sample volume present in the report, a 99% isokinetic sampling rate can be calculated. Also, while two test runs were performed, meter volumes, nozzle diameters, and filter weights for only one test run are available. The test contains no QA data on meter volumes, nozzle geometry, and size or pitot geometries. Lastly, no details are included in the test report on whether changes were made in the arrangement of the S type pitot and the nozzle because of the small duct diameter. As a consequence of the deficiencies, the test data set from this report is **rated C**.

The following presents results from the report and demonstrates how these results were used to develop a controlled particulate matter (PM) emission factor for cement silo filling.

- **Results from the emission testing:**

| | |
|---|---|
| Exhaust Loading | 0.0139 grains per ft3 |
| Exhaust Rate | 115.4 ft3 per min |
| Test Duration | 30 minutes |
| Cement Loaded | 44,340 lb |

- Calculations for the PM emission factor for cement silo filling:

$$\text{Lb of PM in inlet per dust collector} = \left(0.0139 \frac{\text{grains}}{\text{ft}^3}\right)\left(115.4 \frac{\text{ft}^3}{\text{min}}\right)(30\text{min})\left(\frac{1\,\text{lb}}{7{,}000\ \text{grains}}\right)$$

**= 0.00687 lb of PM**

Total for both collectors = 2 x 0.00687 lb of PM
**= 0.0137 lb of PM**

$$\text{Lb of PM per 1,000 lb of cement loaded} = \left(\frac{0.0137\ \text{lb PM}}{44.34 \quad 1{,}000\ \text{lb cement loaded}}\right)$$

$$3.10 \times 10^{-4} \frac{\text{lb PM}}{1{,}000\ \text{lb cement loaded}}$$



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## 4.4 Reference 4

The bulk of this test report (Reference 4) is classified as confidential and was not available for review. Apparently, this test report presents the results of emission testing on the uncontrolled and controlled pneumatic transfer of cement and Pozmix™ (a cement supplement) to a silo for an unknown company in Oklahoma City, Oklahoma in February of 1976. The emissions resulting from the silo filling were controlled with a baghouse (type unknown).

Only one page of information is available. This page includes process weights, permissible emissions, measured emissions, calculated baghouse control efficiencies and isokinetic variations for each of the twelve runs. This limited information is insufficient for determining whether the test method was in accordance with EPA standards. Consequently, the test data set from this report is **rated D**.

The following presents results from the report and demonstrates how these results were used to develop a controlled particulate matter (PM) emission factor for both cement silo filling and cement supplement silo filling.

- Results from the cement emission testing

| | | | | | |
|---|---|---|---|---|---|
| Test 1 Cement Emission Rate | = | 0.085 lb/hr | Baghouse efficiency | = | 97.6% |
| Test 2 Cement Emission Rate | = | 0.044 lb/hr | Baghouse efficiency | = | 99.2% |
| Test 3 Cement Emission Rate | = | 0.039 lb/hr | Baghouse efficiency | = | 99.3% |
| **Average** | = | **0.056 lb/hr** | | | |

- **Calculations for the PM emission factor for cement silo filling:**

Since the rate for all three transfers was 47,000 $\frac{\text{lb cement loaded}}{\text{hour}}$, the average emission factor was:

$$\text{Average Emission Factor} = \frac{0.056 \frac{\text{lb PM}}{\text{hour}}}{47 \frac{1000 \text{ lb cement loaded}}{\text{hour}}}$$

$$= 1.2 \text{ x } 10^{-3} \frac{\text{lb PM}}{1000 \text{ lb cement loaded}}$$

- **Results from the Pozmix™ emission testing:**

| | | | | | |
|---|---|---|---|---|---|
| Test 1 Pozmix™ Emission Rate | = | 0.1328 lb/hr | Baghouse efficiency | = | 99.2% |
| Test 2 Pozmix™ Emission Rate | = | 0.0940 lb/hr | Baghouse efficiency | = | 98.5% |
| Test 3 Pozmix™Emission Rate | = | 0.0541 lb/hr | Baghouse efficiency | = | 99.0% |
| **Average** | = | **0.0936 lb/hr** | | | |

- **Calculations for the PM emission factor for Pozmix™ silo filling:**

Since the rate for all three transfers was 92,500 $\frac{\text{lb cement loaded}}{\text{hour}}$, the average emission factor was:

Attachment: 2. Site Plan (American Eagle Appeal)

$$\text{Average Emission Factor} = \frac{0.0936 \frac{\text{lb PM}}{\text{hour}}}{92.5 \frac{1000 \text{ lb cement loaded}}{\text{hour}}}$$

$$= 1.01 \text{x} 10^{-3} \frac{\text{lb PM}}{1000 \text{ lb cement loaded}}$$

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## 4.5 Reference 5

This report (Reference 5) documents particulate emissions testing conducted by the State of Tennessee, Division of Air Pollution Control of a silo filling operation at Specialty Alloys Corporation in Gallaway, Tennessee. The silo filling operation was controlled by a water impingement scrubber made from a 55 gallon drum with a burlap cover. Emission testing was accomplished with a high volume air sampler held at a single point approximately two feet above the rim of the barrel. Two sets of emissions tests were conducted. The first series were three runs during a lowered loading rate while one layer of burlap covered the drum. Opacities averaged 30% and ranged from 5% to 80% during these test runs. The second series were two runs during a normal loading rate while two layers of burlap covered the drum. Opacities averaged less than 20% and ranged from 5% to 15% during the second run. The test report presents average emissions rates of 0.11 lb/hr during the first test series and 0.04 lb/hr during the second test series. Approximately 26.5 tons of cement was unloaded during each test series. The data documented in this reference are not suitable for developing emission factors. The control device is unique and atypical of those typically used for controlling silo filling emissions. The emission testing methodology used is unlikely to provide a reasonable quantification of the emissions which are fugitive in nature. The test report is not rated.

## 4.6. Information Useful for Estimating Emission Factors for Traversing Paved and Unpaved Roads and for Loading Aggregate and Sand to Elevated Bins (data are from Reference 1 and Reference 2)

Tables 15.1 and 16.1 present information presented in references 1 and 2 that are parameters needed to estimate emissions using methodologies contained in other AP-42 sections. Table 16.2 presents summary statistical information of the batch formulations that were produced during the emissions testing documents in references 1 and 2. Table 16.3 presents the application of the methodology presented in AP-42 Section 13.2.4, *Aggregate Handling and Storage Piles*, and used to develop the final emissions factors for loading aggregate and sand to storage piles, and to elevated bins.

| Table | Table Name |
|---|---|
| 15.1 | Percent Silt and Silt Loading of Road Surfaces |
| 16.1 | Silt & Moisture Content of Aggregate and Sand |
| 16.2 | Batch Formulation Summary Statistics |
| 16.3 | Emission Factors for Aggregates & Sand Transfer to Elevated Bins |

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# Table 15.1

## *PERCENT SILT & SILT LOADING OF ROAD SURFACES*

| | | Sample Number | Avg. % Silt Content (%) |
|---|---|---|---|
| **Unpaved** | Chaney Enterprises | 2 | 6.131 |
| | | 3 | 9.172 |
| | **Average** | -- | **7.652** |

| | | | Sample Number | Avg. % Silt Content (%) | Sample Mass (g) | Silt Mass (g) | Sample Area ($m^2$) | Silt Loading ($g/m^2$) |
|---|---|---|---|---|---|---|---|---|
| **Paved** (uncontrolled) | | Chaney Enterprises | 1 | 16.908 | 5,614 | 949.2 | 37.16 | 25.54 |
| | | | 4 | 11.375 | 6,124 | 696.6 | 10.41 | 66.94 |
| | | | **Average** | **14.1415** | **5,869** | **822.9** | **23.7838** | **46.2437** |
| | * | AP-42 | **Average** | -- | -- | -- | -- | **12.00** |
| | | **Average of Averages** | -- | -- | -- | -- | -- | **29.1218** |
| **Paved** (controlled) | | Concrete Ready Mixed | 1 | 10.727 | 8,732 | 936.7 | 31.39 | 29.85 |
| | | | 2 | 12.540 | 2,722 | 341.3 | 48.45 | 7.04 |
| | | | **Average** | **11.63355** | **5,727** | **639.0** | **39.9179** | **18.4452** |

* The value from AP-42 is taken from Table 13.2.1-3 in Chapter 13.2.1 (10/97).

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# Table 16.1

## *SILT & MOISTURE CONTENT OF AGGREGATE & SAND*

| | | Sample Description | Avg. % Silt Content (%) | Avg. % Moisture (%) |
|---|---|---|---|---|
| **Aggregate** | Chaney Enterprises | Course Chaney Stone | 0.1398 | 3.28 |
| | | Course Black Aggregate | 0.3535 | 0.61 |
| | | **Average** | **0.2467** | **1.95** |
| | Concrete Ready Mixed | Aggregate Gravel | **0.0910** | **1.59** |
| | **Average of Facilities** | -- | **0.1688** | **1.77** |
| **Sand** | Chaney Enterprises | Sand 1 | 1.8216 | 4.88 |
| | | Sand 2 | 2.4295 | 4.87 |
| | | Sand 3 | 2.4742 | 5.26 |
| | | **Average** | **2.2418** | **5.00** |
| | Concrete Ready Mixed | Sand from West Pit (Right) | 2.0230 | 3.29 |
| | | Sand from West Pit (Left) | | 3.39 |
| | | **Average** | **2.0230** | **3.34** |
| | **Average of Facilities** | -- | **2.1324** | **4.17** |

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**Table 16.2**

# BATCH FORMULATION SUMMARY STATISTICS

| | Concrete Ready Mixed Corp., Roanoke, VA | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Course Aggregate | | Sand | | Cement | | Fly Ash | | Cement + Fly Ash | | Water | | Total weight |
| | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (gal/yard) | (weight %) | (lbs/yard) |
| Average | 1864.8 | 45.1% | 1454.2 | 35.4% | 467.6 | 11.4% | 97.1 | 2.5% | 565 | 13.9% | 27.3 | 5.7% | 4111 |
| Standard Deviation | 593.5 | 10.8% | 484.9 | 8.6% | 167.6 | 3.8% | 67.2 | 2.1% | 150 | 3.8% | 5.8 | 1.9% | 746 |
| Median | 1839.9 | 46.4% | 1440.0 | 34.9% | 470.4 | 11.3% | 116.8 | 2.7% | 563 | 12.7% | 27.1 | 5.7% | 3976 |
| 5th Percentile | 853.2 | 37.4% | 1183.0 | 28.5% | 284.6 | 7.2% | 0.0 | 0.0% | 414 | 10.5% | 22.5 | 4.1% | 3277 |
| 10th Percentile | 1677.5 | 42.6% | 1221.8 | 29.6% | 289.8 | 7.3% | 0.0 | 0.0% | 422 | 10.7% | 25.6 | 4.1% | 3846 |
| 25th Percentile | 1788.8 | 45.1% | 1249.7 | 31.3% | 371.2 | 9.3% | 72.0 | 1.8% | 478 | 11.7% | 26.2 | 5.5% | 3953 |
| 50th Percentile | 1839.9 | 46.4% | 1440.0 | 34.9% | 470.4 | 11.3% | 116.8 | 2.7% | 563 | 12.7% | 27.1 | 5.7% | 3976 |
| 75th Percentile | 1868.8 | 47.0% | 1508.0 | 37.1% | 535.1 | 13.5% | 128.0 | 3.2% | 624 | 15.8% | 28.8 | 6.0% | 4148 |
| 90th Percentile | 2830.3 | 55.1% | 1674.4 | 39.1% | 612.0 | 15.5% | 143.4 | 3.6% | 687 | 17.4% | 31.0 | 6.4% | 5249 |
| 95th Percentile | 2906.0 | 55.4% | 1770.3 | 42.6% | 615.8 | 15.6% | 152.7 | 4.4% | 692 | 18.6% | 33.0 | 7.6% | 5329 |
| Count | 154 | | | | | | | | | | | | |

| | Chaney Enterprises, Waldorf, MD | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Course Aggregate | | | Sand | | Cement | | New Cem | | Cement + New Cem | | Water | Total weight |
| | (lbs/yard) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (gal/yard) | (weight %) | (lbs/yard) |
| Average | 3141 | 1865 | 47.0% | 1413 | 35.5% | 504 | 12.7% | 59 | 1.4% | 563 | 14.1% | 16 | 3.4% | 3975 |
| Standard Deviation | 388 | 230 | 6.4% | 218 | 5.4% | 114 | 3.1% | 161 | 3.7% | 275 | 3.1% | 4 | 1.1% | 266 |
| Median | 3160 | 1876 | 47.8% | 1386 | 35.1% | 527 | 13.7% | 0 | 0.0% | 527 | 14.3% | 16 | 3.4% | 3931 |
| 5th Percentile | 3041 | 1805 | 42.5% | 1221 | 31.2% | 260 | 6.1% | 0 | 0.0% | 260 | 7.3% | 8 | 1.7% | 3762 |
| 10th Percentile | 3080 | 1829 | 44.1% | 1252 | 32.6% | 278 | 6.9% | 0 | 0.0% | 278 | 11.5% | 10 | 2.1% | 3814 |
| 25th Percentile | 3128 | 1857 | 47.0% | 1307 | 33.8% | 469 | 11.9% | 0 | 0.0% | 469 | 12.7% | 14 | 2.8% | 3862 |
| 50th Percentile | 3160 | 1876 | 47.8% | 1386 | 35.1% | 527 | 13.7% | 0 | 0.0% | 527 | 14.3% | 16 | 3.4% | 3931 |
| 75th Percentile | 3253 | 1932 | 48.7% | 1453 | 36.0% | 565 | 14.5% | 15 | 0.4% | 580 | 15.5% | 19 | 3.9% | 4046 |
| 90th Percentile | 3304 | 1962 | 49.5% | 1620 | 38.4% | 610 | 15.7% | 467 | 10.6% | 1077 | 17.5% | 20 | 4.3% | 4281 |
| 95th Percentile | 3331 | 1978 | 50.3% | 1640 | 41.6% | 623 | 16.2% | 515 | 11.6% | 1138 | 18.6% | 21 | 4.5% | 4416 |
| Count | 266 | | | | | | | | | | | | | |

Values in first column of course aggregate are as reported on weigh sheets. Since the average value is significantly greater than the average for Concrete Ready Mix, typical formulations and results in a yard of concrete weight significantly higher than typical, all course aggregate weights were adjusted by a common ratio to achieve the average presented.

| | Combined Summary Statistics for Two Plants | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Course Aggregate | | Sand | | Cement | | Fly Ash / New Cem | | Cement + Pozolan | | Water | | Total weight |
| | | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (lbs/yard) | (weight %) | (gal/yard) | (weight %) | (lbs/yard) |
| Average | | 1864.9 | 46.3% | 1428.4 | 35.5% | 490.7 | 12.3% | 73.0 | 1.8% | 563.8 | 14.0% | 20.1 | 4.2% | 4024.6 |
| Standard Deviation | | 403.4 | 8.4% | 341.6 | 6.8% | 137.4 | 3.4% | 135.5 | 3.3% | 140.4 | 3.4% | 7.4 | 1.8% | 503.3 |
| Median | | 1864.4 | 47.3% | 1394.5 | 35.0% | 514.2 | 12.7% | 3.4 | 0.1% | 562.2 | 14.0% | 18.9 | 3.9% | 3956.4 |
| 5th Percentile | | 1699.0 | 41.8% | 1210.0 | 29.3% | 260.0 | 6.6% | 0.0 | 0.0% | 280.3 | 9.3% | 8.8 | 1.9% | 3710.3 |
| 10th Percentile | | 1788.8 | 43.0% | 1233.3 | 30.9% | 289.5 | 7.3% | 0.0 | 0.0% | 418.2 | 10.8% | 10.8 | 2.3% | 3812.8 |
| 25th Percentile | | 1833.1 | 45.6% | 1300.8 | 33.0% | 440.3 | 9.6% | 0.0 | 0.0% | 493.0 | 12.1% | 15.2 | 3.2% | 3892.0 |
| 50th Percentile | | 1864.4 | 47.3% | 1394.5 | 35.0% | 514.2 | 12.7% | 3.4 | 0.1% | 561.1 | 14.0% | 18.9 | 3.9% | 3956.9 |
| 75th Percentile | | 1907.6 | 48.5% | 1477.6 | 36.4% | 564.2 | 14.4% | 116.7 | 2.7% | 616.8 | 15.6% | 26.8 | 5.6% | 4071.5 |
| 90th Percentile | | 1971.3 | 50.2% | 1624.6 | 38.9% | 611.3 | 15.5% | 144.0 | 3.7% | 690.0 | 17.5% | 28.8 | 6.1% | 4406.8 |
| 95th Percentile | | 2750.0 | 52.7% | 1703.2 | 41.7% | 620.0 | 16.2% | 470.0 | 11.6% | 776.2 | 18.6% | 30.6 | 6.4% | 5240.9 |
| Count | | 420 | | | | | | | | | | | | |



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# Table 16.3

## *EMISSION FACTORS FOR AGGREGATE & SAND TRANSFER TO ELEVATED BINS*

| Aggregate Transfer Emission Factors | |
|---|---|
| PM-10 | PM |

| | | | |
|---|---|---|---|
| **1.68E-003** | kg/Mg | **3.54E-003** | kg/Mg |
| **3.27E-003** | lb/ton | **6.92E-003** | lb/ton |

| Sand Transfer Emission Factors | |
|---|---|
| PM-10 | PM |

| | | | |
|---|---|---|---|
| **5.05E-004** | kg/Mg | **1.07E-003** | kg/Mg |
| **9.86E-004** | lb/ton | **2.08E-003** | lb/ton |

**The emission factors were developed from the following formulas from AP-42 Section 13.2.4:**

This formula was used to compute the emission factors for the metric units.

**E = k (.0016) [ (U/2.2)^1.3 / (M/2)^1.4 ]**

This formula was used to compute the emission factors for the english units.

**E = k (.0032) [ (U/5)^1.3 / (M/2)^1.4 ]**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| E | = | emission factors (kg / Mg & lb / ton) | | | | | | | |
| k | = | particle size multiplier for PM-10 | k | = | 0.35 | | | | |
| k | = | particle size multiplier for PM | k | = | 0.74 | | | | |
| U | = | mean wind speed (m/s & mph) | U | = | 4.48 | m/s | U | = 10 | mph |
| M | = | material moisture content for aggregate (%) | M | = | 1.77 | % | | | |
| M | = | material moisture content for sand (%) | M | = | 4.17 | % | | | |

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## 4.7 Reference 6

Reference 6 concerned a series of emission test programs sponsored by The Ready Mixed Concrete Research Foundation (RMC Research Foundation) at six ready mixed concrete facilities located in North Carolina, Virginia, and South Carolina. The purpose of this project is to prepare an updated and expanded set of AP-42, Chapter 11.12 emission factors for total particulate matter, $PM_{10}$, $PM_{10-2.5}$, $PM_{2.5}$, and arsenic from truck mix and central mix process operations at ready mixed concrete plants.

Three truck mix operations and three central mix operations are included in the scope of this test program. Reference 6 presents the results of December 2003, February 2004 and May 2004 emission factor testing at the (1) Ready Mixed Concrete Company, Inc. (RMCC) truck mix and central mix operations at the Wake Forest, North Carolina plant, (2) the S.T. Wooten central mix plant in Raleigh, N.C., (3) the Chandler Concrete truck mix plant in Troutville, Virginia, (4) the Concrete Supply truck mix plant in Rock Hill, South Carolina, and (5) the RMC Carolina Materials central mix plant in Raleigh, North Carolina.

The test program was designed to provide emission factor data at the following locations at ready mixed concrete plants.

- Outlet of the fabric filter collector serving the mixing operation
- Inlet to the fabric filter collector serving the mixing operation
- Fugitive emissions from the mixing operations and trucks

The inlets of the fabric filters were tested using EPA reference methods in conventional ducts. During the tests at RMCC Wake Forest, EPA reference method tests were also conducted in the fabric filter outlet ducts. During the subsequent tests at S.T. Wooten Raleigh, Chandler Concrete Troutville, Concrete Supply Rock Hill, and RMC Carolina Materials, the fabric filter outlet $PM_{10}$ emissions were measured using a continuous particulate matter monitor that was sensitive to the low mass loadings present in the effluent gas streams from the fabric filters.

Fugitive emissions from the mixing operations were measured simultaneously with the tests at the inlet and outlet to the fabric filter. The fugitive emissions were captured in a set of sampling arrays that were located immediately adjacent to the fugitive emission points.

U.S. EPA Conditional Test Method 040 was conducted at the inlets of the mixing operation fabric filter particulate matter control devices to simultaneously measure the concentrations of (1) total particulate matter, (2) $PM_{10}$ particulate matter, (3) $PM_{10-2.5}$ particulate matter, and (4) $PM_{2.5}$ particulate matter. The $PM_{10}$, $PM_{10-2.5}$, and $PM_{2.5}$ emission concentrations were measured directly in this sampling train by partitioning the captured particulate matter into several size ranges. $PM_{10}$ was measured as the sum of the $PM_{10-2.5}$ and $PM_{2.5}$ particulate matter. Total particulate matter was measured as the sum of $PM_{10}$ particulate matter and all of the solids having a size greater than 10 micrometers that were captured in the cyclone and sampling train. There is a possible bias to higher-than-true total particulate matter concentration results due to the geometry of the $PM_{10}$ cyclone, the short length of the sampling nozzle, and the inertia of particles larger than 10 micrometers in the sampling gas stream. Despite this possible bias, it was decided to measure the total particulate matter using the Preliminary Method 4 sampling train due to the ability to collect data in all size ranges simultaneously.

During the tests at RMCC Wake Forest, EPA Preliminary Method 4 was also used at the fabric filter outlet; however, the total particulate matter catch weights in the sampling trains ranged from only 1.0 to 2.3 milligrams. These small catch weights were distributed in several different particle size



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fractions. Air Control Techniques, P.C. determined that tests sponsored by EPA[1] in 1993 also experienced low catch weights. To minimize data precision problems at these low catch weights, Air Control Techniques, P.C. proposed to the RMC Research Foundation to modify the fabric filter outlet tests procedures to use a tapered element oscillating microbalance (TEOM) continuous particulate matter monitor. This instrument is sensitive down to particulate matter concentrations of less than 10 micrograms per cubic meter and is therefore very appropriate for testing low concentration particulate matter gas streams. During the tests at S.T. Wooten (central mix), Chandler Concrete (truck mix), Concrete Supply (truck mix) and RMC Carolina Materials (central mix), a $PM_{10}$ TEOM was used at the fabric filter outlet, and EPA Preliminary Method 4 was used only at the fabric filter inlet.

The presently available hood capture efficiency data were obtained during 1993 tests sponsored by EPA at two plants: one in Maryland and one in Virginia. In both test programs, EPA used qualitative visible emission evaluations to estimate capture efficiency. Air Control Techniques, P.C. use of a TEOM based downwind emissions profiling sampling method provides a quantitative methodology to determine the emissions which escape capture of the batch loading system, thereby eliminating the subjective nature of determining capture efficiency using visible observation methods in the source tests documented in references 1 and 2. Based on the TEOM instrument system, Air Control Techniques, P.C. designed and used a downwind sampling array to quantify the capture efficiency of the ready mixed concrete plant hood systems. This sampling array design was based on the sampling principles adopted by EPA in Method 5D (40 CFR Part 60, Appendix A, Method 5D) used for sampling open top fabric filter systems. This sampling array is also similar to the traversing hood system designed and used by Air Control Techniques, P.C. to measure fugitive particulate matter emissions[2] from sloped vibrating screens at stone crushing plants.

Air Control Techniques, P.C. used a set of downwind sampling arrays mounted vertically on the side walls of the truck loading area and at the inlet of central mixing operations to measure the fugitive dust mass flux through a defined 200 square foot area[3]. Due to space constraints, the downwind sampling arrays were limited to a 140 square foot area for all of the following tests at both truck and central mix facilities. The sampling arrays were mounted directly adjacent to the transfer operations, and portions of the arrays were close to parts of the truck receiving concrete. There were sixty sampling points in the set of two arrays; this number of points exceeds the requirements of EPA Method 5D. The area monitored by the sampling arrays included all of the downwind area subject to dispersion of the fugitive particulate matter. The gas transport velocities through all sampling tubes and ductwork were maintained at a minimum of 3,500 feet per minute to prevent settling of dust in the tubes and ductwork. Method 22 visual observations were conducted during the run. These observations also provided qualitative supporting information concerning the fugitive particulate matter concentrations.

Each of the sampling arrays was ducted together to yield a single sample gas stream. This gas stream was directed past an enlarged duct with the intake for an ambient TEOM monitor meeting the requirements of Method IO-1.3 (the *Compendium of Methods for the Determination of $PM_{10}$ In Inorganic Compounds in Ambient Air Using A Continuous Rupprecht And Patashnick [R&P] Teom® Particle Monitor*). The gas flow rate through this enclosure was maintained at less than 5 mph. The TEOM had a $PM_{10}$ sampling head and operated at a flow rate of 16.67 liters per minute. The TEOM was operated in accordance with Method IO-1.3. The instrument was calibrated in accordance with Section 12.1 of Method IO-1.3.

[1] EPA References 9 and 10 in AP-42 Section 11.12.
[2] The emission factors measured using the screening operation traversing hood system have been published in AP-42 Section 11.19.2 (Fifth Edition, 1995).
[3] The array area for the inlet to the central mixer was limited to 140 square feet due to space constraints.



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The TEOM instrument was mounted on a secure base. The instrument was protected from severe vibration. The TEOM was equilibrated prior to the start of the first test run on each test day. The fugitive $PM_{10}$ emissions ($PM_{10}$ escaping the plant hood system) were measured by multiplying the measured ambient $PM_{10}$ concentration by the ambient air flow rate through the sampling array. A Davis Instruments, Inc. meteorological monitoring station was located within 20 feet of the sampling arrays and at the same elevation as the sampling arrays to measure the wind direction and wind speed through the arrays. During the initial set of tests at the RMCC Plant in December 2003, Air Control Techniques, P.C. determined that the meteorological monitoring equipment was subject to swirling and suppressed winds caused by the deflection of ambient wind by the plant equipment and trucks in the immediate vicinity of the monitoring equipment. Accordingly, Air Control Techniques, P.C. obtained confirming wind speed data from a local meteorological monitoring station located within ten miles of the plant site. During the tests at S.T. Wooten, Chandler Concrete, Concrete Supply, and RMC Carolina Materials, Air Control Techniques, P.C. used multiple wind speed and direction monitoring stations on the plant site located in areas immediately adjacent to the sampling array to provide confirmation data. Wind pennants were also mounted on the arrays to provide a direct indication of wind direction through the array.

All of the particulate matter measured by the TEOM during the time that the equipment being tested was operating was assumed to originate as fugitive emissions from the mixing operation being tested. This approach introduced a bias to lower-than-true capture efficiency due to the presence of ambient $PM_{10}$ in the ambient air upwind of the plant and due to other fugitive $PM_{10}$ sources in the plant area (i.e. roadways and truck exhaust). There was no practical means to identify and correct for these other sources of $PM_{10}$ on a continuous basis.

During the initial set of tests at the RMCC plant sources, Air Control Techniques, P.C. determined that the particulate matter catch weights were extremely low due to the high efficiency of the fabric filter. Air Control Techniques, P.C revised the testing procedures prior to the tests at S.T. Wooten, Chandler Concrete, Concrete Supply, and RMC Carolina Materials to address this issue. A second TEOM monitor was used to provide a more sensitive and precise measurement of particulate matter emissions from the fabric filter. The entire fabric filter outlet gas stream was captured and directed through a duct with an installed TEOM monitor. The TEOM was used to provide a continuous indication of the $PM_{10}$ concentration in the fabric filter effluent gas stream. Total particulate matter emissions were calculated based on (1) the measured $PM_{10}$ emissions from the fabric filter and (2) the total PM/ $PM_{10}$ ratio at the inlet to the fabric filter. The total PM/ $PM_{10}$ ratio was checked based on scanning electron microscopy sizing of filter samples obtained at the fabric filter outlet.

The results of the controlled[4] emission factor tests are summarized in Table 17.1 for the truck mix sources and Table 17.2 for the central mix sources. Uncontrolled emission factor data for truck mix sources and central mix sources are provided in Tables 17.3 and 17.4 respectively.

The RMC Research Foundation measured emission factors for filterable particulate matter and $PM_{10}$ particulate matter are compared with previously published AP-42 emission factors (controlled conditions). No emission factors were previously available for $PM_{10-2.5}$ (termed "coarse particulate matter") and $PM_{2.5}$ (termed "fine particulate matter"). The run-by-run data used in compiling Tables 17.1 and 17.2 are provided in Tables 17.5 through 17.10.

[4] Controlled emissions are the total of emissions from the fabric filter used to control the mixing operation plus the fugitive emissions not captured by the hood.



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Table 17.1 Reference 6 Truck Mix Emission Factor Test Results

| Emission Factors | RMCC Raleigh Truck Mix (Controlled) | Chandler Concrete Truck Mix (Controlled) | Concrete Supply Truck Mix (Controlled) | Reference 6 Truck Mix Average |
|---|---|---|---|---|
| Emission Factors | Lbs./ton | Lbs./ton | Lbs./ton | Lbs./ton |
| Total Particulate Matter | 0.0094 | 0.0512 | 0.0197 | 0.0268 |
| $PM_{10}$ | 0.0039 | 0.0225 | 0.0035 | 0.0100 |
| $PM_{10-2.5}$ | 0.0033 | 0.0195 | 0.0032 | 0.0086 |
| $PM_{2.5}$ | 0.0007 | 0.0031 | 0.0003 | 0.0013 |
| Truck Hood, % | 99.5 | 93.1 | 99.3 | 97.3 |

1. All emission factors expressed as pounds of mass per ton of cement and cement supplement processed.
2. Ratio calculated based on penetration; 100%-97.3% for RMC Research Foundation tests, 100% - 71% for previous tests.

Table 17.2. Reference 6 Central Mix Emission Factor Test Results

| Emission Factors | RMCC Raleigh Central Mix (Controlled) | S.T. Wooten Raleigh Central Mix (Controlled) | RMC Carolina Materials Raleigh Central Mix (Controlled) | Reference Central Mix Average |
|---|---|---|---|---|
| Emission Factors | Lbs./ton | Lbs./ton | Lbs./ton | Lbs./ton |
| Total Particulate Matter | 0.0042 | 0.0402 | 0.0191 | 0.0212 |
| $PM_{10}$ | 0.0028 | 0.0095 | 0.0049 | 0.0057 |
| $PM_{10-2.5}$ | 0.0014 | 0.0087 | 0.0043 | 0.0048 |
| $PM_{2.5}$ | 0.0014 | 0.0007 | 0.0006 | 0.0009 |
| Central Mix Hood, % | 99.3 | 97.5 | 97.2 | 98.0 |

1. All emission factors expressed as pounds of mass per ton of cement and cement supplement processed
2. Ratio calculated based on penetration; 100%-98% for RMC Research Foundation tests, 100% - 94% for previous tests.



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Table 17.3 Reference 6 Truck Mix Uncontrolled Emission Factor Test Results

| Emission Factors | RMCC Raleigh Truck Mix (Uncontrolled) | Chandler Concrete Truck Mix (Uncontrolled) | Concrete Supply Truck Mix (Uncontrolled) | Reference 6 Truck Mix Average |
|---|---|---|---|---|
| Emission Factors | Lbs./ton | Lbs./ton | Lbs./ton | Lbs./ton |
| Total Particulate Matter | 2.128 | 0.544 | 1.693 | 1.455 |
| $PM_{10}$ | 0.726 | 0.232 | 0.291 | 0.416 |
| $PM_{10-2.5}$ | 0.624 | 0.200 | 0.265 | 0.363 |
| $PM_{2.5}$ | 0.102 | 0.032 | 0.026 | 0.053 |

1. All emission factors expressed as pounds of mass per ton of cement and cement supplement processed.

Table 17.4 Reference 6 Central Mix Uncontrolled Emission Factor Test Results

| Emission Factors | RMCC Raleigh Central Mix (Uncontrolled) | S.T. Wooten Raleigh Central Mix (Uncontrolled) | RMC Carolina Materials Raleigh Central Mix (Uncontrolled) | Reference Central Mix Average |
|---|---|---|---|---|
| Emission Factors | Lbs./ton | Lbs./ton | Lbs./ton | Lbs./ton |
| Total Particulate Matter | 0.155 | 1.254 | 0.654 | 0.688 |
| $PM_{10}$ | 0.056 | 0.331 | 0.160 | 0.183 |
| $PM_{10-2.5}$ | 0.047 | 0.306 | 0.141 | 0.165 |
| $PM_{2.5}$ | 0.009 | 0.025 | 0.020 | 0.018 |

1. All emission factors expressed as pounds of mass per ton of cement and cement supplement processed.

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Table 17.5 Wake Forest RMCC Truck Mix Emissions Data

| Test Results | Run # 1 12/8/03 | Run # 2 12/8/03 | Run # 3 12/9/03 | Averages |
|---|---|---|---|---|
| **Method 5 D-Sampling Array Results** | | | | |
| Average Array $PM_{10}$ Particulate Concentration, $ug/m^3$ | 36.1 | 130.5 | 64.6 | 77.1 |
| Measured $PM_{10}$ Emissions Thru Array, lbs./hour | 0.0026 | 0.0120 | 0.0043 | 0.0063 |
| Calculated Total Emissions Thru Array, lbs./hour | 0.0084 | 0.0465 | 0.0116 | 0.0222 |
| Calculated $PM_{2.5}$ Emissions Thru Array, lbs./hour | 0.0003 | 0.0012 | 0.0006 | 0.0007 |
| Calculated $PM_{10\text{-}2.5}$ Emissions Thru Array, lbs./hour | 0.0023 | 0.0109 | 0.0036 | 0.0056 |
| **Fabric Filter Results** | | | | |
| Fabric Filter Inlet, Total Particulate Concentration, lbs./hr | 3.2497 | 3.9991 | 32.1562 | 13.1350 |
| Fabric Filter Outlet, Total Particulate Concentration, lbs./hr | 0.0214 | 0.0139 | 0.0211 | 0.0188 |
| Fabric Filter Inlet, $PM_{10}$ Particulate Concentration, lbs./hr | 1.0090 | 1.0351 | 11.8126 | 4.6189 |
| Fabric Filter Outlet, $PM_{10}$ Particulate Concentration, lbs./hr | 0.0214 | 0.0042 | 0.0211 | 0.0156 |
| Fabric Filter Inlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.1247 | 0.0989 | 1.7750 | 0.6662 |
| Fabric Filter Outlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.00005 | 0.0014 | 0.00703 | 0.0028 |
| Fabric Filter Inlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 0.8843 | 0.9362 | 10.0376 | 3.9527 |
| Fabric Filter Outlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 0.0214 | 0.0028 | 0.0141 | 0.0128 |
| **Particulate Size Ratios based on Fabric Filter Inlet Data** | | | | |
| Total / $PM_{10}$ for TEOM Total Calculation | 3.22 | 3.86 | 2.72 | 3.27 |
| $PM_{2.5}$ / $PM_{10}$ for TEOM $PM_{2.5}$ Calculation | 0.12 | 0.10 | 0.15 | 0.12 |
| $PM_{10\text{-}2.5}/PM_{10}$ Ratio for TEOM $PM_{10\text{-}2.5}$ Calculation | 0.88 | 0.90 | 0.85 | 0.88 |
| **Emission Factor Results** | | | | |
| Average Plant Production Levels During Tests, Tons/Hour | 8.58 | 3.00 | 6.91 | 6.16 |
| Total Particulate Emission Factor, lbs./ton | 0.00347 | 0.02011 | 0.00468 | 0.00942 |
| Total $PM_{10}$ Emission Factor, lbs./ton | 0.00280 | 0.00538 | 0.00362 | 0.00393 |
| Total $PM_{10\text{-}2.5}$ Emission Factor, lbs./ton | 0.00276 | 0.00452 | 0.00253 | 0.00327 |
| Total $PM_{2.5}$ Emission Factor, lbs./ton | 0.00003 | 0.00086 | 0.00109 | 0.00066 |
| **Collection Efficiencies** | | | | |
| Fabric Filter Total Efficiency | 99.3% | 99.7% | 99.9% | 99.6% |
| Truck Hood $PM_{10}$ Efficiency | 99.7% | 98.8% | 99.9% | 99.5% |
| System Collection Efficiency | 97.6% | 98.4% | 99.8% | 98.6% |

Table 17.6. Wake Forest RMCC Central Mix Emissions Data

| Test Results | Run # 1 12/10/03 | Run # 2 12/11/03 | Run # 3 12/11/03 | Averages |
|---|---|---|---|---|
| **Method 5 D-Sampling Array Results** | | | | |
| Average Array $PM_{10}$ Particulate Concentration, ug/$m^3$ | 18.8 | 16.4 | 57.9 | 31.0 |
| Measured $PM_{10}$ Emissions Thru Array, lbs./hour | 0.0009 | 0.0020 | 0.0067 | 0.0032 |
| Calculated Total Emissions Thru Array, lbs./hour | 0.0029 | 0.0053 | 0.0178 | 0.0087 |
| Calculated $PM_{2.5}$ Emissions Thru Array, lbs./hour | 0.0003 | 0.0003 | 0.0010 | 0.0005 |
| Calculated $PM_{10\text{-}2.5}$ Emissions Thru Array, lbs./hour | 0.0006 | 0.0018 | 0.0057 | 0.0027 |
| **Fabric Filter Results** | | | | |
| Fabric Filter Inlet, Total Particulate Concentration, lbs./hr | 0.6950 | 1.5389 | 1.3322 | 1.1887 |
| Fabric Filter Outlet, Total Particulate Concentration, lbs./hr | 0.0270 | 0.0198 | 0.0262 | 0.0243 |
| Fabric Filter Inlet, $PM_{10}$ Particulate Concentration, lbs./hr | 0.2094 | 0.5922 | 0.4987 | 0.4334 |
| Fabric Filter Outlet, $PM_{10}$ Particulate Concentration, lbs./hr | 0.0270 | 0.0128 | 0.0148 | 0.0182 |
| Fabric Filter Inlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.0617 | 0.0799 | 0.0729 | 0.0715 |
| Fabric Filter Outlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.0170 | 0.0000 | 0.0103 | 0.0091 |
| Fabric Filter Inlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 0.1477 | 0.5123 | 0.4258 | 0.3619 |
| Fabric Filter Outlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 0.0099 | 0.0128 | 0.0046 | 0.0091 |
| **Particulate Size Ratios based on Fabric Filter Inlet Data** | | | | |
| Total / $PM_{10}$ for TEOM Total Calculation | 3.32 | 2.60 | 2.67 | 2.86 |
| $PM_{2.5}$ / $PM_{10}$ for TEOM $PM_{2.5}$ Calculation | 0.29 | 0.13 | 0.15 | 0.19 |
| $PM_{10\text{-}2.5}/PM_{10}$ Ratio for TEOM $PM_{10\text{-}2.5}$ Calculation | 0.71 | 0.87 | 0.85 | 0.81 |
| **Emission Factor Results** | | | | |
| Average Plant Production Levels During Tests, Tons/Hour | 6.82 | 8.88 | 7.18 | 7.63 |
| Total Particulate Emission Factor, lbs./ton | 0.00431 | 0.00232 | 0.00612 | 0.00425 |
| Total $PM_{10}$ Emission Factor, lbs./ton | 0.00401 | 0.00134 | 0.00299 | 0.00278 |
| Total $PM_{10\text{-}2.5}$ Emission Factor, lbs./ton | 0.00153 | 0.00130 | 0.00142 | 0.00142 |
| Total $PM_{2.5}$ Emission Factor, lbs./ton | 0.00249 | 0.00003 | 0.00157 | 0.00136 |
| **Collection Efficiencies** | | | | |
| Fabric Filter Total Efficiency | 96.1% | 98.7% | 98.0% | 97.6% |
| Truck Hood $PM_{10}$ Efficiency | 99.6% | 99.7% | 98.7% | 99.3% |
| System Collection Efficiency | 86.7% | 97.5% | 95.7% | 93.3% |

Attachment: 2. Site Plan (American Eagle Appeal)

Table 17.7. S.T. Wooten Central Mix Emissions Data

| Test Results | Run # 1 3/2/04 | Run # 2 3/2/04 | Run # 3 3/2/04 | Averages |
|---|---|---|---|---|
| **Method 5 D-Sampling Array Results** | | | | |
| Average Array $PM_{10}$ Particulate Concentration, $ug/m^3$ | 80.86 | 426.70 | 402.62 | 303.4 |
| Measured $PM_{10}$ Emissions Thru Array, lbs./hour | 0.0261 | 0.1616 | 0.0501 | 0.0792 |
| Calculated Total Emissions Thru Array, lbs./hour | 0.1088 | 0.9414 | 0.1119 | 0.3874 |
| Calculated $PM_{2.5}$ Emissions Thru Array, lbs./hour | 0.0023 | 0.0136 | 0.0029 | 0.0063 |
| Calculated $PM_{10\text{-}2.5}$ Emissions Thru Array, lbs./hour | 0.0238 | 0.1480 | 0.0471 | 0.0730 |
| **Fabric Filter Results** | | | | |
| Fabric Filter Inlet, Total Particulate Concentration, lbs./hr | 13.46 | 14.82 | 12.74 | 13.67 |
| Fabric Filter Outlet, Total Particulate Concentration, lbs./hr | 0.047 | 0.049 | 0.274 | 0.123 |
| Fabric Filter Inlet, $PM_{10}$ Particulate Concentration, lbs./hr | 3.22 | 2.54 | 5.7 | 3.82 |
| Fabric Filter Outlet, $PM_{10}$ Particulate Concentration, lbs./hr | 0.011 | 0.008 | 0.122 | 0.047 |
| Fabric Filter Inlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.28 | 0.21 | 0.33 | 0.28 |
| Fabric Filter Outlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.00098 | 0.00070 | 0.0071 | 0.00294 |
| Fabric Filter Inlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 2.94 | 2.33 | 5.36 | 3.55 |
| Fabric Filter Outlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 0.0103 | 0.0076 | 0.1152 | 0.0444 |
| **Particulate Size Ratios based on Fabric Filter Inlet Data** | | | | |
| Total / $PM_{10}$ for TEOM Total Calculation | 4.17 | 5.83 | 2.24 | 4.08 |
| $PM_{2.5}$ / $PM_{10}$ for TEOM $PM_{2.5}$ Calculation | 0.09 | 0.08 | 0.06 | 0.08 |
| $PM_{10\text{-}2.5}/PM_{10}$ Ratio for TEOM $PM_{10\text{-}2.5}$ Calculation | 0.91 | 0.92 | 0.94 | 0.92 |
| **Emission Factor Results** | | | | |
| Average Plant Production Levels During Tests, Tons/Hour | 7.90 | 13.10 | 15.27 | 12.09 |
| Total Particulate Emission Factor, lbs./ton | 0.01972 | 0.07560 | 0.02526 | 0.04020 |
| Total $PM_{10}$ Emission Factor, lbs./ton | 0.00470 | 0.01240 | 0.01127 | 0.00945 |
| Total $PM_{10\text{-}2.5}$ Emission Factor, lbs./ton | 0.00428 | 0.01131 | 0.01061 | 0.00873 |
| Total $PM_{2.5}$ Emission Factor, lbs./ton | 0.00042 | 0.00109 | 0.00065 | 0.00072 |
| **Collection Efficiencies** | | | | |
| Fabric Filter Total Efficiency | 99.6% | 99.7% | 97.9% | 99.0% |
| Truck Hood $PM_{10}$ Efficiency | 99.2% | 94.0% | 99.1% | 97.5% |
| System Collection Efficiency | 98.8% | 93.3% | 97.0% | 96.4% |

Table 17.8. Chandler Concrete, Troutville Truck Mix Emissions Data

| Test Results | Run # 1 12/8/03 | Run # 2 12/8/03 | Run # 3 12/9/03 | Averages |
|---|---|---|---|---|
| **Method 5 D-Sampling Array Results** | | | | |
| Average Array $PM_{10}$ Particulate Concentration, ug/$m^3$ | 983.4 | 495.3 | 1511.2 | 996.6 |
| Measured $PM_{10}$ Emissions Thru Array, lbs./hour | 0.0786 | 0.0991 | 0.0886 | 0.0887 |
| Calculated Total Emissions Thru Array, lbs./hour | 0.1623 | 0.2099 | 0.2410 | 0.2044 |
| Calculated $PM_{2.5}$ Emissions Thru Array, lbs./hour | 0.0163 | 0.0098 | 0.0108 | 0.0123 |
| Calculated $PM_{10\text{-}2.5}$ Emissions Thru Array, lbs./hour | 0.0622 | 0.0893 | 0.0777 | 0.0764 |
| **Fabric Filter Results** | | | | |
| Fabric Filter Inlet, Total Particulate Concentration, lbs./hr | 2.52 | 1.80 | 5.62 | 3.32 |
| Fabric Filter Outlet, Total Particulate Concentration, lbs./hr | 0.065 | 0.064 | 0.150 | 0.093 |
| Fabric Filter Inlet, $PM_{10}$ Particulate Concentration, lbs./hr | 1.221 | 0.851 | 2.066 | 1.380 |
| Fabric Filter Outlet, $PM_{10}$ Particulate Concentration, lbs./hr | 0.031 | 0.030 | 0.055 | 0.039 |
| Fabric Filter Inlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.254 | 0.084 | 0.252 | 0.197 |
| Fabric Filter Outlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.007 | 0.003 | 0.007 | 0.005 |
| Fabric Filter Inlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 0.967 | 0.767 | 1.814 | 1.183 |
| Fabric Filter Outlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 0.025 | 0.027 | 0.048 | 0.033 |
| **Particulate Size Ratios based on Fabric Filter Inlet Data** | | | | |
| Total / $PM_{10}$ for TEOM Total Calculation | 2.07 | 2.12 | 2.72 | 2.30 |
| $PM_{2.5}$ / $PM_{10}$ for TEOM $PM_{2.5}$ Calculation | 0.21 | 0.10 | 0.12 | 0.14 |
| $PM_{10\text{-}2.5}/PM_{10}$ Ratio for TEOM $PM_{10\text{-}2.5}$ Calculation | 0.79 | 0.90 | 0.88 | 0.86 |
| **Emission Factor Results** | | | | |
| Average Plant Production Levels During Tests, Tons/Hour | 6.19 | 4.12 | 7.75 | 6.02 |
| Total Particulate Emission Factor, lbs./ton | 0.03673 | 0.06647 | 0.05045 | 0.05122 |
| Total $PM_{10}$ Emission Factor, lbs./ton | 0.01771 | 0.03133 | 0.01853 | 0.02252 |
| Total $PM_{10\text{-}2.5}$ Emission Factor, lbs./ton | 0.01395 | 0.02823 | 0.01623 | 0.01947 |
| Total $PM_{2.5}$ Emission Factor, lbs./ton | 0.00377 | 0.00311 | 0.00230 | 0.00306 |
| **Collection Efficiencies** | | | | |
| Fabric Filter Total Efficiency | 97.4% | 96.5% | 97.3% | 97% |
| Truck Hood $PM_{10}$ Efficiency | 94.0% | 89.6% | 95.9% | 93.1% |
| System Collection Efficiency | 91.0% | 84.8% | 93.0% | 89.6% |

Attachment: 2. Site Plan (American Eagle Appeal)

Table 17.9. Concrete Supply, Rock Hill Truck Mix Emissions Data

| Test Results | Run # 1 5/12/04 | Run # 2 5/12/04 | Run # 3 5/13/04 | Averages |
|---|---|---|---|---|
| **Method 5 D-Sampling Array Results** | | | | |
| Average Array $PM_{10}$ Particulate Concentration, ug/$m^3$ | 351.0 | 854.6 | 527.0 | 577.5 |
| Measured $PM_{10}$ Emissions Thru Array, lbs./hour | 0.0170 | 0.0585 | 0.0378 | 0.0378 |
| Calculated Total Emissions Thru Array, lbs./hour | 0.0885 | 0.2154 | 0.2897 | 0.1979 |
| Calculated $PM_{2.5}$ Emissions Thru Array, lbs./hour | 0.0025 | 0.0049 | 0.0026 | 0.0034 |
| Calculated $PM_{10\text{-}2.5}$ Emissions Thru Array, lbs./hour | 0.0145 | 0.0536 | 0.0351 | 0.0344 |
| **Fabric Filter Results** | | | | |
| Fabric Filter Inlet, Total Particulate Concentration, lbs./hr | 15.992 | 24.505 | 43.483 | 27.99 |
| Fabric Filter Outlet, Total Particulate Concentration, lbs./hr | 0.070 | 0.132 | 0.192 | 0.131 |
| Fabric Filter Inlet, $PM_{10}$ Particulate Concentration, lbs./hr | 3.071 | 6.654 | 5.668 | 5.131 |
| Fabric Filter Outlet, $PM_{10}$ Particulate Concentration, lbs./hr | 0.013 | 0.036 | 0.025 | 0.025 |
| Fabric Filter Inlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.456 | 0.561 | 0.393 | 0.470 |
| Fabric Filter Outlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.002 | 0.003 | 0.002 | 0.002 |
| Fabric Filter Inlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 2.615 | 6.093 | 5.275 | 4.6609 |
| Fabric Filter Outlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 0.011 | 0.033 | 0.023 | 0.023 |
| **Particulate Size Ratios based on Fabric Filter Inlet Data** | | | | |
| Total / $PM_{10}$ for TEOM Total Calculation | 5.21 | 3.68 | 7.67 | 5.52 |
| $PM_{2.5}$ / $PM_{10}$ for TEOM $PM_{2.5}$ Calculation | 0.15 | 0.08 | 0.07 | 0.10 |
| $PM_{10\text{-}2.5}/PM_{10}$ Ratio for TEOM $PM_{10\text{-}2.5}$ Calculation | 0.85 | 0.92 | 0.93 | 0.90 |
| **Emission Factor Results** | | | | |
| Average Plant Production Levels During Tests, Tons/Hour | 20.24 | 21.73 | 13.91 | 18.63 |
| Total Particulate Emission Factor, lbs./ton | 0.00783 | 0.01599 | 0.03538 | 0.01973 |
| Total $PM_{10}$ Emission Factor, lbs./ton | 0.00148 | 0.00435 | 0.00461 | 0.00348 |
| Total $PM_{10\text{-}2.5}$ Emission Factor, lbs./ton | 0.00126 | 0.00399 | 0.00427 | 0.00317 |
| Total $PM_{2.5}$ Emission Factor, lbs./ton | 0.00022 | 0.00036 | 0.00034 | 0.00031 |
| **Collection Efficiencies** | | | | |
| Fabric Filter Total Efficiency | 99.6% | 99.5% | 99.6% | 99.5% |
| Truck Hood $PM_{10}$ Efficiency | 99.4% | 99.1% | 99.3% | 99.3% |
| System Collection Efficiency | 99.0% | 98.6% | 98.9% | 98.8% |

Table 17.10. RMC Carolina Materials Central Mix Emissions Data

| Test Results | Run # 1 5/19/04 | Run # 2 5/19/04 | Run # 3 5/20/04 | Averages |
|---|---|---|---|---|
| **Method 5 D-Sampling Array Results** | | | | |
| Average Array $PM_{10}$ Particulate Concentration, ug/$m^3$ | 309.2 | 223.7 | 193.3 | 242.1 |
| Measured $PM_{10}$ Emissions Thru Array, lbs./hour | 0.1013 | 0.0456 | 0.0132 | 0.0534 |
| Calculated Total Emissions Thru Array, lbs./hour | 0.3972 | 0.1761 | 0.0601 | 0.2111 |
| Calculated $PM_{2.5}$ Emissions Thru Array, lbs./hour | 0.0072 | 0.0083 | 0.0013 | 0.0056 |
| Calculated $PM_{10\text{-}2.5}$ Emissions Thru Array, lbs./hour | 0.0942 | 0.0373 | 0.0119 | 0.0478 |
| **Fabric Filter Results** | | | | |
| Fabric Filter Inlet, Total Particulate Concentration, lbs./hr | 7.580 | 5.823 | 10.254 | 7.886 |
| Fabric Filter Outlet, Total Particulate Concentration, lbs./hr | 0.0056 | 0.0064 | 0.0058 | 0.0060 |
| Fabric Filter Inlet, $PM_{10}$ Particulate Concentration, lbs./hr | 1.934 | 1.508 | 2.245 | 1.896 |
| Fabric Filter Outlet, $PM_{10}$ Particulate Concentration, lbs./hr | 0.0014 | 0.0017 | 0.0013 | 0.0015 |
| Fabric Filter Inlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.137 | 0.274 | 0.219 | 0.2098 |
| Fabric Filter Outlet, $PM_{2.5}$ Particulate Concentration, lbs./hr | 0.0001 | 0.0003 | 0.0001 | 0.0002 |
| Fabric Filter Inlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 1.797 | 1.235 | 2.027 | 1.6860 |
| Fabric Filter Outlet, $PM_{10\text{-}2.5}$ Particulate Concentration, lbs./hr | 0.001 | 0.001 | 0.001 | 0.001 |
| **Particulate Size Ratios based on Fabric Filter Inlet Data** | | | | |
| Total / $PM_{10}$ for TEOM Total Calculation | 3.92 | 3.86 | 4.57 | 4.12 |
| $PM_{2.5}$ / $PM_{10}$ for TEOM $PM_{2.5}$ Calculation | 0.07 | 0.18 | 0.10 | 0.12 |
| $PM_{10\text{-}2.5}/PM_{10}$ Ratio for TEOM $PM_{10\text{-}2.5}$ Calculation | 0.93 | 0.82 | 0.90 | 0.88 |
| **Emission Factor Results** | | | | |
| Average Plant Production Levels During Tests, Tons/Hour | 13.01 | 8.15 | 16.82 | 12.66 |
| Total Particulate Emission Factor, lbs./ton | 0.03097 | 0.02240 | 0.00392 | 0.01909 |
| Total $PM_{10}$ Emission Factor, lbs./ton | 0.00790 | 0.00581 | 0.00086 | 0.00485 |
| Total $PM_{10\text{-}2.5}$ Emission Factor, lbs./ton | 0.00733 | 0.00475 | 0.00078 | 0.00429 |
| Total $PM_{2.5}$ Emission Factor, lbs./ton | 0.000561 | 0.0010555 | 0.0000835 | 0.00057 |
| **Collection Efficiencies** | | | | |
| Fabric Filter Total Efficiency | 99.9% | 99.9% | 99.9% | 99.9% |
| Truck Hood $PM_{10}$ Efficiency | 95.0% | 97.1% | 99.4% | 97.2% |
| System Collection Efficiency | 94.7% | 96.9% | 99.4% | 97.0% |

The total amount of concrete processed by the concrete mixing trucks during each test run was recorded in units of yards. The five plants tested recorded the amount of each raw material used for each order. The mix composition information and processing rate information are summarized for each test run in Tables 17.11 through 17.16. All of the processes operated in a normal manner during the test program.

Table 17.11. Wake Forest, RMCC Truck Mix Production Data

| Parameters | Truck Mix Run # 1 | Truck Mix Run # 2 | Truck Mix Run # 3 | Averages |
|---|---|---|---|---|
| Test Date | 12/8/03 | 12/8/03 | 12/9/03 | N/A |
| Run Start Time | 9:01 | 12:14 | 7:53 | N/A |
| Run Stop Time | 11:12 | 14:14 | 10:03 | N/A |
| Number of Truck Loads | 11 | 6 | 7 | 8 |
| Sand, lbs. | 104,440 | 30,280 | 80,360 | 71,693 |
| Stone 67 Size, lbs. | 118,840 | 25,480 | 72,440 | 72,253 |
| Stone 78 Size, lbs. | 14,480 | 9,960 | 20,680 | 15,040 |
| Cement, lbs. | 28,170 | 9,540 | 21,480 | 19,730 |
| Flyash, lbs. | 9,350 | 2,460 | 7,180 | 6,330 |
| Liquid Air, lbs. | 26.06 | 4.56 | 19.50 | 16.71 |
| Water Reducer, lbs. | 11.81 | 16.94 | 37.25 | 22.00 |
| Retarder, lbs. | 0 | 0 | 0 | 0 |
| High Range Water Reducer, lbs. | 0 | 3.44 | 0 | 1.15 |
| Calcium Accelerator, lbs. | 175 | 0 | 71.88 | 82.29 |
| Non-Chloride Accelerator, lbs. | 210 | 0 | 0 | 70 |
| Water, lbs. | 9,552 | 1,872 | 5,552 | 5,658.7 |
| Total Process Weight, lbs. | 285,255 | 79,617 | 207,821 | 190,897.7 |
| Total Process Weight, tons | 142.6 | 39.8 | 103.9 | 95.4 |
| Total Process Weight, yards | 75 | 23 | 54 | 50.7 |
| Tons / Yard | 1.91 | 1.77 | 1.92 | 1.87 |

Attachment: 2. Site Plan (American Eagle Appeal)

Table 17.12. Wake Forest, RMCC Central Mix Production Data

| Parameters | Run # 1 | Run # 2 | Run # 3 | Averages |
|---|---|---|---|---|
| Test Date | 12/10/03 | 12/11/03 | 12/11/03 | N/A |
| Run Start Time | 8:22 | 7:31 | 12:21 | N/A |
| Run Stop Time | 13:24 | 9:37 | 15:35 | N/A |
| Number of Truck Loads | 5 | 7 | 7 | 6.3 |
| Sand, lbs. | 66,560 | 96,560 | 88,640 | 83,920 |
| Stone 67 Size, lbs. | 88,240 | 124,120 | 113,240 | 108,533 |
| Stone 78 Size, lbs. | 0 | 0 | 0 | 0 |
| Cement, lbs. | 22,230 | 29,680 | 26,320 | 26,076.7 |
| Flyash, lbs. | 4,770 | 7,430 | 6,970 | 6,390 |
| Liquid Air, lbs. | 14.44 | 21.88 | 21.5 | 19.27 |
| Water Reducer, lbs. | 34.81 | 11.88 | 45.31 | 30.67 |
| Retarder, lbs. | 0 | 0 | 0 | 0 |
| High Range Water Reducer, lbs. | 0 | 0 | 0 | 0 |
| Calcium Accelerator, lb | 65.63 | 66.25 | 17.50 | 49.79 |
| Non-Chloride Accelerator, lbs. | 0 | 280 | 0 | 93.3 |
| Water, lbs. | 3,160 | 6,564 | 3,888 | 4,537.3 |
| Total Process Weight, lbs | 185,075 | 264,734 | 239,142 | 296,317 |
| Total Process Weight, tons | 92.5 | 132.4 | 119.6 | 114.8 |
| Total Process Weight, yards | 49 | 69 | 64 | 60.7 |
| Tons / Yard | 1.89 | 1.92 | 1.87 | 1.89 |

Attachment: 2. Site Plan (American Eagle Appeal)

Table 17.13. S.T. Wooten Concrete Central Mix Production Data

| Parameters | Run # 1 | Run # 2 | Run # 3 | Averages |
|---|---|---|---|---|
| Test Date | 3/2/04 | 3/2/04 | 3/2/04 | N/A |
| Run Start Time | 9:10 | 11:12 | 13:04 | N/A |
| Run Stop Time | 10:10 | 12:12 | 14:05 | N/A |
| Number of Truck Loads | 5 | 5 | 6 | 5.3 |
| Sand, lbs. | 41,380 | 68,780 | 79,100 | 63,090 |
| Stone 57 Size, lbs. | 53,620 | 88,800 | 101,880 | 81,433 |
| Cement, lbs. | 12,540 | 19,310 | 23,800 | 18,550 |
| Flyash, lbs. | 3,460 | 6,580 | 7,190 | 5,743 |
| Liquid Air, lbs. | 5.43 | 6.18 | 9.06 | 6.90 |
| Polyheed, lbs. | 52.5 | 157.25 | 153.5 | 121.1 |
| Water, lbs. | 2,804 | 6,192 | 6,885 | 5,294 |
| Total Process Weight, lbs | 113,862 | 189,815 | 219,018 | 174,238 |
| Total Process Weight, tons | 56.94 | 94.91 | 109.51 | 87.12 |
| Total Process Weight, yards | 29.500 | 50.000 | 57.50 | 45.67 |
| Tons / Yard | 1.98 | 1.90 | 1.90 | 1.93 |

Table 17.14. Chandler Concrete Truck Mix Production Data

| Parameters | Run # 1 | Run # 2 | Run # 3 | Averages |
|---|---|---|---|---|
| Test Date | 3/17/04 | 3/17/04 | 3/18/04 | N/A |
| Run Start Time | 7:17 | 9:17 | 12:40 | N/A |
| Run Stop Time | 8:34 | 13:21 | 14:50 | N/A |
| Number of Truck Loads | 4 | 4 | 4 | 4 |
| Stone 57, lbs. | 43,180 | 28,700 | 56,960 | 42,946.7 |
| Limestone, lbs. | 33,040 | 17,220 | 28,260 | 26,173.3 |
| Type 1-2 Cement, lbs. | 12,245 | 6,690 | 11,915 | 10,283.3 |
| Castle | 5,100 | 6,620 | 19,120 | 10,280.0 |
| Flyash, lbs. | 1,220 | 1,495 | 4,105 | 2,273.3 |
| Liquid Air, lbs. | 1.75 | 2.25 | 3.00 | 2.33 |
| Water Reducer, lbs. | 12.81 | 14.50 | 38.38 | 21.90 |
| Polarset, lbs. | 69 | 0 | 0 | 23.0 |
| Water, lbs. | 5315.95 | 2,995.96 | 6,993.36 | 5,101.8 |
| Total Process Weight, lbs. | 100,185 | 63,738 | 127,395 | 97,105.7 |
| Total Process Weight, tons | 50.092 | 31.869 | 63.697 | 48.6 |
| Total Process Weight, yards | 24.5 | 14.50 | 32.0 | 23.7 |
| Tons / Yard | 2.03 | 2.16 | 1.99 | 2.1 |

Attachment: 2. Site Plan (American Eagle Appeal)

Table 17.15. Concrete Supply Truck Mix Production Data

| Parameters | Run # 1 | Run # 2 | Run # 3 | Averages |
|---|---|---|---|---|
| Test Date | 5/12/04 | 5/12/04 | 5/13/04 | N/A |
| Run Start Time | 7:50 | 10:07 | 9:06 | N/A |
| Run Stop Time | 8:50 | 11:06 | 10:10 | N/A |
| Number of Truck Loads | 8 | 9 | 5 | 7.3 |
| Sand, lbs. | 95,731 | 80,700 | 51,080 | 75,837 |
| Stone, lbs. | 130,660 | 107,130 | 66,750 | 101,513 |
| Type 1-2 Cement, lbs. | 38,490 | 33,525 | 21,380 | 31,131 |
| Flyash, lbs. | 1,785 | 9,160 | 5,910 | 5,618 |
| Water, lbs. | 11,082.16 | 9,897.17 | 6,225.37 | 9,068.23 |
| Water Reducer, lbs. | 58.5 | 55.31 | 6.5 | 40.1 |
| Liquid Air, lbs. | 3.81 | 13.88 | 10.06 | 9.25 |
| M.S. Sand, lbs. | 5,970 | 26,150 | 17,740 | 16,620 |
| Retarder, lbs. | 42.81 | 29.13 | 46.56 | 39.29 |
| Adva, lbs. | 53.13 | 0 | 0 | 17.71 |
| Delvo, lbs | 75.06 | 0 | 0 | 25.02 |
| Total Process Weight, lbs. | 283,951 | 266,660 | 169,148 | 239,919 |
| Total Process Weight, tons | 141.976 | 133.330 | 84.574 | 119.96 |
| Total Process Weight, yards | 71.250 | 67.20 | 43.00 | 60.48 |
| Tons / Yard | 1.99 | 1.99 | 1.97 | 1.98 |

Table 17.16. RMC Carolina Materials Central Mix Production Data

| Parameters | Run # 1 | Run # 2 | Run # 3 | Averages |
|---|---|---|---|---|
| Test Date | 5/19/04 | 5/19/04 | 5/20/04 | N/A |
| Run Start Time | 8:10 | 10:08 | 8:52 | N/A |
| Run Stop Time | 9:09 | 11:11 | 9:52 | N/A |
| Number of Truck Loads | 5 | 4 | 8 | 5.7 |
| Sand, lbs. | 65,120 | 39,700 | 81,320 | 62,046 |
| Stone, lbs. | 78,860 | 51,840 | 100,700 | 77,133 |
| Type 1-2 Cement, lbs. | 20,860 | 13,100 | 27,280 | 20,413 |
| Flyash, lbs. | 4,990 | 3,190 | 6,580 | 4,920 |
| Water, lbs. | 66,092.4 | 40,256.28 | 61,763.04 | 56,037.24 |
| Water Reducer, lbs. | 64.69 | 34.94 | 67.31 | 55.65 |
| Liquid Air, lbs. | 0 | 3.06 | 18.25 | 7.10 |
| Retarder, lbs. | 0 | 0 | 6.5 | 2.2 |
| Total Process Weight, lbs. | 235,987 | 148,124 | 277,735 | 220,614 |
| Total Process Weight, tons | 117.994 | 74.052 | 138.868 | 110.307 |
| Total Process Weight, yards | 45.0 | 29.0 | 58.0 | 44 |
| Tons / Yard | 2.62 | 2.55 | 2.42 | 2.51 |



Attachment: 2. Site Plan (American Eagle Appeal)

The raw materials for both the truck and central mix processes come from the same sources and, therefore, were sampled only once at the Wake Forest, RMCC plant. The raw material size distribution, moisture levels, and silt contents are summarized in Table 17.17.

Table 17.17. Raw Material Particle Size Distribution, Moisture Levels and Silt Contents

| Raw Material | Date of Test | Time Sample Taken | % Greater than 75 mm | % Greater than 19 mm | % Greater than #20 Mesh | % Greater than 100 Mesh | % Greater than 200 Mesh | Pan % Less than # 200 Mesh (Silt) | % Moisture |
|---|---|---|---|---|---|---|---|---|---|
| RMCC, Wake Forest Plants (Truck Mix and Central Mix) | | | | | | | | | |
| Sand | 12/8/03 | 13:00 | 0.0 | 0.0 | 41.06 | 56.61 | 1.56 | 0.77 | 12.87[5] |
| Stone | 12/8/03 | 13:00 | 0.0 | 33.59 | 64.93 | 0.77 | 0.34 | 0.38 | 1.44 |
| Cement | 12/8/03 | 14:00 | 0.0 | 0.0 | 0.0 | 79.96 | 10.01 | 10.03 | 0.27 |
| Flyash | 12/9/03 | 08:07 | 0.0 | 0.0 | 0.0 | 4.14 | 11.13 | 84.73 | 0.21 |
| S.T. Wooten, Raleigh Plant | | | | | | | | | |
| Cement | 3/2/04 | 11:52 | 0.0 | 0.0 | 0.0 | 37.7 | 12.5 | 49.8 | 0.30 |
| Flyash | 3/2/04 | 13:06 | 0.0 | 0.0 | 0.31 | 1.78 | 10.3 | 87.6 | 0.09 |
| Sand | 3/2/04 | 9:11 | 0.0 | 0.0 | 19.3 | 79.1 | 0.7 | 0.8 | 6.3 |
| Stone | 3/2/04 | 11:18 | 0.0 | 18.8 | 78.9 | 1.1 | 0.4 | 0.8 | 1.1 |
| Chandler Concrete, Troutville Plant | | | | | | | | | |
| Cement | 3/16/04 | 13:15 | 0.0 | 0.0 | 0.0 | 73.5 | 21.94 | 4.56 | 0.39 |
| Flyash | 3/16/04 | 13:22 | 0.0 | 0.0 | 37.2 | 3.18 | 9.63 | 86.81 | 0.16 |
| Sand | 3/16/04 | 10:57 | 0.0 | 0.0 | 5.80 | 92.57 | 1.43 | 0.2 | 8.01 |
| Stone | 3/16/04 | 12:24 | 0.0 | 9.92 | 89.05 | 0.35 | 0.18 | 0.50 | 2.07 |
| Concrete Supply, Rock Hill Plant | | | | | | | | | |
| Cement | 5/11/04 | 13:15 | 0.0 | 0.0 | 0.09 | 80.68 | 18.12 | 1.11 | 0.31 |
| Flyash | 5/11/04 | 14:38 | 0.0 | 0.0 | 0.189 | 3.89 | 12.28 | 83.64 | 0.07 |
| Sand | 5/11/04 | 15:21 | 0.0 | 0.0 | 24.96 | 72.59 | 1.96 | 0.48 | 3.43 |
| Stone | 5/11/04 | 16:33 | 0.0 | 18.87 | 80.41 | 0.17 | 0.11 | 0.44 | 0.46 |
| RMC Carolina Materials, Raleigh Plant | | | | | | | | | |
| Cement | 5/18/04 | 15:13 | 0.0 | 0.0 | 0.70 | 91.74 | 5.26 | 2.30 | 1.07 |
| Flyash | 5/18/04 | 16:13 | 0.0 | 0.0 | 0.24 | 4.07 | 26.87 | 68.82 | 0.19 |
| Sand | 5/18/04 | 12:45 | 0.0 | 0.0 | 23.89 | 73.25 | 2.25 | 0.62 | 7.70 |
| Stone | 5/18/04 | 17:08 | 0.0 | 22.05 | 76.94 | 0.39 | 0.19 | 0.42 | 0.86 |

### *Wind Speed and Direction*

Meteorological data were monitored on a continuous basis on the downwind side of the process being tested. During the first test run at the RMCC plant, it was determined that the wind speed and direction were erratic due to constant truck traffic moving from the loading areas to the wash-off area and the topography of the surrounding plant area. Earth berms and trees surround the plant and form a bowl shaped depression around the plant. The topography causes

[5] The sand moisture content of 12.87% is higher than levels in some parts of the U.S. This sand moisture value has been confirmed for this facility.



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swirling wind conditions, especially during truck movement in and out of the loading areas. For this reason, the data were erratic and could not be used to evaluate wind direction. Air Control Techniques, P.C. visually observed wind direction to confirm that fugitive emissions were passing through the array. The rapid response of the TEOM monitor to the fugitive emissions during each truck and central mixer loading operation also provided direct confirmation that the wind direction was in the appropriate direction during the test program. Table 17.18 summarizes the average wind speeds during both the truck and central mix tests for the five plants tested.

Table 17.18. Wind Speed Averages

| Test Run | Average Wind Speed, MPH |
|---|---|
| RMCC Wake Forest | |
| Truck Mix Run # 1 | 1.1 |
| Truck Mix Run # 2 | 1.4 |
| Truck Mix Run # 3 | 1[1] |
| Average | 1.2 |
| RMCC Wake Forest | |
| Central Mix Run # 1 | 1[1] |
| Central Mix Run # 2 | 2.7 |
| Central Mix Run # 3 | 2.5 |
| Average | 2.1 |
| S.T. Wooten, Raleigh | |
| Central Mix Run # 1 | 7.0 |
| Central Mix Run # 2 | 8.2 |
| Central Mix Run # 3 | 2.7 |
| Average | 6.0 |
| Chandler Concrete[2] | |
| Truck Mix Run # 1 | 1.7 |
| Truck Mix Run # 2 | 4.3 |
| Truck Mix Run # 3 | 1.3 |
| Average | 2.4 |
| Concrete Supply | |
| Truck Mix Run # 1 | 1.1 |
| Truck Mix Run # 2 | 1.5 |
| Truck Mix Run # 3 | 1.6 |
| Average | 1.4 |
| RMC Carolina Materials | |
| Central Mix Run # 1 | 7.1 |
| Central Mix Run # 2 | 4.4 |
| Central Mix Run # 3 | 1.5 |
| Average | 4.3 |

1. One mph was used as a default value during tests in which the meteorological monitoring station was blocked by trucks being loaded.
2. Wind speed potentially biased low due to wind blocking effect of truck on meteorological monitoring station.



Attachment: 2. Site Plan (American Eagle Appeal)

## REFERENCES FOR SECTION 4

1. *Final Test Report for USEAP* [sic] Test *Program Conducted at Chaney Enterprises Cement Plant*, ETS, Inc. Roanoke, VA, April 1994.

2. *Final Test Report for USEPA* [sic] *Test Program Conducted at Concrete Ready Mixed Corporation,* ETS, Inc. Roanoke, VA, April 1994.

3. *Emission Test for Tiberi Engineering Compan*y, Alar Engineering Corporation, Burbank, IL, October 1972.

4. *Stack Test "Confidential*" (Test obtained from State of Tennessee,), Environmental Consultants, Oklahoma City, OK, February 1976.

5. Source Sampling Report, Particulate Emissions from Cement Silo Loading, Specialty Alloys Corporation, Gallaway, Tennessee, Reference Number 24-00051-02, State of Tennessee, Department of Health and Environmental, Division of Air Pollution Control, June 12, 1984.

6. Richards, J. and T. Brozell. "*Ready Mixed Concrete Emission Factors, Final Report*" Report to the Ready Mixed Concrete Research Foundation, Silver Spring, Maryland. August 2004.

Attachment: 2. Site Plan (American Eagle Appeal)

# 5. FINAL EMISSION FACTORS

## 5.1 Truck Mix and Central Mix Loading Particulate Matter Emission Factors

Emission factor data (run-by-run) applicable to controlled truck mix and central mix loading operations are summarized in Tables 18.1 and 18.2. The emission factor data for uncontrolled conditions are summarized in Tables 18.3 and 18.4.

The emission factor data for the six plants summarized in reference 6 are rated A because the fugitive emission rates were measured directly using EPA reference methods. The emission factor data for the plant summarized in reference 1 and the two plants summarized in reference 2 are rated B because the fugitive emission rates from the loading operations were estimated based on qualitative visible emission observations.

Table 18.1. Central Mix Loading Operation (Controlled) Emission Factor Data.

| Reference | Plant | Run | Cement Moisture % | Cement Supplement Moisture, % | Minimum Moisture of Cement and Supplement, % | Tons per Hour of Cement and Cement Supplement | Wind Speed, mph | Total PM, lbs/ton | $PM_{10}$, lbs/ton | $PM_{2.5}$, lbs/ton | Report Format |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | RMCC | 1 | 0.27 | 0.21 | 0.21 | 6.82 | 1 | 0.0043 | 0.0041 | 0.00259 | A |
| 6 | RMCC | 2 | 0.27 | 0.21 | 0.21 | 8.88 | 2.7 | 0.0023 | 0.0013 | 0.00003 | A |
| 6 | RMCC | 3 | 0.27 | 0.21 | 0.21 | 7.18 | 2.5 | 0.0030 | 0.0030 | 0.00157 | A |
| **Test Average** | | | **0.27** | **0.21** | **0.21** | **7.63** | **2.1** | **0.0032** | **0.0028** | **0.00140** | |
| 6 | S.T.Wooten | 1 | 0.30 | 0.09 | 0.09 | 7.90 | 1.0 | 0.0197 | 0.0047 | 0.00042 | A |
| 6 | S.T.Wooten | 2 | 0.30 | 0.09 | 0.09 | 13.10 | 8.2 | 0.0756 | 0.0124 | 0.00109 | A |
| 6 | S.T.Wooten | 3 | 0.30 | 0.09 | 0.09 | 15.27 | 2.7 | 0.0253 | 0.0114 | 0.00066 | A |
| **Test Average** | | | **0.3** | **0.09** | **0.09** | **12.09** | **4.0** | **0.0402** | **0.0095** | **0.00072** | |
| 6 | Carolina Mat'l | 1 | 1.07 | 0.19 | 0.19 | 13.01 | 7.1 | 0.0310 | 0.0079 | 0.00056 | A |
| 6 | Carolina Mat'l | 2 | 1.07 | 0.19 | 0.19 | 8.15 | 4.4 | 0.0224 | 0.0058 | 0.00106 | A |
| 6 | Carolina Mat'l | 3 | 1.07 | 0.19 | 0.19 | 16.80 | 1.5 | 0.0039 | 0.0039 | 0.00008 | A |
| **Test Average** | | | **1.07** | **0.19** | **0.19** | **12.65** | **4.3** | **0.0191** | **0.0059** | **0.00057** | |
| 1 | Cheney Enterprises | 10 | 0.13 | 0.06 | 0.13 | 15.09 | ND | 0.0081 | 0.0057 | ND | B |
| 1 | Cheney Enterprises | 11 | 0.13 | 0.06 | 0.13 | 15.61 | ND | 0.0391 | 0.0101 | ND | B |
| 1 | Cheney Enterprises | 12 | 0.13 | 0.06 | 0.13 | 15.72 | ND | 0.0048 | 0.0002 | ND | B |
| 1 | Cheney Enterprises | 13 | 0.13 | 0.06 | 0.13 | 14.01 | ND | 0.0020 | 0.0014 | ND | B |
| 1 | Cheney Enterprises | 17 | 0.13 | 0.06 | 0.13 | 22.43 | ND | 0.0019 | 0.0015 | ND | B |
| **Test Average** | | | **0.13** | **0.06** | **0.13** | **16.572** | | **0.0111** | **0.0038** | | |
| **Average, Central Mix Controlled** | | | | | | | | **0.0184** | **0.0055** | **0.0009** | |



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Table 18.2. Truck Mix Loading Operation (Controlled) Emission Factor Data.

| Reference | Plant | Run | Cement Moisture % | Cement Supplement Moisture, % | Minimum Moisture, % | Tons per Hour of Cement and Cement Supplement | Wind Speed, mph | Total PM, lbs/ton | $PM_{10}$, lbs/ton | $PM_{2.5}$, lbs/ton □ | Report Rating |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | RMCC | 1 | 0.27 | 0.21 | 0.21 | 8.58 | 1.0 | 0.0035 | 0.0028 | 3.50E-05 | A |
| 6 | RMCC | 2 | 0.27 | 0.21 | 0.21 | 3.00 | 1.4 | 0.0201 | 0.0054 | 8.63E-04 | A |
| 6 | RMCC | 3 | 0.27 | 0.21 | 0.21 | 6.91 | 1.0 | 0.0047 | 0.0036 | 1.09E-03 | A |
| **Test Average** | | | **0.27** | **0.21** | **0.21** | **6.16** | **1.13** | **0.0094** | **0.0039** | **6.63E-04** | |
| 6 | Chandler | 1 | 0.39 | 0.16 | 0.16 | 6.19 | 1.7 | 0.0367 | 0.0177 | 3.77E-03 | A |
| 6 | Chandler | 2 | 0.39 | 0.16 | 0.16 | 4.12 | 4.3 | 0.0665 | 0.0313 | 3.11E-03 | A |
| 6 | Chandler | 3 | 0.39 | 0.16 | 0.16 | 7.75 | 1.3 | 0.0504 | 0.0185 | 2.30E-03 | A |
| **Test Average** | | | **0.39** | **0.16** | **0.16** | **6.02** | **2.43** | **0.0512** | **0.0225** | **3.06E-03** | |
| 6 | Concrete Supply | 1 | 0.31 | 0.07 | 0.07 | 20.24 | 1.1 | 0.0078 | 0.0015 | 2.22E-04 | A |
| 6 | Concrete Supply | 2 | 0.31 | 0.07 | 0.07 | 21.73 | 1.5 | 0.0160 | 0.0044 | 3.64E-04 | A |
| 6 | Concrete Supply | 3 | 0.31 | 0.07 | 0.07 | 13.61 | 1.6 | 0.0354 | 0.0046 | 3.38E-04 | A |
| **Test Average** | | | **0.31** | **0.07** | **0.07** | **18.53** | **1.40** | **0.0197** | **0.0035** | **3.08E-04** | |
| 2 | CRMC | 1 | 0.03 | NA | 0.03 | 16.86 | ND | 0.0985 | 0.0308 | ND | B |
| 2 | CRMC | 2 | 0.03 | NA | 0.03 | 20.27 | ND | 0.1349 | 0.0333 | ND | B |
| 2 | CRMC | 3 | 0.03 | NA | 0.03 | 18.61 | ND | 0.1096 | 0.0275 | ND | B |
| 2 | CRMC | 4 | 0.03 | NA | 0.03 | 16.92 | ND | 0.0849 | 0.0180 | ND | B |
| 2 | CRMC | 5 | 0.03 | NA | 0.03 | 11.83 | ND | 0.0856 | 0.0233 | ND | B |
| 2 | CRMC | 6 | 0.03 | NA | 0.03 | ND | ND | 0.9854 | 0.2067 | ND | B |
| 2 | CRMC | 7 | 0.03 | NA | 0.03 | 29.00 | ND | 0.0305 | 0.0289 | ND | B |
| 2 | CRMC | 8 | 0.03 | NA | 0.03 | 26.30 | ND | 0.0072 | 0.0055 | ND | B |
| 2 | CRMC | 9 | 0.03 | NA | 0.03 | 18.61 | ND | 0.0120 | 0.0070 | ND | B |
| 2 | CRMC | 10 | 0.03 | NA | 0.03 | 16.55 | ND | 0.0084 | 0.0053 | ND | B |
| **Test Average** | | | **0.03** | | **0.03** | **19.44** | | **0.1557** | **0.0386** | | |
| 1 | Chaney | 2 | 0.13 | 0.06 | 0.06 | 14.60 | ND | 0.0721 | 0.0540 | ND | B |
| 1 | Chaney | 4 | 0.13 | NA | 0.13 | 13.92 | ND | 0.0396 | 0.0285 | ND | B |
| 1 | Chaney | 9 | 0.13 | NA | 0.13 | 19.56 | ND | 0.0261 | 0.0116 | ND | B |
| 1 | Chaney | 14 | 0.13 | 0.06 | 0.06 | 14.70 | ND | | 0.0980 | ND | B |
| 1 | Chaney | 15 | 0.13 | 0.06 | 0.06 | 17.88 | ND | 0.6304 | 0.0706 | ND | B |
| 1 | Chaney | 16 | 0.13 | NA | 0.13 | 11.01 | ND | 0.5054 | 0.1144 | ND | B |
| **Test Average** | | | **0.13** | **0.06** | **0.095** | **15.28** | | **0.2547** | **0.0629** | | |
| **Average, Truck Mix Controlled** | | | | | | | | **0.098** | **0.0263** | **0.00134** | |

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Table 18.3. Central Mix Loading Operation (Uncontrolled) Emission Factor Data. □

| Reference | Plant | Run | Cement Moisture % | Cement Supplement Moisture, % | Minimum Moisture of Cement and Supplement, % | Tons per Hour of Cement and Cement Supplement | Wind Speed, mph | Total PM, lbs/ton | $PM_{10}$, lbs/ton | $PM_{2.5}$, lbs/ton | Report Format |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | RMCC | 1 | 0.27 | 0.21 | 0.21 | 6.82 | 1 | 0.102 | 0.031 | 0.009 | A |
| 6 | RMCC | 2 | 0.27 | 0.21 | 0.21 | 8.88 | 2.7 | 0.174 | 0.067 | 0.009 | A |
| 6 | RMCC | 3 | 0.27 | 0.21 | 0.21 | 7.18 | 2.5 | 0.188 | 0.070 | 0.009 | A |
| **Test Average** | | | **0.27** | **0.21** | **0.21** | **7.63** | **2.1** | **0.155** | **0.056** | **0.009** | |
| 6 | S.T.Wooten | 1 | 0.30 | 0.09 | 0.09 | 7.90 | 1.0 | 1.718 | 0.411 | 0.0357 | A |
| 6 | S.T.Wooten | 2 | 0.30 | 0.09 | 0.09 | 13.10 | 8.2 | 1.203 | 0.206 | 0.017 | A |
| 6 | S.T.Wooten | 3 | 0.30 | 0.09 | 0.09 | 15.27 | 2.7 | 0.841 | 0.376 | 0.022 | A |
| **Test Average** | | | **0.3** | **0.09** | **0.09** | **12.09** | **4.0** | **1.254** | **0.331** | **0.0249** | |
| 6 | Carolina Mat'l | 1 | 1.07 | 0.19 | 0.19 | 13.01 | 7.1 | 0.613 | 0.156 | 0.011 | A |
| 6 | Carolina Mat'l | 2 | 1.07 | 0.19 | 0.19 | 8.15 | 4.4 | 0.736 | 0.191 | 0.035 | A |
| 6 | Carolina Mat'l | 3 | 1.07 | 0.19 | 0.19 | 16.80 | 1.5 | 0.613 | 0.134 | 0.0131 | A |
| **Test Average** | | | **1.07** | **0.19** | **0.19** | **12.65** | **4.3** | **0.654** | **0.160** | **0.0197** | |
| 1 | Cheney Enterprises | 10 | 0.13 | 0.06 | 0.13 | 15.09 | ND | 0.0794 | 0.0564 | ND | B |
| 1 | Cheney Enterprises | 11 | 0.13 | 0.06 | 0.13 | 15.61 | ND | 0.242 | 0.0622 | ND | B |
| 1 | Cheney Enterprises | 12 | 0.13 | 0.06 | 0.13 | 15.72 | ND | 0.4568 | 0.01 | ND | B |
| 1 | Cheney Enterprises | 13 | 0.13 | 0.06 | 0.13 | 14.01 | ND | 0.166 | 0.123 | ND | B |
| 1 | Cheney Enterprises | 17 | 0.13 | 0.06 | 0.13 | 22.43 | ND | 0.17 | 0.137 | ND | B |
| **Test Average** | | | **0.13** | **0.06** | **0.13** | **16.572** | | **0.223** | **0.078** | | |
| **Average, Central Mix Uncontrolled** | | | | | | | | **0.572** | **0.156** | **0.018** | |

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Table 18.4. Truck Mix Loading Operation (Uncontrolled) Emission Factor Data.

| Reference | Plant | Run | Cement Moisture % | Cement Supplement Moisture, % | Minimum Moisture, % | Tons per Hour of Cement and Cement Supplement | Wind Speed, mph | Total PM, lbs/ton | $PM_{10}$, lbs/ton | $PM_{2.5}$, lbs/ton □ | Report Rating |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | RMCC | 1 | 0.27 | 0.21 | 0.21 | 8.58 | 1.0 | 0.380 | 0.118 | 1.46E-02 | A |
| 6 | RMCC | 2 | 0.27 | 0.21 | 0.21 | 3.00 | 1.4 | 1.349 | 0.349 | 3.34E-02 | A |
| 6 | RMCC | 3 | 0.27 | 0.21 | 0.21 | 6.91 | 1.0 | 4.655 | 1.710 | 2.57E-01 | A |
| **Test Average** | | | **0.27** | **0.21** | **0.21** | **6.16** | **1.13** | **2.128** | **0.726** | **1.02E-01** | |
| 6 | Chandler | 1 | 0.39 | 0.16 | 0.16 | 6.19 | 1.7 | 0.388 | 0.188 | 3.91E-02 | A |
| 6 | Chandler | 2 | 0.39 | 0.16 | 0.16 | 4.12 | 4.3 | 0.488 | 0.231 | 2.28E-02 | A |
| 6 | Chandler | 3 | 0.39 | 0.16 | 0.16 | 7.75 | 1.3 | 0.756 | 0.278 | 3.39E-02 | A |
| **Test Average** | | | **0.39** | **0.16** | **0.16** | **6.02** | **2.43** | **0.544** | **0.232** | **3.19E-02** | |
| 6 | Concrete Supply | 1 | 0.31 | 0.07 | 0.07 | 20.24 | 1.1 | 0.795 | 0.153 | 2.27E-02 | A |
| 6 | Concrete Supply | 2 | 0.31 | 0.07 | 0.07 | 21.73 | 1.5 | 1.1378 | 0.309 | 2.60E-02 | A |
| 6 | Concrete Supply | 3 | 0.31 | 0.07 | 0.07 | 13.61 | 1.6 | 3.1470 | 0.410 | 2.84E-02 | A |
| **Test Average** | | | **0.31** | **0.07** | **0.07** | **18.53** | **1.40** | **1.693** | **0.291** | **2.57E-02** | |
| 2 | CRMC | 1 | 0.03 | NA | 0.03 | 16.86 | ND | 0.500 | 0.1256 | ND | B |
| 2 | CRMC | 2 | 0.03 | NA | 0.03 | 20.27 | ND | 0.822 | 0.1680 | ND | B |
| 2 | CRMC | 3 | 0.03 | NA | 0.03 | 18.61 | ND | 0.650 | 0.1460 | ND | B |
| 2 | CRMC | 4 | 0.03 | NA | 0.03 | 16.92 | ND | 0.474 | 0.0894 | ND | B |
| 2 | CRMC | 5 | 0.03 | NA | 0.03 | 11.83 | ND | 0.496 | 0.1215 | ND | B |
| 2 | CRMC | 6 | 0.03 | NA | 0.03 | ND | ND | 2.128 | 0.4406 | ND | B |
| 2 | CRMC | 7 | 0.03 | NA | 0.03 | 29.00 | ND | 0.098 | 0.0960 | ND | B |
| 2 | CRMC | 8 | 0.03 | NA | 0.03 | 26.30 | ND | 0.009 | 0.0070 | ND | B |
| 2 | CRMC | 9 | 0.03 | NA | 0.03 | 18.61 | ND | 0.018 | 0.0090 | ND | B |
| 2 | CRMC | 10 | 0.03 | NA | 0.03 | 16.55 | ND | 0.015 | 0.0076 | ND | B |
| **Test Average** | | | **0.03** | | **0.03** | **19.44** | | **0.5210** | **0.1211** | | |
| 1 | Chaney | 2 | 0.13 | 0.06 | 0.06 | 14.60 | ND | 0.2564 | 0.1922 | ND | B |
| 1 | Chaney | 4 | 0.13 | NA | 0.13 | 13.92 | ND | 0.1872 | 0.135 | ND | B |
| 1 | Chaney | 9 | 0.13 | NA | 0.13 | 19.56 | ND | 0.1178 | 0.0522 | ND | B |
| 1 | Chaney | 14 | 0.13 | 0.06 | 0.06 | 14.70 | ND | | 0.2224 | ND | B |
| 1 | Chaney | 15 | 0.13 | 0.06 | 0.06 | 17.88 | ND | 1.7494 | 0.1956 | ND | B |
| 1 | Chaney | 16 | 0.13 | NA | 0.13 | 11.01 | ND | 1.2026 | 0.2718 | ND | B |
| **Test Average** | | | **0.13** | **0.06** | **0.095** | **15.28** | | **0.703** | **0.178** | | |
| **Average, Truck Mix Uncontrolled** | | | | | | | | **1.118** | **0.310** | **0.053** | |

The emission factors for the truck mix and central mix loading operations have been compiled in two different formats: (1) a general factor that is based strictly on cement and cement supplement loading rates, and (2) predictive equations that take into account site specific information. The latter approach is preferred whenever the site specific information is available.



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### *5.1.1 General Emission Factors*

The general emission factors have been compiled based on the test average values summarized in Tables 18.1 through 18.4.

Previously, EPA has determined that Run 14 conducted at the truck mix loading operation at Chaney Enterprises (Reference 1) was an outlier. This was confirmed during this update to the data tables. Several additional high and low outliers were identified in references 1 and 2 for the truck mix operations. However, the removal of these outliers had essentially no impact on the final emission factor test results. Accordingly, all of the test average values shown in Tables 18.1 through 18.2 have been used without any adjustments to correct for outliers with the exception or Reference 1, Run 14. The general emission factors for total particulate matter, $PM_{10}$, and $PM_{2.5}$ are summarized in Tables 18.5 and 18.6.

The results of the controlled truck mix loading data analyses (Table 18.5) yield an arithmetic emission factor value of 0.026 pounds $PM_{10}$ per ton of cement and cement supplement loaded. The 90% confidence interval for this data set of is 0.010 pounds $PM_{10}$/ton of cement and cement supplement (minimum) and 0.043 pounds $PM_{10}$/ton of cement and cement supplement (maximum). The standard deviation for the data set of five test averages is 0.022 pounds $PM_{10}$/ton of cement and cement supplement loaded.

The results of the controlled central mix loading data analyses (Table 18.5) yield an arithmetic emission factor value of 0.006 pounds $PM_{10}$ per ton of cement and cement supplement loaded. The 90% confidence interval for this data set is 0.003 pounds $PM_{10}$/ton of cement and cement supplement loaded and 0.008 pounds $PM_{10}$/ton of cement and cement supplement loaded. The standard deviation for the data set of five test averages is 0.003 pounds $PM_{10}$/ton of cement and cement supplement loaded.

Table 18.5. General Emission Factors, Loading Operations, Controlled.

| Type of Loading Operation | Analyte | Emissions, pounds per ton of cement and cement supplement loaded | | | |
|---|---|---|---|---|---|
| | | Average | Standard Deviation | Minimum of 90% Confidence Interval | Maximum of 90% Confidence Interval |
| Truck Mix | PM | 0.098 | 0.094 | 0.029 | 0.167 |
| | $PM_{10}$ | 0.026 | 0.022 | 0.010 | 0.043 |
| | $PM_{2.5}$ | 0.001 | 0.001 | 0.000 | 0.003 |
| Central Mix | PM | 0.018 | 0.016 | 0.005 | 0.031 |
| | $PM_{10}$ | 0.006 | 0.003 | 0.003 | 0.008 |
| | $PM_{2.5}$ | 0.001 | 0.000 | 0.000 | 0.001 |

Similar analyses were conducted for the uncontrolled emission factor data. With respect to the Reference 6 data, the uncontrolled emissions were calculated as the total of the fugitive emissions plus the inlet mass flow rate to the fabric filter. The results of the analyses of the uncontrolled emission factor data are provided in Table 18.6.

The results of the uncontrolled truck mix loading data analyses (Table 18.6) yield an arithmetic emission factor value of 0.031 pounds $PM_{10}$ per ton of cement and cement supplement loaded. The 90% confidence interval for this data set of is 0.132 pounds $PM_{10}$/ton of cement and



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cement supplement (minimum) and 0.487 pounds $PM_{10}$/ton of cement and cement supplement (maximum). The standard deviation for the data set of five test averages is 0.241 pounds $PM_{10}$/ton of cement and cement supplement loaded.

The results of the uncontrolled central mix loading data analyses (Table 18.6) yield an arithmetic emission factor value of 0.156 pounds $PM_{10}$ per ton of cement and cement supplement loaded. The 90% confidence interval for this data set is 0.054 pounds $PM_{10}$/ton of cement and cement supplement loaded and 0.259 pounds $PM_{10}$/ton of cement and cement supplement loaded. The standard deviation for the data set of five test averages is 0.125 pounds $PM_{10}$/ton of cement and cement supplement loaded.

Table 18.6. General Emission Factors, Loading Operations, Uncontrolled.

| Type of Loading Operation | Analyte | Emissions, pounds per ton of cement and cement supplement loaded | | | |
|---|---|---|---|---|---|
| | | Average | Standard Deviation | Minimum of 90% Confidence Interval | Maximum of 90% Confidence Interval |
| Truck Mix | PM | 1.118 | 0.743 | 0.571 | 1.664 |
| | $PM_{10}$ | 0.310 | 0.241 | 0.132 | 0.487 |
| | $PM_{2.5}$ | 0.053 | 0.042 | 0.013 | 0.093 |
| Central Mix | PM | 0.572 | 0.506 | 0.156 | 0.987 |
| | $PM_{10}$ | 0.156 | 0.125 | 0.054 | 0.259 |
| | $PM_{2.5}$ | 0.018 | 0.008 | 0.010 | 0.026 |

### *5.1.2 Site Specific Equations*

In the previous edition of Section 11.12 and in Section 5.1.1 of this document, the truck mix and central mix loading emission factors for particulate matter have been expressed on the basis of pounds of emission per ton of cement and cement supplement loaded. In the planning for the emissions test program documented in reference 6, several previously unmeasured variables that may affect emissions were identified for improved monitoring. Several other AP-42 emissions factors have used material surface moisture levels and wind speed to increase the predictive precision of the resulting emissions factor equation over the traditional single value emissions factor. As with most particulate matter emissions factors, the within source and between source variability is significant. As presented in Tables 18.5 and 18.6, the Standard Deviation of the data is approximately equal in magnitude to the emissions factors. An examination of the test data supporting these emission factors indicated that the production rate (tons of cement and cement supplement) alone did not serve as an adequate parameter to explain the variability and improve the predictive capability of the emissions factor. For example, in Figure 5.1, the reference 1 and 2 $PM_{10}$ controlled emissions data applicable to truck mix operations are illustrated along with the emission factor values that would be calculated based on the AP-42 factor of 0.051 pounds per ton of cement and cement supplement. Similar data are shown in Figure 5.2, for reference 1 $PM_{10}$ controlled emissions data applicable to central mix loading operations. In the case of Figure 5.2, the data should fall on the emission factor line having a slope of 0.0038 pounds $PM_{10}$ per ton of cement and cement supplement.



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The lack of a strong relationship between the measured emission rate in pounds per hour and the production rate in tons of cement and supplement per hour is also apparent in the truck mix data provided in reference 6 (Figure 5.3). The emission factor data in references 1, 2, and 6 for truck mix and central mix loading operations indicates that there are variables in addition to production rate that affect particulate matter emissions.

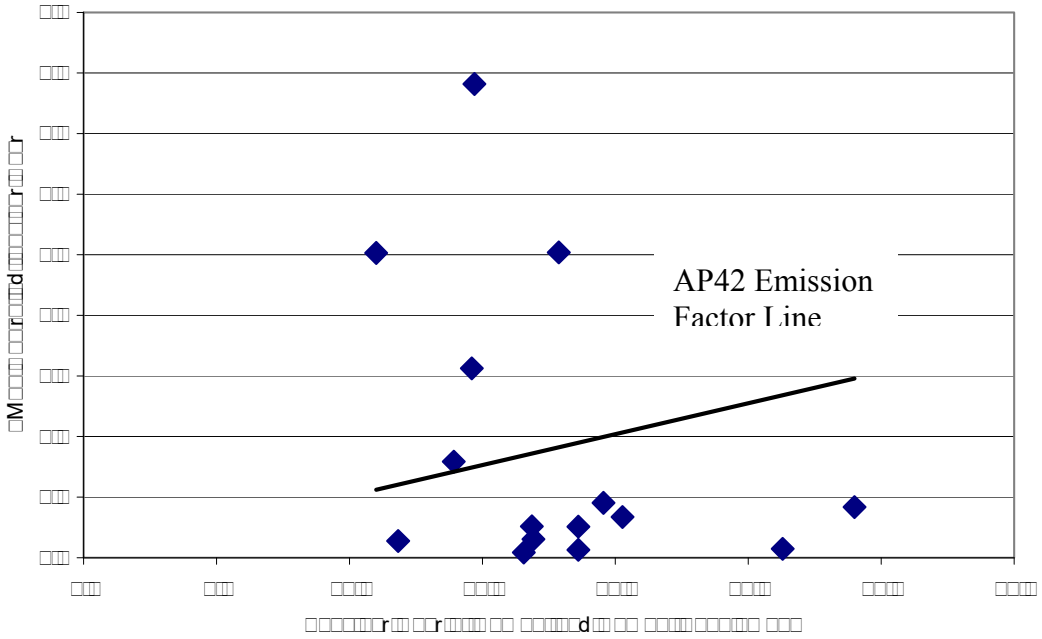



Figure 5.1. Truck Mix Emission Factor Data, EPA AP-42 Section 11.12 References 1 and 2 (Note: Data should be on a line with a slope of 0.051 lbs $PM_{10}$/ton of cement.)

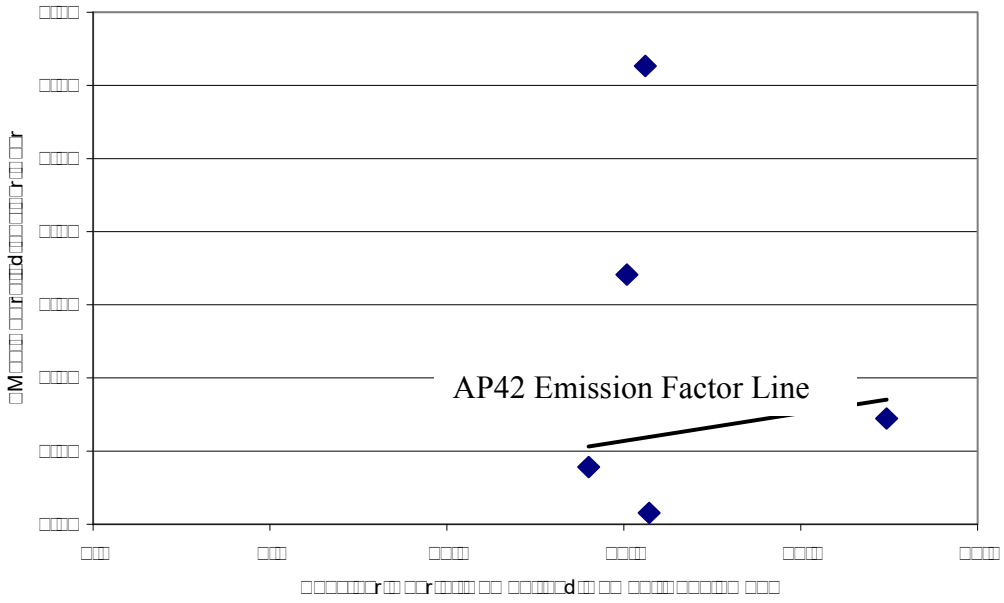



Figure 5.2. Central Mix Emission Factor Data, EPA AP-42 Section 11.12 Reference 1 (Note: Data should be a line with a slope of 0.0038 lbs $PM_{10}$/ton of cement.)



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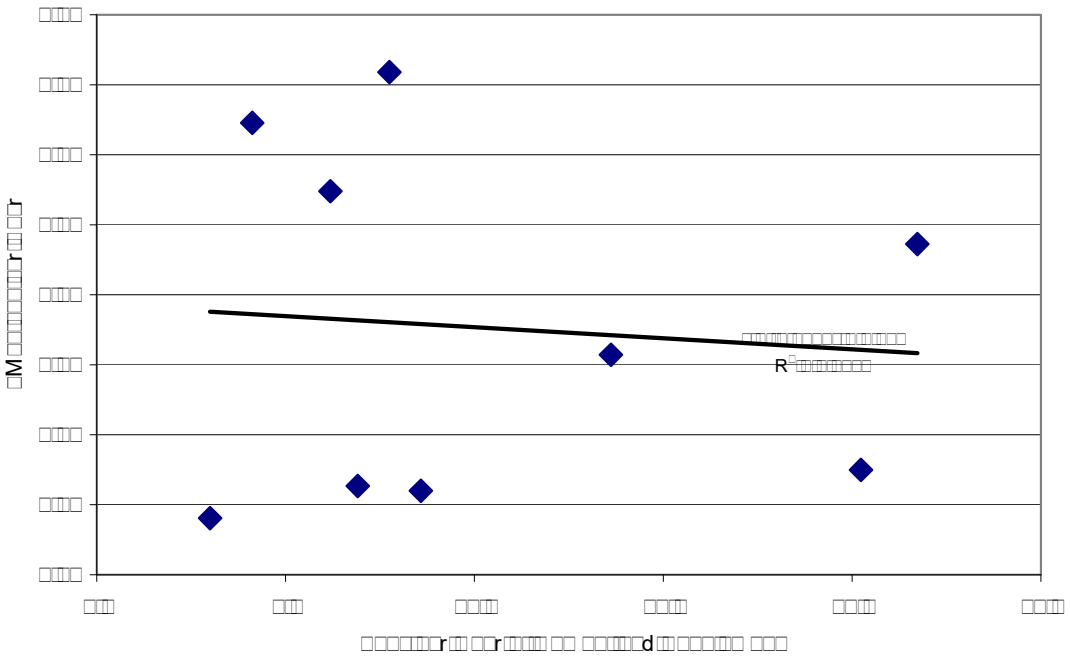


Figure 5.3. Truck Mix Emission Factor Data, Reference 6
(Note: Data should be on a line with a slope of 0.051 lbs $PM_{10}$/ton of cement.)

Since Reference 6 included documentation of the moisture content of the cement and cement supplement (fly ash) and the air velocity near the drop point, the effect of these variables on the emissions factors is possible. Performing a polynomial regression analysis mathematically evaluates the appropriate exponential relationship between the independent variables (moisture content, air velocity and production rate) and the dependent variable emissions per unit activity. Microsoft Excel® provides a multiple linear regression analysis capability in the analysis tools. Prior to using the regression analysis tool, the dependent (emissions) and independent (moisture and air velocity) data are log transformed. A regression analysis is performed on the log transformed data to generate the exponents for the independent variables and to determine the statistical significance that these variables provide to explain the variability of the data. Following determining the exponents and the strength of the relationship, those parameters exhibiting an R2 greater than approximately 0.5 are carried forward where a second regression analysis determines the slope multipliers to use with the polynomials and any constant to use with the equation. Tables 18.7 through 18.13 present the results of the regression analyses for Total PM, $PM_{10}$ and $PM_{2.5}$ for truck mix operations and Tables 18.14 through 18.23 present similar results for central mix operations.



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Table 18.7. Regression Output for Air Velocity and Moisture for Uncontrolled PM for Truck Mix Operations.

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| *Regression Statistics* | |
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| □□□r□□□□ | □ |

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| | *df* | *SS* | *MS* | *F* | *Significance F* |
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| R□□r□□□□□ | □ | □□□□ | □□□□ | □□□□ | □□□□ |
| R□□d□□□ | □ | □□□□ | □□□□ | | |
| □□□□ | □ | □□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□r□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□r□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |



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Table 18.8. Regression Output for Air Velocity and Moisture for Uncontrolled $PM_{10}$ Emissions from Truck Mix Operations.

□□MM□R□□□ □□□□□
□ □□□□□r□□□□d□□M□□

| *Regression Statistics* | |
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| R□□□□□r□ | □□□□ |
| □d□□□□□d□R□□□□r□ | □□□□□ |
| □□□□d□rd□□rr□r | □□□□ |
| □ □□□r□□□□□□ | □ |

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| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□□ | □ | □□□□ | □□□□ | □□□□ | □□□□ |
| R□□d□□□ | □ | □□□□ | □□□□ | | |
| □□□□□ | □ | □□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ |
| □□□r□□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ |
| □□□r□□□□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ |



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Table 18.9. Regression Output for Air Velocity and Moisture for Uncontrolled $PM_{2.5}$ from Truck Mix Operations.

□□MM□R□□□ □□□□□
□□□□□r□□□d□□M□□□

| *Regression Statistics* | |
|---|---|
| M□□□□□□R | □□□□ |
| R□□ □□□r□ | □□□□ |
| □d□□□□d□R□□ □□□r□ | □□□□ |
| □□□d□rd□□rr□r | □□□□ |
| □ □□r□□□□□ | □ |

□□□ □□

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□ | □ | □□□□ | □□□□ | □□□□ | □□□□ |
| R□□d□□□ | □ | □□□□ | □□□□ | | |
| □□□□□ | □ | □□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□r□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□r□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |



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Table 18.10. Regression Output for Moisture and Air Velocity for Controlled PM from Truck Mix Operations.

□□MM□R□□□ □□□□□
□□□□r□□□□d□□□□□□□□M

| *Regression Statistics* | |
|---|---|
| M□□□□□□□□R | □□□□ |
| R□□□□□□r□ | □□□□ |
| □d□□□□□□d□R□□□□r□ | □□□□ |
| □□□□d□rd□□rr□r | □□□□ |
| □ □□□r□□□□□□□ | □ |

□□□ □□

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□□ | □ | □□□□ | □□□□ | □□□□ | □□□□ |
| R□□d□□□ | □ | □□□□ | □□□□ | | |
| □□□□□ | □ | □□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□□ | □□□□□ | □□□□□ |
| □□□r□□□□□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ |
| □□□r□□□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |



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Table 18.11. Regression Output for Slope and Intercept Coefficients for Controlled PM for Truck Mix Operations.

[illegible]

[illegible]

| Regression Statistics | |
|---|---|
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |

[illegible]

[illegible]

| | df | SS | MS | F | Significance F |
|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | | |
| [illegible] | [illegible] | [illegible] | | | |

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

Table 18.12. Regression Output for Moisture and Air Velocity Exponents for Controlled $PM_{10}$ Emissions From Truck Mix Operations.

□□MM□R□□□ □□□□□
□□□□r□□□□d□□M□□

| *Regression Statistics* | |
|---|---|
| M□□□□□□□R | □□□□ |
| R□□□□□□r□ | □□□□ |
| □d□□□□□□d□R□□□□□r□ | □□□□ |
| □□□□d□rd□□rr□r | □□□□ |
| □ □□□r□□□□□□ | □ |

□□□□□

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□□ | □ | □□□□ | □□□□ | □□□□ | □□□□ |
| R□□d□□□ | □ | □□□□ | □□□□ | | |
| □□□□□ | □ | □□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□r□□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
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Table 18.13. Regression Output for Moisture and Air Velocity Exponents for Controlled $PM_{2.5}$ Emissions for Truck Mix Operations.

[illegible]

[illegible]

| Regression Statistics | |
|---|---|
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |

[illegible]

[illegible]

| | df | SS | MS | F | Significance F |
|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | | |
| [illegible] | [illegible] | [illegible] | | | |

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |



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Table 18.14 Regression Output for Moisture and Air Velocity for Uncontrolled PM Emissions from Central Mix Operations.

□□MM□R□□□ □□□□□
□□□□□r□□□d□□□□□□M

| *Regression Statistics* | |
|---|---|
| M□□□□□R | □□□□ |
| R□□□□r□ | □□□□ |
| □d□□□d□R□□□r□ | □□□□ |
| □□□d□rd□rr□r | □□□□ |
| □ □r□□□□□ | □ |

□□□ □□

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□r□□□□ | □ | □□□□ | □□□□ | □□□□ | □□□□□ |
| R□d□□ | □ | □□□□ | □□□□ | | |
| □□□□ | □ | □□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□ | □□□□ | □□□ | □□□□ | □□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□r□□□□ | □□□□ | □□□ | □□□□ | □□□ | □□□□ | □□□ | □□□□ | □□□ |
| □□□r□□□□ | □□□ | □□□ | □□□ | □□□ | □□□□ | □□□ | □□□□ | □□□ |



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Table 18.15 Regression Output for Moisture and Air Velocity for Controlled PM Emissions from Central Mix Operations.

□□MM□R□□□ □□□□□
□□□□r□□□d□□□□□□□M

| *Regression Statistics* | |
|---|---|
| M□□□□□□□R | □□□□ |
| R□□□□□□r□ | □□□□ |
| □d□□□□□d□R□□□□□r□ | □□□□ |
| □□□□d□rd□□rr□r | □□□□ |
| □ □□□r□□□□□□ | □ |

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| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□□ | □ | □□□□ | □□□□ | □□□□ | □□□□□ |
| R□□d□□□ | □ | □□□□ | □□□□ | | |
| □□□□□ | □ | □□□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□□ | □□□□ | □□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ |
| □□□□r□□□□□□ | □□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□□r□□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |



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Table 18.16 Regression Output for Slope and Intercept Coefficients for Uncontrolled PM Emissions for Central Mix Operations.

□□MM□R□□□ □□□□□
□□□□□r□□□d□□□□□□M

| *Regression Statistics* | |
|---|---|
| M□□□□□□R | □□□□ |
| R□□□□□r□ | □□□□ |
| □d□□□□d□R□□□□r□ | □□□□ |
| □□□□d□rd□□rr□r | □□□□ |
| □ □□□r□□□□□□ | □ |

□□□ □□

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□ | □ | □□□□ | □□□□ | □□□□ | □□□□□ |
| R□□d□□□ | □ | □□□□ | □□□□□ | | |
| □□□□□ | □ | □□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ |
| □□□r□□□□□□ | □□□□□ | □□□□□ | □□□□ | □□□□□ | □□□□□ | □□□□□ | □□□□□ | □□□□□ |



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Table 18.17 Regression Output for Moisture and Air Velocity for Controlled PM Emissions from Central Mix Operations.

□□MM□R□□□ □□□□□
□□□□r□□□d□□□□□□□M

| *Regression Statistics* | |
|---|---|
| M□□□□□□□R | □□□□ |
| R□□□□□□r□ | □□□□ |
| □d□□□□□d□R□□□□□r□ | □□□□ |
| □□□□d□rd□□rr□r | □□□□□ |
| □ □□□r□□□□□□ | □ |

□□□ □□

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□□ | □ | □□□□□□ | □□□□□□ | □□□□□□□□ | □□□□□□ |
| R□□d□□□ | □ | □□□□□□ | □□□□□□ | | |
| □□□□□ | □ | □□□□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□□r□□□□ | □□□□□□ | □□□□□□ | □□□ | □□□ | □□□□□ | □□□□ | □□□□□ | □□□□ |
| □□□ □r□□□□□□ | □□□□□□ | □□□□□□ | □□□ | □□□□ | □□□□□ | □□□□□ | □□□□□ | □□□□ |



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Table 18.18 Regression Output for Moisture and Air Velocity for Uncontrolled $PM_{10}$ Emissions from Central Mix Operations.

[illegible]

[illegible]

| Regression Statistics | |
|---|---|
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |

[illegible]

[illegible]

| | df | SS | MS | F | Significance F |
|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | | |
| [illegible] | [illegible] | [illegible] | | | |

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

Table 18.19 Regression Output for Moisture and Air Velocity for Controlled $PM_{10}$ Emissions from Central Mix Operations.

□□MM□R□□□ □□□□□

□□□□r□□d□M□□

| *Regression Statistics* | |
|---|---|
| M□□□□□R | □□□□ |
| R□□ □□□r□ | □□□□ |
| □d□□□□d R□□ □□□r□ | □□□□ |
| □□□d□rd□□rr□r | □□□□ |
| □ □□□r□□□□□ | □ |

□□□ □□

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□ | □ | □□□□ | □□□□ | □□□□ | □□□□ |
| R□□d□□□ | □ | □□□□ | □□□□ | | |
| □□□□ | □ | □□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□ □r□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□ □r□□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |



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Table 18.20 Regression Output for Slope and Intercept Coefficients for Uncontrolled $PM_{10}$ Emissions for Central Mix Operations.

□□MM□R□□□ □□□□□
□□□□□r□□□d□M□□□

| *Regression Statistics* | |
|---|---|
| M□□□□□R | □□□□ |
| R□□ □□□r□ | □□□□ |
| □d□□□□d□R□□ □□□r□ | □□□□ |
| □□□d□rd□□rr□r | □□□□□ |
| □ □□r□□□□□ | □ |

□□□ □□

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□ | □ | □□□□□ | □□□□□ | □□□□ | □□□□□ |
| R□□d□□□ | □ | □□□□□ | □□□□□ | | |
| □□□□□ | □ | □□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□□ | □□□□□ | □□□ | □□□ | □□□□□ | □□□ | □□□□□ | □□□ |
| □□□ □r□□□□□ | □□□□□ | □□□□□ | □□□ | □□□ | □□□□□ | □□□ | □□□ | □□□ |



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Table 18.21 Regression Output for Slope and Intercept Coefficients for Controlled $PM_{10}$ Emissions for Central Mix Operations.

[illegible]

| *Regression Statistics* | |
|---|---|
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |

[illegible]

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | | |
| [illegible] | [illegible] | [illegible] | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

Table 18.22 Regression Output for Moisture and Air Velocity for Uncontrolled $PM_{2.5}$ Emissions from Central Mix Operations.

[illegible]

| *Regression Statistics* | |
|---|---|
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |
| [illegible] | [illegible] |

[illegible]

[illegible]

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | | |
| [illegible] | [illegible] | [illegible] | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

Table 18.23 Regression Output for Moisture and Air Velocity for Controlled $PM_{2.5}$ Emissions from Central Mix Operations.

| *Regression Statistics* | |
|---|---|
| M□□□□□□□R | □□□□ |
| R□□□□□r□ | □□□□ |
| □d□□□□□d□R□□□□r□ | □□□□□ |
| □□□□d□rd□□rr□r | □□□□ |
| □ □□□r□□□□□□ | □ |

□□□□

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| R□□r□□□□□□ | □ | □□□□ | □□□□ | □□□□□ | □□□□ |
| R□□d□□□ | □ | □□□□□ | □□□□ | | |
| □□□□□ | □ | □□□□□ | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| □□□r□□□□ | □□□□□ | □□□□ | □□□□□ | □□□□□ | □□□□□ | □□□□ | □□□□□ | □□□□ |
| □□□r□□□□□□ | □□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |
| □□□r□□□□□□ | □□□□□□ | □□□□ | □□□□□ | □□□□ | □□□□ | □□□□ | □□□□ | □□□□ |



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An examination of all of the emission factor data now available in reference 6 (six separate plants, A-rated tests) indicates that there is a strong relationship between the air velocity close to the drop point and the emissions factors. In addition, a weaker relationship exists between the fine material (cement or cement supplement) moisture content and the emissions factors. Except for uncontrolled truck mix operations, the use of equations based upon these relationships improves the predictive accuracy of the emissions factors by a factor of approximately two. For controlled truck mix operations, the dependency with air velocity is consistent for all particle sizes while the dependency with moisture content is neither as strong nor consistent. Rather than presenting three equations with different constants for exponents, slope and intercept, the equations for $PM_{10}$ and $PM_{2.5}$ are based upon the average ratio of these particle sizes to total particulate and the equation developed for total particulate matter. For central mix operations, there are different air velocity dependencies for uncontrolled emissions than for controlled emissions and there are different air velocity dependencies for total particulate matter than for $PM_{10}$ or $PM_{2.5}$. As a result, different constants for exponents, slope and intercept are presented. Because of the lack of a good relationship between $PM_{2.5}$ and the independent variables, the average ratio of $PM_{2.5}$ to $PM_{10}$ will be applied to the equation developed for $PM_{10}$. Emissions factors of the general form presented by equation 5-1 provide for a more predicatively accurate estimate of emissions than a single value emissions factor based solely on production rate. Equation 5-1 includes parameters that take into account the moisture content of the cement and cement supplement (minimum value) and the air velocity at the point of material transfer. Both of these additional parameters are logically related to fugitive particulate matter emissions. Equation 5-1 is conceptually similar to a variety of emission factor equations presented in AP-42 Section 13.2, *Fugitive Dust Sources* due to the inclusion of material moisture content and wind speed. Tables 18.24 and 18.25 present the constants for the exponent for air velocity, the exponent for the moisture content, the slope of the curve (divided by 0.0032 to allow for particle size multipliers closer to unity) and the intercept.

$$E = x k \frac{U^a}{M^b} + c \qquad (5\text{-}1)$$

| | | |
|---|---|---|
| E | = | Emission factor in lbs/ton of cement and cement supplement |
| k | = | Particle size multiplier (dimensionless) |
| U | = | Air velocity at drop point, miles per hour (mph) |
| M | = | Minimum moisture (% by weight) of cement and cement supplement |
| a,b | = | Exponents |
| x | = | Slope constant (0.0032) |
| c | = | Intercept constant |

These parameters provide the best fit of the measured emission factor data for controlled particulate matter emissions. The $PM_{10-2.5}$ emissions factors are calculated by subtracting the $PM_{2.5}$ values from the $PM_{10}$ values.



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Table 18.24 Equation Parameters for Controlled Truck Mix Operations.

| Condition | Parameter Category | k | a | b | c |
|---|---|---|---|---|---|
| Controlled | Total PM | 0.8 | 1.75 | 0.3 | 0.013 |
| | $PM_{10}$ | 0.32 | 1.75 | 0.3 | 0.0052 |
| | $PM_{2.5}$ | 0.048 | 1.75 | 0.3 | 0.00078 |

Table 18.25 Equation Parameters for Central Mix Operations.

| Condition | Parameter Category | k | a | b | c |
|---|---|---|---|---|---|
| Controlled | Total PM | 0.19 | 0.95 | 0.9 | 0.0010 |
| | $PM_{10}$ | 0.13 | 0.45 | 0.9 | 0.0010 |
| | $PM_{2.5}$ | 0.03 | 0.45 | 0.9 | 0.0002 |
| Uncontrolled | Total PM | 5.90 | 0.6 | 1.3 | 0.120 |
| | $PM_{10}$ | 1.92 | 0.4 | 1.3 | 0.040 |
| | $PM_{2.5}$ | 0.38 | 0.4 | 1.3 | 0.0 |

The relationship between the **$PM_{10}$** (controlled) emission factor calculated using Equation 5-1 and the measured **$PM_{10}$** (controlled) emission factors are shown in Figures 5.4 and 5.5. These figures present only the A-rated data from the six tests described in reference 6. Wind speed data were unavailable in the B-rated data from references 1 and 2.

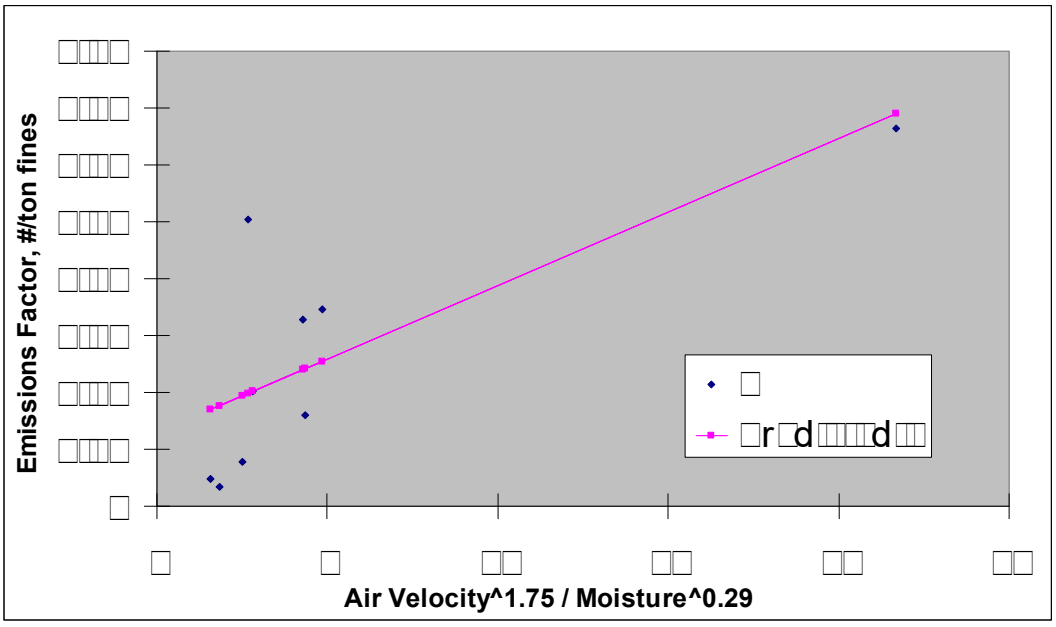



Figure 5.4 Controlled Particulate Matter Emissions from Truck Mix Operations.

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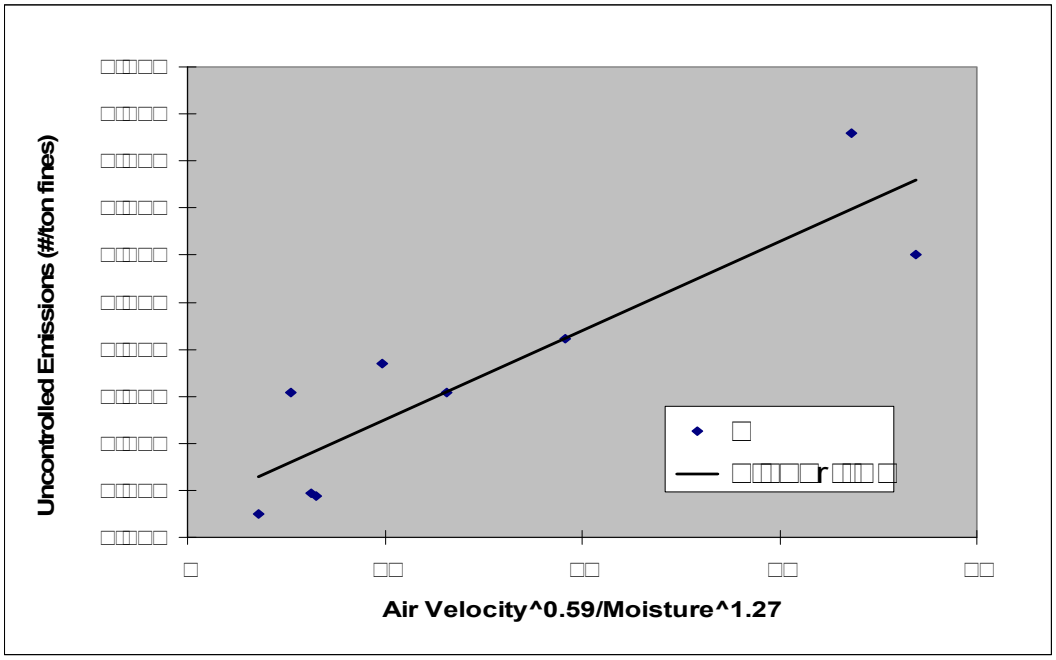



Figure 5.5 Uncontrolled Particulate Matter Emissions for Central Mix Operations.

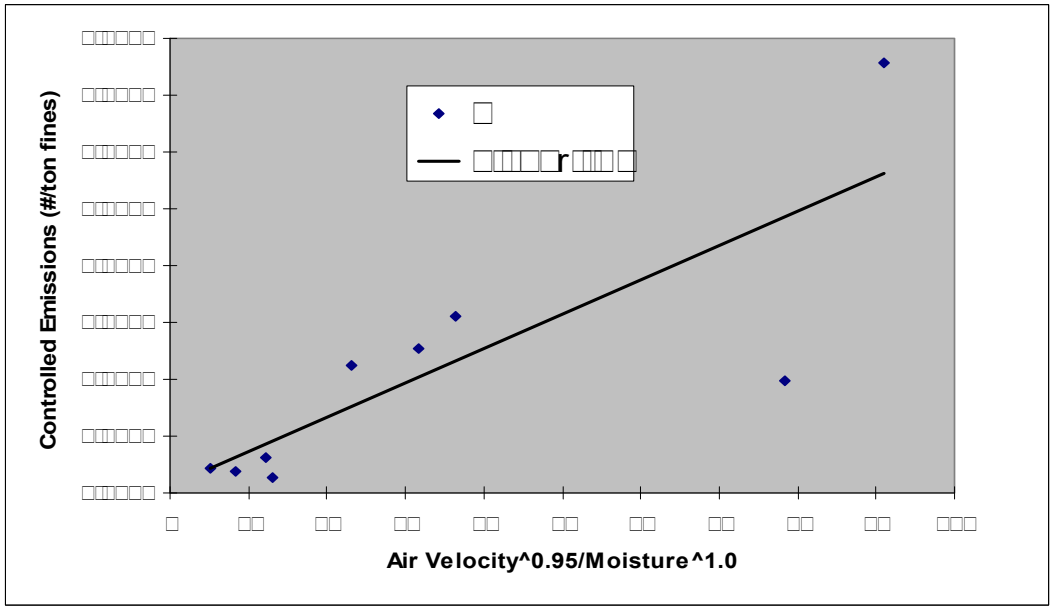



Figure 5.6 Controlled Particulate Matter Emissions for Central Mix Operations.

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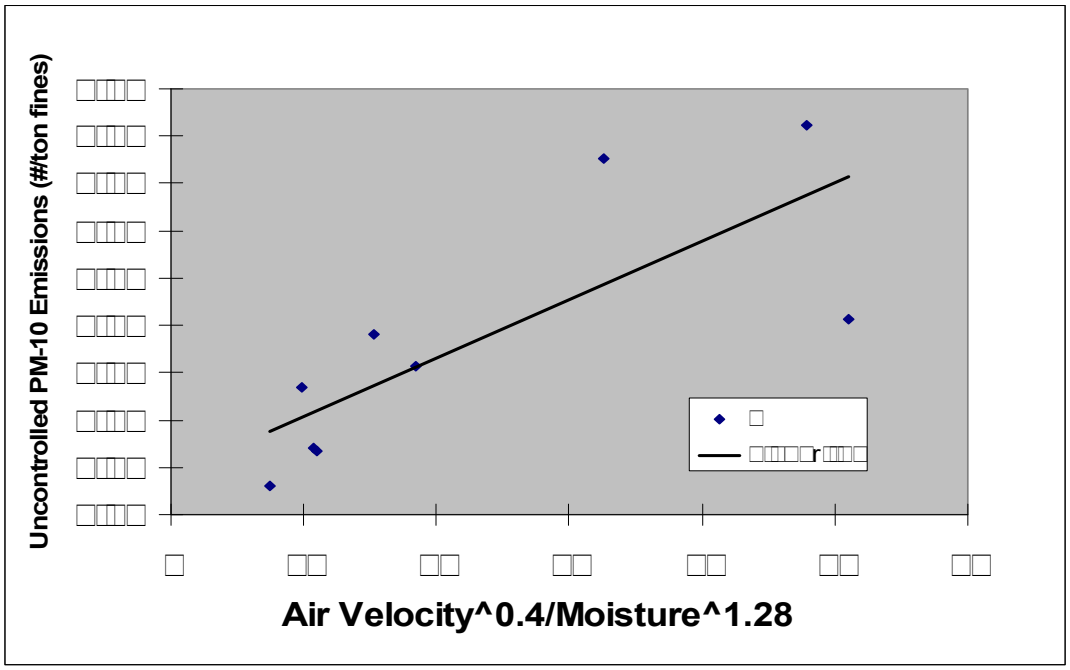



Figure 5.7 Uncontrolled $PM_{10}$ Emissions from Central Mix Operations.

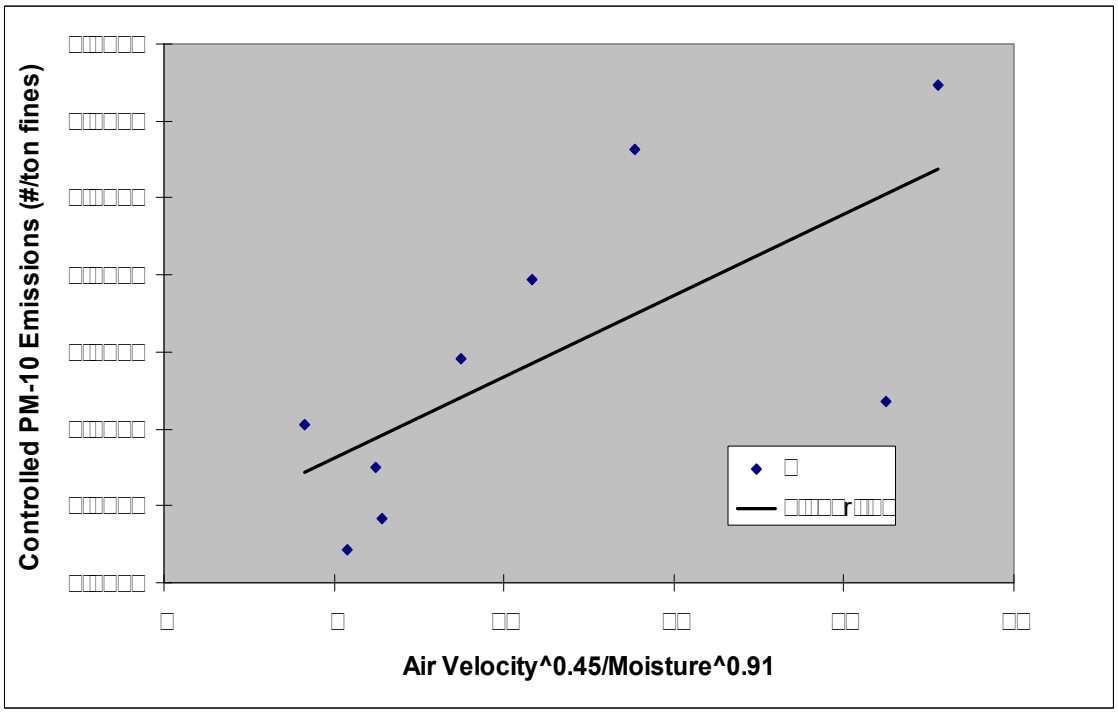



Figure 5.8 Controlled $PM_{10}$ Emissions from Central Mix Operations.

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Using Equation 5-1, it is possible to tailor emission factors to site specific conditions. It is also possible for plant operators to take steps to minimize particulate matter emissions by slightly increasing the moisture levels in the cement and cement supplement materials and by shielding the loading areas to reduce the wind speed in the areas immediately adjacent to the loading operations.

Equation 1 and the Table 18.7 equation parameters are based on the six plants tests described in reference 6. There was no wind speed data available for references 1 and 2. However, if a wind speed of approximately 3 mph is assumed for references 1 and 2, the emission factor data are generally comparable to those in Figures 5.3 and 5.4.

### *5.2 Truck Mix and Central Mix Loading Metals Emission Factors*

Metals emissions from truck and central mix loading operations are summarized in Tables 18.26 and 18.27. These are based on data provided in reference 6 (six plants, A-rated metals data), reference 1 (two plants, C rated metals data), and reference 2 (one plant, B rated metals data).

There is considerable variability in the metals content of cement and cement supplement. These are the dominant sources of particulate matter and metals emissions from truck mix and central mix loading operations. As an alternative to the emission factors presented in Tables 18.5 and 18.6, sources can estimate metals emissions based on the total PM emission factor and site specific analyses of the metals contents of the cement and cement supplement. For example, the arsenic emissions can be expressed by Equation 5-2 as a function of the total particulate matter.

$$Metal_{EF} = PM_{EF}\left(\frac{aC + bS}{C + S}\right) \qquad \text{Equation 5-2}$$

Where:

| | | |
|---|---|---|
| $Metal_{EF}$ | = | Metal Emissions, Lbs. As per Ton of Cement and Cement Supplement |
| $PM_{EF}$ | = | Controlled Particulate Matter Emission Factor Lbs. per Ton of Cement and Cement Supplement |
| a | = | ppm of Metal in Cement |
| C | = | Quantity of Cement Used, Lbs. per hour |
| b | = | ppm of Metal in Cement Supplement |
| S | = | Quantity of Cement Supplement Used, Lbs. per hour |

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Table 18.26. Truck Mix Loading Metals Emission Factors

| Metal Emission | Reference Number | Number of Test Runs | Data Rating | Emission Factors | | Final Emission Factor Rating |
|---|---|---|---|---|---|---|
| | | | | Pounds per cubic yard of Concrete | Pounds per 1000 pounds of Cement and Cement Supplement | |
| Uncontrolled | | | | | | |
| Arsenic | 1 | 1 | C | 2.37E-7 | 3.94E-7 | |
| | 2 | 4 | B | 1.37E-6 | 2.65E-6 | |
| | 6a | 3 | A | 1.07E-5 | 2.09E-5 | |
| | 6b | 3 | A | 5.82E-7 | 1.10E-6 | |
| | 6c | 3 | A | 3.29E-6 | 5.42E-6 | |
| | | | Average | 3.24E-6 | 6.09E-6 | D |
| Beryllium | 1 | 1 | C | 2.15E-8 | 3.6E-8 | |
| | 2 | 4 | B | 1.06E-7 | 2.07E-7 | |
| | | | Average | 6.38E-8 | 1.22E-7 | E |
| Cadmium | 1 | 1 | C | 1.19E-8 | 1.99E-8 | |
| | 2 | 4 | B | 7.77E-9 | 1.43E-8 | |
| | | | Average | 9.84E-9 | 1.77E-8 | E |
| Chromium | 1 | 1 | C | 4.20E-6 | 7.03E-6 | |
| | 2 | 4 | B | 2.27E-6 | 4.39E-6 | |
| | | | Average | 3.24E-6 | 5.71E-6 | E |
| Lead | 1 | 1 | C | 3.29E-7 | 5.51E-7 | |
| | 2 | 4 | B | 1.59E-6 | 3.07E-6 | |
| | | | Average | 9.60E-7 | 1.81E-6 | E |
| Manganese | 1 | 1 | C | 2.76E-5 | 4.61E-5 | |
| | 2 | 4 | B | 7.82E-6 | 1.50E-5 | |
| | | | Average | 1.77E-5 | 3.06E-5 | E |
| Mercury | 1 | | | | | |
| | 1 | | | | | |
| Nickel | 1 | 1 | C | 3.28E-6 | 5.49E-6 | |
| | 2 | 4 | B | 3.35E-6 | 6.48E-6 | |
| | | | Average | 3.32E-6 | 5.99E-6 | E |
| Phosphorus | 1 | 1 | | 1.15E-5 | 1.92E-5 | |
| Selenium | 2 | 3 | | 6.75E-7 | 1.31E-6 | E |

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Table 18.26. Truck Mix Loading Metals Emission Factors (Continued)

| Metal Emission | Reference Number | Number of Test Runs | Data Rating | Emission Factors | | Final Emission Factor Rating |
|---|---|---|---|---|---|---|
| | | | | Pounds per cubic yard of Concrete | Pounds per 1000 pounds of Cement and Cement Supplement | |
| Controlled | | | | | | |
| Arsenic | 1 | 1 | C | 7.69E-8 | 1.29E-7 | |
| | 2 | 4 | B | 5.30E-7 | 1.03E-6 | |
| | 6a | 3 | A | 8.58E-08 | 1.67E-7 | |
| | 6b | 3 | A | 6.05E-08 | 1.14E-7 | |
| | 6c | 3 | A | 3.95E-08 | 6.50E-8 | |
| | | | Average | 1.59E-7 | 3.01E-7 | D |
| Beryllium | 1 | 1 | C | 6.88E-9 | 1.15E-8 | |
| | 2 | 4 | B | 4.70E-8 | 9.21E-8 | |
| | | | Average | 2.69E-8 | 5.18E-8 | E |
| Cadmium | 1 | 1 | C | 3.80E-9 | 6.36E-9 | |
| | 2 | 4 | B | 1.46E-9 | 2.70E-9 | |
| | | | Average | 2.63E-9 | 4.53E-9 | E |
| Chromium | 1 | 1 | C | 1.36E-6 | 2.27E-6 | |
| | 2 | 4 | B | 9.36E-7 | 1.82E-6 | |
| | | | Average | 1.15E-6 | 2.05E-6 | E |
| Lead | 1 | 1 | C | 1.10E-7 | 1.84E-7 | |
| | 2 | 4 | B | 6.94E-7 | 1.35E-6 | |
| | | | Average | 4.02E-7 | 7.67E-7 | E |
| Manganese | 1 | 1 | C | 8.86E-6 | 1.48E-5 | |
| | 2 | 4 | B | 3.21E-6 | 6.03E-6 | |
| | | | Average | 5.99E-6 | 1.04E-5 | E |
| Mercury | 1 | | | | | |
| | 1 | | | | | |
| Nickel | 1 | 1 | C | 1.07E-6 | 1.778E-6 | |
| | 2 | 4 | B | 1.53E-6 | 2.99E-6 | |
| | | | Average | 1.30E-6 | 2.39E-6 | E |
| Phosphorus | 1 | 1 | | 3.68E-6 | 6.16E-6 | |
| Selenium | 2 | 3 | | 2.97E-8 | 5.64E-8 | E |

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Table 18.27 Central Mix Loading Metals Emission Factors

| Metal Emission | Reference Number | Number of Test Runs | Data Rating | Emission Factors | | Final Emission Factor Rating |
|---|---|---|---|---|---|---|
| | | | | Pounds per cubic yard of Concrete | Pounds per 1000 pounds of Cement and Cement Supplement | |
| Uncontrolled | | | | | | |
| | | | | | | |
| Arsenic | 1 | 1 | C | 7.54E-8 | 1.16E-7 | |
| | 6d | 3 | A | 6.16E-7 | 1.15E-6 | |
| | 6e | 3 | A | 5.81E-6 | 1.10E-5 | |
| | 6f | 3 | A | 2.60E-6 | 4.48E-6 | |
| | | | Average | 2.28E-6 | 4.19E-6 | D |
| Beryllium | 1 | 1 | | | | |
| Cadmium | 1 | 1 | C | 3.84E-9 | 5.92-9 | E |
| Chromium | 1 | 1 | C | 4.60E-7 | 7.11E-7 | E |
| Lead | 1 | 1 | C | 1.24E-7 | 1.91E-7 | E |
| Manganese | 1 | 1 | C | 1.98E-5 | 3.06E-5 | E |
| Mercury | 1 | | | | | |
| Nickel | 1 | 1 | C | 1.06E-6 | 1.64E-6 | E |
| Phosphorus | 1 | 1 | C | 6.52E-6 | 1.01E-5 | E |
| Selenium | 2 | 3 | | | | |
| Controlled | | | | | | |
| Arsenic | 1 | 1 | C | 6.05E-9 | 9.35E-9 | |
| | 6d | 3 | A | 1.91E-08 | 3.57E-8 | |
| | 6e | 3 | A | 2.15E-07 | 4.07E-7 | |
| | 6f | 3 | A | 8.06E-08 | 1.39E-7 | |
| | | | Average | 8.02E-08 | 1.48E-07 | D |
| Beryllium | 1 | 1 | | | | |
| Cadmium | 1 | 1 | C | 2.30E-10 | 3.55E-10 | E |
| Chromium | 1 | 1 | C | 4.11E-8 | 6.34E-8 | E |
| Lead | 1 | 1 | C | 1.19E-8 | 1.83E-8 | E |
| Manganese | 1 | 1 | C | 1.23E-6 | 1.89E-6 | E |
| Mercury | 1 | 1 | | | | |
| Nickel | 1 | 1 | C | 8.01E-8 | 1.24E-7 | E |
| Phosphorus | 1 | 1 | C | 3.91E-7 | 6.04E-7 | E |
| Selenium | 1 | 1 | | | | |

Note: Reference 6, Plant d - RMCC Wake Forest; Plant e, S.T. Wooten Raleigh, and Plant f, RMC Carolina, Raleigh



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### *5.3 Emission Factor Values*

The emission factors for cement silo filling, cement supplement silo filling, transfer of aggregate and sand to elevated bins, and weight hoppers are summarized in Tables 19.1 through 19.4. The two main issues in rating the final emission factors were the number of facilities tested and the ratings of the test data sets. An emission factor as low as a C generally requires that a reasonable number of facilities be tested and that the test data ratings for each of these facilities be an A or B (see Section 3.1). The emission factor ratings for these sources are based on no more than four facilities, none are rated above D.

Unless noted otherwise, the following criteria were used to rate the final emission factors in Tables 19.1 through 19.4.

**Rating D**
1. At least two facilities were tested.
2. One of the test data sets is rated A or all of the test data sets are rated B.

**Rating E**
1. Fails to meet the above criteria for Rating D

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b

# 19.1 CEMENT SILO FILLING EMISSION FACTORS

| EMISSION TYPE | REFERENCE NUMBER | NUMBER OF TEST RUNS | DATA RATING | EMISSION FACTOR per 1000 lb CEMENT LOADED (lb) | FINAL EMISSION FACTORS RATING |
|---|---|---|---|---|---|
| **PM-10** | 1 | 1 | C | **0.23672** | **E** |
| **CONTROLLED PM-10** | 1 | 1 | C | 6.00E-005 | |
| | 2 | 3 | A | 2.79E-004 | |
| | **AVERAGE** | | | **1.70E-004** | **D** |
| **PM** | 1 | 1 | C | **0.36297** | **E** |
| **CONTROLLED PM** | 1 | 1 | C | 1.10E-004 | |
| | 2 | 3 | A | 3.68E-004 | |
| | 3 | 1 | C | 3.10E-004 | |
| | 4 | 3 | D | 1.20E-003 | |
| | **AVERAGE** | | | **4.97E-004** | **D** |
| **METALS - UNCONTROLLED** | | | | | |
| ARSENIC | 1 | 1 | C | **8.38E-007** | **E** |
| BERYLLIUM | 1 | 1 | C | **8.97E-009** | **E** |
| CADMIUM | 1 | 1 | C | **1.17E-007** | **E** |
| CHROMIUM | 1 | 1 | C | **1.26E-007** | **E** |
| LEAD | 1 | 1 | C | **3.68E-007** | **E** |
| MANGANESE | 1 | 1 | C | **1.01E-004** | **E** |
| MERCURY | 1 | -- | -- | **--** | **--** |
| NICKEL | 1 | 1 | C | **8.83E-006** | **E** |
| PHOSPHORUS | 1 | 1 | C | **5.88E-005** | **E** |
| SELENIUM | 1 | -- | -- | **--** | **--** |
| **METALS - CONTROLLED** | | | | | |
| ARSENIC | 1 | 1 | C | **2.12E-009** | **E** |
| | 2 | -- | -- | **--** | |
| BERYLLIUM | 1 | -- | -- | **--** | |
| | 2 | 1 | B | **2.43E-010** | **E** |
| CADMIUM | 1 | -- | -- | **--** | |
| | 2 | -- | -- | **--** | |
| CHROMIUM | 1 | 1 | C | 1.87E-008 | |
| | 2 | 1 | B | 1.02E-008 | |
| | **AVERAGE** | | | **1.45E-008** | **E** |
| LEAD | 1 | 1 | C | 6.16E-009 | |
| | 2 | 1 | B | 4.75E-009 | |
| | **AVERAGE** | | | **5.46E-009** | **E** |
| MANGANESE | 1 | 1 | C | 4.96E-008 | |
| | 2 | 1 | B | 6.78E-008 | |
| | **AVERAGE** | | | **5.87E-008** | **E** |
| MERCURY | 1 | -- | -- | **--** | |
| | 2 | -- | -- | **--** | |
| NICKEL | 1 | 1 | C | 2.25E-008 | |
| | 2 | 1 | B | 1.93E-008 | |
| | **AVERAGE** | | | **2.09E-008** | **E** |
| PHOSPHORUS | 1 | -- | -- | **--** | |
| | 2 | -- | -- | **--** | |
| SELENIUM | 1 | -- | -- | **--** | |
| | 2 | -- | -- | **--** | |



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## 19.2 CEMENT SUPPLEMENT SILO FILLING EMISSION FACTORS[c]

| EMISSION TYPE | REFERENCE NUMBER | NUMBER OF TEST RUNS | DATA RATING | EMISSION FACTOR lb per 1000 lb CEMENT SUPPLEMENT LOADED | FINAL EMISSION FACTORS RATING |
|---|---|---|---|---|---|
| **PM-10** | 1 | 2 | C | **0.64611** | **E** |
| **PM** | 1 | 2 | C | **1.56773** | **E** |
| **CONTROLLED PM-10** | 2 | 3 | A | **2.43E-003** | **E** |
| **CONTROLLED PM** | 2 | 3 | A | 7.92E-003 | |
| | 4 | 3 | D | 1.01E-003 | |
| | **AVERAGE** | | | **4.47E-003** | **D** |
| **CONTROLLED ARSENIC** | 2 | 1 | C | **5.02E-007** | **E** |
| **CONTROLLED BERYLLIUM** | 2 | 1 | C | **4.52E-008** | **E** |
| **CONTROLLED CADMIUM** | 2 | 1 | C | **9.92E-009** | **E** |
| **CONTROLLED CHROMIUM** | 2 | 1 | C | **6.10E-007** | **E** |
| **CONTROLLED LEAD** | 2 | 1 | C | **2.60E-007** | **E** |
| **CONTROLLED MANGANESE** | 2 | 1 | C | **1.28E-007** | **E** |
| **CONTROLLED MERCURY** | 2 | -- | -- | **--** | **--** |
| **CONTROLLED NICKEL** | 2 | 1 | C | **1.14E-006** | **E** |
| **CONTROLLED PHOSPHORUS** | 2 | 1 | C | **1.77E-006** | **E** |
| **CONTROLLED SELENIUM** | 2 | 1 | C | **3.62E-008** | **E** |



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## 19.3 EMISSION FACTORS FOR AGGREGATE & SAND TRANSFER TO ELEVATED BINS [d]

| | EMISSION TYPE | REFERENCE NUMBER | NUMBER OF SAMPLES | DATA RATING | EMISSION FACTORS per Mg transferred (kg) | EMISSION FACTORS per ton transferred (lb) | FINAL EMISSION FACTOR RATING |
|---|---|---|---|---|---|---|---|
| AGGREGATE | **PM-10** | 1 | 2 | A | | | |
| | | 2 | 1 | A | | | |
| | | **1 & 2** | | | **1.68E-003** | **3.27E-003** | **D** |
| | **PM** | 1 | 2 | A | | | |
| | | 2 | 1 | A | | | |
| | | **1 & 2** | | | **3.54E-003** | **6.92E-003** | **D** |
| SAND | **PM-10** | 1 | 3 | A | | | |
| | | 2 | 2 | A | | | |
| | | **1 & 2** | | | **5.05E-004** | **9.86E-004** | **D** |
| | **PM** | 1 | 2 | A | | | |
| | | 2 | 2 | A | | | |
| | | **1 & 2** | | | **1.07E-003** | **2.08E-003** | **D** |

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# 19.4 WEIGH HOPPER LOADING EMISSION FACTORS [d]

| English Unit Emission Factors | | | | FINAL |
|---|---|---|---|---|
| PM-10 | | PM | | RATING |
| **0.00375** | lb/yd³ | **0.00794** | lb/yd³ | D |
| **0.00228** | lb/ton | **0.00482** | lb/ton | D |

| Metric Unit Emission Factors | | | | FINAL |
|---|---|---|---|---|
| PM-10 | | PM | | RATING |
| **0.00117** | kg/Mg | **0.00247** | kg/Mg | D |

**The emission factors were developed from the Aggregate and Sand Transfer to Elevated Bins Emission Factors as follows:**

This formula was used to compute the lb of emissions per yd³ of concrete.
**E = (AEF)(AYD3) + (SEF)(SYD3)**

This formula was used to compute the lb of emissions per ton of aggregate and sand.
**E = (AEF)(ATON) + (SEF)(STON)**

This formula was used to compute the kg of emissions per Mg of aggregate and sand.
**E = (AEF)(AMG) + (SEF)(SMG)**

| | | | | | | |
|---|---|---|---|---|---|---|
| E | = | Emission Factors (lb / ton, lb / yd³, & kg / Mg) | | | | |
| AEF | = | Aggregate Transfer Emission Factor for PM-10 | AEF | = | 3.27E-003 | lb/ton |
| SEF | = | Sand Transfer Emission Factor for PM-10 | SEF | = | 9.86E-004 | lb/ton |
| AEF | = | Aggregate Transfer Emission Factor for PM | AEF | = | 6.92E-003 | lb/ton |
| SEF | = | Sand Transfer Emission Factor for PM | SEF | = | 2.08E-003 | lb/ton |
| AEF | = | Aggregate Transfer Emission Factor for PM-10 | AEF | = | 1.68E-003 | kg/Mg |
| SEF | = | Sand Transfer Emission Factor for PM-10 | SEF | = | 5.05E-004 | kg/Mg |
| AEF | = | Aggregate Transfer Emission Factor for PM | AEF | = | 3.54E-003 | kg/Mg |
| SEF | = | Sand Transfer Emission Factor for PM | SEF | = | 1.07E-003 | kg/Mg |
| AYD3 | = | Aggregate per Yd³ of Concrete (see Appendix C) | AYD3 | = | 1,865 | lb |
| SYD3 | = | Sand per Yd³ of Concrete (see Appendix C) | SYD3 | = | 1,428 | lb |
| ATON | = | Aggregate per Ton of Aggregate and Sand | ATON | = | 1,133 | lb |
| STON | = | Sand per Ton of Aggregate and Sand | STON | = | 867 | lb |
| AMG | = | Aggregate per Mg of Aggregate and Sand | AMG | = | 566 | kg |
| SMG | = | Sand per Mg of Aggregate and Sand | SMG | = | 434 | kg |

ATON + [ATON * (SYD3 / AYD3)] = Ton of Aggregate and Sand (TAS)
ATON = TAS / (1+ SYD3 / AYD3)
STON = [ATON * (SYD3 / AYD3)]

AMG and SMG are calculated in the same manner.



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# 19.5 PLANT WIDE EMISSION FACTORS [e]

## *Truck Mix*

| | Uncontrolled | | Controlled | | |
|---|---|---|---|---|---|
| | PM (lb/yd³) | PM-10 (lb/yd³) | PM (lb/yd³) | PM-10 (lb/yd³) | FINAL RATING |
| Aggregate delivery to ground storage | 0.0064 | 0.0031 | 0.0064 | 0.0031 | |
| Sand delivery to ground storage | 0.0015 | 0.0007 | 0.0015 | 0.0007 | |
| Aggregate transfer to conveyor | 0.0064 | 0.0031 | 0.0064 | 0.0031 | |
| Sand transfer to conveyor | 0.0015 | 0.0007 | 0.0015 | 0.0007 | |
| Aggregate transfer to elevated storage | 0.0064 | 0.0031 | 0.0064 | 0.0031 | |
| Sand transfer to elevated storage | 0.0015 | 0.0007 | 0.0015 | 0.0007 | |
| Cement delivery to Silo (Controlled) | 0.0002 | 0.0001 | 0.0002 | 0.0001 | |
| Cement Supplement delivery to Silo (Controlled) | 0.0003 | 0.0002 | 0.0003 | 0.0002 | |
| Weigh Hopper Loading | 0.0079 | 0.0038 | 0.0079 | 0.0038 | |
| Truck Mix Loading | 0.1725 | 0.0422 | 0.0579 | 0.0143 | |
| **Total** | **0.2048** | **0.0576** | **0.0902** | **0.0297** | **E** |

## *Central Mix*

| | Uncontrolled | | Controlled | | |
|---|---|---|---|---|---|
| | PM (lb/yd³) | PM-10 (lb/yd³) | PM (lb/yd³) | PM-10 (lb/yd³) | FINAL RATING |
| Aggregate delivery to ground storage | 0.0064 | 0.0031 | 0.0064 | 0.0031 | |
| Sand delivery to ground storage | 0.0015 | 0.0007 | 0.0015 | 0.0007 | |
| Aggregate transfer to conveyor | 0.0064 | 0.0031 | 0.0064 | 0.0031 | |
| Sand transfer to conveyor | 0.0015 | 0.0007 | 0.0015 | 0.0007 | |
| Aggregate transfer to elevated storage | 0.0064 | 0.0031 | 0.0064 | 0.0031 | |
| Sand transfer to elevated storage | 0.0015 | 0.0007 | 0.0015 | 0.0007 | |
| Cement delivery to Silo (Controlled) | 0.0002 | 0.0001 | 0.0002 | 0.0001 | |
| Cement Supplement delivery to Silo (Controlled) | 0.0003 | 0.0002 | 0.0003 | 0.0002 | |
| Weigh Hopper Loading | 0.0079 | 0.0038 | 0.0079 | 0.0038 | |
| Central Mix Loading | 0.0628 | 0.0219 | 0.0031 | 0.0011 | |
| **Total** | **0.0951** | **0.0373** | **0.0355** | **0.0165** | **E** |

Based on truck and central mix emission factors of lb/1,000 lb of cement and cement supplement presented in section 5.2 and 5.3, emission factors of lb/1,000 lb material transferred from tables 19.1 through 19.4 and the following average composition of concrete as presented in Table 16.1.

| | |
|---|---|
| Course Aggregate | 1865 pounds |
| Sand | 1428 pounds |
| Cement | 491 pounds |
| Pozolan Material | 73 pounds |
| Water | 20 gallons |



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## 5.4 Notes for the Final Emission Factors

[a] The emission factors based on total cement and cement supplements (natural pozolans, NewCem™ or fly ash) are used to compute the final emission factors for truck mix loading and central mix loading. Most facilities should have an accurate record of the weight of these materials used to manufacture concrete. Emission factors based upon the weight of fine material in the batches may be a more reliable metric. However, this information would be more difficult to obtain for existing plants and to predict for new plants. Most of the emissions from concrete batching come from the "fines" that are used to make the concrete. Over 95% of the "fines" are composed of the dry cement and cement supplement. The remaining "fines" are contained in the course aggregate and sand and are partially bound to the larger material by surface moisture. Therefore, emission factors based upon the mass of cement and cement supplement may be useful for a broad range of facilities including those that specialize in a product composed of raw materials significantly different than typical concrete. As shown in Table 16.2 batch formulation summary statistics derived from reference 1 and 2 information indicates that over 90% of the batches contained between 9 and 18 weight percent cement and cement supplement. Batch formulations outside this range may be used at facilities that have a specialized product line but would constitute a minor portion of the typical concrete batch plants product line.

Since information on the amount of concrete produced may be more readily available than for the amounts of cement and cement supplements, the emission factor based on concrete will also be presented in the AP-42 section.

The emission factors based on cement are not used because they do not account for the relationship between the amount of **cement supplement** used and the amount of emissions released. This issue is significant since cement supplements are used in sizable quantities and are often "finer" than cement. The emission factors based on total dry materials used are not used because they do not accommodate formulations that may be used at some specialized but large facilities.

[b] The controlled cement silo filling emission factors derived from test runs that included emissions from the loading of transit-mix trucks are not used because of their apparent lack of precision and accuracy. Consequently, only "Run 7" is used from Reference 1, since it was the only Reference 1 test run that captured emission solely from the cement silo filling process.

[c] The controlled cement supplement silo filling emission factors derived from test runs that included emissions from the loading of transit-mix trucks are not used because of their apparent lack of precision and accuracy. Consequently, none of the emission factors from Reference 1 are used to develop these emission factors.

[d] These emission factors are based on the material transfer equation 1 in AP-42 section 13.2.4, *Aggregate Handling and Storage Piles*, (1/95) using average amounts of aggregate and sand used per $yd^3$ of concrete at References 1 and 2. These emission factors are rated D, since only two test references were used for estimating material moisture content and a wind speed of 10 mph.

[e] The calculated plant wide emission factors are rated E, since they are used in conjunction with the average composition of concrete from only two facilities.



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# Appendix A

## Technical Notes for Reference 1 Tables

### *Tables 1.2, 1.3, 2.2, 2.3, 3.2, 3.3, 4.2, 4.3, 5.3, 5.4, 6.3, 6.4*

1. Each of the estimated emission amounts due solely to silo fillings can be reproduced in the following stepwise manner. First, divide the total amount of "fines" (cement, NewCem™, and silt from sand and coarse aggregate) used during the particular silo filling and truck mix loading test run by one thousand. Next, multiply the resulting number by the average truck mix loading emission factor for the same type emission based on fines. Third, subtract this result from the total amount of emission from the particular silo filling and truck mix loading test. The result of this calculation is an estimate of the emissions form the silo filling.

2. The amount of cement or NewCem™ loaded during each of the silo loading test runs was approximated by analyzing information from Appendix B.2 and the Process Notes Section of the test report. Reproduction of each of these values can be accomplished stepwise as follows. First, compute the rate at which any relevant silo filling (a filling that occurred in part or whole during the test run of interest) was occurring by dividing the amount of material loaded by the time required for the loading to be accomplished. Next, multiply this rate buy the amount of time in which **both** the silo filling and emission testing were occurring simultaneously (this computation relies on the assumption that the loading rates were constant throughout the loading process). Repeat this procedure for each of the other relevant silo fillings that occurred during the test run of interest. Finally, sum the results together to determine the total amount of cement or NewCem™ loaded during the test run.

### *Tables 2.1 – 2.3, 4.1 – 4.3. 6.1 – 6.4*

1. Each of the emission rates at the dust collector's outlet was estimated by averaging all of the outlet rates for the same emission type. The outlet rates were averaged because the individual outlet runs listed in the test report occurred over the course of several inlet runs. The outlet runs lasted longer than the inlet runs, since longer sampling times were required to collect measurable amounts of emissions from the outlet.

### *Tables 2.2, 2.3, 4.2, 4.3, 5.4, 5.5, 6.1 – 6.5*

1. The designation "—" was substituted for every value in the tables that was less than or equal to zero.

### *Tables 3.1, 4.1*

1. The following statistical method indicated that the emission rate for PM during test run 14 was an extreme value relative to the other central batch loading emission rates for PM. In this statistical method a value *r* is computed for a given number of observations as follows:

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If *r* is greater than the **critical value** that is associated with the given number of observations, then the extreme value is outside the 99 percentile. Specific critical values for certain numbers of observations are given in the following table:[1]

| Number of Observations, *n* | Critical Value |
|---|---|
| | =.01 |
| 3 | .988 |
| 4 | .889 |
| 5 | .780 |
| 6 | .698 |
| 7 | .637 |

### *Tables 3.1 – 3.3, 4.1 – 4.3, 5.1 – 5.5, 6.1 – 6.5*

The metal emission factors were based on the test report's "Case 2" emission rates. In "Case 2," the captured and/or the background metal concentrations from which the metal emissions rates were derived were designated to be zero when actual concentrations were below detection limits.

1. The metal emission rates at the inlet of the dust collector were given for several test runs at a time in the test report. As a result, the group of test runs used to develop the individual emission factors are listed above the names of the metals. Accordingly, the estimated capture efficiencies were developed by averaging the capture efficiencies of the listed runs.

### *Tables, 5.5, 6.5*

1. The average metal emission factors were developed only from the emission factors with explicit numerical values

### *Reference for Appendix A*

1. Dixon, Wilfrid J. and Massey, Frank J., Jr., *Introduction to Statistical Analysis*, Second Edition, McGraw-Hill Book Company, Inc., New York, NY, 1957.

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# Appendix B

## Technical Notes for Reference 2 Tables

### *Tables 7, 8, 9, 10*

1. The Estimated Capture Efficiency values were taken from the test report's capture efficiency averages weighted by the amounts and fly ash loaded.

### *Tables 8, 10, 14.1, 14.2*

1. The outlet emission rates given the test report were for emissions coming from both the plant being examined (the Eerie Plant) and another adjacent plant (the Johnson Plant). Consequently, it was necessary to approximate the outlet emission rates due solely to the Eerie Plant during the inlet runs.

   These approximations relied on the assumption that the ration of the Outlet Emission Rate of the Eerie Plant (OERE) to the outlet emission rate of both plants (OERBP) was about the same as the ration of the actual air flow rate of the Eerie Plant (AFRE) to the actual air flow rate of both plants (AFRBP). The formula that shows how this assumption was used to approximate the outlet emission rate due to the Eerie Plant is as follows:

   However, the *AFRE* was measured for each inlet run, whereas the *OERBP* and *AFRBP* were measured for each outlet run. Therefore, the *OERBP* and *AFRBP* are not known for any given measurement of the *AFRE*, since each of the test report's outlet runs typically occurred over the course of several inlet runs. Consequently, the *OERBP* and the *AFRBP* during a particular inlet run were approximated by the *OERBP* and *AFRBP* that were measured for the outlet run that **included** emissions from the particular inlet run respectively.

   On the other hand, the metal inlet **rates** were typically given for several inlet runs at a time. Thus, when calculating the *OERE* for a particular metal inlet rate, the *AFRE* is simply the sum of the *AFRE*s that were measured for the individual inlet runs over which the metal inlet rate was measured. However, the group of inlet runs over which a metal inlet rate were measured does not usually correspond to any group of inlet runs over which an outlet run was preformed. Therefore, both the *OERBP* and *AFRBP* are not necessarily known for any particular metal inlet rate. Consequently, the *OERBP* and *AFRBO* that were used to determine the *OERE* for a particular metal emission rate were approximated by the average of **all** of the *OERBP*s for the same type of metal emission and the average of **all** of the *AFRBP*s respectively.

### *Table 11*

1. Since the three silo emission test runs were performed on three separate days, it was assumed that a given test run collected the emissions resulting from all of the silo loadings that occurred on the day of the test run. Consequently, the "cement loaded" amount associated with each test run was assumed to be the same as the total amount of cement delivered on the particular day of the test run. The total amount of cement delivered on a given day was determined by summing together the amounts of cement delivered as indicated on the bills of sale for the given day. The bills of sale for each day were found in the Process Notes Section of the test report.



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### *Table 12*

1. The amount of fly ash loaded for each run was assumed to be the same for each run, since only one fly ash loaded amount was found in the Process Notes Section of the test report.

### *Tables 13.1 – 13.3, 14.1 – 14.3*

1. The metal emission factors were based on the test report's "Case 2" emission rates. In "Case 2," the captured and/or the background metal concentrations from which the metal emission rates were derived were designated to be zero when the actual concentrations were below the detection limits.

2. The designation "- -" was substituted for every value in the tables that was less than or equal to zero

3. Each group of metal emission rates at the inlet were measured for several test runs at a time in the test report. As a result, the test runs over which a given group of metal emission rates were measured are listed above the group. Accordingly, the estimated capture efficiency associated with a particular group of metal inlet rates was developed by a straight average of the capture efficiencies of the test runs listed above the group.

### *Tables 13.3, 14.3*

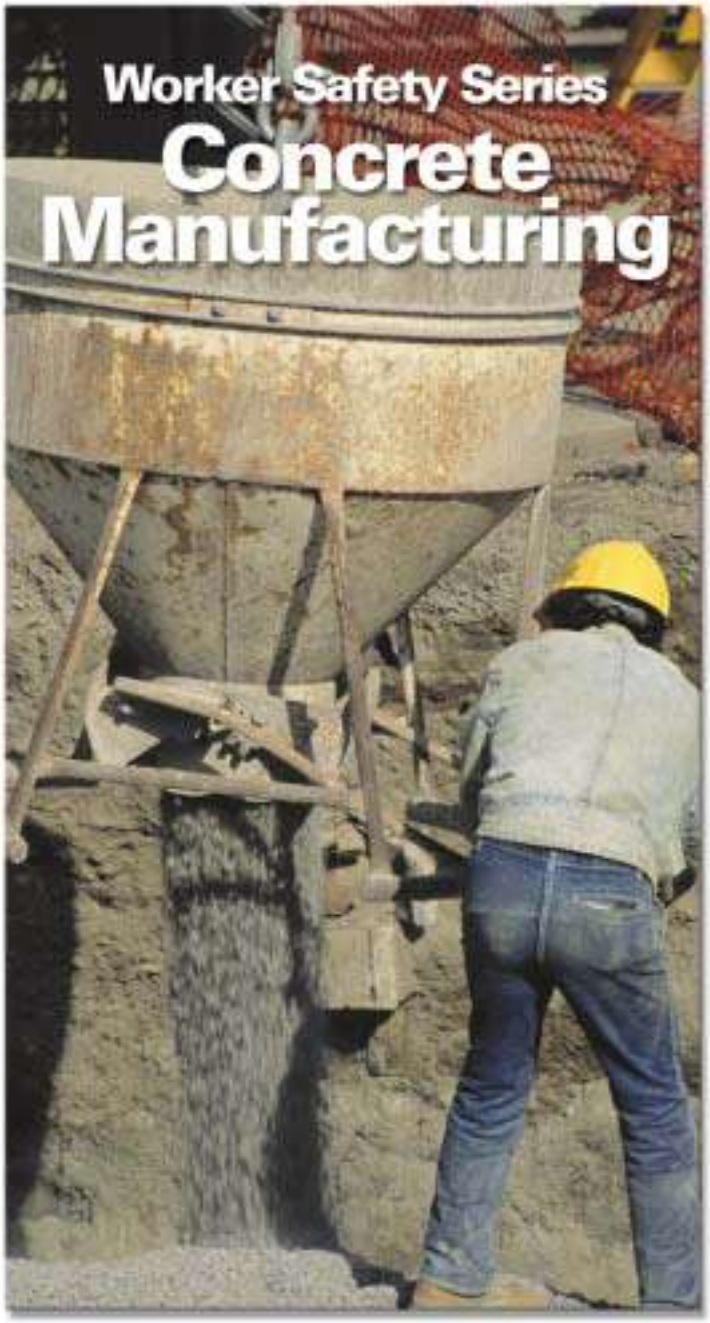
1. The average emission factors were developed from only those emission factors in the table with explicit numerical values.

# Exhibit 4

OSHA POCKET GUIDE

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www.osha.gov




OSHA 3221-12N 2004

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# Concrete Manufacturing

- More than 250,000 people work in concrete manufacturing.
- Over 10 percent of those workers — 28,000 — experienced a job-related injury or illness and 42 died in just one year.
- Potential hazards for workers in concrete manufacturing:
  - Eye, skin and respiratory tract irritation from exposure to cement dust;
  - Inadequate safety guards on equipment;
  - Inadequate lockout/tagout systems on machinery;
  - Overexertion and awkward postures;
  - Slips, trips and falls; and
  - Chemical burns from wet concrete.

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# Hazards & Solutions

**Manufacturing concrete can pose health and safety risks for the worker. For concrete manufacturing, the 10 OSHA standards most frequently included in the agency's citations were:**

1. **Hazard communication**
2. **Lockout/tagout**
3. **Confined spaces**
4. **Respiratory protection**
5. **Guarding floor & wall openings and holes**
6. **Electrical wiring methods**
7. **Noise exposure**
8. **Forklifts**
9. **Electrical systems design**
10. **Machine guarding**



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# Cement Dust

**Hazard:** Exposure to cement dust can irritate eyes, nose, throat and the upper respiratory system. Skin contact may result in moderate irritation to thickening/cracking of skin to severe skin damage from chemical burns. Silica exposure can lead to lung injuries including silicosis and lung cancer.

**Solutions:**

- Rinse eyes with water if they come into contact with cement dust and consult a physician.
- Use soap and water to wash off dust to avoid skin damage.
- Wear a P-, N- or R-95 respirator to minimize inhalation of cement dust.
- Eat and drink only in dust-free areas to avoid ingesting cement dust.



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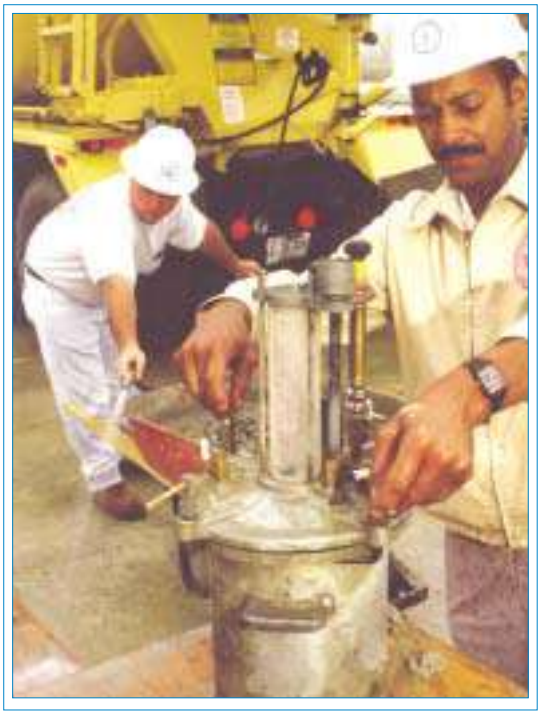


# Wet Concrete

**Hazard:** Exposure to wet concrete can result in skin irritation or even first-, second- or third-degree chemical burns. Compounds such as hexavalent chromium may also be harmful.

**Solutions:**

- Wear alkali-resistant gloves, coveralls with long sleeves and full-length pants, water-proof boots and eye protection.
- Wash contaminated skin areas with cold, running water as soon as possible.
- Rinse eyes splashed with wet concrete with water for at least 15 minutes and then go to the hospital for further treatment.



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## Machine Guarding

**Hazard:** Unguarded machinery used in the manufacturing process can lead to worker injuries.

**Solutions:**

- Maintain conveyor belt systems to avoid jamming and use care in clearing jams.
- Ensure that guards are in place to protect workers using mixers, block makers, cubers and metalworking machinery such as rebar benders, cutters and cage rollers.
- Establish and follow effective lockout/tagout procedures when servicing equipment.
- Be sure appropriate guards are in place on power tools before using them.

## Falling Objects

**Hazard:** Workers may be hit by falling objects from conveyor belt systems, elevators or concrete block stacking equipment.

**Solutions:**

- Avoid working beneath cuber elevators, conveyor belts and stacker/destacker machinery.
- Stack and store materials properly to limit the risk of falling objects.
- Wear eye protection when chipping and cleaning forms, products or mixers.

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## Poor Ergonomics

**Hazard:** Improper lifting, awkward postures and repetitive motions can lead to sprains, strains and other musculoskeletal disorders.

**Solutions:**

- Use handtrucks or forklifts when possible.
- Lift properly and get a coworker to help if a product is too heavy.
- Avoid twisting while carrying a load. Shift your feet and take small steps in the direction you want to turn.
- Keep floors clear to avoid slipping and tripping hazards.
- Avoid working in awkward postures.



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# Confined Spaces

**Hazard:** Mixers and ready-mix trucks have confined spaces that pose safety risks for workers.

**Solutions:**

- Follow established procedures for confined space entry and work to assure safety.
- Guard against heat stress when cleaning truck mixer drums.
- Wear appropriate protective equipment to avoid silica exposure when removing concrete residues from inside truck mixer drums.



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# Vehicles

**Hazard:** Poorly maintained or improperly handled vehicles can lead to crushing injuries at the plant site or other injuries for truck drivers.

**Solutions:**

- Make sure back-up alarms on all vehicles are functioning.
- Avoid overloading cranes and hoists.
- Use care with the load out chute on concrete mixers to avoid injuries to hands and fingers.
- Beware of hot surfaces on equipment and truck components.
- Guard eyes against splashes of aggregate materials during loading and unloading.
- Use hearing protection if needed to guard against excessive noise exposure during cement loading/unloading and while using pneumatic chippers inside truck mixer drums.



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## Other Hazards

- Welding operations can lead to flash burns.
- Makeshift ladders, platforms and stairs with improper or no guardrails make falls more likely.
- Workers can also be injured by falling concrete forms if the forms are improperly chocked, braced or cribbed.



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# Worker Safety Tips

## General Precautions

- Be sure you understand how to perform all your tasks and how to use tools and equipment safely.
- Follow confined space procedures when cleaning and working in mixer drums, hoppers, tanks and other places with potentially serious mechanical hazards, such as blades or sloping sides which may entrap employees, or atmospheric hazards, such as oxygen deficiency.
- Wear appropriate personal protective equipment to avoid being injured by flying or falling objects.

## Vehicle Safety

- Be sure that trucks and other vehicles are in good working order, including audible back-up warning signals, before operating them.
- Avoid overloading hoists, cranes and forklifts.



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## Machine Safety

- Use lockout/tagout procedures to de-energize conveyors and other machinery before attempting to free any jams.
- Secure chutes and hatches to reduce injuries from swinging parts.
- Make sure guards are in place to protect you from moving parts of machinery and tools before you operate the equipment.

## Overhead Hazards

- Be sure that form work, casting and stressing operations are adequately braced and chocked to avoid sudden release of materials.
- Make certain that rigging is in place to protect against falling objects and materials during hoisting and stacking procedures.
- Do not walk or work under overhead loads.



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# Think Safety Checklists

**The following checklists may help you take steps to avoid hazards that cause injuries, illnesses and fatalities. As always, be cautious and seek help if you are concerned about a potential hazard.**

## General Safety

- ☐ Implement a comprehensive safety and health management system to find and fix all hazards at the worksite.
- ☐ Establish a written hazard communication program to inform all employees about chemical hazards and hazardous substances, reporting of hazards, appropriate personal protective equipment and what to do in emergency situations.
- ☐ Train workers in safe work practices and methods for all work activities, procedures and equipment as well as how to recognize and respond to potential workplace hazards, including rendering first aid.
- ☐ Put in place personal protective equipment programs. Train workers in selecting, cleaning and maintaining equipment such as respirators, protective clothing and goggles.
- ☐ Use safe work practices and appropriate personal protective equipment for all welding, cutting and burning; handling of chemicals (e.g., moist concrete, epoxies, form release agents); and during grinding, chipping, wire brushing, scraping and cleaning.

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- [ ] Ensure that all tools and equipment -- including forklifts, cranes, hoists and rigging -- are maintained in good working condition, are inspected regularly and are operated by thoroughly trained, tested and competent workers.

## Physical Hazards

- [ ] Set up a noise control program to reduce noise sources. Include sound-level measurements, audiometric testing, training and/or hearing protection equipment.
- [ ] Implement machine guarding and lockout/tagout procedures for all equipment and machinery servicing and/or maintenance work to prevent workers from being injured.
- [ ] Establish a confined-space entry program to protect workers cleaning the inside of mixer drums, storage bins, hoppers and other confined spaces.

## Health Hazards

- [ ] Avoid exposure to cement dust to prevent bronchitis and silicosis.
- [ ] Prevent burns and skin and eye irritation by avoiding skin contact and eye contact with cement dust or wet cement.
- [ ] Wear the appropriate personal protective equipment, such as gloves, boots, goggles or HEPA-filter respirators.
- [ ] Avoid dusty areas and wet down work areas, as appropriate, to reduce or eliminate dust.





- [ ] Use special HEPA vacuums to clean up dust instead of dry sweeping.
- [ ] Reduce silica exposures during chipping, drilling and sawing of concrete materials with engineering controls, such as wet methods and local exhaust ventilation.

## Fall Hazards

- [ ] Identify and fix fall hazards, such as slippery surfaces, damaged ladders and walkways, and any loose or unsteady hand- or footholds used to climb up and down on trucks and other equipment.
- [ ] Make sure all portable ladders have safety feet and are the proper length for the specific task. Secure them or tie them off to prevent movement.
- [ ] Ensure scaffolding and walking/working surfaces have adequate guardrails, safe accessibility and no tripping hazards or holes.

## Ergonomics

- [ ] Implement appropriate work practices and/or controls to help reduce or eliminate potential back injuries from twisting, turning, lifting, awkward postures and whole body vibration.
- [ ] Train workers in appropriate mechanical and manual materials handling techniques and safety procedures to help reduce or eliminate musculoskeletal injuries.
- [ ] Provide dollies, handtrucks and conveyors to help minimize, reduce or eliminate the need to bend and lift.

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# Concrete Safety & Health Resources

**Most resource materials can be found on the OSHA website at www.osha.gov**

## Physical Hazards

**Confined Space**
Downloadable electronic advisor software (1997), 2MB.
*This software guides the user in identifying confined spaces and protecting workers who enter them.*
http://www.osha.gov/dts/osta/oshasoft/csa.html

**Control of Hazardous Energy (Lockout/Tagout)**
OSHA Publication 3120 (2002), 174KB PDF, 45 pages.
*This booklet provides guidance on protecting workers against unexpected energy releases from mechanical and electrical equipment.*
http://www.osha.gov/Publications/osha3120.pdf

**Lockout/Tagout e-Tool**
Interactive online training program (1999).
*This e-Tool offers an overview of OSHA's Lockout/Tagout standard, including interactive case studies.*
http://www.osha.gov/dts/osta/lototraining/index.htm

**Materials Handling and Storage**
OSHA Publication 2226 (2002), 559KB PDF, 41 pages.
*This booklet outlines OSHA requirements covering handling and storing materials, focusing on forklift safety and ergonomics.*
http://www.osha.gov/Publications/osha2236.pdf

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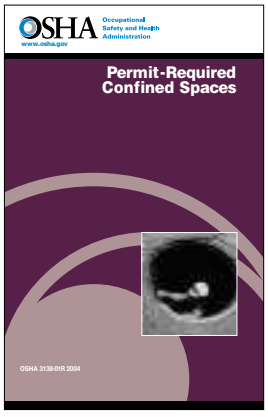


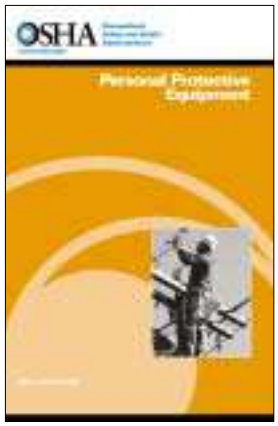
**Permit-Required Confined Spaces**
OSHA Publication 3138 (2004), 486KB PDF, 22 pages.
*This booklet covers highlights of the OSHA standard for confined spaces.*
http://www.osha.gov/Publications/osha3138.pdf

**Safeguarding Equipment and Protecting Workers from Amputations**
OSHA Publication 3071 (2001), 1.2MB PDF, 78 pages.
*This booklet offers guidance on machine guarding and other safe practices to reduce the risk of amputations.*
http://www.osha.gov/Publications/osha3170.pdf

**Sling Safety**
OSHA Publication 3072 (1996), 866KB PDF, 28 pages.
*This booklet covers all aspects of sling safety.*
http://www.osha.gov/Publications/osha3072.pdf

**Stairways and Ladders**
OSHA Publication 3124 (2003), 155KB PDF, 15 pages.
*This booklet covers safety issues related to both fixed and movable stairs and ladders.*
http://www.osha.gov/Publications/osha3124.pdf




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# Health Hazards

**Crystalline Silica Exposure Card for General Industry**
OSHA Publication 3176 (2003), 37KB PDF; OSHA Publication 3178 (Spanish) (2003), 42KB PDF.
*This laminated pocket card offers workers a concise summary of silica health hazards and lists precautions to take to limit exposure.*
http://www.osha.gov/Publications/osha3176.pdf
and
http://www.osha.gov/Publications/osha3178.pdf

**Crystalline Silica**
OSHA Fact Sheet (2002), 52KB PDF, 2 pages, also in Spanish (2003).
*This Fact Sheet highlights the hazards of silica and provides guidance on preventing exposures.*
http://www.osha.gov/OshDoc/data_General_Facts/crystalline-factsheet.pdf
and
http://www.osha.gov/OshDoc/data_General_Facts/crystalline-spanish.pdf

**Silica e-Tool**
Downloadable electronic software (1998).
*This e-Tool describes the hazards of silica and offers guidance on protecting workers.*
http://www.osha.gov/SLTC/etools/silica/index.html

**Hazard Communication Guidelines for Compliance**
OSHA Publication 3111 (2000), 112KB PDF, 33 pages.
*This booklet provides an overview of OSHA's Hazard Communication standard and gives specific guidance on compliance.*
http://www.osha.gov/Publications/osha3111.pdf





**Hearing Conservation**
OSHA Publication 3074 (2002), 157KB PDF, 32 pages.
*The booklet explains how to establish an effective hearing conservation program that meets OSHA requirements.*
http://www.osha.gov/Publications/osha3074.pdf

**Personal Protective Equipment**
OSHA Publication 3151 (2004), 629KB PDF, 46 pages.
*This booklet offers guidance on when and how to use personal protective equipment to guard against occupational injuries and illnesses.*
http://www.osha.gov/Publications/osha3151.pdf

**Respiratory Protection**
OSHA Publication 3079 (2002), 273KB PDF, 42 pages.
*This booklet outlines OSHA requirements on respiratory protection and offers guidance on establishing an effective respiratory protection program.*
http://www.osha.gov/Publications/osha3079.pdf

**Respiratory Protection e-Tool**
Downloadable electronic software (1998).
*This e-Tool enables users to determine whether they need to establish a respiratory protection program and what type of respirators to use.*
http://www.osha.gov/SLTC/etools/respiratory/index.html

**Small Entity Compliance Guide for OSHA's Respiratory Protection Standard**
OSHA (1999), 706KB PDF, 149 pages.
*This booklet provides help for small businesses seeking to meet OSHA requirements for respiratory protection programs.*
http://www.osha.gov/Publications/secgrev-current.pdf

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## NIOSH Materials

The National Institute for Occupational Safety and Health (NIOSH) offers many useful publications available on its website at http://www.cdc.gov/niosh

**Comprehensive Safety Recommendations for the Precast Concrete Products Industry.** DHHS (NIOSH) Publication No. 84-103 (1984).

**Elements of Ergonomics Programs: A Primer Based on Workplace Evaluations of Musculoskeletal Disorders.** DHHS (NIOSH) Publication No. 97-117 (1997).

**NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica.** DHHS (NIOSH) Publication No. 2002-129 (April 2002).

**NIOSH Alert – Preventing Worker Deaths from Uncontrolled Release of Electrical, Mechanical, and Other Types of Hazardous Energy.** DHHS (NIOSH) Publication No. 99-110 (August 1999).

## Other Sources

**Ready Mixed Concrete Truck Drivers: Work-Related Hazards and Recommendations for Controls,** Nancy Clark, Jonathan Dropkin and Lee Kaplan, Mt. Sinai – Irving J. Selikoff Center for Occupational and Environmental Medicine (Sept. 2001), available at http://www.elcosh.org

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# Concrete Industry Cooperative Programs

VPP
Voluntary Protection Programs
An OSHA Cooperative Program

## Voluntary Protection Programs

OSHA recognizes worksites with excellent safety and health management systems through its Voluntary Protection Programs (VPP). These model worksites are willing to share their expertise and many are available to mentor other businesses. For further information on how VPP participants can help you, contact the VPP manager in your OSHA Regional Office (see www.osha.gov for listings) or the Voluntary Protection Programs Participants' Association, 7600-E Leesburg Pike, Suite 440, Falls Church, VA 22043, telephone (703) 761-1146.

alliance
An OSHA Cooperative Program

## Alliance Program

Alliances enable organizations committed to workplace safety and health to collaborate with OSHA to prevent injuries and illnesses in the workplace. Two of OSHA's national Alliances have an impact on the concrete manufacturing industry.

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**Mason Contractors Association of America**
Reducing hazards related to wall bracing, falls, scaffolding and forklifts is the focus of OSHA's Alliance with the Mason Contractors Association of America. The joint effort will include developing education and training programs on these issues as well as developing and disseminating case studies illustrating the business value of safety and health.

**American Concrete Pipe Association**
OSHA's Alliance with the American Concrete Pipe Association (ACPA) focuses on reducing and preventing exposure to confined space hazards. Under this Alliance, OSHA and ACPA will develop and disseminate outreach materials, work together on eTools and participate in other efforts to reduce injuries or illnesses associated with confined space hazards.

## Consultation

Every state offers a free, onsite consultation program to help small employers find and fix hazards and establish effective safety and health management systems. Funded primarily by OSHA, consultation is provided at no cost to small employers and is delivered by state authorities through professional safety and health consultants. More information on OSHA's Consultation Program appears on the agency's website at www.osha.gov.





# A Success Story

## NY Concrete Maker Improves Safety, Cuts Costs

**Precast concrete manufacturer Oldcastle Precast's Manchester New York Division reduced its occupational injury and illness rate by 75 percent in three years. The Manchester facility cut its recordable injuries from 12 in the first year to just one in the third year.**

**Oldcastle experienced this incredible success by establishing a safety and health management system good enough to make it the first precast concrete facility to join OSHA's Merit Voluntary Protection Program (VPP).**

## Changing Culture

The process began when CRH, a multinational conglomerate that manufactures construction materials worldwide, sent new managers to the Building Systems Division of Oldcastle. The new managers brought cultural change and a renewed commitment to safety and health to the Manchester site.

Managers came to know all employees on a first-name basis. They encouraged employees to ask questions and voice any safety concerns so that management could address them immediately. The managers emphasized the importance of employees as a company asset and made clear that employee

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participation is key to eliminating hazards and reducing employee injuries and illnesses.

"Having a safe work environment is just good business," according to the division's general manager. "We need to make the necessary commitment to safety at all levels of the company, and we are responsible to follow through with the safest route, no matter what the cost," he explained. In the process, Oldcastle learned that safety investments pay for themselves, time and again.

## Aiming for VPP

Oldcastle decided to aim for VPP recognition, knowing that working toward this goal would drive the facility toward excellence. Typically, injury and illness rates for VPP sites are 51 percent below industry norms. To qualify, Oldcastle had to submit an application explaining the site's safety and health management system. Then OSHA examined the company's safety records, programs and history, and conducted a detailed onsite review. Once in the program, Oldcastle had to undergo periodic reviews to maintain its status.

To improve its safety program to qualify for VPP, Oldcastle set objectives and provided the necessary resources to accomplish them; they performed daily facility inspections and corrected any problems; and they informed employees, vendors and contractors of the program's status throughout the process. "We knew we had to boost existing programs and initiate new ones to comply. We knew our efforts would make our company a safer place to work and that was our goal," noted Oldcastle's safety manager.





## Applying for VPP

After two years of preparation, Oldcastle applied for VPP recognition. OSHA evaluators spent four days assessing the facility. Their onsite visit included an opening and closing conference, employee interviews, industrial hygiene surveys and a complete evaluation of the site's safety and health management system.

One of the highlights of Oldcastle's program, according to Norman R. Deitch, OSHA's New York VPP Manager and the VPP Team Leader, was the company's effort to involve Spanish-speaking employees. Oldcastle also received high marks for its extensive use of digital photos to record unsafe conditions and the results of corrective actions for worker training.




## Continuing to Improve

For the precast concrete industry (SIC 3272) in 2000, the nonfatal occupational injury and illness incidence rate was 13.7 per 100 full-time workers. When Oldcastle applied for VPP, its rate was 13.4. Now it is 2.0. Oldcastle found

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that reducing worker injuries and illnesses is not only the moral and humanitarian thing to do, but it also reduces costs associated with workplace accidents while increasing the division's competitiveness.

Oldcastle's Accident Prevention Program remains effective because everyone—the general manager, department managers, supervisors, employees and the safety manager—takes a personal interest in accident prevention. Every effort is made to ensure that every worker knows, understands and observes the requirements of applicable laws, regulations and standards.

## Giving Employees Credit

Oldcastle's plant manager credits employees on the shop floor. "We could be the best managers in the world, but the men on the front line need to embrace the safety culture," he observed.

The Manchester facility manufactures and installs hollowcore plank and precast concrete structural systems throughout Western New York. Some of the more than 2.58 million square feet of precast products weigh in excess of 25 tons each. The facility's sales manager related, "Either you make precast concrete pieces safely, or you don't make them for very long."

Oldcastle's safety manager spearheaded the division's commitment to safety and took charge of the VPP application process. She credits the plant employees for their hard work and continued dedication to their safety program.





## Reaching for Star

Under the VPP, Merit worksites are recognized as having the potential and commitment to achieve Star status within three years. Oldcastle's goal is to reach Star status within twelve months. According to the safety manager, "This achievement is looked upon by Oldcastle as a positive step in achieving a safe workplace for our employees and will only further aid us in ensuring the complete safety of our workplace."

Additional information about OSHA's Voluntary Protection Programs is available on the agency's website at www.osha.gov, from regional OSHA VPP managers or local OSHA offices. The Voluntary Protection Programs Participants' Association (www.vpppa.org) administers a mentoring program for those worksites considering participation.



Oldcastle Precast's Manchester New York Division.

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Employers are responsible for providing a safe and healthful workplace for their employees. OSHA's role is to assure the safety and health of America's workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health.

This informational booklet provides a general overview of a particular topic related to OSHA standards. It does not alter or determine compliance responsibilities in OSHA standards or the *Occupational Safety and Health Act of 1970*. Because interpretations and enforcement policy may change over time, you should consult current OSHA administrative interpretations and decisions by the Occupational Safety and Health Review Commission and the Courts for additional guidance on OSHA compliance requirements.

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Journal of Physics: Conference Series

# Exhibit 5

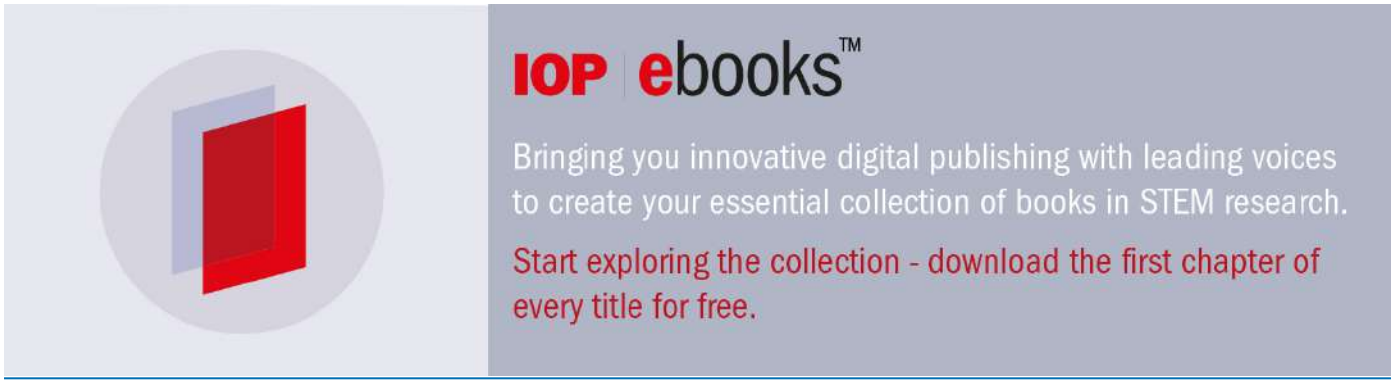
**PAPER** • **OPEN ACCESS**

## Short review on air pollution from cement factories

To cite this article: M.E. Emetere and E Dania 2019 *J. Phys.: Conf. Ser.* **1299** 012033

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# Short review on air pollution from cement factories

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**Abstract**. The paper presents the challenge in the pollution in cement factories. The health implication is huge leading to unimaginable sickness. The review considers the impact of the pollution. Also, the paper considers legal framework to control the excess dispersion of cement pollutants into the factory. It is concluded that the risk of indiscriminate dissemination of cement factory pollution can be reduce if health institutions and government can synergize with stringent legal framework.

## 1. Introduction

Due to poor air quality, 4,000 deaths per day are recorded in China and this is caused by the release of harmful pollutants. The challenge of uncontrollable release of pollutants into the atmosphere includes release of harmful pollutants to the environment; inhalation of these harmful gases into the body; release of fumes and gases which contain harmful toxins; release of acid rain which can be detrimental to health; radiation from harmful elements in pollutants; and the exposure to health challenges such as eye irritation, asthma, cough, chronic Bronchitis etc. In other to control air pollution, developed communities have enacted legal frameworks to guide pollution. Such legal framework includes London's Clean Air act of 1956 which required industries to build higher smokes funnels; Canadian Environmental protection Act, 1999; Environmental Protection Agency (EPA) Clean Air Acts; U.S. - Canada air Quality Agreement, 1986 etc.

Air pollution has become a salient discuss because it gives in-depth understanding on the release of harmful substances into the atmosphere (outdoor air pollution). However, air pollution can begin from closed or semi-closed system and it is referred to as the indoor air pollution. It can occur as a result of human activities or natural phenomenon such as burning biomass or fossil fuels, chemical emission from industries, agriculture-base pollution, Sahara dust influx and other secondary pollution source (Fig 1). It is one of the modern day curse i.e. a by-product of increasing industrialization. Air pollutants include Sulphur dioxide ($SO_2$), nitrogen oxides (NOx), ozone ($O_3$), particulate matter PM (small suspended particles of varying sizes), carbon monoxide (CO) and volatile organic compounds (VOCs)(Ritchie and Roser, 2019). Other pollutants are carbon dioxide, smoke, methane, soot, cigarette smoke etc. Air pollution is estimated to cause 7 million premature deaths yearly (Institute for Health Metrics and Evaluation, 2017). In a bid to curb the increase in air pollution and its harmful effect on nature and man, several international environmental agreements have been formulated and are legally binding for countries that have formally ratified them. Some of these agreements include the Montreal Protocol on ozone protection, UN Framework convention on climate change, International Environment Protection act of 1983, London's clean air act of 1956 etc.

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Figure 1: Sources of air pollution. 1-Agricultural activities, 2-Energy production and distribution, 3-Natural phenomena, 4-Waste and mining, 5-Road transport, 6-Fuel combustion (EEA Signals, 2013).

## 2. Pollution from cement factory

A typical source of pollution is the cement factory and its uncontrolled emission of toxic aerosols into the atmosphere. Cement factory has the appropriate machinery, Equipment, technology, materials, manpower and management required to produce cement and other related products. The processes involved in the making of this cement result in release of harmful waste products to the environment such as Carbon dioxide and concrete dust. There is now a rise in concrete recycling due to the hazards it poses toward environmental health and also due to economic considerations, public awareness and legislation. Cement factory pollution refers to the harmful effects of cement making factories on the environment. In the main pollutants from cement industry includesradioactive dust, nitrogen oxides, hydrogen chloride, hydrogen fluoride, sulphur dioxide, organic compounds, dioxins,carbon monoxide, furans and ammonia. The most commonly used techniques to reduce the contaminants resulting from the combustion are SCR catalysts for the removal of nitrogen oxides and electrical precipitators for the removal of solid waste and aerosols. However Organic pollutants and other combustible compounds like carbon monoxide can be found in these fumes. Around the globe, concrete is the most common building material, but it is harmful to the environment, adding very much to the greenhouse gas emissions during the production process. Cement a main ingredient in concrete, is the second highest industrial source of carbon dioxide on earth.

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Figure 2: Pollution from cement factory

The dust flying from cement production process are transported through the air and are deposited in an area close to the manufacturing plants and or far away to distanced places. This includes villages, towns, green area, recreational places, natural vegetation and agricultural land. The depositions interfere with the natural metabolic system of agricultural production, which ultimately affect food quality and quantity. [9]. WHO and other environmental protection programs have placed sanctions on Industry emissions so as to curb the level of emission. Areas such as India and China that produce one of the largest amounts of cement per year experience have more polluted atmospheres than other countries.In Nigeria, indigenes of Ewekoro local government indicated high levels of respiratory diseases due to the excess release of nitrogen dioxide, carbon monoxide and Sulphur dioxide due to the level of industrialization in the community. It was reported that abouttwo thousand (2,000) Macedonians living in Skopje die each year due to a noxious mix of smoke arising from cement making factories and other major air pollutants. [6]

## 3. Impact of cement pollution

Dr. Ming Zhang and Dr. Mauri McSaveney stated that landslides in China which resulted in the deaths of up to 4000 people was caused by Acid rain which developed as a result of air pollution from Factories in China (Gabbatiss, 2017). Shefali Kesarwani of the department of Environmental science and NRM, SHUATS, Allahabad, Uttar Pradesh India stated that long-exposure to the pollutants released from cement factories and other industries can result in Chronic Bronchitis, Heart disease, Asthma attacks and even premature death (Shefali and James, 2017). Jacobson of Stanford University in his research on the link between carbon dioxide emissions and human mortality started that the 30 percent of 1000 deaths in California due of rise in temperatures were caused by carbon dioxide emissions which also affects the general health of indigenes of America as a whole (Lious, 2008). Ogedengbe and Oke (2011) studied the environmental pollution in the western region of Nigeria (Ewekoro) where three major cement factories are located. The air and water samples were tested and the results shows that the cement dusts released into the atmosphere were rich in heavy metals. Hence, it can be affirmed that a typical industrial source of air pollution is the cement industry. Cement is the basic component of concrete required in civil engineering constructions and buildings; it is one of the most significant manufactured material (Devi et al., 2017). Al Smadi et al., 2009, named concrete as the second most consumed substance on earth after water. Emissions from cement industries include



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heavy metals, $CO_2$, NOx, $SO_2$, VOCs, PM, noise, dust and bad odor from plans and animals that die from the life threatening effects of emissions from these industries undergoing decay (Zimwara et al., 2012). These emissions result in global warming, acid rain, loss of biodiversity, reduced crop yield and adverse health effect such as chest discomfort, chronic bronchitis, asthma attacks, cancers etc. (Pariyar, 2013;Mehraj, 2013).

Particulate matter (PM), a mix of solid and liquid droplets are high from cement plants and affects humans greatly. $PM_{2.5}$ are atmospheric aerosol particles with diameters less than or equal to 2.5µm that on inhalation can penetrate deeply into the lung. Most components of these aerosols are cytotoxic and carcinogenic (McNeill, 2019). Oguntoke et al., 2012 reported a significantly higher than permissible levels of both $PM_{10}$ and $PM_{2.5}$ within and around cement plants in a local government area in Nigeria. Ritchie and Roser, 2019 reported the statistics of $PM_{2.5}$ exposure from air pollution and death rate by country and region respectively (Fig 3). Air pollution is responsible for 3.1% of global disability-adjusted life (Lim et al., 2012). The relationship between long term exposure to air pollution and cardiovascular mortality has been established (Pope et al., 2004). There is an increase in report of the association between air pollution and lung cancer. A study by the American Cancer society (ACS) showed an increase of 8-14% in lung cancer in association with 10µg/$m^3$ increase in $PM_{2.5}$ (Pope et al., 2002).

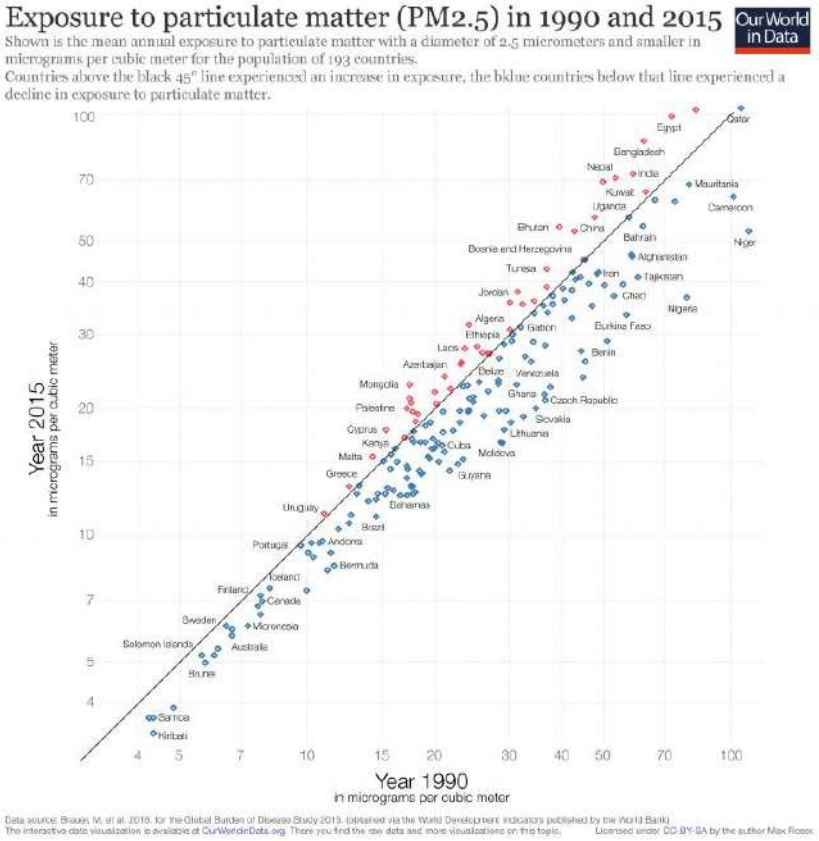



Figure 3: Exposure to particulate matter

## 4. Conclusion

In this study, the impact and dynamics of pollution from cement factory was discussed. Based on the findings, it is recommended that: there should be the use of catalysts which remove dangerous pollutants such as Nitrogen oxides, aerosols and other harmful pollutants in order to reduce the level of contamination to the atmosphere; a proper recycling system will enable less contamination because some of the pollutants can be used as fuels and making use of cleaner chemicals in cement factories; the adoption of computational models and technology such as Wet Scrubbers, Electrostatic



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Precipitators, Flexible Pulse Jet Filters to reduce the level of greenhouse gases that are emitted from the cement factories; adoption of laws and legislation which provide a measure for air pollution. Implementation of laws that prevent industries from over polluting the environment will help control the level of harmful gases that are released daily; and raising awareness of the dangers of air pollution through factories.

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5.2.b

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Exhibit 6

# An inventory of primary air pollutants and CO2 emissions from cement production in China, 1990–2020

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# An inventory of primary air pollutants and $CO_2$ emissions from cement production in China, 1990–2020

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ABSTRACT

Direct emissions of air pollutants from the cement industry in China were estimated by developing a technology-based methodology using information on the proportion of cement produced from different types of kilns and the emission standards for the Chinese cement industry. Historical emissions of sulfur dioxide ($SO_2$), nitrogen oxides ($NO_X$), carbon monoxide (CO), particulate matter (PM) and carbon dioxide ($CO_2$) were estimated for the years 1990–2008, and future emissions were projected up to 2020 based on current energy-related and emission control policies. Compared with the historical high (4.36 Tg of $PM_{2.5}$, 7.16 Tg of $PM_{10}$ and 10.44 Tg of TSP in 1997), PM emissions are predicted to drop substantially by 2020, despite the expected tripling of cement production. Certain other air pollutant emissions, such as CO and $SO_2$, are also predicted to decrease with the progressive closure of shaft kilns. $NO_X$ emissions, however, could increase because of the promotion of precalciner kilns and the rapid increase of cement production. $CO_2$ emissions from the cement industry account for approximately one eighth of China's national $CO_2$ emissions. Our analysis indicates that it is possible to reduce $CO_2$ emissions from this industry by approximately 12.8% if advanced energy-related technologies are implemented. These technologies will bring co-benefits in reducing other air pollutants as well.

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## 1. Introduction

China is the largest cement producing and consuming country in the world. Cement production in China was 1.39 billion metric tons in 2008 (CMIIT, 2009), which accounted for 50% of the world's production (USGS, 2009). Enormous quantities of air pollutants are emitted from cement production, including $SO_2$, $NO_X$, CO, and PM, and result in significant regional and global environmental problems. In China, the cement industry has been identified as an important source of pollution. For example, it is the largest source of PM emissions, accounting for 40% of PM emissions from all industrial sources (CEYEC, 2001) and 27% of total national PM emissions (Zhang et al., 2007a). Cement production also releases large amounts of $CO_2$ from both fuel combustion and the chemical process producing clinker, where calcium carbonate ($CaCO_3$) is calcined and reacted with silica-bearing minerals. According to the National Greenhouse Gas Inventory of China (NDRC, 2004), cement production contributed 57% of $CO_2$ process emissions (distinct from combustion emissions) from China's industrial sources in 1994.

There are two main kiln types in China: shaft kilns and rotary kilns. With higher productivity and efficiency, rotary kilns have dominated the cement industry in Western countries since the middle of the 20th century. Starting in the 1980s in China, however, small but easy-to-construct shaft kilns were built all over the country to meet the rapidly increasing demands of the construction industry. By the mid-1990s, they accounted for 80% of production (Lei, 2004). The extremely rapid increase in the number of shaft kilns resulted in poor operating practices within the Chinese cement industry. There were more than 7000 cement plants in China in 1997 (Zhou, 2003), most of them small and releasing high emissions. At the end of the 1990s, China began to restrict construction of new shaft kilns and instead promoted precalciner kilns, which are the most advanced rotary cement kilns. Consequently, the production from precalciner kilns increased very rapidly and by 2008 they accounted for more than 60% of cement production (CMIIT, 2009).

Since China's cement industry is an important emission source of several types of air pollutants, the systematic and reliable estimation of its emissions is essential for atmospheric modeling and

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air pollution policy-making. From the perspective of criteria air pollutants, existing emission inventories for China usually treat the cement industry as a part of the industrial sector, roughly estimating its emissions based on coal consumption (Streets et al., 2003; Ohara et al., 2007). These emission inventories, however, are not capable of providing to the atmospheric modeling community reliable emission trends of China's cement industry. Moreover, there are shortcomings in future emission estimates because the effects from technology replacement and emission control measures were not taken into account. From the perspective of greenhouse gas (GHG) emissions, there have been some estimates made at a national level (He and Yuan, 2005; Liu et al., 2009; NDRC, 2004; Zhu, 2000) or as a part of a global analysis (Boden et al., 1995, 2009; WBCSD, 2002; Worrell et al., 2001). Most of these studies, however, have focused on a specific year and are not able to reflect changes in emissions due to technology replacement and energy efficiency improvement in China's cement industry. Our previous studies have addressed concerns over the technology-based emission estimates from the cement industry for specific air pollutants, such as PM (Lei et al., 2008) and $NO_X$ (Zhang et al., 2007b) or for a specific year (Zhang et al., 2009), however, a historical trend of emissions from China's cement industry is still missing. In this work, we developed a historical emission inventory of major air pollutants from China's cement industry for the period 1990–2008 to explore the effects of recent regulations and technologies on these emissions, and we predict future emissions up to 2020 in light of existing and possible future regulations.

## 2. Methodology and data

### 2.1. Bottom-up methodology

The emission inventory developed here includes four gaseous air pollutants ($SO_2$, $NO_X$, CO and $CO_2$) and PM in three different size ranges: $PM_{2.5}$ (particulates with diameter less than 2.5 μm), $PM_{10}$ (particulates with diameter less than 10 μm) and TSP (total suspended particulates). Only direct emissions from cement production were considered in this inventory. The indirect emissions, such as which from power consumption during manufacture and the transportation of raw materials and end products are not included. Kilns are the major source of most air pollutants in the cement production process. In this study, cement kilns are classified into three groups: shaft kilns, precalciner kilns, and other rotary kilns.

Emissions from the cement industry of each province in China were calculated based on province-level cement outputs and emission factors (EFs), and then summed to give estimates at a national level. The approaches used for estimating emissions of different pollutants are listed in Table 1. The burning of fuel in the kilns is the sole source of $SO_2$, $NO_X$ and CO emissions. The emissions of these pollutants were estimated based on coal consumption as almost all cement kilns in China use coal as fuel. In addition to fuel combustion, calcination of carbonate such as limestone is the other important source of $CO_2$ emissions, which we calculated separately in our analysis. PM emissions were more complicated to estimate because: (1) besides kiln emissions, there are several other emission sources such as quarrying and crushing, raw material storage, grinding and blending, and packaging and loading; and (2) abatement efficiency varies a lot between the different PM emission control technologies. Taking the multiple sources and control technologies into account, a dynamic methodology was developed to estimate the inter-annual emissions of PM.

### 2.2. Activity rates

Total cement production by province from 1990 is available from the *China Statistical Yearbook* (NBS, 1991–2008). A breakdown of national cement production by kiln type was estimated from the historical capacity of precalciner kilns and other rotary kilns (Kong, 2005; Lei, 2004; Zeng, 2004), as shown in Fig. 1. There are no statistical data for clinker production or coal consumption for the cement industry in China as a whole. We therefore estimated these by using typical clinker to cement ratios and energy efficiency data of the Chinese cement industry.

In general, cement is produced by mixing auxiliary materials with milled clinker. In China in the 1990s, the national average clinker to cement ratio varied within the range 0.701–0.738 (Zhou, 2003) and so for this study we used a value of 0.72. The energy efficiency of China's cement industry has improved considerably in last two decades. The average energy intensity of the whole industry dropped from 5.27 MJ $tonne^{-1}$-clinker in 1990 (Liu et al., 1995) to 4.77 MJ $tonne^{-1}$-clinker in 1998 (Zhou, 2003). And the current energy efficiency of China's precalciner kilns is around 3.51 MJ $tonne^{-1}$-clinker, a value that is recommended as the basic level for clean production of cement (MEP, 2009). Based on this information, the historical energy efficiency of different kiln types was interpolated, which enabled coal consumption to be calculated, as shown in Table 2.

### 2.3. Emission factors (EFs)

$SO_2$ mainly comes from the oxidation of sulfur in coal. In precalciner kilns, approximately 70% of $SO_2$ is absorbed by reaction with calcium oxide (CaO) (Liu, 2006), while much less is absorbed in other rotary kilns and in shaft kilns (Su et al., 1998). Utilization of

**Table 1**
Emission sources of air pollutants from the cement industry and equations used for estimating estimations.

| Pollutants | Combustion | Calcination | Other sources | Equation for emissions estimation[a] |
|---|---|---|---|---|
| $SO_2$ | √ | – | – | $E_j = \sum_{i,m} CC_{i,j,m} \times EF_m$ |
| $NO_X$ | √ | – | – | $E_j = \sum_{i,m} CC_{i,j,m} \times EF_m$ |
| CO | √ | – | – | $E_j = \sum_{i,m} CC_{i,j,m} \times EF_m$ |
| $CO_2$ | √ | √ | – | $E_j = \sum_{i,m} CC_{i,j,m} \times EF_m + \sum_i CP_{i,j} \times EFC$ |
| PM | √ | √ | √ | $E_{j,y} = \sum_{i,m} P_{i,j,m} \times ef_{j,m,y}$, $ef_{j,m,y} = EFR_m \times F_{m,y} \times \sum_n C_{m,n,j} \times (1 - \eta_{n,y})$ |

[a] *i*, *j*, *m* and *n* represent the province, year, type of kiln or emission source and type of PM control technology respectively; *y* represents the three size categories of PM: $PM_{2.5}$, PM > 2.5 μm but < 10 μm ($PM_{2.5-10}$), and PM > 10 μm ($PM_{>10}$); *E* is the total emissions; *CC* is the coal consumption; *CP* denotes the clinker production; *P* is the cement production; *EF* is the emission factors from coal combustion; *EFC* denotes the emission factor of $CO_2$ from calcination during clinker production; *ef* is the final emission factor of PM; *EFR* is the unabated emission factor of PM prior to the effect of PM control devices; $F_y$ is the fraction of all PM in size range *y* with $\sum_y F_y = 1$; $C_n$ is the penetration rate of the PM control technology *n* with $\sum_n C_n = 1$; $\eta$ is the PM removal efficiency of the control technology.

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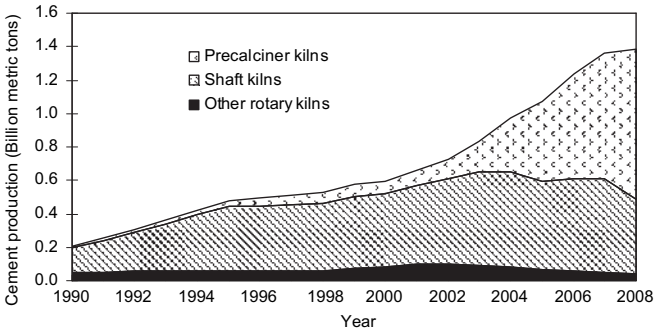



**Fig. 1.** Cement production in China from different types of kiln from 1990 to 2008.

**Table 3**
Emission factors of $SO_2$, $NO_X$ and CO from cement kilns (g $kg^{-1}$ of coal combusted in kilns).

| | $SO_2$[a] | $NO_X$ | CO |
|---|---|---|---|
| Precalciner kilns | 2.9 | 15.3 | 17.8 |
| Other rotary kilns | 12.3 | 18.5 | 17.8 |
| Shaft kilns | 12.3 | 1.7 | 155.7 |
| 1990 average | 11.6 | 7.3 | 108.1 |
| 1995 average | 11.5 | 4.9 | 127.8 |
| 2000 average | 11.4 | 6.1 | 116.9 |
| 2005 average | 8.7 | 8.7 | 88.0 |
| 2008 average | 6.8 | 10.8 | 64.3 |

[a] These are national average $SO_2$ emission factors weighed by provincial coal consumption. Different $SO_2$ emission factors are applied for different provinces according to sulfur content of coal from that province.

baghouse filters, as required with new precalciner kilns, can further reduce $SO_2$ emissions. Assuming that $SO_2$ absorption is 80% for the entire precalciner kiln process and 30% for other types of kilns (Liu, 2006), we estimated $SO_2$ emissions by province using a mass balance approach and based on the average sulfur content of coal in each province (Liu, 1998).

Generation of $NO_X$ and CO is highly dependent on temperature and oxygen availability. Compared to shaft kilns, rotary kilns produce much more $NO_X$ and less CO because of their higher operation temperature and stable ventilation. Based on local test results, our previous studies have estimated the EFs of $NO_X$ (Zhang et al., 2007b) and CO (Streets et al., 2006) from different types of kilns in China. These EFs were used in this study, and the average $NO_X$ and CO EFs of the cement industry as a whole were calculated based on the historical balance of kiln type, as listed in Table 3.

$CO_2$ EFs were given in quite a few studies estimating $CO_2$ emissions from the cement industry in China (Boden et al., 1995; Cui and Liu, 2008; He and Yuan, 2005; NDRC, 2004; Wang, 2009; Worrell et al., 2001; Zhu, 2000). In this work, we used $CO_2$ EFs from the study by Cui and Liu (2008) who followed the approach recommended by the International Panel on Climate Change (IPCC, 2006) and calculated the EFs based on the typical practices of the cement industry in China. Their estimates of the $CO_2$ EFs were 0.55 kg $kg^{-1}$ clinker from the calcining process, and 1.94 kg $kg^{-1}$ coal from coal combustion. The $CO_2$ EFs from different published works are compared in Sect. 3.3 to assess the reliability of our $CO_2$ emission estimates.

The EFs of PM is dependent on both the characteristics of unabated emissions from the overall production process and the effectiveness of PM emission control devices. Our previous study (Lei et al., 2008) reviewed prior research and calculated the unabated PM EFs for different types of kilns and other emission sources, such as quarrying, crushing and other mechanic processes, as summarized in Table 4.

PM control devices can reduce PM emissions by 10–99.9%, depending on the type of control technology employed and the size distribution of PM in the raw flue gas (Lei et al., 2008). Although more efficient PM control technologies require higher investment and have higher operational costs, improving emission standards is driving the promotion of these technologies within the industry. The standard value for the PM concentration in kiln flue gas dropped from 800 to 50 mg $m^{-3}$ in 20 years, according to progressive editions of the air pollutant emission standards for the cement industry (SEPA, 1985, 1996b, 2004). Based on the PM concentration requirements of the three successive emission standards, penetration rates of the different PM control technologies in newly built cement plants are estimated for four periods: before 1985, 1985–1996, 1997–2004, and after 2004. Although the emission standards published in 1996 and 2004 allow 3–10 years for existing plants to reduce their PM emission rates, reduction is not likely to be significant in existing plants as there are few measures to enforce the standard. In this work, we assume that all plants retrofit their whole production line every 15 years, and in doing so meet the present standards for new plants. We then calculate the penetration rates of PM control technologies across the cement industry for the period 1990–2008, and estimate the corresponding PM EFs, as shown in Fig. 2. Over the 18-year period, the EF of TSP from the cement industry dropped by 88%, from 27.93 g $kg^{-1}$ to 3.31 g $kg^{-1}$. The reduction in $PM_{10}$ and $PM_{2.5}$ EFs is also considerable: 18.08–2.53 g $kg^{-1}$ and 10.65–1.61 g $kg^{-1}$, respectively.

## 3. Results and discussion

### 3.1. Emissions from 1990 to 2008

Fig. 3 and Table 5 show emissions of gaseous air pollutants and PM from China's cement industry for the period 1990–2008. The emissions in 2005 are also compared with China's total emissions from all anthropogenic sources in Table 5. The cement industry is a major source of PM in China, contributing more than a quarter of $PM_{2.5}$ and $PM_{10}$ in 2005. As a significant contributor to GHG emissions in China, the cement industry produces approximately one eighth of China's total anthropogenic $CO_2$ emissions. The

**Table 2**
Cement and clinker production and energy consumption in China, 1990–2008.

| Year | Cement production (Tg) | | | Clinker production (Tg) | Average coal intensity (MJ $kg^{-1}$ clinker) | | | Coal consumption (Tg) |
|---|---|---|---|---|---|---|---|---|
| | PC kilns[a] | Shaft kilns | OR kilns[b] | | PC kilns | Shaft kilns | OR kilns | |
| 1990 | 14 | 143 | 53 | 151 | 4.07 | 4.83 | 5.85 | 36 |
| 1995 | 34 | 385 | 57 | 343 | 3.92 | 4.62 | 5.65 | 77 |
| 2000 | 78 | 435 | 84 | 430 | 3.78 | 4.39 | 5.41 | 92 |
| 2005 | 473 | 526 | 70 | 770 | 3.63 | 4.10 | 5.21 | 146 |
| 2008 | 902 | 443 | 43 | 999 | 3.54 | 3.92 | 5.06 | 177 |

[a] PC kilns: precalciner kilns.
[b] OR kilns: other rotary kilns.

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**Table 4**
Unabated PM emission factors for cement production (g kg$^{-1}$ cement).

| Emission sources | | Total PM | $PM_{2.5}$ | $PM_{2.5-10}$ | $PM_{>10}$ | EF range from references (EPA, 1995; Jiao, 2007; SEPA, 1996a) |
|---|---|---|---|---|---|---|
| Kilns | Precalciner kilns | 105 | 18.9 | 25.2 | 60.9 | 58.2–317.9 |
| | Other rotary kilns | 98 | 14.0 | 21.0 | 63.0 | 24–330 |
| | Shaft kilns | 30 | 3.3 | 6.0 | 20.7 | 13.4–91.2 |
| Other sources as a whole | | 140 | 9.5 | 23.8 | 107.7 | 63–235 |

cement industry is also very important from the perspectives of China's $SO_2$, $NO_X$ and CO emissions, contributing approximately 5.1%, 6.4% and 7.7% of national anthropogenic emissions in 2005, respectively.

Emissions of $SO_2$ increased from 0.42 Tg in 1990 to 1.39 Tg in 2007, then dropped to 1.21 Tg in 2008 (a reduction of 12.6%). The decline in $SO_2$ emissions in 2008 is attributed to two factors. First, the global economic recession suppressed the construction industry and saw the annual rate of increase in cement production drop from 10% in the previous year to 2% in 2008. Second, nation-wide replacement of shaft kilns with precalciner kilns from 2007 to 2008 led to a 20% of reduction in cement production from shaft kilns, which emit several times more $SO_2$ per mass unit of cement.

The trend observed for CO emissions is similar to that of $SO_2$. In contrast, $NO_X$ emissions increased much faster than any other pollutant. During the 1990s, $NO_X$ emissions doubled, and the 2000 emissions were three times higher by 2008. With the recent rapid expansion of precalciner kilns in China, the average annual increase in $NO_X$ emissions from the cement industry from 2003 to 2008 was over 220 Gg. This accounts for about 20% of the incremental $NO_X$ emissions seen for China as a whole according to the INTEX-B emission inventory (Zhang et al., 2009). As awareness grows of China's increasing $NO_X$ emissions and its consequences for ozone pollution and acidification (Zhao et al., 2009), policies to combat acid rain pollution will inevitably have to specifically address the cement industry.

Emissions of $CO_2$ increased 5.8 times, from 153 Tg in 1990 to 892 Tg in 2008. The proportion of $CO_2$ emissions from fuel combustion compared to that from calcination of carbonates decreased from 46.0% in 1990 to 38.6% in 2008, representing improved energy efficiency in the cement industry. Our estimates of $CO_2$ emissions are lower than the results delivered by some researchers such as Boden et al. (2009), Liu et al. (2009) and Worrell et al. (2001). The main reasons of the differences are discussed in Section 3.3.

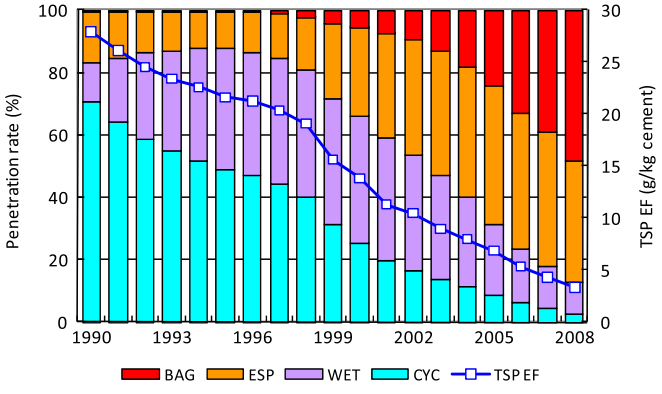



**Fig. 2.** PM emission factors (g kg$^{-1}$ cement) for all cement producing processes in China's cement industry for the years 1990–2008. Bars represent the penetration rate of PM control technologies within the industry (BAG: baghouse filter; ESP: electrostatic precipitator; WET: wet scrubber; CYC: cyclone.), and line represents the net emission factor of TSP.

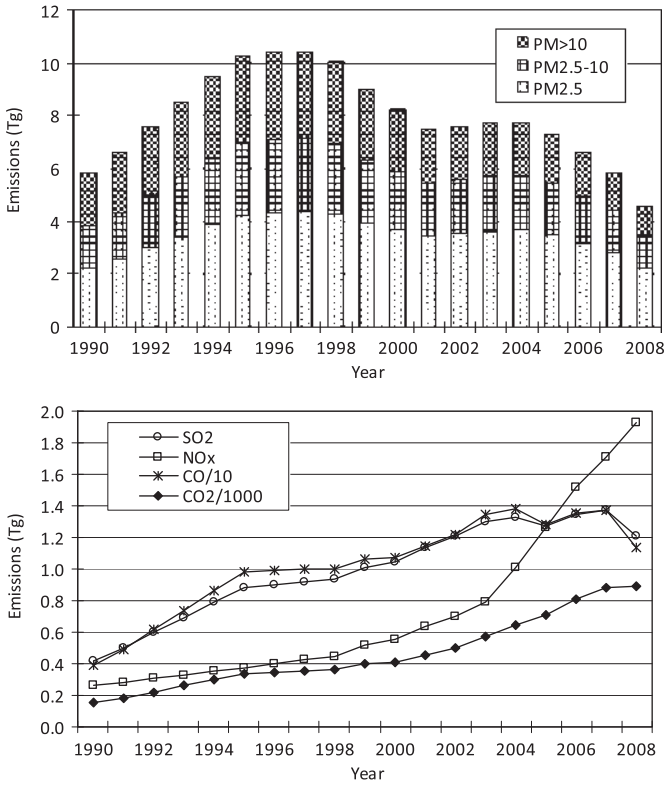



**Fig. 3.** Emissions of air pollutants (top panel, PM; bottom panel, $SO_2$, $NO_X$, CO, $CO_2$) from China's cement industry from 1990 to 2008.

Emissions of PM rose rapidly from 1990 to 1995, when cement production developed with an average annual increase of 17.8%. In the second half of the 1990s, expansion of China's cement industry slowed and the new emissions standard released in 1996 promoted the application of electrostatic precipitators (ESPs) in shaft kilns, resulting in an industry-wide decrease in PM emissions. After 2000, although the average annual increase in cement production was greater than 12%, PM emissions gradually decreased due to the replacement of shaft kilns by precalciner kilns and the application of high-performance PM removal technology, especially after 2004. Over the whole period, PM emissions reached a peak in 1997, with 4.36 Tg of $PM_{2.5}$, 7.16 Tg of $PM_{10}$ and 10.44 Tg of TSP.

### 3.2. Spatial distribution of emissions

The spatial distribution of emissions changed year-by-year. Using 2005 as a base year, cement production from 5294 plants was collected from the China Cement Association (CCA), including the capacity of 612 clinker production lines installed with precalciner kilns. These plants accounted for almost all precalciner kilns and more than 95% of cement production in China in that year. The location of these plants and production lines is determined at county-level from cement plant registration information (CCA, 2006). Thus emissions of $PM_{2.5}$, $SO_2$ and $NO_X$ from the cement industry in 2005 are mapped onto an 18′ × 18′ grid of China, as shown in Fig. 4.

In different ways, the distribution of $PM_{2.5}$, $SO_2$ and $NO_X$ emissions reflect regional operational differences and kiln combinations within China, a point illustrated by the following examples. The grid cells indicating high $PM_{2.5}$ emissions show a greater

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**Table 5**
Estimated emissions of air pollutants from China's cement industry (1990–2008) compared to emissions from all anthropogenic sources (Tg).

| Year | $SO_2$ | $NO_X$ | CO | $CO_2$ | $PM_{2.5}$ | $PM_{10}$ | TSP |
|---|---|---|---|---|---|---|---|
| 1990 | 0.42 | 0.27 | 3.93 | 153.33 | 2.23 | 3.79 | 5.86 |
| 1995 | 0.89 | 0.38 | 9.81 | 336.74 | 4.21 | 6.97 | 10.28 |
| 2000 | 1.04 | 0.56 | 10.70 | 413.31 | 3.68 | 5.90 | 8.25 |
| 2005 | 1.29 | 1.26 | 12.83 | 704.83 | 3.48 | 5.47 | 7.33 |
| 2008 | 1.21 | 1.92 | 11.41 | 892.14 | 2.23 | 3.52 | 4.59 |
| All sources in 2005 | 25.5[a] | 19.8[b] | 167[b] | 5626[c] | 12.9[d] | 18.8[d] | 34.3[d] |
| Percentage contribution of cement in 2005 | 5.1% | 6.4% | 7.7% | 12.5% | 26.9% | 29.0% | 21.4% |

[a] SEPA, 2007.
[b] Zhang et al., 2009.
[c] Boden et al., 2009.
[d] Lei et al., 2010.

concentration in north China. The provinces of Shandong, Hebei and Henan account for 31.5% of total $PM_{2.5}$ emissions. By consuming coal with much higher sulfur content than other provinces, Sichuan has the second highest provincial emissions of $SO_2$, after Shandong. Shandong, Zhejiang, Jiangsu and Anhui are the largest contributors to $NO_X$ emissions, which is due to a number of clinker-producing centers using large precalciner kilns in these provinces. The highest $PM_{2.5}$, $SO_2$ and $NO_X$ emissions are all located in the same grid cell in Shandong province, where the city of Zaozhuang is found.

### 3.3. Comparison of $CO_2$ emissions with other studies

Some studies have been conducted to quantify $CO_2$ emissions from cement production in China, but few of them have observed the effects of developments in technology on $CO_2$ emissions in China. We compare our estimates with some results from other studies in Table 6. All $CO_2$ emission estimates were converted to $CO_2$ EFs in the comparison.

Generally speaking, estimates of China's $CO_2$ emissions as a part of global studies (e.g., WBCSD, 2002; Boden et al., 2009) are much higher than estimates made from domestic studies because some parameters used in global studies doesn't fit the real situation of Chinese cement industry. For example, a higher clinker to cement ratio was used in global studies (83–100%) than in domestic ones (72–75%). Higher energy intensity was assumed in global studies as well, which led to higher EFs of $CO_2$ from energy consumption. The other factor leads to higher results in global studies is that indirect $CO_2$ emissions from electricity consumption are usually included in those analyses. The national average electricity intensity of China's cement industry is 110–115 kwh/tonne cement (Liu et al., 1995; MEP, 2009). Therefore electricity consumption during cement production leads to additional indirect $CO_2$ emissions of 0.102–0.107 kg $CO_2$/kg cement.

Our estimates of $CO_2$ emissions are generally comparable with most domestic studies. However, the recent studies by Cui and Liu (2008) and Wang (2009) indicate much lower values of $CO_2$ emission than our study, as their estimations were based on the working practices of advanced precalciner cement plants. These lower EFs indicate that China's cement industry shows promising potential to reduce $CO_2$ emissions.

## 4. Future emissions and mitigation potential

Since emissions from China's national cement industry contribute significant levels of several air pollutants, accurate emission projections are necessary to inform Chinese national strategies on air pollution control and GHG mitigation. In this study, the future emissions from the cement industry for the period 2010–2020 were estimated, and the potential of mitigation technologies to reduce the emission is analyzed.

### 4.1. Emissions projection

Cement production in China exceeded 1.63 billion metric tons in 2009, and the available statistical data show another 19% increase in the first 5 months of 2010 (http://www.stats.gov.cn/tjsj/), in comparison with the same period of 2009. Expert opinion from the CCA indicates that cement production may reach approximately 1.8 billion tons in 2010 (personal communication), but projecting as far ahead as 2020 reveals large differences between the available predictions: the Chinese Academy for Environmental Planning predicted production to be 2.1 billion metric tons based on future investment in fixed assets; Ho and Jorgenson (2007) modeled China's economy with a computable general equilibrium (CGE) economic model that included 33 production sectors and one household sector, and predicted production to be 1.7 billion metric tons in 2020; Wei and Yagita (2007) coupled cement production with future rates of urbanization and building area and predicted production to be 1.2 billion metric tons by the same date. Considering the large uncertainties involved in predicting the development of China's cement industry over the next 10 years, our emission projections are based on these three studies' predictions of cement production by 2020, representing scenarios of high, medium and low production, respectively.

The key technological features of the cement industry are projected based on the existing policies on industry structure (NDRC, 2006), energy saving (MEP, 2009) and emission control (SEPA, 2004). Assuming no new policy will come into effect before 2020, future EFs of air pollutants from the cement industry were estimated using the same methodology described in Sect. 2, as listed in Table 7. Generally speaking, the continued replacement of shaft kilns by precalciner kilns will lead to a decrease in both coal intensity and in $CO_2$ EFs. Higher penetration of precalciner kilns will also result in a decrease in $SO_2$ and CO EFs, and an increase in $NO_X$ EFs. PM EFs are predicted to fall with the progressive construction of new cement plants which meet the requirement of the latest emission standards.

According to our estimates (Table 8), the emissions of $SO_2$, CO and PM from China's cement industry will decrease in all of the three scenarios; however, emissions of $NO_X$ and $CO_2$ will increase until 2020 in the high-production scenario. Emissions of $NO_X$ will be considerable, compared with $SO_2$ and PM emissions. The ratio of $NO_X$ to $SO_2$ will increase from 2.07 in 2010 to 3.14 in 2020, indicating that greater focus should be given to $NO_X$ emission control in order to prevent pollution from acid rain. The differences in $CO_2$ emissions between 2010, 2015 and 2020 are less than those of other pollutants. This is because under current policies the EF of $CO_2$ will

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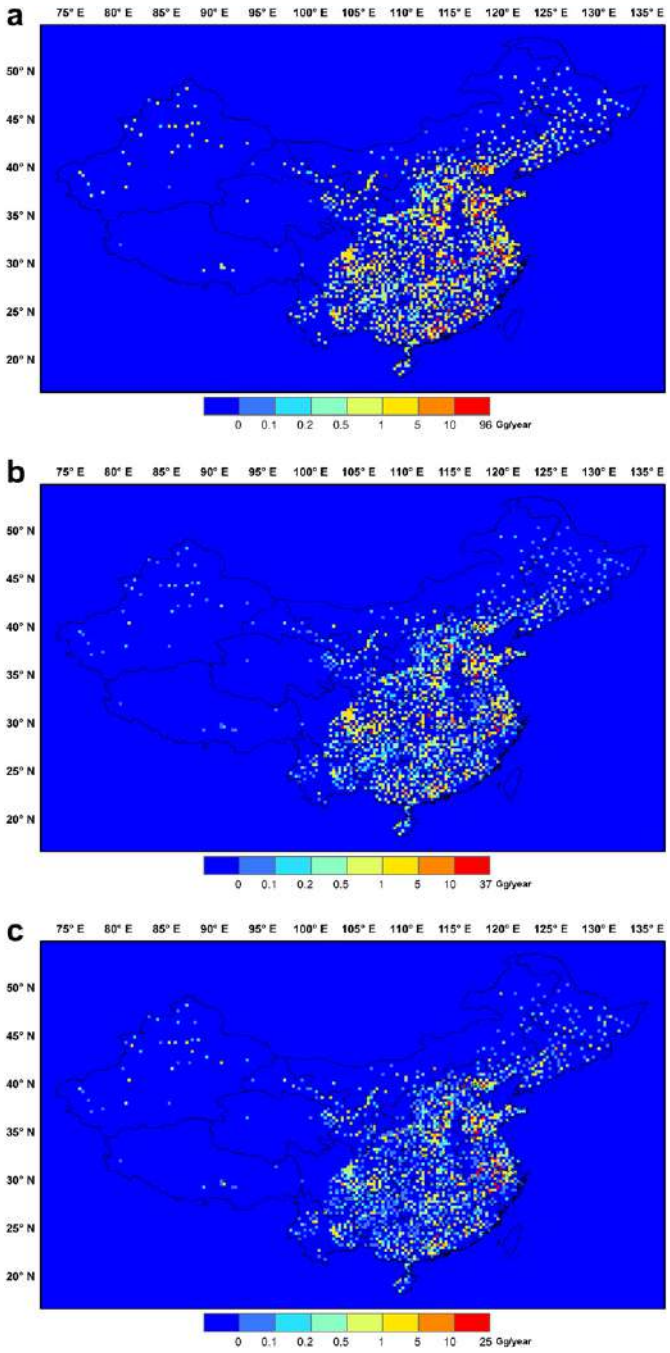



**Fig. 4.** Emissions of $PM_{2.5}$, $SO_2$ and $NO_X$ from the cement industry in China plotted on an 18′ × 18′ grid; provincial boundaries are shown. (a) $PM_{2.5}$; (b) $SO_2$; (c) $NO_X$.

not change as much as other pollutants. However, as $CO_2$ emissions mitigation is of serious concern, more policies should be considered to reduce $CO_2$ EFs from China's cement industry.

### 4.2. Potential for $CO_2$ mitigation

Several studies have addressed potential reductions in $CO_2$ emissions from China's cement industry. The World Business Council for Sustainable Development (WBCSD, 2009a) has summarized the recent studies and pinpointed four areas of technology for the reduction of $CO_2$ emissions: thermal and electric efficiency, alternative fuels, clinker substitution, and carbon capture and storage (CCS). Following the technology roadmap laid out by WBCSD (2009a), we analyzed the potential for $CO_2$ mitigation by China's cement industry in 2020, as listed in Table 9. Thermal efficiency could be improved by replacing small shaft kilns by large precalciner kilns. On a global level, top 10% advanced kilns can currently operate at a average thermal efficiency of 3.10 MJ $kg^{-1}$-clinker (MEP, 2009; WBCSD, 2009a), and although the clinker to cement ratio in China is already lower than the global average (WBCSD, 2009b; Worrell et al., 2001), the predicted increase of power plants and iron and steel plants will increase the availability of by-products which can be used as substitutes for clinker. It is estimated that the clinker to cement ratio could drop to 65% (CCA, personal communication). A few cement plants in China have begun to use solid waste as a fuel in kilns as a substitute for coal. WBCSD (2009a) projected that the share of alternative fuel in clinker fuel use in Asia could increase at an annual rate of 0.6%. CCS technologies are long-term approaches to carbon management and are not likely to be accessible by 2020; therefore we do not include them in our analysis.

Our analysis indicates that the potential for $CO_2$ mitigation by clinker substitution is likely to be much larger than that possible by improvements in thermal efficiency and from the use of alternative fuels. If these three technologies are implemented together, $CO_2$ emissions from cement production could be reduced by 12.8% by 2020. Using the mid-level scenario of predicted increase in cement production, mitigation of $CO_2$ emissions will be 130 Tg of $CO_2$, equivalent to the emissions of $CO_2$ from the usage of 67 Tg of coal.

**Table 6**
Comparison of EFs used for the estimation of $CO_2$ emissions (kg $CO_2$/kg cement).[a]

| | Energy consumption | Calcining process | Total |
|---|---|---|---|
| This study[b] | 0.248–0.336 | 0.395 | 0.643–0.731 |
| Zhu, 2000[c] | 0.367–0.393 | 0.365 | 0.732–0.758 |
| Worrell et al., 2001[d] | (0.467) | 0.415 | (0.883) |
| WBCSD, 2002[e] | – | – | (0.900–0.950) |
| NDRC, 2004 | – | 0.374 | – |
| He and Yuan, 2005 | – | – | 0.671–0.913[f] |
| Cui and Liu, 2008 | 0.168 (0.259) | 0.395 | 0.563 (0.654) |
| Boden et al., 2009 | – | 0.496–0.507 | – |
| Wang, 2009 | (0.226) | 0.427 | (0.653) |

[a] The values in parentheses refer to EFs that include indirect $CO_2$ emission from power consumption.
[b] The lower value in the range is the EF in 2008, and the upper value is the EF in 1990.
[c] The lower value in the range is the EF in 1997, and the upper value is the EF in 1990.
[d] The EF is used to estimate $CO_2$ emission in 1994.
[e] The lower value in the range is the EF in 1995, and the upper value is the EF in 1990.
[f] The range represents the different EF values for different type of kilns.

**Table 7**
The key features and EFs of China's cement industry in 2010, 2015 and 2020 (projections based on existing policies).

| | 2010 | 2015 | 2020 |
|---|---|---|---|
| Proportion of precalciner kilns (%) | 75 | 85 | 90 |
| Coal intensity (MJ $kg^{-1}$-clinker) | 3.58 | 3.39 | 3.22 |
| Clinker to cement ratio | 72 | 72 | 72 |
| $SO_2$ EF (k $kg^{-1}$ coal consumed) | 5.8 | 4.8 | 4.4 |
| $NO_X$ EF (k $kg^{-1}$ coal consumed) | 12.0 | 13.1 | 13.8 |
| CO EF (k $kg^{-1}$ coal consumed) | 51.8 | 40.2 | 32.8 |
| $CO_2$ EF (kg $kg^{-1}$ cement) | 0.634 | 0.621 | 0.610 |
| $PM_{2.5}$ EF (k $kg^{-1}$ cement) | 0.80 | 0.58 | 0.47 |
| $PM_{10}$ EF (k $kg^{-1}$ cement) | 1.26 | 0.94 | 0.78 |
| TSP EF (k $kg^{-1}$ cement) | 1.55 | 1.16 | 0.97 |

5.2.b
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Packet Pg. 194

**Table 8**
Future output and coal consumption of China's cement industry, and associated emissions of air pollutants (Tg) for three production scenarios of high, medium and low cement production (see text for details).

| | High | | | Medium | | | Low | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2010 | 2015 | 2020 | 2010 | 2015 | 2020 | 2010 | 2015 | 2020 |
| Cement production | 1800 | 2010 | 2140 | 1800 | 1850 | 1660 | 1800 | 1580 | 1170 |
| Coal consumption | 222 | 234 | 237 | 222 | 216 | 184 | 222 | 184 | 130 |
| $SO_2$ emissions | 1.29 | 1.12 | 1.04 | 1.29 | 1.04 | 0.81 | 1.29 | 0.88 | 0.57 |
| $NO_X$ emissions | 2.67 | 3.07 | 3.28 | 2.67 | 2.83 | 2.54 | 2.67 | 2.41 | 1.79 |
| CO emissions | 11.51 | 9.42 | 7.79 | 11.51 | 8.67 | 6.04 | 11.51 | 7.40 | 4.26 |
| $CO_2$ emissions | 1141 | 1248 | 1305 | 1141 | 1149 | 1013 | 1141 | 981 | 714 |
| $PM_{2.5}$ emissions | 1.44 | 1.17 | 1.01 | 1.44 | 1.07 | 0.78 | 1.44 | 0.92 | 0.55 |
| $PM_{10}$ emissions | 2.27 | 1.89 | 1.67 | 2.27 | 1.74 | 1.29 | 2.27 | 1.49 | 0.91 |
| TSP emissions | 2.79 | 2.33 | 2.08 | 2.79 | 2.15 | 1.61 | 2.79 | 1.83 | 1.13 |

### 4.3. Potential for emission control of other air pollutants

Current emission standards have promoted the use of advanced emission control technologies; however, the level of emission control in China's cement industry is still lower than that of advanced countries. If state-of-the-art control technologies are used, there is potential to substantially further reduce the emission of air pollutants from the cement industry in China.

PM emissions have been the major focus of air pollution control from the cement industry for years. As of 2010, all new cement plants are required to meet an emission standard of 50 mg $m^{-3}$ flue gas (SEPA, 2004), which equates to a PM EF for the whole production process of approximately 1 g $kg^{-1}$ cement (CRAES, 2003). This emission level could be even lower, however, when baghouse filters replace PM control devices that are relatively inefficient. If all of China's cement plants used baghouse filters in major production processes, the average PM EF could drop to 0.7 g $kg^{-1}$ cement.

Deployment of baghouse filters will benefit $SO_2$ emission control as well. However, emissions of $NO_X$ would not be reduced unless selective catalytic reduction (SCR) or selective non-catalytic reduction (SNCR) technology is used. Although BREF documents state that $NO_X$ emissions could be as low as 200–500 mg $m^{-3}$ if the best available technologies (BAT) are used, actual $NO_X$ emissions from most European cement plants using SNCR technology are 500–800 mg $m^{-3}$ (Jiao, 2007). If China's cement plants could reduce the average $NO_X$ emission level to 500 mg $m^{-3}$ in 2020, the corresponding $NO_X$ EF would be 9.7 k $kg^{-1}$ coal.

The technologies used to mitigate $CO_2$ emissions are also effective in reducing emissions of PM, $SO_2$ and $NO_X$. Based on mid-scenario emissions of these pollutants in 2020, we estimated the potential for emission reduction from each mitigation technology, as listed in Table 10. Our estimates indicate that there is the potential for China's cement industry to reduce air pollutants substantially. Baghouse filters and SCR/SNCR technologies are likely to be the most effective in controlling PM and $NO_X$ emissions, respectively, and technologies to abate $CO_2$ emissions will also bring significant benefits in terms of $SO_2$ emission control.

**Table 9**
Estimated emission reduction potential from major $CO_2$ mitigation technologies in 2020.

| Technology category | Improvement of performance | $CO_2$ reduction (%) |
|---|---|---|
| Thermal efficiency | Thermal intensity drops from 3.22 MJ $kg^{-1}$ clinker to 3.10 MJ $kg^{-1}$ clinker | 1.3 |
| Clinker substitution | Clinker to cement ratio drops from 72% to 65% | 9.7 |
| Alternative fuels | Share of alternative fuel increases by 6% | 2.1 |

**Table 10**
Emission reduction potential of PM, $SO_2$ and $NO_X$ in 2020.

| Technology category | $PM_{2.5}$ | $PM_{10}$ | TSP | $SO_2$ | $NO_X$ |
|---|---|---|---|---|---|
| Baghouse filters | 39.8% | 32.0% | 28.0% | 8.6% | – |
| SCR/SNCR | – | – | – | – | 29.4% |
| Thermal efficiency | – | – | – | 3.7% | – |
| Clinker substitution | 6.5% | 5.5% | 4.1% | 9.7% | 9.7% |
| Alternative fuels | – | – | – | 6.0% | – |
| All | 44% | 36% | 31% | 25% | 36% |

## 5. Conclusions

The cement industry plays an important role in emissions of many air pollutants in China. This study estimates the direct emissions of major air pollutants from cement production based on information on the development of production technologies and rising emission standards in China's cement industry. Our analysis shows that with the replacement of old shaft kilns by precalciner kilns, there is an opportunity to reduce PM emissions through the implementation of stricter emission standards and the promotion of high-performance PM control technologies. Other air pollutants such as CO and $SO_2$ will also decrease as shaft kilns are gradually retired. However, the promotion of precalciner kilns within China and a rapid increase in cement production has led to greatly increased $NO_X$ emissions. Future $NO_X$ emission could be reduced if SCR or SNCR technologies are introduced within the cement industry, although the cost of introduction is likely to be considerable.

Although energy-use efficiency in China's cement industry has improved significantly in recent years, the industry still contributes approximately one eighth of the nation's $CO_2$ emissions. Our analysis indicates that it may be possible to reduce $CO_2$ emissions by 12.8% by 2020 if advanced energy-related technologies are implemented, and that the substitution of clinker with other material is likely to be the most effective technology in this regard. These energy-related technologies are likely to bring additional benefits by reducing the emission other air pollutants as well.

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Exhibit 7

*Full Length Research Paper*

# Effect of cement dust pollution on microbial properties and enzyme activities in cultivated and no-till soils

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**Cement dust pollution is one of the sources of atmospheric pollution. The main impacts of the cement activity to the environment are the broadcasts of dusts and gases. The objective of this study is to determine the effects of cement dust pollution, which was generated by cement plant, on soil microbial population, microbial respiration, and some enzyme activities in cultivated wheat (CT) and no-till (NT) soils. The fields are located at distances of 1, 3, 5, 7, 10 and 15 km away from the cement plant. In dominant wind direction, three replicated 36 soil samples were taken from a depth of 0 to 20 cm and analyzed for chemical, physical and microbiological properties. Soil microbial population and $CO_2$-C production showed significant ($p < 0.05$) positive correlation in CT and NT soils. The highest microbial population and $CO_2$-C production was observed at 15 km away from the cement plant in CT and NT soils. Acid phosphatase, urease and dehydrogenase enzyme activities of the soils showed significant ($p < 0.01$) positive correlation with distance in CT and NT ($r^2$ = 0.80-0.86; $r^2$ = 0.90 to 0.92; $r^2$ = 0.79 to 0.82, respectively). There was negative correlation between alkaline phosphatase enzyme activity and distance in CT and NT ($r^2$ = 0.60, $r^2$ = 0.68; $p < 0.05$).**

**Key words:** Microbial respiration, $CO_2$-C production, microbial population, cement dust pollution, soil enzyme activity.

## INTRODUCTION

Air pollutants generated by the cement manufacturing process consist primarily of alkaline particulates from the raw and finished materials. The direct effects of cement dust pollution are the alkalization of the ecosystem and the changing of the chemical composition of soils (Mandre, 1995). The main impacts of the cement activity on the environment are the broadcasts of dusts and gases. The pollutant particles can enter into soil as dry, humid or occult deposits and can undermine its physicochemical properties (Laj and Sellegri, 2003). Thus, cement dust pollution has a negative effect on the physico-chemical properties and the biological activity of the soil. Soil microbial activity is important for the nutrient biogeochemical cycling and it is negatively affected by the cement dust pollution (Ocak et al., 2004; Nowak et al., 2003). The most commonly used microbial activity indicators for soil health monitoring are microbial biomass, soil respiration and soil enzyme activity (Nielsen and Winding, 2002).

Microorganisms are the main source of enzymes in soils It is well known that all biochemical reactions are catalyzed by enzymes, which are proteins with catalytic properties owing to their power of specific activation. Soil enzyme activities are often used as indices of microbial growth and activity in soils. Enzyme activities play key roles in the biochemical functioning of soils, including soil organic matter formation and degradation, nutrient cycling, and decomposition of xenobiotics (Frankerberger and Dick 1983; Chen et al., 2003; Acosta-Martínez et al., 2007) Their activity may correlate well with nutrient availability and soil fertility (Nannipieri et al., 2003; Baum et al., 2003).

Soil enzymatic activities depend on optimum conditions of moisture, pH, temperature and substrate concentration Soil pH can affect enzyme activity by influencing the concentration of inhibitors or activators in the soil solution and the effective concentration of the substrate. Enzymatic activities may vary under stress when soil is contaminated

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by heavy metals (Dick, 1997; Dick et al., 2000). Enzyme activities have been found to be very responsive to different agricultural soil conservation practices such as non-tillage (Bergstrom et al., 1998), organic amendments, and crop rotation (Miller and Dick, 1995). The difference in microbial dynamics and population, due to soil management practices, may also be reflected in the differences in enzyme activities of soils. Although it has been demonstrated that adoption of long-term cropping system may affect several soil properties, limited information is available about the effect of tillage on enzyme activities of soils. Tillage and management practices may lead to significant changes in biological, chemical and biochemical properties of soils and alter the composition, distribution, and activities of soil microbial community and enzymes (Dick, 1984; Dick et al., 1988). Acid phosphatase, alkaline phosphatase, arylsulfatase, invertase, amidase, and urease activity in 0 to 7.5 cm surface soils were significantly greater in soils from no-till plots, as compared with those from conventional tillage plots (Dick, 1984).

Phosphatase enzymes can be a good indicator of the organic phosphorus mineralization potential and biological activity of soils (Dick and Tabatabai, 1993). Phosphatase activity, which is related to soil and vegetation conditions, responds to changes in management (Herbien and Neal, 1990), and can be related to seasonal changes in soil temperature and moisture (Speir and Cowling, 1991). The phosphatases are significantly affected by soil pH, which controls phosphorus availability in soil, and this could occur despite the level of organic matter content or disturbance (Acosta-Martínez et al., 2007). Studies showed that acid phosphatase is predominant in acidic soils but alkaline phosphatase is predominant in alkaline soils (Deng and Tabatabai, 1997). The inverse relationship between phosphatase activity and soil pH suggests that the rate of synthesis and release of this enzyme by soil microorganisms or the stability of this enzyme are related to soil pH. Since higher plants are devoid of alkaline phosphatase activity, the alkaline phosphatase activity in soils seems derived totally from microorganisms (Dick et al., 1983).

Urease is a ubiquitous cell-free exoenzyme in nature that is produced by plants and microorganisms. Urea is the most widely used nitrogenous fertilizer in world agriculture today. It is hydrolyzed enzymatically by soil urease and the resulting release of ammonia and rise in pH can lead to some problems. These problems are accentuated in alkali soils where the high soil pH can induce appreciable ammonia volatilization (Brynes and Frency, 1995). Alkali soils have low amounts of organic carbon and nitrogen and low levels of urease and dehyrogenase activity (Rao and Ghai, 1985).

Dehydrogenase activity is commonly used as an indicator of biological activity in soil (Beyer et al., 1992). Dehydrogenase enzymes play a significant role in the biological oxidation of soil organic matter by transferring protons and electrons from substrates to acceptors (Dick and Tabatabai, 1993). According to Frankenberger and Dick (1983), dehydrogenase activity is often correlated with microbial respiration when exogenous C sources are added to soil. Skujins (1973) and Casida (1977) reported close correlations of dehydrogenase activity with CO release and $O_2$ uptake, respectively. The highest activity occurred in top 3 cm of an arid soil, but there was no correlation with microbial number because the dehydrogenase activity depends on the total metabolic activity and soil microorganisms. The value of metabolic activity and soil microorganisms in different soils containing different populations, does not always reflect the total numbers of viable microorganisms that are isolated on a particular medium.

In this study, we aimed to detect possible impacts of cement dust pollution, which are generated by cement factory, on microbial population (bacteria and fungi) microbial respiration ($CO_2$-C production) and some enzyme (acid, alkaline phosphatase, urease and dehydrogenase activities in cultivated with wheat and no-till soils.

## MATERIALS AND METHODS

### Experimental site, soil sampling and soil analysis

The study was conducted in the vicinity of Askale town cement plant (39°54' N and 41°13' E at 1883 m above mean sea level), west of the Erzurum, Turkey. Based on area distribution within a soil-mapping unit, the sampling sites at 1, 3, 5, 7, 10 and 15 km away from the Askale cement plant were randomly selected in cultivated (CT) vs no-till (NT) soils. The chimney height of the Askale cement plant was 50 m. The composition of emissions for cement plant were particle matter (48 kg $h^{-1}$), CO (146 kg $h^{-1}$), $NO_2$ (186 kg $h^{-1}$) and $SO_2$ (6 kg $h^{-1}$). The dominant wind direction is north-west, and soil sampling was coincided with the same wind direction. The minimum and maximum temperatures were 11.4 and 26.5°C respectively, and average annual temperature was 15.4°C. The mean relative humidity, wind speed, daily sunshine, total precipitation, and total evaporation were in order 57.42%, 4.71 m $s^{-1}$, 11.12 h, 61.4 mm, and 389.4 mm in 2008 (1 May to 29 Sept.). Three replicated sub-plots were selected within each site. Total 36 sampling sites (6 distance x 2 tillage x 3 replications) were selected for soil collection. The soil was classified as Askale series (ustorthents) according to the USDA soil taxonomy (Soil Survey Staff, 1999). The experiment area soil texture classes were determined loam to clay. The site has a semiarid climate and average annual rainfall of 427 mm. The major crops grown in this area are wheat, barley, secale, maize, cabbage, cotton, sugar beat, and potatoes.

In this research, soil samples were taken from 0 to 20 cm depth (tillage layer) in September 2008. The samples were composited and 2-mm sieved to remove stones, roots, and large organic residues and analyzed. Total organic matter (SOM) content was determined by following the standard loss-on-ignition (LOI) method (Nelson and Sommers, 1996). The $CaCO_3$ content was determined by using the pressure calcimeter method (Leoppert and Suarez, 1996). Total N content of soil was measured by the micro-Kjeldahl method (Bremner 1996). Soil pH was determined by using a glass electrode meter in 1:2.5 soil: water ratio (Handershot et al., 1993). Effective cation exchange capacity was calculated as the sum of exchangeable cations (Sumner and Miller, 1996). Melich I solution was used to extract exchangeable cations and determined by atomic absorption spectrophotometer (Hanlon and DeVore, 1989). The available P in soil was determined by following ammonium molybdate-ascorbic acid

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5.2.b

method (Knudsen and Beegle, 1988). Microelements in the soils were determined by DTPA extraction method (Lindsay and Norvell, 1978). Soil particle size distribution was determined by the hydrometer method (Gee and Bauder, 1986). Soil textural class was determined by following the USDA textural triangle. Electrical conductivity was measured in saturation extracts according to Rhoades (1996). The soils were analyzed for selected physical and chemical properties (Table1).

### Soil biological analysis

Culturable bacteria and fungi cells were enumerated by using spread soil dilution plate method. For bacteria and fungi, each dilution of the series ($10^6$–$10^7$) in PBS (0.15 M potassium phosphate 0.85% NaCl, pH 7.2) was prepared and placed onto Petri-dishes (Zuberer, 1994). Soil extract agar (SEA) was used for bacterial incubation at 30ºC for 7-d (Zuberer, 1994), dextrose-peptone agar (DPA) was used for fungal incubation at 25ºC for 7-d (Parkinson, 1994). After the incubation, the average colony forming units (CFU) per gram of oven-dried equivalent (ODE) of field-moist soil was calculated by using an automated colony counter (Madigon et al., 2006) (Table 2).

Basal respiration (BR), as a measure of soil biological activity, was determined by using in vitro static incubation of unamended field-moist soil (Islam and Weil, 2000). About 20 g ODE of field-moist soil adjusted at 70% water-filled porosity (WFP) was taken in 25 ml glass beakers. Each soil sample was placed in a 1 L mason jar along with a glass vial containing 10 mL of distilled deionized water to maintain humidity and a plastic vial containing 10 mL of 0.5 M NaOH to trap $CO_2$ evolved from the incubated soil. The mason jars were sealed airtight and incubated in the dark at 25 ± 1°C for 20 days. The $CO_2$ evolved over time was absorbed in the 0.5 M NaOH followed by precipitation as $BaCO_3$ by the addition of excess 1M $BaCl_2$. The remaining NaOH in each vial was then titrated to the phenolphthalein endpoint with a standardized 0.5 M HCl solution (Table 2). The BR rate was calculated as below:

BR rates (mg $CO_2$/kg soil) = ($CO_2$soil - $CO_2$air)/20 days

Urease enzyme (UE) activity was assayed by using urea solution and expressed as µg $NH_4$-N per g soil and incubation time (2 h). Acid phosphatase (AcdP) and alkaline phosphatase (Alk-P) activities were assayed by using substrate pNPP (para-nitrophenyl phosphate) and expressed as l µg pNPP per gram soil and incubation time (hours). Dehydrogenase enzyme (DHE) activity was determined with TTC (triphenyl tetrazolium chloride) and expressed as µg TPF per gram soil and incubation time (24 h) according to Tabatabai (1994) (Figure 1a,b, 2, 3).

### Statistical analysis

Statistical analysis was done for soil microorganism population and $CO_2$-C production using repeated measures analysis of variance (ANOVA). Comparison of means was performed, when the F-test for treatment was significant at the 5% level, using Duncan's multiple means tests. In addition, we tested effects of cement dust pollution on soil enzyme activities by calculating regression equation and simple linear correlation coefficient (r) procedures. SPSS 17.0 package was used for all statistical tests.

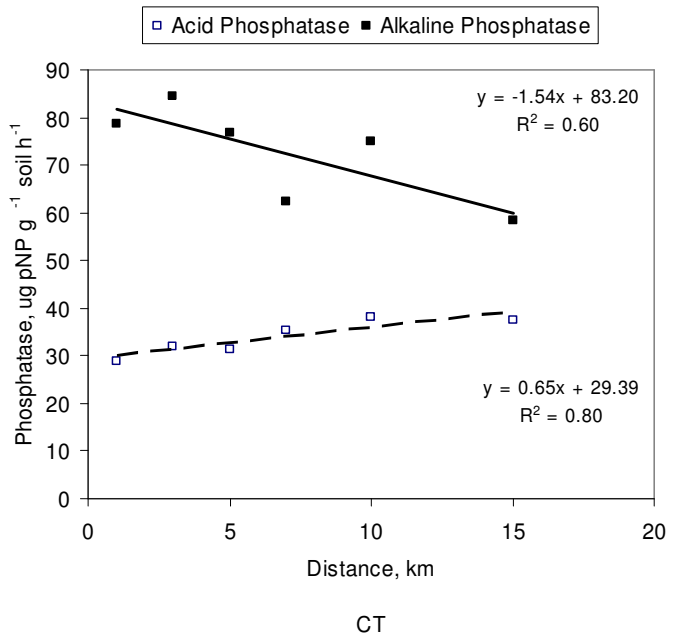



**Figure 1a.** Acid phosphatase enzyme activities vs. polluted distance by cement dust in CT soils.

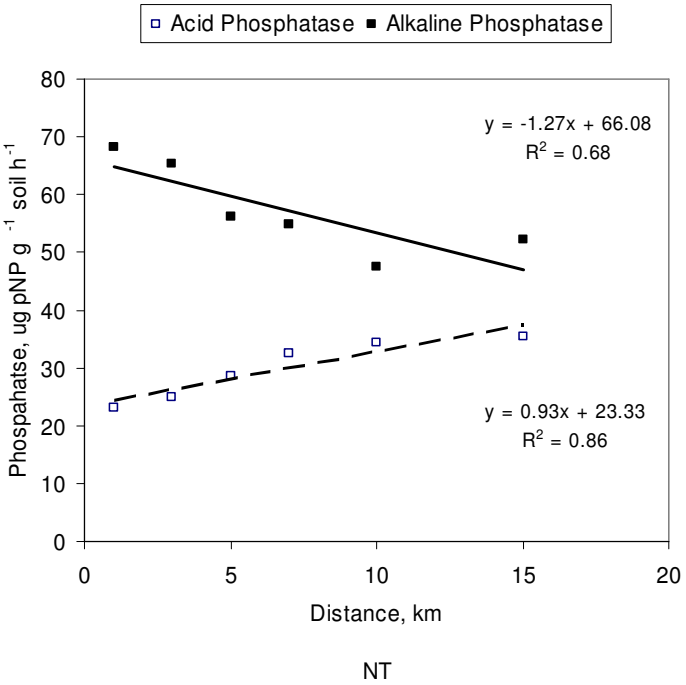



**Figure 1b.** Alkaline phosphatase enzyme activities vs. polluted distance by cement dust in NT soils.

## RESULTS

Some chemical and physical properties of the studied soils are given in Table 1. According to Table 1, most soils had an alkaline reaction between pH 7.40 to 9.24. Soil pH values at a distance of 1 km were 8.83 in CT and 8.52 in NT and at distance of 15 km 7.40 in CT and NT soils Increasing distance from cement plant decreased soil pH ir CT and NT soils. The soils did not exhibit any salinity

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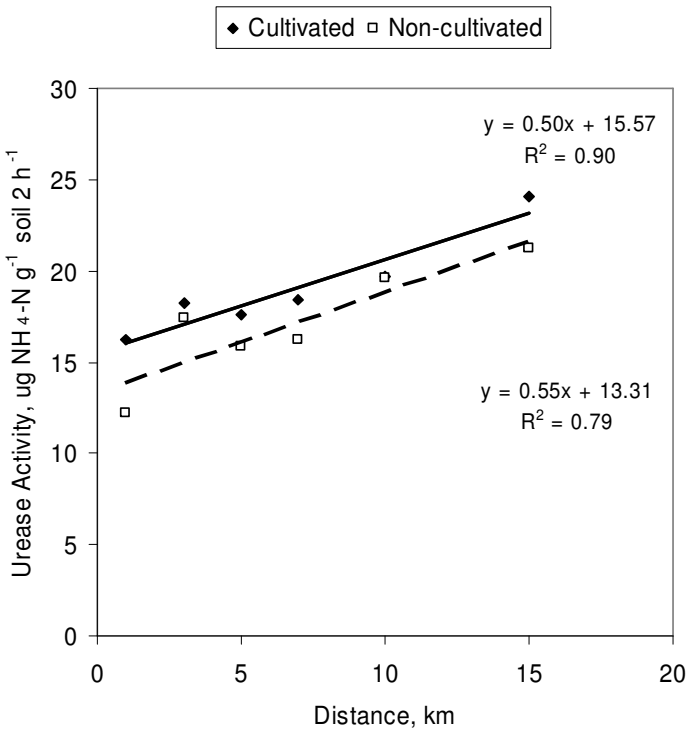



**Figure 2.** Urease enzyme activities vs. polluted distance by cement dust in CT and NT soils.

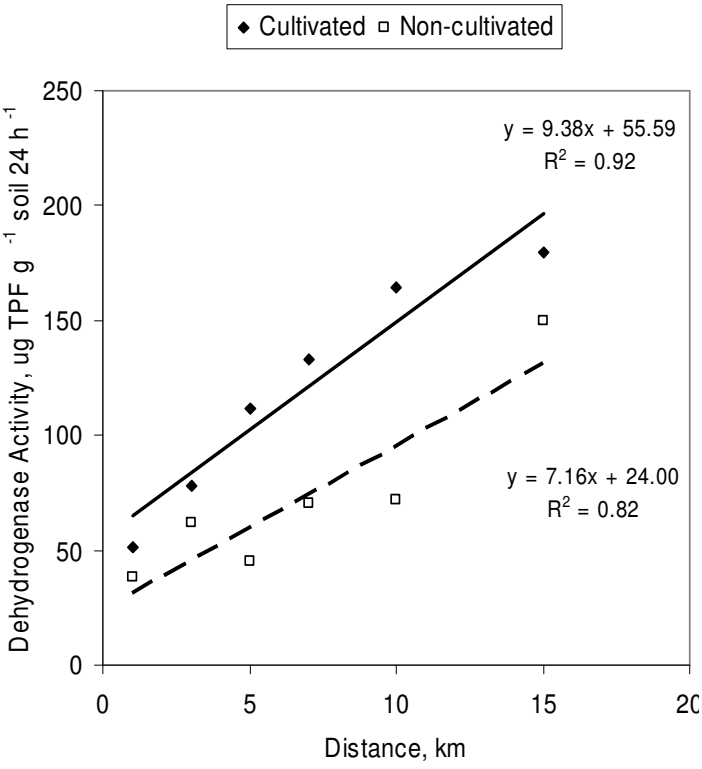



**Figure 3.** Dehydrogenase enzyme activities vs. polluted distance by cement dust in CT and NT soils.

problem but there was enough lime (3.42 to 5.63% present in the soil to be classified calcareous soils Contents of organic matter of the soils were determined between 1.45 to 2.86% (low-middle), total nitrogen between 0.1 to 0.29% and contained sufficient N, available phosphorus between 11.50 to 18.70 mg $kg^{-1}$ (low) (FAO 1990), and cation exchangeable capacity between 30.34 to 38.42 cmol $kg^{-1}$ .

**Effects of spatial variation on microbial population and $co_2$-c production**

The quantitative analysis of bacteria, fungi, and soil $CO_2$-C production in CT and NT soils are given in Table 2 According to the results of ANOVA, significant ($p < 0.05$ differences on average number of bacteria and fungi were observed among different distances from the cement factory in CT and NT soils.

The highest number of bacteria were observed at a distance of 15 km (387.2 x $10^6$ CFU $g^{-1}$ soil) from the cement plant in CT and the lowest were observed at a distance of 1 km (296.3x$10^6$ CFU $g^{-1}$ soil) from the cement plant in CT. The highest number of bacteria were obtained at a distance of 15 km (370.6 x $10^6$ CFU $g^{-1}$ soil) in NT and the lowest were obtained at distance of 1 km (215.7 x 10 CFU $g^{-1}$ soil) from the cement plant in NT soils. Average numbers of bacteria were higher in CT (332.5x$10^6$ CFU $g^{-1}$ soil) soils than in NT (282.8 x $10^6$ CFU $g^{-1}$ soil) soils. Soil microbial population showed a significantly positive correlation with distance in CT and NT ($r^2 = 0.53$; $r^2 = 0.56$ $p < 0.05$) soils.

Significant ($p < 0.05$) differences in average number of fungi were observed among different distances from the cement factory in CT and NT soils. The highest number of fungi was obtained at distance of 7 km and the lowest was obtained at a distance of 1 km from the cement plant in CT (37.2 x $10^4$; 21.6 x $10^4$ CFU $g^{-1}$ soil) and NT (71.4 x $10^4$ 42.6 x $10^4$ CFU $g^{-1}$ soil) soil. Average number of fungi was determined 58.1 x $10^4$ CFU $g^{-1}$ soil in NT and 29.7 x 10 CFU $g^{-1}$ soil in CT soils. Number of fungi showed significant positive correlation with distance in CT ($r^2$ = 0.58; $p < 0.05$) and NT ($r^2 = 0.74$, $p < 0.05$) soils (Table 2).

According to Table 2, statistical results showed a significant ($p < 0.05$) differences between distance and average $CO_2$-C production depending on distance from the cement factory. Increasing distance increased $CO_2$-C production in CT and NT soils. The highest $CO_2$-C production was observed at distance of 15 km from cement factory in CT (31.5 mg $CO_2$-C $m^2$ $h^{-1}$) and NT (21.8 mg $CO_2$-C $m^2$ $h^{-1}$) soils. The lowest $CO_2$-C production was observed at distance of 1 km from cement factory in CT (21.6 mg $CO_2$-C $m^2$ $h^{-1}$) and NT (16.0 mg $CO_2$-C $m^2$ $h^{-1}$ soils. The average $CO_2$-C production was determined 27.2 mg $CO_2$-C $m^2$ $h^{-1}$ soil in CT, and 19.3 mg $CO_2$-C $m^2$ $h^{-1}$ soil in NT soils. Average soil $CO_2$-C production showed significant positive correlation with distance in CT and NT ($r^2 = 0.94$, $p < 0.01$) soils.

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5.2.b

**Table 1.** Some chemical and physical properties of CT and NT soils.

| Soil properties | | Polluted distance by cement dust | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 km | | 3 km | | 5 km | | 7 km | | 10 km | | 15 km | |
| | | CT | NT | CT | NT | CT | NT | CT | NT | CT | NT | CT | NT |
| pH (1:2.5) (soil/water) | | 8.83 | 8.52 | 9.24 | 8.71 | 8.54 | 8.21 | 8.24 | 7.85 | 7.82 | 8.12 | 7.40 | 7.40 |
| Organic matter, % | | 1.96 | 1.62 | 2.04 | 2.21 | 2.00 | 2.26 | 2.42 | 2.86 | 2.01 | 1.45 | 2.54 | 2.32 |
| $CaCO_3$ . % | | 5.49 | 3.70 | 3.83 | 4.20 | 4.66 | 5.26 | 5.63 | 4.21 | 4.38 | 3.75 | 4.63 | 3.42 |
| Total N, % | | 0.15 | 0.10 | 0.19 | 0.14 | 0.25 | 0.21 | 0.26 | 0.17 | 0.29 | 0.21 | 0.19 | 0.25 |
| Available P, mg $kg^{-1}$ soil | | 14.23 | 10.20 | 18.70 | 14.20 | 16.47 | 18.00 | 16.47 | 13.40 | 17.21 | 13.70 | 15.30 | 11.50 |
| Exchageable Cations, cmol $kg^{-1}$ soil | $Ca^{+2}$ | 23.11 | 25.46 | 20.18 | 24.53 | 21.65 | 23.45 | 21.65 | 18.46 | 21.16 | 21.45 | 17.56 | 18.63 |
| | $Mg^{+2}$ | 9.70 | 7.87 | 8.48 | 9.56 | 9.09 | 8.23 | 9.09 | 6.85 | 8.89 | 7.23 | 6.05 | 7.26 |
| | $K^{+1}$ | 3.17 | 4.12 | 2.76 | 3.74 | 2.97 | 1.86 | 2.97 | 2.76 | 2.90 | 3.25 | 3.56 | 4.85 |
| | $Na^{+1}$ | 0.38 | 0.26 | 0.31 | 0.28 | 0.35 | 0.21 | 0.35 | 0.18 | 0.33 | 0.48 | 0.31 | 0.29 |
| Micro Elements, ppm | Fe | 24.11 | 25.45 | 20.54 | 23.05 | 21.37 | 25.93 | 23.17 | 17.95 | 23.30 | 24.15 | 21.85 | 22.83 |
| | Cu | 2.56 | 3.66 | 2.57 | 3.60 | 2.63 | 3.21 | 3.48 | 2.89 | 4.46 | 4.99 | 4.59 | 3.01 |
| | Zn | 2.85 | 2.19 | 1.60 | 1.91 | 1.23 | 2.17 | 2.30 | 1.06 | 2.93 | 2.30 | 2.82 | 2.76 |
| | Mn | 8.29 | 9.63 | 11.19 | 9.03 | 13.14 | 9.15 | 6.58 | 11.17 | 11.16 | 10.87 | 13.30 | 13.83 |
| CEC, cmol $kg^{-1}$soil | | 36.29 | 38.24 | 35.77 | 38.42 | 36.03 | 34.59 | 36.03 | 30.65 | 35.94 | 33.25 | 30.34 | 33.24 |
| Texture, % | Clay | 32.45 | 36.18 | 33.20 | 36.20 | 28.75 | 34.33 | 28.35 | 33.97 | 27.33 | 33.69 | 33.99 | 34.55 |
| | Silt | 20.25 | 30.56 | 25.46 | 29.50 | 31.12 | 28.56 | 32.00 | 27.93 | 28.56 | 31.05 | 26.07 | 21.24 |
| | Sand | 47.30 | 33.26 | 41.34 | 34.30 | 40.13 | 37.12 | 39.65 | 38.10 | 44.11 | 35.26 | 39.94 | 44.21 |
| Texture class | | L | CL | CL | L | CL | CL | L | CL | CL | CL | L | L |

CT : Cultivated wheat, NT : No-Till soil, L : Loam, CL : Clay loam.

**Table 2.** Effects of cement dust pollution on population of bacteria and fungi, $CO_2$-C production, Duncan test results and correlation coefficient values (r).

| Distance (km) | Bacteria x$10^6$ (CFU $g^{-1}$) | | Fungi x$10^4$ (CFU $g^{-1}$) | | $CO_2$-C Production (mg C $m^{-2}$ $h^{-1}$) | |
|---|---|---|---|---|---|---|
| | CT | NT | CT | NT | CT | NT |
| 1 | 296.3 b | 215.7 b | 21.6 b | 42.6 b | 21.6 b | 16.0 b |
| 3 | 315.7 ab | 281.5 ab | 25.4 b | 58.7 ab | 24.6 ab | 18.4 ab |
| 5 | 362.5 a | 243.0 b | 29.8 b | 42.2 b | 25.6 ab | 18.6 ab |
| 7 | 337.6 ab | 343.2 a | 37.2 a | 71.4 a | 29.7 a | 20.2 a |
| 10 | 297.6 b | 243.5 b | 37.1 a | 65.5 a | 30.3 a | 21.1 a |
| 15 | 387.2 a | 370.6 a | 27.0 b | 68.4 a | 31.5 a | 21.8 a |
| Average | 332.5 A | 282.8 B | 29.7 B | 58.1 A | 27.2 A | 19.3 B |
| r-values | 0.53* | 0.56* | 0.58* | 0.74* | 0.94** | 0.94** |

CT: Cultivated wheat , NT: No-Till Soil, † The means with the same letter are not statistically significant ($p < 0.05$). *, ** : Indicate significance at the 5 and 1%, respectively.

## Effects of spatial variation on some soil enzyme activity

We also monitored the activities of four enzyme groups: AcdP, AlkP, urease (UE) and dehydrogenase (DHE) at different distance from the cement plant in CT and NT soils. According to our results, phosphatase enzyme activities varied widely in relation to distance CT and NT soils. The highest AcdP enzyme activity was observed a distance of 15 km (37.6 µg pNP $g^{-1}$ soil $h^{-1}$) in CT and the lowest AcdP enzyme activity was observed at distance of 1 km (29.0 µg pNP $g^{-1}$ soil $h^{-1}$) away from the cement factory in CT soils. Similarly, the highest AcdP enzyme activity was obtained at distance of 15 km (35.3 µg pNP $g^{-1}$ soil $h^{-1}$

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in NT soils and the lowest AcdP enzyme activity was obtained at distance of 1 km (23.0 µg pNP $g^{-1}$ soil $h^{-1}$) away from the cement factory in NT soils. AcdP enzyme activity showed a significant positive correlation with distance in CT ($r^2$ = 0.80, $p < 0.01$) and NT ($r^2$ = 0.86, $p < 0.01$) soils (Figure 1a and b).

The highest AlkP enzyme activity was observed at distance of 2 km (84.60 µg pNP $g^{-1}$ soil $h^{-1}$), and the lowest AlkP enzyme activity was observed at distance of 15 km (58.40 µg pNP $g^{-1}$ soil $h^{-1}$) away from the cement factory in CT soils. The highest AlkP enzyme activity was observed at distance of 1 km (68.10 µg pNP $g^{-1}$ soil $h^{-1}$) and the lowest AlkP enzyme activity was observed at distance of 10 km away from the cement factory (47.50 µg pNP $g^{-1}$ soil $h^{-1}$) in NT soils. The results in this particular case showed a significant negative correlation between cement dust pollution and distance in CT ($r^2$ = 0.60, $p < 0.05$) and NT ($r^2$ = 0.68, $p < 0.05$) soils. AcdP enzyme activity was significantly lower than AlkP enzyme activity in CT and NT soils (Figure 1a and b).

Urease enzyme activity was highly correlated with the distance of CT and NT soils. The regression equations and simple correlation coefficients for these relationships are shown in Fig. 2. The highest UE activity was observed at distance of 15 km (24.08 mg $NH_4$-N $kg^{-1}$ soil $2h^{-1}$) and the lowest was observed at distance of 1 km (16.25 mg $NH_4$-N $kg^{-1}$ soil $2h^{-1}$) away from the cement factory in CT soils. The highest UE activity was observed at distance of 15 km (21.24 mg $NH_4$-N $kg^{-1}$ soil 2 $h^{-1}$) and the lowest was observed at distance of 1 km (12.20 mg $NH_4$-N $kg^{-1}$ soil 2 $h^{-1}$) away from the cement factory in NT soils. UE activity showed a significant positive correlation with distances in CT ($r^2$= 0.90, $p < 0.01$) and NT ($r^2$= 0.79; $p < 0.01$) soils.

Maximum variation based on distance from the cement factory was observed for dehydrogenase activity in various soils. The highest DHE activity was determined at 15 km distance (180 mg TPF $kg^{-1}$ soil 24 $h^{-1}$) and the lowest was determined at 1 km distance (51.16 mg TPF $kg^{-1}$ soil 24 $h^{-1}$) away from the cement factory in CT soils. The highest DHE activity was observed at distance of 15 km (150 mg TPF $kg^{-1}$ soil 24 $h^{-1}$) and the lowest was obtained at a 1 km distance (37.88 mg TPF $kg^{-1}$ soil 24 $h^{-1}$) from the cement factory in NT soils. Strong positive correlation among DHE enzyme activity and distances was observed in CT ($r^2$ = 0.92, $p < 0.01$) and NT ($r^2$ = 0.82, $p < 0.01$) soils (Figure 3).

## DISCUSSION

Our findings that soils under cement dust have lower enzyme activity, compared to the CT and NT soils, are due to the negative impacts of the cement dust on soil properties including the microbial populations and activities. The effects of cement dust on soil microbial population and $CO_2$-C fluxes were significantly correlated with distance in CT and NT soils. Increasing distance increased the average number of bacteria, fungi and soil $CO_2$-C production and decreased lime contents of the soil in CT and NT soils (Table 1 and 2). The increases in amount of lime were related to the increase of soil pH.

Microorganism activity was affected negatively by cement pollution and the other environmental conditions resulting from cement pollution; it most likely would have negative effects on the other ecosystem functions (Bayhan et al. 2002; Nowak et al. 2003; Fabbri et al. 2004; Ocak et al. 2004).

The pH affected the activity of enzymes as amino acid functional groups that alter conformational and chemical changes of amino acids essential for binding and catalysis were very sensitive to pH range (Dick et al., 2000). Phosphomonoesterases such as AcdP and AlkP significantly were affected by changes in soil pH (Table 1 and Figure 1) and each enzyme was observed more predominant in acidic and alkaline soils, respectively (Deng and Tabatabai, 1997). Changing soil pH is connected with content of cement dust of the soil. Cement dust pollution effected soil pH directly, and affected soil acid phosphatase enzyme activity in directly. AcdP responded negatively to the soil acidity and the tested enzymes were ordered according to their susceptibility of soil acidity as follows: dehydrogenases>urease>alkaline phosphatase>acid phosphatase (Wyszkowska et al. 2006).

The highest urease activity was observed around pH = 7.4 and the lowest urease activity was at pH = 8.8 (Table 2). Optimum pH for soil UE activity was 8.8 to 9.0 (Tabatabai and Bremner, 1972; May and Douglas, 1976). However, Singh and Nye (1984) reported that soil pH for UE activity was around 6 for the overall reaction and 6.8 for the high affinity reaction. Alkaline soils have low amounts of organic carbon and nitrogen and low levels of urease and dehydrogenase enzyme activity. Urease enzyme activity was significantly correlated not only with organic carbon and $CaCO_3$, but also with pH (Rao and Ghai, 1985). Urease turned out to be more resistant to soil acidity than dehydrogenases (Wyszkowska et al., 2006). Phosphatase and urease enzyme activities were greater in CT soils than NT soils (Gupta and Bhardwaj, 1990). Especially, urease activity was much lower in NT soils than in CT soils. When compared to the corresponding undisturbed or less disturbed soils, our results are in agreement with previous studies showing enzyme activity values reported by Acosta-Martinez et al. (2004) and Fenn et al. (1992).

Dehydrogenase enzyme activity showed a positive correlation with decreasing cement dust, $CaCO_3$, and pH in CT and NT soils (Figure 3, Table 1). The maximum dehydrogenase enzyme activity was observed at pH 7.4 under wheat vegetation. Similar results were observed in pH 6.6-7.2 during barley vegetation under different air water conditions (Brzezinska et al., 2001). We determined positive correlation between dehydrogenase enzyme activity and pH. Similarly, Moore and Russell (1972) and Onet et al. (2007) observed that there was strong correlation between dehydrogenase enzyme activity and

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organic matter (Khan, 1999) and weakly positive with pH and nitrogen. Dehydrogenase enzyme activity in CT (Ph 7.4-8.52) soils was greater than NT (pH 7.4 to 9.24) soils. Dehydrogenase enzyme activity decreased significantly with the decline in soil pH values in acidic soils. These results are in agreement with that reported by Rao and Ghai (1985) and Aoyama and Nagumo (1996).

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Exhibit 8

5.2.b



# 2019 REPORT ON AIR POLLUTION AND HEALTH RESEARCH



UTAH PHYSICIANS for a HEALTHY ENVIRONMENT

## AIR POLLUTION AND HEALTH: SUMMARY OF THE 2019 MEDICAL RESEARCH

compiled by
Utah Physicians for a Healthy Environment

In 2019 the medical research on air pollution strengthened and expanded our understanding of just how hazardous it is to public health and the damage it is doing to individual lives. Several well-respected studies were truly alarming. Today we highlight what we feel are the most important ones.

The authors of two new studies describe the impacts of air pollution in nearly the exact terms that UPHE has been using for several years. Air pollution is the world's fifth leading risk factor for death. Tissue damage may result directly from pollutant toxicity because fine and ultrafine particles can gain access to organs, or indirectly through systemic inflammatory processes. It can harm any organ in the body. Air pollution is a danger to everyone's health, but some people are more susceptible than others, either because of genetics, socioeconomics, race, or ethnicity.

Public health is damaged at levels far below those previously considered to be safe.[1,2]

The relationship between particulate pollution and death has been repeatedly studied for at least three decades. Almost from the beginning studies have yielded consistently alarming, but slightly different statistics. This year a meta-analysis of all the important previous studies has allowed us to narrow those differences, and has provided even more solid evidence that increases of just 1 ug/m3 of PM2.5 chronic exposure increases community deaths rates about 1%.[3] Acute spikes of PM2.5 will add additional mortality, as will ozone. This study adds strong confirmation to the statement UPHE has made for several years that between 1,000 and 2,000 people die prematurely every year in Utah because of our air pollution.

A new BYU study[4] significantly strengthens the contention

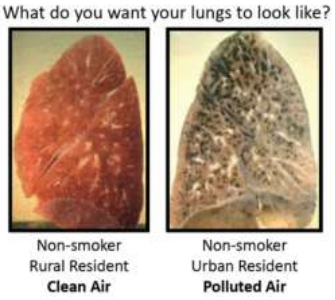
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A new BYU study significantly strengthens the contention that UPHE has been making for more than a decade–that our air pollution shortens the life span of Utah residents an average of two years, and nearly one in four residents lose 5 years of more. The same study estimates that air pollution costs our economy about $1.8 billion a year, although other national studies found that number to be even higher, i.e. $7.4 billion.[5,6,7,8]



Of the two high volume pollutants–ozone and particulate matter–ozone has historically been considered the "weaker sister." Nonetheless, ozone has been associated with almost all the health consequences of particulate matter, if only to a slightly lesser extent. Ozone is a powerful oxidizing agent and has been proven to cause a decrease in lung function and damage to lung tissue. But a new study shows that the lung is exquisitely sensitive to even small increments of ozone. Researchers followed nearly 7,000 patients and found emphysematous destruction of lung tissue and loss of lung function (measured by CAT scans and spirometry) in both smokers and non-smokers at this shocking rate: Just 3 ppb increase in ozone exposure over ten years caused as much lung damage as smoking a pack a day of cigarettes for 29 years.[9]

Short term exposure to PM2.5 and risk of hospital admission were found for several prevalent but rarely studied diseases, such as septicemia (blood infections), fluid and electrolyte disorders, and acute and unspecified renal failure. Positive associations were also found between risk of hospital admission and cardiovascular and respiratory diseases, Parkinson's disease, diabetes, phlebitis, thrombophlebitis, and thromboembolism.[10]




We have seen the emergence of studies proving that particulate matter is embedded in the critical organs of virtually all humans. Pollution particles contaminate human brain tissue, at the rate of millions per gram of brain tissue. Other studies have found the particles embedded in the lining of blood vessels and even the placentas of pregnant mothers. This year researchers studied dozens of people at autopsy who had been residents of Mexico City. The average age was 25, the youngest was only three years old. Astonishingly, they found between 2 billion and 22 billion nanoparticles of air pollution embedded in the heart, per gram of heart tissue, in all patients, even the children. Those people who had lived in highly polluted Mexico City had between 2 and 10 ten times as many pollution particles as those that lived in less polluted environments.[11] The clinical significance of this finding is almost undoubtedly impaired performance of the heart's pumping mechanism and disruption of the electrical impulses that control heart rate and rhythm.





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Many other studies have shown that air pollution does indeed impair the normal electrical signaling of the heart. That is one way that air pollution causes sudden death. This study suggests that damage to the heart's electrical activity begins in infancy.[12] Even newborns exposed to more air pollution have higher blood pressure.[13]

Published in one of the most prestigious medical journals, this study of 4.5 million US veterans found that 99% of the deaths related to air pollution occur in populations where the air pollution meets the EPA's standards. This puts a definitive stamp on the concept that there is no safe level of air pollution, and that those standards, which are supposed to be updated every 5 years, are far too lax. Also, nine causes of death related to air pollution were identified, including causes not previous connected to air pollution—kidney disease, dementia, and type II diabetes.[14]

A new study demonstrates that the benefits of cleaner air occur almost immediately. Respiratory symptoms, hospitalizations, school absenteeism, and mortality start to drop within a few weeks, although they may not drop back to normal. And there is additional benefit to making already clean air even cleaner.[15]

For several years numerous studies have shown the toxicity of air pollution to brain function and development, even changing brain architecture. New studies provide more detail. A critical area of the brain for memory, the hippocampus, is smaller in adults exposed to more air pollution.[16] Air pollution changes the physical development of the brain in utero, including reducing the size of certain parts of the brain like the corpus callosum, the bridge between both hemispheres. This abnormality is associated with behavioral disorders.[17] Another new study provided more evidence that air pollution, prenatal or during infancy, is associated with increased risk of autism.18

Numerous other studies showed the clinical consequences of air pollution showing impaired memory. For example, for every 2.81 µg/m3 of PM2.5, the annual decline rate in a certain type of memory capability was accelerated by 19.3%.[19] Chronic exposure to more HAPs (hazardous air pollutants) was found to be associated with worse academic performance among school children in reading, math, and science through the third grade.[20]

One study focused on particulate pollution



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associated with Mountain Top Removal mining, something that is directly relevant to Utah given the close proximity of the Kennecott mine to our largest population center. The study found that air pollution from mining contributes to dramatically increased risk for dementia related mortality.[21]







Previous studies have shown that air pollution can acutely reduce the performance of children in school. A new study also shows the reverse. Reducing air pollution in school classrooms improves test scores substantially. One study found that even from a baseline of low level pollution (well below the EPA's annual standard) a classroom air purifier capable of reducing PM 2.5 90%, improved students' test scores more than reducing class size by 30%, i.e. a 0.20 standard deviation improvement in Math and English scores.[22]

There were many new studies showing that air pollution is associated with virtually every type of mental illness, like depression, behavioral disorders, unethical behavior, violent crime, and increased rates of hospitalizations and emergency room visits for mental illness for pediatric, adolescent and adult patients.[23,24,25] Several studies have even shown that pollution decreases stock market returns by decreasing mood and trading activity among brokers.[26]

Numerous new studies added confirmation to the already substantial research showing the multiple ways that air pollution can harm pregnancy and fetal development, including increasing the incidence of hypertensive disorders,[27] gestational diabetes, [28] premature rupture of membranes (a disorder that puts both the baby and mother at risk for infection), for premature birth,[29] and still birth.[30]



Significant progress was made in the past year showing that air pollution increases the risk for metabolic and endocrine diseases, like diabetes, both type I and type II, and impaired thyroid function.[31,32,33,34,35]Thyroid function is critical to good health at any age, and especially critical for normal fetal development, especially brain development. New studies show that air pollution impairs thyroid function in pregnant mothers and in turn impairs fetal thyroid development, which may contribute to the well established connection between air pollution and low birth weight.36,37,38

More studies that show air pollution is associated with higher rates of lung, breast, and nasopharyngeal cancer.[39,40,41,42] About 30% of lung cancer is now attributable to air pollution.[43]

By promoting inflammation, particulate pollution was found to contribute to rheumatoid and osteoarthritis, higher levels of auto antibodies, severe bone density decrease, bone

demineralization, cartilage wear, and structure damages.[44,45,46,47]

We have seen numerous studies showing that air pollution exposure early in life (in utero and infancy) can have lasting impacts on health, like heart and lung function, that don't show up for decades. A new study expanded that concept finding that early life exposure is even associated with higher rates of arthritis in adulthood, especially rheumatoid arthritis.[48]



Sleep disorders are increasingly recognized as very common, as well as very important contributors to overall poor health. This year more evidence was published that air pollution is associated with sleep disorders, especially sleep apnea.[49,50]

The length of chromosome end caps, called telomeres, is a marker of aging at the molecular level. Another study was published showing that air pollution exposure during pregnancy was associated with shorter telomeres measured at the age of eight.[51]

## 2019 RESEARCH HIGHLIGHTS

1. Air pollution kills 1,000 to 2,000 Utah residents every year, from at least nine different causes of death. Shortens life span in Utah an average of two years, some as much as five years.

2. Costs to the economy are between $2 billion and $7.4 billion.

3. Because cleaner air has such a profound benefit to brain function, classroom air purifiers are the most cost effective way of improving public education.

4. Extremely small increases in ozone damage lung tissue and function as much as smoking does.

5. Just 3 ppb increase in ozone exposure over ten years caused as much lung damage as smoking a pack a day of cigarettes for 29 years.

6. Particulate pollution provokes disease by contaminating all major organs, like the heart, lungs, brain, kidneys, blood vessels, placenta. For example, between 2 billion and 22 billion nanoparticles per gram of heart tissue.

7. 99% of air pollution deaths occur where the air pollution meets the EPA's standards. All air pollution matters.

8. Cleaning up the air has almost immediate health benefits.

## WHAT WE SHOULD DO NEXT

1. It's time for free public transit: like Kansas City, Oslo, Amsterdam, Winnipeg, Melbourne, Athens, Geneva, Scotland, Pittsburgh, Philadelphia

2. Emissions testing of all commercial diesel trucks and heavy equipment, on road and off.

3. Room air purifiers in all school class rooms.

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4. Repeal the Port

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# Exhibit 9

**ASSESSMENT OF THE RISK FOR SILICOSIS AND LUNG CANCER ASSOCIATED WITH RESIDENTIAL EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA ORIGINATING FROM THE "POINT OF THE MOUNTAIN" GRAVEL QUARRY**

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Updated: December 4, 2018

**Roles, Responsibilities, and Capacity of the Environmental Epidemiology Program**

The Environmental Epidemiology Program (EEP) has three primary roles:

- Provide a public resource of health data and monitoring data associated with environmental health concerns;
- Provide assessment and interpretation of data to characterize potential environmental risks, and recommend actions to monitor and mitigate those risks;
- Develop and maintain administrative rules on injury surveillance and public health sanitation standards.

To meet these responsibilities, the EEP staff includes expertise in epidemiology, toxicology, risk assessment, risk communication, biostatistics, geomatics, health education and environmental health sciences.

The EEP does not have the role, responsibility or capacity to:

- Conduct permitting or regulating activities, or enforce rules;
- Conduct sampling and testing of soil, water, air, or homes for environmental contaminates (except at a very limited level).

## Defining a Public Health Concern

The Centers for Disease Control and Prevention (CDC) has adopted the Vilnius-Dandoy criteria (CDC 2013; Vilnius & Dandoy 1990) for evaluating and establishing public health priorities. The Vilnius-Dandoy criteria were researched and established at the request of the Utah Department of Health (UDOH). Dr. Dandoy served as the Executive Director of the UDOH at the time. Those criteria are as follows:

- **Size of the risk**:
  Epidemiologic Measurement of Risk: Epidemiologists measure risk as a comparative ratio of disease burden measures (for example, the rate of disease) between two populations. There are a number of types of risk ratios including: odds ratios (OR), relative risks (RR), standardized incidence ratios (SIR), or standardized mortality ratios (SMR). The odds ratio (a measure of the probable association of a risk factor to a health outcome) is a commonly used measurement for exposure risk assessment. All of the risk



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measures are comparative ratios, comparing a study group to a "comparison" group. The study group might be a population exposed to respirable crystalline silica (rc-silica). The comparison population could be one that is not exposed to rc-silica. If the disease burdens of the two groups are equal, the risk ratio will be 1.0. If the study group (the exposed group) has a higher disease burden compared with the comparison group, the risk ratio will be greater than 1.0. If this comparison is in the form of an odds ratio, then the exposure risk is considered to be "associated" with the health outcome. Good epidemiology is seldom able to declare that a risk factor is "causal" without the assistance of other disciplines such as toxicology (Greenland et al. 2008; Griffith et al. 1993).

Because there is a lot of random variation in the association of risk factors to health outcomes (consider, for example, the variation in the association between tobacco use and lung cancer) a "95% confidence interval" (95% CI) is applied to the risk ratio. Occasionally another percentage is used, such as 99%. The real interpretation is actually the lower limit. If the lower limit of 95% CI is greater than 1.0, then the risk is considered "significantly associated." If the lower limit of the 95% CI is less than 1.0, then we generally say there is no significant association. Some epidemiologists may say there is a weak association (Greenland et al. 2008; Griffith et al. 1993).

One way to interpret a risk ratio is as a magnitude of excess risk. A risk ratio of 1.0 is interpreted as a no excess risk. A risk ratio of 2.0 can be interpreted to mean the study population has twice as much risk as the comparison population. Conversely, a risk ratio of 0.5 can be interpreted to mean the study population has half the risk as the comparison population.

Meaningful Risk Standard: The CDC recommends a "meaningful" criterion to the size of the risk. The EEP applies this guideline. Much of environmental epidemiology is driven by cancer concerns, so the recommendations used by environmental epidemiology often come from cancer investigations which are then applied to other types of investigations.

In the 1990's, a risk ratio needed to be in the 50s to be considered meaningful (Bender et al. 1990). Fortunately, more government public health agencies have since relaxed the meaningful criteria. Currently, the EEP uses the recommendation of Thun and Sinks (2004) which considers a risk ratio above 3.0 to be meaningful. These criteria are open to change as the literature evolves and as directives to the EEP are issued.

Toxicological Measurement of Risk: Toxicologists measure risk as a comparison of effect levels and effects (dose-response). Toxicological investigation of effect levels attempts to determine the dose where an effect starts or stops manifesting. These levels are known as the "lowest observable effect level" (LOEL) or the "no observable effect level" (NOEL). If there are both positive and negative effects associated with an exposure,



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toxicologists will distinguish a "lowest/no observable *adverse* effect level" (LOAEL or NOAEL, respectively).

From these dose-response levels, and considering the potency, exposure routes, frequency, and the susceptibility of the exposed individual, toxicologists develop an exposure reference dose (RfD). Typically, the RfD is the NOEL or NOAEL divided by several orders of magnitude (i.e., 10, 100, 1000, etc.) to account for uncertainty. The degree of uncertainty is based on the nature of the studies used to find the dose-response relationship. For example, was the finding a NOEL or a LOEL? How close to humans was the animal model used – human subjects, apes, rabbits, mice, etc.? Additional uncertainty is added because of the variability in humans in their response to exposures. Thus, if the NOAEL for a respiratory exposure to a chemical was found to be 1.0 $mg/m^3$ (read 1.0 milligrams of chemical per cubic meter of air), the RfD might be set at 0.001 $mg/m^3$, or a thousand times below the known "no observable adverse effect level" (Faustman & Omenn 1996).

Toxicologic Risk Level: The US Occupational Health and Safety Administration (OSHA) has established many 8-hour time-weighted-average (TWA) permissible exposure limits (PELs) for contaminants in the workplace. The OSHA TWA PEL for rc-silica is 50 $\mu g/m^3$ (read 50 micrograms silica per cubic meter of air). OSHA has also established an action level of 25 $\mu g/m^3$ (OSHA 2017). Air levels at or above the action level require that the work site start monitoring and mitigating the air exposure. Air levels above the PEL result in a regulatory action (i.e., a fine, an order to mitigate, etc.).

The US Environmental Protection Agency (EPA) data and guidelines suggest the dose-response for a continuous (24-hour) exposure of 8 $\mu g/m^3$ would pose about the same risk in the general public as an 8-hour exposure of 22.4 $\mu g/m^3$ does in an occupational setting (EPA 1996). While this research did not establish a federal standard for non-occupational exposure to respirable silica, it does suggest that the OSHA TWA PEL can be interpolated to 18 $\mu g/m^3$ (50 $\mu g/m^3$ x 8 $\mu g/m^3$ / 22.4 $\mu g/m^3$ = 17.9 $\mu g/m^3$) averaged over a 24-hour period.

In 2005, the California Office of Environmental Health Hazards set a chronic reference exposure level (cREL) for $PM_{4.0}$ at 3.0 $\mu g/m^3$ (Richards et al. 2009). While the EEP uses federally established standards or recommendations to interpret public health risk, we do consider what other states are using.

- **Seriousness of the outcome**: This criterion has two factors – urgency and severity. All of the health outcomes (silicosis, chronic obstructive pulmonary disease [COPD], lung cancer, gastrointestinal cancer, kidney damage, autoimmune disease [particularly rheumatoid arthritis], increased risk for contracting tuberculosis [if exposed], etc.) associated with rc-silica exposure are severe (ATSDR 2017; Bernstein et al. 2013). All of these outcomes have long latent periods of 5–30+ years (i.e., the time between an exposure and the onset of a disease or symptoms). Since 1990, the residents of Traverse



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Mountain (or the city of Lehi when we do not have the ability to resolve the data to Traverse Mountain) have experienced the following disease burdens:

| Health Outcome | Data Source | Resolution | Rate per 10,000 population/year | Standardized Incidence Ratio (95% CI) |
|---|---|---|---|---|
| Silicosis | Hospital Discharge Database | City of Lehi | 0.00 | NA |
| COPD | Hospital Discharge Database | City of Lehi | 5.6 | 0.43 (0.34 – 0.55) |
| Lung & Bronchial Cancers | Utah Cancer Registry | Traverse Mountain | 0.2 | 0.11 (~0.0 – 0.61) |
| Gastrointestinal Cancers (stomach, small and large intestines, & rectum) | Utah Cancer Registry | Traverse Mountain | 1.4 | 0.41 (0.15 – 0.90) |

The comparison population is the rest of the state of Utah. If there is a sudden dramatic change in the rates or risk ratio, that could indicate an emerging public health concern. They are also useful in educating the public about the health status in the neighborhood.

In this case, for interpretation, there have been too few cases of silicosis in the city of Lehi to make a statistical evaluation. The rate of COPD in the city of Lehi is about half what the rest of the state is experiencing, and that difference ***is*** statistically significant. However, the only data available to the EEP are those cases admitted for treatment at a hospital. The rate is likely underestimated. If the assumption that the ratio of hospitalized cases versus outpatient cases is approximately equal for both the city of Lehi and the state of Utah, then the SIR will remain an accurate assessment of the risk difference between the city Lehi and the State.

Similarly, the cancer incidence rates among Traverse Mountain residents are significantly lower than the rest of the state (the upper limit of the 95% CI is below 1.0). The cancer data currently available to the EEP is through 2015. We have just received and are processing 2016 data. The number of cases were too small to evaluate trends. Most of the growth in Traverse Mountain appears to have occurred after 2001 and all of the cases are scattered through the 2001–2015 time frame. For reference, the EEP's cancer statistical review procedures are found at:



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health.utah.gov/enviroepi/cancerstudies/Documents/Utah_Cancer_Investigatio_Protocol_Final_2May2016.pdf

The data presented in the table are incidence rates—meaning that the residential address at the time of initial diagnosis was in Traverse Mountain. We assume the prevalence rates (which counts cases diagnosed in Traverse Mountain residents and cases diagnosed elsewhere and moved in) would be higher. Both lung cancer and GI tract cancer have long latencies, typically in the 15–30+ year range (Nalder & Zurbenko 2014; Thun et al. 2018). We think the triggering events (the combination of genetics, life choices, environmental exposures, infections, medical treatments, and random chance) (Thun et al. 2018) occurred prior to residency in Traverse Mountain for most, if not all, incident cases.

Incidentally, Traverse Mountain residents have a non-significant elevated rate of skin cancers (SIR=1.13; 95% CI = 0.18-3.57), breast cancer (1.31; 0.33-3.41), prostate cancer (1.72; 0.43-4.49), and thyroid cancer (1.46; 0.23-4.60) during the last five years (2011-2015) of data.

- **Political will to address the problem**: This criterion has two components—public concern and availability of resources. This is an area where citizen activism has the most value. The governor or the state legislature (through the enactment of law) can direct the UDOH or the EEP to designate an issue as a public health concern. For example, initially, the cancer rates in Monticello did not meet the criteria for a concern. A citizen's group successfully influenced the governor's office to make the Monticello cancer rates a public health concern. In the end, the city of Monticello, with the assistance of the EEP, were able to obtain federal grant money to increase their local capacity to screen for cancers. In another example, the EEP evaluated the risk of a type of chicken feed containing arsenic to be a public health problem. The manufacturer lobbied state leadership which then directed the EEP to retract our report about the concern. In both cases, interested parties used the political system to establish a political will the EEP addressed.

- **An intervention**: The EEP does not have the authority to shut down rock quarry operations, nor does it have the authority to make recommendations to shut it down. That authority lies with the Utah Department of Natural Resources (UDNR) and the Utah Department of Environmental Quality (UDEQ). The kinds of interventions the EEP can recommend would focus on residents themselves, and protective actions they can take. For example, the EEP has recommended that all residents:
  - Avoid smoking or using tobacco products
  - Minimize alcohol consumption
  - Participate regularly in physical exercise or deep breathing exercises
  - Help prevent respiratory infections through regular hand washing, good oral hygiene, and staying current on vaccinations
  - Get regular healthcare checkups



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- Minimize exposure to air pollution as much as possible
  - Stay indoors if no protective equipment (i.e., an effective respirator mask) is available
  - Use protective equipment if outdoor activity is necessary
  - Choose less strenuous activities when air pollution levels are high

We believe these recommendations reduce the risk of developing silicosis and subsequently developing lung cancer.

- **Health disparities**: The EEP's practice is to reduce the threshold for meaningfulness if the exposed population is socially or economically deprived. The EEP does this because these populations typically have less access to health care and ability to manage their concerns privately.

## Understanding the Risk: Approach 1 – Literature Review

The EEP was asked by the Lehi City Council to address rc-silica. The EEP has reviewed a number of other gravel and sand quarries in the state of Utah in the past, including the one in Box Elder County (ATSDR 2006).

The EEP has not addressed, nor been asked to address, other potential air pollution hazards associated with the Point of the Mountain.

- **Respirable crystalline silica (rc-silica)**: rc-silica < 10 µm (micrometers) in size are able to penetrate to the alveolar sacs of the lungs (ATSDR 2017; Bernstein et al. 2013; Pinkerton & Southard 2005). Deposition of rc-silica occurs by two mechanisms. Approximately 60% of particles < 0.1 µm in size deposit in the alveolae by diffusion. Approximately 60% of particles between 1.0 and 2.5 µm deposit in the alveolae by impaction. Particles in the range of 0.1 to 1.0 are not able to deposit by either mechanism and are predominately exhaled. Particles larger than 2.5 µm deposit higher up (mouth and nasal cavity, pharyngeal area, trachea, the bronchi, and the bronchioles) in the respiratory tract (Bezemer & Pieters 2009; Brown 2015; Frohlich et al. 2016; Heyder 2004; Hussain et al. 2011; Lin et al. 2009; Namati et al. 2008; Rissler et al. 2017; Shulz et al. 2000).

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*Figure 2.* Total and regional deposition of unit-density spheres in the human respiratory tract predicted by the ICRP deposition model for oral inhalation at rest.

The red graphic represents the alveolar deposition. Note the x-axis is logarithmic. (*figure from Heyder 2004*)



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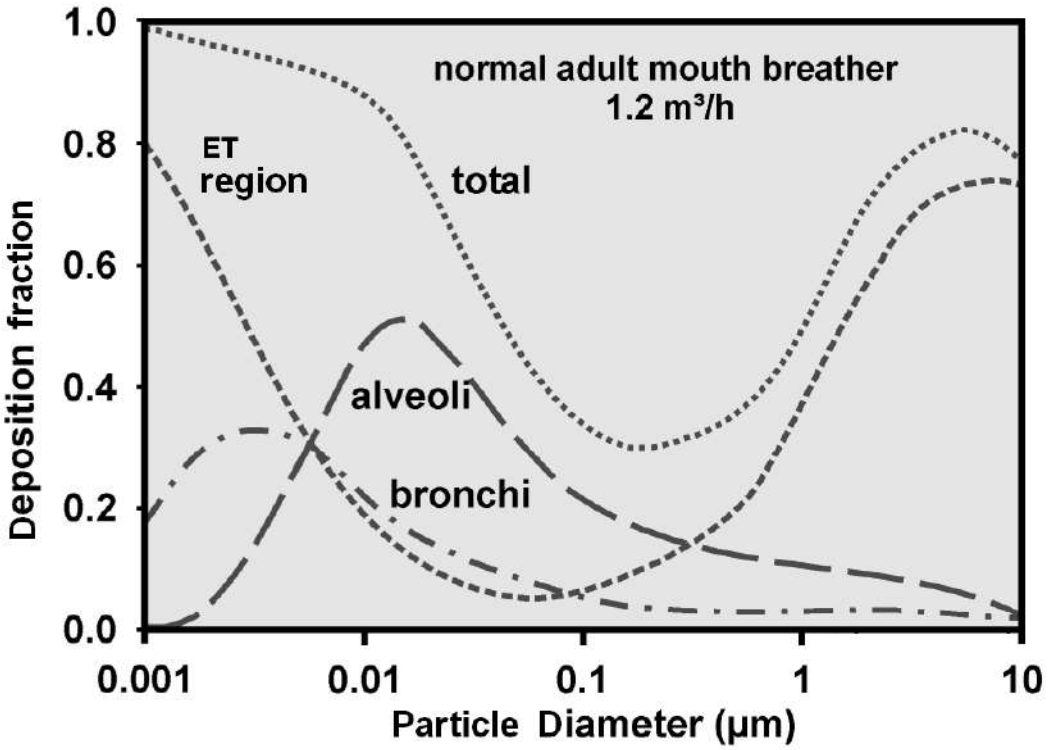



Figure 6: Average predicted total and regional lung deposition based on ICRP [1] deposition model for nose breathing for light exercise breathing condition. Highest deposition (ET region for 0.001 and 10 µm particles, bronchi region for 0.005 to 0.007 µm particles and alveolar region for 0.01 to 0.05 µm particles).

Note x-axis is logarithmic. (*figure from Hussain et al. 2011*)

rc-Silica is poorly soluble. Deposition results in irritation that initiates a number of pulmonary clearance processes. If the level of rc-silica is high enough to overload the clearance processes, then encapsulating processes are initiated. The encapsulating processes result in the development of the fibrotic condition known as silicosis (Bevan et al. 2018).

- **Silicosis**: Silicosis is a progressive, irreversible lung disease. Only rc-silica that is able to penetrate the alveolar sacs causes silicosis. Amorphous silica does not cause silicosis. rc-Silica that is too large to penetrate to the alveolar sacs does not cause silicosis (ATSDR 2017; Bernstein et al. 2013; Thomas & Kelley 2010; Yang et al. 2006).

  Chronic silicosis is a progressive disease that presents first as simple silicosis (also known as Stage I silicosis), characterized by tiny round scar lumps developing in the alveolar





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dense regions of the lungs. Simple silicosis progresses to progressive massive fibrotic silicosis (PMF or Stage II), characterized by large fibrotic masses that develop in the lung tissues. PMF silicosis may progress to PMF Stage III silicosis characterized by *cor pulmonale* (abnormal enlargement of the heart). All forms of chronic silicosis are characterized by stressed breathing. The average latency period for developing silicosis is 22.9 years after the start of exposure in the occupational setting (persistent unprotected exposure lasting up to 8-hours a day). Approximately 48% of cases of simple silicosis progress to PMF (Steenland & Ward 2014; Yang et al. 2006).

The EEP uses several health-based searchable literature search engines such as PubMed and ToxNet. These search engines provide an index of peer-reviewed scholarly articles. A search of PubMed for "silicosis" listed 6,024 articles 1923 and through the most recent publication in November 2018. Of those, a little over 180 articles address risk magnitude associated with rc-silica exposure. The EEP reviewed those articles.

The exposure-response relationship of rc-silica to chronic silicosis is non-linear (Calvert et al. 2003; EPA 1996; Mannetje et al. 2002).

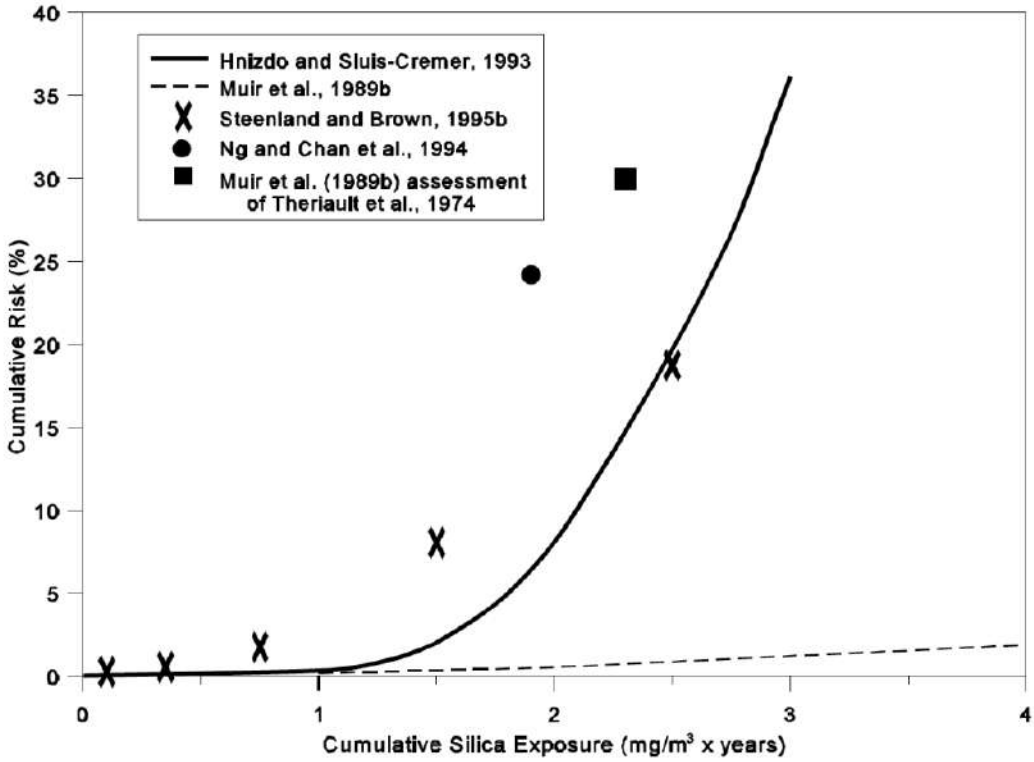



Figure 7-1. Cumulative silica risk curves estimated for South African gold miners (—) (Hnizdo and Sluis-Cremer, 1993) and Canadian hardrock miners (– –)(Muir et al., 1989b); cumulative silica risk points estimated for South Dakota gold miners (✗) (Steenland and Brown, 1995b), Hong Kong granite workers (●) (Ng and Chan, 1994), and Vermont granite miners (■) (Theriault et al., 1974c; Muir et al., 1989b).



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(*figure from EPA 1996)*

We interpret the figure above to suggest that exposures below 1 mg/m$^3$-years (read as 1 mg exposure per cubic meter of air per year) pose minimal risk. A 1 mg/m$^3$-year exposure is equivalent to 1,000 µg/m$^3$-years (read as 1,000 micro grams exposure per cubic meter of air per year). Risk begins to rise from 1.0 to 1.5 mg/m$^3$-years (1,000-1,500 µg/m$^3$-years), and greater than 1.5 mg/m$^3$-years (>1,500 µg/m$^3$-years) the risk increases substantially. These studies are for a 30-year cumulative exposure.

Calvert et al. (2003) found that the risk of developing silicosis to be OR = 2.9 (2.4 – 3.5) when exposed to the OSHA TWA PEL (50 µg/m$^3$ over 8 hours; read as exposure to an average of 50 µg per cubic meter of air for 8 hours). The odds ratio increased to 6.8 (5.7 – 8.2) when the exposure was twice the PEL (100 µg/m$^3$) and to 30.5 (18.4 – 50.5) when the exposure was five times the PEL (250 µg/m$^3$).

Similarly, a persistent occupational exposure (8 hours/day) lasting 30 years to 50 µg/m$^3$ results in a less than 5% increased lifetime risk for silicosis, whereas, a 30-year persistent occupational exposure of 100 µg/m$^3$ results in a 25% increased lifetime risk for silicosis (Finkelstein 2000; Mannetje 2002).

Vacek et al. (2018) reports an increasing trend in the risk as cumulative exposure increases. The study assessed a cohort of 1,902 workers from 40 different work sites in 22 different states. Workers with cumulative exposures between 500 and 1,500 µg/m$^3$-years had an odd ratio of developing silicosis of OR = 1.10 (0.26 – 4.64). For exposures between 1,500 and 3,000 µg/m$^3$-years, the OR = 2.06 (0.55 – 7.79). For exposures greater than 3,000 µg/m$^3$-year, the OR = 12.57 (2.08-55.47).

Chronic silicosis has been associated with the development of COPD (chronic bronchitis and emphysema are examples of COPD), lung cancer, gastrointestinal cancer, kidney damage, autoimmune disease, and an increased risk for contracting active tuberculosis if exposed to the bacteria (for example, rheumatoid arthritis) (ATSDR 2017; Bernstein et al. 2013).

Exposures at extreme levels may result in acute silicosis or accelerated silicosis which are usually fatal due to anoxia a few months to years after exposure (ATSDR 2017; Bernstein et al. 2013; Yang et al. 2006).

- **Lung cancer from rc-silica exposure**: The only health outcome the EEP was asked to address was the development of lung cancer from rc-silica exposure.

  *Nature of Public Research*: Unlike some of the more exact sciences, epidemiologic research into the association of a specific risk factor to a specific health outcome is subject to high variability. For example, despite the evidence that rc-silica is associated with the development of silicosis, Checkoway et al. (1997) studied a large occupational



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cohort (2,342 workers) and found no significant risk for cancer deaths (SMR = 1.1; 0.9 – 1.2) and a low significant risk for deaths from respiratory disease (1.8; 1.4 – 2.2).

A meta-analysis found the reported relationship between silicosis and lung cancer to range from statistically significant and meaningful (SMR = 6.03; 4.38 – 8.09) to statistically insignificant (1.37; 0.95 – 1.91). In that analysis of 31 individual studies, seven (23%) had insignificant findings. Twenty-four (77%) showed a significant association of silicosis exposure to lung cancer, but only two (6%) resulted in meaningful findings by the EEP's current definition (Lacasse et al. 2005).

Similarly, the meta-analysis by Poinen-Rughooputh et al. (2016) included studies that ranged from 0.90 (0.51 – 1.47) to 6.03 (5.29 – 6.77). In that report, 23% of the included studies were statistically insignificant and 9% were of a magnitude to meet the EEP's "meaningfulness" threshold.

Because of this variability, the EEP preferentially (but not exclusively) uses meta-analytical reports. Meta-analysis is a statistical process of summarizing the wide-ranging body of literature into a single assessment. Using meta-analytical reports has several advantages, in that it ensures the interpretation of the assessment has the statistical power of the combined reports, and ensures that an incomplete literature review is not guilty of "cherry-picking" reports to support a predetermined conclusion (Hedges & Olkin 1985).

*Non-Occupational Exposure*: Unfortunately, there is a scarcity of studies on non-occupational exposures. Here, reports on occupational exposure are considered and, where possible, extrapolated to non-occupational exposures.

*Meta-analysis of the association of rc-silica exposure to the development of lung cancer*: The following meta-analytic reports are from the occupational setting.

| | Erren et al. 2011 | Poinen-Rughooputh et al. 2016 | Smith et al. 1995 |
|---|---|---|---|
| Number of studies | 38 | 10 | 29 |
| Lung cancer risk among silicotic cases | 2.1 (2.0 – 2.3) | 2.3 (1.9 – 2.8) | 2.2 (2.1 – 2.4) |
| Lung cancer risk in non-silicotic cases not adjustments | 1.2 (1.0 – 1.4) | 1.2 (0.9 – 1.6) | |
| Lung cancer risk in non-silicotic cases adjusting for smoking | 1.0 (0.8 – 1.3) | | |

All of the above ratios are relative risks (RR) with 95% confidence intervals.



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The three meta-analyses presented here may have some overlap in which individual studies they included. They are consistent in their findings that lung cancer development is about twice as high in silicotic cases but not significant in non-silicotic cases. In other words, the development of silicosis after rc-silica exposure in the occupational setting is associated with the development of lung cancer. However, rc-silica exposure is not directly associated with lung cancer development.

Steenland et al. (2001; 2014) in a meta-analytic report that examined 10 studies suggested that a lifetime occupational exposure to 0.10 mg/m$^3$ (100 µg/m$^3$) of rc-silica results in increased lifetime lung cancer risk of 1.1% to 1.7% above background risk.

The EEP replicated meta-analysis using 181 reports of risk magnitude and found similar pooled results. Each of the authors cited above, and EEP noted (using the funnel diagram) in its own analysis that there is a significant publication bias associated with these studies. Publication bias is effect caused when researchers and publishers do not publish insignificant or negative findings, thus biasing the pooled effect towards a positive finding.

*Meta-analysis of the association of rc-silica exposure and death by lung cancer*:
These meta-analytic reports are in the occupational setting.

| | Lacasse et al. 2005 | Poinen-Rughooputh et al. 2016 | Smith et al. 1995 |
|---|---|---|---|
| Number of studies | 31 | 85 | 29 |
| Lung cancer deaths among silicotic cases without adjustment | 2.5 (1.6 – 3.7) | 2.3 (1.9 – 2.8) | 2.7 (2.3 – 3.2) |
| Lung cancer deaths among silicotic cases adjusting for smoking | 1.6 (1.3 – 1.9) | | |
| Lung cancer deaths among in non-silicotic cases without adjustment | | 1.8 (1.1 – 3.0) | |

All of the above ratios are standardized mortality ratios (SMR) with 95% confidence intervals.

The three meta-analyses presented here may have some overlap in which individual studies they included. They are consistent in their findings that lung cancer deaths occur two to three times more often among silicotic cases (not adjusted for smoking).

Calvert et al. (2003) found that the risk for developing lung cancer from occupational silicosis was OR = 0.88 (0.87 – 0.90) when exposed at the OSHA TWA PEL level. This risk



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increased to 1.1 (1.1 – 1.2) for exposures twice as high, but did not change for exposures five times as high.

The data suggest that silica exposure is a risk effect modifier of tobacco use the development of silicosis, COPD and lung cancer. However, the data is limited (Hessel et al. 2003, Tse et al 2014). An effect modifier is a factor that enhances the primary effect of another risk factor. In this case, tobacco use is the primary risk. Silica exposure increases the harm done by tobacco use.

- **Other findings**:
  - Two studies found that the number of aerosol particles that reached the lower pulmonary regions in children was the same or lower than in adults. This finding is attributed to the lower tidal volume and inhalation pressure of children, allowing the particles to impact in the extra-thoracic part of the respiratory tract (Albuquerque-Silva 2014; Rissler et al. 2017). Our assessment is that both studies are a start, but too weak (3 and 7 subjects, respectively) to be definitive.
  - In addition to basic comparative measures of risk (odds ratios, relative risk, etc.), epidemiologists have a number of useful tools to measure the attribution of risk to various factors when a combination of risk factors are present. For example, the risk factors for lung cancer include tobacco exposure, radon exposure, exposure to heavy metals (e.g., arsenic, beryllium, cadmium, etc.), exposure to organic compounds (i.e., vinyl chloride), certain dietary supplements, genetics, combustion engine exhaust, radiation therapy, and a number of other factors (CDC 2018). The basic measures of risk are problematic in that they conceal the background or confounding risks (Suissa 1999). A large cohort study (58,677 workers) estimated that the excess relative risk (ERR) per dust-year associated with silicosis was 0.061 (95% CI = 0.039 – 0.083) for exposures > 10 mg/m$^3$-year (10,000 µg/m$^3$-year). This study confirms a small positive exposure-response relationship between silica and lung cancer for very high exposures (Sogl et al. 2012).
  - Individuals with genetic variations in certain genes (the tumor necrosis factor (TNF-alpha), and interleukin cytokine (IL-10) genes) have increased risk of developing silicosis after rc-silica exposure (Kurniawidjaja 2014).

- **Research by Utah Physicians for a Healthy Environment (UPHE)**: As we have previously stated, we applaud the work done by UPHE. They have been able to address concerns much more broadly than the EEP has been authorized to do. We encourage policymakers to consider their work in parallel with ours.

## Understanding the Risk: Approach 2 – Air Dispersion Modeling

- **Point of the Mountain**: The rock formations in the quarries at Steep Mountain, Sage Canyon, and other nearby areas (collectively referred to as “the Point of the Mountain”)



Attachment: 2. Site Plan (American Eagle Appeal)

are highly fractured orthoquartzite with some limestone and calcareous sandstone. Quartzite is approximately 90% quartz crystal (cristobalite or tridymite), which is in turn predominately crystalline silica (c-silica) (JBR 2009).

Geneva Rock is the largest of a number of companies operating at the Point of the Mountain and is permitted to emit up to 128.86 tons of $PM_{10}$ per year (read as particulate matter smaller than or equal to 10 microns in size per year) (JRB 2009). There was no mention of a permitted level for total solid particulate matter (TSP). It is quite possible that the air opacity is affected by a range of air buoyant particle sizes up to about 500 microns.

In addition to rock quarry operations, the Point of the Mountain site includes concrete batch production, hot mix asphalt production, as well as fuel farms and maintenance operations.

Using inhouse geographic information systems (GIS) and the most recent satellite imagery, the site includes approximately 2,939,910 square meters of de-vegetated or excavated land.

- **Sand and gravel sources of silica**: Huggins and Meyers (1986) investigated the size distribution of respirable particles from 29 mines (including at least 15 sand and gravel quarries) and found that about 60% of the particles in the respirable size range (0 to 15 µm) were in the alveolar deposition size range (0 to 3.0 µm). Cauda et al. (2014), investigating mines across the nation, found that, on average, only 9.4 to 11.7% of the total dust cloud mass was rc-silica.

  Richard et al. (2009) found that the $PM_4$ fraction (read as particulate matter smaller than or equal to 4 microns in size) of the dust from California screening operations, tertiary crushers, and conveyor transfer points comprised 0.000006 to 0.000110 lbs/ton (pounds per ton) of the total dust cloud mass. They further found good correlation between the proportion of rc-silica in the dust cloud mass and the proportion of c-silica in the source material. Using this correlation slope, the EEP estimates that for a source that is 90% orthoquartzite, rc-silica dust would comprise 0.0003 lbs/ton of the total dust cloud mass.

- **Other dust sources**: Within three miles (5,000 meters) of the Traverse Mountain residential area are at least 15 large agriculture fields that are plowed and harvested periodically. Within three miles of the Traverse Mountain residential area, including within the Traverse Mountain community itself, there are a number of housing development areas with active excavation and earth pilling.

  Surveys of crystalline silica levels, while not extensive, suggest that air concentrations between 1 to 10 µg/$m^3$ are common in both urban and rural settings and are thought to be from natural sources. Silica is the most common material found on the earth. For this



Attachment: 2. Site Plan (American Eagle Appeal)

reason, the EPA has put off issuing a reference dose for non-occupational exposures. (Hardy & Weill 1995).

- **Windrose data**: Windrose data indicates that in the Lehi area, about 25% of the year the wind is from the N (3%), NNW (4%), NW (6%), WNW (7%), or W (5%). The Windrose provides an estimation of windspeeds: averaging 1.5 mph for 6% of the year, 5 mph for 12% of the year, 10 mph for 5% of the year, and 15 mph or faster for 1% of the year. The remaining 75% of the year, the wind is either in a direction away from the Traverse Mountain residential area or is calm.

- **Worst case scenario area source exposure modeling**: The EEP used the SCREEN3 air quality dispersion modeling tool to estimate the area-based dispersion of fugitive dust from the quarry site to various distances toward Traverse Mountain.

  The SCREEN3 model gives generic pollutant concentrations at points that are various distances from the source. It is a screening model and is designed to overestimate the pollutant concentration. If the screening results are above a threshold of concern, a more robust model that can account for the meteorological, terrain, and structural conditions is used before making any conclusions (EPA 1995; Bruce et al. 2014; Till & Meyer 1983; Reed 2005; Turner 1994).

  In using this model, the following assumptions were applied (these represent worst case conditions for dust exposure):
  - The sky was always noon-time sunny, no cloud cover, and no precipitation for 100% of the year (the worst-case stability class).
  - The dust cloud mass is 100% rc-silica in the <0.01 µm or the 1.0-2.5 µm size.
  - Any wind speed is able to lift and transport at 100% capacity.
  - The rc-silica is eternally buoyant (no deposition). Deposition is an interesting concern. In reality, as the dust cloud moves downwind the mass is reduced by deposition, but the ratio of rc-silica to total mass increases because the heavier materials will deposit earlier than the lighter materials (Aluko & Noll 2006).

  The annual average exposure levels for the three modeled distances are as follows:

| | | |
|---|---|---|
| 400 feet (122 meters) | Closest resident | 9.19 µg/m$^3$-year |
| 1,660 feet (506 meters) | Closest resident to large pit | 9.57 µg/m$^3$-year |
| 4,900 feet (1,494 meters) | School | 8.87 µg/m$^3$-year |

  The overall annual average exposure level across the Traverse Mountain residential area is <10 µg/m$^3$. This is below the OSHA TWA PEL (50 µg/m$^3$) and the EPA interpolated equivalent (18 µg/m$^3$). It is above the California cREL (3.0 µg/m$^3$).

Next Steps: We have proposed acquiring several portable PM2.5 monitors and conducting spot checks of locations around the perimeter of the site and in the Traverse Mountain residential area (i.e., near the closest homes, near the school, etc.).

- **Investigation of heavy metals**: With a petition to conduct a formal investigation, we could look at this in more depth. As a preliminary assessment, assuming a total dust exposure level of 10 µg/m$^3$ (0.000010 g/m$^3$), this is what we might find:

| Metal | Weight Volume (µg/g) | Exposure Level (µg/m$^3$) | ATSDR chronic-duration inhalation MRL (µg/m$^3$) |
|---|---|---|---|
| Aluminum | 1,800 | 0.0018000 | 4,500 |
| Arsenic | 13.8 | 0.0000138 | 2 |
| Barium | 82.3 | 0.0000823 | 500 |
| Beryllium | 0.187 | 0.0000002 | 2 |
| Cadmium | 0.28 | 0.0000003 | 0.01 |
| Chromium | 7.24 | 0.0000072 | 0.3 (assuming all is Cr-6) |
| Cobalt | 1.23 | 0.0000012 | 0.1 |
| Lead | 4.34 | 0.0000004 | 50 |
| Manganese | 96.9 | 0.0000969 | 0.3 |
| Molybdenum | 0.751 | 0.0000008 | 0.4 |
| Strontium | 32.4 | 0.0000324 | 0.5 |
| Tin | 1.1 | 0.0000011 | 2,000 (assuming is inorganic) |
| Titanium | 43.0 | 0.0000430 | 0.1 |
| Uranium | 10.8 | 0.0000108 | 0.8 |
| Vanadium | 6.96 | 0.0000070 | 0.1 |
| Zinc | 22.2 | 0.0000222 | 1,000 |

MRL is a Minimal Risk Level, and is interpreted similarly to a RfD.

The metals that are micro-nutrients or were not detected were not evaluated. The above data from a very preliminary assessment. Our preliminary conclusion is that the metal levels from this one sample are not at a high enough concentration to cause concern.

**Conclusion**: The EEP was asked to address construction dust with consideration of silica, and the risk of silicosis and lung cancer. We have not addressed any other potential pollutant or health outcome.

Based on our literature review, the EEP cannot state that exposure to rc-silica is "safe." Indeed, long-term exposures at or above 1000 µg/m$^3$-year have an increasing risk approximately twice that of an unexposed community.

However, the literature review, and subsequent modeling of the Point of the Mountain quarry, suggests to us that the exposures to rc-silica originating from the quarry that are experienced



Attachment: 2. Site Plan (American Eagle Appeal)

by Traverse Mountain residents are transient (25% of the time of the year) in nature, and well below (approximately 100 times below) the levels where observable effects occur. The modeling also suggests that the exposure levels to rc-silica originating from the quarry and experienced by Traverse Mountain residents are below (about one half) the EPA recommended residential exposure interpolation of the OSHA occupational threshold.

Previous investigations: The EEP referenced the "Brigham City Sand and Gravel Pits" (ATSDR 2006) as one example of several of prior investigative experiences. That investigation was conducted as part of a cooperative agreement UDOH had with the Agency for Toxic Substances and Disease Registry (ATSDR) and is therefore published online. We feel there has been some misinterpretation of that report. Similar to this situation, that investigation focused on particulate matter. In that assessment, the EEP found that particulate matter ($PM_{10}$) ". . . are a nuisance, but do not pose a health concern . . .". Similarly, the data suggested that total solid particulates were ". . . a nuisance and do not pose a health concern." Those reading the report have focused on a recommendation the EEP made because the investigation focused on particulate matter. We recognized then, and continue to recognize now, there are other concerns that were not investigated.

Residents' concerns: We recognize and appreciate that the residents have individual and community level concerns. We encourage your efforts to continue to work within your political jurisdiction to voice those concerns. We feel that the best policy decisions are made when many voices contribute to the process.

## Recommendations

The EEP recommends that either the city of Lehi or residents of Traverse Mountain, through the Utah County Health Department, petition the EEP to conduct a more thorough investigation of the site, to include additional potential air pollutants (i.e., VOCs, PAHs, heavy metals, etc.) and to consider more adverse health outcomes (i.e., cancers, cardiovascular disease, other respiratory disease, reproductive health, children's health, etc.).

Additionally, either the city of Lehi or the Utah County Health Department can propose thresholds of concern for the EEP to use that are lower than a risk ratio of 3.0 or the OSHA TWA PEL (or the EPA interpolation of that PEL for residents).

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# Exhibit 10

U.S. Department
of Transportation

**Federal Highway
Administration**

# FHWA
# Roadway Construction Noise Model
# User's Guide

FHWA-HEP-05-054
DOT-VNTSC-FHWA-05-01

**Final Report**
January 2006







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Prepared for
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Federal Highway Administration
Office of Natural and Human Environment
Washington, DC 20590

Prepared by
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The Roadway Construction Noise Model (RCNM) is the Federal Highway Administration's (FHWA) national model for the prediction of construction noise. Due to the fact that construction is often conducted in close proximity to residences and businesses, construction noise must be controlled and monitored to avoid impacts on surrounding communities. In addition to community issues, excessive noise can threaten a construction projects' progress. Each project needs to balance the community's need for peace and quiet with the contractor's need to progress the work.

During the Central Artery/Tunnel (CA/T) project in Boston, Massachusetts, the project's noise control program developed the Construction Noise Control Specification 721.560, the most comprehensive noise specification ever developed in the United States. As part of the CA/T project noise control program, a construction noise prediction spreadsheet was developed. Because the CA/T prediction tool can benefit other state and local governments, the FHWA developed the RCNM, which is based on the noise prediction calculations and equipment database used in the CA/T prediction spreadsheet. The RCNM provides a construction noise screening tool to easily predict construction noise levels and determine compliance with noise limits for a variety of construction noise projects of varying complexity.

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# METRIC/ENGLISH CONVERSION FACTORS

## ENGLISH TO METRIC

### LENGTH (APPROXIMATE)

| | | |
|---|---|---|
| 1 inch (in) | = | 2.5 centimeters (cm) |
| 1 foot (ft) | = | 30 centimeters (cm) |
| 1 yard (yd) | = | 0.9 meter (m) |
| 1 mile (mi) | = | 1.6 kilometers (km) |

### AREA (APPROXIMATE)

| | | |
|---|---|---|
| 1 square inch (sq in, $in^2$) | = | 6.5 square centimeters ($cm^2$) |
| 1 square foot (sq ft, $ft^2$) | = | 0.09 square meter ($m^2$) |
| 1 square yard (sq yd, $yd^2$) | = | 0.8 square meter ($m^2$) |
| 1 square mile (sq mi, $mi^2$) | = | 2.6 square kilometers ($km^2$) |
| 1 acre = 0.4 hectare (he) | = | 4,000 square meters ($m^2$) |

### MASS – WEIGHT (APPROXIMATE)

| | | |
|---|---|---|
| 1 ounce (oz) | = | 28 grams (gm) |
| 1 pound (lb) | = | 0.45 kilogram (kg) |
| 1 short ton = 2,000 pounds (lb) | = | 0.9 tonne (t) |

### VOLUME (APPROXIMATE)

| | | |
|---|---|---|
| 1 teaspoon (tsp) | = | 5 milliliters (ml) |
| 1 tablespoon (tbsp) | = | 15 milliliters (ml) |
| 1 fluid ounce (fl oz) | = | 30 milliliters (ml) |
| 1 cup © | = | 0.24 liter (l) |
| 1 pint (pt) | = | 0.47 liter (l) |
| 1 quart (qt) | = | 0.96 liter (l) |
| 1 gallon (gal) | = | 3.8 liters (l) |
| 1 cubic foot (cu ft, $ft^3$) | = | 0.03 cubic meter ($m^3$) |
| 1 cubic yard (cu yd, $yd^3$) | = | 0.76 cubic meter ($m^3$) |

### TEMPERATURE (EXACT)

[(x-32)(5/9)] °F = y °C

## METRIC TO ENGLISH

### LENGTH (APPROXIMATE)

| | | |
|---|---|---|
| 1 millimeter (mm) | = | 0.04 inch (in) |
| 1 centimeter (cm) | = | 0.4 inch (in) |
| 1 meter (m) | = | 3.3 feet (ft) |
| 1 meter (m) | = | 1.1 yards (yd) |
| 1 kilometer (km) | = | 0.6 mile (mi) |

### AREA (APPROXIMATE)

| | | |
|---|---|---|
| 1 square centimeter ($cm^2$) | = | 0.16 square inch (sq in, $in^2$) |
| 1 square meter ($m^2$) | = | 1.2 square yards (sq yd, $yd^2$) |
| 1 square kilometer ($km^2$) | = | 0.4 square mile (sq mi, $mi^2$) |
| 10,000 square meters ($m^2$) | = | 1 hectare (ha) = 2.5 acres |

### MASS – WEIGHT (APPROXIMATE)

| | | |
|---|---|---|
| 1 gram (gm) | = | 0.036 ounce (oz) |
| 1 kilogram (kg) | = | 2.2 pounds (lb) |
| 1 tonne (t) | = | 1,000 kilograms (kg) |
| | = | 1.1 short tons |

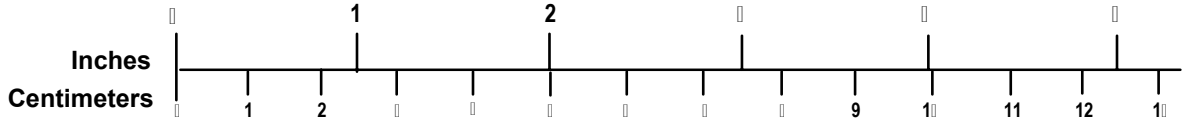
### VOLUME (APPROXIMATE)

| | | |
|---|---|---|
| 1 milliliter (ml) | = | 0.03 fluid ounce (fl oz) |
| 1 liter (l) | = | 2.1 pints (pt) |
| 1 liter (l) | = | 1.06 quarts (qt) |
| 1 liter (l) | = | 0.26 gallon (gal) |
| 1 cubic meter ($m^3$) | = | 36 cubic feet (cu ft, $ft^3$) |
| 1 cubic meter ($m^3$) | = | 1.3 cubic yards (cu yd, $yd^3$) |

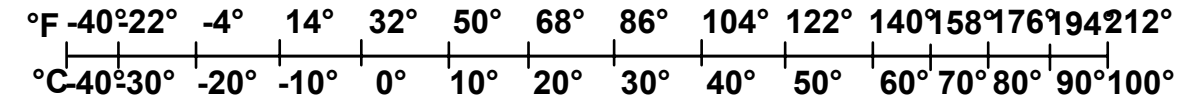
### TEMPERATURE (EXACT)

[(9/5) y + 32] °C = x °F

## QUICK INCH - CENTIMETER LENGTH CONVERSION




## QUICK FAHRENHEIT - CELSIUS TEMPERATURE CONVERSION




For more exact and or other conversion factors, see NIST Miscellaneous Publication 286, Units of Weights and Measures.
Price $2.50 SD Catalog No. C13 10286. **Updated 6/17/98**

Attachment: 2. Site Plan (American Eagle Appeal)

# Table of Contents

Section Page

Table of Contents ..... i
List of Figures ..... ii
List of Tables ..... iii
1 Introduction ..... 1
2 Background ..... 2
3 The RCNM ..... 4
3.1 RCNM Main Page ..... 4
3.1.1 File Menu ..... 5
3.1.2 Edit Menu ..... 5
3.1.3 View Menu ..... 6
3.1.4 Options Menu ..... 6
3.1.5 Help Menu ..... 8
3.2 Input Data ..... 8
3.2.1 Receptors ..... 8
3.2.2 Equipment ..... 9
3.2.3 Noise Metric and Noise Limit Criteria ..... 10
4 Results ..... 18
5 Calculations in the RCNM ..... 20
5.1 Metric Calculation ..... 20
5.2 Exceedance Calculation ..... 20
5.3 Totals Calculation ..... 21
6 References ..... 22
Appendix A: Best Practices for Calculating
Estimated Shielding for Use in the RCNM ..... A-1

Attachment: 2. Site Plan (American Eagle Appeal)

## List of Figures

Figure Page

1. The RCNM main page ..... 4
2. <File> Menu ..... 5
3. <Edit> Menu ..... 5
4. <View> Menu ..... 6
5. <Options> menu ..... 6
6. Equipment list modification dialogue box ..... 7
7. Units modification pull-down menu ..... 8
8. Equipment dialogue box, with pull-down menu shown ..... 9
9. Noise Metric pull-down menu ..... 10
10. Noise Limit Criteria pop-up dialogue box ..... 11
11. The Noise Limit Criteria "Clear" command button ..... 12
12. Noise Limit Criteria pull-down menu ..... 13
13. Noise Limit Criteria "Value" dialogue box ..... 13
14. Noise Limit Criteria "Maximum" dialogue box ..... 14
15. Noise Limit Criteria "Baseline +" dialogue box ..... 14
16. Noise Limit Criteria "Conditional" dialogue box ..... 15
17. L10 Adjustment dialogue box ..... 16
18. Noise Limits display window ..... 16
19. The RCNM main-page Results display ..... 18

Attachment: 2. Site Plan (American Eagle Appeal)

## List of Tables

Table Page

1. CA/T equipment noise emissions and acoustical usage factors database. ..... 3
2. Default Noise Limit Criteria ..... 11

Attachment: 2. Site Plan (American Eagle Appeal)

# 1 Introduction

The Roadway Construction Noise Model (RCNM) is the Federal Highway Administration's (FHWA) national model for the prediction of construction noise. Due to the fact that construction is often conducted in close proximity to residences and businesses, construction noise must be controlled and monitored to avoid impacts on surrounding communities. In addition to community issues, excessive noise can threaten a construction project's progress. Each project needs to balance the community's need for peace and quiet with the contractor's need to progress the work.

The Central Artery/Tunnel (CA/T) project in Boston, Massachusetts, which began in the early 1990s, is the largest urban construction project ever conducted in the United States. Its noise control program developed the Construction Noise Control Specification 721.560, the most comprehensive noise specification ever developed in the United States [1]. As part of the CA/T project noise control program, a construction noise prediction spreadsheet was developed [2]. Because the CA/T prediction tool can benefit other state and local governments, the FHWA developed the RCNM, which is based on the noise prediction calculations and the equipment database used in the CA/T prediction spreadsheet. The RCNM provides a construction noise screening tool to easily predict construction noise levels and to determine compliance with noise limits for a variety of construction noise projects of varying complexity.

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## 2 Background

The RCNM is a national model based on the noise calculations and extensive construction noise data compiled for the CA/T Project. The basis for the national model is a spreadsheet tool developed in support of the CA/T project [2]. The CA/T predictions originated from Environmental Protection Agency (EPA) noise level work [3] and an Empire State Electric Energy Research Corp. Guide [4] which utilizes an "acoustical usage factor" to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. Table 1 presents a construction equipment noise database compiled through the CA/T project [2]. This database is used to predict construction noise within the RCNM. The noise levels listed represent the A-weighted maximum sound level (Lmax), measured at a distance of 50 feet from the construction equipment.

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**Table 1.** CA/T equipment noise emissions and acoustical usage factors database.

| CA/T Noise Emission Reference Levels and Usage Factors | | | | | |
|---|---|---|---|---|---|
| filename: EQUIPLST.xls | | | | | |
| revised: 7/26/05 | | Acoustical | Spec 721.560 | Actual Measured | No. of Actual |
| | Impact | Use Factor | Lmax @ 50ft | Lmax @ 50ft | Data Samples |
| Equipment Description | Device ? | ( % ) | (dBA, slow) | (dBA, slow) | (Count) |
| | | | | (samples averaged) | |
| All Other Equipment > 5 HP | No | 50 | 85 | -- N/A -- | 0 |
| Auger Drill Rig | No | 20 | 85 | 84 | 36 |
| Backhoe | No | 40 | 80 | 78 | 372 |
| Bar Bender | No | 20 | 80 | -- N/A -- | 0 |
| Blasting | Yes | -- N/A -- | 94 | -- N/A -- | 0 |
| Boring Jack Power Unit | No | 50 | 80 | 83 | 1 |
| Chain Saw | No | 20 | 85 | 84 | 46 |
| Clam Shovel (dropping) | Yes | 20 | 93 | 87 | 4 |
| Compactor (ground) | No | 20 | 80 | 83 | 57 |
| Compressor (air) | No | 40 | 80 | 78 | 18 |
| Concrete Batch Plant | No | 15 | 83 | -- N/A -- | 0 |
| Concrete Mixer Truck | No | 40 | 85 | 79 | 40 |
| Concrete Pump Truck | No | 20 | 82 | 81 | 30 |
| Concrete Saw | No | 20 | 90 | 90 | 55 |
| Crane | No | 16 | 85 | 81 | 405 |
| Dozer | No | 40 | 85 | 82 | 55 |
| Drill Rig Truck | No | 20 | 84 | 79 | 22 |
| Drum Mixer | No | 50 | 80 | 80 | 1 |
| Dump Truck | No | 40 | 84 | 76 | 31 |
| Excavator | No | 40 | 85 | 81 | 170 |
| Flat Bed Truck | No | 40 | 84 | 74 | 4 |
| Front End Loader | No | 40 | 80 | 79 | 96 |
| Generator | No | 50 | 82 | 81 | 19 |
| Generator (<25KVA, VMS signs) | No | 50 | 70 | 73 | 74 |
| Gradall | No | 40 | 85 | 83 | 70 |
| Grader | No | 40 | 85 | -- N/A -- | 0 |
| Grapple (on backhoe) | No | 40 | 85 | 87 | 1 |
| Horizontal Boring Hydr. Jack | No | 25 | 80 | 82 | 6 |
| Hydra Break Ram | Yes | 10 | 90 | -- N/A -- | 0 |
| Impact Pile Driver | Yes | 20 | 95 | 101 | 11 |
| Jackhammer | Yes | 20 | 85 | 89 | 133 |
| Man Lift | No | 20 | 85 | 75 | 23 |
| Mounted Impact Hammer (hoe ram) | Yes | 20 | 90 | 90 | 212 |
| Pavement Scarafier | No | 20 | 85 | 90 | 2 |
| Paver | No | 50 | 85 | 77 | 9 |
| Pickup Truck | No | 40 | 55 | 75 | 1 |
| Pneumatic Tools | No | 50 | 85 | 85 | 90 |
| Pumps | No | 50 | 77 | 81 | 17 |
| Refrigerator Unit | No | 100 | 82 | 73 | 3 |
| Rivit Buster/chipping gun | Yes | 20 | 85 | 79 | 19 |
| Rock Drill | No | 20 | 85 | 81 | 3 |
| Roller | No | 20 | 85 | 80 | 16 |
| Sand Blasting (Single Nozzle) | No | 20 | 85 | 96 | 9 |
| Scraper | No | 40 | 85 | 84 | 12 |
| Shears (on backhoe) | No | 40 | 85 | 96 | 5 |
| Slurry Plant | No | 100 | 78 | 78 | 1 |
| Slurry Trenching Machine | No | 50 | 82 | 80 | 75 |
| Soil Mix Drill Rig | No | 50 | 80 | -- N/A -- | 0 |
| Tractor | No | 40 | 84 | -- N/A -- | 0 |
| Vacuum Excavator (Vac-truck) | No | 40 | 85 | 85 | 149 |
| Vacuum Street Sweeper | No | 10 | 80 | 82 | 19 |
| Ventilation Fan | No | 100 | 85 | 79 | 13 |
| Vibrating Hopper | No | 50 | 85 | 87 | 1 |
| Vibratory Concrete Mixer | No | 20 | 80 | 80 | 1 |
| Vibratory Pile Driver | No | 20 | 95 | 101 | 44 |
| Warning Horn | No | 5 | 85 | 83 | 12 |
| Welder / Torch | No | 40 | 73 | 74 | 5 |

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# Guide to Air Quality Permitting for Concrete Batch Plants

First Edition, Fall 2018

The University of Texas at Austin
Environmental Clinic
*School of Law*

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# Purpose and Acknowledgments

This Guide provides an overview, but is by no means a comprehensive description of concrete batch plant air permitting in Texas. As a result, while every effort has been made to make these materials as accurate as possible, these materials are not to be used as a substitute for the advice of an attorney. Persons reviewing this Guide should not act upon the information without seeking the advice of an attorney.

Special thanks to Kathryn Kalinowski and Sarah Beach at University of Texas School of Law for their edits to this guide.

Cover Photo: Air Alliance Houston

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Attachment: 2. Site Plan (American Eagle Appeal)

# Table of Contents

## GUIDE TO AIR QUALITY PERMITTING FOR CONCRETE BATCH PLANTS

**Introduction** ..... **2**
**What Are Concrete Batch Plants?** ..... **2**
**What Problems Do Concrete Batch Plants Create for Neighbors?** ..... **4**
Air Pollution Issues ..... 4
Non-Air Pollutant Concerns ..... 5
**How Are Concrete Batch Plants Regulated?** ..... **5**
Storm water and waste water ..... 5
Land use regulation ..... 6
**How Are Air Emissions Authorized?** ..... **6**
Individual NSR Permit ..... 6
Standard Permits ..... 7
Air Quality Standard Permit for Concrete Batch Plants with Enhanced Controls ..... 9
**What Are the Opportunities for Community Involvement?** ..... **9**
Public Notice of an application ..... 9
Comments and hearing requests ..... 10
Limitation on "affected person" ..... 10
Limitation on evidence that is admissible ..... 10
**What Possible Benefits Might Be Secured for Clients by Challenging a Concrete Batch Plant Air Permit?** ..... **11**
**Conclusion** ..... **13**

# Index of Attachments

**Attachment A –** TCEQ, Air Quality Standard Permit for Concrete Batch Plants, RG-056 (Dec. 2000)

**Attachment B –** TCEQ, Concrete Batch Plant Standard Permit Protectiveness Review (Sept. 24, 2012)

**Attachment C –** TCEQ, Amendments to the Concrete Batch Plants Air Quality Standard Permit (2012)

**Attachment D –** U.S. EPA, Emission Factors Documentation for AP-42 Section 11.12-Concrete Batching (2006)

**Attachment E –** TCEQ, General Permit for Stormwater Discharges from Concrete Batch Plants

# INTRODUCTION

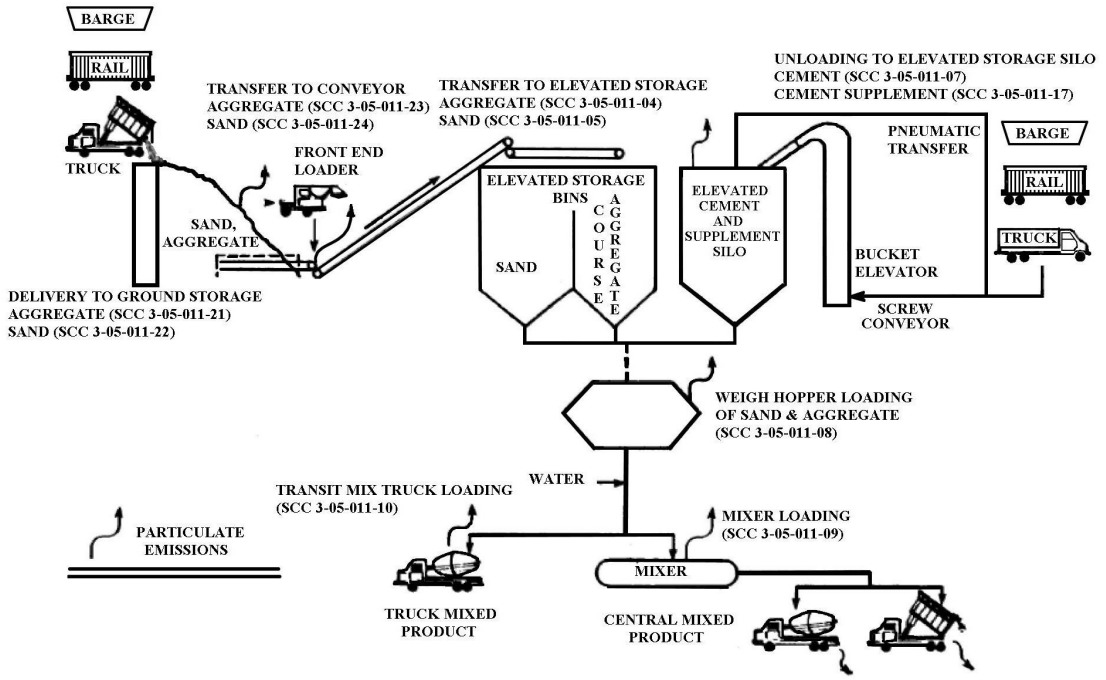
Due to the ubiquity of concrete batch plants, many communities throughout Texas are suffering from the pollution caused by concrete batch plants. Neighbors report particulate emissions coating their homes and cars and causing respiratory problems. They also object to the diesel trucks that cut through their communities and emit toxic air pollutants while idling outside concrete batch plants waiting to load.

Most people do not know, however, how to engage in the permitting process to attempt to require better controls and reduced pollution at concrete batch plants. This guide is intended to provide an overview of the Texas air permitting process for concrete batch plants and the types of pollution controls that communities could seek through that process.

# WHAT ARE CONCRETE BATCH PLANTS?

A typical concrete batch plant mixes water, cement, fine aggregate (e.g., sand) and coarse aggregate (e.g., gravel) and a small amount of supplemental materials in a very large drum to create concrete.[1] At most commercial-scale concrete plants, the cement is stored in silos and fed on a conveyor belt to a loading point where feeds of sand, gravel, and supplement join the cement feed. The feeds are dropped together through the drum into concrete trucks where they are combined with water. The concrete truck then drives to the construction site, further mixing the cement and water along the way. There are instances, usually at large construction sites, where the concrete is mixed on site in a central mix drum and then transferred to a transport truck.

**Concrete Batch Plant**




*Source: EPA, AP-42, Figure 11.12-1 (June 2006)*

The cement silos are generally the most noticeable part of a concrete batch plant. They will typically be very tall, maybe three stories or 40 feet. There will be several of them. At some concrete batch plants, there will be a silo that stores a supplemental mixture that is added to the concrete truck at the cement drop point. The drop occurs into a large funnel-shaped structure that is on stilts, so the concrete trucks can be driven beneath it for loading.





Attachment: 2. Site Plan (American Eagle Appeal)

A concrete batch plant site will generally be at least an acre, and much larger sites are not uncommon. The site will have stockpiles of sand and gravel, and there will be conveyor belts that move these materials into position to be mixed with the cement. There will also be a driveway, often, a circular one, for the concrete trucks, and there will be some internal material haul roads.

There may be a railroad spur that brings in the raw materials, i.e., the sand, gravel, cement, and cement supplements. There will be a small building or two on the site for such things as office space and the storage of repair parts and cleaning materials. Owners and operators of large concrete batch plants sometimes also operate other facilities, such as asphalt plants or rock crushers, at the same site.[2]

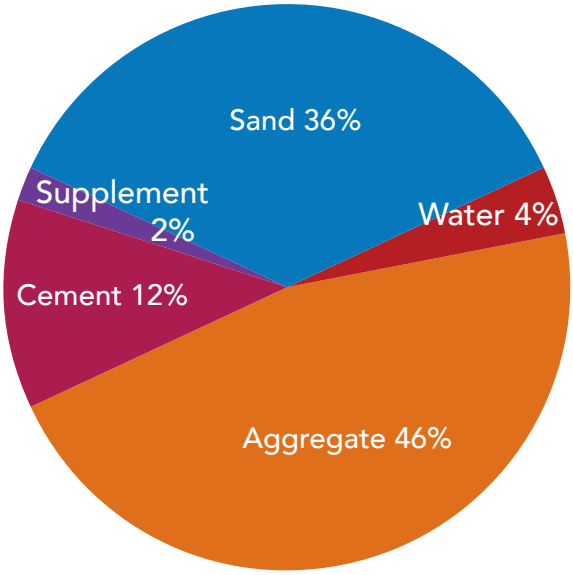
Additives to the cement mixture may include materials such as fly ash, granulated blast-furnace slag, and silica fume, which are intended to make the concrete more economical, reduce permeability, or increase strength. They may also include chemical additives, which are usually liquid ingredients intended to entrain air, reduce the water required, retard or accelerate the setting rate, make the concrete more fluid, etc. The Texas Commission on Environmental Quality's (TCEQ's) standard permit prohibits the use of additives that release volatile organic compounds.

This is not an industry that has changed greatly in recent decades. The TCEQ's predecessor agency, the Texas Natural Resource Conservation Commission ("TNRCC"), determined in the late 1990s that most concrete batch plants produced between 100 and 300 $yd^3$/hr of concrete.[3] Various sources indicated to the agency staff that average production rates were in the lower half of that range, between 157 $yd^3$/hr to 176 $yd^3$/hr. Industry representatives participating in focus group meetings hosted by the agency indicated that a 200 $yd^3$/hr production rate was a reasonable worst-case assumption for most plants in Texas, with the exception of a central-mix style plant, which could approach 300 $yd^3$/hr. (Central-mix plants mix the cement and the water at the plant site in a fixed mixing machine; central-mix plants usually make large volumes of concrete for use very nearby.)

Batch plants are generally broken into two categories: permanent concrete batch plants and temporary concrete batch plants. TCEQ defines "temporary plants" as those that occupy a particular location for no more than 180 days or until a single construction project is completed. There are a few plants, usually permanent ones, that are treated as a third separate category. These are "specialty" concrete plants. Specialty concrete plants might make such things as precast concrete products, prefabricated building and road materials, cement blocks, concrete pipes, septic tanks, or statuary. The output of specialty plants is generally small, when compared to the output of permanent and temporary plants that mix concrete for off-site construction projects.

***Composition of Concrete by Weight***

A cubic yard of wet concrete weighs about 4,024 pounds




*Source: EPA, AP-42, ch. 11.12, Table 11.12-2, note "a" (2011).*

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### About Portland Cement

Portland cement is the binding ingredient in concrete. It was patented in England in 1824. The name suggested the strength of construction stone from the Isle of Portland.

Portland cement is a mixture of limestone, clay, iron ore, and small amounts of other minerals. These materials are ground into a slurry and heated to very high temperatures in a nearly horizontal rotary kiln, which might be very large (e.g., 12 feet in diameter and 500 feet long). The slurry is fed into the high end of the kiln. At the lower end is a roaring flame, perhaps 2700 degrees Fahrenheit. A number of gases are driven off by this firing process. The remaining material, called clinker, emerges at the low end as gray marble-sized balls. These are, themselves, ground to a fine dust with a small amount gypsum and limestone.

Hazardous wastes are often used as fuel for the flame, and the overall process can create a number of pollutants, including mercury and toxic acid gases. The exhaust dusts from cement kilns were defined by Congress in 1980, pending further study, not to be hazardous wastes. 42 U.S.C. §6921(b)(3)(A)(iii), the "Bevill Amendment." Over the last 40 years, however, there has been continuing controversy as to the risk that these toxic pollutants adhere to and within the clinker. See, for example, Kleppinger, "Cement Clinker: An Environmental Sink for Residues from Hazardous Waste Treatment in Cement Kilns," 13 Waste Management 553-572 (1993).

"Basic Information: Air Emissions from the Portland Cement Industry," EPA, www3.epa.gov/airquality/cement/basic.html, and "How Cement is Made," Portland Cement Association, www.cement.org.

# WHAT PROBLEMS DO CONCRETE BATCH PLANTS CREATE FOR NEIGHBORS?

## Air Pollution Issues:

Neighbors most commonly complain about dust and particulate matter (PM) emissions from concrete batch plants.

PM emissions come primarily from the transfer of cement and additive materials to the silos, the transfer of sand and aggregate, truck loading, mixer loading, and sand and aggregate blowing from the piles.[4] Roadways internal to the plant site are also big contributors to the overall level of dust associated with a plant. The PM is comprised mainly of cement and dust from the additives; there are metals associated with the PM.[5] The impact of dust on neighbors is usually controlled by the continuous watering, i.e., misting, of plant roadways and other sources of dust. Dust may also be somewhat controlled by establishing a buffer zone between roadways and neighbors. Another protective measure is to erect a barrier between the roadways and the neighbors.

> Based on observations and experience, the TNRCC found that the height of a dust plume will be about twice the height of the vehicle generating the road dust. To achieve approximately 50% control of the dust plume, the height of a barrier was thought to be at the height of the plume center line. Based on the modeling, the agency found this height to be about 12 feet.
>
> (TCEQ Regulatory Guidance RG-056, December 2000, p. 9 of 49)

Air pollutants - including carbon monoxide, nitrogen oxides, volatile organic compounds, particulate matter, nickel and formaldehyde - can also be generated by on-site internal combustion engines.[6] Most concrete batch plants that have engines use diesel compression ignition internal combustion engines up to 1,000 horsepower.[7]

Finally, while not part of the concrete plant itself, the trucks that access the facility are often diesel-fueled and frequently idle outside the facility waiting to load for long stretches of time. Emissions from

idling concrete haul trucks are not included in the TCEQ's potential to emit calculations for concrete batch plants.

Particulate emissions are a complex mixture of extremely small particles and liquid droplets. Once inhaled, these particles can affect the heart and lungs and cause serious health effects, including increased risk of heart attacks, aggravation of asthma, and decreases in lung function.[8] The smaller particles, 2.5 micrometers and less in diameter, are the most harmful ones, since they are inhaled more deeply in the lungs than are larger particles.

Both EPA and TCEQ have Potential to Emit Calculators for Concrete Batch Plants that can be used to help estimate a facility's emissions.

https://www.epa.gov/sites/...06/concrete_batch_plants_pte_calculator070214_0.xlsx and https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/emiss-calc-cbp.xlsx.

TCEQ estimated that a 300 $yd^3$/hr plant that was limited to 6,000 $yd^3$/day and did not generate its own electricity (i.e., did not run a diesel generator) would emit an average of about 4 pounds of total particulate matter per hour during a 24-hour period. Please see the further explanation in the endnote [9] to understand that in any one hour that rate could be higher. If the plant does not generate its own power, TCEQ estimates about 0.24 pounds per hour (6% of total emissions) will be $PM_{2.5}$. If the plant does generate its own power, TCEQ assumes all the particulate emissions from the generator are $PM_{2.5}$. With on-site power production, $PM_{2.5}$ emissions rise to about 1.13 pounds/hour, 4.7 times as much as in the "no power generation" scenario.

### Non-Air Pollutant Concerns:

TCEQ will likely state that the first two of these concerns are outside of its jurisdiction. They are, however, issues that can be addressed in a settlement.

Noise: Noise is sometimes a problem for concrete plant neighbors. Large concrete trucks, those with the roughly cone-shaped mixing barrels on their backs, often arrive before dawn to pick up loads of concrete to take to construction sites, and the idling of these early-morning arrivals and their reverse warning sounds can be noisy, in addition to spreading diesel fumes throughout the neighborhood.

Traffic: The traffic of the trucks, depending on the roadway layout near the plant, can be a problem for the neighborhood, particularly when the trucks travel through or idle near residential areas.

Polluted wastewater runoff: The site stockpiles and dusty roads can contribute sediment to rain that falls on them, causing muddy runoff to the nearby neighborhood, if the runoff is not well-controlled by the plant.

## HOW ARE CONCRETE BATCH PLANTS REGULATED?

This guide addresses only air quality permitting in any detail. However, other permitting programs also affect the operation of a concrete batch plant and may provide avenues for the local citizens to lessen the impact of a plant.

### Storm water and waste water

A concrete batch plant that discharges storm water associated with the plants' operation, rather than retaining the water on-site, will need a storm water permit. A permit is needed if the storm water has come in contact with the stockpiles, infrastructure, or equipment at the plant.[10] In addition, if the plant discharges conventional waste water, for example, water that was used to wash down trucks or clean equipment, it will likely need a separate waste water discharge permit from TCEQ. If a plant's discharges are to a storm sewer, the terms of the city's municipal separate storm sewer system, i.e., "MS4," permit may also regulate the discharges.

There is a TCEQ general storm water permit that covers storm water discharges associated with a concrete batch plant. (A "general permit" is like a "standard permit" but is an authorization under the Clean Water Act rather than under the Clean Air Act.) The current general permit for concrete batch plants is Attachment E to this guide. As you will see from the coverage limitations on pages 6 and 7 of the permit, the general permit may be unavailable for operations near the Edwards Aquifer recharge zone or if the discharges might affect an endangered or threatened species. There are several other instances where storm water discharges may not be covered by the general permit. In the event a concrete batch plant does not qualify for or does not want to commit to the terms of coverage as described in the general permit, an individual Texas Pollution Discharge Elimination System ("TPDES") permit will usually be needed. A Storm Water Pollution Prevention Plan ("SWPPP") is required in order to secure coverage under the general permit and, as a practical matter, under an individual NPDES permit. These plans are not automatically submitted to the TCEQ for review, so they are often prepared poorly or not at all. A plan that conforms to the agency's SWPPP regulations can greatly improve the facility's storm water practices, if it is enforced.

### Land use regulation

In addition to other pollution permitting requirements, a concrete batch plant may be subject to local zoning or land use requirements. While temporary batch plants may have fewer restrictions, permanent batch plants located in a city will generally be limited to certain areas, unless the plant obtains some sort of special use exception or change in zoning. The city land use proceedings may provide the best opportunity for neighbors to actually stop the siting of a new concrete batch plant in their area.

## HOW ARE AIR EMISSIONS AUTHORIZED?

Concrete batch plants cannot begin construction of air pollution emitting facilities until the air pollution emissions are authorized by the TCEQ. There are two permitting vehicles for authorizing air pollution from a concrete batch plant: an individual New Source Review (NSR) permit and a Standard Permit. With a New Source Review Permit, the permit terms are written for the specific facility seeking authorization. A Standard Permit is a generic permit that applies to a certain type of industry or operation. Any facility that meets the terms of the standard permit can claim coverage and operate pursuant to its limits. There are two versions of the standard permit.

Neither the individual NSR permit nor either of the standard permits for concrete batch plants supersedes other TCEQ regulatory requirements or requirements of the Texas or federal Clean Air Act.[11] Therefore, theoretically, the holder of an authorization to operate under the TCEQ standard permit may not do so in such a manner as to cause a nuisance. Nuisance operations are prohibited by TCEQ regulation.[12]

### Individual NSR Permit

Any size concrete batch plant may decide to seek to authorize its emissions pursuant to an individual NSR permit, but it is the only avenue for large-capacity plants, i.e., plants with greater than 300 $yd^3$/hr production or 6000 $yd^3$/day production at one site. In 2012, TCEQ reported that an average of three to four concrete batch plants apply for a conventional NSR permit in any one year.[13] TCEQ data indicate that, at the end of 2017, 249 of 796 permitted concrete batch plants held individual permits.[14]

To obtain an individual NSR permit, Texas statutes require that the facility demonstrate: (1) it will use at least the best available control technology, considering the technical practicability and economic reasonableness of reducing or eliminating the emissions resulting from the facility; and (2) there are no indications the emissions from the facility will contravene the intent of the Texas Clean Air Act, including protection of the public's health and physical property.[15]

Attachment: 2. Site Plan (American Eagle Appeal)

In addition, TCEQ's regulations require that an individual NSR permit application:

- Demonstrate protection of public health and welfare, including compliance with all TCEQ regulations and the intent of the Texas Clean Air Act, including protection of the health and property of the public;
- For any facility within 3,000 feet of an elementary, junior high/middle, or senior high school, consider any possible adverse short-term or long-term side effects that an air contaminant or nuisance odor from the facility may have on the individuals attending the school(s);
- Include provisions for measuring the emission of significant air contaminants as determined by the executive director;
- Assure the facility will achieve Best Available Control Technology levels of emissions control;
- Demonstrate compliance with any additional, applicable federal requirements, including: New Source Performance Standards, National Emission Standard for Hazardous Air Pollutants, Hazardous Air Pollutant requirements, Prevention of Significant Deterioration or Nonattainment New Source Review requirements;
- Show that the proposed facility will achieve the performance specified in the permit application;
- Comply with any air dispersion modeling requirements imposed by the TCEQ executive director; and
- Obtain allowances to operate if the facility is subject to a Mass Emissions Cap and Trade Program.[16]

The terms of the individual NSR permit may be crafted to address the particular needs of and risks posed by the plant. Many terms in an individual NSR permit for a plant will mirror those in permits for other plants, but there is no real standardization of terms.

## Standard Permits

The second and most-used permitting vehicle is a "standard permit," of which there are two types: (1) the Standard Permit for Concrete Batch Plants and (2) the Air Quality Standard Permit for Concrete Batch Plants with Enhanced Controls.[17]

***Standard Permit for Concrete Batch Plants:*** Texas Health and Safety Code § 382.05195, allows TCEQ to promulgate permits for categories of facilities and to apply the same air emission controls to all plants that are within the defined category. TCEQ can only issue standard permits for "the types of facilities will not make a significant contribution of air contaminants to the atmosphere" and may not authorize "major" facilities through standard permits.[18] There are few legislative requirements for these standard permits, only that the permits be enforceable, be ones the Commission can adequately monitor for compliance, and that the permits require the permitted facilities to use Best Available Control Technology ("BACT").[19]

TCEQ's predecessor agency issued its first standard permit for concrete batch plants in 2000. That permit, now a TCEQ permit, is occasionally amended, most recently in 2012. As of 2012, TCEQ estimated that the average rate of application for coverage under its standard permit was 94 plants/year.[20] The Standard Permit for Concrete Batch Plants covers three types of facilities: (1) permanent concrete batch plants, (2) temporary concrete batch plants, and (3) specialty concrete batch plants. The standard permit is available for any concrete batch plant located at a site producing less than 300 $yd^3$/hr. The permit has separate requirements for permanent and temporary and specialty plants.

"Temporary" plants are defined to be plants that occupy a particular location for not more than 180 days or until a single project was completed.

Attachment: 2. Site Plan (American Eagle Appeal)

### *The general test of the protectiveness of the standard permits*

TCEQ performs "protectiveness reviews" that nominally test whether the terms of proposed and amended standard permits are, in fact, protective of human health and the environment. At its most basic, a protectiveness review models emissions from a plant operating with whatever pollution controls the standard permit requires and disburses the emissions to the property line or off-site sources using a computer-simulation of air flows. There are obviously a number of judgment calls to be made in the course of a protectiveness review: What are the uncontrolled emission rates, how efficient are the pollution control technologies, what are the background meteorological conditions at the "universal" site, etc.?

The 2000 standard permit for concrete batch plants was evaluated using the then-preferred EPA air dispersion model (ISCST3) to estimate the off-site air quality impacts. The restrictions of that permit were applied to hypothetical plants, and the agency modeled five years of atmospheric conditions it felt would be representative of atmospheric conditions anywhere in the state. The agency made a number of what it considered to be conservative or worst-case assumptions for model variables and concrete plant layouts. These are described in some detail in a regulatory guide published by the agency, RG-056, Air Quality Standard Permit for Concrete Batch Plants (December 2000), which is Attachment 1 to this guide.

The Texas-law "property line standard" for PM was the one by which the "protectiveness" of the 2000 standard permit had been measured. The property line standard, however, was considered by industry representatives to be more stringent than required by federal law, and before TCEQ conducted an additional protectiveness review in 2012, TCEQ repealed the property line standard. The 2012 amendments to the standard permit measured protectiveness against EPA's National Ambient Air Quality Standards.

The TCEQ standard permit is quite complicated. The following are only the highlights of the permit.[21]

- TCEQ's application notice requirements, found at 30 Tex. Admin. Code Chapter 39, generally apply to applications for standard permit coverage, but there is a very complicated exception for certain portable concrete batch plants associated with "public works projects."[22] Chapter 39 does not require mailed notice to neighbors of the to-be-permitted plant.
- A TCEQ approval of a registration under the standard permit is required before beginning construction or operation. There are some technical forms associated with applying for the registration, but air quality modeling is explicitly not required to support the application.
- The "site" of a plant includes contiguous or adjacent properties under common control, and a plant includes all the stockpiles and silos and conveyor belts, i.e., all the support equipment.
- Both the permanent and temporary plants are limited to 300 cubic yards of concrete production per hour at a site and to 6,000 cubic yards of production per day at a site. Specialty plants may not produce more than 30 cubic yards of concrete per hour at a site.
- The principal difference in the treatment of the permanent and temporary facilities is that temporary plants may only be on site for 180 days. A temporary plant serving only one construction project may remain on site longer than that. Roads at a permanent facility must be paved with "a cohesive hard surface" to control dust, whereas temporary and specialty plant roads may be watered or covered with such materials as roofing shingles or tire chips to suppress dust. The permit exempts temporary plants closely associated with public works projects from several of requirements that apply to other temporary plants.
- Operators are required to maintain their records on site for a rolling two-year period. Those records are, therefore, available to TCEQ and local government inspectors,[23] but most records are not filed with TCEQ (so, are not readily available to citizens).

Attachment: 2. Site Plan (American Eagle Appeal)

- Silos and weigh hoppers (i.e., the hoppers where the concrete components are weighed) are required to have particulate-matter-control systems with fabric or cartridge filters or must be vented to a central baghouse. These filters are to be 99.5% efficient at removing $PM_{2.5}$. A filter that catches $PM_{2.5}$ will catch the larger particles, too.
- Materials conveyor belts have to be covered.
- Concrete haul trucks must be loaded within a 3-sided shroud or curtain.
- Stockpiles have to be sprayed with water or chemicals to suppress dust.
- Multiple standard-permit concrete batch plants may be operated at one site, but the limits on hourly and daily production apply to the entire site. This "at a site" limitation is important as it somewhat limits a proliferation of plants in one area. Similarly, if there are rock crushers, concrete crushers, or asphalt plants on site, there are some restrictions on batch plant operation and location.
- The default rule is that silos, stockpiles, equipment and vehicles (except entering and leaving the site) must be kept 50 feet from the property line. In the alternative, the operator may rely on 12-foot-high barriers and three-walled stockpile bunkers. The exhaust vent for the weigh hopper shroud has to be 100 feet from the property line.

Compliance monitoring is a weakness of the concrete batch plant standard permit. The standard for dust emissions is "no visible emissions." That standard applies at the property line, and it applies to the fabric or cartridge filter systems on site. But, the determination that the standard is met is made using EPA method 22,[24] which is basically that no more than 30 seconds of dusty air are observed in any 6-minute period (for the legislative "enhanced controls" permit, 5-minute period). The operator is required to perform this test only once a quarter, under what are supposed to be normal operating conditions.

The "reportable quantity" for PM, the air contaminant that is most commonly of interest at a concrete batch plant, is 100 pounds per 24 hours.[25] If an accident, such as a ripped baghouse or shroud at the truck-loading drop, results in PM emissions that are less than the reportable quantity, those emissions do not have to be reported at all.[26] The permittee simply has to create a report within two weeks of the emissions event, which is then kept on site.[27]

## Air Quality Standard Permit for Concrete Batch Plants with Enhanced Controls

There is a second type of concrete batch plant standard permit that was created by the legislature in 2003.[28] More precisely, the legislature told TCEQ to issue a standard permit for concrete batch plants with "enhanced" pollution controls defined by the legislature.

The terms of the two standard permits are similar, but there are differences. The enhanced controls standard permit is only available for permanent concrete batch plants that produce 300 or fewer cubic yards of concrete per hour at a site.[29] Unlike the other standard permit, the enhanced controls permit allows more than 6,000 cubic yards of production per day at a site. While both standard permits include a "no visible emissions" standard, the enhanced controls standard is measured over a 5-minute, as opposed to a 6-minute, period. The enhanced controls standard permit does not include restrictions related to the co-location of rock crushers, concrete crushers, or asphalt plants on site. The enhanced control permit's record-keeping requirements are much-reduced, as compared to those of operators under the other standard permit. The enhanced controls standard permit also has its own public notice requirements, which include newspaper notice but do not require mailed notice or any posted (sign) notice. On the other hand and unlike the situation with the other standard permit, the enhanced controls standard permit requires a mandatory non-evidentiary public meeting before a registration for the permit may be authorized.

Attachment: 2. Site Plan (American Eagle Appeal)

# WHAT ARE THE OPPORTUNITIES FOR COMMUNITY INVOLVEMENT?

At the outset, there are two types of non-legislative opportunities for citizens to participate in the air permitting for concrete batch plants.

**At the time a registration is sought:** First, if a plant operator is seeking an individual permit, members of the public may participate in the permitting proceedings by filing comments, requesting a public meeting, and requesting a contested case hearing. Similarly, when an operator comes forward to seek coverage under the TCEQ-drafted standard permit, anyone may comment as to whether the operator qualifies for coverage under the standard permit, and an "affected person" may pursue a contested case hearing on that point and on the protectiveness of the standard permit, given the facts of the particular situation at hand. The "affected person" definition is limited, as discussed below. If the operator is seeking coverage under the enhanced controls standard permit, the rights of public participation are more limited. There is only a comment opportunity with no right to a hearing.

**At the time the standard permit is being amended:** Second, members of the public may participate in the periodic amendment of the TCEQ's standard permit. Historically, the interests of neighbors of concrete batch plants have not been well-represented in the various proceedings to draft or amend the TCEQ standard permit. During the 2012 amendment cycle, six representatives of the concrete and aggregates industries filed written comments on the proposed permit. No non-industry representative filed a comment.[30] In early 2003, when the permit was previously amended, one industry representative filed a written comment, and Harris County commented that a concrete batch plant being relocated to support a public works project should give notice to any local pollution control agency that had jurisdiction of the site.[31] In 2000, when the permit was initially drafted, eight industry representatives filed written comments, whereas only one non-industry representative filed comments.[32]

## Public Notice of an application

There is no written notice of air quality permit proceedings to neighbors of a proposed concrete batch plant, regardless of air quality permit the operator seeks. Of course, if a neighbor happens to be on a mailing list for all permit applications in a county, that neighbor should receive notice of a concrete batch plant proceeding. If an operator is seeking coverage under an individual NSR permit or under the Standard Permit for Concrete Batch Plants, there is both newspaper and sign-posting notice. The sign-posting notice is not required for the Air Quality Standard Permit for Concrete Batch Plants with Enhanced Controls.

## Comments and hearing requests

For an application for an individual NSR concrete batch plant permit, the comment and hearing request rights are the same as they are for any other individual air quality permit. (Note: S.B. 1045 from 2017 created a single-notice system for any individual air permit application for which a draft permit is prepared within 15 days of the initial filing of the application.) The public-notice (i.e., publication and sign posting) and hearing-request requirements for a registration under the non-enhanced controls standard permit are a bit different from the usual requirements.

Because of 2016 rule amendments to these requirements, initiated by the Texas Aggregates and Concrete Association, there is only one notice to the public and, hence, one comment period associated with applications to register a facility under the TCEQ standard permit. This notice is a consolidated notice of both (1) the receipt of application and intent to receive coverage under the permit and (2) the notice of application and preliminary decision by the agency. The consolidated notice is posted at the site and published after the administrative and technical reviews of the registration application



Attachment: 2. Site Plan (American Eagle Appeal)

have been completed and the draft permit issued. The consolidated notice establishes a single, 30-day notice period during which comments and requests for a public meeting or contested case hearing can be submitted.[33] (So, note that public meetings, which are not mandatory in order to secure coverage under the TCEQ standard permit, nonetheless may be requested.)

Prior to the amendments, the comment period during which a person had to raise any issue that might be tried in a contested case hearing was only 15 days following the application filing, so the post-amendment rule, which lengthens the comment period to at least 30 days and arises after the application is technically complete and the draft permit issued, can be characterized as an improvement in public participation. The 30-day period begins on the last date of newspaper publication, and the comment period is automatically extended to the close of any public meeting. As required by 30 Tex. Admin. Code § 55.201, issues that might be tried in a contested hearing must be raised in a requestor's timely submitted comments.

For the Enhanced Controls standard permit, there is no contested-case hearing opportunity for anyone opposing an application. There is a required public meeting. The TCEQ has a 35-day time period, following the public meeting, in which to grant or deny the application.

### Limitation on "affected person"

While the legislature generally provided limited direction to TCEQ regarding the terms of a standard permit that TCEQ issues, it did limit the opportunities for public participation by limiting the universe of potential "affected persons." In 1985, the legislature provided for a "standard exemption" from permitting for facilities that TCEQ "found upon investigation … will not make a significant contribution of air contaminants to the atmosphere."[34] (Authorization by standard exemption is no longer allowed.) Then, in the same bill, the legislature imposed a limit on the range of people who might be considered "affected persons" and, thus, potential contested case opponents for a standard-exemption concrete batch plant. The limitation stated that the person must reside in a permanent residence within ¼ mile of the proposed plant.[35] In 1999, the legislature added "standard permits" to the set of TCEQ authorizations for which only persons residing within 440 yards (i.e., a quarter mile) might be found to be affected.[36] So, the universe of persons potentially affected by a TCEQ standard permit concrete batch plant is, by law, a limited one.

### Limitation on evidence that is admissible

TCEQ's first standard permit for concrete batch plants was issued in September 2000[37] in response to the legislature's 1999 grant to the agency of authority to develop standard permits.[38] TCEQ's action was preceded by a set of studies that attempted to determine the protectiveness of three "standard exemptions" that, prior to 2000, largely provided the regulatory mechanisms for obtaining authorization to operate a concrete batch plant.

The 1999 legislature also passed a second bill, SB 1298,[39] that directly affected concrete batch plant authorizations. Prior to 2000, citizens had started using air dispersion modeling to challenge the granting of concrete batch plant standard exemptions (rule-like authorizations that were then available for certain polluting activities but were less formally developed than is a rule). Would-be operators of concrete batch plants complained that they were being pulled into contested case hearings by affected persons who claimed atmospheric dispersion modeling of plant air emissions showed harmful off-site impacts.

The second 1999 legislative act prohibited the use of atmospheric dispersion modeling in contested case hearings arising from applications for concrete batch plant approval under a standard exemption if atmospheric dispersion modeling had been employed in developing the exemption. TCEQ, "in order to give full effect to the intent of SB 1298," has also barred atmospheric dispersion modeling in contested cases arising from applications for coverage under the newly-created concrete batch plant standard permit.[40] TCEQ took the legislative act applicable to standard exemptions and applied it to the roughly corresponding and newly-created standard permit.

Attachment: 2. Site Plan (American Eagle Appeal)

# WHAT POSSIBLE BENEFITS MIGHT BE SECURED FOR CLIENTS BY CHALLENGING A CONCRETE BATCH PLANT AIR PERMIT?

Most would-be operators of concrete batch plants opt to get authorization under the non-enhanced controls standard permit. If the operator has chosen an appropriately zoned location, citizens living or working nearby do not have strong leverage by which to protect their neighborhoods. Obviously, neighbors should check the operator's application to TCEQ to confirm that the proposed operation, as described, qualifies for the permit. If the application for a storm water permit has been filed, it is a good idea to check that (particularly the SWPPP) too.

If talking to a would-be operator in order to secure concessions in exchange for withdrawing or refraining from a protest of the facility, below are some "asks" one might consider. Keep in mind that the would-be operator is likely to be more receptive to incurring expenses that do not "front load" the project (i.e., expenses that may be incurred over time as production at the site generates cash flow). Any commitments agreed to by the would-be operator need to be memorialized in special conditions of an individual permit or in a side agreement in the event the permit is a standard permit. One must pay attention to the enforceability of a side agreement; consider how it will be enforced three or six years from now, should today's involved citizens move, for example.

1. Contact Person. Get the name and phone number of a contact person or persons to whom to raise complaints, should any arise. Get a commitment that the phone will be answered by a person during plant operating hours or that the call will relay to a staff person who will find an appropriate person.

2. Dust control. The general permit requires dust control, but it is vague about the details. Get details tied down. For example, the permit does not require any particular schedule of water sprays to control dust or of the particular circumstances that trigger the need to spray; it requires recordkeeping of water spraying, but it does not specify what the records have to contain. It does not require the records be made available to anyone other than state and local government inspectors. Some of these short-comings might be negotiated away by neighbors.

   There may be instances where paved internal haul roads and staging areas are not required by the permit but where the benefits to the local residents sufficiently outweigh the costs to the operator, so pavement is worth negotiating for. It is also possible that a wider buffer zone around stockpiles, hoppers, and staging areas would make a difference. Either the height or construction of barrier perimeter fencing could also be negotiated.

3. Dust measurement. This is difficult. The permit standards for measurement of particulate emissions are not strong. In a perfect world, there would be periodic upwind and down-wind (of the plant) measurements of dust during normal operating conditions, so that the fact of dust emissions and the amount of dust emissions could be quantified. That is a heavy ask. However, it might be possible to negotiate one or two continuous emissions monitoring systems (CEMS) at selected sites in or near the facility that, if nothing else, would alert the operator of the need to spray that area. (CEMS are basically light sources, like lasers, that measure the attenuation of light in a volume of air through which a beam is directed. They can be calibrated to a "visible emissions" or other opacity standard, but the size of the particles and the presence of water vapor makes a difference. So, calibrating a CEMS is not simple.) Most would-be operators will strongly resist any automated dust measurement efforts; there is little or no industry history of this, and there would be both initial and operating expenses associated with automated measurement.

4. Get copies of upset reports. Get copies of reports submitted to TCEQ regarding pollution events at the facility. Get the reports contemporaneously with their submission to TCEQ. Possibly, one could get notice of un-permitted emissions that do not rise to the level of a "reportable quantity" release.

5. $PM_{2.5}$. Diesel engine emissions are the overwhelming source of these emissions from a concrete batch plant site. $PM_{2.5}$ emissions are more dangerous, if less near-term bothersome, than are visible dust emissions. (2.5 microns is about $1/30^{th}$ the width of a typical human hair or about 1/10,000 of an inch.) So, try to get the would-be operator to use electric-drive equipment powered from the utility grid or some non-hydrocarbon source.

6. Hours of operation. Ask for known and more limited than 24x7 hours of operation. Also, define what "operation" means. Perhaps, plant maintenance, for example, could occur outside of "operational" hours. If haul truck idling or even arrival at the site at 5 a.m. is likely, negotiate to forbid that.

7. Lighting. Find out what the plan is for lighting the site and see if you can secure guaranties of down-cast lighting and/or a time of night when almost all lights are dimmed or turned off.

8. Truck traffic. The would-be operator has little control over the routes a concrete truck driver uses to reach and depart from the site. However, signs on site reminding the drivers that people live nearby and urging drivers to avoid shortcuts through the neighborhood may do some good, as may admonitions about speed and not stacking trucks outside the site gates on neighborhood roads.

9. Dispersion modeling. Air dispersion modeling is not legally required in order for the would-be operator to get coverage under the standard permit. Air dispersion modeling can be expensive, because if done well, data has to be collected concerning sources of emissions in addition to the sources on the would-be operator's site. Unfortunately, and in addition to any other criticisms one might have of TCEQ's assumptions when it developed its standard permit, the standard permit does not address the scenario in which there are multiple nearby concrete batch plants that are not owned or controlled by the same operator. Cumulative impacts are not effectively address by the standard permit.

   So, if the site is in a heavily industrial area or is among other nearby concrete batch plants, one could cause the would-be operator to undertake some air dispersion modeling, possibly providing arguments for altering hours of operation or to support enhanced dust (or NOx) controls. If nothing else, such modeling might provide evidence to take to TCEQ to convince the agency its standard permit needs adjustment in some scenarios. (If the applicant is seeking an individual permit, rather than coverage under a standard permit, air dispersion modeling that considers off-site sources will not be required by the agency in most cases; agency-approved screening techniques that are based on the size of the plant seeking the permit will usually mean that off-site pollution sources need not be considered.)

# CONCLUSION

Concrete batch plants create environmental hazards and nuisance conditions in many low-income communities. Participating in the permitting or siting processes for these plants can halt construction of a plant or lead to better pollution limits and other community benefits. While the air permitting process for concrete batch plants is complicated, this guide can assist communities in navigating that process to improve conditions in their neighborhoods.

# Endnotes

1 The additional chemicals are used to control properties like setting time and plasticity.

2 Amendments to the Concrete Batch Plants Air Quality Standard Permit, TCEQ (2012), p. 3 (Attachment C).

3 TCEQ, Air Quality Standard Permit for Concrete Batch Plants, RG-056 (December 2000), p. 31 of 49 (Attachment A).

4 U.S. EPA, Background Document: General Air Quality Permit for New or Modified True Minor Source Concrete Batch Plants at p. 2.

5 U.S. EPA, Background Document: General Air Quality Permit for New or Modified True Minor Source Concrete Batch Plants (July 2, 2014), p.1.

6 U.S. EPA, AP-42, Sec. 3.4, Tables 34.-1 through 3.4-4 (October 1996).

7 TCEQ, Amendments to the Concrete Batch Plants Air Quality Standard Permit: Summary Document, p. 7, available at https://www.tceq.texas.gov/assets/public/permitting/air/NewSourceReview/Mechanical/cbpsp-finalpreamble.pdf.

8 https://www.epa.gov/pm-pollution.

9 TCEQ's most recent "protectiveness review" for the concrete batch plant standard permit is summarized in two documents. The first is a staff memo that sets out most of the details entitled Concrete Batch Plant Standard Permit Protectiveness Review, by Robert Opiela and dated September 24, 2012, which is Attachment B to this Guide. That memo provides the emission rates that were assumed for the various emission sources at a plant that were modeled. Maximum possible particulate emissions/hour were reduced by 17% (i.e., 4/24), because the averaging time for emissions was calculated based on a 24-hour day, while a maximum rate of 300 cubic yards/hour assumes a plant will operate only 20 hours/day, so that it may remain within the 6,000 cubic yards/day limit. The Opiela memo is summarized in more polished form at pages 8-11 of 29 in TCEQ's Amendments to the Concrete Batch Plants Air Quality Standard Permit (2012), which is Attachment C to this guide. The latter indicates that, using the Opiela memo's emissions rates, total particulate emissions from the plant are either 4.07 pounds/hour or 3.84 pounds/hour over a 24-hour period.

10 The technical test is whether the runoff has contacted industrial activities, and runoff from some structures on site, such as an office building, are not "associated" with the plant, unless they become commingled with runoff that is associated with the plant.

11 30 Tex. Admin. Code § 116.615(1).

12 30 Tex. Admin. Code § 101.4. "A nuisance is a condition that substantially interferes with the use and enjoyment of land by causing unreasonable discomfort or annoyance to per- sons sonsof ordinary sensibilities. Barnes v. Mathis, 353 S.W.3d 760, 763 (Tex. 2011) (emphasis added). Nuisance actions have a two-year statute of limitations, measured from the time a person knew or should have known the condition would substantially interfere with the use of the land. But, the limitations period does not begin simultaneously with the construction of what turns out to be a nuisance-causing project. Schneider Nat. Carriers, Inc. v. Bates, 147 S.W.3d 264 (Tex. 2004)("a landowner has the right to wait and see what the result will be when the improvements are subjected to an actual test"). Gilbert Wheeler, Inc. v. Enbridge Pipelines (E. Texas), L.P., 449 S.W.3d 474 (Tex. 2014), is a more recent case that also discusses when the limitations period begins to run.

13 TCEQ, Amendments to the Concrete Batch Plants Air Quality Standard Permit (2012).

14 The 2017 data were produced as a spreadsheet by TCEQ in response to a Public Information Act Request. The data are doubtless generally accurate. However, interpretation of the spreadsheet entries required that some judgments be made regarding the permit applicable to any individual facility.

15 Tex. Health & Safety Code § 382.0518(b).

16 30 Tex. Admin. Code § 116.111.

Attachment: 2. Site Plan (American Eagle Appeal)

17 Prior to 2012, there were concrete batch plants that could be authorized by rule, but new or modified plants may no longer receive authorizations under the permit-by-rule regimen.

18 Tex. Health & Safety Code § 382.05195(i)(2)(a).

19 Tex. Health & Safety Code § 382.05195(a). This section references § 382.0518(a) for the BACT requirement. BACT is not defined in state Statute, but it is defined in federal statute. The federal statutory definition, 42 U.S.C. § 7479(3), is that BACT is an emission limitation, e.g., "X ppm," achievable by various methods and control technologies. TCEQ, until 2010, defined the term in regulation at 30 TAC § 116.10(3) in a circular fashion, as "BACT with consideration given to the technical practicability and economic reasonableness of reducing or eliminating emission from the facility." In 2010, the regulation was changed to be "an air pollution control method" that is technically practical and economically reasonable. 30 TAC § 116.10(1). So, the State definition is of a control method, such as a scrubber, rather than of a level of emissions achieved by use of a scrubber.

20 "Amendments to the Concrete Batch Plants …"

21 Att. C, pp. 19-29, is the 2012 and currently-effective concrete batch plant standard permit, also available at: https://www.tceq.texas.gov/assets/public/permitting/air/NewSourceReview/Mechanical/cbpsp_only.pdf

22 See, 30 Tex. Admin. Code § 116.178.

23 Tex. Health & Safety Code § 382.111.

24 Method 22 is described in more detail in 40 CFR, Pt. 60, Appx. A-7.

25 30 Tex. Admin. Code §§ 101.1(88) and (89)(A)(ii).

26 30 Tex. Admin. Code § 101.201

27 30 Tex. Admin. Code §§ 101.210(b) and (b)(2).

28 Acts 2003, 78th Leg., ch. 361, § 3, codified at Tex. Health & Safety Code §§ 382.05198 and 382.05199. See, https://www.tceq.texas.gov/assets/public/permitting/air/NewSourceReview/Mechanical/cbp_ec_reqs.pdf.

29 The site-based limitation is one added by the agency. The legislature's statute included only a 300 $yd^3$ per hour per plant limitation.

30 Amendments to the Concrete Batch Plants Air Quality Standard Permit, TCEQ (2012), p. 12.

31 TCEQ RG-056 (July 2003), p. 2. This is Attachment 2 to this guide.

32 TCEQ RG-056 (2000), p. 21.

33 30 Tex. Admin. Code § 55.152.

34 Acts 1985, 69th Leg., Ch. 637, § 26. This was derived from SB 725. It amended § 3.27 of art. 4477-5, which was at the time the Texas Clean Air Act.

35 Acts 1985, 69th Leg., Ch. 637, § 26.

36 Acts 1999, 76th Leg., Ch. 406, § 7. This was derived from SB 766. The limitation is today at Tex. Health & Safety Code § 382.058(c).

37 TCEQ Regulatory Guidance RG-056, December 2000, p. 1 of 49. (In an apparent typographical error, the page is marked as 1 of 58, but subsequent pages are marked, 2, 3, 4, etc. of 49.)

38 Acts 1999, 76th Leg., Ch. 406, § 5, codified at Tex. Health & Safety Code § 382.05195.

39 Acts 1999, 76th Leg., Ch. 391, § 1, codified at Tex. Health & Safety Code § 382.058(d).

40 TCEQ, Air Quality Standard Permit for Concrete Batch Plants, RG-056, p. 1 of 49.

Exhibit 12



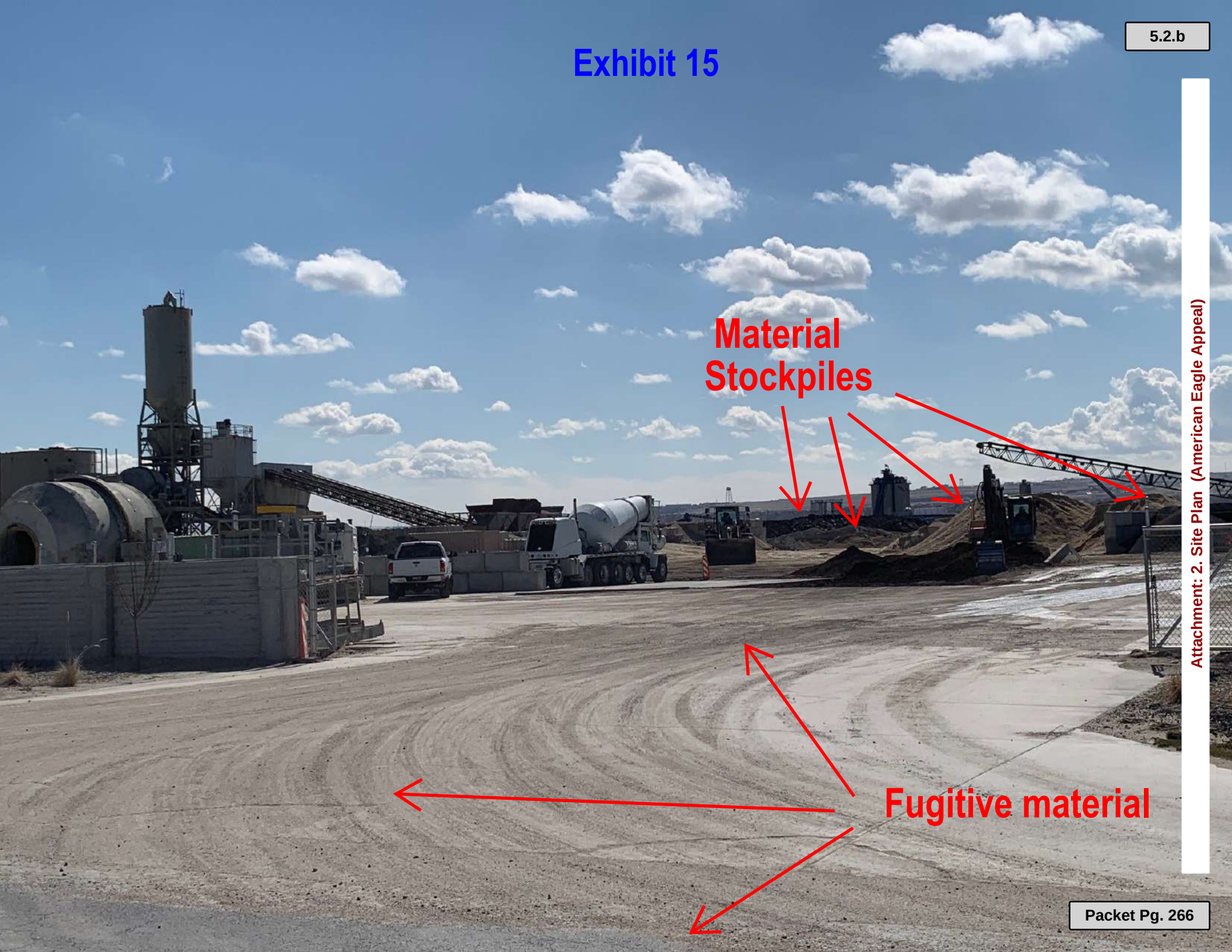
# Exhibit 13



# Exhibit 14



# Exhibit 15



# Exhibit 16



# Exhibit 17



# Exhibit 18


MAXIMUM LOADING
DUNN
(888) 594-5191
Recycling Wasatch, Summit and Utah Counties

6' TALL PRECAST CONCRETE FENCE AROUND ENTIRE PERIMETER

N 0°45'22" E 739.08'

PROPERTY LINE

MIXER PARKING AREA

FIRE & EMERGANCY ACCECSS

50'-0" ACCESS

FIRE & EMERGANCY ACCECSS

8'-0" CONVEYOR C/C

40'-0"

TRUCK UNLOADER RAMP

TRUCK UNLOADER RAMP

50' ROLLING GATE

16'-0" HOPPER LENGTH

30'-0" (REF.)

4'-0"

41'-6" (REF.)

42" X 40'+/- COLLECTION CONVEYOR

RECYLED CONC. BLOCKS

61'-9"

196'-0"

NEW 6' SIDEWALK

50' ROLLING GATE

50'-0" ACCESS

83'-+/-

SURFACE OF ACCESS ROADS AND PARKING LOT TO BE CONCRETE

TEMPORARY SURFACE OF ACCESS ROADS AND PARKING LOT TO BE MADE OF 6" RECYCLED ASPHALT

NEW 6' SIDEWALK

6"

90'-0"

30'-0"

60'-0"

FUTURE OFFICE/SHOP 60'X90'

14'

6'

10'

8'

1700 SOUHT

20' (MIN) ACCESS ROAD

R120'

AGGRAGATE & SAND STOCKPILE

S 89°14'38" E 295.73'

PROPERTY LINE

DUMPSTER ENCLOUSER WITH 6' TALL BLOCK WALLS ALL SIDES & PR 5' GATES

18' TYP

13'

9' TYP

9'

5'

EXIST'G 5' SIDEWALK

6' TALL PRECAST CONCRETE FENCE AROUND ENTIRE PERIMETER

26,400 C.F. WATER RETENTION

16'-9"

8'-5"

WATER RETENTION MIXER

MIXER PREP

MIXER PARKING AREA

30'-0"

30'-0"

30'-0"

FIRE & EMERGANCY ACCECSS

27 FUTURE PARKING STALLS

90'-0"

6'

14'

EXIST'G C & G

CONC. MOW CURB

8'

6'

18'-0"

TYP

9'

TYP

15'-0"

149'-3"

30'-0"

TEMP. LOCATION OF DUMPSTER & SEMI PERMANENT RESTROOM FACILITY FOR OPERATION UNTIL FUTURE SHOP IS COMPLETED

50' ROLLING GATE

PROPERTY LINE

S 0°37'36" W 739.08'

500 EAST

20' (MIN) ACCESS ROAD

50'-0" ACCESS

FIRE HYDRANT WITH 2 BOLLARDS FOR PROTECTION

6' TALL PRECAST CONCRETE FENCE AROUND ENTIRE PERIMETER

140'-0"

6' TALL PRECAST CONCRETE FENCE AROUND ENTIRE PERIMETER

# LANDSCAPE & SITE PLAN

N

8'-0" TREE STAKES
NAIL OR STAPLE
WIRE TIES
TREE
RUBBER HOSE WITH WIRE INSIDE
DETAIL

8'-0" TREE STAKES

5'-0" Ø

SET TOP OF ROOT BALL 1" ABOVE FINISH GRADE

AMENDED BACKFILL

FINISH GRADE

ROUGHEN SIDES AND BOTTOM OF HOLE

ROOT BALL

IN HEAVY CLAY SOILS OR WHERE THERE IS A HARD PAN, AUGER AN 8" HOLE 6' DEEP OR THROUGH THE HARD PAN. (BACKFILL WITH AMENDED SOIL)

TREE BASE PROTECTION

2" MIN. MULCH

WATER BASIN

FERTILIZER TABLETS

MIN 4"

+6'-0"

8"

PLANT PIT SHALL BE 3X AS WIDE AS ROOT BALL AND A MINIMUM OF 4" DEEPER (ANGLE SIDES OF PIT)

MOUND OF TAMPED FIRM AMENDED SOIL

## TREE PLANTING AND STAKING (D)

SCALE: 1/2" = 1'-0"

SET TOP OF ROOT BALL 1" ABOVE FINISH GRADE

WATER RETENTION BERM

FINISH GRADE

AMENDED BACKFILL

FERTILIZER TABLETS

ROOT BALL

PLANT PIT SHALL BE 3X AS WIDE AS ROOT BALL AND A MINIMUM OF 4" DEEPER (ANGLE SIDES OF PIT)

## SHRUB PLANTING DETAIL (B)

SCALE: 1/2" = 1'-0"

## PLANTING & SPRINKLING IRRIGATION NOTES

1. THE IRRIGATION MATERIALS ARE TO BE FROM RAINBIRD OR TORO SUBMITTED EQUAL
2. IRRIGATION SYSTEM TO BE A FULLY AUTOMATIC SPRINKLER SYSTEM USING POP-UP HEADS AND PVC PIPING, WITH COMPLETE DRAINS AND STOPS
3. LANDSCAPE / IRRIGATION CONTRACTOR TO SUBMIT DESIGN/SCHEMATIC DRAWINGS SHOWING LOCATION AND COVERAGE OF IRRIGATION SYSTEMS, LOCATION OF VALVE BOXES AND TIME CLOCK LOCATION
4. TOP DRESS ALL PLANTING AREAS / MOUNDS WITH 3" DEEP SHREDDED BARK (MULCH).
5. ALTERNATE PLANT MATERIALS MAY BE SUBMITTED UPON THE APPROVAL OF THE DESIGNER
6. TOP SOIL TO SHALL CONTAIN AT LEAST 4% ORGANIC MATTER AND SHALL BE PLACES AT LEAST 12" DEEP IN ALL PLANTER BEDS

## LEGEND

TREES

| SYMBOL | COMMON NAME | QTY | BOTANICAL NAME | SIZE |
|---|---|---|---|---|
| | ASPEN TREE | 20 | ACER PLATANOIDES "SHADE MASTER" | 2" CAL. |

SHURBS/PLANTS

| | COMMON NAME | QTY | | SIZE |
|---|---|---|---|---|
| | CINQUEFOIL OR EQUAL | 43 | POTENTILLA FRUTICOSA "ABBOTTSWOOD" | 1 GAL |
| | DAYLILLY | 41 | HEMERCALLIS HYBRIDS "STELLA D' ORO" | 1 GAL |
| | LENA BROWN | 45 | CYTISUS X LENA | 1 GAL |

OTHER

| | | QTY | | |
|---|---|---|---|---|
| | BOULDERS | 25 | | 2' – 4' |
| | 3/4" COBBLE MULCH WITH WEED BARRIER | | GRAY | |
| | GRASS FROM LOCAL SOURCE | 1650 S.F. | T.B.D. | |

revisions

WALLACE DRAFTING & BLUEPRINTING

project title
BATCH PLANT
FOR
AMERICAN EAGLE CONCRETE

date

drawn by V.W.

checked by

cad title

sheet title
SITE AND LANDSCAPE PLAN

sheet no.
SD–1

Attachment: 2. Site Plan (American Eagle Appeal)

April 16, 2020

American Fork City Senior Planner, Adam Olsen
American Fork City Planning Commission

email; solsen@afcity.net

Re: McDonald Fielding letter dated April 6, 2020
Roderick Enterprise letter dated April 6, 2020

Dear Mr. Olsen and the American Fork City Planning Commission,

American Eagle Ready Mix (AERM) was made aware and given copies of the documents from Roderick Enterprises (RE) and McDonald Fielding (McF) the day after the planning meeting on April 8, 2020.

AERM does not have an issue with others having their own opinion. However, we believe the information is misleading and inaccurate with many their facts and feel it necessary to give the actual facts and defend all the businesses in the I-1 zone.

The American Fork City Master Plan intended and planned this general area as I-1. The existing business within the I-1 zone comply and meet the intended use of this land. All business that currently exist, ready-mix producer, topsoil screening, recycle crushers, landscapers, oil and fuel distribution were planned that way due to the location. The transportation is close to and from the interstate. It is not near residential subdivisions, schools or churches. The business operates in much the same way. It is a great location for the intended use. See AERM Exhibit - 3

The Lakeland Business Park was developed originally work with American Fork City. The city wanted to move a business not located in the city into this park to set up and operate a transfer station for waist products and build an additional pond for storm water retention. In the beginning of this process the city manager was introduced to AERM. He was aware that we wanted to put a ready-mix plant in the Lakeland development. His words, “That is a perfect place and use of this land”. It is my understanding from city and the landowner that the best way to handle the development was to annex it from Utah County into American Fork City. My understanding again, that is would be zoned I-1 zone to ensure it was suitable for its intended use as a waist transfer station, topsoil screening, recycle concrete and put the ready-mix plant there. The I-1 zone is the same as the adjoining properties. This would allow other like existing business (ready-mix, concrete recycling, topsoil screening) into the park. From the beginning the city was aware the intent of this property was to install a ready-mix plant.

The property RE is developing for warehouse and office space was I-1. RE chose to change the zoning with the intent to change all the other companies around him. Business in the general area, in the American Fork I-1 zone and operational at the time of the change were the sewer plant, landscape and landscape materials, several concrete recycling, precast, topsoil screening. RE made several attempts last year to shut down other business in this area without success. I believe I was at



Attachment: 2. Site Plan (American Eagle Appeal)

a Planning Commission meeting, that the members of the commission told Mr. Roderick, in my words, “stop trying to bully others to get your way”.

If these so-called construction experts were genuinely concerned with anyone but themselves, they would be buying local concrete from the existing ready-mix supplier, Altaview Concrete, which is in the I-1 zone, 600 feet from the entrance of the RE property? Additionally, they would be strategically working with the recycle and topsoil companies (ESP and D&R) next door to them for their engineered fill materials, road base and landscaping products. All are examples that would economically benefit RE as an owner, the local companies and American Fork City in keeping tax revenue local and improving the economic wellbeing of the city.
All the products that are local (concrete, engineered fill, road base, topsoil) are needed in most if not all construction projects. Ready-mix is the #1 building material in the world. The largest and most used material in RE products is concrete. See AERM Exhibit - 1

The remainder of my response will attempt to address page by page responses for the two documents. I believe it will explain the intent and use of the property and answer or dispute most in not all the misleading, malicious, factually inaccurate and attempt to bully others by RE.

Specifically, with regards to the RE document – Letter to Planning Commission April 6, 2020:

RE – P.1

1. RE boasts of his success. That does not excuse him of bullying and his attempt to mislead? The fact that there are several companies in the I-1 zone today and currently operating within the RE projects boundaries - 30’, across the street and 600 feet from and existing ready-mix company, Altaview.

RE – P.2

1. The neighbors RE fails to mention are the existing neighbors, (in the middle of his project, west side and east side) within the same zone, who are currently adding to the economic good of American Fork. Companies such as the oil refinery, fuel / oil distribution facility, outdoor landscape, outdoor hardscape material supply, Concrete / ready mix production facility, several topsoil screening facilities, several concrete crushing and recycling facilities and precast concrete manufacturing. See AERM Exhibit - 3
2. AERM is has been working and will continuing with the city to get our site plan approved.
3. AERM does not have 100’s of trucks. Nor do they intend to at this location.
4. RE fails to mention that his project will have 28 bay doors and 38 parking stalls for semi-trailers along with 28-+ forklifts for each warehouse? How do they move in and out daily without the same concerns, vibration, dust, noise, vapors, noxious odors, smoke, glair?
1. All cities across the Wasatch Front uses concrete. There are an estimated 37 ready mix plants in this region. 70% of them are in a city and not in a pit. See AERM Exhibit – 2. This is for several obvious reasons. First being safety. There would be several hundred more ready-mix trucks on the road. In turn it would drive the cost of the product up to so customers like RE could not afford to build. However, this does not address the fact that the concrete



Attachment: 2. Site Plan (American Eagle Appeal)

quality, specification put out by engineers and overall shelf life of concrete. No one could build unless they were close to the pits. Which in turn would create this whole process over again.

2. We must all work together to co-exist. I will do my part, if you do yours. It's hard to imagine the money being thrown away and tax dollars lost because of the RE arrogance?

RE – P.3

1. The landowner owns a piece of property in the I-1 zone. Currently there are other concrete recycling facilities in operation. The neighbor RE continues and fails to mention is R&D. Who sits directly center of the RE project? R&D and Altaview Concrete have a working together to take all the Altaview comeback concrete and spoils generated at their plant to be recycled. See AERM Exhibit – 5. This is a great partnership which is good for both companies, intended for companies to work together in the I-1 zone and good for the economic wellbeing and broadens the tax base for American Fork. It was intended to work that way.
2. AERM is not going against the city's master plan. We fit in it and its intended use. Just as similar other companies do.
3. It is funny that RE brings up trash. In the very beginning of this venture, early 2019, American Fork City was approached to provide a great location to move an existing waist transfer station from a neighboring city to American Fork. The city approached Lakeland development to provide this site. Along with the transfer station there was to be a storm water pond. At this point the city manager knew we were also going to put the ready- mix plant in. There was never a question as the city was aware and there is an existing ready-mix producer next door in the same I-1 zone. See AERM Exhibit - 3
4. The rezoning of the shoreline was done for the intent of American Fork City to broaden their tax base by adding more I-1 zone land in the intended area to do so.
5. AERM is operating and intends to operate within the guidelines of its industry and American Fork City.

Specifically, with regards to the McF document – Letter to Planning Commission, April 6, 2020

Exhibit 19 - P. 1

1. AERM does not own a crusher, nor did they contract anyone to crush concrete, nor did we contract anyone to construct a truck repair facility, nor were the same parcel of land a AERM, nor would anyone McF talk to know anything about AERM or its plans.
2. All plant footings installed were in place prior to the annexation into American Fork City. All plant footings were built to specification using the Geotech report stamped by an engineer, stamped engineered drawings for footings, third party inspection agreement, third-party inspections with complete reports of all process from excavation, fabric, backfill material, compaction, rebar inspection and concrete inspection. Bolting together our machinery is not a permitted construction process.

Exhibit 19 – P.2



Attachment: 2. Site Plan (American Eagle Appeal)

1. It would be very hard to argue that the existing sewer plant, oil refinery, fuel / oil distribution facility, outdoor landscape, outdoor hardscape material supply, Concrete / ready mix production facility , several topsoil screening facilities, several concrete crushing and recycling facilities and precast concrete manufacturing are not similar / like in nature. These all are current and operating companies in the I-1 zone. They all meet the intended use as per American Fork City. See AERM Exhibit – 3
2. AERM does agree when possible, ready mix can be more profitable when located at the source. Not just in ready-mix, transportation cost is a significant factor to the profitability of any company. Additionally, companies that have production within their sources, are also faces with importing products because not all sources create all the correct materials. Across the Wasatch Front, from Brigham City to Santiquin, and Park City to Tooele, there are approximately 6 ready-mix producers. With an estimated 37 ready mix plants; 70% of them are in the city vs pits. See AERM Exhibit - 2

Exhibit 19 – P.3

1. AERM does not own a crusher, nor did they contract anyone to crush concrete, nor did we contract anyone to construct a truck repair facility, nor were the same parcel of land a AERM, nor would anyone McF talk to know anything about AERM or its plans.
2. All plant footings installed were in place prior to the annexation into American Fork City. All plant footings were built to specification using the Geotech report stamped by an engineer, stamped engineered drawings for footings, third party inspection agreement, third-party inspections with complete reports of all process from excavation, fabric, backfill material, compaction, rebar inspection and concrete inspection. Bolting together our machinery is not a permitted construction process.
3. The south west quadrant of the site is not owned by AERM. It has an approved land disturbance permit to allow ESP who will recycle the material into topsoil and engineered fill.
4. The shroud the McF expert talks about is for a dry process plant. While they are good plants, they are not the wet / premixed plant AREM has. Additionally, the AERM plant has over 6 filter systems along with a central dust collector. All are sized sufficiently for the production the plant was designed for. They are appropriate for our use. They are an industry standard. They are the same as other ready-mix producers as well as the ready-mix producer located within this same I-1 zone. Most so called experts would know this simple process?
5. This zone was intended for the use as indicated by its current business.
6. AERM is working with American Fork City and its planning and building departments.

Exhibit 19 – P.4

1. AERM works with an independent air quality consultant and directly with the Division of Environmental Quality (DEQ). In all cases we have provided the requested information in spread sheets provided to them. In the estimate by our consultant and DEQ came up with



Attachment: 2. Site Plan (American Eagle Appeal)

the same answer. I had a phone call meeting directly with them to go over the calculation and site plan. In the fact that we do qualify for the small source and meet all regulations and requirements and conditions. AERM did not fill in the DEQ form report in McF exhibit. In the AERM spread sheet, 30 cyph indicates the average amount of sand alone, or the average amount of aggregate alone delivered / hr. Once again, most so called experts would know and could read this simple process? I am guessing the experts are calling AERM, our consultant and DEQ liars? In the AERM spread sheet it qualifies that the calculation presented are accurate and we comply per DEQ. Additionally, See AERM Exhibit – 10, It clearly state that we have an air quality permit and it is ultimately upon AERM, the user, to comply as is with any operation and air quality permit.

2. The MP 11 plant has been produced by Erie Strayer for years. The comments from McF are misleading. In fact the MP 11 can be built in many configurations. Like cars, many cars can be built for stock or built to be a race car. In the current configuration AERM should expect 180 cyph. Enough to get our trucks out in a timely manner and average 60 cyph for the remainder of the day.
3. Our trips per day in our ready-mix production will be estimated at 60+-. I am guessing much like the current existing ready-mix operation and like the recycle loads and similar to the topsoil loads. Probably like the semi load coming and going in the RE business park as well. Please also note, that the Alpine School District has their bus maintenance and parking facility just down the street from the RE project. There will be several hundred (300 busses parked at this facility) round trips, in and out, up to 2 times per day generated without students aboard. See AERM Exhibit - 6

Exhibit 19 – P.5

1. AERM does have a storm water and wastewater plan. It is in our agreement with Timpanogos Sewer District, provided to the American Fork City Engineer. We will not be tied into any storm drain system at all. We will contain all our water in water retention and recycle the water in our production process as well as recycling process we participate in.
1. Our operational does not generate any more or less air born contaminants than any of the existing business listed in item 1 above. In our industry we all must keep BMP in play and do our part. Just as all the other companies currently do. AERM has purchased the best equipment and implemented BMP's.
2. The McF experts did not disclose that it is building around 3 sides of an approved existing I-1 zone business who crushes concrete, screes topsoil and generates pieces of precast concrete? They accept 100% of the come-back concrete for to recycle generated by another existing I-1 zone business the ready-mix producer. See AERM Exhibit – 5, 3
3. It is the believe of AERM that all the business within the zone in this corridor of American Fork City are working very well together to maintain the I-1 zone requirement and to generate a positive impact for the city and their residents.

Exhibit 19 – P.6 - Summary

1. AERM is not any different than all the other approved and existing business with in the I-1 zone

Attachment: 2. Site Plan (American Eagle Appeal)

2. The recycling mentioned is not AERM or hired by AERM. However, currently there is recycling going on in the center of the RE project that they failed to mention.
3. AERM has invested in all the BMP's available similar to all the other approved business in this zone. In fact, they did not look very hard. The dust collector and loading boot is on the ground in the southern portion of the parcel.
4. The report attempts to mislead. There has never been any communication by AERM to only load 30 cyph of ready-mix? This is MSFs words. We have been in full disclosure as to what our intent is. The plant is sufficiently to load the intended annual production.
5. With any DEQ permit, it is the requirement of the producer to properly maintain its facility properly, keep all working items in its proper working order and to have all the necessary report available to the DEQ anytime they request or come onto the property for inspection.
6. Wastewater has been addressed and will be recycled and used in several production items to manage and properly process.
7. If RE builds it project around a I-1 producer there is not much they can say? Stating the obvious that all I-1 producers are required to properly conduct business. Just as RE is required to do.
8. The approval needed after the annexation are in the process and AERM has been working diligently with American Fork to get approval so we can move forward.
9. Again, words from McF are inaccurate and misleading. AERM has never, nor can we physically produce 300 cyph. AERM has surrounded itself with existing like business; sewer plant, oil refinery, fuel / oil distribution facility, outdoor landscape, outdoor hardscape material supply, Concrete / ready mix production facility , several topsoil screening facilities, several concrete crushing and recycling facilities and precast concrete manufacturing are not similar / like in nature. These all are current and operating companies in the I-1 zone. They are all located in this location and are hereby the design of the city planners. Their business is intended to be here to positively impact promote the economic well-being of the people and broaden the tax base.

P.7 – Exhibit A – Keith Sorensen (KS)

1. AERM did not flagrantly and deliberately break American Fork City policies. As noted above; All plant footings installed were in place prior to the annexation into American Fork City. All plant footings were built to specification using the Geotech report stamped by an engineer, stamped engineered drawings for footings, third party inspection agreement, third-party inspections with complete reports of all process from excavation, fabric, backfill material, compaction, rebar inspection and concrete inspection. Bolting together our machinery is not a permitted construction process or breaking the law.
2. It cannot be against the law to have a ready-mix plant in the I-1 zone, as there is a current and already approved ready-mix business within the zone. See Exhibit – 3, 4
3. KS did not consider that his Everyone thinking of building around an I-1 zone business and not expecting the daily operations of I-1 approved business and expecting everyone else to change is being a bully. See AERM Exhibit - 3
4. The DEQ reports and all their approval were based on accurate numbers.
5. KS and RE are building their project in an I-1 zone. All businesses, existing and to come, will have to comply with the I-1 zone. The city meant to place them all here in this location.

Attachment: 2. Site Plan (American Eagle Appeal)

6. KS continues to mislead and make untrue statements. The existing business with in the I-1 zone are not going to kill anyone per KS.

P.8 – Exhibit A – Keith Sorensen (KS)

1. It is hard to deny the intended use? There is another ready-mix operation and currently existing like business in the I-1 zone next to the RE project. See AERM Exhibit – 3,4,5,9
2. AERM has not placed any recycling facility on their property. However, the RE project is build around 3 sides of an existing and approved recycle crushing business.
3. It is a requirement of all ready-mix producers to operate cleanly. There are guidelines already put in place for by the DEQ for this. AERM is in compliance.
4. AERM will operate just as all the other existing and approved business in the I-1 zone. They are all placed here for a reason. We all comply with the noise, vibration, smoke, odor, dust or fumes. AERM currently operates, mitigates, has BMP's in place to mitigate and manage its operation in a professional manner.

P.9 – Exhibit A – Keith Sorensen (KS)

1. KS continues to mislead and misrepresent the facts. AERM will operate just as all the other existing and approved business in the I-1 zone.
2. The RE project surrounds an existing recycle crushing, topsoil screening and precast operation. In addition to that, the RE project will have the same standard semi-trucks bringing in and taking out products and forklifts generated by the warehouse businesses every day. The KS statement of "royalty" is once again the RE team being a bully to somehow get their way? See AERM Exhibit – 3,5,7,8,9

P.10 – Exhibit B – McDonald Fielding (McF)

1. It would be very hard to argue that a sewer plant, oil refinery, fuel / oil distribution facility, outdoor landscape, outdoor hardscape material supply, Concrete / ready mix production facility , several topsoil screening facilities, several concrete crushing and recycling facilities and precast concrete manufacturing are not similar / like in nature. These all are current and operating companies in the I-1 zone. They all meet the intended use as per American Fork City. They are not illegal?
2. The intent of the zone has already been established and defined by the existing business.

P.11 – Exhibit B – McDonald Fielding (McF)

1. The AERM ready-mix plant is planned in a zone that meets the intended I-1 uses. By definition and by similarities. There are other like companies and uses within the same zone in the same vicinity. The production of concrete is a manufacturing process of putting several raw materials together. Our process are the exact same as an adjacent operator who is currently operating.
   Specifically addressing:

Attachment: 2. Site Plan (American Eagle Appeal)

a. Noxious odor - The manufacturing of concrete does not present or put off a noxious odor that is known or that in not typical by the existing sewer plant, mulch in landscape yards, ready mix plant, recycle crusher, topsoil screen or the trucks need for all these types of business to conduct business.
b. Smoke - The manufacturing of concrete does not present or put off any smoke that is known or that in not typical by the existing sewer plant, mulch in landscape yards, ready mix plant, recycle crusher, topsoil screen or the trucks need for all these types of business to conduct business.
c. Noise – The noise of manufacturing concrete are typical noises that already exist in this I-1 zone. Weather it by an existing ready-mix plant, recycle crusher, topsoil screen or the equipment and trucks need for all these types of business to conduct business. AERM has taken several precautions to mitigate noise by setting the plant back as far as possible from the frontage, 300'. The frontage perimeter wall / concrete fence will block noise. Currently it is planned to be 6', with the approval of the city we could increase that to 8'. Our shop and office building will be built between the plant and the frontage which will also act as a noise barrier.
d. Vapor - The manufacturing of concrete does not present or put off vapor. When we heat water, we emit steam from a 99% efficient natural gas burner. There is little to no emission and the steam evaporates. AERM has the same water heater as the existing ready-mix supplier in this I-1 zone.
e. Vibration - The vibration generated in the manufacturing process if any are not rhythmic or constant. If any vibrations that are created, they are typical vibrations that already exist in this I-1 zone. Weather it by an existing ready-mix plant, recycle crusher, topsoil screen or the equipment and trucks need for all these types of business to conduct business. AERM has taken several precautions to mitigate vibration by setting the plant back as far as possible from the frontage, 300'.
f. Glair - The manufacturing of concrete does not present or put off any glair that is known or that does not already existing from the ready mix plant, recycle crusher, topsoil screen or the trucks for all these types of business to conduct business.

Addressing all of these items above, AERM feels it has and will continue mitigated these situation just as the sewer plant, mulch in landscape yards, ready mix plant, recycle crusher, topsoil screen or the equipment and trucks need for all these types of business to conduct business and that these conditions do not create conditions which is harmful to the persons or which is readily discernable beyond the boundary of the zone or create an adverse visual impact readily discernable from the public roads

P.12 – 14 – Exhibit B – McDonald Fielding (McF)

1. Cement Manufacturing – This is that McF is ignorant and does not know the difference or they will say and try anything to maliciously hurt AERM. Most so-called experts would definitely know the simple distinction between cement and concrete or ready-mix? AERM does not manufacture cement and does not have a cement plant. AERM produces ready mix. There are 2 cement manufacture in Utah. Holcim Cement; located near Morgan Ut and Ashgrove Cement; located in Leamington UT.

Attachment: 2. Site Plan (American Eagle Appeal)

2. Are we all to believe what McF has listed here? Concrete is the most widely uses construction material in the world. As a producer we must comply with the regulation set in place. Technology has significantly improved, and BMP's are in place for this reason. See AERM Exhibit – 1. RE uses quite a bit of it.
3. Are we also to believe that producing and pouring concrete if bad for everyone but RE? See AERM Exhibit – 1. Early morning pour on 4/14/2020. This is an example of talking out of both sides of their mouths. Additionally, if they would have used the local supplier, from American Fork, with in 600' of their entrance, they could have used 4 – 5 total trucks round trip into their project and generated several thousands in tax generating revenue.

P. 14 – Exhibit B – McDonald Fielding (McF)

1. Portable plants used for highway construction, in their FHWA example are not the same as a permanent plant.
2. Once again the noise RE keeps talking about is similar to all the current operation including the R&D Recycling operation that RE is building on 3 sides.
3. RE will generate noise with semi loads of production brought in and out of their project into its 28 bay doors and 38 trailer stalls.
4. RE has also failed to mention that most if not all warehouses will utilize a forklift. Forklifts in general generate noise, exhaust and vibrations with the walls of the office warehouse they are building?

P. 15 – Exhibit B – McDonald Fielding (McF)

1. As noted in previous responses, the I-1 zone allows for like companies. These companies produce products that all have outdoor storage. Topsoil, structural fill, recycled road base, washed rock and sand, bark, mulch and several other landscape products. Most if not all of these products RE project is building ar See AERM Exhibit – 3, 4 – Approved ready-mix producer currently operating in the S-1 zone.

P. 16 – Exhibit B – McDonald Fielding (McF)

1. The placement of the RE project is already impacted by its location to begin with. RE project is being built surrounded with like I-1 business. Including one that is withing his own project? See AERM Exhibit - 3

P. 17 – Exhibit B – McDonald Fielding (McF)

1. AERM operates it companies just as all the rest of the ready-mix companies in Utah. We all must comply with the regulations. We all meet them and work hard to do so. All construction projects from residential, subdivisions, commercial, city and DOT work uses concrete. It is the number one building material used in the world. It is not practical to have all the supply companies in aggregate pits for several reasons. First being safety. There would be several hundred more ready-mix trucks on the road. However, this does not address the fact that the quality, specification put out by engineers and overall shelf life of



Attachment: 2. Site Plan (American Eagle Appeal)

concrete will not allow it. No one could build unless they were next to the pits. Which in turn would create this whole process over again.

In conclusion it is apparent that the RE team is only giving the Planning Commission false facts of the true reality. In most cases, their so-called experts do not know the ready-mix. The fact that if they did not want the neighbors they have currently, even without AERM, they building in the wrong piece of property. More so, RE changed the originally zoned I-1 to P-1. Knowing the property surrounding a I-1 zone manufacture. RE has tried his bullying tactic with several landowners surrounding him. The perfect analogy of this is: “The arrogant rich man who builds his mansion in a trailer park, bully’s its existing tenants and expects them to vacate”?

American Fork City is a great place to do business. It has developed its planning zones appropriately. AERM fits in the I-1 zone just as all the other existing companies do. The RE project uses all the products that surround them but has chosen not to do business with them and not help the overall good of American Fork? This leaves us all to believe that what is good for them is not good for the rest of us? Furthermore, RE should not be allowed to bully the existing companies that have been in American Fork providing economic opportunity for the city and its residents much longer than he has? If we do not squash this now, we can expect RE to continue to bully its neighbors, in the center, to the west and to the east. Additionally, the true frontage of the RE property is 1500 S, not 1700 S, are we to expect the all to be bullied? In the RE conclusion it appears as though they have threatened to bully American Fork City as well?

I apologize for the redundancy in my response. However, it seems as the two documents continually said the same thing over and over, to bully and possibly wear us out?

Respectfully,

Doug Clements
American Eagle Ready Mix

Please see American Fork City_AERM Exhibits 1 - 10_04162020

Attachment: 2. Site Plan (American Eagle Appeal)

April 16, 2020

American Fork City Senior Planner, Adam Olsen
American Fork City Planning Commission

email; solsen@afcity.net

Re: American Eagle Ready Mix (AERM)

Dear Adam and the Members of the Planning Commission,

Thank you for your continued support and review of our project. We appreciate your time as well as the time and attention that Adam has given us. AERM was given the notes on items that needed to be addressed and revised from our initial submitted site plan.

The following items have been reviewed by AERM and updated for the City Planner and Planning Commission meeting.

1. The AERM ready-mix plant is planned in a zone that meets the intended I-1 uses. There are other like companies and uses within the same zone in the same vicinity. The production of concrete is a manufacturing process by putting several raw materials together. Our daily process is much like the ready-mix plant, mulch in landscape yards, recycle crusher, topsoil screen, sewer plant and other adjacent operators who are currently operating in the same I-1 zone.
   Specifically addressing:
   a. Noxious odor - The manufacturing of concrete does not present or put off a noxious odor. It would be similar to all other existing business that surround us such as the ready mix plant, mulch in landscape yards, recycle crusher, topsoil screen, sewer plant or the trucks needed for all these types of business to conduct business.
   b. Smoke - The manufacturing of concrete does not present or put off any smoke that is known or that in not typical of the existing ready mix plant, mulch in landscape yards, recycle crusher, topsoil screen, sewer plant or the trucks needed for all these types of business to conduct business.
   c. Noise – The noise of manufacturing concrete are typical noises that already exist in this I-1 zone. Weather it by an existing ready-mix plant, recycle crusher, topsoil screen or the equipment and trucks need for all these types of business to conduct business. AERM has taken several precautions to mitigate noise by setting the plant back as far as possible from the frontage, 300'. The frontage perimeter wall / concrete architectural fence will block noise. Currently it is planned to be 6', with the approval of the city we could increase that to 8'? Our shop and office building will be built between the plant and the frontage which will also act as a noise barrier.
   d. Vapor - The manufacturing of concrete does not present or put off vapor. Please do not confuse Vapor with steam. When we heat water, we emit steam from a 99% efficient natural gas burner. There is little to no emission and the steam evaporates. AERM has the same water heater as the existing ready-mix supplier in this I-1 zone.



Attachment: 2. Site Plan (American Eagle Appeal)

e. Vibration - The vibration generated in the manufacturing process are not rhythmic or constant. If any vibrations that are created, they are typical vibrations that already exist in this I-1 zone. Weather it by an existing ready-mix plant, recycle crusher, topsoil screen or the equipment and trucks needed for all these types of business to conduct business. AERM has taken several precautions to mitigate vibration by setting the plant back as far as possible from the frontage, 300'.

f. Glair - The manufacturing of concrete does not present or put off any glair that is known or that does not already existing from the ready mix plant, recycle crusher, topsoil screen or the trucks needed for all these types of business to conduct business.

Addressing all these items above, AERM feels it has and will continue to mitigated these situations just as the existing businesses do and that these conditions do not create conditions which is harmful to the persons or which is readily discernable beyond the boundary of the zone or create an adverse visual impact readily discernable from the public roads.

2. The location of all existing and proposed building and structures on the site, with full dimension showing the distance between buildings and distances from buildings to adjacent property lines.
   a. 30' setback for future shop and office
   b. This has been updated on the revised site plan dated April 16, 2020
3. A landscaping plan showing the location, types and initial sizes of all planting material to be used together with the location of fences, walls, hedges, and decorative materials.
   a. Landscape islands have revised and sized correctly with a minimum of 140 sf,
   b. There are at least 13 shade trees in the parking area for 27 stalls
   c. All landscape islands; there are not less than 1 shrub for every 25 sf of landscape
   d. There is a 6' wide landscape perimeter for the parking area
   e. There is a 14' wide landscape adjacent to the street frontage that include 8 trees for the 295'
   f. This has been updated on the revised site plan dated April 16, 2020
4. The location of all existing and proposed building and structure on the site with full dimensions showing the distance between buildings and distances from building to adjacent property lines
   a. This has been updated dated on the revised site plan dated April 16, 2020
5. Landscaping has been reviewed and updated. We believe our update addresses all the landscaping requirements. It is our intent to comply with the landscaping code. Any additions or changes can be addressed with final conditions.
6. The location of solid waste receptacles and trach pick-up areas.
   a. We have added a permanent dumpster enclosure and noted the temporary location for the dumpster during construction.
   b. This has been updated for temporary and permanent locations on the revised site plan dated April 16, 2020

Attachment: 2. Site Plan (American Eagle Appeal)

AERM believes there may have been other items of concern from the commission that were raised during the meeting.

Please see the following to communicate answers to your questions.

1. Dust and dust mitigation
    a. Paving our yard – AERM intends to pave our yard to help mitigate and maintain dust, track out, water drainage and retention.
    b. Sweeper truck – Daily our sweeper truck will maintain the yard and main traffic patterns in our yard
    c. Covered conveyors - From the point the aggregates are loaded into the plant they are conveyed on covered belts. This will help prevent and mitigate dust coming off them in the event of windy conditions.
    d. Washed aggregates – All the aggregate and sand used to manufacture concrete is washed. Due to the moisture in this material after being washed, dust is mitigated, and the sand and aggregate are not typically dusty in nature.
    e. There are 6 Bag houses with filter - All silos and weigh hoppers are vented with their own bag house to vent and recycle the dust collected back into the raw product.
    f. There is a central Dust Collector used to pick up major transfer points where dust could be present and recycle it back into our raw materials.
    g. Wet batch processing plant – AERM manufactures concrete wet before it is loaded into our mixer trucks which prevents dust at that transfer point
2. Production
    a. The production rates of our plant were in question? The commission commented from 30 cyph to 300? Our plant configuration allows us to load 180 - 200 cyph. However, this is not achievable hour over hour as we cannot load the raw materials into the plant that fast. 4 min loads = 150 cyph. Which is very fast, and not achievable hour over hour for plant and raw material needs.
    b. We would like to average 500 - 550 cy per day. Which is 60 +- loads per day or about 60 cyph on the average
3. Trucks
    a. Specifically, the loading of trucks. AERM does not have 100's of trucks anywhere and never intends to have 100's of trucks at this location. This number is physically impossible with the size of our property and the size of our plant. It is our intention to keep and operate 20 mixer trucks.
    b. Initially in the morning the trucks are loaded, depending on the schedule, estimated to be 4 - 10 minutes apart. Once the initial loading takes place, we average about 6 loads an hour to achieve our average daily production.
4. Come back concrete
    a. Retaining wall blocks – Block forms will be utilized to pour come back concrete into retaining wall blocks
    b. Recycled into road base products – Concrete not used in blocks will be recycled into road base by our neighbor, Mike Dunn. Much like the relationship Altaview Concrete has with R&D Topsoil and Recycling on 1500 S.
    c. Water will be recycled and or used for dust control.

Attachment: 2. Site Plan (American Eagle Appeal)

5. Visual site
    a. AERM is using a 6-foot architectural concrete fence. If warranted by the commission, AERM is willing to place 8' fence along the frontage.
    b. Landscape trees in along the frontage and in the parking lot islands will athletically provide and maintain pleasing visual for this zone and like properties.
    c. The addition of our shop and office will also be placed between the plant and road.
6. 1700 S.
    a. It should be mentioned that 1700 S along the frontage of AERM and its like manufactures in this zone have approximately ¾ of a mile of frontage. The traveling public and others coming to work in this industrial area, most likely never drive past our property as 1500 S is the main thoroughfare.
    b. Currently 500 E to the south is a dead end and 1700 S to the west is a dead end.
    c. AERM can / will post "No Through Street" signs on 500 E at 1500 S.

AERM believes this ready-mix plant complies and fits in the Master Plan of American Fork City. The location fits the definition and use (see below) of the city.
Specifically, for the following facts:

1. Bringing in raw materials in larger quantities and manufacture them into a smaller quantity for local distribution
2. AERM like other I-1 companies is strategically located close to the interstate (1 mile)
3. Location – AERM is in the intended location as we are next to and near like manufactures. We are not near residential, churches and commercial companies.
4. To improve the Economic Well Being for the people of American Fork. AERM will generate tax revenues of $14M +- and pay property taxes which will also benefit the city.

The Lakeland Business Park was developed originally work with American Fork City. The city wanted to move a business not located in the city into this park to set up and operate a transfer station for waist products and build an additional pond for storm water retention. In the beginning of this process the city manager was introduced to AERM. He was aware that we wanted to put a ready-mix plant in the Lakeland development. His words, "That is a perfect place and use of this land". It is my understanding from city and the landowner that the best way to handle the development was to annex it from Utah County into American Fork City. My understanding again, that is would be zoned I-1 zone to ensure it was suitable for its intended use as a waist transfer station, topsoil screening, recycle concrete and put the ready-mix plant there. The I-1 zone is the same as the adjoining properties. This would allow other like existing business (ready-mix, concrete recycling, topsoil screening) into the park. From the beginning the city was aware the intent of this property was to install a ready-mix plant.

In conclusion, not to sidestep, but to clear up and apologize; The current situation of the plant is all plant footings were installed prior to the annexation into American Fork City. All plant footings were built to specification using the Geotech used for the parcel / approved subdivision and stamped by an engineer, stamped engineered drawings for footings, third party inspection agreement, third-party inspections with complete reports of all process from excavation, fabric, backfill material, compaction, rebar inspection and concrete inspection. Bolting together our machinery is the work that has taken place since the annexation and we have not continued any process that would require our building permit from the city.



Attachment: 2. Site Plan (American Eagle Appeal)

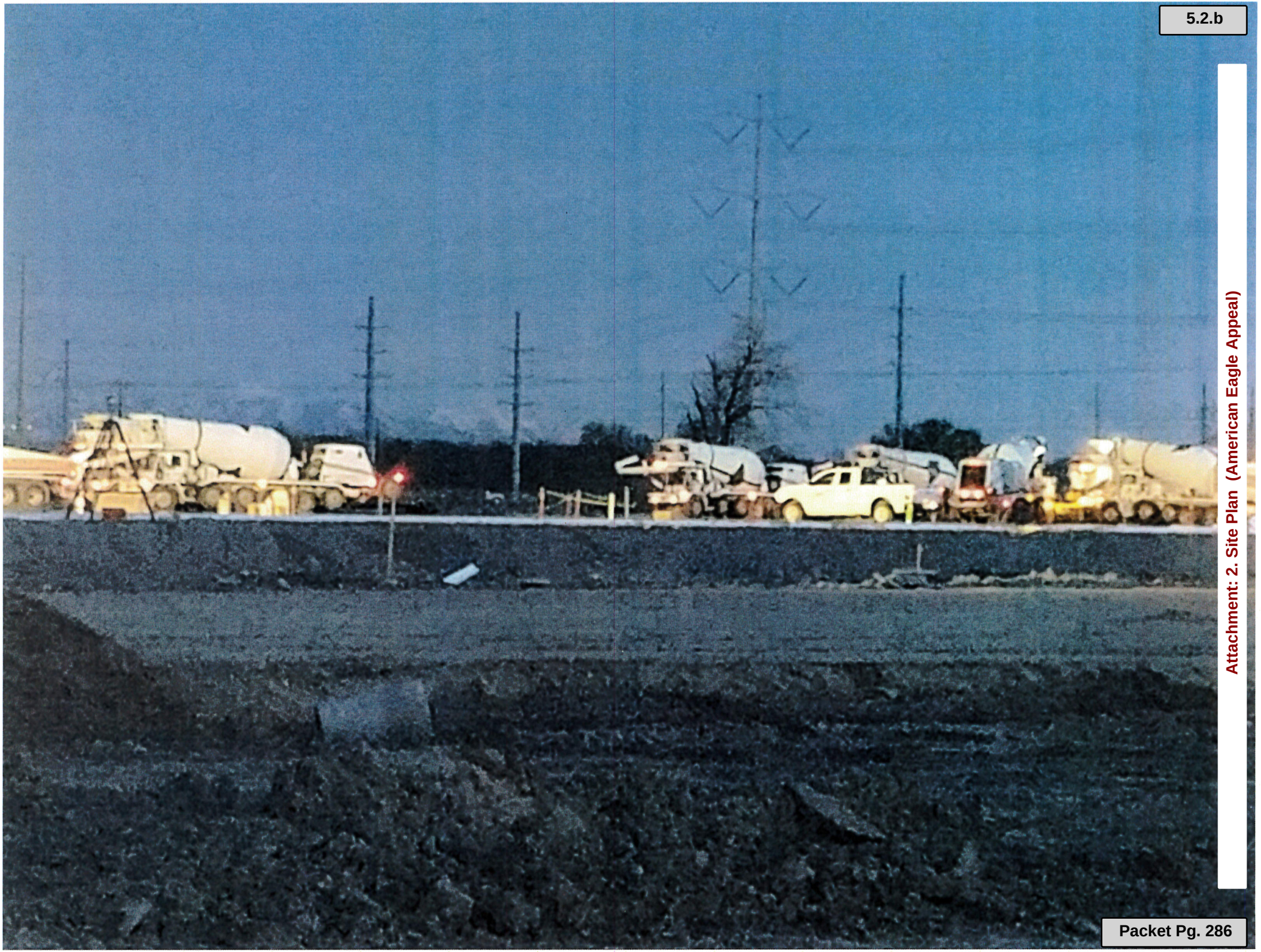
We are committed to be a great partner with the city and other like business in the I-1 zone. In these times of uncertainty, construction and construction related products will remain an essential business. Construction is the backbone of our infrastructure which include building homes, subdivision, restaurants, warehouses, utilities, roads and bridges. We all contribute in an economically positive way for the city and its residents.

We respectfully submit this updated information with the anticipation of approval from the Planning Commission.

Sincerely,

Doug Clements
American Eagle Ready Mix.

Attachment: 2. Site Plan (American Eagle Appeal)





# Roderick Enterprises

1214 East Vine Street
Salt Lake City, Utah 84121

**EST. 1967**

Tel (801) 506-5005
www.roderickrealty.com

April 21, 2020

American Fork City Planning Commission
c/o Mr. Adam Olsen, Senior Planner
via email: aolsen@afcity.net

RE: American Eagle Ready Mix Site Plan Application
American Fork Planning Commission Session:
April 22, 2020

Dear Mr. Olsen and the Honorable Members of the Planning Commission,

I would like to specifically reply to inaccurate acquisitions that Ms. Liz Phelon of E.S.P Excavation submitted to the Planning Commission within her letter dated April 15, 2020. I would also like to submit additional information for your consideration.

1. Ms. Phelon's statement about the amount of property taxes we pay in American Fork is completely incorrect. We currently have completed three buildings in the North Pointe Business Park in American Fork and own 80 acres in our new project (Catalyst Business Park) directly across from the proposed American Eagle facility. In 2019 these properties generated $383,427 in property taxes for Utah County and American Fork as shown on the attached Exhibit "A".

2. Ms. Phelon questioned our ability to generate jobs in our new business park. Our projection of at least 3,000 jobs was derived from existing business parks that we have already completed and have information from. Specifically, the job numbers came from our Pheasant Hollow Business Park located in Sandy, Utah.

   This project contains twelve (12) buildings, consisting of 740,000 S.F. on 70 acres (see attached Exhibit "B"). This project is fifteen years old, has enjoyed a 98% occupancy rate throughout its history and the job data is readily available.

3. If the American Eagle Structure is in fact "just a piece of machinery that does not require any city permits" which Ms. Phelon suggests, then why is this matter before the Planning Commission?



Attachment: 2. Site Plan (American Eagle Appeal)

4. We do buy a lot of concrete. Our company and our contractor have a national account with a large concrete supplier. This suppler **has three existing concrete supply plants just in Utah County alone**. We would not utilize the proposed American Eagle Plant at all as Utah County is already well supplied. In fact, the existing Alta View Plant is currently only selling 27% of its overall approved capacity. As per the Utah Division of Air Quality (see Promac report that is submitted separately).

5. I totally reject Ms. Phelons accusation that we are trying to drive out or bully surrounding neighbors. We currently have 80 acres which will keep us busy for many years. We have asked two (2) neighbors if they are interested in selling their land. They both said no so we simply moved on. We have not bullied anyone. Instead we are simply trying to protect our very large investment and bring a very desirable project to the City. Perhaps people feel bullied because we have notified the city of illegal activity?

   It's interesting that typically when we enter a new city and describe to the city what we have created in other areas and what we hope to accomplish. The cities and surrounding neighbors welcome us with open arms because they also share the vision of what a Class "A" business park can do for there city and the property values of surrounding neighbors.

   Generally, the cities realize that we take raw ground that is often paying greenbelt taxes and construct beautiful buildings, create a desirable atmosphere for image conscious companies, bring in jobs, create increased property taxes and increase sales taxes (Yes, the vast majority of the tenants we attract do create large amounts of sales tax).

   Likewise, the surrounding neighbors see a significant increase in their property values. The math is very easy to follow. For example, our two larger buildings that we previously completed in American Fork City generated $129,000 in property taxes for building #1 and $180,000 in property taxes for building #2 (see attached Exhibit "A").

   I have no idea what type of taxes a batch plant would generate as the applicant claims his project is "machinery". I would suggest that the economic benefit to the city from a batch plant is minimal.

   The City has very limited undeveloped land left and may want to seriously consider the highest and best use for each undeveloped parcel. A strong factor in this decision should be how the use benefits the city, its citizens and the surrounding neighbors and its economic benefit.

6. When we purchased our property, the Seller whom we were dealing with was in the process of annexing the property into the City. He was attempting to zone all his property to I-1. We met with the City to explore the various zoning options. We quickly determined that the P-1 Zone (Planned Industrial) was a better fit for our existing business model, even though the P-1 Zone is much more restrictive than the I-1 Zone.

   We were very much aware of all the existing industrial uses. We were also very aware that the adjacent property to the South of us (The American Eagle Site) was master planned as "Shoreline Protected" (S.P.). Therefore, based on the master plan and the shoreline protection zone, we felt comfortable in purchasing our land as other less desirable uses

Attachment: 2. Site Plan (American Eagle Appeal)

could not be expanded. We signed up for all the existing surrounding uses. We did not sign up for the re-zone of the shoreline protected area to industrial nor the expansion of undesirable uses. Now five (5) years later, the City disregarded their own master plan for the American Eagle site, and they are now considering an undesirable pollution generating use.

7. The contract for our phase 1 subdivision improvements is $3,626,000. All of these improvements including a new road at 1600 South and a new road at 400 East as well as the land under the roads will be dedicated to the City.

   In addition to the above, the City has asked us to upsize several utilities at a cost of $1,094,000. We will be reimbursed for these upsized utilities as these utilities will benefit all surrounding neighbors including Ms. Phelon's property and the American Eagle site.

   Again, as you can see from the above, Ms. Phelon statements are incorrect.

8. As described above, I am not opposed to the I-1 industrial zone. I am just opposed to this particular use as well as the concrete recycling use that is also getting ready to come before the City.

   The I-1 Zone has hundreds of clean beneficial uses that would benefit the City and its citizens. Junk yards, animal processing plants, batch plants and concrete recycling facilities are just a few of the uses that the City just doesn't need. The City needs a clear vision as to what uses it wants in their City and what economic benefit or detriment the use will create.

   Our company can help bring into the City large desirable employers that provides jobs and generate sales tax for the City.

   I have attached an Exhibit "C" that shows the type of businesses that we already have a Tenant relationship with, the type of industry that they are in and whether or not they generate sales tax. This exhibit shows our Tenant relationships and helps to portrait the type of companies we can deliver to the City if we are able to develop a quality project free of pollution, dust and noise.

Based on all the above, I strongly suggest that the American Fork City Planning Commission, permanently reject the proposed American Eagle Concrete Batch Plant use.

Sincerely,

Michael W. Roderick
General Manager
Roderick Enterprises
www.roderickrealty.com

Attachment: 2. Site Plan (American Eagle Appeal)

# EXHIBIT A
# PROPERTY TAXES

**Utah County Treasurer**
100 East Center, Suite 1200
Provo, Utah 84606-3159
801-851-8255

## 2019 UTAH COUNTY TAX NOTICE
DUPLICATE TAX NOTICE

** See Reverse Side For Important Information **

Tax District: 060 Property Class: CI Acreage: 11.71

Property Address: 1226 S 630 EAST - AMERICAN FORK

Recorded Owner as of January 1, 2019
RODERICK ENTERPRISES LIMITED PARTNERSHIP

Property Description (not for legal documents):
LOT 2A, RODERICK NORTH POINTE AMD SUB AREA 11.434 AC. ALSO PART PUBLIC ROAD, PLAT D, NORTH POINTE BUSINESS PARK SUBDV, DESCRIBED AS FOLLOWS:; COM S 1295.57 FT & W 2332.25 FT FR E 1/4 COR. SEC. 25, T5S, R1E, SLB&M.; S 30.17 FT; ALONG A CURVE TO R (CHORD BEARS: S 44 DEG 41' 45" W 21.1 FT, RADIUS = 15 FT); ALONG A CURVE TO R (CHORD BEARS: S 89 DEG 58' 35" W 16.31 FT, RADIUS = 796.09 FT); ALONG A(MORE)

Prior Year Delinquent Tax Information:

Fees Detail:

Adjustment Detail:

| | |
|---|---|
| **Serial Number:** | **51:556:0003** |
| PIN: | 1364213 |
| 2019 Taxes: | $180,631.28 |
| Adjustments: | $0.00 |
| Fees: | $0.00 |
| Total Payments: | $0.00 |
| **2019 Amount Due:** | **$180,631.28** |
| Prior Years Due: | 0.00 |

**DUE: DEC. 02, 2019**

Checks and Cash

Web Pay At: www.utahcounty.gov Fees may apply.
Make Check Payable To: UTAH COUNTY TREASURER
Sign up for e-Billing at: www.utahcounty.gov/taxnotice

Mortgage Company that requested your tax info:

| Value of Property | | | * Effective Tax Rate | Distribution of General Taxes | | | |
|---|---|---|---|---|---|---|---|
| Type | Taxable Value | Market Value | | Taxing Unit | % | Tax Rate | Amount |
| Non-Primary Residential | 18,095,700 | 18,095,700 | 0.00663500 | Alpine School District | 66.47% | 0.006635 | $120,064.97 |
| | | | 0.00202700 | American Fork City | 20.31% | 0.002027 | $36,679.98 |
| | | | 0.00067200 | Utah County | 6.73% | 0.000672 | $12,160.31 |
| | | | 0.00040000 | Central Utah Water Dist | 4.01% | 0.000400 | $7,238.28 |
| | | | 0.00016700 | Assessing & Collecting | 1.67% | 0.000167 | $3,021.98 |
| | | | 0.00006400 | State Charter School-Alpir | 0.64% | 0.000064 | $1,158.12 |
| | | | 0.00001700 | North Utah County Water | 0.17% | 0.000017 | $307.64 |
| **Totals** | 18,095,700 | 18,095,700 | 0.00998200 | | | 0.009982 | $180,631.28 |

* Effective Tax Rate is computed by dividing tax amount by total market value.

Created: 10/22/2019 02:57:23

This portion must accompany payment.

## 2019 UTAH COUNTY TAX NOTICE
UTAH COUNTY TREASURER

Pay Online at www.utahcounty.gov

****TAXES ARE DELINQUENT AT 5:00 PM, DEC. 02, 2019****

Check here and see reverse side for address correction

| | |
|---|---|
| **Serial Number:** | **51:556:0003** |
| PIN: | 1364213 |
| 2019 Taxes: | $180,631.28 |
| Adjustments: | $0.00 |
| Fees: | $0.00 |
| Total Payments: | $0.00 |
| **2019 Amount Due** | **$180,631.28** |
| Prior Years Due | 0.00 |

**DUE: DEC. 02, 2019**

Make check payable to: UTAH COUNTY TREASURER

**Owner of Record (as of this printing):**

RODERICK ENTERPRISES LIMITED PARTNERSHIP
1214 E VINE ST
SALT LAKE CITY, UT 84121

UTAH COUNTY TREASURER
100 EAST CENTER, SUITE 1200
PROVO, UT 84606-3159

515560003 2019 1364213 0180631288

Attachment: 2. Site Plan (American Eagle Appeal)

**Utah County Treasurer**
100 East Center, Suite 1200
Provo, Utah 84606-3159
801-851-8255

# 2019 UTAH COUNTY TAX NOTICE

ORIGINAL TAX NOTICE



** See Reverse Side For Important Information **

Tax District: 060 Property Class: CI Acreage: 10.86

Property Address: 584 E 1100 SOUTH - AMERICAN FORK

Recorded Owner as of January 1, 2019
RODERICK ENTERPRISES

Property Description (not for legal documents):
LOT 1A, RODERICK NORTH POINTE AMD SUB AREA 10.859 AC.

**Serial Number: 51:556:0001**
PIN: 1364204

| | |
|---|---|
| 2019 Taxes: | $129,920.72 |
| Adjustments: | $0.00 |
| Fees: | $0.00 |
| Total Payments: | $0.00 |
| **2019 Amount Due:** | **$129,920.72** |
| Prior Years Due: | 0.00 |

**DUE: DEC. 02, 2019**

Checks and Cash

Web Pay At: www.utahcounty.gov Fees may apply.
Make Check Payable To: UTAH COUNTY TREASURER
Sign up for e-Billing at: www.utahcounty.gov/taxnotice

Prior Year Delinquent Tax Information:

Fees Detail:

Adjustment Detail:

Mortgage Company that requested your tax info:

| Value of Property | | | * Effective | Distribution of General Taxes | | | |
|---|---|---|---|---|---|---|---|
| Type | Taxable Value | Market Value | Tax Rate | Taxing Unit | % | Tax Rate | Amount |
| Non-Primary Residential | 13,015,500 | 13,015,500 | 0.00663500 | Alpine School District | 66.47% | 0.006635 | $86,357.84 |
| | | | 0.00202700 | American Fork City | 20.31% | 0.002027 | $26,382.42 |
| | | | 0.00067200 | Utah County | 6.73% | 0.000672 | $8,746.42 |
| | | | 0.00040000 | Central Utah Water Dist | 4.01% | 0.000400 | $5,206.20 |
| | | | 0.00016700 | Assessing & Collecting | 1.67% | 0.000167 | $2,173.59 |
| | | | 0.00006400 | State Charter School-Alpir | 0.64% | 0.000064 | $832.99 |
| | | | 0.00001700 | North Utah County Water | 0.17% | 0.000017 | $221.26 |
| **Totals** | 13,015,500 | 13,015,500 | 0.00998200 | | | 0.009982 | $129,920.72 |

* Effective Tax Rate is computed by dividing tax amount by total market value.

Created: 10/06/2019 10:07:38

This portion must accompany payment

## 2019 UTAH COUNTY TAX NOTICE
UTAH COUNTY TREASURER

Pay Online at www.utahcounty.gov

****TAXES ARE DELINQUENT AT 5:00 PM, DEC. 02, 2019****

**Serial Number: 51:556:0001**
PIN: 1364204

| | |
|---|---|
| 2019 Taxes: | $129,920.72 |
| Adjustments: | $0.00 |
| Fees: | $0.00 |
| Total Payments: | $0.00 |
| **2019 Amount Due** | **$129,920.72** |
| Prior Years Due: | 0.00 |

**DUE: DEC. 02, 2019**

Make check payable to: UTAH COUNTY TREASURER

Owner of Record (as of this printing):

☐ Check here and see reverse side for address correction

RODERICK ENTERPRISES
PO BOX 186
COTTONWOOD HEIGHTS, UT 84047-0160

1

UTAH COUNTY TREASURER
PO BOX 410483
SALT LAKE CITY UT 84141-0483

515560001 2019 1364204 0129920722

Attachment: 2. Site Plan (American Eagle Appeal)

00 East Center, Suite 1200
rovo, Utah 84606-3159
01-851-8255

DUPLICATE TAX NOTICE

** See Reverse Side For Important Information **

Values have been adjusted for Equalization.

Tax District: 060 Property Class: V Acreage: 41.67

Property Address:

Recorded Owner as of January 1, 2019
RODERICK ENTERPRISES

Property Description (not for legal documents):
COM N 89 DEG 48' 53" W 238.58 FT & S 134.23 FT FR NE COR. SEC. 35, T5S, R1E, SLB&M.; S 0 DEG 36' 7" W 659.25 FT; S 89 DEG 19' 28" E 647.83 FT; S 0 DEG 59' 20" W 614.83 FT; N 89 DEG 14' 38" W 279.74 FT; ALONG A CURVE TO R (CHORD BEARS: N 88 DEG 11' 25" W 53.85 FT, RADIUS = 1464 FT); N 87 DEG 8' 11" W 770.37 FT; ALONG A CURVE TO R (CHORD BEARS: N 85 DEG 34' 55" W 27.13 FT, RADIUS = 500 FT); N 84 DEG(MORE)

Prior Year Delinquent Tax Information:

| | |
|---|---|
| **Serial Number:** | **13:076:0046** |
| PIN: | 0170001 |
| 2019 Taxes: | $82,795.70 |
| Adjustments: | -$24,399.59 |
| Fees: | $0.00 |
| Total Payments: | $0.00 |
| **2019 Amount Due:** | **$58,396.11** |
| Prior Years Due: | 0.00 |
| **DUE: DEC. 02, 2019** | |

VISA DISCOVER

Checks and Cash

Web Pay At: www.utahcounty.gov Fees may apply.
Make Check Payable To: UTAH COUNTY TREASURER
Sign up for e-Billing at: www.utahcounty.gov/taxnotice

Mortgage Company that requested your tax info:

Fees Detail:

Adjustment Detail
VAL$ADJ $-24,399.59

| Value of Property | | | * Effective | Distribution of General Taxes | | | |
|---|---|---|---|---|---|---|---|
| Type | Taxable Value | Market Value | Tax Rate | Taxing Unit | % | Tax Rate | Amount |
| Vacant Land | 5,850,141 | 5,850,141 | 0.00940730 | Alpine School District | 66.47% | 0.006635 | $55,034.01 |
| | | | 0.00287394 | American Fork City | 20.31% | 0.002027 | $16,812.95 |
| | | | 0.00095278 | Utah County | 6.73% | 0.000672 | $5,573.90 |
| | | | 0.00056713 | Central Utah Water Dist | 4.01% | 0.000400 | $3,317.80 |
| | | | 0.00023678 | Assessing & Collecting | 1.67% | 0.000167 | $1,385.18 |
| | | | 0.00009074 | State Charter School-Alpir | 0.64% | 0.000064 | $530.85 |
| | | | 0.00002410 | North Utah County Water | 0.17% | 0.000017 | $141.01 |
| **Totals** | 5,850,141 | 5,850,141 | 0.01415277 | | | 0.009982 | $82,795.70 |

* Effective Tax Rate is computed by dividing tax amount by total market value.

Created: 10/23/2019 02:54:02

This portion must accompany payment.

## 2019 UTAH COUNTY TAX NOTICE
UTAH COUNTY TREASURER

Pay Online at www.utahcounty.gov

**TAXES ARE DELINQUENT AT 5:00 PM, DEC. 02, 2019**

Check here and see reverse side for address correction

| | |
|---|---|
| **Serial Number:** | **13:076:0046** |
| PIN: | 0170001 |
| 2019 Taxes: | $82,795.70 |
| Adjustments: | -$24,399.59 |
| Fees: | $0.00 |
| Total Payments: | $0.00 |
| **2019 Amount Due** | **$58,396.11** |
| Prior Years Due | 0.00 |
| **DUE: DEC. 02, 2019** | |

Make check payable to: UTAH COUNTY TREASURER

wner of Record (as of this printing):

RODERICK ENTERPRISES
PO BOX 186
COTTONWOOD HEIGHTS, UT 84047

UTAH COUNTY TREASURER
100 EAST CENTER, SUITE 1200
PROVO, UT 84606-3159

130760046 2019 0170001 0058396116

Attachment: 2. Site Plan (American Eagle Appeal)

Utah County Treasurer
100 East Center, Suite 1200
Provo, Utah 84606-3159
801-851-8255

# 2019 UTAH COUNTY TAX NOTICE

ORIGINAL TAX NOTICE



** See Reverse Side For Important Information **

Tax District: 060 Property Class: CS Acreage: 1.67

Property Address: 698 E 1300 SOUTH - AMERICAN FORK

Recorded Owner as of January 1, 2019
RODERICK ENTERPRISES

Property Description (not for legal documents):
LOT 3, PLAT D, NORTH POINTE BUSINESS PARK SUBDV. AREA 1.665 AC.

**Serial Number: 47:286:0003**
PIN: 1163653

| | |
|---|---|
| 2019 Taxes: | $14,480.89 |
| Adjustments: | $0.00 |
| Fees: | $0.00 |
| Total Payments: | $0.00 |
| **2019 Amount Due:** | **$14,480.89** |
| Prior Years Due: | 0.00 |

**DUE: DEC. 02, 2019**

Checks and Cash

Web Pay At: www.utahcounty.gov Fees may apply.
Make Check Payable To: UTAH COUNTY TREASURER
Sign up for e-Billing at: www.utahcounty.gov/taxnotice

Prior Year Delinquent Tax Information:

Fees Detail: Adjustment Detail

Mortgage Company that requested your tax info:

| Value of Property | | | * Effective | Distribution of General Taxes | | | |
|---|---|---|---|---|---|---|---|
| Type | Taxable Value | Market Value | Tax Rate | Taxing Unit | % | Tax Rate | Amount |
| Non-Primary Residential | 1,450,700 | 1,450,700 | 0.00663500 | Alpine School District | 66.47% | 0.006635 | $9,625.40 |
| | | | 0.00202700 | American Fork City | 20.31% | 0.002027 | $2,940.57 |
| | | | 0.00067200 | Utah County | 6.73% | 0.000672 | $974.87 |
| | | | 0.00040000 | Central Utah Water Dist | 4.01% | 0.000400 | $580.28 |
| | | | 0.00016700 | Assessing & Collecting | 1.67% | 0.000167 | $242.27 |
| | | | 0.00006400 | State Charter School-Alpir | 0.64% | 0.000064 | $92.84 |
| | | | 0.00001700 | North Utah County Water | 0.17% | 0.000017 | $24.66 |
| **Totals** | 1,450,700 | 1,450,700 | 0.00998200 | | | 0.009982 | $14,480.89 |

* Effective Tax Rate is computed by dividing tax amount by total market value.

Created: 10/08/2019 10:07:38

This portion must accompany payment.

## 2019 UTAH COUNTY TAX NOTICE

UTAH COUNTY TREASURER

Pay Online at www.utahcounty.gov

****TAXES ARE DELINQUENT AT 5:00 PM. DEC. 02, 2019****

**Serial Number: 47:286:0003**
PIN: 1163653

| | |
|---|---|
| 2019 Taxes: | $14,480.89 |
| Adjustments: | $0.00 |
| Fees: | $0.00 |
| Total Payments: | $0.00 |
| **2019 Amount Due** | **$14,480.89** |
| Prior Years Due: | 0.00 |

**DUE: DEC. 02, 2019**

Make check payable to: UTAH COUNTY TREASURER

**Owner of Record (as of this printing):**

☐ Check here and see reverse side for address correction

RODERICK ENTERPRISES
PO BOX 186
COTTONWOOD HEIGHTS, UT 84047-0160

1

UTAH COUNTY TREASURER
PO BOX 410483
SALT LAKE CITY UT 84141-0483

472860003 2019 1163653 0014480898

Attachment: 2. Site Plan (American Eagle Appeal)

# EXHIBIT B
# PHEASANT HOLLOW BUSINESS PARK

## *Pheasant Hollow Business Park*

9800 South 500 West, Sandy, Utah 84070



## PROPERTY FEATURES:

- High Image, Class A, 70 Acre Business Park
- Easy I-15 Access at 90th and 106th South
- Ground Level & Dock High Loading
- Across the Freeway from South Towne Mall & Sandy City Hall
- 18-32 Foot Clear Ceiling Height
- Excessive Parking
- Lush Landscape

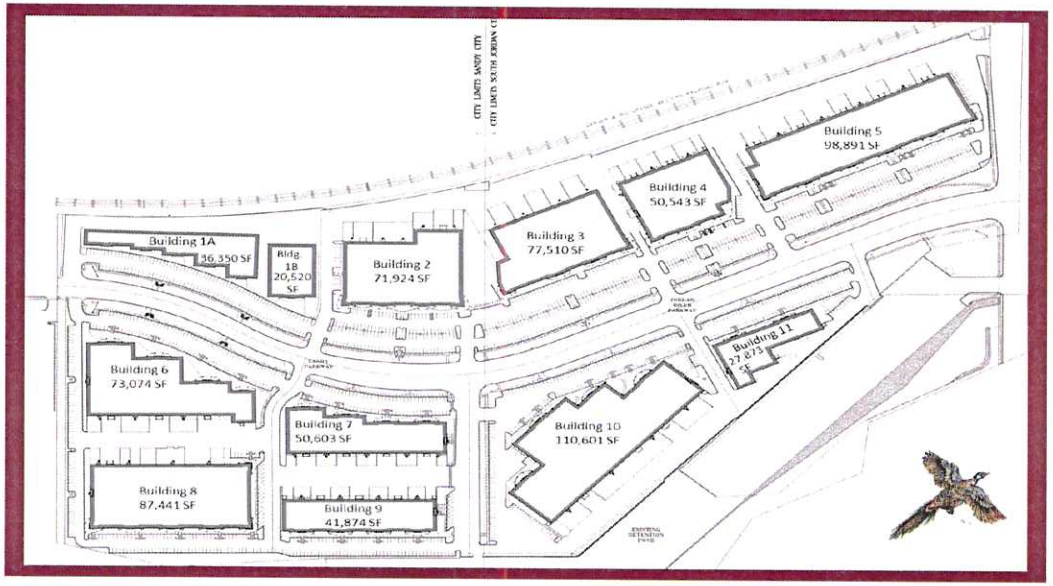
Attachment: 2. Site Plan (American Eagle Appeal)

# Pheasant Hollow Business Park

9800 South 500 West, Sandy, Utah 84070

*Pheasant Hollow Business Park is a 70 acre class "A" master-planned park, consisting of over 800,000 square feet within twelve buildings. The park accommodates office, warehouse, flex, research and development, distributing, manufacturing, retail and office use.*






*The buildings containing ceiling heights between 18 and 32 feet as well as each space includes ground level doors, dock high loading doors as well as knock out panels. The park is conveniently located off I-15 between 90th South and 106th South exits.*







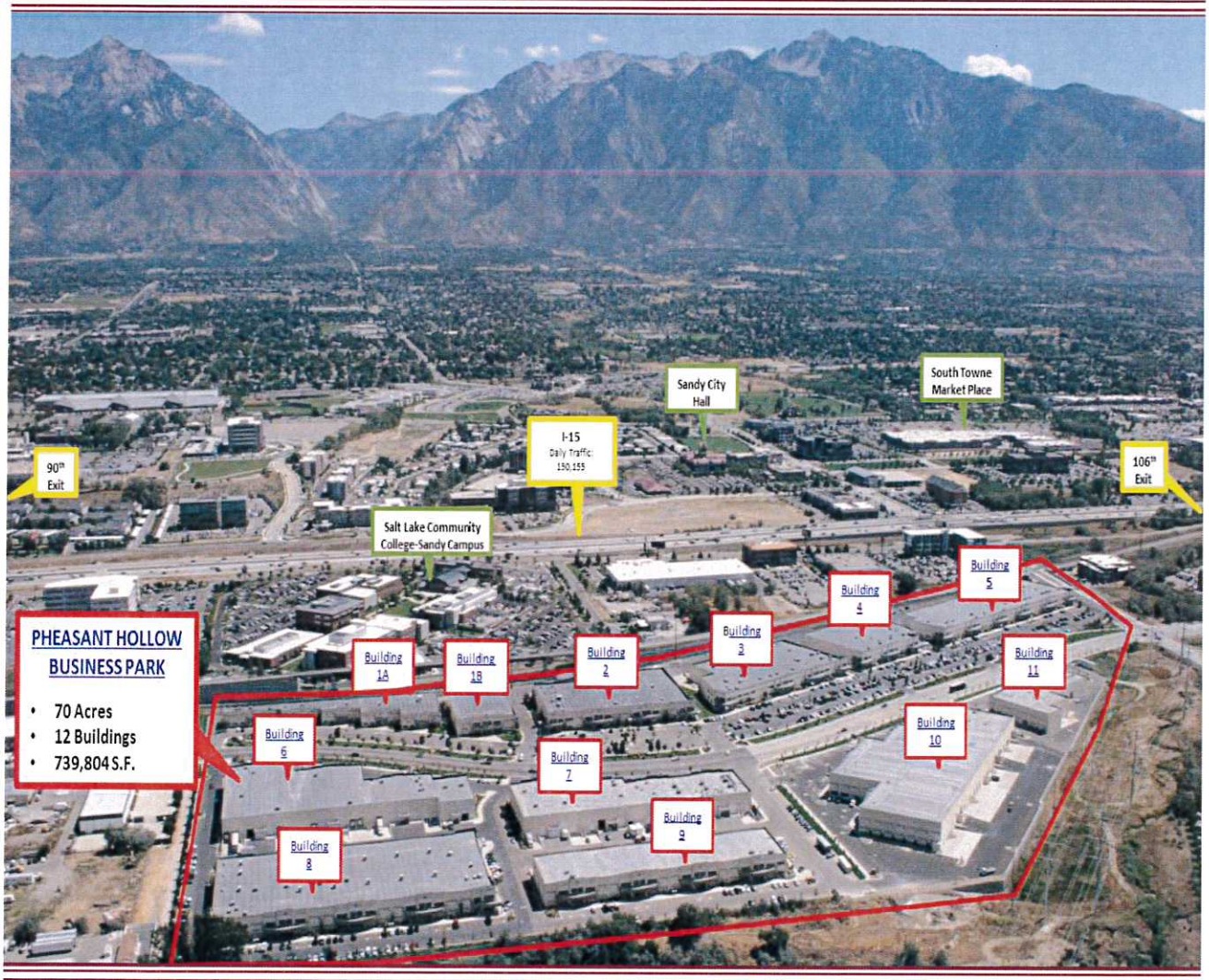





RodérickRealty.com
801-506-5005

The information contained herein has been given to us by the owner or obtained from other reliable sources. We have no reason to doubt its accuracy but we do not guarantee it. Vacancy factors, projections, opinions, assumptions or estimates used herein are for example only and represents the current or future performance of the property. The value of this investment depends on tax and other factors which should be evaluated by your tax financial and legal advisors. YOU AND YOUR ADVISOR SHOULD VERIFY PROPERTY INFORMATION TO DETERMINE TO YOUR SATISFACTION THE PROPERTY FOR YOUR NEEDS.

Roderick Realty
SERVICES
www.roderickrealty.com
801-506-5005




**PHEASANT HOLLOW BUSINESS PARK**

- 70 Acres
- 12 Buildings
- 739,804 S.F.

FOR MORE INFORMATION PLEASE CONTACT

**Mike Roderick**
Roderick Realty Services
801-506-5005
miker@roderickrealty.com

**Benjamin Wheat**
Roderick Realty Services
801-891-6596
benw@roderickrealty.com

www.roderickrealty.com

Attachment: 2. Site Plan (American Eagle Appeal)

# EXHIBIT C
# RODERICK ENTERPRISES BUSINESS PARK TENANTS
## ( x= generates sales tax)

| INDUSTRY | | TENANT |
|---|---|---|
| Technology: | | |
| | X | Hei-Tek |
| | X | Stratache-Super Lumin |
| | X | LVT-Clean Rooms |
| | | Global SIMS |
| | X | Syscon Automation |
| | X | Hardy Diagnostics |
| | X | Innate Devices |
| | X | AT&T |
| | X | Comcast |
| Medical: | | |
| | X | Agility Health |
| | X | Accredo Health |
| | | KT-Health |
| | | Kwik-Med |
| | X | Stryker |
| | X | Henry Schein |
| | X | JQ Medical |
| Retail/Supply: | | |
| | X | Seagull Book/Covenant Communications |
| | | Vista Outdoor Products |
| | | Liberty Mountain Sports |
| | X | Zebco-Holdings |
| | X | Scholarwear |
| | X | Bohme (Headquarters) |
| | | NAPA (Ballkamp) |
| | X | Benjamin Moore |
| Business Services: | | |
| | X | Sign-A-Rama |
| | X | United Refrigeration |
| | | Carrier Consulting |
| | | Antarctic Logistics |
| | X | Identity Signs |
| | X | Flooring Services |
| | X | Fastenal |

Attachment: 2. Site Plan (American Eagle Appeal)

| INDUSTRY | | TENANT |
|---|---|---|
| Construction Supply: | | |
| | X | Lansing Building Products-Sandy |
| | X | Lansing Building Products- Logan |
| | X | Consolidated Electrical Distributors (CED)- Sandy |
| | X | Consolidated Electrical Distributors (CED)- Logan |
| | X | Consolidated Electrical Distributors (CED)- West Jordan |
| | X | Royal Electric- American Fork |
| | X | Royal Electric- Springville |
| | X | Centimark Supply |
| | | Interiorworx |
| | X | Baker HVAC Supply |
| | X | Builder Services |
| | X | Bedrock Quartz |
| | X | Goodman HVAC |
| | X | BMC West |
| Food and Nutrition: | | |
| | | Betterbody Foods |
| | | E Excel |
| | | Dryers Ice Cream |
| | | Red Bull Distributors |
| | X | WholeFoods |
| Events/Trade Shows: | | |
| | X | ARL |
| | X | Aventri |
| | X | Power Graphics |
| Logistic Services: | | |
| | X | Drive Marketing |
| | | American Promotional Events |
| Biology/DNA Services: | | |
| | | ARUP Blood Services |
| | | Acenstry.com |
| Energy: | | |
| | X | Vivint Solar |
| | X | Power Innovations |
| | | Curtis Wright/Delta Valve |
| | X | Agility Energy |
| Building Services/Equipment: | | |
| | X | Kone-Elevators |
| | X | Siemens Building Technology |
| | X | Emerson Electric |
| Professional Services: | | |
| | | Precision Systems Engineering |
| | | MedUSA |
| | | Immersive Technologies |
| | | Stanley Consultants |
| Education Services: | | |
| | | Von Curtis/Paul Mitchell |

Attachment: 2. Site Plan (American Eagle Appeal)

**MCDONALD FIELDING** PLLC
2100 W. PLEASANT GROVE BLVD., SUITE 250
PLEASANT GROVE, UTAH 84062
PHONE: 801-610-0010

DANIEL J. MCDONALD E-MAIL: dan@mcdonaldfielding.com

April 21, 2020

American Fork City Planning Commission
c/o Adam Olsen, Senior Planner
Via Email: aolsen@afcity.net
Via Email: zoompubliccomment@afcity.net

RE: American Eagle Ready Mix Site Plan Application
American Fork City Planning Commission Regular Session – March 18, 2020

Honorable Mr. Olsen and Members of the Planning Commission:

I am writing on behalf of Roderick Enterprises in reply to the application materials submitted to you by E.S.P. Excavation, Inc. and American Eagle Ready Mix on or about April 16, 2020. First, let us thank you for carefully considering the voluminous amounts of information that have been submitted to you in conjunction with this application. We realize there is a lot of information to digest but everything we have submitted is important in creating a record and helping you make an informed opinion. Where possible, we have highlighted the most critical information for your consideration. Second, let me explain the reason for our submission of a reply to the response materials submitted by the site plan applicant.

Instead of discussing and presenting evidence in support of meeting the mandatory elements of the City Code, American Eagle has taken you on a long, meandering attack of Roderick Enterprises that is so full of irrelevant comparisons, inconsistencies and internal contradictions that we believe any court of law would find it utterly lacking in credibility and not worthy of your reliance. Let me highlight just a few points for your consideration.

1. **No Expert Testimony**. The applicant has submitted no qualified expert testimony of its own to support its application. In contrast, Roderick's experts are titans of the construction and development industry, having held executive positions with industry leaders such as Parsons, Sahara, Layton, and Prowswood and having supervised such landmark projects as the Salt Lake International Airport, Smith's Distribution Center, and the Salt Lake City Gateway, to name a few. They know what they're talking about. Our experts reply to American Eagle's supplement materials in **Exhibit 1**. Please seriously consider what our experts are telling you about the many ways the application fails to meet the mandatory provisions of the City Code and how the materials you are getting from American Eagle are riddled with contradictions and unreliable.

2. **Apples and Oranges Comparisons**. The applicant tries to compare itself to the nearby Altaview Concrete facility. However, this is like comparing apples to oranges for several

Attachment: 2. Site Plan (American Eagle Appeal)

reasons. They are two entirely different types of operations with **more than 20 key operational, size, and scope differences**, which are noted in more detail in a comparison table contained in the supplemental report from our construction and development experts, which is attached as **Exhibit 1**.

3. **Legally Irrelevant Comparisons**. The applicant's comparison to Altaview and other pre-existing I-1 operations is not only factually inaccurate it is also legally irrelevant. Altaview and these pre-existing uses do not set any kind of legal precedent that the Planning Commission is bound by. In fact, under Section 17.6.101.A of the City Code, the Planning commission has the "duty and power to … disapprove a project plan and to attach such modifications or conditions as may be deemed appropriate … to ensure that the project will not pose any detrimental effect to persons or property, or to protect the health, safety, and general welfare of the citizens of the city." As a practical matter, this means you are legally obligated to **consider applications on a plan-by-plan, site-by-site basis**. Also, please consider the following, which make a comparison to Altaview and the other pre-existing uses legally irrelevant or dangerous, at best:

   - Those properties were annexed into American Fork in 1999 and **were zoned PI-1, "Planned Industrial Zone"**, a different zoning designation than the American Eagle site currently has (*see* **Exhibit 2**).

   - There is no evidence Altaview or the other pre-existing uses were in the I-1 zone at the time of their approval.

   - Even if Altaview and these other pre-existing businesses were in the I-1 zone at the time of their approval, there is no evidence the I-1 zoning regulations *then* were the same as they are *now*. According to the City Code, the I-1 zone has been modified at least 8 times since its initial enactment. The Planning Commission would be making nothing more than a wild guess if it just assumed the law at the time of Altaview's approval or approval of the other pre-existing uses was exactly the same as it is now.[1]

   - There is no evidence of what conditions, if any, were imposed on Altaview and these other pre-existing businesses as conditions of their approval.

4. **Missing or Contradictory Information**. Our construction industry experts have identified at least two dozen contradictions or omissions in the American Eagle application materials. Please carefully consider the bullet points in their report attached as **Exhibit 1**.

[1] I should note that we have made GRAMA requests to the City Recorder to verify all of this information and obtain more information about the history of the Altaview project. However, that information has not yet been produced to us as of the time and date of this submission.

Attachment: 2. Site Plan (American Eagle Appeal)

5. **Non-compliance with City Code § 17.5.116 – Air Quality.** There has been no showing that the applicant has complied or will comply with the air quality provisions of Section 17.5.116 of the City Code, which provides, "Any use shall be prohibited which emits or discharges gasses, fumes, or other pollutants into the atmosphere in amounts which exceed the standards as prescribed by the Utah State Air Conservation Board, the board of health, or such appropriate body as may be appointed by the city council."

6. **Non-compliance with City Code § 17.5.116 – Wastewater.** There has been no showing that the applicant has complied or will comply with the wastewater provisions of Section 17.5.116 of the City Code, which provides, "Any use shall also be prohibited which emits or discharges liquids or solid material onto the soil or water in amounts which result in pollutants entering any water or drainage system in amounts exceeding the standards prescribed by the Utah State Water Pollution Control Board or the state board of health."

7. **Arbitrary and Capricious**. A land use authority's decision is arbitrary or capricious if it is not supported by substantial evidence in the record. *Pacific West Communities, Inc. v. Grantsville City*, 2009 UT App 291, ¶ 22, 221 P.3d 280. *Accord* Utah Code Ann. § 10-9a-801(3)(c)(i). There is not substantial evidence in the record to support American Eagle's application.

8. **Illegal**. A land use authority's decision is "illegal" under Utah Code Ann. § 10-9a-801(3)(c)(ii) if it is "based on an incorrect interpretation of a land use regulation; or contrary to law." We have already outlined in our previous submissions how the I-1 code does not allow the type of open, non-enclosed, heavy manufacturing, processing and crushing proposed by American Eagle. The substantial evidence submitted by Roderick proves this beyond any reasonable doubt.

Sincerely,

**MCDONALD FIELDING**

Daniel J. McDonald

**Enclosures**

Ex. 1 – Supplemental Report from PROMAC experts Roy Bosley and Keith Sorenson
Ex. 2 – 1999 Annexation Ordinance

Attachment: 2. Site Plan (American Eagle Appeal)

Exhibit 1 to M[illegible]onald [illegible]ielding [illegible]etter of [illegible]21[illegible]2[illegible] - [illegible]pplemental Expert [illegible]eport from P[illegible]MA[illegible]

PROMAC
PROJECT MANAGEMENT CONSULTANTS L.L.C.

April 16, 2020

Mr. Dan McDonald, Attorney
McDonald Fielding PLLC
2100 West Pleasant Grove Blvd.
Pleasant Grove, Utah 84062

RE: American Eagle Ready Mix Site Plan Application

Subject: Update – Comparison to Altaview Transit Mix Facility/Reply to Applicant's Supplemental Materials

Dear Mr. McDonald,

Let this communication serve as a brief comparative analysis between the proposed American Eagle Ready Mix batch plant versus the existing Altaview Transit Mix batch plant, as well as a reply to the supplemental materials recently submitted by the applicant. This opinion is based upon my site visit to both plants on March 19, 2020, as well as my review of the evidence submitted and publicly-available Utah Division of Air Quality documents.

<u>**Comparative Analysis with Altaview Transit Mix Facility**</u>

**Plant Type and Regulatory Differences:**

Both plants were manufactured by Erie Strayer Inc.

**The Altaview plant** is a transit mix plant. The raw ingredients are added to the truck at the site. From there it relies on the truck to do the mixing while in transit to a pour site.[1]

[1] [illegible]

PROMAC
PROJECT MANAGEMENT CONSULTANTS L.L.C.

A transit mix or "dry batch" concrete plant can be customized in a multitude of ways to address a producer's needs for production, storage, aggregate handling, cement handling, the management of specialty products, **dust control**, and computer controlled automation.

On average, the Altaview plant produces 123,435 cubic yards / year Reference Exhibit "A", which is well below the 450,000 cubic yards / year capacity it was approved for through the Utah Division of Air Quality. Per the Utah Air Quality Board report which was issued on May 30, 2007 Westrock the original owner of the now Altaview Plant was approved to produce no more than 150 yards / hour with an annual volume of 450,000 cubic yards / year. A copy of the Altaview facility's original DAQ approval is attached as Exhibit "F." As you can tell from even a quick scan of the DAQ approval order, Altaview was completely forthright with the DAQ in regard to its intended capacity and, consequently, underwent a rigorous DAQ review and approval process that included, among other things, public notice, public comment, emissions testing and reports / projected calculations, and HAP modelling for toxic air pollutants, among other things, none of which was done for the American Eagle plant.

I have reviewed the Altaview Air Quality reports which were filed every three years and have noted that dust control improvements were added and that they have stayed within the air quality limits imposed as part of the original approval process. Also, it appears that Altaview has operated significantly under its DAQ-approved plant capacity, which demonstrates that there is likely no critical need for another concrete batching facility in this area.

**In contrast, the proposed American Eagle plant** can be either a central mix plant or a transit mix plant. Central mix plants are more economical to run which leads me to believe that American Eagle will operate it as a central mix plant. A central mix plant produces concrete with the capability to produce large volume production. As noted in my previous report American Eagle's MP-11T&C plant has the capability to produce "up to 366 cubic yards per hour" according to the specifications submitted by American Eagle. Its realistic continuous capacity is between 200 and 300 yards per hour Reference Exhibit "B."[2]

In contrast to Altaview, American Eagle applied for a small facility exemption (Small Source Registration) from the DAQ, which would enable it to avoid the more rigorous DAQ requirements that Altaview had to and must continually undergo. American Eagle represented to the DAQ that (even though it has a mechanical capacity to produce 300 yards per hour) it would produce no more than 30 cubic yards per hour with a max annual production rate of 120,000 cubic yards. However, in its most recent submission to the Planning Commission

Attachment: 2. Site Plan (American Eagle Appeal)

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American Eagle admits that it intends to operate at a much higher capacity than what was originally represented to the DAQ to obtain the DAQ exemption.

In short, Altaview is a transit mix or "dry batch" concrete plant that is heavily regulated by the Utah DAQ whereas American Eagle is (most likely) a central mix plant that has obtained a DAQ small source exemption based upon what appear to be (by American Eagle's own admission) the inaccurate and unrealistically low numbers that American Eagle submitted to the DAQ.

**Key Difference Between the Two Plants:**

The first key difference between the two plants is the fact that the Altaview plant is enveloped in two enclosed structures reference Exhibit "C" and is located at the end of a partial cul-de-sac. To the extent possible Altaview has made a good faith effort to enclose their operation within a building consistent with the requirements stipulated in the I1 zoning documents. It should also be noted that by enclosing the operation within a building the daily batching noise associated with the operation is significantly reduced. Also, migrant dust and particulate matter is more readily and effectively contained, unlike the open operation at American Eagle, which will do little to nothing to contain migrant dust, particulate matter, or noise. Finally, the Altaview operation is located in a partial cul-de-sac and is largely enclosed, which creates a much more professional-looking, pleasing aesthetic appearance and reduces the adverse visual impact of the operation discernible from the public roads in contrast to the American Eagle operation, which is located directly on a public road and is an openly visible "open" operation that creates an adverse visual impact that IS readily discernible from the public roads.

The second item of importance to note is the fact that after batching each truck goes through a truck wash station reference Exhibit "D" to remove any laitance which may have adhered to the truck during batching of the concrete. The truck leaves the site clean. This further reduces concerns with air pollution, migrant dust, and release of particulate matter.

The third item of note is the fact that the aggregate stockpiles Reference Exhibit "E" are watered with a water truck on a periodic basis to minimize dust. The site is paved which allows for a street sweeper which was observed on site to keep the area clean. This results in further control of migrant dust, travelling particulate matter, and other debris and also furthers the aesthetic requirements of the I-1 zone.

The fourth key difference between the two plants is that the Altaview plant is required by the DAQ to use and implement BACT technology, which stands for "Best Available Control

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Technology." Please look at the highlighted portions of Exhibit F to see what these measures are. There is no indication that American Eagle implements or utilizes BACT technology.

**Summary of Opinions:**

It is my considered opinion that the Altaview plant operates "under conditions which limit the generation of noise, vibration, smoke, odor, dust, fumes, or hazard from explosion" (see City Code § 17.4.503.A) whereas American Eagle does not.
It is my opinion that American Eagle's operation will produce odors, fumes, smoke, noise, vapor, vibration, etc. (see City Code § 17.4.503B.1.a) at levels that are significantly higher than the Altaview plant.

Alta view's uses are "conducted entirely within a fully enclosed building" (actually two buildings) (see City Code § 17.4.503.I.1.) except those that may be appropriately conducted outdoors with the dust-mitigating measures required by the Utah DAQ. American Eagle's plant will NOT conduct its business entirely within fully enclosed buildings, its operations will be open and may not appropriately be conducted in the open unless BACT measures are implemented and DAW oversight is imposed as it is with the Altaview plant.

Alta view's operation stores "vehicles used in the conduct of the business activity" (see City Code § 17.4.503.I.2.) in an enclosed building. American Eagle's does not.

For more detail on the differences between the two operations, please consult the following table:

| **Altaview Plant** | **American Eagle Plant** |
|---|---|
| Transit mix / "dry batch" plant | Central mix and/or transit mix |
| Capacity represented to DAQ = 150 cy / hour | Capacity represented to DAQ = 30 cy / hour |
| Actual plant capacity = (unknown) | Actual plant capacity = 200-300 cy / hour |
| Operates under a Utah DAQ ***permit*** | Operates under a Utah DAQ small source ***exemption*** (based upon American Eagle's representations to the DAQ) |
| Heavily regulated by the Utah DAQ | Not heavily regulated by the Utah DAQ |

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| | |
|---|---|
| Enclosed production structure | Not enclosed |
| **Altaview Plant** | **American Eagle Plant** |
| Enclosed garage | No enclosed garage |
| Located off a public road at the end of a partial cul-de-sac | Located right on a public road |
| Mostly not visible from a public road | Completely visible from a public road |
| Noise mitigating structures such as enclosed facilities | No noise mitigating structures, or measures noted |
| Truck washing station | No truck washing station |
| Street sweeper present | No street sweeper |
| Good dust and particulate matter controls | Poor to no dust and particulate matter controls |
| BACT technology (Best Available Control Technology) plan for dust and pollution control:<br>• material handling - all sand and gravel transported to the plant will be washed<br>• conveyors - all sand and gravel used at the plant will be washed<br>• unpaved road dust - roads and loader equipment are watered once every two hours; mag water (magnesium chloride) applied as required to control dust<br>• elevated bins are housed in the enclosed structure | No BACT technology or plan |

Attachment: 2. Site Plan (American Eagle Appeal)

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| | |
|---|---|
| • sand and gravel weight hopper is enclosed in the building<br>• weigh hopper is controlled by a fabric filter<br>• cement chute sleeves (shown in Ex. D) and fabric filters to control emissions<br>• emissions from the cement and fly ash are controlled by fabric filters<br>• storage piles are washed | |

**Reply to Supplemental Materials Submitted by the Applicant:**

We have carefully reviewed the materials submitted to the Planning Commission by E.S.P. Excavation, Inc., and American Eagle Ready Mix on or about April 16, 2020. There are large amounts of missing or contradictory information from American Eagle's application. For example, please carefully consider the following:

- The applicant claims at p. 2 of the E.S.P. letter to "have a land disturbance permit" but no such permit has been produced, provided or attached as an exhibit.

- The applicant admits "we are recycling the concrete waste to stabilize the ground" for building structures at p. 2 of the E.S.P. letter but claims, in the same paragraph, "This is not a building it is a piece of machinery."[3]

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- Connection to the city's potable water system will require municipal approval.

[illegible]

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- While claiming "[t]his is … a piece of machinery" American Eagle admits on page 3 of its letter that "plant footings installed were in place prior to the annexation …." If this is not a building but a piece of machinery, why were the admitted footings necessary? *See* note 3.

- Where is the building permit or business license for the on-site concrete recycling admitted at p. 2 of the E.S.P. letter? Why was the applicant allowed to begin on-site operations before site plan approval?

- The applicant states at p. 2 of the E.S.P. letter "Nor is there a truck repair facility anywhere on the radar for any piece of property owned by Phelon Lakeland or ESP Excavation." But the site plan (SD-1) clearly shows a future 60'x90' shop. In addition, the site plan calls for a "Semi Permanent Restroom Facility for Operation Until Future Shop Is Completed."

- The applicant states at p. 2 of the E.S.P. letter that it "does indeed have a SWPPP in place" but it is not provided and not part of the record.

- The applicant claims at p. 2 of the E.S.P. letter "[a]all the studies that Mr. Roderick claims to not have been done have indeed been done by proper professionals hired by ESP Excavation as the landowner" but no such studies have been provided and are not part of the record.

- The applicant makes unsubstantiated claims that there will never be a line of concrete trucks on the road and/or that the roads will not suffer damage from the heavy weight of concrete trucks but provides no traffic studies or trip generation counts to back up its claims.

- Comparing the weight and impact of school busses to concrete trucks is comparing apples to oranges. According to the applicant's own DAQ application materials 1 $yd^3$ of ready-mix equals 3600 lbs. One $yd^3$ of cement weighs 420 lbs. Obviously, students don't weigh that much. *See* Exhibit G.

Attachment: 2. Site Plan (American Eagle Appeal)

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- The applicant claims at p. 3 of the E.S.P. letter "there is such a huge shortage" in concrete producing facilities like American Eagle but provides no evidence or studies to support this claim. Also, according to DAQ records we have provided, Altaview operates at substantially under its approved capacity, suggesting that there is no shortage of product as American Eagle claims.

- At page 3 of the American Eagle letter, American Eagle claims "[a]all plant footings installed were in place prior to the annexation into American Fork City" but provides no proof of this other than this unsubstantiated statement. Where is the Utah County building permit, footings inspections, etc.?

- At page 3 (last ¶ 2) of the American Eagle letter, it claims that its "plant footings" "were built to specification using the Geotech report stamped by an engineer, stamped engineered drawings for footings," etc. but none of this evidence has been produced or is part of the record. This simply further demonstrates that American Eagle engaged in building and construction without a valid permit for which it was red-tagged with a stop work order by the City.

- The applicant admits "we are recycling the concrete waste to stabilize the ground" for building structures at p. 2 of the E.S.P. letter but at p. 4 (middle ¶ 1) of the American Eagle letter it denies engaging in crushing concrete (which is essentially what concrete recycling is).

- American Eagle claims at p. 5, ¶ 1 of the American Eagle letter that it represented to the Utah DAQ a volume of "30 cyph [cubic yards per hour]" only as it relates to the volume of sand throughput and denies that it represented to the DAQ that it would only produce 30 cubic yards of ready mix per hour. However, please look at the DAQ records in American Eagle's file, excerpts of which are attached here and highlighted for you at **Exhibit G**. Those very same records show a "Ready Mix" output of 120,000 $yd^3$/year and an "Hourly Rating" of 30 $yd^3$/hour for the finished product (ready mix). Now American Eagle is claiming "in the current configuration AERM should expect 180 cyph [$yd^3$.]"

- Note in Exhibit G that American Eagle led the Utah DAQ to believe that it was a "Truck-Mix" facility. However, American Eagle is telling the Planning Commission that it will operate as a "wet / premixed plant."

- There are no traffic studies to justify any of American Eagles estimated traffic counts.

Attachment: 2. Site Plan (American Eagle Appeal)

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- American Eagle claims "our operational [sic] does not generate any more or less air born contaminants than any of the existing business [sic] listed in item 1 above" but provides no evidence, studies, or statistics to back this up. In contrast, the studies and evidence presented by Roderick Enterprises refutes this.

- At p. 6, ¶ 9 of its letter, American Eagles claims "AERM has never, nor can we physically produce 300 cyph" but the Erie Strayer specifications provided at Exhibit I to our prior report to the Planning Commission states that the capacity is up to 300 $yd^3$/hour.

- At p. 7, ¶1 of its letter, American Eagle claims that its foundation and footings work is supported with "inspections with complete reports of all process [sic] from excavation, fabric, backfill material, compaction, rebar inspection and concrete inspection[]" but there is no evidence of this whatsoever in the record. Again, this goes to show the extent to which American Eagle engaged in construction activities before it was shut down and red-tagged by the City.

We appreciate the opportunity to be of service regarding this issue. If you are in need of further clarification feel free to contact me. The above referenced report update is based on a combined average of over 100 years of management experience in the construction industry.

Sincerely,

Roy L. Bosley, Managing Member
Project Management Consultants, LLC

Enc. Exhibits A - G

Roy Bosley
801 668-5869
promac@comcast.net

4059 Bona Villa Dr. Ogden, UT 84403

Keith Sorensen
801-309-1932
fksor@comcast.net

Attachment: 2. Site Plan (American Eagle Appeal)

**Exhibit A to Proma expert report - Altaviews perational tatisti s al totals vs. A approved apa ity**

| Month / Year | Rolling 12 - Month Total Production Concrete Batch Plant (Cubic Yards) | Month / Year | Rolling 12 - Month Total Natural Gas Usage |
|---|---|---|---|
| Jul-17 | 7,958 | Jul-17 | 0 |
| Aug-17 | 11,087 | Aug-17 | 0 |
| Sep-17 | 9,731 | Sep-17 | 0 |
| Oct-17 | 10,122 | Oct-17 | 0 |
| Nov-17 | 9,543 | Nov-17 | 53 |
| Dec-17 | 8,614 | Dec-17 | 816 |
| Jan-18 | 8,307 | Jan-18 | 799 |
| Feb-18 | 10,054 | Feb-18 | 733 |
| Mar-18 | 13,530 | Mar-18 | 1124 |
| Apr-18 | 11,909 | Apr-18 | 506 |
| May-18 | 13,638 | May-18 | 60 |
| Jun-18 | 8,941 | Jun-18 | ? |
| Rolling 12-Month Total: | **123,434** | Rolling 12-Month Total: | **4091** |
| Annual Production Limit | 450,000 (Cubic Yards / rolling 12) | Dth Limit | 7000 |
| In Compliance with Annual Permit Limit? | **Yes** | In Compliance with Annual | **Yes** |
| | | | |
| Daily Production Limit | 2400 Cubic Yards | See Supporting Attachments | |
| Note: Throughout all of the rolling 12 report, the daily production never exceeded 967 cubic yards per day. | | | |
| In Compliance with Daily Permit Limit? | **Yes** | | |
| Hourly Production Limit | 150 Cubic Yards | See Supporting Attachments | |
| NOTE: Daily production / hours of operation never exceeded the permit limit of 150 cubic yards per hour. | | | |
| In Compliance with Hourly Permit Limit? | **Yes** | | |

**Kilgore Companies, LLC DBA**
**Altaview Concrete**
**Westroc**
**American Fork Batch Plant**
**618 East 1700 South**
**American Fork , UT 84003**

**Rolling 12 - Month RMX Production Totals (Cubic Yards)**

KILGORE CONTRACTING

**AO# DAQE-AN0140220001-07**

Attachment: 2. Site Plan (American Eagle Appeal)

Exhibit  to P  MA  expert report
showing Ameri an Eagles
a t al  apa ity

ERIE STRAYER RUGGED . RELIABLE . . . RESPECTED

# Portable Transit & Central Mix Plant(MP-11T&C)

**Description**

- Up to 366 cubic yards per hour
- 20,50,80,100,150, or 200 cubic yard aggregate bin
- 10 or 12 cubic yard batching system
- 36"or 48" wide batch transfer conveyor
- 715 bbl, 935 bbl, 1150 bbl, cement silos available in one or two compartment(s)
- 3" or 4" Badger electronic water meter
- 15 HP Ingersoll-Rand air compressor, with 120 gallon air tank
- 10 or 12 yard Erie Tilt Mixer



**Search Criteria**

**Mix Type:**

Transit & Central Mix

**Capacity (yd/hr):**

200 - 300

**Mobility:**

Stationary
Portable

**Application:**

Ready Mix
Construction
Specialty Jobs

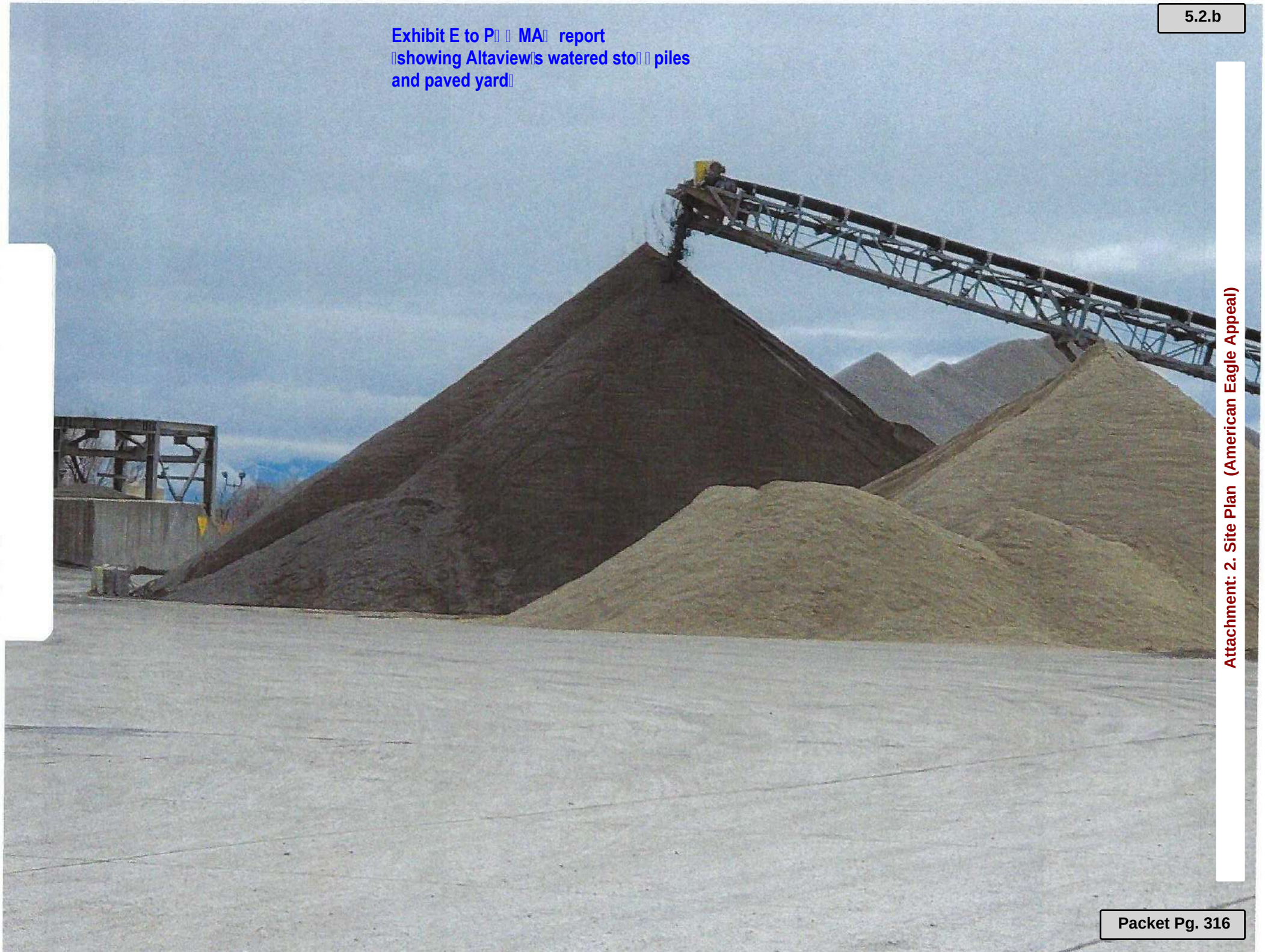
Website: http://eriestrayer.com/

Attachment: 2. Site Plan (American Eagle Appeal)


Exhibit  to P  MA  expert report
showing Altaviews en losed str  t res and
en losed operations with external  on rete and spray e  ipment


Exhibit  to P  MA  expert report
showing Altaview s en losed
operations  on rete yard and tr  wash
station to remove laitan e - cement shute sleeves

Exhibit E to P MA report
showing Altaview s watered sto piles
and paved yard



Attachment: 2. Site Plan (American Eagle Appeal)

Exhibit F to P[illegible] MA[illegible] expert report (Altaview's original DAQ approval with public notice, detailed emissions analysis, detailed hazardous air pollutants analysis, none of which were undertaken with American Eagle's differing exemption application)

JON M. HU[illegible]M[illegible]
*Governor*

GARY HERBERT
*Lieutenant Governor*

State of Utah

Department of Environmental Quality

Richard W. Sprott
*Executive Director*

DIVISION OF AIR QUALITY
Cheryl Heying
*Director*

FILE COPY

DAQE-AN0140220001-07

July 12, 2007

Greg Reece
Westroc Inc.
670 West 220 South
Pleasant Grove, Utah 84062

Dear Mr. Reece:

Re: Approval Order: Approval Order for Concrete Batch Plant, Utah County – CDS B; NA; HAPs
Project Code: N014022-0001

The attached document is the Approval Order for the above-referenced project.

Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Chad Harris. He may be reached at (801) 536-4069.

Sincerely,

M. Cheryl Heying, Executive Secretary
Utah Air Quality Board

MCH:CH:kw

cc: Utah County Health Department

Document Date: 07/12/2007
DAQ-2007-007941



Attachment: 2. Site Plan (American Eagle Appeal)

# STATE OF UTAH

## Department of Environmental Quality

## Division of Air Quality

FILE COPY

# APPROVAL ORDER: Approval Order for Concrete Batch Plant

**Prepared By: Chad Harris, Engineer**
**(801) 536-4069**
**Email: cdharris@utah.gov**

**APPROVAL ORDER NUMBER**

**DAQE-AN0140220001-07**

**Date: July 12, 2007**

## Westroc Inc.

**Source Contact**
**Greg Reece**
**(801) 785-5600**

**M. Cheryl Heying**
**Executive Secretary**
**Utah Air Quality Board**

Attachment: 2. Site Plan (American Eagle Appeal)

*Abstract*

***Westroc Inc. has submitted a Notice of Intent to operate a concrete plant in American Fork, Utah County. This plant will replace a plant operating in Pleasant Grove, Utah County. The new plant will produce 450,000 cubic yards of concrete per year.***

***Utah County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for $PM_{10}$. New Source Performance Standards (NSPS) do not apply to this source. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) regulations do not apply to this source.***

***The emissions, in tons per year, from this plant will be as follows: $PM_{10}$ = 8.18, $PM_{2.5}$ = 2.41, $NO_x$ = 4.19, $SO_2$ = 0.38, CO = 1.46, VOC = 0.54, HAPs = 0.009.***

The project has been evaluated and found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). A public comment period was held in accordance with UAC R307-401-7 and no comments were received. This air quality Approval Order (AO) authorizes the project with the following conditions, and failure to comply with any of the conditions may constitute a violation of this order.

**General Conditions:**

1. This AO applies to the following company:

| Site Office | Corporate Office Location |
|---|---|
| Westroc Inc.<br>618 East 1700 South<br>American Fork, Utah 84003 | Westroc Inc.<br>670 West 220 South<br>Pleasant Grove, Utah 84062 |

Phone Number (801) 785-5600
Fax Number (801) 785-7408

The equipment listed in this AO shall be operated at the following location:

Street address
618 East 1700 South
American Fork, Utah County

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,466,000 m. Northing, 433,600 m. Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.

3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.

Attachment: 2. Site Plan (American Eagle Appeal)

4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.

5. All records referenced in this AO which are required to be kept by Westroc Inc. (Westroc) shall be made available to the Executive Secretary or Executive Secretary's representative upon request. All records shall be kept for a minimum of two years.

6. Westroc shall install and operate the concrete batch plant and shall conduct its operations in accordance with the terms and conditions of this AO, which was written pursuant to Westroc's Notice of Intent submitted to the Division of Air Quality (DAQ) on February 5, 2007.

7. The approved installations shall consist of the following equipment or equivalent*:

   A. One (1) 150 cu yd/hr Truck Mix concrete plant.

   B. One (1) Cement and Fly Ash Storage Silo with four compartments, design capacity 3,000 bbl

   C. One (1) 7,000,000 Btu/hr Natural Gas Boiler

   D. Four (4) Sand and Gravel Storage Bins

   E. Conveyors and stacker

   F. Front-end Loaders

   G. Miscellaneous Trucks

   H. One (1) Diesel Storage Tank, maximum capacity 15,000 gallons

   I. Miscellaneous Water and Admixture Tanks

   * Equivalency shall be determined by the Executive Secretary.

8. Westroc shall notify the Executive Secretary in writing when the installation of the equipment listed in Condition #7 has been completed and is operational, as an initial compliance inspection is required. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

   If the construction and/or installation has not been completed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO in accordance with R307-401-18.

Attachment: 2. Site Plan (American Eagle Appeal)

**Limitations and Tests Procedures**

9. Visible emissions from the following emission points shall not exceed the following values:

   A. Conveyor transfer points – 10% opacity

   B. Conveyor drop points – 20% opacity

   C. All diesel engines - 20% opacity

   D. All other points - 20% opacity

   Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. Visible emissions from mobile sources and intermittent sources shall use procedures similar to Method 9, but the requirement for observations to be made at 15-second intervals over a six-minute period shall not apply. Any time interval with no visible emissions shall not be included.

10. The following production and/or consumption limits shall not be exceeded:

   A. 150 cubic yards of concrete produced per hour.

   B. 2,400 cubic yards of concrete produced per day.

   C. 450,000 cubic yards of concrete produced per rolling 12-month period

   D. 7,000 decatherms of natural gas consumed per rolling 12-month period.

   Records of consumption/production shall be kept for all periods when the plant is in operation. The records of consumption/production shall be kept on a daily basis, with the exception of natural gas consumption, which may be determined by monthly billing records. To determine compliance with a rolling 12-month total, Westroc shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months.

**Roads and Fugitive Dust**

11. Westroc shall abide by a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Name of project. Westroc shall submit a fugitive dust control plan to the Executive Secretary, attention: Compliance Section, for approval within 30 days of the date of this AO.

12. Westroc shall abide by all applicable requirements of UAC R307-309 for $PM_{10}$ nonattainment areas for Fugitive Emission and Fugitive Dust sources.

13. All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed to control fugitive dust. The application of water treatment shall be used. Treatment shall be of sufficient frequency and quantity to maintain the surface

Attachment: 2. Site Plan (American Eagle Appeal)

material in a damp/moist condition. The opacity shall not exceed 20% during all times the areas are in use or unless it is below freezing. If chemical treatment is to be used, the plan must be approved by the Executive Secretary. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:

A. Date and time of day treatments were made

B. Number of treatments made, dilution ratio, and quantity

C. Rainfall received, if any, and approximate amount

14. The haul road shall not exceed 700 feet in length and the vehicle speed along the haul road shall not exceed 10 miles per hour. The vehicle speed on the haul road shall be posted, at a minimum, on site at the beginning of the haul road so that it is clearly visible from the haul road.

15. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity. Visible emissions determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Opacity readings shall be made ½ the vehicle length or greater behind the vehicle and at approximately ½ the height of the vehicle or greater. The accumulated six readings shall be averaged for the compliance value.

16. The storage piles shall be watered to minimize generation of fugitive dusts as dry conditions warrant or as determined necessary by the Executive Secretary. Records of water treatment shall be kept for all periods when the plant is in operation.

**Fuels**

17. Westroc shall use natural gas as fuel in the boiler.

18. The sulfur content of any diesel fuel oil burned in off highway equipment shall not exceed 0.50% by weight as determined by ASTM Method D-4294-89 or approved equivalent. On-highway diesel fuel shall be limited to 0.05% sulfur by weight. The sulfur content shall be tested if directed by the Executive Secretary. Fuel supplier records shall be available on-site for the Executive Secretary or a representative of the Executive Secretary.

**Records & Miscellaneous**

19. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on

Attachment: 2. Site Plan (American Eagle Appeal)

the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.

20. Westroc shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

Under R307-150-1, the Executive Secretary may require a source to submit an emission inventory for any full or partial year on reasonable notice.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the DAQ. The UAC R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

http://www.airquality.utah.gov/

The annual emissions estimations below include point source, fugitive emissions, fugitive dust, road dust, etc. and do not include tail pipe emissions, grandfathered emissions, etc. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, Maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for this plant are currently calculated at the following values:

| | Pollutant | Total Emissions (tons/year) |
|---|---|---|
| A. | $PM_{10}$ | 8.18 |
| B. | $PM_{2.5}$ | 2.41 |
| C. | $SO_2$ | 0.38 |
| D. | $NO_X$ | 4.19 |
| E. | CO | 1.46 |
| F. | VOC | 0.54 |
| | Total HAPs | 0.009 |

Approved By:

M. Cheryl Heying, Executive Secretary
Utah Air Quality Board

Attachment: 2. Site Plan (American Eagle Appeal)

State of Utah

Department of
Environmental Quality

Dianne R. Nielson, Ph.D.
*Executive Director*

DIVISION OF AIR QUALITY
Richard W. Sprott
*Director*

JON M. HU. MAN, JR.
*Governor*

GARY HERBERT
*Lieutenant Governor*

FILE COPY

DAQE-IN0140220001-07

May 30, 2007

Greg Reece
Westroc Inc.
670 West 220 South
Pleasant Grove, Utah 84062

Dear Mr. Reece:

Re: Intent to Approve: Approval Order for Concrete Batch Plant, Utah County – CDS B; NA; HAPs
Project Code: N014022-0001

The attached document is the Intent to Approve for the above-referenced project. Intent to Approves are subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Chad Harris. He may be reached at (801) 536-4069.

Sincerely,

John T. Blanchard, Manager
Minor New Source Review Section

JTB:CH:kw

cc: Utah County Health Department



Attachment: 2. Site Plan (American Eagle Appeal)

FILE COPY

# STATE OF UTAH

## Department of Environmental Quality

## Division of Air Quality

# INTENT TO APPROVE: Approval Order for Concrete Batch Plant

**Prepared By: Chad Harris, Engineer**
**(801) 536-4069**
**Email: cdharris@utah.gov**

**INTENT TO APPROVE NUMBER**

**DAQE-IN0140220001-07**

**Date: May 30, 2007**

## Westroc Inc.

**Source Contact**
**Greg Reece**
**(801) 785-5600**

**Richard W. Sprott**
**Executive Secretary**
**Utah Air Quality Board**

Attachment: 2. Site Plan (American Eagle Appeal)

*Abstract*

***Westroc Inc. has submitted a Notice of Intent to operate a concrete plant in American Fork, Utah County. This plant will replace a plant operating in Pleasant Grove, Utah County. The new plant will produce 450,000 cubic yards of concrete per year.***

***Utah County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for $PM_{10}$. New Source Performance Standards (NSPS) do not apply to this source. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) regulations do not apply to this source.***

***The emissions, in tons per year, from this plant will be as follows: $PM_{10} = 8.18$, $PM_{2.5} = 2.41$, $NO_x = 4.19$, $SO_2 = 0.38$, $CO = 1.46$, $VOC = 0.54$, HAPs = 0.009.***

The Notice of Intent (NOI) for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an Approval Order (AO) by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notice of intent to approve will be published in the Provo Daily Herald on June 5, 2007. During the public comment period the proposal and the evaluation of its impact on air quality will be available for both you and the public to review and comment. If anyone so requests a public hearing it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated.

Please review the proposed AO conditions during this period and make any comments you may have. The proposed conditions of the AO may be changed as a result of the comments received. Unless changed, the AO will be based upon the following conditions:

**General Conditions:**

1. This AO applies to the following company:

| Site Office | Corporate Office Location |
|---|---|
| Westroc Inc.<br>618 East 1700 South<br>American Fork, Utah 84003 | Westroc Inc.<br>670 West 220 South<br>Pleasant Grove, Utah 84062 |

Phone Number (801) 785-5600
Fax Number (801) 785-7408

Attachment: 2. Site Plan (American Eagle Appeal)

The equipment listed in this AO shall be operated at the following location:

Street address
618 East 1700 South
American Fork, Utah County

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,466,000 m. Northing, 433,600 m. Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.

3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.

4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.

5. All records referenced in this AO which are required to be kept by Westroc Inc. (Westroc) shall be made available to the Executive Secretary or Executive Secretary's representative upon request. All records shall be kept for a minimum of two years.

6. Westroc shall install and operate the concrete batch plant and shall conduct its operations in accordance with the terms and conditions of this AO, which was written pursuant to Westroc's Notice of Intent submitted to the Division of Air Quality (DAQ) on February 5, 2007.

7. The approved installations shall consist of the following equipment or equivalent*:

A. One (1) 150 cu yd/hr Truck Mix concrete plant.

B. One (1) Cement and Fly Ash Storage Silo with four compartments, design capacity 3,000 bbl

C. One (1) 7,000,000 Btu/hr Natural Gas Boiler

D. Four (4) Sand and Gravel Storage Bins

E. Conveyors and stacker

F. Front-end Loaders

G. Miscellaneous Trucks

H. One (1) Diesel Storage Tank, maximum capacity 15,000 gallons

Attachment: 2. Site Plan (American Eagle Appeal)

I. Miscellaneous Water and Admixture Tanks

* Equivalency shall be determined by the Executive Secretary.

8. Westroc shall notify the Executive Secretary in writing when the installation of the equipment listed in Condition #7 has been completed and is operational, as an initial compliance inspection is required. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation has not been completed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO in accordance with R307-401-18.

**Limitations and Tests Procedures**

9. Visible emissions from the following emission points shall not exceed the following values:

A. Conveyor transfer points – 10% opacity

B. Conveyor drop points – 20% opacity

C. All diesel engines - 20% opacity

D. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. Visible emissions from mobile sources and intermittent sources shall use procedures similar to Method 9, but the requirement for observations to be made at 15-second intervals over a six-minute period shall not apply. Any time interval with no visible emissions shall not be included.

10. The following production and/or consumption limits shall not be exceeded:

A. 150 cubic yards of concrete produced per hour.

B. 2,400 cubic yards of concrete produced per day.

C. 450,000 cubic yards of concrete produced per rolling 12-month period

D. 7,000 decatherms of natural gas consumed per rolling 12-month period.

Records of consumption/production shall be kept for all periods when the plant is in operation. The records of consumption/production shall be kept on a daily basis, with the exception of natural gas consumption, which may be determined by monthly billing records. To determine compliance with a rolling 12-month total, Westroc shall calculate a

Attachment: 2. Site Plan (American Eagle Appeal)

new 12-month total by the twentieth day of each month using data from the previous 12 months.

**Roads and Fugitive Dust**

11. Westroc shall abide by a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Name of project. Westroc shall submit a fugitive dust control plan to the Executive Secretary, attention: Compliance Section, for approval within 30 days of the date of this AO.

12. Westroc shall abide by all applicable requirements of UAC R307-309 for $PM_{10}$ nonattainment areas for Fugitive Emission and Fugitive Dust sources.

13. All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed to control fugitive dust. The application of water treatment shall be used. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition. The opacity shall not exceed 20% during all times the areas are in use or unless it is below freezing. If chemical treatment is to be used, the plan must be approved by the Executive Secretary. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:

    A. Date and time of day treatments were made

    B. Number of treatments made, dilution ratio, and quantity

    C. Rainfall received, if any, and approximate amount

14. The haul road shall not exceed 700 feet in length and the vehicle speed along the haul road shall not exceed 10 miles per hour. The vehicle speed on the haul road shall be posted, at a minimum, on site at the beginning of the haul road so that it is clearly visible from the haul road.

15. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity. Visible emissions determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Opacity readings shall be made ½ the vehicle length or greater behind the vehicle and at approximately ½ the height of the vehicle or greater. The accumulated six readings shall be averaged for the compliance value.

16. The storage piles shall be watered to minimize generation of fugitive dusts as dry conditions warrant or as determined necessary by the Executive Secretary. Records of water treatment shall be kept for all periods when the plant is in operation.

Attachment: 2. Site Plan (American Eagle Appeal)

**Fuels**

17. Westroc shall use natural gas as fuel in the boiler.

18. The sulfur content of any diesel fuel oil burned in off highway equipment shall not exceed 0.50% by weight as determined by ASTM Method D-4294-89 or approved equivalent. On-highway diesel fuel shall be limited to 0.05% sulfur by weight. The sulfur content shall be tested if directed by the Executive Secretary. Fuel supplier records shall be available on-site for the Executive Secretary or a representative of the Executive Secretary.

**Records & Miscellaneous**

19. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.

20. Westroc shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

Under R307-150-1, the Executive Secretary may require a source to submit an emission inventory for any full or partial year on reasonable notice.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the DAQ. The UAC R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

http://www.airquality.utah.gov/

The annual emissions estimations below include point source, fugitive emissions, fugitive dust, road dust, etc. and do not include tail pipe emissions, grandfathered emissions, etc. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, Maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

Attachment: 2. Site Plan (American Eagle Appeal)

The Potential To Emit (PTE) emissions for this plant are currently calculated at the following values:

| | Pollutant | Total Emissions (tons/year) |
|---|---|---|
| A. | $PM_{10}$ | 8.18 |
| B. | $PM_{2.5}$ | 2.41 |
| C. | $SO_2$ | 0.38 |
| D. | $NO_X$ | 4.19 |
| E. | CO | 1.46 |
| F. | VOC | 0.54 |
| | Total HAPs | 0.009 |

The DAQ is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Sincerely,

John T. Blanchard, Manager
Minor New Source Review Section

Attachment: 2. Site Plan (American Eagle Appeal)

State of Utah

Department of
Environmental Quality

Dianne R. Nielson, Ph.D.
*Executive Director*

DIVISION OF AIR QUALITY
Richard W. Sprott
*Director*

JON M. HU[illegible]MAN, JR.
*Governor*

GARY HERBERT
*Lieutenant Governor*

FILE COPY

DAQE-NN0140220001-07

May 30, 2007

Provo Daily Herald
Legal Advertising Department
1555 North 200 West
Provo, Utah 84601

RE: Legal Notice of Intent to Approve

This letter will confirm the authorization to publish the attached NOTICE in the Provo Daily Herald on June 5, 2007.

Please mail the invoice and affidavit of publication to the Utah State Department of Environmental Quality, Division of Air Quality, and P. O. Box 144820, Salt Lake City, Utah 84114-4820.

Sincerely,

Kimberly Wilcox

Kimberly Wilcox
Office Technician

Enclosure

cc: Utah County
Utah Co Admin Bldg
100 E Center St
Provo UT 84606

Mountainland Association of Governments
2545 N Canyon Rd
Provo UT 84604-5906



Attachment: 2. Site Plan (American Eagle Appeal)

FILE COPY

## NOTICE

A notice of intent for the following project submitted in accordance with §R307-401-1, Utah Administrative Code (UAC), has been received for consideration by the Executive Secretary, Utah Air Quality Board:

**Company Name:** Westbrook, Inc.
**Location**: 618 East West 1700 South, American Fork, Utah County, Utah
**Project Description:** Westbrook, Inc. has submitted a Notice of Intent to operate a concrete plant in American Fork, Utah County, Utah. The plant will replace a plant operating in Pleasant Grove, Utah County. The new plant will produce 450,000 cubic yards of concrete per year.

Utah County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for $PM_{10}$. New Source Performance Standards (NSPS) do not apply to this source. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) regulations do not apply to this source.

The emissions, in tons per year, from this plant will be as follows: $PM_{10} = 8.18$, $PM_{2.5} = 2.41$, $Kn_{ox} = 4.19$, $SO_2 = 0.38$, CO = 1.46, VOC = 0.54, HAPs = 0.009.

The completed engineering evaluation and air quality impact analysis showed that the proposed project meets the requirements of federal air quality regulations and the State air quality rules. The Executive Secretary intends to issue an Approval Order pending a 30-day public comment period. The project proposal, estimate of the effect on local air quality and draft Approval Order are available for public inspection and comment at the Utah Division of Air Quality, 150 North 1950 West, Salt Lake City, UT 84114-4820. Written Comments received by the Division at this same address on or before July 5, 2007, will be considered in making the final decision on the approval/disapproval of the proposed approval order. Email comments will also be accepted at cdharris@utah.gov. If anyone so requests to the Executive Secretary at the Division in writing within 15 days of publication of this notice, a hearing will be held in accordance with R307-401-4, UAC.

**Date of Notice: June 5, 2007**

Attachment: 2. Site Plan (American Eagle Appeal)

# PROOF Of PUBLICATION

from

# The Daily Herald

STATE OF UTAH } SS.
Utah County }

I, Julie Serna , being first duly sworn depose and say that I am the Legal Billing Clerk of the Daily Herald, a newspaper of general circulation, published seven times each week at Provo, Utah, County of Utah; that the notice attached hereto, 284746 NOTICE A notice of , and which is a copy, was published in said newspaper, the first publication having been made on the 5th day of June, 2007, and the last on the 5th day of June, 2007; that said notice was published in the regular and entire issue of every number of the paper during the period and times of publication, and the same was published in the newspaper proper and not in the supplement.

Julie Serna

Subscribed and sworn before me this 5th day of June, 2007.

Karen Jordan Notary Public

Residence: Orem, UT
My commission expires 04-03-2010

KAREN JORDAN
NOTARY PUBLIC • STATE of UTAH
909 SOUTH 150 WEST
OREM, UTAH 84058
COMM. EXPIRES 4-03-2010

**NOTICE**

A notice of intent for the following project submitted in accordance with §R307-401-1, Utah Administrative Code (UAC), has been received for consideration by the Executive Secretary, Utah Air Quality Board:

**Company Name:** Westbrook, Inc.
**Location:** 618 East West 1700 South, American Fork, Utah County, Utah
**Project Description:** Westbrook, Inc. has submitted a Notice of Intent to operate a concrete plant in American Fork, Utah County, Utah. The plant will replace a plant operating in Pleasant Grove, Utah County. The new plant will produce 450,000 cubic yards of concrete per year.

Utah County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for PM10. New Source Performance Standards (NSPS) do not apply to this source. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) regulations do not apply to this source.

The emissions, in tons per year, from this plant will be as follows: PM10 = 8.18, PM2.5 = 2.41, Knox = 4.19, SO2 = 0.38, CO = 1.46, VOC = 0.54, HAPs = 0.009.

The completed engineering evaluation and air quality impact analysis showed that the proposed project meets the requirements of federal air quality regulations and the State air quality rules. The Executive Secretary intends to issue an Approval Order pending a 30-day public comment period. The project proposal, estimate of the effect on local air quality and draft Approval Order are available for public inspection and comment at the Utah Division of Air Quality, 150 North 1950 West, Salt Lake City, UT 84114-4820. Written Comments received by the Division at this same address on or before July 5, 2007, will be considered in making the final decision on the approval/disapproval of the proposed approval order. Email comments will also be accepted at cdharris@utah.gov. If anyone so requests to the Executive Secretary at the Division in writing within 15 days of publication of this notice, a hearing will be held in accordance with R307-401-4, UAC.
Legal Notice 284746 Published in The Daily Herald June 5, 2007.

*Air Quality Services* . . . . Providing Air Emissions Permitting Support
968 South 970 West, Woods Cross, Utah 84087 Phone & Fax: (801) 294-0454 E-mail: jwnewby@comcast.net

February 5, 2007

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
FEB 13 2007
DIVISION OF AIR QUALITY

Mr. Rick Sprott, Director
Utah Division of Air Quality
Post Office Box 144820
Salt Lake City, Utah 84114-4820

Re: Notice of Intent for the Westroc, Inc. American Fork Concrete Plant

Dear Mr. Sprott:

On behalf of Westroc, Inc., Air Quality Services submits to the Utah Division of Air Quality (DAQ) this Notice of Intent to operate a concrete plant in American Fork, Utah.

A check for the application fee of $1,900.00 is being prepared. It will be submitted to the DAQ as soon as it is available.

Thank you for your assistance. If you have questions or need any additional information, please contact me at (801) 294-0454.

Sincerely,

**AIR QUALITY SERVICES**

James W. Newby

Attachment
Notice of Intent

c: Mr. Greg Reece, Westroc, Inc.

Attachment: 2. Site Plan (American Eagle Appeal)

# NOTICE OF INTENT

for

## WESTROC, INC.

AMERICAN FORK, UTAH

CONCRETE PLANT

February 2007

Submitted To:

**Utah Division of Air Quality**

Prepared By:

**Air Quality Services**
968 South 970 West
Woods Cross, Utah 84087
(801) 294-0454

Attachment: 2. Site Plan (American Eagle Appeal)

# NOTICE OF INTENT

for

## WESTROC, INC.

AMERICAN FORK, UTAH

CONCRETE PLANT

February 2007

Submitted To:

**Utah Division of Air Quality**

Prepared By:

**Air Quality Services**
968 South 970 West
Woods Cross, Utah 84087
(801) 294-0454

Attachment: 2. Site Plan (American Eagle Appeal)

# Table of Contents

INTRODUCTION....1

DESCRIPTION OF PLANT....1

EQUIPMENT LISTING....2

EMISSIONS....3

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)....4

EMISSION OFFSETS....5

MODELING....5

APPENDIX A -- PROJECTED EMISSIONS CALCULATIONS

APPENDIX B -- HAP MODELING THRESHOLD EVALUATION

APPENDIX C -- SITE PLAN AND FLOW DIAGRAM

Attachment: 2. Site Plan (American Eagle Appeal)

## INTRODUCTION

In accordance with R307-400 of the Utah Air Quality Rules, Westroc, Inc. submits this Notice of Intent (NOI) to operate a concrete plant in American Fork, Utah. This new plant will replace the plant currently operating in Pleasant Grove. They are requesting approval to produce 450,000 cubic yards of concrete per year.

The plant will be a minor source for both criteria pollutants and Hazardous Air Pollutants (HAP). It will be located in Utah County, which is a nonattainment area for Particulate Matter less than or equal to 10 Micrometers ($PM_{10}$) and Carbon Monoxide (CO). Note that Utah County is a non-attainment area for CO only in the Provo/Orem area. Emissions offsets are not required, because the combined $PM_{10}$, Sulfur Dioxide ($SO_2$) and Nitrogen Oxides ($NO_X$) emissions increase is less than 25 tons per year. Projected annual emissions from the plant will be 7.26 tons of $PM_{10}$, 2.38 tons of Particulate Matter less than or equal to 2.5 microns ($PM_{2.5}$), 0.38 tons of $SO_2$, 4.19 tons of $NO_X$, 1.46 tons of CO, 0.54 tons of Volatile Organic Compounds (VOCs) and 0.01 tons of HAP.

All correspondence regarding this submission should be addressed to:

Mr. Greg Reece
Westroc, Inc.
670 West 220 South
Pleasant Grove, Utah 84062

Phone: (801) 785-5600
Facsimile: (801) 785-7408

## DESCRIPTION OF PLANT

The Westroc American Fork Concrete Plant is located at the following address:

618 East 1700 South
American Fork, Utah 84003

This location corresponds to the following Universal Transverse Mercator (UTM) coordinates (North American Datum of 1927 [NAD 27]):

433,600 meters Easting  4,466,000 meters Northing  Zone 12

*Concrete Plant*

The concrete plant will consist of the following equipment: haul trucks, front-end loaders, sand and aggregate storage bins, conveyors, truck mix concrete plant, cement and fly ash storage silos, natural gas boiler, concrete trucks, and diesel and water storage tanks.

Haul trucks will transport washed sand and gravel to the plant and dump it into a drive over hopper. A conveyor and stacker will transfer the sand and gravel to the appropriate storage piles. As required to meet production demand, a front-end loader will transport the sand and gravel



Attachment: 2. Site Plan (American Eagle Appeal)

from the storage piles to the concrete plant bins. Conveyors will then carry the sand and gravel to overhead bins that will dump to a weigh hopper.

Trucks will also transport cement and fly ash to the plant. The cement and fly ash will be pneumatically loaded into a silo which consists of four storage compartments.

The sand, gravel, cement and flyash will be mixed to the appropriate proportions in the weigh hoppers. The completed mix will then slide down a chute into the concrete trucks. There, water will be added and the concrete mixed. Finally, the concrete will be transported off-site for use at various locations.

Emissions from the storage compartments, weigh hopper and truck loading will be controlled with fabric filters. Each compartment of the storage silo will be equipped with a fabric filter rated at 2,340 Actual Cubic Feet per Minute (acfm). The cement and supplement weigh hopper and truck loading will be controlled by a fabric filter rated at 8,000 acfm. A sleeve will sit between the chute and the concrete truck to help control emissions while the sand, gravel, cement and flyash drop into the truck.

The plant will operate on commercial power.

The plant will be equipped with a natural gas boiler design rated at 7.0 million British Thermal Units (Btu) per hour. It will operate during the winter months to provide hot water for the concrete.

Diesel fuel for the trucks and loaders will be stored in a 10,000 gallon tank. The plant will also be equipped with water tanks and various admixture tanks.

Westroc, Inc. is requesting the plant be approved to produce 450,000 cubic yards of concrete per rolling 12-month period and 150 cubic yards per hour. The boiler is expected to operate a maximum of 1,000 hours a year, and the front-end loader is expected to operate a maximum of 4,000 hours per year.

A site plan and flow diagram of operations are provided in Appendix C.

## EQUIPMENT LISTING

The following equipment is located at the plant:

A. One (1) Truck Mix Concrete Plant

| | |
|---|---|
| Manufacturer: | Erie Strayer |
| Model: | MPB-11T |
| Design Capacity: | 150 cu yd/hr |

B. One (1) Cement and Fly Ash Storage Silo (with four compartments)

| | |
|---|---|
| Design Capacity: | 3,000 bbl |

Attachment: 2. Site Plan (American Eagle Appeal)

C. One (1) Natural Gas Boiler
Design Capacity: 7,000,000 Btu/hr

D. Four (4) Sand and Gravel Storage Bins

E. Conveyors and Stacker

F. Front-end Loaders

G. Miscellaneous Trucks

H. One (1) Diesel Storage Tank
Capacity: 10,000 gal

I. Miscellaneous Water and Admixture Tanks

## EMISSIONS

Fugitive $PM_{10}$ will be emitted from the following sources:

A. Material Handling (truck, loader and conveyor drops)
B. Storage Piles
C. Unpaved Road Dust (trucks and loader)
D. Concrete Batching

$PM_{10}$ and HAP will be emitted from the fabric filters controlling the storage silo, weigh hopper and truck loading.

$PM_{10}$, $SO_2$, $NO_X$, CO, VOCs, and HAPs will be emitted from the combustion of diesel and natural gas in the front-end loaders and boiler.

VOC emissions from the diesel storage tank are assumed to be negligible, since the vapor pressure of diesel at ambient temperature is only 0.0075 pounds per square inch.

Table 1 summarizes projected emissions from the plant.

**Table 1**

| Pollutant | Uncontrolled Emissions (ton/yr) | Controlled Emissions (tons/yr) |
|---|---|---|
| $PM_{10}$ | 73.56 | 7.26 |
| $PM_{2.5}$ | 31.05 | 2.38 |
| $SO_2$ | 0.38 | 0.38 |
| $NO_X$ | 4.19 | 4.19 |
| CO | 1.46 | 1.46 |
| VOC | 0.54 | 0.54 |



Attachment: 2. Site Plan (American Eagle Appeal)

The emission calculations and documentation are provided in Appendix A. HAP emissions are not provided in Table 1, but they are identified in the calculations in Appendix A.

## BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Material Handling (Drops):

All sand and gravel transported to the plant will be washed.

Conveyors:

All sand and gravel used at the plant will be washed.

Unpaved Road Dust:

The roads and loader operating areas will be watered once every two hours to minimize emissions, as required. Magnesium Chloride will also be applied, as required.

Elevated Bins:

All sand and gravel transported to the plant will be washed. The elevated bins will be housed in the building.

Weigh Hoppers:

All sand and gravel transported to the plant will be washed. The sand and gravel weigh hopper will be housed in the building. The cement and supplement weigh hopper will be controlled by a fabric filter.

Concrete Trucks:

Emissions from the dropping of the cement, and supplement will be controlled by the sleeve on the chute and a fabric filter. Water is added to the trucks prior to mixing.

Cement and Fly Ash Storage Silo:

Emissions from the cement and fly ash storage silos will be controlled with fabric filters.

Storage Piles:

All sand and gravel transported to the plant will be washed. In addition, the storage piles will be watered to minimize emissions, as required.

These control methods meet the definition of BACT.



Attachment: 2. Site Plan (American Eagle Appeal)

## EMISSION OFFSETS

The combined $PM_{10}$, $SO_2$ and $NO_X$ emissions increase will be 11.83 tons per year. Emission offsets are not required, because the increase will be less than 25 tons per year.

## MODELING

*Criteria Pollutants*

Modeling is not required in nonattainment areas for criteria pollutants for which the area is non-attainment. Therefore, modeling was not conducted for $PM_{10}$. The $SO_2$, $NO_X$ and CO emission increases identified in Table 1 of this NOI are below the thresholds for modeling established in Table 1 of R307-410-3. Therefore, modeling was not conducted for $NO_X$ and CO.

*HAPs*

The HAP emission increases are below the thresholds for modeling established in R307-410-4; consequently, HAP modeling was not conducted. The HAP emissions increases were evaluated for modeling using the procedure identified in R307-410-4. A copy of the evaluation is provided in Appendix B.

Attachment: 2. Site Plan (American Eagle Appeal)

Notice of Intent
Westroc, Inc.
American Fork, Utah
February 2007

# APPENDIX A

# PROJECTED EMISSIONS CALCULATIONS

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Emission Summary**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Uncontrolled Emissions | | | | | |
|---|---|---|---|---|---|---|
| | PM10 (ton/yr) | PM2.5 (ton/yr) | SO2 (ton/yr) | NOx (ton/yr) | CO (ton/yr) | VOC (ton/yr) |
| Material Handling (Drops) | 2.60 | 0.39 | -- | -- | -- | -- |
| Material Handling (Conveyors) | 0.40 | 0.11 | -- | -- | -- | -- |
| Storage Piles | 0.18 | 0.09 | -- | -- | -- | -- |
| Unpaved Road Dust | 8.09 | 0.81 | -- | -- | -- | -- |
| Paved Road Dust | 6.62 | 1.65 | -- | -- | -- | -- |
| Concrete Batching | | | | | | |
| Aggregate transfer | 0.65 | 0.32 | -- | -- | -- | -- |
| Sand transfer | 0.16 | 0.08 | -- | -- | -- | -- |
| Cement loading to silo (pneumatic) | 23.81 | 11.90 | -- | -- | -- | -- |
| Cement supplement loading to silo (pneumatic) | 12.38 | 6.19 | -- | -- | -- | -- |
| Weigh hopper loading | 0.86 | 0.43 | -- | -- | -- | -- |
| Mixer loading (truck mix) | 17.51 | 8.76 | -- | -- | -- | -- |
| Wheeled Loader Exhaust | 0.28 | 0.28 | 0.37 | 3.85 | 1.18 | 0.52 |
| Natural Gas Boilers | 0.03 | 0.03 | 0.00 | 0.33 | 0.28 | 0.02 |
| Total | 73.56 | 31.05 | 0.38 | 4.19 | 1.46 | 0.54 |

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Emission Summary**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Controlled Emissions | | | | | |
|---|---|---|---|---|---|---|
| | PM10 (ton/yr) | PM2.5 (ton/yr) | SO2 (ton/yr) | NOx (ton/yr) | CO (ton/yr) | VOC (ton/yr) |
| Material Handling (Drops) | 0.98 | 0.15 | -- | -- | -- | -- |
| Material Handling (Conveyors) | 0.02 | 0.00 | -- | -- | -- | -- |
| Storage Piles | 0.18 | 0.09 | -- | -- | -- | -- |
| Unpaved Road Dust 2.24 | ~~2.02~~ | ~~0.20~~ 0.23 | -- | -- | -- | -- |
| Paved Road Dust 1.69 | ~~0.99~~ | 0.25 | -- | -- | -- | -- |
| Concrete Batching | | | | | | |
| Aggregate transfer | 0.65 | 0.32 | -- | -- | -- | -- |
| Sand transfer | 0.16 | 0.08 | -- | -- | -- | -- |
| Cement loading to silo (pneumatic) | 0.02 | 0.01 | -- | -- | -- | -- |
| Cement supplement loading to silo (pneumatic) | 0.06 | 0.03 | -- | -- | -- | -- |
| Weigh hopper loading | 0.86 | 0.43 | -- | -- | -- | -- |
| Mixer loading (truck mix) | 1.01 | 0.50 | -- | -- | -- | -- |
| Wheeled Loader Exhaust | 0.28 | 0.28 | 0.37 | 3.85 | 1.18 | 0.52 |
| Natural Gas Boilers | 0.03 | 0.03 | 0.00 | 0.33 | 0.28 | 0.02 |
| Total | ~~7.26~~ 8.18 | ~~2.38~~ 2.41 | 0.38 | 4.19 | 1.46 | 0.54 |

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Emission Summary**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Pollutant | Cement Silo Filling (lb/yr) | Supplement Silo Filling (lb/yr) | Truck Mix Batching (lb/yr) | Natural Gas Boiler (lb/yr) | Total (lb/yr) |
|---|---|---|---|---|---|
| Arsenic | 4.39E-04 | 2.25E-02 | 1.46E-01 | 1.33E-03 | 1.70E-01 |
| Benzene | -- | -- | -- | 1.40E-02 | 1.40E-02 |
| Beryllium | 5.03E-05 | 2.03E-03 | 1.31E-02 | 8.00E-05 | 1.53E-02 |
| Cadmium | 5.03E-05 | 4.46E-04 | 1.14E-03 | 7.33E-03 | 8.97E-03 |
| Chromium | 3.00E-03 | 2.75E-02 | 5.17E-01 | 9.33E-03 | 5.56E-01 |
| Cobalt | -- | -- | -- | 5.60E-04 | 5.60E-04 |
| Dichlorobenzene | -- | -- | -- | 8.00E-03 | 8.00E-03 |
| Formaldehyde | -- | -- | -- | 5.00E-01 | 5.00E-01 |
| Hexane | -- | -- | -- | 1.20E+01 | 1.20E+01 |
| Lead | 1.13E-03 | 1.17E-02 | 1.93E-01 | 3.33E-03 | 2.09E-01 |
| Manganese | 1.21E-02 | 5.76E-03 | 2.62E+00 | 2.53E-03 | 2.64E+00 |
| Mercury | -- | -- | -- | 1.73E-03 | 1.73E-03 |
| Naphthalene | -- | -- | -- | 4.07E-03 | 4.07E-03 |
| Nickel | 4.33E-03 | 5.13E-02 | 6.02E-01 | 1.40E-02 | 6.72E-01 |
| Phosphorus | 2.44E-01 | 7.97E-02 | 1.55E+00 | | 1.87E+00 |
| Polycyclics | -- | -- | -- | 5.88E-04 | 5.88E-04 |
| Selenium | -- | 1.63E-03 | 1.42E-02 | 1.60E-04 | 1.60E-02 |
| Toluene | -- | -- | -- | 2.27E-02 | 2.27E-02 |

Projected Emissions Calculations

Source: **Material Handling (Drops)**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Particle Size Multiplier k | Wind Speed (mph) U | Moisture Content (%) M | Emission Factor (lb/ton) EF | Production Rate (ton/yr) | Production Rate (ton/hr) PR | Number of Drops (#) ND | Emission Rate (ton/yr) | Emission Rate (lb/hr) ER | Emission Rate (g/sec) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Uncontrolled | | | | | | | | | | | |
| Trucks (to hopper) | PM10 | 0.35 | 9 | 2 | 2.40E-03 | 720,000 | 240.0 | 1 | 0.87 | 0.58 | 0.0727 |
| Stacker (to piles) | PM10 | 0.35 | 9 | 2 | 2.40E-03 | 720,000 | 240.0 | 1 | 0.87 | 0.58 | 0.0727 |
| Loader (to hoppers) | PM10 | 0.35 | 9 | 2 | 2.40E-03 | 720,000 | 240.0 | 1 | 0.87 | 0.58 | 0.0727 |
| | | | | | | | | Total | 2.60 | | |
| Trucks (to hopper) | PM2.5 | 0.053 | 9 | 2 | 3.64E-04 | 720,000 | 240.0 | 1 | 0.13 | 0.09 | 0.0110 |
| Stacker (to piles) | PM2.5 | 0.053 | 9 | 2 | 3.64E-04 | 720,000 | 240.0 | 1 | 0.13 | 0.09 | 0.0110 |
| Loader (to hoppers) | PM2.5 | 0.053 | 9 | 2 | 3.64E-04 | 720,000 | 240.0 | 1 | 0.13 | 0.09 | 0.0110 |
| | | | | | | | | Total | 0.39 | | |
| Controlled | | | | | | | | | | | |
| Trucks (to hopper) | PM10 | 0.35 | 9 | 4 | 9.11E-04 | 720,000 | 240.0 | 1 | 0.33 | 0.22 | 0.0276 |
| Stacker (to piles) | PM10 | 0.35 | 9 | 4 | 9.11E-04 | 720,000 | 240.0 | 1 | 0.33 | 0.22 | 0.0276 |
| Loader (to hoppers) | PM10 | 0.35 | 9 | 4 | 9.11E-04 | 720,000 | 240.0 | 1 | 0.33 | 0.22 | 0.0276 |
| | | | | | | | | Total | 0.98 | | |
| Trucks (to hopper) | PM2.5 | 0.053 | 9 | 4 | 1.38E-04 | 720,000 | 240.0 | 1 | 0.05 | 0.03 | 0.0042 |
| Stacker (to piles) | PM2.5 | 0.053 | 9 | 4 | 1.38E-04 | 720,000 | 240.0 | 1 | 0.05 | 0.03 | 0.0042 |
| Loader (to hoppers) | PM2.5 | 0.053 | 9 | 4 | 1.38E-04 | 720,000 | 240.0 | 1 | 0.05 | 0.03 | 0.0042 |
| | | | | | | | | Total | 0.15 | | |

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Material Handling (Drops)**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

**Source of Data:**

| | |
|---|---|
| Particle Size Multiplier: | Page 13.2.4-4 |
| Wind Speed: | Average from SLC Airport Meteorological Data |
| Moisture Content: | Estimated |
| Emission Factor: | AP-42, Fifth Edition, Section 13.2.4, 11/6<br>Aggregate Handling and Storage Piles<br>Page 13.2.4-4 |
| Production Rate: | Westroc, Inc. |
| Number of Drops: | Westroc, Inc. |
| Emission Rate: | Calculated |

**Notes:**

1. As the sand and gravel have been washed, the controlled mosture content is estimated at 4 percent.

**Equations:**

Emission Factors:

$$k(0.0032)\frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} = EF\left(\frac{lb}{ton}\right)$$

Emission Rates:

$$\left(EF\frac{lb}{ton}\right)\left(PR\frac{ton}{yr}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right)(ND) = ER\left(\frac{ton}{yr}\right)$$

$$\left(EF\frac{lb}{ton}\right)\left(PR\frac{ton}{hr}\right)(ND) = ER\left(\frac{lb}{hr}\right)$$

$$\left(ER\frac{lb}{hr}\right)\left(453.59\frac{g}{sec}\right)\left(\frac{1\ hr}{3{,}600\ sec}\right) = ER\left(\frac{g}{sec}\right)$$

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Material Handling (Conveyors)**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Emission Factor (lb/ton) EF | Production Rate (ton/yr) PR | (ton/hr) | Number of Drops (#) ND | Emission Rate (ton/yr) | (lb/hr) ER | (g/sec) |
|---|---|---|---|---|---|---|---|---|
| Uncontrolled | | | | | | | | |
| Conveyors | PM10 | 1.10E-03 | 720,000 | 240.0 | 1 | 0.40 | 0.26 | 0.0333 |
| Conveyors | PM2.5 | 3.10E-04 | 720,000 | 240.0 | 1 | 0.11 | 0.07 | 0.0094 |
| Controlled | | | | | | | | |
| Conveyors | PM10 | 4.60E-05 | 720,000 | 240 | 1 | 0.02 | 0.01 | 0.0014 |
| Conveyors | PM2.5 | 1.30E-05 | 720,000 | 240 | 1 | 0.00 | 0.00 | 0.0004 |

**Source of Data:**

Emission Factor: AP-42, Fifth Edition, Section 11.19.2
Crushed Stone Processing
Table 11.19.2-2
Production Rate: Westroc, Inc.
Number of Drops: Westroc, Inc.
Emission Rate: Calculated

**Equations:**

Emission Rates:

$$\left(EF\frac{lb}{ton}\right)\left(PR\frac{ton}{yr}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right)(ND) = ER\left(\frac{ton}{yr}\right)$$

$$\left(EF\frac{lb}{ton}\right)\left(PR\frac{ton}{hr}\right)(ND) = ER\left(\frac{lb}{hr}\right)$$

$$\left(ER\frac{lb}{hr}\right)\left(453.59\frac{g}{lb}\right)\left(\frac{1\ hr}{3{,}600\ sec}\right) = ER\left(\frac{g}{sec}\right)$$

**Notes:**

1. The uncontrolled PM2.5 emission factor is estimated as 28.26 percent of the uncontrolled PM10 emission factor (based on the ratio of the controlled PM2.5 emission factor to the controlled PM10 emission factor)
2. All the sand and gravel used at the plant will be washed.

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Storage Piles**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Emission Factor (ton/acre-yr) EF | Area (acre) A | Operating Time (day/yr) OP | Emission Rate (ton/yr) | (lb/hr) ER | (g/sec) |
|---|---|---|---|---|---|---|---|
| Storage piles | PM10 | 0.18 | 1.00 | 365 | 0.18 | 0.04 | 0.0052 |
| | PM2.5 | 0.09 | 1.00 | 365 | 0.09 | 0.02 | 0.0026 |

**Source of Data:**

Emission Factor: AP-42, Fifth Edition, Section 11.9, 10/98
Western Surface Coal Mining
Table 11.9-4
Area: Westroc, Inc.
Operating Time: Westroc, Inc.
Emission Rate: Calculated

**Notes:**

1. The TSP emission factor is 0.38 ton/acre-yr. The PM10 emission factor is calculated by dividing the TSP emission factor by 2.1.
2. The PM2.5 emission factor is estimated to be half the PM10 emission factor.
3. The emissions are assumed to be uncontrolled.

**Equations:**

Emission Rates:

$$\left(EF\frac{ton}{acre-yr}\right)(A\ acre)\left(OP\frac{day}{yr}\right)\left(\frac{1\ yr}{365\ day}\right)=ER\left(\frac{ton}{yr}\right)$$

$$\left(EF\frac{ton}{acre-yr}\right)(A\ acre)\left(\frac{1\ yr}{8{,}760\ hr}\right)\left(2{,}000\frac{lb}{ton}\right)=ER\left(\frac{lb}{hr}\right)$$

$$\left(ER\frac{lb}{hr}\right)\left(453.59\frac{g}{lb}\right)\left(\frac{1\ hr}{3{,}600\ sec}\right)=ER\left(\frac{g}{sec}\right)$$

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Unpaved Road Dust**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Control Efficiency (%) CE | Uncontrolled Emissions (ton/yr) ER | Uncontrolled Emissions (lb/hr) ER | Controlled Emissions (ton/yr) ER | Controlled Emissions (lb/hr) ER | Controlled Emissions (g/sec) |
|---|---|---|---|---|---|---|---|
| Loader (to hoppers) | PM10 | 75 | 2.69 2.98 | 2.38 | 0.67 0.75 | 0.60 | 0.0750 |
| Trucks (aggregate) | PM10 | 75 | 1.35 1.49 | 1.19 | 0.34 0.37 | 0.30 | 0.0375 |
| Trucks (cement, etc.) | PM10 | 75 | 4.06 4.07 | 3.59 | 1.01 1.13 | 0.90 | 0.1130 |
| | Total | | 8.09 8.98 | | 2.02 2.24 | | |
| Loader (to hoppers) | PM2.5 | 75 | 0.27 | 0.24 | 0.07 | 0.06 | 0.0075 |
| Trucks (aggregate) | PM2.5 | 75 | 0.13 | 0.12 | 0.03 | 0.03 | 0.0038 |
| Trucks (cement, etc.) | PM2.5 | 75 | 0.41 | 0.36 | 0.10 | 0.09 | 0.0113 |
| | Total | | 0.81 | | 0.20 0.225 | | |

| Source | Production Rate (ton/yr) PR | Production Rate (ton/hr) PR | Length of Round Trip (ft/trip) LT | Length of Round Trip (vmt/load) LT | Distance Traveled (vmt/yr) DT | Distance Traveled (vmt/hr) DT |
|---|---|---|---|---|---|---|
| Loader (to hoppers) | 720,000 | 240.0 | 200 | 0.04 | 3,409 | 1.14 |
| Trucks (aggregate) | 720,000 | 240.0 | 550 | 0.10 | 1,667 | 0.56 |
| Trucks (cement, etc.) | 1,017,000 | 339.0 | 700 | 0.13 | 5,837 | 1.95 |

should be 60

| Source | Pollutant | Particle Size Multiplier k | Surface Silt Content (%) s | Vehicle Weight (ton) | Vehicle Capacity (ton/load) | Mean Vehicle Weight (ton) W | Days With Precip. >= 0.01 Inch p | Annual Emission Factor (lb/vmt) EF | Short-Term Emission Factor (lb/vmt) EF |
|---|---|---|---|---|---|---|---|---|---|
| Loader (to hoppers) | PM10 | 1.5 | 7.1 2 | 14.00 | 8.00 | 18.00 | 90 | 1.58 1.75 | 2.09 |
| Trucks (aggregate) | PM10 | 1.5 | 4.8 | 19.00 | 45.00 | 41.50 | 90 | 1.62 | 2.14 |
| Trucks (cement, etc.) | PM10 | 1.5 | 4.8 | 18.12 | 23.10 | 29.67 | 90 | 1.39 | 1.84 |
| Loader (to hoppers) | PM2.5 | 0.15 | 7.1 | 14.00 | 8.00 | 18.00 | 90 | 0.16 | 0.21 |
| Trucks (aggregate) | PM2.5 | 0.15 | 4.8 | 19.00 | 45.00 | 41.50 | 90 | 0.16 | 0.21 |
| Trucks (cement, etc.) | PM2.5 | 0.15 | 4.8 | 18.12 | 23.10 | 29.67 | 90 | 0.14 | 0.18 |





Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Unpaved Road Dust**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

**Source of Data:**

| | |
|---|---|
| Particle Size Multiplier: | Table 13.2.2-2 |
| Surface Silt Content: | Table 13.2.2-1 |
| Vehicle Weight: | Westroc, Inc. |
| Vehicle Capacity: | Westroc, Inc. |
| Mean Vehicle Weight: | Calculated |
| Days With Precip. >= 0.01: | Figure 13.2.2-1 |
| Emission Factor: | AP-42, Fifth Edition, Section 13.2.2, 11/06<br>Unpaved Roads<br>Page 13.2.2-4 |
| Production Rate : | Westroc, Inc. |
| Length of Trip: | Westroc, Inc. |
| Distance Traveled: | Calculated |
| Control Efficiency: | Estimated |
| Emission Rate: | Calculated |

**Notes:**

The Average Vehicle Weight (W) is the average of the loaded and empty vehicle weight.
The Days With Precipitation >=0.01 Inches (p) portion of the emission factor equation is used only for the annual emission factor.
The control efficiency is based on applying water and MgCl.

**Equations:**

Emission Factors:

$$k\left(\left[\frac{s}{12}\right]^{a}\right)\left(\left[\frac{W}{3}\right]^{b}\right)\left(\frac{365-p}{365}\right) = EF$$

PM10: a = 0.9, b = 0.45

Emission Rates:

$$\left(EF\frac{lb}{vmt}\right)\left(DT\frac{vmt}{yr}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right) = ER\left(\frac{ton}{yr}\right)$$

$$\left(EF\frac{lb}{vmt}\right)\left(DT\frac{vmt}{yr}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right)\left(1-\left[\frac{CE\ \%}{100}\right]\right) = ER\left(\frac{ton}{yr}\right)$$

$$\left(EF\frac{lb}{vmt}\right)\left(DT\frac{vmt}{hr}\right) = ER\left(\frac{lb}{hr}\right)$$

$$\left(EF\frac{lb}{vmt}\right)\left(DT\frac{vmt}{hr}\right)\left(1-\left[\frac{CE\ \%}{100}\right]\right) = ER\left(\frac{lb}{hr}\right)$$

$$\left(ER\frac{lb}{hr}\right)\left(453.59\frac{g}{lb}\right)\left(\frac{1\ hr}{3{,}600\ sec}\right) = ER\left(\frac{g}{sec}\right)$$

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Paved Road Dust**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Control Efficiency (%) CE | Uncontrolled Emissions (ton/yr) ER | Uncontrolled Emissions (lb/hr) ER | Controlled Emissions (ton/yr) ER | Controlled Emissions (lb/hr) ER | Controlled Emissions (g/sec) ER |
|---|---|---|---|---|---|---|---|
| Trucks (aggregate) | PM10 | 75 | 2.06 | 1.38 | ~~0.52~~ .53 | 0.34 | 0.0433 |
| Trucks (cement, etc.) | PM10 | 75 | 4.55 | 3.04 | ~~1.14~~ 1.16 | 0.76 | 0.0956 |
| | Total | | 6.62 | | ~~1.65~~ 1.69 | | |
| Trucks (aggregate) | PM2.5 | 75 | 0.31 | 0.21 | 0.08 | 0.05 | 0.0065 |
| Trucks (cement, etc.) | PM2.5 | 75 | 0.68 | 0.45 | 0.17 | 0.11 | 0.0143 |
| | Total | | 0.99 | | ~~0.25~~ 0.26 | | |

| Source | Production Rate (ton/yr) PR | Production Rate (ton/hr) PR | Length of Trip (ft/trip) LT | Length of Trip (vmt/load) LT | Distance Traveled (vmt/yr) DT | Distance Traveled (vmt/hr) DT |
|---|---|---|---|---|---|---|
| Trucks (aggregate) | 720,000 | 240.0 | 550 | 0.10 | 1,667 | 0.56 |
| Trucks (cement, etc.) | 1,017,000 | 339.0 | 730 | 0.14 | 6,088 | 2.03 |

| Source | Pollutant | Particle Size Multiplier k | Silt Loading (g/m^2) sL | Vehicle Weight (ton) | Vehicle Capacity (ton/load) | Mean Vehicle Weight (ton) W | Factor for Exhaust & Wear (lb/vmt) C | Days With Precip. >= 0.01 Inch P | Number of Days in Averaging Period N | Emission Factor (lb/vmt) EF |
|---|---|---|---|---|---|---|---|---|---|---|
| Trucks (aggregate) | PM10 | 0.016 | 12 | 19.00 | 45.00 | 41.50 | 0.00047 | 90 | 365 | 2.48 ✓ |
| Trucks (cement, etc.) | PM10 | 0.016 | 12 | 18.12 | 23.10 | 29.67 | 0.00047 | 90 | 365 | 1.50 |
| Trucks (aggregate) | PM2.5 | 0.0024 | 12 | 19.00 | 45.00 | 41.50 | 0.00036 | 90 | 365 | 0.37 |
| Trucks (cement, etc.) | PM2.5 | 0.0024 | 12 | 18.12 | 23.10 | 29.67 | 0.00036 | 90 | 365 | 0.22 |

2.53
1.53
~~1.53~~ 0.38
0.22

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Paved Road Dust**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

**Source of Data:**

| | |
|---|---|
| Particle Size Multiplier: | Table 13.2-1.1 |
| Surface Silt Loading: | Table 13.2.1-4 |
| Vehicle Weight: | Westroc, Inc. |
| Vehicle Capacity: | Westroc, Inc. |
| Mean Vehicle Weight: | Calculated |
| Factor for Exhaust & Wear: | Table 13.2.1-1.2 |
| Days With Preecip. >=0.01 Inch: | Figure 13.2.1-2 |
| Emission Factor: | AP-42, Fifth Edition, Section 13.2.1, 12/03<br>Paved Roads<br>Page 13.2.2-4 |
| Production Rate: | Westroc, Inc. |
| Length of Trip: | Westroc, Inc. |
| Distanced Traveled: | Calculated |
| Control Efficiency: | Estimated |
| Emission Rate: | Calculated |

**Notes:**

The control efficiency is estimated based on washing and sweeping as required.
Truck tires will be washed prior to driving onto pavement.

$$\left[0.016\left(\frac{12}{2}\right)^{0.65}\left(\frac{41.5}{3}\right)^{1.5}-C\right]\times\left(1-\left(\frac{60}{365}\right)\right)=$$

**Equations:**

Emission Factors:

$$\left[k\left(\frac{sL}{2}\right)^{0.65}\left(\frac{W}{3}\right)^{1.5}-C\right]\left(1-\left[\frac{P}{4N}\right]\right)=EF\left(\frac{lb}{vmt}\right)$$

Emission Rate:

$$\left(EF\frac{lb}{vmt}\right)\left(DT\frac{vmt}{yr}\right)\left(\frac{1\,ton}{2{,}000\,lb}\right)=ER\left(\frac{ton}{yr}\right)$$

$$\left(EF\frac{lb}{vmt}\right)\left(DT\frac{vmt}{hr}\right)=ER\left(\frac{lb}{hr}\right)$$

$$\left(ER\frac{lb}{hr}\right)\left(453.59\frac{g}{lb}\right)\left(\frac{1\,hr}{3{,}600\,sec}\right)=ER\left(\frac{g}{sec}\right)$$

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Concrete Batching**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Emission Factor (lb/ton) EF | Production Rate (ton/yr) PR | (ton/hr) | Emission Rate (ton/yr) | (lb/hr) ER | (g/sec) |
|---|---|---|---|---|---|---|---|
| Uncontrolled | | | | | | | |
| Aggregate transfer | PM10 | 0.0033 | 393,750 | 131.25 | 0.65 | 0.43 | 0.0546 |
| Sand transfer | PM10 | 0.00099 | 326,250 | 108.75 | 0.16 | 0.11 | 0.0136 |
| Cement loading to silo (pneumatic) | PM10 | 0.46 | 103,500 | 34.50 | 23.81 | 15.87 | 1.9996 |
| Cement supplement loading to silo (pneumatic) | PM10 | 1.10 | 22,500 | 7.50 | 12.38 | 8.25 | 1.0395 |
| Weigh hopper loading | PM10 | 0.0024 | 720,000 | 240.0 | 0.86 | 0.58 | 0.0726 |
| Mixer loading (truck mix) | PM10 | 0.278 | 126,000 | 42.00 | 17.51 | 11.68 | 1.4711 |
| Aggregate transfer | PM2.5 | 0.0017 | 393,750 | 131.25 | 0.32 | 0.22 | 0.0273 |
| Sand transfer | PM2.5 | 0.00050 | 326,250 | 108.75 | 0.08 | 0.05 | 0.0068 |
| Cement loading to silo (pneumatic) | PM2.5 | 0.23 | 103,500 | 34.50 | 11.90 | 7.94 | 0.9998 |
| Cement supplement loading to silo (pneumatic) | PM2.5 | 0.55 | 22,500 | 7.50 | 6.19 | 4.13 | 0.5197 |
| Weigh hopper loading | PM2.5 | 0.0012 | 720,000 | 240.00 | 0.43 | 0.29 | 0.0363 |
| Mixer loading (truck mix) | PM2.5 | 0.139 | 126,000 | 42.00 | 8.76 | 5.84 | 0.7356 |
| Controlled | | | | | | | |
| Cement loading to silo (pneumatic) | PM10 | 0.00034 | 103,500 | 34.50 | 0.02 | 0.01 | 0.0015 |
| Cement supplement loading to silo (pneumatic) | PM10 | 0.0049 | 22,500 | 7.50 | 0.06 | 0.04 | 0.0046 |
| Mixer loading (truck mix) | PM10 | 0.0160 | 126,000 | 42.00 | 1.01 | 0.67 | 0.0847 |
| Cement loading to silo (pneumatic) | PM2.5 | 0.00017 | 103,500 | 34.50 | 0.01 | 0.01 | 0.0007 |
| Cement supplement loading to silo (pneumatic) | PM2.5 | 0.0025 | 22,500 | 7.50 | 0.03 | 0.02 | 0.0023 |
| Mixer loading (truck mix) | PM2.5 | 0.0080 | 126,000 | 42.00 | 0.50 | 0.34 | 0.0423 |

**Source of Data:**

Emission Factor: AP-42, Fifth Edition, Section 11.12, 06/06
Concrete Batching
Table 11.12-2
Production Rate: Westroc, Inc.
Emission Rate: Calculated

**Notes:**

**Equations:**

Emission Rates:

$$\left(EF\frac{lb}{ton}\right)\left(PR\frac{ton}{yr}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right) = ER\left(\frac{ton}{yr}\right)$$

$$\left(EF\frac{lb}{ton}\right)\left(PR\frac{ton}{hr}\right) = ER\left(\frac{lb}{hr}\right)$$

$$\left(ER\frac{lb}{hr}\right)\left(453.59\frac{g}{lb}\right)\left(\frac{1\ hr}{3{,}600\ sec}\right) = ER\left(\frac{g}{sec}\right)$$



Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Cement Silo Filling**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Emission Factor (lb/ton) EF | Production Rate (ton/yr) PR | Emission Rate (lb/yr) ER |
|---|---|---|---|---|
| Cement silo filling (w/fabric filter) | Arsenic | 4.24E-09 | 103,500 | 4.39E-04 |
| | Beryllium | 4.86E-10 | 103,500 | 5.03E-05 |
| | Cadmium | 4.86E-10 | 103,500 | 5.03E-05 |
| | Chromium | 2.90E-08 | 103,500 | 3.00E-03 |
| | Lead | 1.09E-08 | 103,500 | 1.13E-03 |
| | Manganese | 1.17E-07 | 103,500 | 1.21E-02 |
| | Nickel | 4.18E-08 | 103,500 | 4.33E-03 |
| | Phosphorus | 2.36E-06 | 103,500 | 2.44E-01 |

**Source of Data:**

Emission Factor: AP-42, Fifth Edition, Section 11.12, 10/01
Concrete Batching
Table 11.12-6
Production Rate (concrete): Westroc, Inc.
Emission Rate: Calculated

**Notes:**

1. The emission factors are pounds per ton of cement.
2. Emissions are controlled by a baghouse.

**Equations:**

Emission Rate:

$$\left(EF\frac{lb}{cu\ yd}\right)\left(PR\frac{ton}{yr}\right) = ER\left(\frac{lb}{yr}\right)$$

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Cement Supplement Silo Filling**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Emission Factor (lb/ton) EF | Production Rate (ton/yr) PR | Emission Rate (lb/yr) ER |
|---|---|---|---|---|
| Cement supplement silo filling (w/fabric filter) | Arsenic | 1.00E-06 | 22,500 | 2.25E-02 |
| | Beryllium | 9.04E-08 | 22,500 | 2.03E-03 |
| | Cadmium | 1.98E-08 | 22,500 | 4.46E-04 |
| | Chromium | 1.22E-06 | 22,500 | 2.75E-02 |
| | Lead | 5.20E-07 | 22,500 | 1.17E-02 |
| | Manganese | 2.56E-07 | 22,500 | 5.76E-03 |
| | Nickel | 2.28E-06 | 22,500 | 5.13E-02 |
| | Phosphorus | 3.54E-06 | 22,500 | 7.97E-02 |
| | Selenium | 7.24E-08 | 22,500 | 1.63E-03 |

**Source of Data:**

Emission Factor: AP-42, Fifth Edition, Section 11.12, 10/01
Concrete Batching
Table 11.12-6
Production Rate (concrete): Westroc, Inc.
Emission Rate: Calculated

**Equations:**

Emission Rate:

$$\left(EF\frac{lb}{cu\ yd}\right)\left(PR\frac{ton}{yr}\right)=ER\left(\frac{lb}{yr}\right)$$

**Notes:**

1. The emission factors are pounds per ton of cement supplement.
2. Emissions are controlled by a baghouse.

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Truck Mix Batching**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Emission Factor (lb/ton) EF | Production Rate (ton/yr) PR | Emission Rate (lb/yr) ER |
|---|---|---|---|---|
| Truck mix batching | Arsenic | 1.16E-06 | 126,000 | 1.46E-01 |
| | Beryllium | 1.04E-07 | 126,000 | 1.31E-02 |
| | Cadmium | 9.06E-09 | 126,000 | 1.14E-03 |
| | Chromium | 4.10E-06 | 126,000 | 5.17E-01 |
| | Lead | 1.53E-06 | 126,000 | 1.93E-01 |
| | Manganese | 2.08E-05 | 126,000 | 2.62E+00 |
| | Nickel | 4.78E-06 | 126,000 | 6.02E-01 |
| | Phosphorus | 1.23E-05 | 126,000 | 1.55E+00 |
| | Selenium | 1.13E-07 | 126,000 | 1.42E-02 |

**Source of Data:**

Emission Factor: AP-42, Fifth Edition, Section 11.12, 10/01
Concrete Batching
Table 11.12-6
Production Rate (concrete): Westroc, Inc.
Emission Rate: Calculated

**Notes:**

1. The emission factors are pounds per ton of cement and cement supplement.
2. Emissions are controlled by a baghouse.

**Equations:**

Emission Rate:

$$\left(EF\frac{lb}{cu\ yd}\right)\left(PR\frac{ton}{yr}\right) = ER\left(\frac{lb}{yr}\right)$$

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Wheeled Loader Exhaust**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Emission Factor (lb/kgal) EF | Diesel Consumed (gal/yr) DC | (gal/hr) | Emission Rate (ton/yr) | (lb/hr) ER | (g/sec) |
|---|---|---|---|---|---|---|---|
| Wheeled loader | PM10 | 23.44 | 24,000 | 6.0 | 0.28 | 0.14 | 0.0177 |
| | PM2.5 | 23.44 | 24,000 | 6.0 | 0.28 | 0.14 | 0.0177 |
| | SOx | 31.20 | 24,000 | 6.0 | 0.37 | 0.19 | 0.0236 |
| | NOx | 321.23 | 24,000 | 6.0 | 3.85 | 1.93 | 0.2428 |
| | CO | 98.66 | 24,000 | 6.0 | 1.18 | 0.59 | 0.0746 |
| | VOC | 43.16 | 24,000 | 6.0 | 0.52 | 0.26 | 0.0326 |

**Source of Data:**

Emission Factor: AP-42, Fourth Edition, Section II-7, Heavy Duty Construction Equipment Table 2-7.1
Diesel Consumed: Westroc, Inc.
Emission Rate: Calculated

**Notes:**

The PM10 emission factor was assumed to be 80% of the TSP emission factor.

**Equations:**

Emission Rates:

$$\left(EF\frac{lb}{kgal}\right)\left(DC\frac{gal}{yr}\right)\left(\frac{1\ kgal}{1{,}000\ gal}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right)=ER\left(\frac{ton}{yr}\right)$$

$$\left(EF\frac{lb}{kgal}\right)\left(DC\frac{gal}{hr}\right)\left(\frac{1\ kgal}{1{,}000\ gal}\right)=ER\left(\frac{lb}{hr}\right)$$

$$\left(ER\frac{lb}{hr}\right)\left(453.59\frac{g}{lb}\right)\left(\frac{1\ hr}{3{,}600\ sec}\right)=ER\left(\frac{g}{sec}\right)$$

Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Natural Gas Boilers**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

| Source | Pollutant | Emission Factor (lb/mmcf) EF | Heat Content (Btu/scf) HC | Fuel Consumed (mmBtu/yr) FC | (mmBtu/hr) FC | Emission Rate (ton/yr) ER | (lb/yr) ER | (lb/hr) ER | (g/sec) ER |
|---|---|---|---|---|---|---|---|---|---|
| Natural gas boiler (<100 mmBTU/hr) | PM10 | 7.6 | 1,050 | 7,000 | 7.00 | 0.03 | -- | 0.05 | 0.0064 |
| | PM2.5 | 7.6 | 1,050 | 7,000 | 7.00 | 0.03 | -- | 0.05 | 0.0064 |
| | SOx | 0.6 | 1,050 | 7,000 | 7.00 | 0.00 | -- | 0.00 | 0.0005 |
| | NOx | 100 | 1,050 | 7,000 | 7.00 | 0.33 | -- | 0.67 | 0.0840 |
| | CO | 84 | 1,050 | 7,000 | 7.00 | 0.28 | -- | 0.56 | 0.0706 |
| | VOC | 5.5 | 1,050 | 7,000 | 7.00 | 0.02 | -- | 0.04 | 0.0046 |
| | Arsenic | 2.00E-04 | 1,050 | 7,000 | -- | -- | 1.33E-03 | -- | -- |
| | Benzene | 2.10E-03 | 1,050 | 7,000 | -- | -- | 1.40E-02 | -- | -- |
| | Beryllium | 1.20E-05 | 1,050 | 7,000 | -- | -- | 8.00E-05 | -- | -- |
| | Cadmium | 1.10E-03 | 1,050 | 7,000 | -- | -- | 7.33E-03 | -- | -- |
| | Chromium | 1.40E-03 | 1,050 | 7,000 | -- | -- | 9.33E-03 | -- | -- |
| | Cobalt | 8.40E-05 | 1,050 | 7,000 | -- | -- | 5.60E-04 | -- | -- |
| | Dichlorobenzene | 1.20E-03 | 1,050 | 7,000 | -- | -- | 8.00E-03 | -- | -- |
| | Formaldehyde | 7.50E-02 | 1,050 | 7,000 | -- | -- | 5.00E-01 | -- | -- |
| | Hexane | 1.80E+00 | 1,050 | 7,000 | -- | -- | 1.20E+01 | -- | -- |
| | Lead | 5.00E-04 | 1,050 | 7,000 | -- | -- | 3.33E-03 | -- | -- |
| | Manganese | 3.80E-04 | 1,050 | 7,000 | -- | -- | 2.53E-03 | -- | -- |
| | Mercury | 2.60E-04 | 1,050 | 7,000 | -- | -- | 1.73E-03 | -- | -- |
| | Naphthalene | 6.10E-04 | 1,050 | 7,000 | -- | -- | 4.07E-03 | -- | -- |
| | Nickel | 2.10E-03 | 1,050 | 7,000 | -- | -- | 1.40E-02 | -- | -- |
| | Polycyclics | 8.82E-05 | 1,050 | 7,000 | -- | -- | 5.88E-04 | -- | -- |
| | Selenium | 2.40E-05 | 1,050 | 7,000 | -- | -- | 1.60E-04 | -- | -- |
| | Toluene | 3.40E-03 | 1,050 | 7,000 | -- | -- | 2.27E-02 | -- | -- |

$\left(\frac{7.6\ lb}{mmcf}\right)\left(\frac{7000\ mmBtu}{yr}\right)\left(\frac{ton}{2000\ lb}\right)\left(\frac{scf}{1050\ Btu}\right)\left(\frac{1{,}000{,}000\ Btu}{1\ mmBtu}\right)\left(\frac{1\ mmcf}{1000000\ scf}\right)$

$\left(7000\ \frac{mmBtu}{yr}\right)\left(\frac{Therm}{100{,}000\ Btu}\right)\left(\frac{1{,}000{,}000\ Btu}{mmBtu}\right)\left(\frac{decatherm}{10\ Therms}\right) =$ 7000 Decatherms

*Air Quality Services*



Attachment: 2. Site Plan (American Eagle Appeal)

Projected Emissions Calculations

Source: **Natural Gas Boilers**
Company: Westroc, Inc.
Site: American Fork Concrete Plant
Date: 02/05/2007

**Source of Data:**

| | |
|---|---|
| Emission Factor: | AP-42, Fifth Edition, Section 1.4, 7/98<br>Natural Gas Combustion<br>Tables 1.4-1, 1.4-2 and 1.4-3 |
| Heat Content: | AP-42, Fifth Edition, Page A-5 |
| Fuel Consumed: | Westroc, Inc. |
| Emission Rate: | Calculated |

**Notes:**

The emissions are assumed to be uncontrolled.

**Equations:**

Emission Rates:

$$\frac{\left(EF\frac{lb}{mmcf}\right)\left(FC\frac{mmBtu}{yr}\right)\left(\frac{1\ ton}{2{,}000\ lb}\right)}{\left(HC\frac{Btu}{cf}\right)\left(\frac{1\ mmBtu}{1{,}000{,}000\ Btu}\right)\left(\frac{1{,}000{,}000\ cf}{1\ mmcf}\right)} = ER\left(\frac{ton}{yr}\right)$$

$$\frac{\left(EF\frac{lb}{mmcf}\right)\left(FC\frac{mmBtu}{yr}\right)}{\left(HC\frac{Btu}{cf}\right)\left(\frac{1\ mmBtu}{1{,}000{,}000\ Btu}\right)\left(\frac{1{,}000{,}000\ cf}{1\ mmcf}\right)} = ER\left(\frac{lb}{yr}\right)$$

$$\frac{\left(EF\frac{lb}{mmcf}\right)\left(FC\frac{mmBtu}{hr}\right)}{\left(HC\frac{Btu}{cf}\right)\left(\frac{1\ mmBtu}{1{,}000{,}000\ Btu}\right)\left(\frac{1{,}000{,}000\ cf}{1\ mmcf}\right)} = ER\left(\frac{lb}{hr}\right)$$

$$\left(ER\frac{lb}{hr}\right)\left(453.59\frac{g}{lb}\right)\left(\frac{1\ hr}{3{,}600\ sec}\right) = ER\left(\frac{g}{sec}\right)$$

Attachment: 2. Site Plan (American Eagle Appeal)

Notice of Intent
Westroc, Inc.
American Fork, Utah
February 2007

# APPENDIX B

# HAP MODELING THRESHOLD EVALUATION

Attachment: 2. Site Plan (American Eagle Appeal)

# Westroc, Inc.
## American Fork Concrete Plant
## Method 1 HAP Modeling Evaluation

| Pollutant | CAS Number | Plant Emission Rate (lb/yr) | Operating Hours (hr/yr) | Boiler Emission Rate (lb/yr) | Operating Hours (hr/yr) | Total Emission Rate (lb/hr) | Pollutant Type | Emission Threshold Factors (m^3-lb/mg-hr) | TLV-TWA (mg/m^3) | Emission Threshold Value (lb/hr) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 7440-38-2 | 1.69E-01 | 3,000 | 1.33E-03 | 1,000 | 5.77E-05 | chronic | 0.051 | 0.010 | 5.10E-04 | No modeling required |
| Benzene | 71-43-2 | -- | -- | 1.40E-02 | 1,000 | 1.40E-05 | chronic | 0.051 | 1.597 | 8.15E-02 | No modeling required |
| Beryllium | 7440-41-7 | 1.52E-02 | 3,000 | 8.00E-05 | 1,000 | 5.14E-06 | chronic | 0.051 | 0.002 | 1.02E-04 | No modeling required |
| Cadmium | 7440-43-9 | 1.64E-03 | 3,000 | 7.33E-03 | 1,000 | 7.88E-06 | carcinogenic | 0.017 | 0.002 | 3.40E-05 | No modeling required |
| Chromium | 7440-47-3 | 5.47E-01 | 3,000 | 9.33E-03 | 1,000 | 1.92E-04 | carcinogenic | 0.017 | 0.010 | 1.70E-04 | **Modeling may be required** |
| Cobalt | 7440-48-4 | -- | -- | 5.60E-04 | 1,000 | 5.60E-07 | chronic | 0.051 | 0.020 | 1.02E-03 | No modeling required |
| Formaldehyde | 50-00-0 | -- | -- | 5.00E-01 | 1,000 | 5.00E-04 | acute | 0.038 | 0.368 | 1.40E-02 | No modeling required |
| Hexane | 110-54-3 | -- | -- | 1.20E+01 | 1,000 | 1.20E-02 | chronic | 0.051 | 176.237 | 8.99E+00 | No modeling required |
| Manganese | 7439-96-5 | 2.64E+00 | 3,000 | 2.53E-03 | 1,000 | 8.82E-04 | chronic | 0.051 | 0.200 | 1.02E-02 | No modeling required |
| Mercury | 7439-97-6 | -- | -- | 1.73E-03 | 1,000 | 1.73E-06 | chronic | 0.051 | 0.025 | 1.28E-03 | No modeling required |
| Naphthalene | 91-20-3 | -- | -- | 4.07E-03 | 1,000 | 4.07E-06 | chronic | 0.051 | 52.429 | 2.67E+00 | No modeling required |
| Nickel | 7440-02-0 | 6.58E-01 | 3,000 | 1.40E-02 | 1,000 | 2.33E-04 | carcinogenic | 0.017 | 0.100 | 1.70E-03 | No modeling required |
| Phosphorus | 7723-14-0 | 1.87E+00 | 3,000 | -- | -- | 6.25E-04 | chronic | 0.051 | 0.101 | 5.17E-03 | No modeling required |
| Selenium | 7782-49-2 | 1.59E-02 | 3,000 | 1.60E-04 | 1,000 | 5.45E-06 | chronic | 0.051 | 0.200 | 1.02E-02 | No modeling required |
| Toluene | 108-88-3 | -- | -- | 2.27E-02 | 1,000 | 2.27E-05 | chronic | 0.051 | 188.405 | 9.61E+00 | No modeling required |

Dichlorobenzene and polycyclics (except naphthalene)were not evaluated, as they do not have TLV-TWA.
Lead was not evaluated as it has a modeling threshold of 0.6 tons per year.
Emission threshold factors based on vertically restricted and fugitive emission release points and a distance to property boundary of 20 meters or less.

Attachment: 2. Site Plan (American Eagle Appeal)

Westroc, Inc.
American Fork Concrete Plant
Method 2 HAP Modeling Evaluation

| Source | Chromium Emissions (lb/yr) | Operating Time (hr/yr) | Chromium Emissions (lb/hr) | Fraction | Emission Threshold Factors (m^3-lb/mg-hr) | Adjusted Emission Threshold Factors (m^3-lb/mg-hr) | TLV-TWA (mg/m^3) | Emission Threshold Value (lb/hr) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| Concrete Plant | 5.47E-01 | 3,000 | 1.82E-04 | 0.9513 | 0.017 | 0.016 | | | |
| Boiler | 9.33E-03 | 1,000 | 9.33E-06 | 0.0487 | 0.066 | 0.003 | | | |
| Total | | | 1.92E-04 | 1.0000 | | 0.019 | 0.3685 | 7.14E-03 | No modeling required |

Concrete plant emission threshold factor based on vertically restricted and fugitive emission release points and a distance to property boundary of 20 meters or less.
Boiler emission threshold factor based on a vertically unrestricted release point and a distance to property boundary of 50 meters or less.

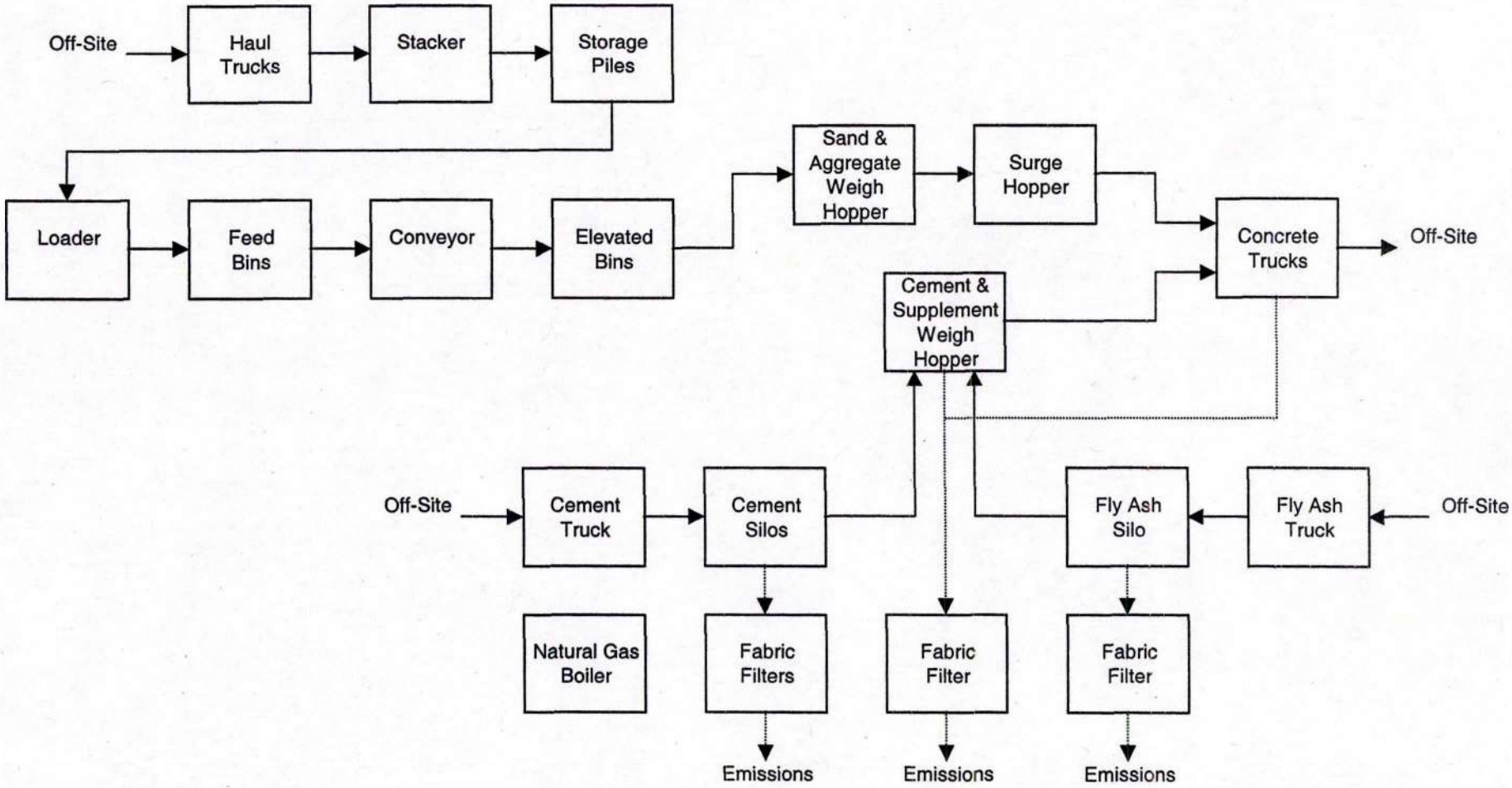
Attachment: 2. Site Plan (American Eagle Appeal)

# APPENDIX C

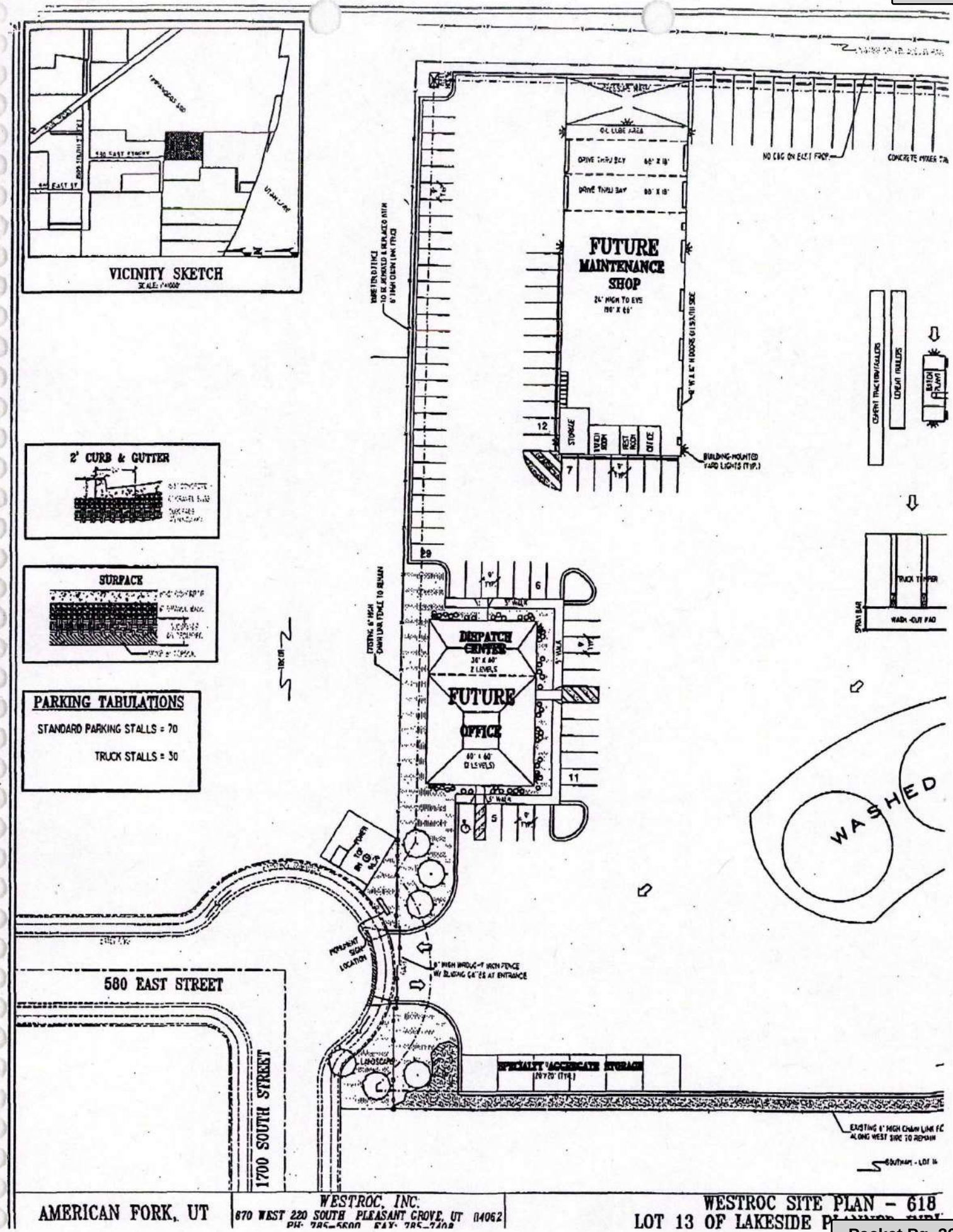
# SITE PLAN AND FLOW DIAGRAM

Attachment: 2. Site Plan (American Eagle Appeal)

Westroc, Inc.
American Fork Concrete Plant
Process Flow Diagram

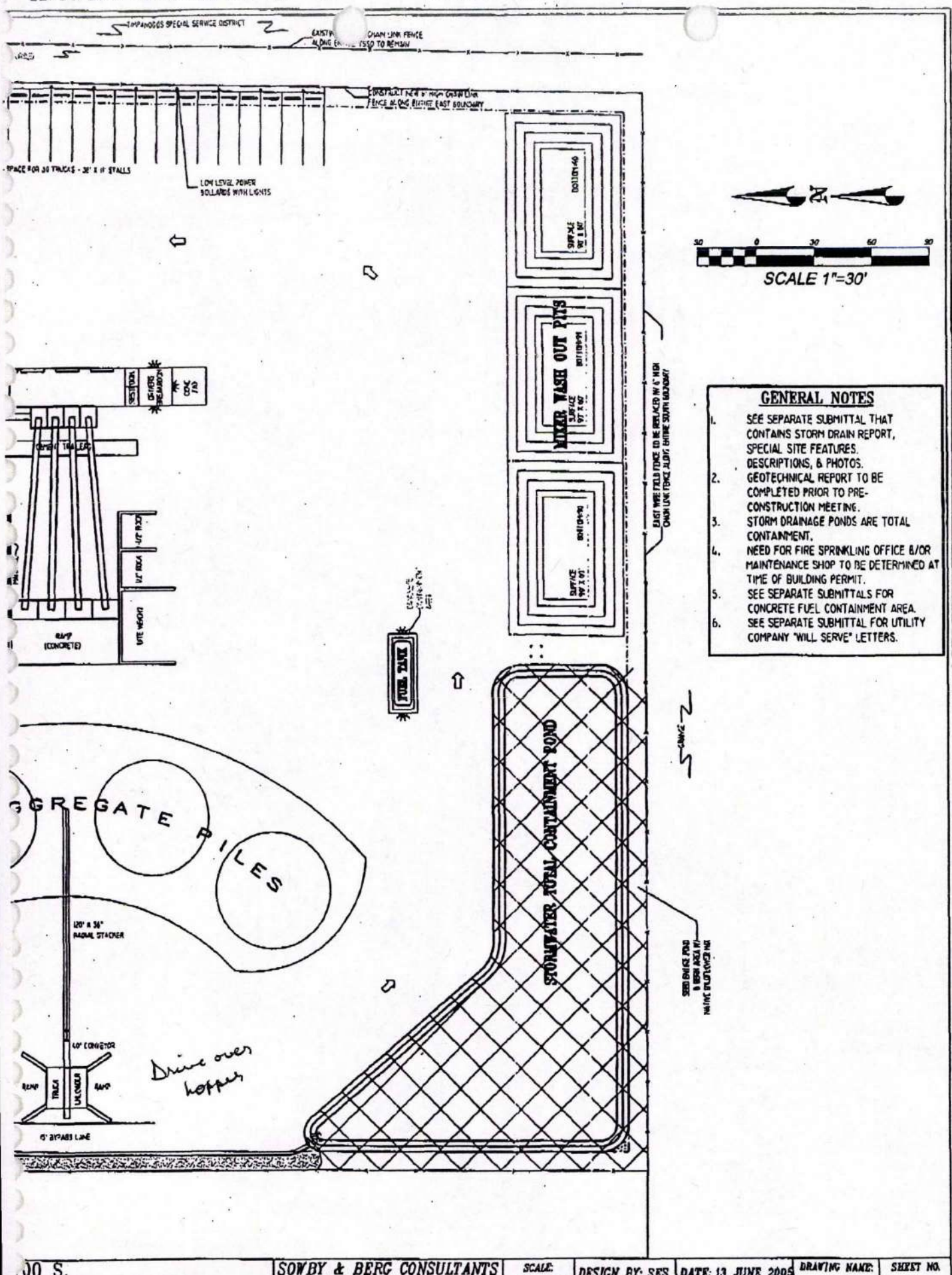



Attachment: 2. Site Plan (American Eagle Appeal)




Attachment: 2. Site Plan (American Eagle Appeal)

5.2.b




## GENERAL NOTES

1. SEE SEPARATE SUBMITTAL THAT CONTAINS STORM DRAIN REPORT, SPECIAL SITE FEATURES, DESCRIPTIONS, & PHOTOS.
2. GEOTECHNICAL REPORT TO BE COMPLETED PRIOR TO PRE-CONSTRUCTION MEETING.
3. STORM DRAINAGE PONDS ARE TOTAL CONTAINMENT.
4. NEED FOR FIRE SPRINKLING OFFICE &/OR MAINTENANCE SHOP TO BE DETERMINED AT TIME OF BUILDING PERMIT.
5. SEE SEPARATE SUBMITTALS FOR CONCRETE FUEL CONTAINMENT AREA.
6. SEE SEPARATE SUBMITTAL FOR UTILITY COMPANY "WILL SERVE" LETTERS.

| | | | | | | |
|---|---|---|---|---|---|---|
| 00 S. L PARK – PLAT B | SOWBY & BERG CONSULTANTS 45 N. 490 W. 492-1277 AMERICAN FORK, UTAH 84003 | SCALE: 1"=30' | DESIGN BY: SES DRAWN BY: SAW | DATE: 13 JUNE 2005 REV: | DRAWING NAME: WROC_SITE | SHEET NO. 1 |

Attachment: 2. Site Plan (American Eagle Appeal)

# UTAH DIVISION OF AIR QUALITY
# NEW SOURCE PLAN REVIEW

Greg Reece
Westroc, Inc.
670 West 220 South
Pleasant Grove, Utah 84062

Project fee code: N140220001

| | |
|---|---|
| RE: | Approval Order for Concrete Batch Plant<br>Utah County, CDS B; NA, HAPs. |
| REVIEW ENGINEER: | Chad Harris |
| DATE: | May 16, 2007 |
| NOTICE OF INTENT SUBMITTED: | February 5, 2007 |
| PLANT CONTACT: | Greg Reece |
| PHONE NUMBER:<br>FAX NUMBER: | (801) 785-5600<br>(801) 785-7408 |
| SOURCE LOCATION: | 618 East 1700 South<br>American Fork, Utah County |
| UTM COORDINATES: | 4,466,000 m. Northing, 433,600 m. Easting, Zone 12<br>UTM datum NAD27 |

N:\cdharris\Approval Orders\Westroc\Draft Review

Attachment: 2. Site Plan (American Eagle Appeal)

REVIEWS:

Peer Engineer _____
Maung Maung

DAQ requests that a company/corporation official read the attached draft/proposed Plan Review with Recommended Approval Order Conditions. If this person does not understand or does not agree with the conditions, the PLAN REVIEW ENGINEER - TECHNICIAN should be contacted within five days after receipt of the Plan Review. Special attention needs to be addressed to the Recommended AO Conditions because they will be recommended for the final AO. If this person understands and the company/corporation agrees with the Plan Review or Recommended AO Conditions, this person should sign below and return (can use FAX # 801-536-4099) within 10 days after receipt of the conditions. If the Plan Review Engineer is not contacted within 10 days, the Plan Review Engineer shall assume that the Company/Corporation official agrees with this Plan Review and will process the Plan Review towards final approval. A **30** day public comment period will be required before the Approval Order can be issued.

Thank You

Applicant Contact Greg Reece 5-22-07
*(Signature & Date)*

RECEIVED
MAY 22 2007
AIR QUALITY



Attachment: 2. Site Plan (American Eagle Appeal)

REVIEWS:

Peer Engineer Maung Maung
Maung Maung

DAQ requests that a company/corporation official read the attached draft/proposed Plan Review with Recommended Approval Order Conditions. If this person does not understand or does not agree with the conditions, the PLAN REVIEW ENGINEER - TECHNICIAN should be contacted within five days after receipt of the Plan Review. Special attention needs to be addressed to the Recommended AO Conditions because they will be recommended for the final AO. If this person understands and the company/corporation agrees with the Plan Review or Recommended AO Conditions, this person should sign below and return (can use FAX # 801-536-4099) within 10 days after receipt of the conditions. If the Plan Review Engineer is not contacted within 10 days, the Plan Review Engineer shall assume that the Company/Corporation official agrees with this Plan Review and will process the Plan Review towards final approval. A **30** day public comment period will be required before the Approval Order can be issued.

Thank You

Applicant Contact _____

*(Signature & Date)*



Attachment: 2. Site Plan (American Eagle Appeal)

## TYPE OF IMPACT AREA

Attainment Area ..... No
Non-attainment Area
    $PM_{10}$ ..... Yes
    $SO_2$ ..... No
Maintenance Area
    CO ..... No

NSPS ..... No

NESHAP ..... No
MACT ..... No

Hazardous Air Pollutants (HAPs) ..... Yes
Hazardous Air Pollutants Major Source ..... No

New Major Source ..... No
Major Modification ..... No
PSD Permit ..... No
PSD Increment (modeling) ..... No

Operating Permit Program
    Minor ..... No
    Major ..... No

Send to EPA ..... No
Comment period ..... 30 days



Attachment: 2. Site Plan (American Eagle Appeal)

*Abstract*

Westroc, Inc. has submitted a Notice of Intent to operate a concrete plant in American Fork, Utah County. This plant will replace a plant operating in Pleasant Grove, Utah County. The new plant will produce 450,000 cubic yards of concrete per year.

Utah County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for $PM_{10}$. New Source Performance Standards (NSPS) do not apply to this source. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) regulations do not apply to this source.

The emissions, in tons per year, from this plant will be as follows: $PM_{10} = 8.18$, $PM_{2.5} = 2.41$, $NO_x = 4.19$, $SO_2 = 0.38$, CO = 1.46, VOC = 0.54, HAPs = 0.009.

**Newspaper Notice**

**Company Name: Westroc, Inc.**
**Location**: 618 East West 1700 South, American Fork, Utah County, Utah
**Project Description:** Westroc, Inc. has submitted a Notice of Intent to operate a concrete plant in American Fork, Utah County, Utah. The plant will replace a plant operating in Pleasant Grove, Utah County. The new plant will produce 450,000 cubic yards of concrete per year.

Utah County is a Non-attainment area of the National Ambient Air Quality Standards (NAAQS) for $PM_{10}$. New Source Performance Standards (NSPS) do not apply to this source. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) regulations do not apply to this source.

The emissions, in tons per year, from this plant will be as follows: $PM_{10} = 8.18$, $PM_{2.5} = 2.41$, $NO_x = 4.19$, $SO_2 = 0.38$, CO = 1.46, VOC = 0.54, HAPs = 0.009.

## I. DESCRIPTION OF PROPOSAL

Westroc, Inc. has requested to operate a concrete batch plant in American Fork. The plant will replace a plant operating in Pleasant Grove, Utah County. The new plant will produce 450,000 cubic yards of concrete per year.

## II. EMISSION SUMMARY

The emissions from the plant will be as follows:



Attachment: 2. Site Plan (American Eagle Appeal)

| Pollutant | Current Emissions (tons/year) | Emission Increases (tons/year) | Total Emissions (tons/year) |
|---|---|---|---|
| PM10 | - | 8.18 | 8.18 |
| PM2.5 | - | 2.41 | 2.41 |
| SO2 | - | 0.38 | 0.38 |
| NOx | - | 4.19 | 4.19 |
| CO | - | 1.46 | 1.46 |
| VOC | - | 0.54 | 0.54 |
| Total HAPs | - | 0.009 | 0.009 |

## III. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) ANALYSIS

*Conveyors*
All sand and gravel transported to the plant will be washed.

*Material Drops*
Fugitive emissions from material drops will be controlled by minimizing the distance that materials are dropped and by residual moisture in the materials from water spray controls.

*Road Dust*
Fugitive emissions from vehicle traffic on the unpaved road and loader operating area will be controlled by the application of water. Magnesium Chloride will be applied as necessary. The paved road will be cleaned by a sweeper periodically.

*Elevated Bins*
Emissions from elevated bins will be controlled by washing with water all sand and gravel transported to the site.

*Weigh Hoppers*
The sand and gravel weigh hopper will be housed in a building. The cement and supplement weigh hopper will be controlled by a fabric filter. All sand and gravel transported to the plant will be washed.

*Concrete Trucks*
Emissions from the dropping of the cement and supplement will be controlled by the sleeve on the chute and a fabric filter. Water is added to the trucks before mixing.

*Cement and Fly Ash Storage Silo*
Emissions from the cement and fly ash storage silos will be controlled with fabric filters.

*Storage piles*
All sand and gravel transported to the plant will be washed. Additionally, the storage piles will be watered as required.



Attachment: 2. Site Plan (American Eagle Appeal)

## IV. APPLICABILITY OF FEDERAL REGULATIONS AND UTAH ADMINISTRATIVE CODES (UAC)

The Notice of Intent submitted is for a new source. At the time of this review the Utah Administrative Code Rules 307 (UAC R307) and federal regulations have been examined to determine their applicability to this Notice of Intent. The following rules have been specifically addressed.

1. R307-101-2, Major Modification - means any physical change in or change in the method of operation of a major source that would result in a significant net emissions increase of any pollutant.

2. R307-107, UAC - Unavoidable breakdown reporting requirements

3. R307-150 Series, UAC - Inventories, Testing and Monitoring. These rules cover emission inventory reporting requirements and require the owner or operator of sources of air pollution to submit an emissions inventory report.

4. R307-201-3(2), UAC - 20% maximum opacity limitation at all emission points. Visible emissions from installations constructed after April 25, 1971, except internal combustion engines, or any incinerator shall be of a shade or density no darker than 20% opacity, except as otherwise provided in these regulations.

5. R307-201-1(9), UAC - Opacity Observation.

6. R307-203-1(1), UAC - Commercial and Industrial Sources. Any coal, oil, or mixture thereof, burned in any fuel burning or process installation not covered by New Source Performance Standards for sulfur emissions shall contain no more than 1.0 pound sulfur per million gross Btu heat input for any mixture of coal or .85 pounds sulfur per million gross Btu heat input for any oil.

7. R307-205 (UAC) - Emission Standards: Fugitive Emissions and Fugitive Dust.

8. R307-206, UAC - Abrasive Blasting Requirements - Opacity limitations and performance standards for abrasive blasting.

9. R307-401-4(3) Low Oxides of Nitrogen Burner Technology.
(a) Except as provided in (b) below, whenever existing fuel combustion burners are replaced, the owner or operator shall install low oxides of nitrogen burners or equivalent oxides of nitrogen controls, as determined by the executive secretary, unless such equipment is not physically practical or cost effective. The owner or operator shall submit a demonstration that the equipment is not physically practical or cost effective to the executive secretary for review and approval prior to beginning construction.
(b) The provisions of (a) above do not apply to non-commercial, residential buildings.

10. R307-401-XX, UAC - Exemptions and Special Provisions



Attachment: 2. Site Plan (American Eagle Appeal)

401-9. Small Source Exemption.
401-10. Source Category Exemptions.
401-11. Replacement-in-Kind Equipment.
401-12. Reduction in Air Contaminants.
401-13. Plantwide Applicability Limits.
401-14. Used Oil Fuel Burned for Energy Recovery.
401-15. Air Strippers and Soil Venting Projects.
401-16. De minimis Emissions From Soil Aeration Projects.

11. R307-401-17, UAC - Rules for relocation of temporary sources.

12. R307-403-3, UAC - Every major new source or major modification must be reviewed by the Executive Secretary to determine if a source will cause or contribute to a violation of the NAAQS.

13. R307-403-5(1)(b), UAC - Enforceable offsets of 1.2:1 are required for new sources or modifications that would produce an emission increase greater than or equal to 50 tons per year of any combination of $PM_{10}$, $SO_2$, and $NO_x$.

14. R307-403-5(1)(c), UAC - Enforceable offsets of 1:1 are required for new sources or modifications that would produce an emission increase greater than or equal to 25 tons per year but less than 50 tons per year of any combination of $PM_{10}$, $SO_2$, and $NO_x$.

15. R307-405. Permits: Major Sources in Attainment or Unclassified Areas (PSD).
405-1. Purpose.
405-2. Applicability.
405-3. Definitions.
405-4. Area Designations.
405-5. Area Redesignation.
405-6. Ambient Air Increments.
405-7. Ambient Air Ceilings.
405-8. Exclusions from Increment Consumption.
405-9. Stack Heights.
405-10. Exemptions.
405-11 Control Technology Review.
405-12. Source Impact Analysis.
405-13. Air Quality Models.
405-14. Air Quality Analysis.
405-15. Source Information.
405-16. Additional Impact Analysis.
405-17. Sources Impacting Federal Class I Areas: Additional Requirements.
405-18. Public Participation.
405-19. Source Obligation.
405-20. Innovative Control Technology.
405-21. Actuals PALs.
405-22. Banking of Emission Offset Credit in PSD Areas.



Attachment: 2. Site Plan (American Eagle Appeal)

16. R307-406, UAC – Visibility

406-1.(1) The Executive Secretary shall review any new major source or major modification proposed in either an attainment area or area of non-attainment area for the impact of its emissions on visibility in any mandatory Class I area.

17. R307-410, UAC - Permits: Emissions Impact Analysis (Air Quality Modeling)

18. R307-420, UAC - Permits: Ozone Offset Requirements in Davis and Salt Lake Counties.

19. 40 CFR, Part 50 - National Ambient Air Quality Standards (NAAQS). The following areas are Non-attainment areas:

| | |
|---|---|
| $PM_{10}$ | Salt Lake and Utah Counties, and the city of Ogden |
| $SO_2$ | Salt Lake County and the Oquirrh Mountains above 5,600 feet in Eastern Tooele County |

The following areas are Maintenance Areas:

| | |
|---|---|
| CO | Ogden, Provo, and Salt Lake City |

20. 40 CFR 60.15, Definition of Reconstruction - the replacement of components of an existing facility to such an extent that:

A. The fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable entirely new facility and

B. It is technologically and economically feasible to meet the applicable standards set forth in this part.

## V. RECOMMENDED APPROVAL ORDER CONDITIONS

**General Conditions:**

1. This Approval Order (AO) applies to the following company:

Site Office
Westroc, Inc.
618 East 1700 South
American Fork, Utah 84003

Corporate Office Location
Westroc, Inc.
670 West 220 South
Pleasant Grove, Utah 84062

Phone Number (801) 785-5600
Fax Number (801) 785-7408



Attachment: 2. Site Plan (American Eagle Appeal)

The equipment listed in this AO shall be operated at the following location:

Street address
618 East 1700 South
American Fork, Utah County

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27
4,466,000 m. Northing, 433,600 m. Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307) and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.

3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.

4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.

5. All records referenced in this AO which are required to be kept by Westroc shall be made available to the Executive Secretary or Executive Secretary's representative upon request. Records shall be kept for the following minimum periods:

| | | |
|---|---|---|
| A. | Emission inventories | Five years from the due date of each emission statement or until the next inventory is due, whichever is longer. |
| B. | All other records | Two years |

6. Westroc, Inc. shall install and operate the concrete batch plant and shall conduct its operations in accordance with the terms and conditions of this AO, which was written pursuant to Westroc's Notice of Intent submitted to the Division of Air Quality (DAQ) on February 5, 2007.

7. The approved installations shall consist of the following equipment or equivalent*:

A. One (1) 150 cu yd/hr Truck Mix concrete plant.

B. One (1) Cement and Fly Ash Storage Silo with four compartments, design capacity 3,000 bbl

C. One (1) 7,000,000 Btu/hr Natural Gas Boiler

D. Four (4) Sand and Gravel Storage Bins

E. Conveyors and stacker



Attachment: 2. Site Plan (American Eagle Appeal)

F. Front-end Loaders

G. Miscellaneous Trucks

H. One (1) Diesel Storage Tank, maximum capacity 15,000 gallons

I. Miscellaneous Water and Admixture Tanks

* Equivalency shall be determined by the Executive Secretary.

8. Westroc, Inc. shall notify the Executive Secretary in writing when the installation of the equipment listed in Condition #7 has been completed and is operational, as an initial compliance inspection is required. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation has not been completed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO in accordance with R307-401-18.

**Limitations and Tests Procedures**

9. Visible emissions from the following emission points shall not exceed the following values:

A. Conveyor transfer points – 10% opacity
B. Conveyor drop points – 20% opacity
C. All diesel engines - 20% opacity
D. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9. Visible emissions from mobile sources and intermittent sources shall use procedures similar to Method 9, but the requirement for observations to be made at 15-second intervals over a six-minute period shall not apply. Any time interval with no visible emissions shall not be included.

.

10. The following production and/or consumption limits shall not be exceeded:

A. 150 cubic yards of concrete produced per hour.

B. 2,400 cubic yards of concrete produced per day.

C. 450,000 cubic yards of concrete produced per rolling 12-month period



Attachment: 2. Site Plan (American Eagle Appeal)

D. 7,000 decatherms of natural gas consumed per rolling 12-month period.

Records of consumption/production shall be kept for all periods when the plant is in operation. The records of consumption/production shall be kept on a **daily** basis, with the exception of natural gas consumption, which may be determined by monthly billing records. To determine compliance with a rolling 12-month total, Westroc shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months.

**Roads and Fugitive Dust**

11. Westroc, Inc. shall abide by a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Name of project. Westroc, Inc. shall submit a fugitive dust control plan to the Executive Secretary, attention: Compliance Section, for approval within 30 days of the date of this AO.

12. Westroc, Inc. shall abide by all applicable requirements of UAC R307-309 for $PM_{10}$ nonattainment areas for Fugitive Emission and Fugitive Dust sources.

13. All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed to control fugitive dust. The application of water treatment shall be used. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition. The opacity shall not exceed 20% during all times the areas are in use or unless it is below freezing. If chemical treatment is to be used, the plan must be approved by the Executive Secretary. Records of water and/or chemical treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:

    A. Date and time of day treatments were made
    B. Number of treatments made, dilution ratio, and quantity
    C. Rainfall received, if any, and approximate amount

14. The haul road shall not exceed 700 feet in length and the vehicle speed along the haul road shall not exceed 10 miles per hour. The vehicle speed on the haul road shall be posted, at a minimum, on site at the beginning of the haul road so that it is clearly visible from the haul road.

15. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity. Visible emissions determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Opacity readings shall be made ½ the vehicle length or greater behind the vehicle and at approximately ½ the height of the vehicle or greater. The accumulated six readings shall be averaged for the compliance value.



Attachment: 2. Site Plan (American Eagle Appeal)

16. The storage piles shall be watered to minimize generation of fugitive dusts as dry conditions warrant or as determined necessary by the Executive Secretary. Records of water treatment shall be kept for all periods when the plant is in operation.

**Fuels**

17. Westroc shall use natural gas as fuel in the boiler.

18. The sulfur content of any diesel fuel oil burned in off highway equipment shall not exceed 0.50% by weight as determined by ASTM Method D-4294-89 or approved equivalent. On-highway diesel fuel shall be limited to 0.05% sulfur by weight. The sulfur content shall be tested if directed by the Executive Secretary. Fuel supplier records shall be available on-site for the Executive Secretary or a representative of the Executive Secretary.

**Records & Miscellaneous**

19. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this Approval Order, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.

20. Westroc shall comply with R307-150 Series. Inventories, Testing and Monitoring.

21. Westroc shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality. The Utah Administrative Code R307 rules used by DAQ, the Notice of Intent (NOI) guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:
http://www.airquality.utah.gov/

The annual emissions estimations below include point source, fugitive emissions, fugitive dust, road dust, etc. and do not include tail pipe emissions, grandfathered emissions, etc. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, Maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.



Attachment: 2. Site Plan (American Eagle Appeal)

The Potential To Emit (PTE) emissions for this plant are currently calculated at the following values:

| Pollutant | Total Emissions (tons/year) |
|---|---|
| PM10 | 8.18 |
| PM2.5 | 2.41 |
| SO2 | 0.38 |
| NOx | 4.19 |
| CO | 1.46 |
| VOC | 0.54 |
| Total HAPs | 0.009 |

Attachment: 2. Site Plan (American Eagle Appeal)

**From:** Chad Harris
**To:** jwnewby@comcast.net
**Date:** 5/15/2007 3:01 PM
**Subject:** Westroc American Fork
**Attachments:** Westroc AF draft review 051507.pdf

Hi James,

I spoke to Greg Reece today about the draft review for Westroc's planned concrete batch plant in American Fork. Greg requested a few changes and I have made most of those. Specifically, he requested that I remove the daily limit of 12 hours of plant operation from condition 10A. I have spoken to some of my peers about that condition and have concluded that there should be some limit on daily use of the plant because the site is in Utah County, which is a non-attainment area for PM10. By limiting the daily use we spread particulate emissions over the whole year and thereby reduce the likelihood of short term exceedences. However, I realize that the nature of the business is such that some days require more production than others to meet the demand. So I have changed the daily limit on operating hours from 12 to 16, and have kept the total annual operating hours at 3000. This should allow the source some flexibility in meeting customers' demand and should distribute plant operation throughout the year.

I'm attaching an updated draft of the review. Please have Greg sign and return the second page as soon as possible. I told Greg I could get the Intent to Approve out to public comment by the end of this week if I receive the signed page 2 by Thursday.

Thanks,
Chad Harris

**From:** Chad Harris
**To:** jwnewby@comcast.net
**Date:** 5/1/2007 11:53 AM
**Subject:** Westroc American Fork
**Attachments:** Westroc AF draft review 050107.pdf

Hi James,

I am attaching a draft of my review for the Westroc concrete batch plant in American Fork. Please look it over and pass it on to Westroc. If you have any recommendations or desire any changes, please let me know. When you're comfortable with it, have Westroc sign the second page and return it to me so I can send it out for public comment.

Thanks,
Chad Harris
801-536-4069

Attachment: 2. Site Plan (American Eagle Appeal)

*Air Quality Services* . . . . Providing Air Emissions Permitting Support

968 South 970 West, Woods Cross, Utah 84087 Phone & Fax: (801) 294-0454 E-mail: jwnewby@comcast.net

AI ID → 14022

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
FEB 5 2007
DIVISION OF AIR QUALITY

February 5, 2007

Mr. Rick Sprott, Director
Utah Division of Air Quality
Post Office Box 144820
Salt Lake City, Utah 84114-4820

Re: Notice of Intent for the Westroc, Inc. American Fork Concrete Plant

Dear Mr. Sprott:

On behalf of Westroc, Inc., Air Quality Services submits to the Utah Division of Air Quality (DAQ) this Notice of Intent to operate a concrete plant in American Fork, Utah.

A check for the application fee of $1,900.00 is being prepared. It will be submitted to the DAQ as soon as it is available.

Thank you for your assistance. If you have questions or need any additional information, please contact me at (801) 294-0454.

Sincerely,

**AIR QUALITY SERVICES**

James W. Newby

James W. Newby

Attachment
Notice of Intent

c: Mr. Greg Reece, Westroc, Inc.

Attachment: 2. Site Plan (American Eagle Appeal)

Concrete Batching

Exhibit  to P  MA  expert report - Ex erpts from Ameri an Eagle s small so r e exemption appli ation showing vol mes  tah  A  relied  pon to grant the small so r e exemption from stri ter air    ality reg lations.

**CONCRETE BATCH PLANT**

| Process | Fugitive or Non-Fugitive | Throughput | | Emission Factors (lb/yd$^3$) | | | $PM_{10}$ Emissions | | $PM^{2.5\ 4}$ | | TSP Emissions | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | yd$^3$/hr | yd$^3$/yr | $PM_{10}$ | $PM_{2.5}$ | TSP | lb/hr | tpy | lb/hr | tpy | lb/hr | tpy |
| Aggregate Delivery to Storage Pile -Uncontrolled[1] | Fugitive | 30 | 120,000 | 0.0031 | 0.0022 | 0.0064 | 0.09 | 0.19 | 0.07 | 0.13 | 0.19 | 0.38 |
| Sand Delivery to Storage Pile - Uncontrolled[1] | Fugitive | 30 | 120,000 | 0.0007 | 0.0005 | 0.0015 | 0.02 | 0.04 | 0.01 | 0.03 | 0.05 | 0.09 |
| Aggregate Transfer to Conveyor[1] | Fugitive | 30 | 120,000 | 0.0031 | 0.0022 | 0.0064 | 0.02 | 0.04 | 0.01 | 0.03 | 0.04 | 0.08 |
| Sand Transfer to Conveyor[1] | Fugitive | 30 | 120,000 | 0.0007 | 0.0005 | 0.0015 | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 | 0.02 |
| Aggregate Transfer to Elevated Storage - Controlled[1,2] | Fugitive | 30 | 120,000 | 0.0031 | 0.0022 | 0.0064 | 0.02 | 0.04 | 0.01 | 0.03 | 0.04 | 0.08 |
| Sand Transfer to Elevated Storage - Controlled[1,2] | Fugitive | 30 | 120,000 | 0.0007 | 0.0005 | 0.0015 | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 | 0.02 |
| Cement Delivery to Silo - Controlled[3] | Non-Fugitive | 180 | 120,000 | 0.0001 | 0.0001 | 0.0003 | 0.02 | 0.01 | 0.01 | 0.00 | 0.05 | 0.02 |
| Cement Supplement Delivery to Silo - Controlled[3] | Non-Fugitive | 180 | 120,000 | 0.0014 | 0.0010 | 0.0025 | 0.25 | 0.08 | 0.17 | 0.06 | 0.45 | 0.15 |
| Weigh hopper loading - Controlled[3] | Non-Fugitive | 200 | 120,000 | 0.0007 | 0.0005 | 0.0014 | 0.14 | 0.04 | 0.09 | 0.03 | 0.29 | 0.09 |
| Central mix loading - Controlled[1] | Non-Fugitive | 200 | 120,000 | 0.0004 | 0.0002 | 0.0006 | 0.07 | 0.02 | 0.05 | 0.01 | 0.12 | 0.04 |
| **Total** | **Fugitive** | | | | | | **0.16** | **0.32** | **0.11** | **0.22** | **0.33** | **0.66** |
| **Total** | **Non-Fugitive** | | | | | | **0.47** | **0.15** | **0.33** | **0.11** | **0.91** | **0.29** |

NOTES:

1 - Emission factors from Table 11.12-5&6

2 - The conveyors transfer material to the controlled elevated silos that have a control effeciency of 80% which has been applied to the conveyors.

3 - Emission factors from Equation 11.12-2 in table below

4- Assume PM2.5 is 70% of PM10

| | | |
|---|---|---|
| 1 yd$^3$ of ready-mix = 3600 lbs | 3600 | |
| 1 yd$^3$ of ready-mix has 1600 lbs of course aggregate | 1600 | 44% |
| 1 yd$^3$ of ready-mix has 1200 lbs of fine aggregate | 1200 | 33% |
| 1 yd$^3$ of cement = 420 lbs | 420 | 12% |
| 1 yd$^3$ of fly ash = 110 lbs | 110 | 3% |
| Water | 270 | 8% |

| Material | Ready Mix | Fine | Course | Total Agg. | Cement | Fly Ash | Water |
|---|---|---|---|---|---|---|---|
| TPY | 216,000 | 72,000 | 96,000 | 168,000 | 25200 | 7,344 | 9000 |
| Cubic Yds/yr | 120,000 | 120,000 | 120,000 | 120,000 | 96000 | 24000 | |
| Ratio Used (wt% | 100% | 33% | 44% | 78% | 12% | 3% | 8% |

| Process | PM lb/ton | $PM_{10}$ lb/ton | PM lb/yd$^3$ | $PM_{10}$ lb/yd$^3$ |
|---|---|---|---|---|
| Aggregate Transfer to Conveyor - UnControlled | 0.0069 | 0.0033 | 0.0064 | 0.0031 |
| Sand Transfer to Conveyor - UnControlled | 0.0021 | 0.0010 | 0.0015 | 0.0007 |
| Cement Delivery to Silo - Controlled[1] | 0.0010 | 0.0003 | 0.0003 | 0.0001 |
| Cement Supplement Delivery to Silo - Controlled[1] | 0.0089 | 0.0049 | 0.0025 | 0.0014 |
| Weigh hopper loading - Controlled[1] | 0.0051 | 0.0024 | 0.0014 | 0.0007 |

Emission Factor Calculations

Equation 11.12-2: EF (lb/yd$^3$) = 0.282 * EF Table 11.12-2 0.282

Attachment: 2. Site Plan (American Eagle Appeal)

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
AIR QUALITY

# Concrete Batch Plants

| Equipment Details | | |
|---|---|---|
| Hourly Rating | 30 | $yd^3$/hour |
| Annual Production | 120,000 | $yd^3$/year |
| Type | Truck-Mix | |

| Pollutant | Percent $PM_{2.5}$ of $PM_{10}$ | Emission Rate (lbs/hr) | Emission Total (tons/year) | Reference |
|---|---|---|---|---|
| $PM_{10}$ | | 0.69 | 1.37 | See Below, & AP-42 Appendix B.2.2 Category 3 |
| $PM_{2.5}$ | 29.4% | 0.20 | 0.40 | |
| HAP | | 0.00 | 0.00 | |

| Process (Controlled) | $PM_{10}$ Emission Factor (lb/ton) | $PM_{10}$ Emission Factor ($lb/yd^3$) | $PM_{10}$ Emission Rate (lbs/hr) | $PM_{10}$ Emission Total (tons/year) | Reference |
|---|---|---|---|---|---|
| Aggregate Delivery to Ground | | 0.0031 | 0.09 | 0.19 | AP-42 Table 11.12-2, Table 11.12-5, Table 11.12-6, Equation 11.12-2 |
| Sand Delivery to Ground | | 0.0007 | 0.02 | 0.04 | |
| Aggregate Delivery to Conveyor | | 0.0031 | 0.09 | 0.19 | |
| Sand Delivery to Conveyor | | 0.0007 | 0.02 | 0.04 | |
| Aggregate Delivery to Storage | | 0.0031 | 0.09 | 0.19 | |
| Sand Delivery to Storage | | 0.0007 | 0.02 | 0.04 | |
| Cement Delivery to Silo | | 0.0001 | 0.00 | 0.01 | |
| Additive Delivery to Silo | | 0.0002 | 0.01 | 0.01 | |
| Weigh Hopper Loading | | 0.0038 | 0.11 | 0.23 | |
| Truck-Mix Loading | 0.0263 | 0.0074166 | 0.22 | 0.44 | |

| Hazardous Air Pollutant (Controlled) | Emission Factor (lb/ton) | Emission Factor ($lb/yd^3$) | Emission Rate (lbs/hr) | Emission Total (tons/year) | Reference |
|---|---|---|---|---|---|
| Arsenic | 1.61E-06 | 4.53E-07 | 1.36E-05 | 2.72E-05 | AP-42 Table 11.12-8 |
| Beryllium | 1.95E-07 | 5.50E-08 | 1.65E-06 | 3.30E-06 | |
| Cadmium | 9.26E-09 | 2.61E-09 | 7.83E-08 | 1.57E-07 | |
| Chromium | 5.35E-06 | 1.51E-06 | 4.53E-05 | 9.05E-05 | |
| Lead | 2.06E-06 | 5.81E-07 | 1.74E-05 | 3.49E-05 | |
| Manganese | 2.12E-05 | 5.97E-06 | 1.79E-04 | 3.58E-04 | |
| Nickel | 7.10E-06 | 2.00E-06 | 6.01E-05 | 1.20E-04 | |
| Phosphorus | 1.58E-05 | 4.47E-06 | 1.34E-04 | 2.68E-04 | |
| Selenium | 1.85E-07 | 5.23E-08 | 1.57E-06 | 3.14E-06 | |

Attachment: 2. Site Plan (American Eagle Appeal)

AN ORDINANCE

AN ORDINANCE AMENDING SECTION 1.12.010 OF THE REVISED ORDINANCES OF AMERICAN FORK CITY 1985, AS AMENDED, ANNEXING CERTAIN PROPERTIES TO AMERICAN FORK CITY AND ESTABLISHING ZONING CLASSIFICATION FOR SAID PROPERTY.

BE IT ORDAINED BY THE CITY COUNCIL OF AMERICAN FORK CITY, UTAH:

SECTION I. THAT THE FOLLOWING DESCRIBED REAL PROPERTY BE, AND THE SAME IS HEREBY ANNEXED TO AMERICAN FORK CITY, UTAH, THE CORPORATE LIMITS OF SAID CITY ARE HEREBY EXTENDED TO INCLUDE SAID DESCRIBED PROPERTY, AND SAID PROPERTY IS HEREBY DECLARED TO BE PART OF AMERICAN FORK CITY AND SHALL HENCEFORTH BE SUBJECT TO ALL OF THE ORDINANCES AND REGULATIONS THEREOF, AND THAT THE DESCRIPTION OF THE BOUNDARIES OF AMERICAN FORK CITY AS SET FORTH IN SECTION 1.12.010 OF THE REVISED ORDINANCES BE AMENDED TO INCLUDE THE FOLLOWING DESCRIBED PROPERTY TO-WIT:

ENT 33331:2001 PG 1 of 19
RANDALL A. COVINGTO
UTAH COUNTY RECORDE
2001 Apr 10 10:50 am FEE 0.00 BY AB
RECORDED FOR AMERICAN FORK CITY

ORDINANCE NO. 99-05-17
STRATE AF ANNEXATION (1550 SOUTH 600 EAST)
SEE ATTACHMENT 'A'

SECTION II. THAT THE TERRITORY ANNEXED UNDER SECTION I ABOVE, IS HEREBY CLASSIFIED INTO THE PI-1, PLANNED INDUSTRIAL ZONE, SUBJECT TO THE TERMS AND CONDITIONS OF THE STRATE ANNEXATION AGREEMENTS (SEE ATTACHMENT 'B')

SECTION III. THAT THIS ORDINANCE SHALL TAKE EFFECT UPON ITS PASSAGE AND FIRST PUBLICATION. PASSED BY THE CITY COUNCIL OF AMERICAN FORK, THIS 25 DAY OF MAY, 1999.

TED BARRATT, MAYOR

ATTEST:

STATE OF UTAH
COUNTY OF UTAH

I, RICHARD M. COLBORN, RECORDER OF AMERICAN FORK CITY, UTAH, DO HEREBY CERTIFY THE ABOVE AND FOREGOING TO BE A FULL, TRUE AND CORRECT COPY OF AN ORDINANCE AMENDING SECTION 1.12.010 OF THE REVISED ORDINANCES OF AMERICAN FORK CITY 1985, AMENDED, ANNEXING CERTAIN PROPERTIES TO AMERICAN FORK CITY AND ESTABLISHING ZONING CLASSIFICATION FOR SAID PROPERTY.

IN WITNESS WHEREOF, I HEREUNTO SET MY HAND AND AFFIX THE CORPORATE SEAL OF AMERICAN FORK, UTAH THIS 25 DAY OF MAY, 1999.

RICHARD M. COLBORN, RECORDER

Attachment: 2. Site Plan (American Eagle Appeal)

ENT 33331:2001 PG 2 of 1ª

**ATTACHMENT 'A'**

# SURVERYOR'S CERTIFICATE

I, MATT JUDD, DO HEREBY CERTIFY THAT I AM A REGISTERED SURVEYOR AND THAT I HOLD CERTIFICATE NO. 6913 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE PREPARED THIS MAP OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED HEREON AND THAT IT IS TRUE AND CORRECT. I ALSO CERTIFY THAT THE BOUNDARY IS BOUNDED AND DESCRIBED AS SHOWN BELOW.

June 15, 1995
DATE

Marc B. Judd
SURVEYOR
(SEE SEAL BELOW)

# BOUNDARY DESCRIPTION

COMMENCING AT A POINT LOCATED NORTH 00°05'46" WEST ALONG THE SECTION LINE 568.43 FEET AND EAST 2814.48 FEET FROM THE SOUTHWEST CORNER OF SECTION 25, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 90°00'00" EAST 162.20 FEET; THENCE SOUTH 37°36'24" EAST ALONG THE EXISTING AMERICAN FORK CITY BOUNDARY LINE 888.59 FEET; THENCE NORTH 88°51'58" WEST 635.10 FEET; THENCE SOUTH 00°03'14" WEST 687.08 FEET; THENCE NORTH 89°29'14" WEST 194.02 FEET; THENCE SOUTH 00°41'57" WEST 727.02 FEET; THENCE SOUTH 88°56'21" EAST 162.64 FEET; THENCE SOUTH 01°16'41" WEST 676.76 FEET; THENCE NORTH 89°51'11" WEST 634.14 FEET; THENCE NORTH 00°00'00" WEST 44.98 FEET; THENCE NORTH 90°00'00" WEST 223.99 FEET; THENCE NORTH 00°00'00" WEST 688.29 FEET; THENCE NORTH 90°00'00" WEST 203.10 FEET; THENCE NORTH 89°13'05" WEST 29.19 FEET; THENCE NORTH 00°22'14" EAST 1391.34 FEET; THENCE SOUTH 89°30'00" EAST 1060.23 FEET; THENCE NORTH 00°40'00" EAST 666.01 FEET TO THE POINT OF BEGINNING.

AREA = 54.3500 ACRES

Attachment: 2. Site Plan (American Eagle Appeal)

**ATTACHMENT 'B'**

3-31-01
Adoption Draft
(Revised)

**ANNEXATION AGREEMENT**

**Strate-AF Annexation**

ENT 33331:2001 PG 3 of 1

This agreement, made and entered into this 28th day of July, 1999, by and between The City of American Fork, Utah, a Utah Municipal Corporation (hereafter referred to as "City") and Legacy Properties and Investments, L.C. (hereafter referred to as "Legacy"), John Kelly Eastman, Jerry Adam Eastman and Judy Ann Eastman Jensen (hereafter referred to collectively as "Eastman") and Phelon Family Limited Partnership (hereafter referred to as "Phelon"),is based on the following:

**RECITALS**

**WHEREAS,** Legacy, Eastman and Phelon (hereafter referred to collectively as "Applicants") are each the owner of certain parcels of privately owned real property located within the unincorporated territory of Utah County, but contiguous to the corporate boundary of the City, and

**WHEREAS,** the Applicants have submitted a *Request to Initiate Annexation of Land Within an Island or Peninsula* requesting that their respective properties be annexed to the City. A copy of the Annexation Plat, denoted as the Strate Annexation, showing the boundary of the area proposed for annexation and the portion owned by each (hereafter referred to as "Annexation Area") and also a copy of the Request are attached (Attachments 1 an 2 respectively) and are, by this reference made part of this Agreement, and

**WHEREAS,** the area proposed for annexation constitutes a portion of an existing island or peninsula, and

**WHEREAS,** in accordance with the provisions of UCA 10-2-418, the American Fork City Council has heretofore adopted Resolution No. 99-01-01R indicating its intent to annex the entire Annexation Area. Further, notice of hearing regarding the proposed annexation has been published and the public hearing thereon held. No protests to the annexation have been received, and

**WHEREAS,** The City Council has determined that, subject to compliance with certain terms and conditions, annexation of the territory is in the best interest of the City and has enacted an ordinance of annexation relating thereto (Ordinance 99-5-17) and approved execution of this Agreement, with instructions to record the annexation plat at the office of the Utah County Recorder, subject to those certain understandings as are more fully set forth in this Agreement and upon: (1) completion of all

Attachment: 2. Site Plan (American Eagle Appeal)

outstanding tasks identified herein, and (2) execution of this Agreement.



**TERMS AND CONDITIONS**

**NOW THEREFORE,** based on the above recitals and in consideration of the annexation of the territory described in Attachment 1 to the City, the parties covenant and agree as follows:

**SECTION 1.** The real property to which the terms of this Agreement apply shall be each of the parcels of private real property within the Annexation Area, and identified on Attachment 1 Legacy, Eastman and Phelon Parcels. Said Attachment 1 is hereby incorporated by reference.

**SECTION 2.** Legacy, Eastman and Phelon each hereby acknowledge that the City is not required to approve the Strate Annexation and that the terms and conditions of annexation, as set forth herein, are reasonable and entered into freely and voluntarily. Further, Legacy, Eastman and Phelon, by virtue of the request for annexation and signature attached hereto, hereby acknowledge and agree that the benefit received from annexation of the parcels is equal to or greater than the requirements and conditions of annexation set forth under this Agreement and the conditions of development imposed by the City upon the property pursuant to the terms of the City's Development Code and Impact Fee Ordinance.

**SECTION 3.** Legacy, Eastman and Phelon each affirms that they are the sole owner of their respective parcels as identified on Attachment 1 and have complete authority to enter into this Agreement and to bind their respective parcels hereto.

**SECTION 4.** The City affirms that, pursuant to the terms of the Annexation Ordinance (Ordinance 99-05-17), the zone classification to be made applicable to the entire Annexation Area shall be the PI-1 Planned Industrial Zone.

**SECTION 5.** Concurrently with passage of the Annexation Ordinance and execution of this Agreement the Applicants have submitted an annexation concept plan (Attachment 3) showing the intended location of 1500 South and 500 East Streets and also the location of existing major water and sewer utilities and surface water drainage facilities through the annexation area. The plan has been reviewed by the Planning Commission and determined by them to be generally consistent with the terms and intent of the proposed revisions to General Plan for the area. It is expressly understood and agreed by the City and Applicants that all further submissions for development approval by any of the Applicants will be in substantial compliance with the street and utility systems set forth on the concept plan.

**SECTION 6.** As a condition of Annexation, each of the Applicants agrees to convey to the City their proportionate share

Attachment: 2. Site Plan (American Eagle Appeal)

of the additional right-of-way necessary to accommodate the widening of 1500 South Street as an Arterial Class street, also 500 East as a collector class street and also such area as is determined necessary to preserve the historic drainage channels and other resource protected areas within the Annexation Area. The general location of the essential street right-of-way and historic drainage channels is identified on Attachment 3 and the legal description for the street or other areas required to be conveyed and a copy the deeds conveying said parcels to the City is attached hereto (Attachment 4) and the City hereby acknowledges receipt of the executed originals.

**SECTION 7.** As a condition of approval each of the Applicants agrees to convey sufficient water rights to meet the anticipated demand of development occurring within the Annexation Area calculated at the rate of 3 acre feet per acre, not including street right-of-way area previously conveyed to the City. Each Applicant will provide the water rights applicable to their respective parcels. A summary of the water right to be conveyed under this provisions is set forth on Attachment 5. The water rights conveyance requirement is based on typical water use characteristics for general office structures under average circumstances. Accordingly, in the event subsequent development of the property includes uses which have a demonstrated higher rate of use, the City shall be entitled to require the conveyance of additional water rights to meet the water requirements of such a use. Any such supplemental water rights conveyance will be required as a condition of development and not as a condition of annexation.

**SECTION 8.** The water right conveyance requirement is to be satisfied by the conveyance of a combination of sources, as follows:

LEGACY PARCELS (Amount Required 120.6 acre feet)

1. 52.0 acre feet from surface sources under WUC# 55-4578

2. 68.6 acre feet from a combination of well and surface sources under WUC# 55-3989 and 55-3990.

EASTMAN PARCEL (Amount Required - 15.750 acre feet)

1. 15.750 acre feet from WUC# 55-332.

PHELON PARCEL (Amount required - 15.74 acre feet)

1. 9.84 shares of Pleasant Grove Irrigation Company Stock (Cert # 6407).

A copy of the stock certificate and the deeds conveying the water right to the City is attached hereto (Attachment 5) and City acknowledges receipt of the executed originals.

Attachment: 2. Site Plan (American Eagle Appeal)

**SECTION 9.** A review of the record of the proposed water right indicates that, if fully approved for conversion to municipal use by the State Engineer, the amount of the right would equal or exceed the amount needed to satisfy the requirements of the proposed development. However, in the event that Utah State Engineer shall refuse to approve the Change Application as submitted or that the approval shall be for a quantity of water less than required to meet the water conveyance requirements for development of the Annexation Area, Each of the Applicants hereby agree to provide substitute water right, acceptable to the City, in an amount sufficient to meet the deficiency for their respective parcels.

**SECTION 10.** The Applicants acknowledge that some or all of the parcels may have significant physical limitations for development including, but not limited to, the possibility of jurisdictional wetlands, liquefaction potential, high water table and unstable soils. All further requests for development upon the site may include the need for extra-ordinary studies to determine suitability for development and the Applicants agree that annexation of the property by the City shall not be construed as a determination of suitability for development.

**SECTION 11.** Development of the site requires the extension of a water and sewer line from existing facilities. The Applicants acknowledge that "off-site" sewer and water lines may be required and that some or all of these facilities may need to be oversized. The Applicants agree to construct the "off-site lines" as part of the development of the first phase of the project. The extent of any oversizing and any provisions for cost sharing or reimbursement by the City will be established at the time of final approval of any development project and in accordance with Section 3-9 of the Development Code and other applicable City policies relating thereto.

**SECTION 12.** No impact fees are required as a condition of annexation. However, nothing in this Agreement constitutes a waiver of any obligation that the Applicants or their successor may have for the payment of impact fees required as a condition of development of the Annexation Area or any portion thereof. The Applicant acknowledges that no development approval or building permit shall be issued until all applicable fees required by City ordinance have been paid at the amount then in effect.

**SECTION 13.** Should any of the parties default in the performance of any of the terms of this agreement, the parties shall first seek mediation to resolve any defaulting performance. The defaulting party shall pay all costs and expenses, including mediation fees and/or reasonable attorney's fee, which may arise from enforcing this agreement, whether such remedy is pursued by mediation and/or filing suit or otherwise.

Attachment: 2. Site Plan (American Eagle Appeal)

**SECTION 14.** Any Notice to be given hereunder shall be given by certified mail, return receipt requested, addressed as follows:

a. If to City, to the City of American Fork, 31 North Church Street, American Fork, Utah 84003

b. If to Legacy, to Legacy Properties and Investments, 1402 West State Road, Pleasant Grove, Utah 84062

c. If to Eastman, to John Kelly Eastman, 9991 North 5320 West, Highland, Utah 84003

d. If to Phelon, to Stephen Phelon, PO Box 1090, American Fork, Utah 84003

**SECTION 15.** This Agreement constitutes the entire agreement between the parties and may be changed only in writing signed by all parties, and this agreement shall bind the heirs, assigns and successors in interest of the respective parties. If any party shall breach this Agreement, the other party shall be entitled to recover their attorneys fees and court costs in addition to other lawful damages resulting therefrom.

**IN WITNESS WHEREOF,** the parties have signed this agreement on the date first mentioned above.

LEGACY PROPERTIES AND INVESTMENTS, L.C. (A Utah Limited Liability Co.)

JOHN C. HEINER

by: _____
Title: Member

AMERICAN FORK CITY

by: _____
Mayor

attest: _____
City Recorder

JOHN KELLY EASTMAN

JERRY ADAM EASTMAN

JUDY ANN EASTMAN JENSEN

PHELON FAMILY LIMITED PARTNERSHIP

AMERICAN FORK CITY CORPORATE SEAL UTAH COUNTY STATE OF UTAH

Attachment: 2. Site Plan (American Eagle Appeal)

# LIST OF ATTACHMENTS

**ATTACHMENT 1.** Copy of Annexation Plat

**ATTACHMENT 2.** Copy of Request for Annexation

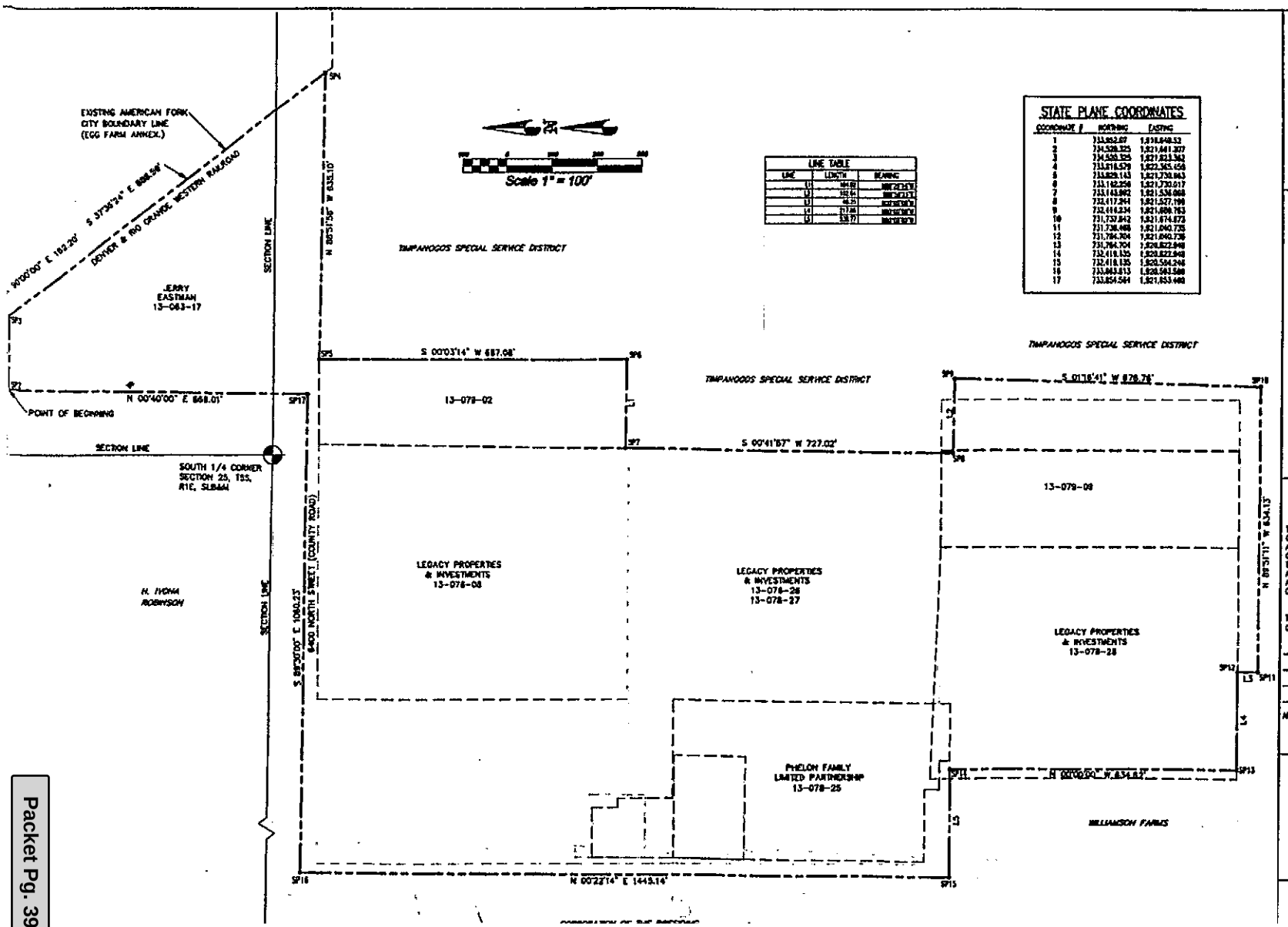
**ATTACHMENT 3.** Annexation Concept Plan

**ATTACHMENT 4.** Copy of Deeds Conveying Street Right-of-way for Widening of 1500 South and 500 East Streets and the drainage corridor along 500 East.

**ATTACHMENT 5.** Copy of evidence of conveyance of water rights.

Attachment: 2. Site Plan (American Eagle Appeal)

# ATTACHMENT




| LINE TABLE | | |
|---|---|---|
| LINE | LENGTH | BEARING |
| L1 | 144.69 | N89°51'56"W |
| L2 | 102.64 | N89°28'14"W |
| L3 | 46.35 | N01°16'41"E |
| L4 | 77.86 | N89°51'56"W |
| L5 | 538.77 | N00°03'14"E |

## STATE PLANE COORDINATES

| COORDINATE # | NORTHING | EASTING |
|---|---|---|
| 1 | 733,852.67 | 1,818,648.53 |
| 2 | 734,528.325 | 1,821,641.207 |
| 3 | 734,530.525 | 1,821,823.362 |
| 4 | 733,214.579 | 1,822,345.458 |
| 5 | 733,829.143 | 1,821,730.843 |
| 6 | 733,182.256 | 1,821,730.017 |
| 7 | 733,143.892 | 1,821,536.868 |
| 8 | 732,417.241 | 1,821,527.198 |
| 9 | 732,414.234 | 1,821,884.153 |
| 10 | 731,737.842 | 1,821,874.672 |
| 11 | 731,736.488 | 1,821,840.735 |
| 12 | 731,784.304 | 1,821,840.736 |
| 13 | 731,784.704 | 1,820,822.948 |
| 14 | 732,418.135 | 1,820,822.948 |
| 15 | 732,418.135 | 1,820,564.246 |
| 16 | 733,863.813 | 1,820,561.588 |
| 17 | 733,854.561 | 1,821,853.480 |

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A REGISTERED SURVEYOR AND THAT I HOLD CERTIFICATE NO. _____ AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE PREPARED THIS MAP OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED HEREON AND THAT IT IS TRUE AND CORRECT. I ALSO CERTIFY THAT THE BOUNDARY IS BOUNDED AND DESCRIBED AS SHOWN BELOW.

DATE _____ SURVEYOR (SEE SEAL BELOW) _____

## BOUNDARY DESCRIPTION

COMMENCING AT A POINT LOCATED NORTH 00°05'46" WEST ALONG THE SECTION LINE 568.43 FEET AND EAST 2814.68 FEET FROM THE SOUTHWEST CORNER OF SECTION 25, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 00°03'00" EAST 182.20 FEET; THENCE SOUTH 37°36'24" EAST ALONG THE EXISTING AMERICAN FORK CITY BOUNDARY LINE 898.58 FEET; THENCE NORTH 89°51'56" WEST 835.10 FEET; THENCE SOUTH 00°03'14" WEST 687.08 FEET; THENCE NORTH 89°28'14" WEST 184.02 FEET; THENCE SOUTH 00°41'57" WEST 727.02 FEET; THENCE SOUTH 89°56'21" EAST 162.64 FEET; THENCE SOUTH 01°16'41" WEST 676.78 FEET; THENCE NORTH 89°51'11" WEST 634.13 FEET; THENCE NORTH 00°05'10" WEST 45.25 FEET; THENCE NORTH 89°00'00" WEST 217.85 FEET; THENCE NORTH 00°00'00" WEST 634.82 FEET; THENCE NORTH 00°00'00" WEST 238.77 FEET; THENCE NORTH 00°22'14" EAST 1445.14 FEET; THENCE SOUTH 89°37'00" EAST 1060.23 FEET; THENCE NORTH 00°40'00" EAST 868.01 FEET TO THE POINT OF BEGINNING.

AREA = 54.5442 ACRES

## ACCEPTANCE BY LEGISLATIVE BODY

THIS IS TO CERTIFY THAT WE HAVE RECEIVED A PETITION SIGNED BY A MAJORITY OF THE OWNERS OF THE TRACT SHOWN HEREON REQUESTING THAT SAID TRACT BE ANNEXED TO THE CITY OF AMERICAN FORK AND THAT A COPY OF THE ORDINANCE HAS BEEN PREPARED FOR FILING HEREWITH ALL IN ACCORDANCE WITH THE UTAH CODE ANNOTATED (1953) SECTION 10-2-401 TO 10-2-414 AS REVISED AND THAT WE HAVE EXAMINED AND DO HEREBY APPROVE AND ACCEPT THE ANNEXATION OF THE TRACT AS SHOWN AS A PART OF SAID CITY AND THAT SAID TRACT OF LAND IS TO KNOWN HEREAFTER AS THE STRATE ANNEXATION

THE CITY COUNCIL OF AMERICAN FORK COUNTY OF UTAH, APPROVES AND ACCEPTS THIS ANNEXATION PLAT THIS _____ DAY OF _____ A.D. 19 ____

APPROVED _____ ATTEST _____
CITY ENGINEER CLERK-RECORDER

# STRATE ANNEXATION
## AMERICAN FORK CITY, UTAH

LOCATED IN THE SW 1/4 & SE 1/4 OF SECTION 25, T5S, R1E, SLB&M AND IN THE NE 1/4 & NE 1/4 OF SECTION 36, T5S, R1E, SLB&M

AMERICAN FORK CITY, UTAH COUNTY, STATE OF UTAH

SCALE: 1" = 200 FEET

ENT 33331:2001 PG

Packet Pg. 397

5.2.b

Attachment: 2. Site Plan (American Eagle Appeal)

ATTACHMENT "7"

# REQUEST TO INITIATE ANNEXATION OF LAND WITHIN AN ISLAND OR PENINSULA

ENT 33331:2001 PG 10 of

Date: 29 December 1998

We the undersigned, by virtue of our signatures affixed hereto, do hereby request the City of American Fork, Utah, to annex the parcel(s) identified on the attached map, in accordance with the procedures for "Annexation Without Petition" as set forth under Section 10-2-418 of the Utah State Code.

We hereby further acknowledge and affirm as follows:

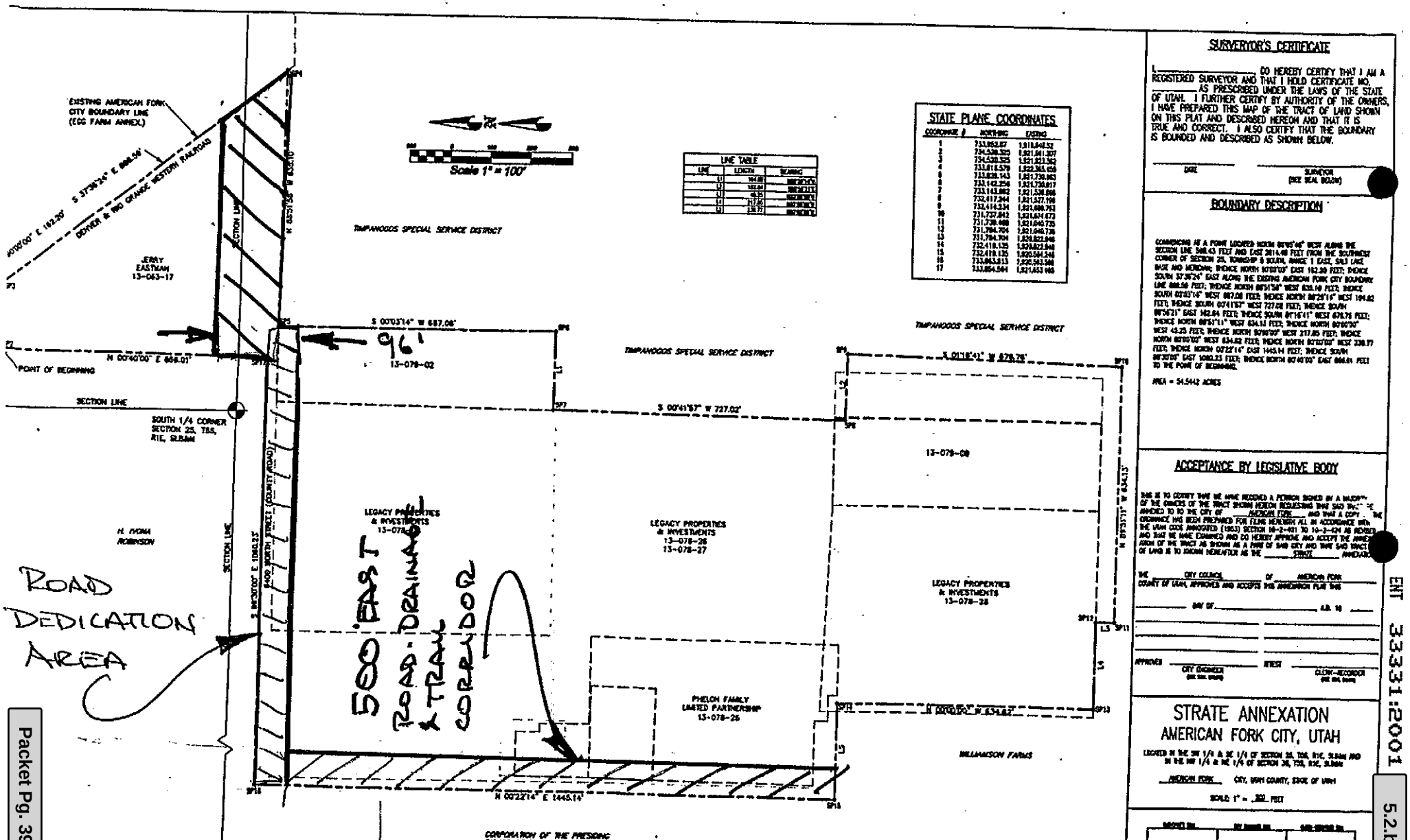
A. The majority of the area consists of residential or commercial development
B. The area requires delivery of municipal type services.
C. American Fork City has provided most or all of the municipal type services to the area for at least one year.

STRATE ANNEXATION % All American Devel & Constr 1402 W Sta Pleasant Gro

| Tax I.D. No. | Name(s) of Owner | Signature of Owner(s) |
|---|---|---|
| 13-079-02 | Legacy Properties & Investments | |
| 13-078-03 | " | |
| 13-078-26 | " | |
| 13-078-27 | " | |
| 13-079-09 | " | |
| 13-078-29 | " | |
| 13-078-25 | Phelon Family Limited Partnership | |
| 13-063-17 | Jerry Eastman | |
| | | |

Attachment: 2. Site Plan (American Eagle Appeal)

**ATTACHMENT "3"**




| LINE TABLE | | |
|---|---|---|
| LINE | LENGTH | BEARING |
| L1 | 144.68' | N89°36'04"E |
| L2 | 100.64' | S89°36'04"W |
| L3 | 48.55' | N00°00'00"E |
| L4 | 217.85' | N89°36'04"E |
| L5 | 336.77' | N00°00'00"E |

| STATE PLANE COORDINATES | | |
|---|---|---|
| COORDINATE # | NORTHING | EASTING |
| 1 | 733,953.87 | 1,819,642.52 |
| 2 | 734,538.325 | 1,821,661.307 |
| 3 | 734,530.525 | 1,821,823.362 |
| 4 | 733,817.579 | 1,822,365.458 |
| 5 | 733,828.143 | 1,821,730.863 |
| 6 | 733,142.256 | 1,821,738.817 |
| 7 | 733,143.882 | 1,821,536.888 |
| 8 | 732,617.344 | 1,821,537.198 |
| 9 | 732,414.534 | 1,821,686.753 |
| 10 | 731,727.842 | 1,821,694.673 |
| 11 | 731,728.488 | 1,821,840.725 |
| 12 | 731,794.704 | 1,821,840.726 |
| 13 | 731,794.704 | 1,820,823.848 |
| 14 | 732,418.135 | 1,820,823.848 |
| 15 | 732,418.135 | 1,820,564.346 |
| 16 | 733,963.813 | 1,820,563.588 |
| 17 | 733,864.564 | 1,821,633.985 |

## SURVEYOR'S CERTIFICATE

I _____ DO HEREBY CERTIFY THAT I AM A REGISTERED SURVEYOR AND THAT I HOLD CERTIFICATE NO. _____ AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY BY AUTHORITY OF THE OWNERS, I HAVE PREPARED THIS MAP OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED HEREON AND THAT IT IS TRUE AND CORRECT. I ALSO CERTIFY THAT THE BOUNDARY IS BOUNDED AND DESCRIBED AS SHOWN BELOW.

DATE _____ SURVEYOR (SEE SEAL BELOW) _____

## BOUNDARY DESCRIPTION

COMMENCING AT A POINT LOCATED NORTH 00°00'40" WEST ALONG THE SECTION LINE 5666.43 FEET AND EAST 2614.48 FEET FROM THE SOUTHWEST CORNER OF SECTION 25, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 00°00'00" EAST 182.20 FEET; THENCE SOUTH 37°36'24" EAST ALONG THE EXISTING AMERICAN FORK CITY BOUNDARY LINE 888.59 FEET; THENCE NORTH 89°51'58" WEST 832.10 FEET; THENCE SOUTH 00°03'14" WEST 667.08 FEET; THENCE NORTH 89°25'16" WEST 194.62 FEET; THENCE SOUTH 00°41'57" WEST 727.02 FEET; THENCE SOUTH 89°36'21" EAST 362.84 FEET; THENCE SOUTH 01°18'41" WEST 878.28 FEET; THENCE NORTH 89°51'11" WEST 634.11 FEET; THENCE NORTH 00°00'00" WEST 43.25 FEET; THENCE NORTH 89°36'00" WEST 217.85 FEET; THENCE NORTH 00°00'00" WEST 634.82 FEET; THENCE NORTH 00°00'00" WEST 336.77 FEET; THENCE NORTH 00°22'14" EAST 1445.14 FEET; THENCE SOUTH 89°20'00" EAST 1080.53 FEET; THENCE NORTH 00°40'00" EAST 666.01 FEET TO THE POINT OF BEGINNING.

AREA = 54.5442 ACRES

## ACCEPTANCE BY LEGISLATIVE BODY

THIS IS TO CERTIFY THAT WE HAVE RECEIVED A PETITION SIGNED BY A MAJORITY OF THE OWNERS OF THE TRACT SHOWN HEREON REQUESTING THAT SAID TRACT BE ANNEXED TO THE CITY OF AMERICAN FORK AND THAT A COPY OF THE ORDINANCE HAS BEEN PREPARED FOR FILING HEREWITH ALL IN ACCORDANCE WITH THE UTAH CODE ANNOTATED (1953) SECTION 10-2-401 TO 10-2-424 AS AMENDED AND THAT WE HAVE EXAMINED AND DO HEREBY APPROVE AND ACCEPT THE ANNEXATION OF THE TRACT AS SHOWN AS A PART OF SAID CITY AND THAT SAID TRACT OF LAND IS TO KNOWN HEREAFTER AS THE _____ STRATE ANNEXATION

THE CITY COUNCIL OF AMERICAN FORK COUNTY OF UTAH, APPROVES AND ACCEPTS THIS ANNEXATION PLAT THIS _____ DAY OF _____ A.D. 19 ____

APPROVED _____ CITY ENGINEER (SEE SEAL BELOW) ATTEST _____ CLERK-RECORDER (SEE SEAL BELOW)

# STRATE ANNEXATION
## AMERICAN FORK CITY, UTAH

LOCATED IN THE SW 1/4 & SE 1/4 OF SECTION 25, T5S, R1E, SLB&M AND IN THE NW 1/4 & NE 1/4 OF SECTION 36, T5S, R1E, SLB&M

AMERICAN FORK CITY, UTAH COUNTY, STATE OF UTAH

SCALE 1" = 200 FEET

ENT 33331:2001

Packet Pg. 399

5.2.b

Attachment: 2. Site Plan (American Eagle Appeal)



ATTACHMENT "4A"

WHEN RECORDED, MAIL TO:

AMERICAN FORK CITY

31 NORTH CHURCH

AMERICAN FORK, UTAH 84003

Escrow No.

ENT 33331:2001 PG 12 of 1

Space Above This Line for Recorder's Use

# QUIT CLAIM DEED

JERRY ADAM EASTMAN, JUDY ANN EASTMAN JENSEN AND JOHN KELLY EASTMAN,grantor(s)

of State of , hereby QUIT CLAIMS to

AMERICAN FORK CITY Grantee(s)

of AMERICAN FORK, UTAH

for the sum of ONE DOLLAR and other good and valuable consideration, the following described tract of land in UTAH County, State of Utah, to-wit:

BEGINNING AT A POINT WHICH IS SOUTH 88 DEG. 59' 19" EAST 2806.78 FEET FROM THE NORTHWEST CORNER OF SECTION 36, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; RUNNING THENCE SOUTH 89 DEG. 30' 00" EAST 649.80 FEET; THENCE SOUTH 37 DEG. 36' 24" EAST 101.39 FEET; THENCE NORTH 88 DEG. 51' 58" WEST 712.62 FEET; THENCE NORTH 00 DEG. 40' 00" EAST 71.90 FEET TO THE POINT OF BEGINNING.

WITNESS the hand(s) of said grantor(s), this 30TH day of JUNE 2000

Signed in the presence of

JERRY ADAM EASTMAN

JUDY ANN EASTMAN JENSEN

JOHN KELLY EASTMAN

STATE OF UTAH

SS.

COUNTY OF UTAH

On the 12th day of July 2000, personally appeared before me JERRY ADAM EASTMAN, JUDY ANN EASTMAN JENSEN AND JOHN KELLY EASTMAN, the signer(s) of the foregoing instrument, who duly acknowledged to me that THEY executed the same.

NOTARY PUBLIC
CHARLLETTE EASTMAN
327 East 1200 South, #1
Orem, Utah 84058
My Commission Expires: 10-14-2000
State of Utah

Notary Public.

My Commission Expires: 10-14-2000

Attachment: 2. Site Plan (American Eagle Appeal)

When recorded return to:
AMERICAN FORK CITY
31 NORTH CHURCH STREET
AMERICAN FORK, UTAH 84003

**ATTACHMENT "AB"**

ENT 33331:2001 PG 13 of 1

# QUITCLAIM DEED

**LEGACY PROPERTIES AND INVESTMENTS, L.C.,** a Utah limited liability company, whose address is 1402 West State Street, Pleasant Grove, Utah 84062, as GRANTOR, hereby quitclaims to **AMERICAN FORK CITY,** 84003, a Utah municipal corporation, whose address is 31 North Church Street, American Fork, Utah, as GRANTEE, for the sum of Ten Dollars and other good and valuable consideration, that certain Real Property located in Utah County, State of Utah, which is described on Exhibit "A" attached hereto and incorporated herein by this reference.

IN WITNESS WHEREOF, GRANTOR has executed this Quitclaim Deed this _____day of August, 2000.

LEGACY PROPERTIES AND
INVESTMENTS, L.C., a Utah limited
liability company

By:_____
JOHN HEINER, MEMBER

STATE OF UTAH )
) SS
COUNTY OF UTAH )

The foregoing instrument was acknowledged before me this 16 day of August, 2000 by John Heiner, in his capacity as a Member of Legacy Properties and Investments, L.C., a Utah limited liability company.

Maralee Mortensen
Notary Public
Residing at: Am. Fork

My commission expires: March 1, 2001

NOTARY PUBLIC
STATE OF UTAH
My Commission Expires
March 1, 2001
MARALEE MORTENSEN
33 East Main
American Fork, Utah 84003

354333.1

Attachment: 2. Site Plan (American Eagle Appeal)

EXHIBIT "A"

That certain real property located in Utah County, State of Utah, more particularly described as follows:



BEGINNING AT A POINT WHICH IS SOUTH 87 DEG. 06' 17" EAST 1747.82 FEET FROM THE NORTHWEST CORNER OF SECTION 36, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; RUNNING THENCE SOUTH 89 DEG. 30' 00" EAST 1137.48 FEET; THENCE SOUTH 00 DEG. 03' 14" WEST 48.00 FEET; THENCE NORTH 89 DEG. 30' 00" WEST 1137.75 FEET; THENCE NORTH 00 DEG. 22' 14" EAST 48.00 FEET TO THE POINT OF BEGINNING.

AND ALSO

BEGINNING AT A POINT WHICH IS SOUTH 85 DEG. 32' 00" EAST 1750.60 FEET FROM THE NORTHWEST CORNER OF SECTION 36, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; RUNNING THENCE SOUTH 89 DEG. 30' 00" EAST 19.50 FEET; THENCE SOUTH 1343.53 FEET; THENCE NORTH 89 DEG. 13' 05" WEST 28.19 FEET; THENCE NORTH 00 DEG. 22' 14" EAST 1343.34 FEET TO THE POINT OF BEGINNING.

Attachment: 2. Site Plan (American Eagle Appeal)

ENT 33331:2001 PG 15 of

**ATTACHMENT "5A"**

When Recorded, Return To:

American Fork City
31 North Church Street
American Fork, Utah 84003
Attention: Rod Despain

**QUIT CLAIM DEED**
(WATER DEED)

THIS QUIT CLAIM DEED is executed as of the 10 day of AUGUST, 2000 by Legacy Properties and Investments, L.C., a Utah limited liability company (hereinafter "Grantor"), in favor of American Fork City, a municipal corporation organized under the laws of the State of Utah (hereinafter "Grantee").

FOR THE SUM OF TEN DOLLARS ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor hereby quitclaims to Grantee, all of Grantor's right, title, and interest in and to: (1) Fifty-Two (52.0) acre-feet of water per year, representing the irrigation requirements of 13 acres based on a duty of 4 acre-feet per acre, under Water Right No. 55-4578 (D2550); and (2) Sixty-Eight and Six Tenths (68.6) acre-feet of water per year, representing the irrigation requirements of 17.15 acres based on a duty of 4 acre-feet per acre, under Water Right Nos. 55-3989 (U21436) and 55-3990 (U21437), as collectively represented by Certificate No. a534, which are more particularly defined in the records of the Utah Division of Water Rights.

Grantor has executed this instrument in favor of Grantee to be effective as of the date set forth above.

**GRANTOR:**

**LEGACY PROPERTIES AND INVESTMENTS, L.C., a Utah limited liability company**

By: John Heiner
Title: Member

Attachment: 2. Site Plan (American Eagle Appeal)

ENT 33331:2001 PG 16 of 1

STATE OF UTAH )
:ss.
COUNTY OF UTAH )

The foregoing instrument was acknowledged before me this 10th day of Aug., 2000, by John Heiner in his capacity as a Member of Legacy Properties and Investments, L.C., a Utah limited liability company.

NOTARY PUBLIC

Residing at: _____

My Commission Expires:

_____

NOTARY PUBLIC
STATE OF UTAH
My Commission Expires
July 3 2002
KEVIN B. JOHNSON
714 North 350 West
American Fork, Utah 84003

Attachment: 2. Site Plan (American Eagle Appeal)

Strata Annexation

ATTACHMENT "5B

Incorporated Under Laws of Utah

No. 6407

SHARES (9.84) Primary

# Pleasant Grove Irrigation Company

Capital Stock $254,185.00—3051 Shares Primary Water Stock at $80.00 per Share
429 Shares East Meadow Water Right Stock at $25.00 per share, 640 Shares West Meadow Water Right Stock at $10.00 per Share

This Certifies That American Fork City is the owner of Nine and eighty four hundredths (9.84) shares of Primary Water Right Stock of the

**Pleasant Grove Irrigation Company**

transferable only on the Books of the Corporation, in person or by Attorney upon surrender of this Certificate properly endorsed.

IN WITNESS WHEREOF, the said Corporation has caused this Certificate to be signed by its duly authorized Officers, and its corporate seal to be hereunto affixed at Pleasant Grove, Utah this 19th day of March 2001.

Secretary

President

ENT 33331:2001

Packet Pg. 405

5.2.b

FOR VALUE RECEIVED _____ HEREBY SELL, ASSIGN AND TRANSFER UNTO

_____

_____ Shares

of the Capital Stock represented by the within Certificate and do hereby irrevocably constitute and appoint

_____ Attorney

to transfer the said stock on the books of the within named Company, with full power of substitution in the premises.

Dated _____, 19 _____

in Presence of _____

_____

NOTICE - The signature to this assignment must correspond with the name written upon the face of this Certificate in every particular.

CERTIFICATE FOR (9.84) Primary

Pleasant Grove Irrigation Company

ISSUED TO

American Fork City

DATED

(19 March 2001)

Attachment: 2. Site Plan (American Eagle Appeal)

# WATER DEED

**ATTACHMENT "5C"**

ENT 33331:2001 PG 19 of 1

**JUDY ANN EASTMAN JENSEN, JOHN KELLY EASTMAN, AND JERRY EASTMAN aka JERRY ADAM EASTMAN,** Grantor, in consideration of the payment of the sum of Ten Dollars ($10.00) and other good and valuable consideration hereby conveys and warrant against all claim, by, through or under Grantor, to **THE CITY OF AMERICAN FORK,** Grantee, the following described water right in Utah County, Utah;

(15.750)

**A fifteen and three quarter acre foot portion of that certain water right identified on the records of the Utah State Engineer as Water User Claim No. WUC #55-332.**

WITNESS the hand of said Grantor, this 21st day of March, 2001.

JUDY ANN EASTMAN JENSEN

JOHN KELLY EASTMAN

JERRY EASTMAN aka JERRY ADAM EASTMAN

State of Utah )
:ss
County of Utah )

The foregoing instrument was subscribed, sworn to, and acknowledged before me on this 21st day of March, 2001, by JUDY ANN EASTMAN JENSEN.

LISA W. LOTT
NOTARY PUBLIC • STATE of UTAH
422 SOUTH 780 WEST
LEHI, UTAH 84043
COMM. EXP. 9-18-2001

Notary public

State of Utah )
:ss
County of Utah )

The foregoing instrument was subscribed, sworn to, and acknowledged before me on this 21st day of March, 2001, by JOHN KELLY EASTMAN.

LISA W. LOTT
NOTARY PUBLIC • STATE of UTAH
422 SOUTH 780 WEST
LEHI, UTAH 84043
COMM. EXP. 9-18-2001

Notary public

State of Utah )
:ss
County of Utah )

The foregoing instrument was subscribed, sworn to, and acknowledged before me on this 21st day of March, 2001, by JERRY EASTMAN aka JERRY ADAM EASTMAN.

LISA W. LOTT
NOTARY PUBLIC • STATE of UTAH
422 SOUTH 780 WEST
LEHI, UTAH 84043
COMM. EXP. 9-18-2001

Notary public

Attachment: 2. Site Plan (American Eagle Appeal)

Snell & Wilmer
L.L.P.

15 West South Temple
Suite 1200
Gateway Tower West
Salt Lake City, UT 84101
801.257.1900
801.257.1800 (Fax)
www.swlaw.com

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LOS CABOS
ORANGE COUNTY
PHOENIX
PORTLAND
RENO
SALT LAKE CITY
SAN DIEGO
SEATTLE
TUCSON
WASHINGTON DC

Wade R. Budge
wbudge@swlaw.com

April 29, 2020

**VIA E-MAIL AOLSEN@AFCITY.NET AND LHALVERSON@AFCITY.NET**

American Fork Planning Commission
c/o Adam Olsen, Senior Planner
c/o Lisa Halverson, Administrative Assistant
American Fork City Planning Department
275 East 200 North,
American Fork, Utah 84003

**Re: American Eagle Ready Mix's Response to Opposition of Its Site Plan**

Dear Planning Commissioners:

This firm represents American Eagle Ready Mix ("**AERM**"). AERM is seeking to operate its business on certain property located in American Fork, Utah at approximately 500 East 1700 South (the "**Property**"). The Property is located within the Industrial zoning district ("**I-1**"). AERM is seeking site plan approval of its site plan (the "**Site Plan**") from this Planning Commission to operate a concrete ready-mix facility (the "**Operation**").

A neighboring property owner has submitted exhaustive letters of opposition. The purpose of this letter is to respond to some of the neighbor's comments and concerns.

In short, the Planning Commission should approve AERM's proposed Site Plan. The Operation is for a permitted use and is otherwise allowed by the City Code. Further, the intent of the I-1 is to allow for important operations such as this one in this part of the city.

## I. AERM's Operation is Legal in the I-1

The City recently annexed the Property and designated the Property's zone classification as I-1. The Operation is legal in the I-1 because it (A) is a permitted use within the I-1, as expressly provided by the City Code and previous decisions of this Planning Commission, (B) mitigates the Adverse Impacts (defined below) set forth in the City Code, (C) is consistent with the intent of the I-1 and the General Plan, and (D) otherwise meets all other requirements of the City Code.

### A. AERM's Operation of the Property is Permitted by City Code

Attachment: 2. Site Plan (American Eagle Appeal)

The City Code clearly allows, as a permitted use, areas for the compounding of goods and materials in the I-1. In pertinent part, the City Code provides that "uses of land shall be permitted upon compliance with the standards and requirements" as follows:[1]

> 1. Structures and areas used for the manufacturing, compounding, processing fabrication, and warehousing of goods and materials, subject to the following conditions and exclusions:
>
> a. None of the activities carried out on the premises shall produce any noxious odor or any fumes, smoke, noise, vapor, vibration, glare or similar condition which is harmful to persons or which is readily discernible beyond the boundary of the zone or create an adverse visual impact readily discernible from the public roads.

AERM's Operation consists of structures and areas used for the manufacturing, compounding, processing fabrication, and warehousing of sand, aggregate, and other necessary materials for its concrete ready-mix plant. As such, AERM's Operation is permitted. In operating its permitted use, AERM must mitigate the adverse impacts identified in the City Code, as listed above (the "**Adverse Impacts**"). AERM will address all Adverse Impacts in the manner described below. But first, there are additional important points to note as the Site Plan is being evaluated.

AERM's Operation at the Property was not done by happenstance. Instead, the Property was selected through both AERM and City representatives', including, among others, Dave Bunker, collective efforts to bring the Operation to the Property, including going through the annexation process with the Operation, among others, in mind. As such, AERM has relied on the City's representations that the Operation is permitted within the I-1. AERM has spent significant time, effort, and resources based on those representations.

Finally, this Planning Commission has previously permitted this exact use within the I-1, along with other similar uses. For example, Altaview Concrete is a concrete ready-mix facility (the "**Altaview Facility**") that is similarly situated to that of the Operation and is located only about five hundred feet (500') east of the Property, as shown on the attached **Exhibit "A"**. The Altaview Facility was previously operated by Westroc, a predecessor to Altaview. Westroc obtained approval from the City's Planning Commission for its commercial site plan for a concrete batch plant within the I-1 on May 18, 2005, and a modification to that commercial site plan on June 4, 2008. A copy of the minutes from each of the aforementioned meetings are attached hereto as **Exhibit "B"** and **Exhibit "C"**, respectively. The city planner at that time, Rod Despain, correctly made clear that the "use [of a concrete ready-mix facility] is permitted with performance conditions, largely dust suppression."[2]

[1] City Code § 17.4.503(B).
[2] Exhibit B, at 6.

Attachment: 2. Site Plan (American Eagle Appeal)

To the extent a neighboring owner is trying to prevent this use in the I-1, this neighbor is trying to promote the violation of AERM's constitutional rights. It is a violation of the United States Constitution to intentionally treat "similarly situated" properties differently, without a rational basis for the difference in treatment.[3] In all material respects, the Altaview Facility is similarly situated to that of the Operation. Both are concrete ready-mix facilities, and both are located in the same area of the City within the I-1 (within 500' of each other). The only significant differences are favorable to AERM. First, AERM's Operation is not capable of producing the same amount of concrete ready-mix than that of the Altaview Facility, which will lead to less Adverse Impacts from the Operation. Second, AERM is utilizing newer more efficient processing equipment, in particular the Erie Stray MP-11T (the "**Batch Plant**"), which is equipped with updated technology and more safeguards to mitigate the Adverse Impacts, as discussed more fully below. For this and other reasons, AERM's Site Plan must be approved.

### B. AERM's Operation Mitigates the Adverse Impacts Identified in the City Code

As discussed above, AERM's Operation is a permitted use within the I-1 zoning district. To simplify AERM's mitigation response to each of the identified Adverse Impacts, it has prepared the following table:

| Adverse Impact | AERM's Mitigation Response |
|---|---|
| **Dust** | • AERM is not processing or crushing concrete which creates more risk of dust, instead they are only a concrete ready-mix facility.<br>• AERM purposefully purchases pre-washed materials for the Batch Plant, so dust is very minimal when arriving on the Property.<br>• AERM will have a water truck on the Property to keep the sand and aggregate materials and the general area wet or damp (used on an as-needed basis).<br>• Batch Plant itself mitigates dust by utilizing six (6) dust collectors, a bag house, and covered conveyors. Some of these features were added by AERM at additional cost, even though not required, to ensure it is mitigating any dust emanating from its Operation.<br>• AERM will have a sweeper vacuum truck on site as it does with its other locations. AERM typically runs the sweepers twice a day to ensure yard is kept nice and to reduce tracking onto public highways. |

[3] *Farley v. Utah County*, 440 P.3d 856, 863–64 (Ut. Ct. App. 2019).

Attachment: 2. Site Plan (American Eagle Appeal)

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| | |
|---|---|
| | • AERM plans to have entire Property paved by the end of the year to reduce dust on the Property and to further prevent any potential tracking onto public streets.<br>• Property will be surrounded by a six-foot (6') fence and a building that will assist in ensuring any dust is kept on the Property.<br>• AERM has obtained a Small Source Registration from the Division of Air Quality ("**DAQ**"),[4] which is attached hereto as **Exhibit C**, and will be compliant with all air quality rules and regulations it is subject to. |
| **Noise** | • New Batch Plant with its updated equipment and technology, including the use of covered conveyors, will reduce noise emanating from the Property.<br>• Batch Plant is set back from frontage of street as much as possible.<br>• Batch plant will be screened, to the extent possible, by constructing a six-foot (6') fence and building that fronts the street.<br>• Aggregate bins, which is a significant source of the noise generated by the Batch Plant, will eventually be placed inside a building. |
| **Vibration** | • Batch Plant will reduce the vibration, if any exists, generated from its operation through its own design.<br>• Batch Plant is a machine attached to concrete footings which keeps the machine in place and reduces vibration further. |
| **Smoke** | • Batch Plant significantly reduces, if not ceases, any smoke directly generated from concrete ready-mix plants.<br>• Many confuse the steam from the Batch |

[4] A neighboring property owner asserts and implies that AERM has not been truthful in its submission to the DAQ. In pertinent part, the neighbor points to the Concrete Batch Plants calculations made by DAQ, which is attached hereto as **Exhibit "E"**, to imply that AERM misrepresented that it only plans to produce thirty (30) cubic yards per hour at the Property. However, DAQ filled out the information on that sheet, not AERM. It is unclear to AERM how DAQ reached that figure, but what is important on that sheet is the amount of total cubic yards per year. It has always been AERM's intention to operate at or below 120,00 cubic yards per year, as the sheet clearly indicates. At no point has AERM, for any of its concrete ready-mix facilities, produced more than that amount and has no plans to do so presently. AERM will comply with any and all DAQ requirements. To assist AERM in meeting all air quality requirements, it has retained James Newby from Cirrus Consulting, LLC as its air quality consultant.

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| | |
|---|---|
| | Plant's water heater as smoke, which is not the case and not harmful to the environment or others.<br>• AERM has obtained a Small Source Registration from the DAQ and will be compliant with all air quality rules and regulations it is subject to. |
| **Odor** | • The concrete ready-mix process does not directly emit odor. Typically, the only odor is from the diesel of concrete ready-mix trucks, which is no different than the numerous machines operated in the area. This will be mitigated by operating efficiently, which is the goal of any business.<br>• Batch Plant should not produce odors that will be a nuisance in the area, especially considering the area is near sewage waste facility, another batch plant operation, farms, and even Utah Lake. |
| **Fumes** | • There are very minimal, if any, fumes emitted from the Batch Plant itself.<br>• AERM has obtained a Small Source Registration from the DAQ and will be compliant with all air quality rules and regulations it is subject to.<br>• Many people confuse steam that comes off water heater as smoke or fumes when this is not the case.<br>• Batch Plant has a ninety-nine percent (99%) efficient natural gas water heater, which complies with all EPA regulations. |
| **Hazard from explosion** | • There is no risk of explosion from AERM's Operation. |
| **Glare** | • Batch Plant has very minimal, if any, glare emanating from it.<br>• Batch Plant is set as far back from public road and others as possible.<br>• The Property will be surrounded by a six-foot (6') fence and a building will eventually front the public street, which will help knockdown any glare that exists. |
| **Adverse visual impact readily discernible from** | • The visual impacts will be mitigated by setting back the Batch Plan as far as possible |

Attachment: 2. Site Plan (American Eagle Appeal)

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| | |
|---|---|
| **public roads** | on the Property.<br>• A six-foot (6') fence and a larger building will be constructed to assist in screening the batch plant equipment, and the landscaping will beautify the area.<br>• AERM will have sweeping and watering trucks on the Property to control any potential tracking onto public streets.<br>• It is very unlikely that general public will ever be on 1700 South. The general public is more likely to be on 1500 South, which will have additional buildings that will make AERM's operation less noticeable. |

These steps to mitigate the Adverse Impacts are sufficient to approve AERM's Site Plan at this time. This is especially the case when evaluating the mitigation steps taken by the Altaview Facility's predecessors and others in the area with similar type uses to that of the Operation. Moreover, AERM is willing to continue to work with the City to further address any Adverse Impacts, if necessary.

### C. AERM's Operation is Consistent with the Intent of the I-1 and the City's General Plan

The intent of the I-1 is to "provid[e] a place where firms engaged in the light manufacturing, processing, warehousing and fabrication of goods and materials can locate with minimum conflict or deleterious effect on surrounding properties and uses" and to "promote the economic well-being of the people and broaden the tax base."[5] Moreover the I-1 is "characterized by a mixture of industrial establishments, with ready access to major transportation route."

As acknowledged in this Planning Commission's April 8, 2020 meeting, the general I-1 permitted use, detailed above, is broadly drafted. It is clear that the use provision for this zone was intentionally written this broadly to provide flexibility to the Planning Commission or City Council in order to carry out the purposes of the City's General Plan (the "**General Plan**").[6] Under the Goals and Policies of the General Plan, it provides, in pertinent part, that the City "[p]rovide for the establishment of well-designed, attractive industrial environments, with adequate utilities and direct vehicular access to major transportation arteries," while still directing that the City protect the industrial areas by adopting policies, standards, and regulations.[7]

The City Code accomplishes this goal by allowing various industrial uses that are obligated to mitigate the associated Adverse Impacts. As detailed above, AERM's Operation is permitted

[5] City Code § 17.4.503(A).
[6] *See generally* Resolution No. 05-03-07R, adopted March 8, 2005, https://afcity.org/DocumentCenter/View/179/Land-Use-Element-PDF?bidId=.
[7] *See id.*

Attachment: 2. Site Plan (American Eagle Appeal)

and can be shown to mitigate the Adverse Impacts. It is therefore consistent with the intent of the I-1 and the General Plan.

**D. AERM's Site Plan Meets All Requirements of the City Code**

A neighboring property owner argues that AERM's Operation will violate City Code §§ 17.4.503(I)(1) – (2). In pertinent part this provides that "[a]ll uses shall be conducted entirely within a fully enclosed building, **except** those uses deemed by the city to be customarily and appropriately conducted in the open"[8] and "[a]ll materials and vehicles used in the conduct of the business activity shall be stored within an enclosed building or within an area designated for such use as shown on the approved site plan."[9]

Common sense dictates that the Operation must be "customarily and appropriately conducted in the open," as expressly permitted by the City Code. Moreover, to support this contention, the adjacent Altaview Facility primarily operates in the open, as shown by Exhibit A. Regardless, AERM plans to eventually conduct as much of the Operation within an enclosed building as possible, including moving its aggregate bins indoors. However, some portion of the Operation will always be required to be conducted outdoors. City Code allows the storage of materials and vehicles outdoors so long as there is a designated area that is approved of on a site plan. AERM has designated such areas on its Site Plan. This is consistent, not only with the Altaview Facility, but with other similarly impactful uses in the area surrounding the Property.

Finally, AERM has complied with all City Code requirements and City staff requests, including the submission of any and all necessary studies. AERM, which is potentially purchasing and/or leasing the Property from ESP Excavation, Inc. ("**ESP**"), has relied on many of the studies completed by ESP for the Property. Moreover, AERM has revised its Site Plan several times to ensure it complies with all requirements detailed therein and to comply with staff requests. If any other detail or requirement was otherwise missed by AERM or City staff, AERM has no issue making further revisions to ensure it so complies.

**II. The Neighboring Property Owner and Its Experts' Opinions are Unfounded and Unreliable**

A neighboring property owner has criticized AERM for not retaining experts to form rebuttal opinions. This critique fails to recognize and/or acknowledge that AERM is itself an expert as to the Operation. It also fails to acknowledge that property owners do not need an expert to exercise their property rights. AERM presently operates two (2) other successful concrete ready-mix facilities in Utah. Further, AERM's owner, Doug Clements, brings his expertise to AERM. Mr. Clements has worked in the concrete and ready-mix industry for nearly forty (40) years.

Moreover, AERM is working with the benefit of knowing all pertinent information as to its Operation and future plans. Comparably, the neighbor's submissions make numerous incorrect

[8] City Code § 17.4.503(I)(1) (emphasis added).
[9] City Code § 17.4.503(I)(2) (emphasis added).

Attachment: 2. Site Plan (American Eagle Appeal)

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assumptions and presumptions about the Batch Plant equipment being utilized, AERM's Operation, and the supposed adverse impacts of the Operation, among others. Instead of being a truly independent, thoughtful expert opinion, it is a lightly veiled attempt to shutdown AERM's Operation at any and all costs.

## III. Conclusion

In conclusion, the Planning Commission should approve AERM's proposed Site Plan. The Operation of a concrete ready-mix facility is a permitted use in the I-1 zoning district. AERM has shown it will mitigate the Adverse Impacts associated with the Operation. Moreover, AERM has expressed its willingness to work with the city to mitigate those Adverse Impacts further, if necessary. The Operation will be a significant benefit to the community, the City, and AERM.

Additionally, AERM acknowledges, and apologizes to this Planning Commission for, its error in installing the footings on the Property without the proper approvals in place. However, from the time of that error till now, AERM has shown it is willing to work with the City to obtain any and all necessary approvals and has been cooperative and responsive to City staff from that time. To that end, AERM looks forward to continuing to work with the City through this process.

Sincerely,

Wade R. Budge

WRB

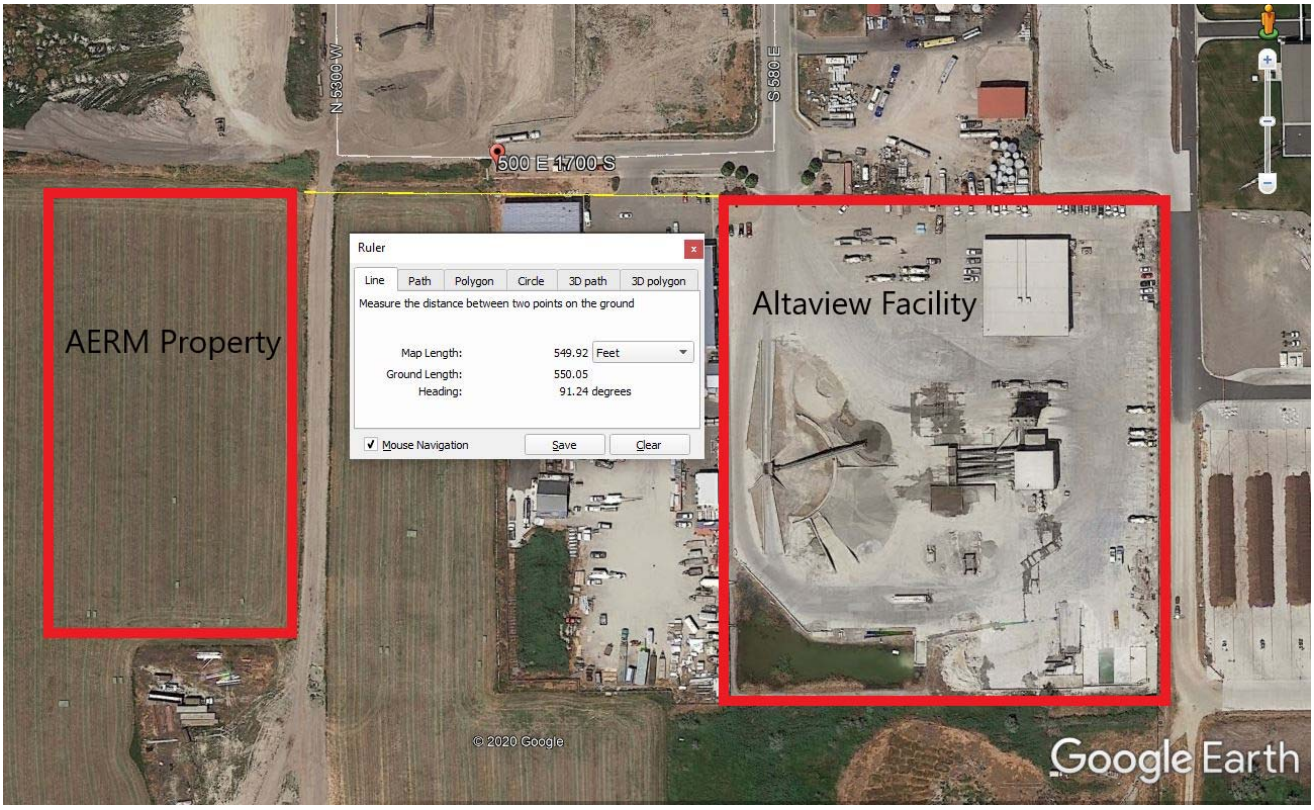
Enclosures as Stated

cc: Cherylyn M. Egner, Esq., cegner@hmmutah.com
Doug Clements, Dclements@aermut.com
McKay Ozuna, Mozuna@swlaw.com

Attachment: 2. Site Plan (American Eagle Appeal)

# EXHIBIT A

## Altaview Facility's Approximate Proximity to the Property




Attachment: 2. Site Plan (American Eagle Appeal)

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L.L.P.

**EXHIBIT B**

**Minutes from the American Fork City Planning Commission Meeting dated May 18, 2005**

[*Attachment Follows*]

Attachment: 2. Site Plan (American Eagle Appeal)

Snell & Wilmer

**AMERICAN FORK CITY**
**PLANNING COMMISSION MEETING**
**MAY 18, 2005**

The American Fork Planning Commission met in regular session May 18, 2005, at the American Fork City Hall, commencing at 7:05 p.m. Planning Commission Members present included Chairman James Hansen, Heber Thompson, Joe Gordon, and John Woffinden. Excused were Ken Baldwin, Karen Schaack, and Kevin Tea. City Staff present included Rod Despain, Wendelin Knobloch, J.H. Hadfield, and Cindy Walker. Others present included David Carter, Andy Spencer (PEPG), Steve Rose, Dan LaFontaine, Michael Krugley, Russ Naylor (architect), Dave Millheim, Tom Mackay, David Lamb, Steve Sowby, Paul Washburn, and Barbara Christiansen

Chairman Hansen welcomed everyone to Planning Commission and excused Ken Baldwin, Karen Schaack, and Kevin Tea. He indicated that because there was only a quorum of four Planners, there would have to be a unanimous vote to be able to approve any of the items on the agenda.

**PLEDGE OF ALLEGIANCE**

Those present stood and repeated the Pledge of Allegiance.

**REVIEW AND ACTION ON A PROPOSED ANCILLARY STRUCTURE LOCATED AT THE MCDONALDS RESTAURANT, 406 EAST STATE ROAD**

Mr. Hadfield indicated that they are proposing to place one DVD kiosk (of G & PG rated shows) at each of the 96 McDonalds in Utah. He explained that it is self-serving and has a drop off bin. Customers can rent a DVD at $1.00 a day, by swiping their credit card, and then the card is charged when the movie is dropped off at another participating McDonalds. He said that it would be located in the grassy area in front of McDonalds, and meets the intent of an Ancillary Structure. He also indicated that it would have no impact on parking.

Mr. Despain explained that the Ancillary provisions were met incidental from the Primary Use. He said it is pretty simple project, and he pointed out that it qualifies for recommendation of approval.

Mr. Gordon asked if there were no setback or landscape requirements, because it's located in a GC-1 General Commercial Zone. Mr. Despain indicated that there are setbacks, but they are included with the building. Mr. Gordon indicated that they are taking out a small amount of sod and replacing it with sidewalk around the kiosk.

**Joe Gordon moved to approve the proposed Ancillary Structure located at the McDonalds Restaurant, 406 East State Road, subject to the compliance with the**



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**existing code for Ancillary Structures. John Woffinden seconded the motion. All were in favor. The motion carried unanimously.**

**REVIEW AND ACTION ON A SITE PLAN FOR A CELLULAR ANTENNA LOCATED AT THE ART DYE COMPLEX, 550 EAST 1200 NORTH**

David Carter, a contractor from Cingular Wireless, was present to propose a light standard at the Art Dye Ball Field. He said they picked that location because it would not interfere with the General Plan of the Park Complex.

Mr. Despain pointed out that the Ordinance concerning monopole antennas requires a spacing standard of ½ mile from residential and other major areas. He said that the Parks and Recreation are in favor of it, and the Art Dye Complex is not in a residential area. He recommended modifying the location standard, to allow the poles closer than ½ mile (it's 300 ft for residential).

Mr. Gordon pointed out that there is already an existing cellular tower at the Art Dye Park, but Mr. Despain said he doesn't think it is in use. Verizon Wireless pays rent on it, but it doesn't appear to be in use.

Mr. Carter indicated that they are proposing a ballpark light pole, not a monopole, and it would be a secondary use. Mr. Despain said that he wasn't sure that it complied with all the monopole requirements. Mr. Hadfield commented that it would be different if it was in a residential area (which is 382 ft away), but he feels there shouldn't be a problem.

Mr. Thompson asked if Mr. Carter was prepared to undergo damage to the pole from foul balls. Mr. Carter pointed out that the 80 ft. tall pole should be pretty safe.

Chairman Hansen recommended approval, with a small change to the Ordinance, which would allow more than one antenna in the area. Mr. Despain suggested changing the language, adding an exception (#D), which is the spacing requirement. Chairman Hansen asked if we could make it part of the motion tonight, and Mr. Despain said that if we sent it forward to the City Council, it will have to go to hearing first, and then it will go concurrent. Mr. Gordon pointed out that the Ordinance prohibits spacing and too many towers in one area, and also limits the height. He feels that it should be denied, because it is not in compliance with the code. If the City Council approves the change in language, it would come back and move quickly. Mr. Despain said that the alternative is to table it and bring it back. Mr. Gordon suggested looking in to discontinuing the lease on the Verizon pole. Mr. Despain said there are still questions on that antenna.

Mr. Despain suggested tabling it, and he will put language together, and bring it back to the next meeting. Mr. Carter asked if something is tabled, what is he suppose to do. He said that other light poles have a maximum height of 20 ft., but ballpark poles are 60 ft. He said he would agree to table it, if that is what the Planning Commission recommends. Mr. Gordon indicated that they're not looking at a lot of resistance; it just doesn't comply to the current Ordinance.



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**Heber Thompson moved to table the Site Plan for a Cellular Antenna located at the Art Dye Complex, 550 East 1200 North, with the consent of the applicant, to come back at a future date, with the understanding that we are going to review the current Ordinance restricting the placement of the tower within a ½ mile radius, and Rod Despain will come back with that suggested wording on that revision. Joe Gordon seconded the motion. All were in favor. The motion carried unanimously.**

**REVIEW AND ACTION ON A SPECIFIED SITE PLAN FOR LOTS #2 & 3 OF PLAT "H," AMERICAN FORK COMMERCIAL CENTER, LOCATED AT 313 NORTH WEST STATE ROAD**

Andy Spencer, Mike Krugly, and Steve Rose were present to answer any questions concerning this project. Mr. Spencer indicated that Lots #2 &3 have both previously been approved; the proposed use for Lot #2 is Applebee's, for Lot #3 is a retail pad, and there is a new access that has been added off of Pacific Avenue. Chairman Hansen asked if they were going to come back in the future for the approval of Lot #3. Mr. Spencer said that he would bring something back, with technical corrections of this pad, and if it's considered a minor issue, they could construct it without another approval. Chairman Hansen pointed out that they need to see the elevations, and therefore needs to come back with the full process.

Mr. Hadfield reviewed the Plan and it complies. He indicated that any approval for Lot #2 should be subject to requirements from the Timpanogos Special Service District, and there should also be some verification of cross easement (ingress/egress).

Mr. Despain explained that this is an area where the water rights have not been resolved. He said that they are working on it, but any action should be subject to the water rights being satisfied. He indicated that in the future, we could probably take care of Lot #3 as a minor adjustment, without a hearing. He questioned the monument sign that is located on Applebee's site, but it intended to identify Kohl's (down the street). He said it is an accessory sign and is not permitted, unless it advertised Applebee's.

Mr. Krugly, a representative from Applebee's, explained that he would like the approval of the sign at that location, because they are planning on selling a strip of land (to Kohl's), which will run to (and under) the sign. Mr. Hadfield said that they would have to do a modification of Plat "H." Mr. Krugly said that all they are asking for is to place a sign there, not necessarily for Kohl's or Applebee's. Chairman Hansen said that selling land to Kohl's that reaches the sign might play havoc with Applebee's lot lines. Mr. Krugly said they are planning on going 5 ft. along the property line, adjacent to Pacific Avenue, which is non-build able land, and then around the corner. Mr. Krugly said that if the sign creates a problem, then let's delete the proposed sign location, and come in at a later date for a sign request.

Mr. Gordon pointed out, as a consumer, that the parking seems to be inadequate at some of the other restaurants in the "Meadows." He asked if Lot #3 has been considered to be a restaurant. Mr. Krugly said that there is an agreement (a recorded document) with



Attachment: 2. Site Plan (American Eagle Appeal)

Kohl's prohibiting a food facility to occupy Lot #3. He indicated that the original agreement had Lot #3 as wetlands, but now it is buildable, the agreement was made. He pointed out that they have a cross parking agreement within the "Meadows," and they also have permission from Kohl's, to cut through their property line (east parking lot), during the overflow hours. Chairman Hansen said that cross easements were not part of the original "Meadows" Project. Mr. Despain indicated that they use to be Plats and were handled through private arrangements. He suggested the we get a copy of the agreement that allows Applebee's parking to overflow into Kohl's parking lot. He said there is no opportunity for expansion for parking, so we need a copy of that agreement.

Mr. Woffinden asked if a geotechnical report has been done, and Mr. Spencer said that a specific one has not been done on this parcel. Mr. Woffinden requested that he sees and reviews the geotechnical report, especially in that area, and would like it added to the motion. He indicated that on sheet C-4, there is one grease trap for all three tenants; Applebee's has their own, and there is a grease trap, which was a carryover from Les Schwab that should be deleted. Chairman Hansen suggested adding a manhole where the stub plug is on Lot #3.

**Joe Gordon recommended approval to the City Council, the Specified Site Plan for Lot #2, with parking for Lots #2 & 3 of Plat "H," American Fork Commercial Center, located at 313 North West State Road, and the details on Lot #3 will require some approval, hopefully minor modifications, so that it can be expedited when that time comes. Subject to(s) are as follows: (1) removal of the offsite plan, which is currently identified as the Kohl's monument sign on the corner of Pacific Avenue and State Street, (2) modification of the notes on C-4 to have that reflect existing conditions on the plat map, (3) geotechnical studies be done for the site (which has not been seen by Mr. Woffinden for review as of May 31, 2005), especially those areas in the conservation areas, where they have been removed Mr. Woffinden explained that a copy was given to him), (4) conveyance of water rights, (5) evidence of cross easement documentation between tenants, (6) other single manhole cleanouts, etc. be provided that have been requested by City Engineering for the Timpanogos Special Service District. Heber Thompson seconded the motion. All were in favor. The motion carried unanimously.**

**REVIEW AND ACTION ON AN AMENDED SITE PLAN FOR LOT #3, UTAH VALLEY BUSINESS PARK PLAT "F," LOCATED AT 738 EAST QUALITY DRIVE, FOR THE USE AS A PRIVATE SCHOOL**

Chairman Hansen pointed out that this is a proposal for a Charter School, not a Private School. He indicated that the location is in the former DOT Rubber Stamp Manufacturing Building, next to Twin Labs. He explained that it has been empty for quite some time.

Kevin Scholl, from the Odessy Charter School, indicated that they are only asking for a change in occupancy. He said that they believe they are in compliance, and have no need



Attachment: 2. Site Plan (American Eagle Appeal)

to add anything to the exterior of the building. He pointed out that it's a great site for circulation, in-and-out.
Chairman Hansen asked what grades would be attending the school. David Lamb said that it would be Kindergarten through 8th Grade. Chairman Hansen asked what the approval process was through the state. Mr. Lamb said that State specifications go by what the City requests. He explained that he presents his plans to the State and County Fire Marshall's.

Chairman Hansen pointed out that there is a door that opens inward, and there are parts of the building that you can't get into. Mr. Scholl indicated that a new floor plan is being made up. Chairman Hansen said that if this is not approved through the State, the City has a greater responsibility to approve it. He asked if they are going to hire a building inspector or rely on American Fork City's Building Inspector. Mr. Scholl said that they would do whatever the City requires them to do. Chairman Hansen pointed out that within the State Code, unless you hire your own inspector, you would need to show evidence of your own inspection, or use the City's Inspector. Mr. Despain explained that Ron Morrill needs to be involved and it should be coordinated between him and the State.

Mr. Woffinden indicated that there was not a vicinity map included in the plan to show exactly where they are located.

Chairman Hansen asked about fencing. Mr. Scholl indicated that there would be a fence put up around the play land. Mr. Despain asked if they were going to turf the area outside the play land or will it be for parking. He said that it isn't landscaped very well.

Chairman Hansen pointed out that before a motion is made, he has no conflict of interest, even though he works for the local school district.

**Joe Gordon moved to approve the Amended Site Plan for Lot #3, Utah Valley Business Park Plat "F," located at 738 East Quality Drive, for the use as a Charter School subject to: (1) the school working closely with the City, and the City verifying either that the State Fire Marshall's Office or the City Inspectors are able to review the Site Plan, (2) detail the interior a little more, so the plans can be reviewed for egress, and if it's sprinklered, they'll need to know where the walls are going in, to make sure that the sprinklers will cover the corridors, so they are well within the current code, (3) add 3 vicinity maps to the plans. John Woffinden seconded the motion. All were in favor. The motion carried unanimously.**

**REVIEW AND ACTION ON A COMMERCIAL SITE PLAN FOR A CONCRETE BATCH PLANT IN THE INDUSTRIAL ZONE, LOCATED AT 618 EAST 1700 SOUTH, ON LOT #13 OF THE LAKESIDE PLANNED INDUSTRIAL PLAT "B"**

Steve Sowby, engineer, and Greg Reese, Vice President of Westroc, were present to present their proposal for a concrete batch plant south of the freeway.



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Steve Sowby went over the highlights of the site plan. He explained that Westroc has been in Pleasant Grove for several decades, and they need a bigger and better location to be able to expand, and they are moving from their existing site because of the encroaching residential uses. Mr. Despain indicated that they work late and early and can offend neighbors. The zone has been recently changed to I-1 Industrial Zone, and it appears that such a use is permitted with performance conditions, largely dust suppression. It will be next to the Timpanogos Special Service Plant, which they seem to be appropriate neighbors, and we also don't expect any dwellings in that area.

Mr. Sowby pointed out that Westroc generates a lot of sales tax. He said that the facility will have a new office, truck bays, large concrete batch plant, conveyors, and stockpiles for washed aggregate. The west side will be where the fuel containment area is, and the south side will have a storm water "total" containment pond, above grade (nothing will leave this site). He indicated that they will reuse the water (It has a circular traffic flow-thru pattern). He explained that there is plenty of room for employee parking on the north. He also indicated that the fencing would be masonry block or chain link.

Greg Reese pointed out that the mixer washout pits, brings concrete in and layers it. The only thing that gets to the ponds is the final washout. The Oil Bay area is self-contained.

Chairman Hansen asked what the time frame was moving from Pleasant Grove to American Fork. Mr. Reese said it would be approximately a year.

Mr. Gordon pointed out that there are a lot of narrow country roads, but he feels they will probably be solved in the future. Mr. Sowby indicated that this is not a subdivision; it's just a site plan approval for Lot #13. He said that they are not asking for a building permit, and a geotechnical report is not needed yet. Mr. Woffinden agreed, but stated that the geotechnical report will be required at the next phase of development of the site.

Mr. Thompson asked about the dust suppression steps. Mr. Reese said that they have to meet all of the air quality standards, and the dust on the pavement is taken care of with brooms. Mr. Sowby pointed out that the entire site will be completely paved. Mr. Reese said it is very costly to pave it all (approximately ½ million dollars), but they want to get it in as quickly as possible, so it looks nice.

Mr. Gordon asked what would be the water requirement. Mr. Reese said about 4-5 million gallons a year (but some of it is recycled).

Mr. Hadfield said that if it is an authorized use and if the site plan is acceptable, he is comfortable to recommend approval for a site plan. Mr. Despain indicated that they are not asking for site plan approval, but Mr. Sowby disagreed and said they are asking for site plan approval. Mr. Hadfield went over a list of questions, indicating that a lot of issues need to be resolved, and will be, but not tonight. Mr. Despain said that the City Council has no involvement in this, and details by the City Engineer should be included in the subject to(s).



Attachment: 2. Site Plan (American Eagle Appeal)

Chairman Hansen asked if the 4 million gallons of water is consumed, and Mr. Reese said "yes." Mr. Despain pointed out that the approval of this project would need to be subject to resolution of water rights.

Mr. Hadfield indicated that there are several unknowns that can't be answered here tonight. The site will accommodate it, and they have provided everything that was asked of them, it's just that some things will take time to get done.

John Woffinden said that he has questions on the water and the geotechnical report that will come later, but he said let's get you into American Fork first and work out the required steps as soon as possible.

Mr. Despain asked about how many trucks are in-and-out each day. Mr. Reese said about 200 loads a day.

Mr. Gordon indicated that there are a number of things still pending, and if we are to move to approve the site plan, then a lot of issues will be unresolved. If we move it forward, he said the thinks it would be premature.

Mr. Hadfield pointed out that most of the issues are technical in nature, and he doesn't feel that it will be a "war stopper" between the petitioner and the City. Chairman Hansen said that the location looks good for the proposed business.

Mr. Sowby indicated that this is an I-1 Industrial Zone, and the access, setbacks, building location, drainage, rear setbacks, outside storage, and landscaping are all on the location plan. He said the storm drain profiles would still need to be done for City Engineering. Mr. Hadfield indicated that the TSSD would also be looking for the Oil Filter, etc.

**Heber Thompson moved to approve the Commercial Site Plan for a Concrete Batch Plant in the Industrial Zone, located at 618 East 1700 South, on Lot #13 of Lakeside Planned Industrial Park Plat "B" subject to: (1) further refinement of the Engineering details as specified in this discussion, (2) water source and usage detail, including water rights, be provided, to the satisfaction of our Engineering Department, (3) complete geotechnical report on the site be provided. John Woffinden seconded the motion. All were in favor. The motion carried unanimously.**

**REVIEW AND ACTION ON A REVISED FINAL PLAT OF TEMPLE MEADOWS PUD LOCATED AT 650 NORTH 1200 EAST**

Mr. Hadfield indicated that we have seen this as a Preliminary Plat, June 23, 2004, which the Planning Commission acted on. He read the motion that pointed out that approval was pending legal issues (signatories were needed). He said that in comparing the previous Plat to the one now, they are not the same.



Attachment: 2. Site Plan (American Eagle Appeal)

Chairman Hansen questioned the sewer and water lines, and said that this plat does not equate with the previous Preliminary Plat. He explained that you can't change the lot lines after it's been approved. He read a letter (which is attached at the end of the minutes) from Marsha Broadway, which indicated that the issues with the neighbors have not been resolved. He said that the Final Plat is not in compliance with the Preliminary Plat, and therefore it is too soon for Final Plat approval.

David Millheim explained that if he doesn't receive approval from the Planning Commission, he will go back to the City Council. He pointed out that he has done everything that the City Council has told him to do. He said that it has been difficult, because he is cleaning up other people's messes. Chairman Hansen said that without a proper Preliminary Plat, we can't tell you what can be built upon it. Mr. Millheim pointed out that City Staff has looked at it, and they are just trying to fix what the previous people did.

Chairman Hansen said that one of the problems is the fact that we do not have a Preliminary Plat with lots in this position. This should have been scheduled as a Revised Preliminary Plat.

Tom Mackay, a member of the interim board, said that he would attest to the facts that Mr. Millheim has stated. He said that out of the 84 residents, only Mrs. Broadway and two other residents voted against it. He said that she came to the meeting very angry, and didn't present her concerns with us. I don't feel one resident should persuade the City's decision. He said that he was at the City Council Meeting where they directed Mr. Millheim to redraw the lines to preserve open space areas. Mr. Millheim said that he doesn't want to be argumentative, but after two years he wants it taken care of.

Chairman Hansen pointed out that he was unhappy with the fact that Temple Meadows was advertised in a magazine as being approved and re-plotted. Mr. Millheim said that he hasn't seen that and would like to make it right.

Mr. Hadfield indicated that back on June 14, 2004, there were 9 issues that needed to be taken care of, and to his knowledge, they still haven't been done.

Mr. Gordon said that there has been a modification between the Preliminary and Final Plat. The action should have been advertised as a Revised Preliminary Plat, and then have it come back with the Final Plat. That would also give more time to work with Mr. Hadfield on the issues that haven't been resolved.

Mr. Mackay said that the Home Owner's Association should have handled Mrs. Broadway's letter.

Mr. Despain indicated that the Plat is consistent with what the City Council directed Mr. Millheim to do. They interjected in this process. He explained that he doesn't know what 9 items need to be resolved.



Attachment: 2. Site Plan (American Eagle Appeal)

Mr. Millheim said that the documents have been revised and recorded. Chairman Hansen asked if they would provide the City with a copy, to show that it has been done.

Mr. Despain asked Mr. Hadfield if he was content with the drainage issues, and Mr. Hadfield said that they need to be redone. Mr. Despain said there is a need for the supplemental drainage calculations, because the Engineering Department is concerned about the relocation of the water and storm drain lines (where houses might be put over them). Mr. Hadfield indicated that he will need detailed drawings. He said that currently, we have homes with two stub-ins, and homes with no stub-ins. Mr. Despain pointed out that the City has been told that their isn't a problem, but the City needs that documentation.

Mr. Despain explained that the original plan on open space calculation, was 6.74 acres, and it has now been revised to 5.6 acres, which is .77 less than what was previously approved. It still has 27 percent, which is less, but still enough to meet the code (it also has less doors 84 down to 78). He indicated that this Plat is in compliance and believes that the City Council would be in agreement if it complies.

Mr. Hadfield read the 9 items that needs to be resolved (including no geotechnical report on each site, water has changed, storm drain issues, and more). Mr. Woffinden again stated the need for a geotechnical report for this area with a known history of ground water problems. He needs to review this report before final action is taken. Mr. Hadfield feels that more time is needed to be able to approve this project.

Mr. Millheim pointed out that they are on the City Council Agenda for June 14, 2005, and so he suggested tabling it, with his blessing, and come back on June 1, 2005 Planning Commission Meeting (after all of the issues have been met). Mr. Hadfield indicated that the City Attorney needs to be included.

Mr. Despain suggested that the percentages for the agreement of the Home Owner's for the CC&R's should be left up to the City Council and the City Attorney, Kevin Bennett. He said that he has no problem with an Amended Preliminary and the Final Plat coming back on June 1, 2005. Mr. Hadfield pointed out that he would call prior to the meeting, and if the conditions are not met, it will not be discussed.

**Joe Gordon moved to table any action on the Revised Final Plat of Temple Meadows PUD located at 650 North 1200 East, and suggested that the developer come back with a Revised or Amended Preliminary Plan and Plat, which can be acted on in addition to them bringing back a Final Plat, with the appropriate drawings for our next Planning Meeting, if we can come to some resolution of the disputed issues on those items which have been previously identified on the Preliminary Plat Approval. Heber Thompson seconded the motion. All were in favor. The motion carried unanimously.**

Mr. Thompson suggested that the City Council provide minutes to the Planning Commission when they pass something that has been appealed.



Attachment: 2. Site Plan (American Eagle Appeal)

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**DISCUSSION ON THE ANNEXATION AGREEMENT FOR THE L.W. HANSEN ANNEXATION, CONSISITNG OF 7.30 ACRES, LOCATED AT 405 EAST 620 SOUTH**

Chairman Hansen indicated that we have seen this before us 2-3 times before. He said we are waiting for one minor adjustment to send it to the City Council. He said he needs a better outline on the properties on the Kitchen Annexation. He said it shows more signatories on the application than the agreement. Mr. Despain said that he will incorporate it into it (Mr. Bennett pointed it out too).

Mr. Hadfield explained what portions of the lots will be taken, and that they will have to come in as part of a subdivision.

Mr. Despain explained that permission was given for the off-center cul-de-sac for Kitchen's portion.

Chairman Hansen questioned the signatories for the Hansen portion. Mr. Sowby said that there would be new signatories. Chairman Hansen said that the new plan for Hansen's is a better plan, and the concept plan looks good. He asked where the City Council was with this, and Mr. Despain said it is at the hearing process now.

Chairman Hansen scheduled this for action on June 15, 2005, assuming that the City Council approves it on June 14, 2005.

Mr. Despain said that Mr. Bennett has given him corrections, and questioned where we should provide notice. Mr. Sowby said to give it to Dan La Fontaine. Mr. Despain indicated that the water rights are still unknown, and Mr. Sowby indicated that Mike (?) wants to request that it be done at the time of development. If that is not possible, he said they would agree to do it by annexation.

**DISCUSSION ON WHITE CASTLE ANNEXATION, CONSISTING OF 1.59 ACRES, LOCATED AT 920 EAST STATE ROAD**

Mr. Hadfield showed the area on the map, and indicated that they want to expand the Covenant Communications Building.

Mr. Despain went over the Discussion Outline including:

1. Intended use from applicant. We are not sure who the applicant is
2. Zone Classifications are GC-1 General Commercial Zone and GC-2 General Commercial Zone. If it's an extension of the Covenant Building, it would be a GC-1 Zone. If it's separate, it would be a GC-2 Zone.
3. Discussed Annexation Concept Plan/Access.
4. Water Rights.



Attachment: 2. Site Plan (American Eagle Appeal)

Chairman Hansen said that the Annexation Concept Plan is important. Mr. Hadfield said that once the Annexation is complete, they'd come back with a Site Plan that is appropriate to give Mr. Despain direction on what to write on the agreement. He said that he would pursue it.

**REVIEW AND ACTION ON THE PLANNED UNIT DEVELOPMENT PROVISIONS OF THE DEVELOPMENT**

Mr. Despain went over the May 17, 2005 Memorandum (included at the end of the minutes), concerning the subjects covered in Planning Commission Draft #10. He indicated that we have an R1-12000 Zone, but there is now area designated for it (but the text is there). He continued to go over each section of the Memorandum, such as: (A) requirements for the new PUD projects, (B) add one more Planned Residential Zone (PR-3.7), (C) Accessory Apartments, (D) standards for the design of a subdivision project, (E) updates on the water and dry utility requirements for subdivision, (F) bonding requirements for subdivisions and PUD's.

Mr. Despain then went over the May 18, 2005 Memorandum (included at the end of the minutes), concerning the distribution of dwellings under PR-3 Flexible Lot PUD alternative. He went over the 6 main issues, such as Minimum percentage: (A) 15 percent – 10 percent minimum lot size, alternative is 73 percent housing and 27 percent roads, (B) Upsize lot alternative – 78 percent housing and 22 percent roads. Mid-range percentage: (A) 20 percent – 25 percent minimum lot size, 71 percent housing and 29 percent roads/open space, (B) Upsize lot alternative – 76 percent housing and 24 percent to roads/open space. Maximum percentage: (A) 25 percent – 40 percent minimum lot size, 68 percent housing and 32 percent to roads/open space, (B) Upsize lot alternative – 73 percentage to lots and 27 percentage to roads/open space.

Mr. Despain asked how important 11 percent is to us. We came up with it for the trail system. He said that one option would be to revisit open space in variable circumstances. We might have to tweak the percentage numbers on the dwelling types.

Mr. Sowby had 3 comments (and he appreciated the analysis): (1) undeveloped estimated roads – road percentage probably would be higher, (2) best way is to reduce maximum size of lot and lower square footage, (3) need to make decision of forcing twin home issue or make it optional.

Planners continued to discuss the Ordinance PR-2 & 3 Zones, and the Flexible Lot Subdivision. Mr. Washburn said that he feels Flexible Lot Subdivisions adds character to the neighborhood. The discussion continued concerning Senior Housing and also twin homes. Mr. Gordon pointed out that twin homes are an attempt to add variety to developments.

After a lengthy discussion, Mr. Despain said that he would make an effort to give a little more open space, and make changes that Wendelin will bring back to the June 1, 2005



Attachment: 2. Site Plan (American Eagle Appeal)

hearing. Chairman Hansen suggested having the hearing and adoption take place on June 1, 2005. Mr. Despain indicated that Mountainlands has some suggestions on compliance.

**SITE PLAN COMMITTEE REPORT**

Mr. Hadfield said that Site Plan remains busy.

**OTHER BUSINESS**

Discussed a letter from Jess Green and suggested that a Discussion Outline for Spring Creek Annexation be moved to the next meeting.

**Joe Gordon moved to discuss it at the June 1, 2005 Planning Meeting. John Woffinden seconded the motion. All were in favor. The motion carried unanimously.**

Mr. Hadfield explained that Snow Spring Elementary School is pushing to go over the freeway at Harts, which could create some problems.

**REVIEW AND ACTION ON THE CORRECTED MINUTES OF THE APRIL 6, 2005 PLANNING COMMISSION MEETING**

**Joe Gordon moved to approve, as corrected, the Minutes of the April 6, 2005 Planning Commission Meeting. Heber Thompson seconded the motion. All were in favor. The motion carried unanimously.**

**REVIEW AND ACTION ON THE CORRECTED MINUTES OF THE APRIL 13, 2005 PLANNING COMMISSION MEETING**

**Joe Gordon moved to approve the Minutes of the April 13, 2005 Planning Commission Meeting. Heber Thompson seconded the motion. All were in favor. The motion carried unanimously.**

**ADJOURNMENT**

**Joe Gordon moved to adjourn. Heber Thompson seconded the motion. All were in favor. The motion carried unanimously.**

The meeting adjourned at 11:35 p.m.

Cindy Walker
Planning Commission



Attachment: 2. Site Plan (American Eagle Appeal)

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L.L.P.

**EXHIBIT C**

**Minutes from the American Fork City Planning Commission Meeting dated June 4, 2008**

[*Attachment Follows*]

Attachment: 2. Site Plan (American Eagle Appeal)

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**AMERICAN FORK CITY**
**PLANNING COMMISSION MEETING MINUTES**
**JUNE 4, 2008**

Notice is hereby given that the American Fork Planning Commission met in regular session on June 4, 2008, at the American Fork City Hall, commencing at 7:00 p.m. Planning Commission Members present included Chairman James Hansen, John Woffinden, Larry Howden, Rebecca Staten, and Kevin Tea. City Staff members present included, Adam Olsen, Wendelin Knobloch, Andy Spencer and Rod Despain. Others present included Tom Laursen, Lavon Laursen, June Durrant, Ken Berg, Mike Robinson, Eric Franson, Barbara Christiansen, and a few other citizens.

**PLEDGE OF ALLEGIANCE**

Chairman Hansen welcomed everyone to the Planning Commission meeting. He excused Marie Adams and Ken Baldwin. Chairman Hansen also excused J.H. Hadfield.

Those in attendance stood and repeated the Pledge of Allegiance.

**HEARING, REVIEW AND ACTION ON AN INTERIM AMENDMENT TO THEM MAJOR TRANSPORTATION ELEMENT OF THE GENERAL PLAN**

Chairman Hansen noted that the Planning Commission has had discussions the last few meeting on potential amendments to the Transportation Element; specifically the south side of the City, with minor revisions in other areas.

Mr. Spencer stated that he had prepared potential motions illustrating the changes made to the Planning Commissioners' packets which were distributed tonight.

Chairman Hansen discussed the five changes on Exhibit #1, displayed on the screen, and explained where and what the proposed changes were. He noted that the City Council recently recommended that change #5 be removed, the road through Art Dye Park. That road is expected to carry about 10,500 ADT (Average Daily Trips) but with the amount of ADT projected for that street, if it is removed then 700 North from 100 East to 1100 East would carry that traffic and need to be reclassified as an arterial.

Mr. Spencer gave an estimate that it would cost roughly $15,000,000 in today's dollars in acquiring properties along 700 North in order to reconstruct it to turn it into an Arterial.

Mr. Despain noted that the existing road (700 North) probably doesn't meet qualifications for a Major Collector. It would qualify for a Minor Collector as it stands. Staff's recommendation is that the Planning Commission send this back to the City Council in favor of keeping the proposed connection as shown.



Attachment: 2. Site Plan (American Eagle Appeal)

Chairman Hansen discussed each of the seven proposed changes on Exhibit #2, the southeast area. A larger exhibit was presented for the Main Street/State Street intersection, change #2. It is proposed that the intersection become a "T Intersection". UDOT proposes to signalize that intersection.

A citizen brought up a question regarding 400 South between 400 East and 500 East and wondered if it would go through his property. He was concerned that it would prohibit his development plans. Chairman Hansen explained that the 400 South connection to 500 East was never taken off the transportation plan.

Chairman Hansen brought up Exhibit #3, the southwest area. He noted that there are numerous major changes in this area. He then explained each of the eleven proposed changes. He focused on the Main Street interchange. A minor collector is needed in the Main Street interchange area. Mr. Despain stated that the area has begun to develop as a retail area, and part of a concern is that we provide adequate access into the area. This change intended to show it.

Chairman Hansen noted that change #2 removes a frontage road, from Main Street to 350 West, but with rebuild of I-15 the frontage road will have to be removed.

Mr. Despain pointed out that change #4 should continue to 800 South; it does not stop at the location depicted on the plan.

Chairman Hansen explained that Exhibit #4 incorporates all the proposed changes on one map and Exhibit #5 gives the traffic counts for existing and proposed streets.

Mrs. Staten had a question on change #11, Exhibit 3. She asked for clarification on the location of the intersection and alignment. Chairman Hansen stated it was intended to miss some of the wetlands.

Mr. Despain stated that the current General Plan shows two crossings of I-15; at 100 West and Center Street. For a number of reasons, due to the Ryan Hales Study, we have settled on 100 West as a crossing. The Center Street crossing will be taken out. This is the alternative that seems the most feasible; the direct north-south crossing on 100 West.

**Public Hearing:**

Chairman Hansen opened the hearing f or public comment. No public comments were made and the hearing was closed.

**Kevin Tea moved to recommend approval of the Interim amendment to the Major Transportation Element of the General Plan subject to: (1) A specific recommendation that the collector road through the Art Dye complex shown as 1200 North be again added to the master plan, (2) Connection of 1200 North to 1280 North, (3) Add correction that 1300 West connect to 800 South, (4) Remove the option of the Center Street overpass and make 100 West the crossing of I-15. Larry**



Attachment: 2. Site Plan (American Eagle Appeal)

**seconded the motion, motion carried unanimously. This is going to CC next Tuesday. Larry Howden seconded the motion. All were in favor. The motion carried unanimously.**

Chairman Hansen noted that this item is on the City Council Agenda for next Tuesday, June 10, 2008.

**HEARING, REVIEW AND ACTION ON A ZONE CHANGE FOR PROPERTIES ON 500 EAST FROM 200 SOUTH TO 450 SOUTH FROM THE R4-7500 RESIDENTIAL ZONE TO THE GC-2 GENERAL COMMERCIAL ZONE.**

Chairman Hansen explained that this was before the Planning Commission month or so ago. A request from property owner in the area was received to rezone his parcel to commercial. That was put on hold for the possibility of rezoning entire area down to 450 South. This would be a design commercial zone. Residences would be allowed to remain until a request for a change is made. Current residential uses would be grandfathered.

Mr. Despain indicated that most of the property owners have come one at a time requesting a change to commercial. If it goes to commercial, it needs to happen in a unified way and a way which provides for land assembly and a coordinated development plan. This is the first request we have had for parcels on the south end. The parcels on south end could potentially be stand alone commercial parcels. The thought here is that with potential rezone, incentive is there for land assembly. It is currently zoned R4-7500 and if properties were developed under that zone, multi-family units on individual lots would be allowed. Our real objective over time is to place this into a commercial zone for development. This rezone would accomplish this objective. Rather than piecemeal the area, we look more comprehensively at the entire area. The Current General Plan identifies this area as commercial, and this request is consistent with that plan.

Chairman Hansen pointed out the various properties as part of this proposal on the screen.

**Public Hearing:**

Chairman Hansen opened the hearing for public comment.

A citizen requested that it remain residential.

Josh Martin, property owner, would like to see this rezoned to General Commercial. Chairman Hansen explained that Mr. Martin owns the property at 350 South and had requested to rezone his parcel.

Chairman Hansen closed the hearing.



Attachment: 2. Site Plan (American Eagle Appeal)

**Kevin Tea moved to recommend approval of the zone change for properties along 500 East from 200 South to 450 South from the R4-7500 Residential Zone to the GC-2 General Commercial Zone as per the Master Plan. John Woffinden seconded the motion. All were in favor. The motion carried unanimously.**

Mr. Despain noted this will not go on the June 10th meeting but will go on the June 24th meeting when the City Council will consider the rezone request. One other thought, that in the GC-2 zone, all developments require a specific site plan and a hearing be held on that site plan. This allows the city to attach conditions. A desire will be to have cross easements on these properties so access can be between properties and not all onto 500 East. The GC-2 zone does not permit residences. Attached multi-family will not be permitted.

Chairman Hansen questioned for clarification if the existing residences can remain? Mr. Despain stated that is correct.

Mr. Martin asked if he should come to the meeting on the 24thand the location and time of that meeting. Mr. Despain suggested that Mr. Martin go online to make sure item is on the City Council agenda for that date. Chairman Hansen explained how he could find the information online.

**HEARING, REVIEW AND ACTION ON A MODIFIED SITE PLAN FOR DUDLEY CONCRETE LOCATED AT 712 SOUTH AUTOMALL DRIVE, IN THE PI-1 PLANNED INDUSTRIAL ZONE.**

Chairman Hansen noted that this item was no longer on the agenda.

**REVIEW AND ACTION ON A MODIFIED SITE PLAN FOR WESTROC LOCATED AT 618 EAST 1700 SOUTH, IN THE I-1 INDUSTRIAL ZONE.**

Chairman Hansen asked if a representative was present.

Ken Berg, representative, stated that the batch plant is operating. This is Phase 2, the maintenance area. The last remaining piece is the office/call center. That should be back within 6 months before the Planning Commission as Phase 3.

Mr. Olsen gave a brief presentation and noted that the staff report attempted to highlight the review criteria as set forth in the Development Code. Of concern is that on the original site plan, areas were labeled to be surfaced with concrete and this phase labels those areas as gravel. These areas should be surfaced with concrete, per the original site plan.

Mr. Spencer requests that the area be paved largely to keep up the cleanliness of public streets and storm water cleanliness.



Attachment: 2. Site Plan (American Eagle Appeal)

Mr. Woffinden asked if Westroc could concrete their area piece by piece, with "haul back" concrete, working to eventually have the entire area covered. Mr. Spencer agreed that would be fine and we could accommodate that.

Mr. Spencer brought up the issue of the gate area. The trucks, as they leave the site, do not stop at the entry/exit, but rather continue on into the street. Westroc has recently installed a pressed concrete wall close to the entry and exit area. Mr. Spencer was hoping this could be placed further back into the site so the drivers would have a better sight triangle. There has been talk of painting "stop" lettering, installing a stop sign, and possibly putting up attention signs for pedestrians on the sidewalk. We would like Westroc to emphasize that their drivers do not have the right-of-way as they exit the site. Accident potential is high. Mr. Spencer discussed the potential motion items.

Chairman Hansen asked if this item stays with the Planning Commission because it is in the I-1 zone, or does it go to the City Council? Mr. Despain indicated that it stays here and does not move forward to City Council.

Mr. Berg explained that Westroc has prepared and designed sections for concrete paving. This could be provided to staff, and certain areas could be more of a priority.

Mr. Tea suggested more trees be planted around the building.

Mr. Despain explained that the plan we received is for Phase 2 and the references to gravel should be deleted from final site plan. Mr. Despain then asked if a well was used. Mr. Berg stated yes.

Mr. Woffinden noted a correction that the fence is gone along the western edge of the property next to Southams, but is still noted on the plan.

**John Woffinden moved to approve modified site plan for Westroc located at 618 East 1700 South in the I-1 Industrial Zone subject to: (1) Stop sign and lettering at the entrance off the cul-de-sac, (2) That they have an area in place for the haul back concrete in Phase 2, (3) Remove the word "gravel" from the site plan (4) Landscaping in Phase 1 be completed before final occupancy of the building in Phase 2, (5) Final approval by City Engineer and Fire Marshal, (6) Location of a trash enclosure be identified on the site plan. Kevin Tea seconded motion. All were in favor. The motion carried unanimously.**

**REVIEW AND ACTION ON A SITE PLAN FOR AN OPEN RESERVOIR FOR PRESSURIZED IRRIGATION LOCATED AT 1650 NORTH 200 EAST, IN THE PF PUBLIC FACILITES ZONE.**

Chairman Hansen explained that there were issues that had to be resolved, and most of those issues have been resolved at the City Council level and now is back to the Planning Commission. For clarification, Highland City has annexed into their city a portion of this area.



Attachment: 2. Site Plan (American Eagle Appeal)

Mr. Spencer pointed out that page 6 in the packet illustrates the city boundaries between American Fork and Highland. American Fork offered to take this whole area into the city, but Highland opted not to allow the boundary adjustment, but will allow American Fork to construct the reservoir on their portion of the site. A Conditional Use Permit is needed in Highland for the portion of the reservoir in their city limits. Approvals tonight will be for the portion of the reservoir in American Fork.

Mr. Woffinden stated that he works for Horrocks Engineers, and is a construction inspector on this overall project. He explained he has reviewed the plan, and all of his corrections and/or additions have been given to the Project Manger, John Scheiss.

Mr. Spencer went over some issues that have been addressed. This facility will be used for canoeing, scuba diving, kayaking and a trail will run along the perimeter. The hope is to bid this project within a few weeks.

Eric Franson, representative, noted that they have added more landscaping details, such as boulders to break up the berm area. A slight change is to be made in the rendering along the south face, such as adding more trees. This will help with visual impacts.

Chairman Hansen asked the Planning Commissioners for questions or comments. Earlier discussions included adding possible lighting on the trail so it is not overly dark.

Mr. Spencer stated it was appropriate to add smaller, 12-14 foot street lights at the corners, and bollard lights along the trail corridor to make it safer for residents use at night. This should help to deter vandalism. These additional items had not been considered, but we are hopeful it could be added to the budget.

Chairman Hansen appreciated the work on this. Mr. Tea noted this will be one of the nicer irrigation ponds.

Mr. Despain pointed out that the City's Public Facilities zone requires an overlay and a hearing. The hearing was noticed some time ago; this is technically a continuation of the hearing and then this will go to the City Council for final action.

**Public Hearing:**

Chairman Hansen opened the continuation of the hearing for public comment. There were no comments and the hearing was closed.

**Larry Howden moved to approve the site plan for an open reservoir for pressurized irrigation located at 1650 North 200 East, in the PF Public Facilities Zone subject to the addition of lighting along the pathway for security purposes. Rebecca Staten seconded the motion. Kevin Tea noted that the plan needs to include extra trees on south side. All were in favor. The motion carried unanimously.**



Attachment: 2. Site Plan (American Eagle Appeal)

Mr. Despain thought it appropriate for the minutes to contain language to the effect that this plan has been referred to the Highland Planning Commission and City Council and with the possible exception of relocating the city sign, they are in approval of the portion within Highland City.

**HEARING, REVIEW AND ACTION ON A HISTORIC BUILDING CONSERVATION PROJECT LOCATED AT 317 WAST MAIN STREET, IN THE R2-7500 ZONE.**

Tom Hunter, owner, stated this is the old Chipman Home and he has been remodeling the inside and outside. Mr. Hunter is wishing to lease it as a commercial space, office space. Tentative plans call for a Title Company to move in.

Chairman Hansen noted that the existing ditch that runs through the property is a good looking rock ditch. By retaining the historic nature of the property, could ditch be left open? Mr. Hunter stated he had only considered piping it for pressurized irrigation but would love to leave it open for aesthetic purposes. He would pipe it under the parking area and then leave it open. Chairman Hansen noted that it is a nice addition to the historic home and area. He does not see necessity of piping the ditch. Mr. Hunter agreed that it is a better look for house to leave ditch open.

Chairman Hansen asked about removing the asphalt drive onto other property. Mr. Hunter stated yes, it will be removed and a 9' drive will be placed in that location, but not on the adjoining property.

Mr. Spencer noted that this ditch is allowed to stay because of its historic nature. He explained to the Planning Commission that our standard is that all ditches be piped.

Mr. Despain explained that there is no addition to the building and no alteration to the character of building. Mr. Hunter stated no. Mr. Despain noted that there is no signage on the plan. Will there be a monument sign? Mr. Hunter stated maybe, but he is not sure. Mr. Despain stated that the plan should identify a location for a sign. This moves on to the City Council because it is a specific site plan for historic conservation project. Converting a residence into an office is allowed if the purpose of the conversion is to preserve the historic character of structure.

**Public Hearing:**

Chairman Hansen opened the hearing for public comment. There were no comments made so the hearing was closed.

**Kevin Tea moved to recommend approval of an Historic Building Conservation Project located at 317 East Main Street, in the R2-7500 Residential Zone subject to: (1) Verification of ditch piping size with the irrigation company, (2) Finding that the ditch is an historic element of the home and to allow the piping of the ditch to be limited to only those portions necessary for the proposed parking lot, (3) The**



Attachment: 2. Site Plan (American Eagle Appeal)

**addition of a storm drainage system approved by the City Engineer at the end of the curb on Main Street, (4) Final approval of plans by City Engineering (5) Identify location of a future monument sign on the plan as proposed by Planning Commission between the new driveway and sidewalk (6) Verification of the notes and numbering on the erosion and sediment control. Larry Howden seconded the motion. All were in favor. The motion carried unanimously.**

Mr. Despain noted that the parking solution is commendable.
Mr. Howden asked what was the purpose of the additional sidewalk, and Mr. Spencer noted it was in order to meet ADA requirements.

**HEARING, REVIEW AND ACTION ON A COMERCIAL SITE PLAN FOR BUILDING #2 OF NORTH POINTE BUSINESS PARK LOT #4 LOCATED AT 1367 SOUTH 630 EAST, IN THE PI-1 PLANNED INDUSTRIAL ZONE AND HEARING, REVIEW AND ACTION ON A COMMERCIAL SITE PLAN FOR BUILDING #3 OF NORTH POINTE BUSINESS PARK LOT #4 LOCATED AT 1367 SOUTH 630 EAST, IN THE PI-1 PLANNED INDUSTRIAL ZONE.**

Chairman Hansen indicated that item #8 and #9 should be combined as they are on the same lot even though Building 3 is shown as "future". Both buildings are still is integral to the entire lot. However, no phase line is shown.

Mike Robinson, owner, agreed to placing items #8 and #9 together. Mr. Robinson explained this is a continuation of what has already been done in the area. He appreciated the help of staff to get to this point and in overcoming challenges along the way. These buildings are more office-warehouse. He stated that there are three different companies looking at this site right now. There is some very good interest in the property.

Mr. Spencer noted engineering concerns. He went through the suggested motion items. The storm drainage issues have been solved. Any approval on this is conditioned upon the plat being recorded. The detention basin is to be landscaped with subdivision. Discussion occurred earlier regarding the landscaping of the railroad corridor and potentially shifting the trash enclosure to the south parking area. This will allow more of a landscape look for the site as Frontrunner goes through. Trees and screening are suggested south of the enclosure. The landscape plan lists spruce trees but does not show any. If this remains under one ownership, one sewer lateral is ok, but if it is to be separated, separate laterals are needed. An easement is needed from the Price's or they will need to finish the northeast access. Improvements cannot be installed without an easement.

Chairman Hansen noted that adding trees along railroad corridor would be helpful.

Mr. Robinson agreed to moving the trash enclosure and adding trees. There is an old fence at the railroad right-of-way and they want to clean it up.



Attachment: 2. Site Plan (American Eagle Appeal)

Mr. Despain expressed concern for the future if two buildings are located on a single lot. Someday those may be divided. If they are divided into a subdivision there would be some difficulty in dividing the land as the land for building 3 would have no direct access to a public street.

Mr. Woffinden asked about compaction density requirements, as per which Proctor was being used, and clarification on the calculations. Corrections are needed. Mr. Spencer stated that the confusion is stemming from Engineering, a general list was created and we will correct it.

Mr. Despain asked about the eastern access, is half on Robinson land? Mr. Spencer stated no only about 4 feet is on the Price side. Mr. Despain noted that curb and gutter would be on Price's side. Do they know its coming? Mr. Robinson stated yes, and we have had meetings with them and this fits in with their tentative plan.

Mr. Tea brought up some landscape concerns. Tree quantities are needed. Trees should be added along the railroad corridor and in front of building 2 in the planter strip. A few slender trees could be added in front of the building.

Mrs. Staten would like to see some trees in the detention pond, along the railroad area or along the backside of building 3. Mr. Spencer noted that trees can be placed in the pond area, just not on the embankments.

Mr. Tea had a general question on LEED initiatives; what are we doing as a City to promote green buildings? We need to start as a city to implement this type of program.

**Public Hearing:**

Chairman Hansen opened the hearing for public comment. There were no comments and the hearing was closed.

**Kevin Tea moved to approve a Commercial Site Plan for Building #2 and #3 of North Pointe Business Park Lot #4 located at 1367 South 630 East, in the PI-1 Planned Industrial Zone subject to: (1) Final plat being recorded with detention basin landscaped per City ordinance and maintained by property owners association with the addition of trees being added to the plan, (2) Landscape plan be updated to show landscape along the railroad corridor and include relocation of dumpster enclosure to allow for better screening of enclosure and updated plan to identify location of spruce trees as noted per plan and the addition of the quantities added to the plan schedule, (3) Notification that City ordinances requires separate utility laterals if the future desire is to condominiumize the building. This includes separate water and sewer and other utilities per City ordinance, (4) Dedication of easements for City utilities and cross access with north lot. Off property improvements cannot be installed without easement on adjacent lot, (5) Final approval of construction plans by City Engineering and Fire Marshal, (6) Building #3, which is shown as "future", the pad being prepared and capped with gravel until**



Attachment: 2. Site Plan (American Eagle Appeal)

**future construction if not built at the same time as building #2, (7) Updated technical notes as noted by John Woffinden. Larry Howden seconded the motion. All were in favor. The motion carried unanimously.**

**HEARING, REVIEW AND ACTION ON A COMMERCIAL SITE PLAN FOR SOUTH VALLEY MOTORSPORTS LOCATED AT 622 EAST 1306 SOUTH ON LOT #1 NORTH POINTE BUSINESS PARK PLAT D, IN THE PI-1 PLANNED INDUSTRIAL ZONE**

Chairman Hansen indicated this is to the northwest of the previous item and is similar in nature. Mr. Robinson stated that as soon as the subdivision plat is recorded, South Valley Motorsports will purchase the property. This is not to be for retail space. This will be for storage. The Draper facility has no room for storage. This is to accommodate for the storage and building of products. There will be no outside storage.

Mr. Spencer went over engineering issues. Landscape along the rear of the building will need to be approved by the Fire Marshal. He then explained the additional potential motion items. He stated that we would like to maintain the ability to drive through the rear area of building, 12 ft width, if landscape is present.

Mr. Woffinden noted concerns with the technical notes. Correction is needed.

Mr. Despain raised the issue of the future parking stalls to be constructed when the need is warranted.

Mr. Robinson explained that all parking will be put in now. This has been added to the site plan.

Mr. Tea commented on the landscape plan and plant quantities need to be added to table.

**Public Hearing:**

Chairman Hansen opened the hearing for public comment. There were no comments made so the hearing was closed.

**Kevin Tea moved to recommend approval of a Commercial Site Plan for South Valley Motorsports located at 622 East 1306 South on Lot #1 North Pointe Business Park Plat D, in the PI-1 Planned Industrial Zone subject to: (1) Final plat being recorded with detention basin landscaped per City ordinance and maintained by property owners association with additional trees and update to the landscape plan to include if possible landscaping along the rear of the building as discussed and approved by the Fire Marshal and addition of the quantities called out per the plan schedule, (2) Landscape of the railroad corridor with trees, (3) Addition of a grease trap if determined necessary by TSSD, (4) Dedication of easements for City utilities, (5) Final approval of construction plans by City Engineering and Fire Marshal, (6) Review and update of the Technical notes as pointed out by John Woffinden. John**



Attachment: 2. Site Plan (American Eagle Appeal)

**Woffinden seconded the motion. All were in favor. The motion carried unanimously.**

**OTHER BUSINESS**

Mr. Despain received an inquiry from a prospective purchaser, Liberty Cove area. The site faces 620 South. Does the City have strong feelings on the character of buildings to be constructed in this area? The architect was wondering if the City has a design format for that area. He has proposed a design and is wanting feedback. Would the Planning Commission deny something that wasn't consistent with what existed to the west? Does the Planning Commission have feelings on the three different renderings? Mr. Tea felt this would be an improvement to the area. Other Commissioners agreed it would improve the area. Mr. Despain noted he will pass on feedback and the architect may come to us soon.

Mr. Despain also brought up the street plan; staff has a meeting on June 17th with representatives from the Vineyard Connector. A resolution from the City Council is hoped for by then amending the General Plan. We want to take a positive position regarding the connector. Mr. Despain is hopeful that on the 10th the City Council will approve a resolution and that will give us a firm position on the connector to present on the 17th to representatives.

Mr. Despain noted that we have been approached by Mark Goodsell looking to build small homes with no common wall. He wants to propose it as a form of an infill project. Heavy emphasis would be on green construction. Our current ordinance will not support this as written. Mr. Despain suggests we listen to Mark and have him sell his product and see if it is a direction the City wants to go. We have to look for the unintended consequences, but there may be some advantage to going this direction. Let him as representative come before you and see if there is any interest in moving forward.

Mr. Spencer brought up the Reuben Adams parcel and noted that he is beginning to work on his plans. He had proposed some storage units. Any proposal for storage units would have to be 1 foot above the base flood elevation. In the case of storage units, do we consider them to be habitable structures? Would we require FEMA concurrence with that? Mr. Despain stated there would be an onsite manager residence that would qualify a habitable structure.

Mr. Tea stated he will not be here for the July 2nd meeting. He brought up 900 East and Haymaker. There is a dead-end road, but the public does not know that. Perhaps a could be placed saying "No Outlet". He also brought up a recommendation on LEED certification for commercial buildings, establishing procedures for those requirements. Another issue is the enforcement of trees; how do we enforce projects that have dead trees? There are nice areas but many dead trees and the dead trees have not been replaced.

**SITE PLAN COMMITTEE REPORT**



Attachment: 2. Site Plan (American Eagle Appeal)

Mr. Despain noted that things seem to be picking up. Most items are primarily commercial, but there is some residential. Vintaro is coming in as a 48 unit townhouse complex. The new plan is not meeting the original plan. We need to see if some of the changes are consistent with the overall plan.

**REVIEW AND ACTION ON THE MINUTES OF THE MAY 21, 2008, PLANNING COMMISSION MEETING**

**Kevin Tea moved to approve, with corrections as noted, the minutes of the May 21, 2008 Planning Commission Meeting. Larry Howden seconded the motion. Those voting Aye: Chairman James Hansen, Kevin Tea, John Woffinden, Rebecca Staten, and Larry Howden. The motion carried.**

**ADJOURNMENT**

**Larry Howden moved to adjourn at 9:15 p.m. John Woffinden seconded the motion. All were in favor. The motion carried unanimously.**

Adam Olsen
American Fork Planning



Attachment: 2. Site Plan (American Eagle Appeal)

Snell & Wilmer
L.L.P.

**EXHIBIT D**

**Small Source Registration from Utah Division of Air Quality**

[*Attachment Follows*]

Attachment: 2. Site Plan (American Eagle Appeal)

Snell & Wilmer

AERM Exhibit - 10

State of Utah
GARY R. HERBERT
*Governor*
SPENCER J. COX
*Lieutenant Governor*

Department of
Environmental Quality
L. Scott Baird
*Executive Director*
DIVISION OF AIR QUALITY
Bryce C. Bird
*Director*

## Small Source Registration

DAQE-EN160100001-20

March 6, 2020

Doug Clements
American Eagle Ready Mix
7811 West 2100 South
Magna, UT 84044

Dear Mr. Clements:

Re: Request for Evaluation of Compliance with Rule R307-401-9, UAC: Small Source Exemption
Project Fee Code: N160100001

On February 7, 2020, the Division of Air Quality (DAQ) received your request for a small source exemption for American Eagle Ready Mix Utah, LLC - American Fork Concrete Batch Plant. The source is located at 500 East 1700 South, American Fork, Utah County. DAQ has determined the small source exemption applies to the source, as long as the equipment and associated processes operate as specified in the registration request.

The small source exemption does not exempt a source from complying with other applicable federal, state, and local regulations and the current Utah Administrative Code. Based on the emissions you submitted to DAQ with your registration request, American Eagle Ready Mix Utah, LLC - American Fork Concrete Batch Plant is not required to obtain an approval order under R307-401. If you change your operation such that there is an increase in emissions, we recommend you notify us, as an approval order may be required.

As authorized by the Utah Legislature, the fee for issuing this small source exemption is a one-time filing fee in addition to the actual time spent by the review engineer and all other staff on the project. Payment should be sent to DAQ upon receipt of the invoice.

195 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144820 • Salt Lake City, UT 84114-4820
Telephone (801) 536-4000 • Fax (801) 536-4099 • T.D.D. (801) 903-3978
www.deq.utah.gov
Printed on 100% recycled paper

Snell & Wilmer



Thank you for registering your source with the DAQ. If you have any additional questions, please contact Mr. Tim DeJulis at (801) 536-4012.

Sincerely,

Bryce C. Bird
Director

Alan D. Humpherys, Manager
New Source Review Section

BCB:ADH:TD:sa

Attachments: Small Source Exemption Registration Request and attached forms

Attachment: 2. Site Plan (American Eagle Appeal)

Snell & Wilmer
L.L.P.

**EXHIBIT E**

**Concrete Batch Plant Calculations Made by DAQ**

[*Attachment Follows*]

Attachment: 2. Site Plan (American Eagle Appeal)

Snell & Wilmer

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
AIR QUALITY

# Concrete Batch Plants

| Equipment Details | | |
|---|---|---|
| Hourly Rating | 30 | $yd^3$/hour |
| Annual Production | 120,000 | $yd^3$/year |
| Type | Truck-Mix | |

| Pollutant | Percent $PM_{2.5}$ of $PM_{10}$ | Emission Rate (lbs/hr) | Emission Total (tons/year) | Reference |
|---|---|---|---|---|
| $PM_{10}$ | | 0.69 | 1.37 | See Below, & AP-42 Appendix B.2.2 Category 3 |
| $PM_{2.5}$ | 29.4% | 0.20 | 0.40 | |
| HAP | | 0.00 | 0.00 | |

| Process (Controlled) | $PM_{10}$ Emission Factor (lb/ton) | $PM_{10}$ Emission Factor ($lb/yd^3$) | $PM_{10}$ Emission Rate (lbs/hr) | $PM_{10}$ Emission Total (tons/year) | Reference |
|---|---|---|---|---|---|
| Aggregate Delivery to Ground | | 0.0031 | 0.09 | 0.19 | AP-42 Table 11.12-2, Table 11.12-5, Table 11.12-6, Equation 11.12-2 |
| Sand Delivery to Ground | | 0.0007 | 0.02 | 0.04 | |
| Aggregate Delivery to Conveyor | | 0.0031 | 0.09 | 0.19 | |
| Sand Delivery to Conveyor | | 0.0007 | 0.02 | 0.04 | |
| Aggregate Delivery to Storage | | 0.0031 | 0.09 | 0.19 | |
| Sand Delivery to Storage | | 0.0007 | 0.02 | 0.04 | |
| Cement Delivery to Silo | | 0.0001 | 0.00 | 0.01 | |
| Additive Delivery to Silo | | 0.0002 | 0.01 | 0.01 | |
| Weigh Hopper Loading | | 0.0038 | 0.11 | 0.23 | |
| Truck-Mix Loading | 0.0263 | 0.0074166 | 0.22 | 0.44 | |

| Hazardous Air Pollutant (Controlled) | Emission Factor (lb/ton) | Emission Factor ($lb/yd^3$) | Emission Rate (lbs/hr) | Emission Total (tons/year) | Reference |
|---|---|---|---|---|---|
| Arsenic | 1.61E-06 | 4.53E-07 | 1.36E-05 | 2.72E-05 | AP-42 Table 11.12-8 |
| Beryllium | 1.95E-07 | 5.50E-08 | 1.65E-06 | 3.30E-06 | |
| Cadmium | 9.26E-09 | 2.61E-09 | 7.83E-08 | 1.57E-07 | |
| Chromium | 5.35E-06 | 1.51E-06 | 4.53E-05 | 9.05E-05 | |
| Lead | 2.06E-06 | 5.81E-07 | 1.74E-05 | 3.49E-05 | |
| Manganese | 2.12E-05 | 5.97E-06 | 1.79E-04 | 3.58E-04 | |
| Nickel | 7.10E-06 | 2.00E-06 | 6.01E-05 | 1.20E-04 | |
| Phosphorus | 1.58E-05 | 4.47E-06 | 1.34E-04 | 2.68E-04 | |
| Selenium | 1.85E-07 | 5.23E-08 | 1.57E-06 | 3.14E-06 | |



Version 1.0
November 29, 2018



Attachment: 2. Site Plan (American Eagle Appeal)

AMERICAN FORK CITY
PLANNING COMMISSION

MEETING DATE: April 22, 2020
STAFF PRESENTATION: Adam Olsen

AGENDA TOPIC: Review and action on a commercial site plan for American Eagle Ready Mix, located in the area of 1700 South 500 East, in the I-1 (Industrial) zone.

ACTION REQUESTED: Approval of the site plan.

| BACKGROUND INFORMATION | | |
|---|---|---|
| Location: | | Approximately 1700 S. 500 E. |
| Applicants: | | Doug Clements |
| Existing Land Use: | | Vacant/Agriculture |
| Proposed Land Use: | | Industrial |
| Surrounding Land Use: | North | Planned Industrial |
| | South | Vacant/Agriculture |
| | East | Industrial |
| | West | Agriculture |
| Existing Zoning: | | I-1 (Industrial) |
| Proposed Zoning: | | N/A |
| Surrounding Zoning: | North | PI-1 (Planned Industrial) |
| | South | I-1 (Industrial) |
| | East | I-1 (Industrial) |
| | West | I-1 (Industrial) |

Background

****This item was tabled at the April 8, 2020 Planning Commission meeting over concerns on mitigation measures for items such as dust, noise, odor, vapor, etc. In addition, questions on landscaping and setbacks were raised. It was unclear from the original submittal materials whether landscaping and setbacks met the requirements as set forth in the Development Code.**

**The applicant has submitted a revised site plan, illustrating compliance with setback and landscape requirements. The applicant has also prepared a letter addressing the Planning Commission, identifying items of concern raised at the April 8th meeting, and how those will be addressed (see attached letter and site plan).**

**The Planning Commission may review the materials submitted and discuss at the meeting on April 22nd.**

Attachment: 3. Staff Report (American Eagle Appeal)

**The body of the original report is below for reference.****

American Eagle Ready Mix proposes an operation at approximately 1700 S. 500 E. The site is within the proposed Lakeland Industrial Park subdivision. The property was recently annexed, and improvements initially constructed without formal site plan approval. The facility was required to shutter operations until such approval occurred. The applicant submitted a site plan, which is now before the Planning Commission for review.

Uses and site plan requirements within the I-1 zone are covered in Sections 17.4.503 and 17.6.101, respectively, of the City's Development Code. 17.4.503.B.1(a & b) states that "structures and areas used for the manufacturing, compounding, processing, fabrication and warehousing of goods and materials" are allowed within the zone, provided that "none of the activities carried out on the premises shall produce any noxious odor or any fumes, smoke, noise, vapor, vibration, glare or similar condition which is harmful to persons or which is readily discernable beyond the boundary of the zone or create an adverse visual impact readily discernable from the public roads". From the application materials, it is unclear how the above issues will be addressed. The Planning Commission may request the applicant address the items as outlined in the Code, mitigation efforts to take place and how they will apply to the site.

The site plan illustrates a proposed structure toward the north end of the property, south of 1700 South. The I-1 zone requires a 30' front setback for structures. Verification of front setback is required. Verification of adherence to landscape requirements is also unclear and should be addressed. Specifically, the following: (1) landscape islands adequately sized at the end of all parking rows, (2) shade trees provided at the ratio of 1 tree per 6 parking stalls and 1 shrub per 25 sq. ft. of landscape island, (3) 6' wide parking perimeter landscape area, and (4) a 14' wide landscape area adjacent to a street frontage with 1 tree provided for every 40' of street frontage.

Section 17.6.101.B of the Development Code

Application for site plan approval shall be submitted on forms provided by the City and shall be accompanied by maps and drawings showing the following:

a. The location of all existing and proposed buildings and structures on the site, with full dimensions showing the distance between buildings and distances from buildings to adjacent property lines.

   Full dimensions are not provided; specifically, distances between buildings and from buildings to adjacent property lines.

b. The location of all parking spaces, driveways, and points of vehicular ingress and egress.

Attachment: 3. Staff Report (American Eagle Appeal)

The location of driveways and points of vehicular ingress and egress has been illustrated.

c. A landscaping plan showing the location, types and initial sizes of all planting materials to be used together with the location of fences, walls, hedges, and decorative materials.

   A landscape plan is provided; however, it does not appear to address specifics required by the City's landscape requirements. Revision is needed to ensure compliance.

d. Preliminary elevations of main buildings showing the general appearance and types of external materials to be used.

   An existing structure, while inoperable, is in place. Elevations and renderings of the existing and proposed structures have been provided in the submittal materials.

e. The location of solid waste receptacles and trash pick-up areas.

   This has not been illustrated on the site plan.

POTENTIAL MOTIONS

The following potential motions are offered for consideration. If the Planning Commission feels clarification/more information is needed, a motion to table the application is prudent.

APPROVAL

Mr. Chairman, I move that we approve the site plan for the American Eagle Ready Mix, subject to any findings, conditions and modifications listed in the Engineering Report.

DENIAL

Mr. Chairman, I move that we deny the site plan for the American Eagle Ready Mix.

TABLE

Mr. Chairman, I move that we table action on the site plan for American Eagle Ready Mix.

Attachment: 3. Staff Report (American Eagle Appeal)

# AMERICAN FORK CITY ENGINEERING DIVISION
# STAFF REPORT

Planning Commission Meeting Date: 3/18/2020

This report is a summary of the American Fork City Engineering Division plan review comments regarding the subject plan as submitted by the applicant for American Fork City Land Use Authority approval:

Project Name: American Eagle ready Mix

Project Address: 1700 South 500 East

Developer / Applicant's Name: Doug Clements

Type of Application:

- ☐ Subdivision Final Plat
- ☐ Subdivision Preliminary Plan
- ☐ Annexation
- ☐ Code Text Amendment
- ☐ General Plan Amendment
- ☐ Zone Change
- ☒ Commercial Site Plan
- ☐ Residential Accessory Structure Site Plan

**Engineering Division Recommendation:** The Engineering Division recommends APPROVAL of the proposed development subject to the following findings and conditions:

1. All Standard Conditions of Approval and items denoted as "Plan Modification(s) Required" in the 3/18/2020 Engineering Division Staff Report for the City Land Use Authority shall be addressed on all final project documents.

**Project Map:**








Attachment: 3. Staff Report (American Eagle Appeal)

## STANDARD CONDITIONS OF APPROVAL

**Standard Conditions of Approval:**

APPLICANT is responsible and shall submit/post/obtain all necessary documentation and evidence to comply with these Standard Conditions of Approval prior to any platting, permitting, or any other form of authorization by the City including plat recording or other property conveyance to the City and prior to scheduling a pre-construction meeting. All recording shall take place at the Utah County Recorder's Office.

1. **Water Rights:** Submit evidence that all the required water rights have been conveyed to American Fork City.
2. **Performance Guarantee:** Post a performance guarantee for all required public and essential common improvements.
3. **Easements and Agreements:** Submit/record a long-term Storm Water Pollution Prevention Maintenance Agreement signed and dated by the property owner and any required easement documentation.
4. **Land Disturbance Permit:** Obtain a Land Disturbance Permit.
5. **Compliance with the Engineering Division Plan Review Comments:** All plans and documents shall comply with all the Technical Review Committee comments and the City Engineer's final review.
6. **Sensitive Lands:** Record all applicable documents required for compliance with the City's Sensitive Lands Ordinance.
7. **Utility Notification Form:** Submit a Subdivision Utility Notification Form.
8. **Professional Verification:** Submit final stamped construction documentation by all appropriate professionals.
9. **Fees:** Payment of all development, inspection, recording, street light, and other project related fees.

**Plan Modifications Required:**

1. Final approval and construction of 1700 South roadway improvements and culinary water line shall be completed prior to or in conjunction with development.
2. The current culinary water system was modeled with the addition of this development. The results of the model show velocities are higher than allowable per city standard and differential pressures between peak hour and peak day are greater than 15 psi as prescribed in the master plan. These present issues unless master planned water main lines are installed prior to or in conjunction with this development. If the City commits to building these water lines, then we recommend approval. If the City cannot commit to building these water lines, then we strongly recommend denial.

Attachment: 3. Staff Report (American Eagle Appeal)

# UNAPPROVED MINUTES

## AMERICAN FORK CITY
## PLANNING COMMISSION MINUTES
## MAY 6, 2020

The American Fork City Planning Commission met in a regular session on May 6, 2020 in an electronic meeting on the Zoom platform, viewable on the City's YouTube link, commencing at 7:00 p.m.

| | |
|---|---|
| Present: | John Woffinden |
| | Chris Christiansen |
| | Geoff Dupaix |
| | Harold Dudley |
| | Ryan Hunter |
| | Christine Anderson |
| | Rod Brocious |
| Absent: | |
| Staff Present: | Adam Olsen, City Planner |
| | Wendelin Knobloch, Planner |
| | Ben Hunter, Engineer |
| | Scott Sensanbaugher, Public Works Director |
| | Cherylyn Egner, City Attorney |
| | Lisa Halversen, Administrative Assistant |

Public Comments Received: Mr. Wayne Budge, Mr. Dan McDonald

1. Review and action on a commercial site plan for American Eagle Ready Mix, located in the area of 1700 South 500 East in the I-1 Industrial zone

Mr. Olsen stated that this item was tabled at the April 8, 2020 Planning Commission meeting over concerns on mitigation measures for items such as dust, noise, odor, vapor, etc. In addition, questions on landscaping and setbacks were raised. It was unclear from the original submittal materials whether landscaping and setbacks met the requirements as set forth in the Development Code.

The applicant has submitted a revised site plan, illustrating compliance with setback and landscape requirements. The applicant has also prepared a letter addressing the Planning Commission, identifying items of concern raised at the April 8th meeting, and how those will be addressed-. The body of the original report is below for reference.

American Eagle Ready Mix proposes an operation at approximately 1700 S. 500 E. The site is within the proposed Lakeland Industrial Park subdivision. The property was recently annexed, and improvements initially constructed without formal site plan approval. The facility was



Attachment: 4. Minutes (American Eagle Appeal)

required to shutter operations until such approval occurred. The applicant submitted a site plan, which is now before the Planning Commission for review.

Uses and site plan requirements within the I-1 zone are covered in Sections 17.4.503 and 17.6.101, respectively, of the City's Development Code. 17.4.503.B.1(a & b) states that "structures and areas used for the manufacturing, compounding, processing, fabrication and warehousing of goods and materials" are allowed within the zone, provided that "none of the activities carried out on the premises shall produce any noxious odor or any fumes, smoke, noise, vapor, vibration, glare or similar condition which is harmful to persons or which is readily discernable beyond the boundary of the zone or create an adverse visual impact readily discernable from the public roads". From the application materials, it is unclear how the above issues will be addressed. The Planning Commission may request the applicant address the items as outlined in the Code, mitigation efforts to take place and how they will apply to the site.

The site plan illustrates a proposed structure toward the north end of the property, south of 1700 South. The I-1 zone requires a 30' front setback for structures. Verification of front setback is required. Verification of adherence to landscape requirements is also unclear and should be addressed. Specifically, the following: (1) landscape islands adequately sized at the end of all parking rows, (2) shade trees provided at the ratio of 1 tree per 6 parking stalls and 1 shrub per 25 sq. ft. of landscape island, (3) 6' wide parking perimeter landscape area, and (4) a 14' wide landscape area adjacent to a street frontage with 1 tree provided for every 40' of street frontage.

Applicant has submitted further material showing mitigation measures to address commissioner's concerns. Applicant and opposing counsel will each have ten minutes to make their arguments, then applicant will have a short rebuttal period.

Mr. Wayne Budge, legal counsel representing American Eagle Ready Mix (AERM), thanks commission for their attention to submittal materials. He first wishes to highlight the important points of their arguments.

He first referenced the history of the site, and concerns about prior activity on-site. AERM takes seriously their responsibility to the city, on-site activities occurred before the site was annexed into American Fork. After annexation, all activities ceased until appropriate permissions could be approved. Other observed activities in the vicinity are not from his client.

Mr. Budge stated that they have spent a lot of time working towards this approval. Last year they worked with city staff to be annexed, with the clear understanding of what the appropriate use would be. Some concerns were raised about another batch plan in the area, but city staff annexed and rezoned for this purpose and use. A neighbor recently made arguments that should have been made before a zoning and annexation took place. After annexation there is an expectation of activity being approved into the zone it is appropriate for. His client is required to submit an application that conforms to city code. This particular property is zoned industrial, it is next to the TSSD site with open sewer lagoons, mulching, and other outdoor activities that are tolerated and appropriate for the I-1 zone. Within 700 ft of this site is Rock Canyon Oil, which is constantly



Attachment: 4. Minutes (American Eagle Appeal)

trucking material in and out, and involves uses such as storage facilities. Alta View is a currently operating batch plant 500 ft or less from this site. The Alta View application was processed in 2005 and 2008 and approved by this body. The city council and planning commission went through careful analysis to approve Alta View, the minutes are attached. AERM has the obligation to show that this use is permitted in this zone. Though engaging in approved uses such as compounding and processing of materials, they will also meet stated conditions that activities not produce noxious odors, vapors, dust, noise, etc. The area is industrial, and they offer the following as mitigating measures:

1. There will be no smoke produced, and fumes will not be worse than the trucks at the neighboring oil facility, compost plant and Alta View batch plant.
2. Noise issues will be mitigated by using best available machinery, and vibrations will be minimal.
3. Dust will be mitigated by using paved area for operations, a sweeper truck will be utilized, and they will have an area for washing trucks to prevent tracking dirt out.
4. Adverse visual impact could be mitigated by a precast wall, up to 8 ft if city desires. This use is the visual one would expect in an industrial zone. The standards being proposed by Roderick are appropriate for a business park, but inconsistent with an industrial zone.

Mr. Budge adds that people coming onto the site will comply with OSHA requirements. He concluded by asking for approval, and stated that they have made a tremendous investment in both time and money, and they intend to be a good neighbor.

Mr. Dan McDonald, legal counsel for Roderick, was granted time to make an opposing statement. He stated that silica dust is very harmful to humans. He displayed a power point that focused on the following concerns:

1. Applicant has not demonstrated adherence to air quality requirements. They installed a plant with the capacity to produce up to 366 CY/Hour but represented to the DAQ that they intend to only operate at a max of 30 CY/Hour in order to obtain a small source exemption from air quality requirements.
2. Applicant has not demonstrated compliance with city code regarding wastewater.
3. There are more than 20 key differences between Alta View and the proposed American Eagle batch plant, some of which include –
   - Alta View operates under a DAQ approval order, AERM is exempt
   - Alta View is an enclosed production facility, AERM is an open production facility
   - AERM engages in crushing and recycling concrete on-site
   - Alta View has a truck washing station, AERM has none on their site plan
   - Alta View is hardly visible from the public road, AERM is clearly visible
   - Alta View has chute sleeves, AERM has open conveyors
   - Alta View is required to use best available control technology (BACT) by DAQ, AERM is not required to use BACT as a term of their exemption
   - Alta View is a dry batch plant, AERM is a ready mix plant



Attachment: 4. Minutes (American Eagle Appeal)

Mr. McDonald added that this use is not allowed under city code in the I-1 zone, as it will generate dust and noise. It is not considered light manufacturing and will have an adverse visual impact. He challenged the applicant to produce permissions from Utah County before annexation by the city, but has not seen any. This applicant is rogue, and they can't be trusted. They have been red-tagged and shut down by the city and are not trustworthy.

He then stated that this is an adjudicative body, which gets to decide if the site plan meets the legal requirements. The applicants were unreasonable to rely on statements by people who are not the decision makers. Their use is not light manufacturing, dust and noise will not be limited, there will be adverse visual impact, materials will be stored in full view. The commission should deny this application. Alternately, if they decide to approve, they should require the following:

1. Quarterly volume audits
2. Compliance with wastewater code
3. Enclosed production
4. Prohibit crushing and recycling
5. Truck washing facility
6. Mature trees to be planted along public road to obscure plant and absorb dust
7. All BACT technology be implemented
8. All mitigation efforts implemented within 3 months of approval

Mr. Budge is given time for rebuttal. He said that information in the presentation from Roderick is misstated and should be disregarded. AERM will have a truck washing station on site. They will also have covered conveyors and no concrete crushing. These comments and recommendations would be appropriate if you were recommending new requirements for a batch plant. This is not the case, we need only show that we do meet the current standards of the city and state. AERM intends to abide by all applicable permits and requirements. If the city were inclined to follow Roderick's recommendations, this would be inconsistent with the approved zoning. He asks commission for its approval.

Discussion of item is now closed to applicant and opposing counsel, and comments by staff and commissioners were heard.

Mr. Christiansen is concerned that AERM is not enclosed. He's studied several batch plants and sees that most are enclosed. If that was what AERM intended, he'd be more likely to approve the application. What is set up is just the machine, which is typical of a temporary project. Without the commitment of an enclosure to mitigate noise and dust, he is concerned about this site plan.

Mr. Brocious has similar feelings, an enclosed building seems to be the factor that would mitigate other concerns. With enclosure, true mitigation can take place.

Chairman Woffinden feels that it fits in zone, but his question is "do we trust applicant to do mitigation?" His track record is not good.



Attachment: 4. Minutes (American Eagle Appeal)

Ms. Anderson pointed out that the Alta View plant was approved in 2004-2005, she said our code has changed since then and we can't use old code to judge present suitability.

Chairman Woffinden agreed. This commission is not judging Alta View in the past, it is judging AERM now. He does agree that batch plants fit in the industrial zone.

Mr. Olsen said the code hasn't changed much in the industrial zone, some exceptions have been added but they don't apply to AERM.

Mr. Ryan Hunter says it is disingenuous to suggest that we have to accept/approve all applicants of a certain type just because one was approved previously. The code certainly didn't anticipate several batch plants in the area. The 92 ft tall tower near the lake is a concern for him. It seems that we are dumping our most unsightly things along our beautiful lakeshore. He has concerns about wastewater requirements, he doesn't like the small exemption instead of DAQ compliance, and doesn't feel that city staff should be the enforcer of air quality. That's why DAQ exists. The open building and rock crushing are other concerns. He doesn't see rock crushing as being a light industrial function.

Mr. Dupaix agrees with previously stated concerns. He asks Mr. Christiansen if the batch plant that he is most associated with is covered, and he affirms. Mr. Dupaix feels that that is a big mitigating factor, similar production facilities are better protected than the current proposal.

Chairman Woffinden feels that their site plan still lacks many details, such as a wash out area.

Mr. Brocious addresses water quality issues, and asks how will they handle water retention to mitigate water quality issues. What BMP's will they follow?

Mr. Ben Hunter indicated that he has reviewed the plans, and the site will be sloped to a retention pond, where water will be recycled and used on-site. Some of the BMP's are paved areas to help reduce pollutants and grading hard surfaces.

Mr. Brocious asked about the potential of pollutants infiltrating into the ground water.

Mr. Ben Hunter agreed that the potential is there, pollutants will be produced from operations. The retention pond will capture some of the dust and dirt. Whether pollutants will dissolve and percolate into groundwater, he can't speak to. BMP is that the retention pond will capture the majority of pollutants, and the storm water facility agreement stipulates that inspections will take place.

Mr. Dupaix asked Mr. Hunter what the BMP's are for batch plants.

Mr. Hunter replied that they are the same as for other operations. A retention pond, paved hard surfaces, grading, etc.

Chairman Woffinden asked how commissioners feel about the exemption for air quality?

Mr. Ryan Hunter is not in favor of that exemption.



Attachment: 4. Minutes (American Eagle Appeal)

Mr. Christiansen stated that he has other concerns such as haul-back concrete. This was not addressed in their plans, and they will have a loader going back and forth. In the last meeting it was mentioned that they would be crushing and recycling, their statements regarding this have been inconsistent. Their plan shows temporary surface and access roads to be made of recycled asphalt, he thinks it should all be concrete. More dust would be generated over time from temporary access roads. He feels that this is quite a bit different from Alta View.

Chairman Woffinden agrees, he didn't see any of these important details in their plan and the area seems too small to accommodate many of them.

Mr. Brocious asked what the alternative is to crushing, do they just store it and then haul away.

Mr. Christiansen says yes, but we don't know their real intent.

Chairman Woffinden indicated that some batch plants pour their haul-back concrete in forms to become part of the road surface a little at a time.

Mr. Ryan Hunter said that as currently configured, it feels like a temporary batch plant.

Mr. Brocious added that it doesn't qualify as light manufacturing without an enclosure.

**Mr. Ryan Hunter moved to deny the site plan for American Eagle Ready Mix on the basis that the applicant has failed to adequately demonstrate that the project meets the following required criteria for the I-1 zone:**

- **It is a light manufacturing, processing, warehousing and fabrication of goods and materials**
- **It has minimum conflict or deleterious effect on surrounding properties and uses**
- **None of the activities carried out on the premises produce any noxious odor or any fumes, smoke, noise, vapor, vibration, glare or similar condition that is harmful to persons or that is readily discernable beyond the boundary of the zone or create an adverse visual impact readily discernable from the public roads**
- **All uses are to be conducted entirely within a fully enclosed building, except those uses deemed by the city to be customarily and appropriately conducted in the open.**
- **No portion of a designated off-street parking area is to be used for storage of materials or vehicles**
- **All materials and vehicles used in the conduct of the business activity are to be stored within an enclosed building or within an area designated for such use as shown on the site plan**
- **All outside storage areas are enclosed with a fence or wall of not less than 6 feet in height**



Attachment: 4. Minutes (American Eagle Appeal)

- **The site plan and improvements provide for efficient removal and proper disposal of surface water generated by the use**

**Mr. Dupaix seconded the motion.**

Ms. Anderson thinks they should table this item, she feels it's not ready for a submission. Mr. Olsen instructed that if a commissioner wants another option and is not in favor of the motion for denial, they should vote no.

Ms. Anderson wants the record to reflect that she is voting to table.

**Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Aye** |
| **Chris Christiansen** | **Abstain** |
| **Christine Anderson** | **Nay** |
| **Geoff Dupaix** | **Aye** |
| **Harold Dudley** | **Aye** |
| **Ryan Hunter** | **Aye** |
| **Rod Brocious** | **Aye** |

**The motion carried.**

2. Hearing, review and action on a commercial site plan located at 64 North 900 West in the GC-2 Planned Commercial zone

Mr. Olsen stated that the applicant proposes a pool display area on landscaped, but vacant, ground adjacent to I-15, at approximately 64 N. 900 W. Applicant states that he intends to construct a structure for sales, storage and additional display in the future; however, for now, he requests approval to display pools on the site. Planning staff has requested a full site plan illustrating this future structure, as this creates a comprehensive picture of the intended use on site.

The GC-2 zone allows display areas as part of a sales establishment, but not a display area without a main use (sales establishment). A display area without a main use could be construed as off-premise advertising, which is not allowed as a sole use. Previously, area was approved as a display area from county. When it was annexed into city, the use changed.

Mr. Dupaix said that Best Vinyl used to be there just to the west, they had a lot of displays but the main business was close enough to conform to requirements.

Mr. Olsen stated that they've indicated to applicant that if there's a site plan with a building, his recommendation would change.

Chairman Woffinden asked if we've required a geotech report.

Mr. Ben Hunter replied that they have not, it's just a pool display without any building.



Attachment: 4. Minutes (American Eagle Appeal)

# APPROVED MINUTES

AMERICAN FORK CITY
PLANNING COMMISSION MINUTES
APRIL 22, 2020

The American Fork City Planning Commission met in a regular session on April 22, 2020 in an electronic meeting on the Zoom platform, viewable on the City's YouTube link, commencing at 7:00 p.m.

| | |
|---|---|
| Present: | John Woffinden |
| | Chris Christiansen |
| | Geoff Dupaix |
| | Harold Dudley |
| | Ryan Hunter |
| | Christine Anderson |
| | Rod Brocious |
| Absent: | |

| | |
|---|---|
| Staff Present: | Adam Olsen, City Planner |
| | Wendelin Knobloch, Planner |
| | Lisa Halversen, Administrative Assistant |
| | Scott Sensanbaugher, Public Works Director |
| | Cherylyn Egner, City Attorney |

Public Comments Received:

1. Review and action on a commercial site plan for American Eagle Ready Mix, located in the area of 1700 South 500 East in the I-1 Industrial zone

Mr. Olsen stated that this item was tabled at the April 8, 2020 Planning Commission meeting over concerns on mitigation measures for items such as dust, noise, odor, vapor, etc. In addition, questions on landscaping and setbacks were raised. It was unclear from the original submittal materials whether landscaping and setbacks met the requirements as set forth in the Development Code.

The applicant has submitted a revised site plan, illustrating compliance with setback and landscape requirements. The applicant has also prepared a letter addressing the Planning Commission, identifying items of concern raised at the April 8th meeting, and how those will be addressed (see attached letter and site plan).

The applicant has asked that this item be tabled until the next meeting on May 6. They would like additional time to prepare information for the commission.



Attachment: 4. Minutes (American Eagle Appeal)

As background, the American Eagle Ready Mix proposes an operation at approximately 1700 S. 500 E. The site is within the proposed Lakeland Industrial Park subdivision. The property was recently annexed, and improvements initially constructed without formal site plan approval. The facility was required to shutter operations until such approval occurred. The applicant submitted a site plan, which is now before the Planning Commission for review.

Uses and site plan requirements within the I-1 zone are covered in Sections 17.4.503 and 17.6.101, respectively, of the City's Development Code. 17.4.503.B.1(a & b) states that "structures and areas used for the manufacturing, compounding, processing, fabrication and warehousing of goods and materials" are allowed within the zone, provided that "none of the activities carried out on the premises shall produce any noxious odor or any fumes, smoke, noise, vapor, vibration, glare or similar condition which is harmful to persons or which is readily discernable beyond the boundary of the zone or create an adverse visual impact readily discernable from the public roads". From the application materials, it is unclear how the above issues will be addressed. The Planning Commission may request the applicant address the items as outlined in the Code, mitigation efforts to take place and how they will apply to the site.

The site plan illustrates a proposed structure toward the north end of the property, south of 1700 South. The I-1 zone requires a 30' front setback for structures. Verification of front setback is required. Verification of adherence to landscape requirements is also unclear and should be addressed. Specifically, the following: (1) landscape islands adequately sized at the end of all parking rows, (2) shade trees provided at the ratio of 1 tree per 6 parking stalls and 1 shrub per 25 sq. ft. of landscape island, (3) 6' wide parking perimeter landscape area, and (4) a 14' wide landscape area adjacent to a street frontage with 1 tree provided for every 40' of street frontage.

For the record the city has received information and a letter of opposition from a neighboring property owner's legal counsel.

**Mr. Hunter moved to table discussion of the site plan for American Eagle Ready Mix.**

**Mr. Christiansen seconded the motion. Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Aye** |
| **Chris Christiansen** | **Aye** |
| **Christine Anderson** | **Aye** |
| **Geoff Dupaix** | **Aye** |
| **Harold Dudley** | **Aye** |
| **Ryan Hunter** | **Aye** |
| **Rod Brocious** | **Aye** |

**The motion carried.**



Attachment: 4. Minutes (American Eagle Appeal)

# APPROVED MINUTES

AMERICAN FORK CITY
PLANNING COMMISSION MINUTES
APRIL 8, 2020

The American Fork City Planning Commission met in a regular session on April 8, 2020 in an electronic meeting on the Zoom platform, viewable on the City's YouTube link, commencing at 7:00 p.m.

Present: John Woffinden
Chris Christiansen
Geoff Dupaix
Harold Dudley
Ryan Hunter
Christine Anderson
Rod Brocious

Absent:

Staff Present: Adam Olsen, City Planner
Wendelin Knobloch, Planner
Ben Hunter, Engineer
Lisa Halversen, Administrative Assistant
Scott Sensanbaugher, Public Works Director
Cherylyn Egner, City Attorney

Public Comments Received: Larry Olsen, Tyler Skidmore, Clint and Reva Cook, John Mulholland, Brandon Anderson, Dan Duncan, Micki Cottam, Kristie Jensen, Shane Armitage, Lacy Anderson, Karen Auman, Allison Duncan, Brittney Gonzalez, Nathan Price, Carolyn Lloyd, Tresa Chadwick, Luis Gonzalez, Lynlee Price, Roderick Legal Counsel, Doug Clements, Liz Phelon, Ken Berg, Robbie Thompson, Reid Swenson

1. Pledge of Allegiance

Chairman Woffinden welcomed everyone and those present recited the Pledge of Allegiance.

2. Review and action on a commercial site plan for American Eagle Ready Mix, located in the area of 1700 South 500 East in the I-1 Industrial zone

Mr. Olsen stated that the American Eagle Ready Mix proposes an operation at approximately 1700 S. 500 E. The site is within the proposed Lakeland Industrial Park subdivision. The property was recently annexed, and improvements initially constructed without formal site plan approval. The facility was required to shutter operations until such approval occurred. The applicant submitted a site plan, which is now before the Planning Commission for review.



Attachment: 4. Minutes (American Eagle Appeal)

Uses and site plan requirements within the I-1 zone are covered in Sections 17.4.503 and 17.6.101, respectively, of the City's Development Code. 17.4.503.B.1(a & b) states that "structures and areas used for the manufacturing, compounding, processing, fabrication and warehousing of goods and materials" are allowed within the zone, provided that "none of the activities carried out on the premises shall produce any noxious odor or any fumes, smoke, noise, vapor, vibration, glare or similar condition which is harmful to persons or which is readily discernable beyond the boundary of the zone or create an adverse visual impact readily discernable from the public roads". From the application materials, it is unclear how the above issues will be addressed. The Planning Commission may request the applicant address the items as outlined in the Code, mitigation efforts to take place and how they will apply to the site.

The site plan illustrates a proposed structure toward the north end of the property, south of 1700 South. The I-1 zone requires a 30' front setback for structures. Verification of front setback is required. Verification of adherence to landscape requirements is also unclear and should be addressed. Specifically, the following: (1) landscape islands adequately sized at the end of all parking rows, (2) shade trees provided at the ratio of 1 tree per 6 parking stalls and 1 shrub per 25 sq. ft. of landscape island, (3) 6' wide parking perimeter landscape area, and (4) a 14' wide landscape area adjacent to a street frontage with 1 tree provided for every 40' of street frontage.

Mr. Olsen notes for the record that he has received information and a letter of opposition from a neighboring property owner's legal counsel.

Mr. Dupaix said that the code seems to be pretty generic, and that with a concrete plant there is usually dust and noise. There are other concerns with a concrete crusher, he doesn't see how those things fit within the code for this zone.

Mr. Olsen replied that the code is broad, and in looking at the application for ready-mix, it could possibly fall within the allowed manufacturing and processing, but he doesn't know how they plan to address the issues. The planning commission can make the call if they think the operations are outside of the approved zone allowances.

Mr. Christiansen added that he thinks this is more of a heavy-industrial application than a light one which would be allowed. He is concerned that this project would generate a lot of dust, and their site plan doesn't seem to address on-site containment and processing in a satisfactory way.

Chairman Woffinden agreed, and stated that the applicant is asking for forgiveness instead of permission, and that they're still working on the site. There will be a lot of trucks hauling stuff to the site. He thinks the site plan seems to be kind of sketchy by not showing information regarding operations and containment.

Mr. Dupaix added that it's not only the hauling in and out that he's concerned about, but protection of their existing materials.

Chairman Woffinden stated that the site plan is lacking in every way.



Attachment: 4. Minutes (American Eagle Appeal)

Mr. Ben Hunter indicated that infrastructure improvements and rights-of-way are shown as Lakeland Industrial Park. Off-site infrastructure meets code, but applicant should address issues with their operations.

Mr. Brocious asked Mr. Ben Hunter about the ability of the water system to support this project. Would it be able to meet peak demand, etc?

Mr. Ben Hunter indicated that the utility plans show water lines being brought to the area.

Mr. Sensanbaugher added that this is similar to the TOD area in that there are major pipes that need to be built to feed the area. His recommendation is that if the city council is able to commit to build the water lines to the southern part of the city, we recommend approval. If not, we recommend denial.

Mr. Brocious asked if the water system would fail if it were to tie in today.

Mr. Sensanbaugher said not necessarily, but if all pending projects are built and occupied but water lines aren't built, we will have a problem. There's a time delay between approval and occupancy and operational water lines.

Mr. Brocious asked if commissioners should be looking at it as though the subdivisions that have been approved should be counted toward use.

Mr. Sensanbaugher replied that the need hasn't physically hit yet, but it's coming.

Mr. Brocious expressed concern about continuing to approve additional plats. He asked if the necessary infrastructure should be put in before they approve any more plats.

Mr. Sensanbaugher stated that he is comfortable continuing to approve plats knowing that additional capacity is coming, if the council approves.

Mr. Brocious questioned how they will know if the council is approving the infrastructure, is there a way that they make a more informed decision?

Mr. Sensanbaugher indicated that he is filling out a loan application with the state for the water lines, but the council has to approve borrowing the funds. He can't speak for the council, but they understand and seem to be on board with building the required water lines. They haven't yet taken the formal action to accept the loan.

Ms. Anderson expressed concern that so much of what they're doing tonight has the same requirement - they need to know what the city council is doing before they can move ahead. She asks if there is a timeline of when a decision can be expected.

Mr. Sensanbaugher replied that probably in the next 2-3 months a funding item will be taken to them for approval.

Mr. Olsen instructed commissioners that they are still free to make any decision with the caveat that places the burden on the council. Items move on to the council for final decision and they can



Attachment: 4. Minutes (American Eagle Appeal)

see what concerns were discussed. The Planning Commission recommendation could match the Engineering Division recommendation regarding council approval of infrastructure.

Mr. Christiansen agreed that they should make a similar recommendation, but Mr. Brocious felt that it is a disservice to a development to get approval from Planning Commission and then have to stop if conditions of infrastructure approval by council aren't met.

Mr. Sensanbaugher pointed out that many of tonight's agenda items are in the same situation.

Chairman Woffinden also instructed commissioners that they are simply a body that makes a recommendation, and the council has final authority.

Mr. Olsen added that this agenda item gets final approval or denial from this commission.

Mr. Brocious stated that he has read the legal letter of objection. It referred to a traffic study, has Engineering looked at the demands this item would place on current roads?

Mr. Ben Hunter replied that the Technical Review Committee review flags when a traffic study is required, this didn't meet that threshold. Maybe the applicant could give more information regarding traffic if that's a concern for commissioners.

Mr. Brocious said that due to the nature of vehicles coming in, the roads might not be adequate to support them.

Mr. Ben Hunter said that that's a good question, and the applicant should give more information if commissioners want it.

Chairman Woffinden stated that there will be a lot of materials both coming in and going out.

Ms. Anderson asked if the proposed uses are even allowed in this zone.

Mr. Olsen replied that prohibited uses are called out specifically, it's up to the Planning Commission to make the decision based on how applicant will address commission's concerns.

Ms. Anderson asked if there is a limit on noise level in this zone.

Mr. Olsen replied that there is not.

Chairman Woffinden stated that you can't contain noise and dust very well.

Mr. Doug Clements, applicant, stated that they won't be crushing and processing concrete, and an air quality survey has been secured. He believes that commissioners may not have latest site plan. On the newest plan, ponds for retention and recycling water are shown. He believes the current use meets city code, they also have an option of using well water to supplement culinary water. The developer did a traffic study and gave the engineer all the information, and he calculated that it's ready for a building permit. There's already a batch plant 300 ft to the east that is bigger than the one he's putting up. A typical early morning load will be around 100 yards an hour, but most times of the day will be on the order of 50-60 yards per hour. They're not asking for anything



Attachment: 4. Minutes (American Eagle Appeal)

that's not already in the neighborhood, they intend to be a good neighbor. They've been working on securing a few safety items and are ready for a building permit.

Chairman Woffinden reiterated that applicant is asking for forgiveness and not permission, and they should have done it the right way in the first place. They've been shut down by the city. If the city is not going to enforce its ordinances, why bother having them? He thinks they should be required to take it down.

Mr. Sensanbaugher added that they can't get a building permit until they have approval from the commission. He feels that the developer has given city staff everything they've asked for.

Mr. Ben Hunter said that there are two types of traffic studies. The Building Department was given numbers to generate impact fee estimates. This is a separate report from a full-blown traffic impact study.

Mr. Clements said that he understands the Chairman's concern, and he added that the batch plant itself is a machine. The only thing that needs inspection are the footings. He understands commissioners concerns but the only thing they've done is pour some footings. Everything else will come in with the full building permit. Their intention was not to be evasive. He sat in several council meetings a year ago with the intention of having it annexed and getting up and going. The annexation ended up taking a lot longer than anyone intended. They're just trying to get the business up and running. There are other businesses in the area that do similar things. They are one mile west of I 15, they bring in fully loaded aggregate trucks for that mile. Ninety percent of everything he produces will go on that same road up to I-15, then disperse along that road. No residences, churches or schools will be in the area.it is purely an industrial park. He apologizes and said that they've been trying for over a year, and he feels that this will be a good addition to American Fork.

Chairman Woffinden said that this is the first time he's heard of a batch plant in this location, how can the developer be trusted?

Mr. Clements indicated that they've been working with city staff for quite a while.

Mr. Dupaix asked about the other batch plant. Is it in the same zone? Yes, so there's already established precedent.'

Ms. Anderson has concerns are about dust, and how will they verify adherence to landscape requirements?

Mr. Olsen replied that landscaping is a concern that hasn't been addressed, it's one of the loose ends.

Mr. Clements replied that they've talked extensively with staff about landscaping. They intend to put a precast wall around the plant,the yard will be fully covered in concrete to help in dust control, and they will also use water trucks with recycled water. He feels that they are doing more than is required.



Attachment: 4. Minutes (American Eagle Appeal)

Christine acknowledges that things weren't done the way they should have been. She feels comfortable recommending approval based on certain requirements being met.

Mr. Brocious doesn't think that the vibration that will be generated has been addressed. How will this be mitigated?

Mr. Clements isn't aware of any vibration that will be generated, the plant sits on a 3" foundation. Trucks that deliver concrete, sand and rocks don't usually generate any concern about vibration. The plant itself is called a wet batch plant. Concrete that goes into the truck is wet and premixed, minimal vibration is generated.

Mr. Christiansen said that if there was much vibration, it would tear the machine apart.

Mr. Olsen noted that legal counsel retained by Mr. Roderick sent a letter opposing this item earlier this week. He made sure that each commissioner has a copy.

Ms. Anderson stated that a lot of opposition is based on this activity not being allowed in this zone, but there seems to be another batch plant in the same area.

Mr. Christiansen said that the difference is that this is right next to other businesses, which is concerning. He feels that there are too many red flags to move forward. He felt like commission should table the item based on the existing issues.

Ms. Anderson said that the situation in the country right now is that everything is on hold. She would like to let something move forward with stipulations.

Ms. Cherylyn Egner, city legal counsel, stated that public comments can still be provided throughout the meeting. She reads into the record a comment from Roderick which indicates that they believe the batch plant is illegal use and will result in litigation to the city.

**Ms. Anderson moved to approve the site plan for American Eagle Ready-Mix, with the findings listed in the staff report and subject to any findings, conditions and modifications listed in the Engineering report, and with the conditions that landscaping meets requirements and any effects of noise, dust, and visual impacts will be mitigated.**

**Mr. Dudley seconded the motion. Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Nay** |
| **Chris Christiansen** | **Nay** |
| **Christine Anderson** | **Aye** |
| **Geoff Dupaix** | **Nay** |
| **Harold Dudley** | **Aye** |
| **Ryan Hunter** | **Nay** |
| **Rod Brocious** | **Nay** |

**The motion failed.**

**Mr. Dupaix moves to table the site plan for American Eagle Ready-Mix until landscaping and other concerns have been resolved.**

**Mr. Christianson seconds. Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Nay** |
| **Chris Christiansen** | **Aye** |
| **Christine Anderson** | **Nay** |
| **Geoff Dupaix** | **Aye** |
| **Harold Dudley** | **Nay** |
| **Ryan Hunter** | **Aye** |
| **Rod Brocious** | **Aye** |

**The motion carried.**

3. Hearing, review and action on the preliminary and final plats for Lakeland Industrial Park, consisting of 4 lots, located in the area of 1700 South 500 East in the I-1 Industrial zone

Mr. Olsen stated that Lakeland Industrial Park Plat A is a 3-lot industrial subdivision, located south of 1700 South at approximately 500 East. Lots 1 and 2 are approximately 5.1 acres and Lot 3 is 10.5 acres. Access to the lots will be from 1700 South. An area of future development (labeled at "Future Plat B") is illustrated on the plat, immediately adjacent (west and south) of Plat A.

Mr. Ben Hunter said this item isn't specifically related to the previous item, but it creates the lot that the previous application would use. Master plan utilities are included in the subdivision, required improvements would be extending 500 East further to the south, and 1700 South would also be extended past Lot 1. The Engineering Division doesn't have any further issues or concerns.

**Public Hearing Opened**

Ms. Liz Phelon, representing ESP Excavation, brought to the commissioners' attention that Mr. Roderick re-zoned his property after purchasing it. He moved in knowing that it was I-1 zoned, and he chose to re-zone knowing that his zone was surrounded by industrial use.

Mr. Brocious asked who will be occupying the lots.

Ms. Phelon replied that American Eagle is a potential buyer, as well as landscapers and other buyers that would be interested in property in an industrial zone.



Attachment: 4. Minutes (American Eagle Appeal)

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June 19, 2020

**VIA E-MAIL TERILYN@AFCITY.NET AND CEGNER@HMMUTAH.COM**

American Fork City Council
c/o Terilyn Lurker, City Recorder
c/o Cherylyn Egner, City Attorney
51 East Main Street,
American Fork, Utah 84003

**Re: AERM's Appeal to City Council for the Denial of its Site Plan**

Honorable Council Members:

This firm represents American Eagle Ready Mix ("**AERM**"). AERM sought and applied for site plan approval from the Planning Commission of its site plan to operate a concrete batch plant (the "**Operation**") within the recently approved Lakeland Industrial Park, located at approximately 500 East 1700 South, American Fork, Utah (the "**Property**"). As explained more fully below, the Planning Commission erred in denying AERM's site plan. As such, AERM respectfully requests that this City Council reverse the Planning Commission's denial of its site plan and allow AERM to proceed with obtaining the building permits and approvals necessary for the Operation.

In sum, to affirm the Planning Commission's denial of AERM's site plan would be "arbitrary and capricious" as it would "not [be] supported by substantial evidence in the record."[1] The Operation is permitted in the I-1 (defined below). Additionally, many of the statements by planning commissioners supporting their denial were incorrect and opposite of the evidence presented to them.[2] Moreover, the denial was illegal as it was "based on an incorrect interpretation of a land use regulation" or otherwise "contrary to law."[3] In pertinent part, to uphold the Planning Commission's denial would violate AERM's constitutional property rights and would fail to adhere to the mandate that when a "land use regulation does not plainly restrict a land use

[1] *See* Utah Code Ann. § 10-9a-801(3).
[2] In light of the recent circumstances surrounding COVID-19, the Planning Commission's meeting was held via webcam. As such, the typical back and forth dialogue an applicant would have with the Planning Commission was absent, and AERM could not correct many of presumptions or misconceptions of the Planning Commission.
[3] *Id.*



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

application, the land use authority shall interpret and apply the land use regulation to favor the land use application."[4]

## I. Standards of Review

City Code provides for the process and standards of Administrative Site Plan Reviews.[5] In pertinent part, it provides that "[a]ny person aggrieved by a determination of the planning commission [as the land use authority] may request a hearing before the city council who shall have the authority to reverse, affirm or modify any decision of said commission."[6] The City Council, as an appeal authority under state law, "act[s] in a quasi-judicial manner" and "serve[s] as the final arbiter of issues involving the interpretation or application of land use ordinances."[7]

While an appellant has the burden of proof to establish error,[8] the City Code does not establish a scope of review for quasi-judicial hearings before the City Council. In such cases, Utah law requires that this City Council "review the matter de novo, without deference to the land use authority's determination of factual matters."[9] Moreover, the City Council is required to adhere to the same principle the Planning Commission should have adhered to and "interpret and apply a land use regulation to favor a land use application unless the land use regulation plainly restricts the land use application."[10]

## II. Affirming the Planning Commission's Denial of AERM's Site Plan would be Arbitrary and Capricious as it is Not Supported by Substantial Evidence in the Record

The City annexed the Property this year and designated the Property's zone classification as I-1 Industrial Zone ("**I-1**"). The Operation is expressly permitted in the I-1, subject to certain performance standards that AERM meets. The Planning Commission did not understand that the Operation is permitted in the I-1. Rather, the Planning Commission incorrectly based its denial instead on AERM supposedly not meeting the performance standards listed in the City Code. In doing so, the Planning Commission relied on misrepresentations, misconceptions, and/or misunderstandings in reaching its decision to deny AERM's site plan, as discussed more fully below. As such, this City Council should reverse the Planning Commission's denial and approve AERM's site plan.

### A. The Planning Commission Correctly Concluded that AERM's Operation is Permitted by City Code

[4] Utah Code Ann. § 10-9a-306(2).
[5] *See* City Code § 17.6.101 et seq.
[6] City Code § 17.6.101(C).
[7] Utah Code Ann. § 10-9a-701(3).
[8] Utah Code Ann. § 10-9a-705.
[9] *See* Utah Code Ann. §§ 10-9a-707(1) – (2).
[10] Utah Code Ann. § 10-9a-707(4)(b).



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

The City Code expressly allows, as a permitted use, areas for the compounding of goods and materials in the I-1. In pertinent part, the City Code provides that "uses of land shall be permitted upon compliance with the standards and requirements" as follows:[11]

> 1. Structures and areas used for the manufacturing, compounding, processing fabrication, and warehousing of goods and materials, subject to the following conditions and exclusions:
>
> a. None of the activities carried out on the premises shall produce any noxious odor or any fumes, smoke, noise, vapor, vibration, glare or similar condition which is harmful to persons or which is readily discernible beyond the boundary of the zone or create an adverse visual impact readily discernible from the public roads.

AERM's Operation consists of structures and areas used for the manufacturing, compounding, processing fabrication, and warehousing of sand, aggregate, and other necessary materials for its concrete ready-mix facility. As discussed more fully below, AERM meets the performance standards identified above. Therefore, AERM's Operation is permitted by the plain language of the City Code.[12]

Furthermore, the City has previously approved this exact use in the I-1. Indeed, Altaview Concrete is a concrete ready-mix facility (the "**Altaview Facility**") that is similarly situated to that of the Operation and is located approximately five hundred feet (500') to the east of the Property. The Altaview Facility was previously operated by Westroc, a predecessor to Altaview Concrete. Westroc obtained approval from the City's Planning Commission to operate a concrete batch plant within the I-1 on May 18, 2005, and a modification to that approval on June 4, 2008. The city planner at the time of Westroc's original approval, Rod Despain, correctly made clear that the "use [of a concrete ready-mix facility in the I-1] is permitted with performance conditions, largely dust suppression."[13] Finally, Chairman John Woffinden, Jr. conceded the Operation was permitted in the I-1 and no other planning commissioner expressly questioned his assertion or argued against the Operation being permitted within the I-1.[14]

**B. The Planning Commission Incorrectly Determined that AERM's Operation Failed to Meet the Performance Standards Identified in the**

[11] City Code § 17.4.503(B).
[12] *See* Utah Code Ann. § 10-9a-306(1) ("A land use authority shall apply the plain language of land use regulations.").
[13] A copy of the minutes from each respective meeting was included in AERM's letter to Planning Commission and can be provided to the City Council upon request.
[14] AERM prepared a rough transcript of the Planning Commission meeting from May 6, 2020 by reviewing the recorded presentation. Therein, Chairman Woffinden stated "I don't think there's any question, at least not in my mind, that this type of application fits in this zone as an I-1 zone."



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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**City Code as the Substantial Evidence in the Record Supports the Opposite Finding**

As shown above, AERM's Operation is a permitted use within the I-1 zoning district. The Planning Commission's denial of AERM's site plan was based on the incorrect belief that AERM failed to meet the performance standards identified in the City Code. Indeed, in making the motion to deny AERM's site plan, Commissioner Ryan Hunter asserted that AERM failed to adequately demonstrate the Operation met the criteria for the I-1 and its Operation has minimum conflict or deleterious effect on surrounding properties and uses. However, the Planning Commission failed to explicitly identify how AERM failed to meet such performance standards.

In reaching this conclusion, the Planning Commission made numerous statements and assumptions throughout the meeting to support its denial that were opposite of what was supported by the record and the law. The table below addresses the more significant misrepresentations, misconceptions, or misunderstandings made by the Planning Commission (collectively, the "**Errors**"). The following table lists the Errors and provides an explanation of how each is not supported by the record or law (much of which was provided to the Planning Commission on multiple occasions):

| Errors | Explanation |
|---|---|
| AERM was somehow non-compliant or acting untoward in its receipt of a Small Source Registration (the "**Exemption**") from the Division of Air Quality ("**DAQ**"). | AERM is fully compliant with all local, state, and federal environmental regulations it is subject to, including that of air quality. In fact, by notifying DAQ of the Exemption, AERM went above and beyond what is required of it.[15] If a business is under the thresholds discussed below it qualifies for the small source exemption and does not need to notify or register with DAQ in any manner. However, AERM opted to so register to verify it did not need a full approval order from DAQ, as a safety precaution.<br><br>A business is eligible for a small source exemption if (a) actual emissions are less than 5 tons per year per air pollutant of sulfur dioxide, carbon monoxide, nitrogen oxides, PM10, ozone, or volatile organic compounds; (b) actual emissions are less than 500 pounds per year of any hazardous air pollutant and less than 2000 pounds per year of any combination of air pollutants; and (c) actual emissions are less than |

[15] *See* Utah Admin. Code § R307-401-9(2) (stating that an "owner or operator of a stationary source that is claiming an exemption ... **may** submit a written registration notice to the director").



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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| | 500 pounds per year of any air pollutant not otherwise listed and less than 2000 pounds per year of any combination of air pollutants.[16]<br><br>AERM submitted to DAQ an excel sheet prepared and/or confirmed by its air quality consultant, Cirrus Consulting, LLC, who calculated the actual emissions for the air pollutants associated with the Operation. A copy of the excel sheet to perform the calculations are attached hereto as **Exhibit "A"**. The calculations therein are based on AERM producing up to 120,000 cubic yards of ready-mix concrete per year. *See* Exhibit A. AERM has no present intention of producing more than this amount and has not done so for any of its other facilities in any prior year. However, should its business model change, AERM will continue to report to DAQ annually to ensure it remains compliant with all applicable laws and regulations. As shown on Exhibit A, AERM is far below the threshold amount to be required to obtain a DAQ approval order. |
| The Altaview Facility and AERM's Operation were considered dissimilar by the Planning Commission, including as to covered conveyor belts, crushing and recycling concrete, enclosed operation, truck washing station, utilization of best available control technology (BACT), type of operation, and visibility from public road. | The Altaview Facility and AERM's Operation are nearly the same, except that AERM is a smaller operation and, as shown below, has taken more actions to address the performance standards.<br><br>*Covered Conveyor Belts*:<br>AERM has always represented, and its initial elevation drawings have shown, that the Operation is utilizing covered conveyor belts as part of addressing the performance standards listed in the City Code. Images from the elevation drawings and photographs of the concrete batch plant presently on the Property support that the conveyor belts will be covered. These images and photographs are attached hereto as **Exhibit "B"**. |

[16] Utah Admin. Code § R307-401-9(1).



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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| | *Crushing and Recycling:*<br>AERM has never planned to crush or recycle concrete itself. Instead, AERM has contracted with a local existing business, R&D Recycling, and a possible future business, Dunn Recycling, near the Property, that will crush and recycle any haul back concrete. Altaview likewise utilizes R&D Recycling for this same purpose.<br><br>*Enclosed Operation:*<br>AERM has consistently represented to City staff and the Planning Commission that the Operation would be enclosed in a similar manner as the Altaview Facility. Images of the area proposed to be enclosed and renderings of the same are attached hereto as **Exhibit "C"**.<br><br>*Truck Washing Station:*<br>AERM's updated site plan provided to the Planning Commission, explicitly includes an area designated as "MIXER PREP". *See* **Exhibit D**. It was explained and represented to the Planning Commission several times that this was the truck washing station. Exhibit D also contains images from AERM's other facilities to show how the truck washing station will look.<br><br>*BACT:*<br>AERM purchased and is utilizing the most up-to-date technology and equipment for its Operation. In comparison to Altaview, AERM's equipment is considerably newer with updated technology, making the processing of ready-mix concrete more efficient and less impactful on the environment.<br><br>*Type of Operation:*<br>The Altaview Facility and AERM Operation are the same type of operation (i.e. a "central mix" facility). A central mix facility combines the concrete ready-mix materials into a separate drum and inserts the finished product into the trucks. At one time, the Altaview Facility was a |



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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| | "transit mix" facility, which meant it combined all concrete ready-mix materials into the trucks and the truck itself would then mix the materials to produce a finished product. This latter process is widely considered less efficient, less cost effective, and potentially more impactful upon the environment. It is unsurprising then that the Altaview Facility switched its operation to a central mix facility.<br><br>*Visibility*:<br>The Altaview Facility and AERM Operation are on the same public roadway of 1700 South. Moreover, the Altaview Facility is three feet (3') taller than any point of AERM's Operation. Undoubtedly, concrete ready-mix facilities are structures with significant heights. However, AERM has taken significant steps to mitigate the adverse visual impact from the Operation by (i) setting the concrete ready-mix plant as far back from 1700 South as feasibly possible; (ii) fronting 1700 South with its shop; (iii) installing landscape along 1700 South, including therein trees in accordance to AF City Code; and (iv) installing a six foot (6') tall precast concrete fence around the Property. |
| AERM failed to address "haul back" concrete. | AERM's updated site plan provided to the Planning Commission explicitly lists "RECYLED CONC. BLOCKS". An image of which is attached hereto as **Exhibit "E"**. This was intended to reflect AERM's intention of utilizing any haul back concrete to be poured in forms that would create concrete blocks that AERM sales to its customers (as it does with its other facilities). If no additional blocks are needed, AERM has contracted with several local businesses to handle its concrete recycling, as discussed above. Unlike what was assumed by Planning Commission, AERM will not store any haul back concrete on its Property. |
| Chairman Woffinden felt that AERM's site plan lacked | Adam Olsen, City Planner, noted to the Planning Commission that AERM's site plan met all City |



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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| many details. | Code requirements as to the technical issues (i.e landscaping, setbacks, lot size, etc.).<br><br>AERM is unsure how to further address Chairman Woffinden's concerns, as he did not explicitly list any deficiencies in AERM's site plan, aside from noting he could not find a "truck washing station" which, as described above, is listed on there as "MIXER PREP". It was represented and explained to the Planning Commission through various submittals and presentations that AERM had a truck washing station, as explained above. |

Again, the above table is limited to addressing the more prominent Errors made by the Planning Commission, it was not to address how each performance condition is being met. The table provided to the Planning Commission in AERM's letter from its counsel, dated April 29, 2020, provided the numerous actions AERM was taking to adhere to the performance standards and mitigate the potential impacts to surrounding properties, which actions were sufficient to approve AERM's site plan. These actions will be reiterated at the forthcoming City Council meeting and will show that AERM has taken the necessary actions to warrant approval of its site plan.

Moreover, as discussed with the Planning Commission, AERM is and always was willing to continue to work with the City or adjoining land owners to further identify other actions necessary to address any of the performance standards. To that end, the following table addresses some of the additional actions AERM is willing to undergo, or has already undergone, to address the performance standards:

| Adverse Impact | AERM's Response to the Adverse Impact |
|---|---|
| **Dust** | • AERM is paving the entire lot by year end.<br>• AERM purchased BACT and several upgrades for the batch plant equipment.<br>• AERM is constructing a shop near the front of the lot, which will have the additional benefit of assisting in reducing dust escaping from the lot.<br>• AERM plans to have batch plant enclosed by year end, as discussed above and shown in Exhibit C.<br>• AERM purchased sweeper and water trucks to control dust.<br>• AERM amenable to extending concrete fence from 6' requirement to 8', if necessary.<br>• AERM amenable to purchasing taller trees for |



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

| | |
|---|---|
| | landscaping, if necessary.<br>• AERM amenable to installing cattle grates at entrance and exits to ensure no tracking onto public roadways. |
| **Noise** | • AERM purchased BACT and several upgrades for the batch plant equipment.<br>• AERM is constructing a shop near the front of the lot, which will have the additional benefit of knocking down noise to surrounding properties.<br>• AERM plans to have batch plant enclosed by year end, as discussed above and shown in Exhibit C.<br>• AERM amenable to extending concrete fence from 6' requirement to 8', if necessary.<br>• AERM amenable to purchasing taller trees for landscaping, if necessary. |
| **Vibration** | • AERM purchased BACT and several upgrades for the batch plant equipment. |
| **Adverse Visual Impacts Readily Discernible from Public Roads** | • AERM is constructing a shop near the front of the lot, which will have the additional benefit of knocking down dust.<br>• AERM plans to have batch plant enclosed by year end, as discussed above and shown in Exhibit C.<br>• AERM purchased sweeper and water trucks to control track out to public streets.<br>• AERM amenable to extending concrete fence from 6' requirement to 8', if necessary.<br>• AERM amenable to purchasing taller trees for landscaping, if necessary.<br>• AERM amenable to installing cattle grates at entrance and exits to ensure no tracking onto public roadways. |

The responsive actions AERM is undergoing, or willing to undergo, are beyond what is sufficient to address the required performance standards. To affirm the Planning Commission's decision to deny the application for failing to meet such performance standards would be arbitrary, capricious, and illegal given these responsive actions by AERM.

**C. AERM's Site Plan and Operation Meets All Requirements of City Code**



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

At the outset it should be noted that Adam Olsen confirmed to the Planning Commission that AERM's site plan met all technical requirements of the City Code, which would include, but not be limited to, lot size, set back, and landscaping requirements. However, the Planning Commission also denied AERM's site plan because they seemingly concluded that (1) AERM's Operation failed to be conducted within a fully enclosed building and was not a use deemed by the City to be customarily and appropriately conducted in the open; (2) AERM did not meet the surface wastewater requirements of the City Code; and (3) it was implied, not necessarily by the Planning Commission, that AERM did not meet air quality requirements of the City Code or state law. These will be addressed below in the order so provided.

Surprisingly, given the lack of discussion on the matter, the Planning Commission included in its motion to deny that AERM's Operation failed to be conducted within a fully enclosed building and otherwise did not find the Operation to be customarily and appropriately conducted in the open. City Code provides that "All uses shall be conducted entirely within a fully enclosed building, **except** those uses deemed by the city to be customarily and appropriately conducted in the open."[17] The portions of AERM's Operation conducted in the open are customarily and appropriately so conducted. AERM's site plan shows that a shop will be constructed on the Property, which will be utilized mostly for repairs to equipment and standard office uses. AERM will also enclose a portion of its concrete batch plant consistent in the manner done so by the Altaview Facility, which means the aggregate bins will be enclosed.[18] It would be unreasonable and implausible for an entire concrete ready-mix facility to be fully conducted within an enclosed building. To the extent that the Planning Commission was requiring this it thereby errored in making such a determination as it is not supported by custom or common sense.[19]

The Planning Commission briefly discussed AERM's handling of surface wastewater but did not explicitly or impliedly state how the Operation was noncompliant with City Code. In the I-1, City Code requires that the "site plan and improvements shall provide for the efficient removal and proper disposal of surface water generated by the use."[20] As represented, AERM plans to retain all surface water on site in a retention pond and then recycle that water for additional use on the Property. This is proper control of the Property's surface wastewater. The general nature of this response is due to the lack of specific allegations or questions by the Planning Commission, or any other interested party, on how AERM is lacking in compliance to City Code as to the surface or any wastewater requirements.

Finally, it was suggested by an adjoining landowner that AERM was noncompliant with the City Code and state laws as to air quality controls. The City Code has a general provision related to pollution prevention, which defers to the standards prescribed by the appropriate agency.[21] As such, the City is, or at least ought to be, deferring to the DAQ requirements. As

[17] City Code § 17.4.503(I)(1) (emphasis added).
[18] *See* Exhibit C.
[19] This was mentioned in the motion to deny AERM's site plan, but no discussion was had during the meeting as to this being a problem.
[20] City Code § 17.4.503(I)(6).
[21] *See* City Code § 17.5.116.



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

explained in more detail above, AERM has contracted with Cirrus Consulting, LLC to ensure it complies with all local, state, and federal air quality laws and regulations. AERM's initial calculations will continue to be audited, by itself and Cirrus Consulting, to ensure continued compliance. Therefore, the Operation will be in compliance with all such laws and regulations.

## III. Affirming the Denial of AERM's Site Plan would be Illegal as it was Based on an Incorrect Interpretation of a Land use Regulation and is Contrary to Law

A court will not uphold a land use decision if it is illegal.[22] A decision is considered illegal if it is (A) "based on an incorrect interpretation of a land use regulation" or (B) is "contrary to law."[23] As discussed more fully below, the Planning Commission's denial of AERM's site plan was illegal and to affirm that denial would likewise be illegal.

### A. Planning Commission Incorrectly Interpreted its City Code in Denying AERM's Site Plan because the Operation is Permitted and because it Applied Standards Not Within the City Code.

To the extent the Planning Commission based its denial on the Operation not being permitted in the I-1, it was based on an incorrect interpretation of City Code § 17.4.503. The City Code is unique in that it does not, as other municipalities typically do, set forth a use table with well-defined permitted and conditional uses. Instead, the City Code lists seventeen (17) uses as all as being "permitted upon compliance with the standards and requirements set forth" in the City Code, and explicitly excludes four (4) other uses, but does not list any conditional uses.[24] As such, the Operation is permitted and should not have been denied. Acting appropriately, the Planning Commission should have approved AERM's site plan and specifically listed any necessary standards on what additional actions AERM needed to take to further address the performance standards listed in the City Code. The Planning Commission's failure to act in this manner is inconsistent with the plain language of the City Code and is thereby illegal.

Similarly, the Planning Commission implemented standards in reviewing AERM's site plan that are not listed in the City Code. For instance, it was important to at least one of the Planning Commissioners that the Operation is visible from the shoreline of Utah Lake. Plainly, this is not one of the considerations for approving or denying a site plan application. As such, to the extent the Planning Commission relied on this standard, even if only in part, the denial was based on an incorrect interpretation of its City Code and thereby made the denial illegal.

### B. Planning Commission's Denial of AERM's Site Plan was Contrary to Law because the Planning Commission Failed to Adhere to Principles Prescribed by LUDMA and Violated AERM's Constitutional Rights.

[22] *See* Utah Code Ann. § 10-9a-801(3)(b).
[23] *Id.*
[24] City Code § 17.4.503(B).



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

Affirming the Planning Commission's decision to deny AERM's site plan would be illegal as the Planning Commission's denial was contrary to law in several respects. First, the Planning Commission failed to adhere to the principle prescribed by the Municipal Land Use Development and Management Act ("LUDMA") to "interpret and apply a land use regulation to favor a land use application."[25] Coupling this principle to the fact that the Operation is permitted in the I-1 and that AERM had taken significant steps to comply with the performance standards, AERM's site plan certainly should have been approved. This conclusion is further supported by the fact that City staff confirmed the site plan met all the technical requirements of the City Code. Therefore, failure by the Planning Commission to apply such a principle in making its decision was illegal.

Second, affirming the Planning Commission's decision would violate AERM's constitutional rights under the principles of (i) due process, and (ii) equal protection under the laws.

*i. Due Process*

Due process prevents the state from depriving a person of "life, liberty, or property" without due process of law.[26] Due process violations can stem from deficiencies with either substantive due process or procedural due process. As to the latter, the "process due in an individual case is 'flexible and calls for such procedural protections as the particular situation demands.'"[27] At minimum, this requires "adequate notice and an opportunity to be heard in a meaningful manner."[28]

Without waiving any potential due process violations committed by the City or the Planning Commission,[29] the Planning Commission violated AERM's due process rights by permitting an impartial decision maker to cooperate and opine in the Planning Commission meeting. In order to be heard in a meaningful manner, as due process requires, "the concerns of the affected parties should be heard by an impartial decision maker."[30] Indeed, "[w]here a party to an adversarial proceeding can demonstrate actual impermissible bias or an unacceptable risk of an impermissible bias on the part of the decision maker, the decision maker must be disqualified."[31] The Utah Supreme Court has categorized certain biasing influences, which included "[o]ne who

[25] Utah Code Ann. §§ 10-9a-306(2), -707(4).
[26] U.S. Const. amend. XIV, § 1; Utah Const. art. 1, § 7.
[27] Sa*lt Lake City Corp. v. Jordan River Restoration Network*, 299 P.3d 990, 1005 (Utah 2012) (quoting *Morrissey v. Brewer*, 408 U.S. 471, 481 (1972)); *see also Long v. Ethics & Discipline Comm. Of the Utah Supreme Court*, 256 P.3d 206 (Utah 2011) (stating that "due process is flexible and calls for the procedural protections that the given situation demands").
[28] *Id.*
[29] In particular, AERM reserves the right to pursue any arguments that the City violated its due process rights in limiting the time available for AERM to present to the Planning Commission or City Council, the inability to respond to questions posed by the Planning Commission or City Council, and, if applicable, to any limitations of evidence that the City Council is willing to consider.
[30] *Dairy Prod. Servs., Inc. v. City of Wellsville*, 2000 UT 81, 13 P.3d 581, 593 (2000).
[31] *Id.* at 594 (citation omitted).



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

stands to gain or lose by a decision either way has an interest that may disqualify if the gain or loss to the decisionmaker flows fairly directly from her decision."[32]

Planning Commissioner Chris Christiansen notably abstained from voting at the Planning Commission meeting. AERM openly addressed with City staff the questionability of Mr. Christiansen's involvement in the Planning Commission meeting and voting due to his high-level employment with a competitor of AERM. Despite feeling compelled to abstain from voting, Mr. Christiansen was very involved in the Planning Commission's denial and openly criticized much of AERM's Operation. Moreover, many of the other Planning Commissioners relied on his guidance for voting due to his supposed expertise from his employment. If Mr. Christiansen felt compelled enough to abstain from voting, he likewise should have abstained from the discussion. Thus, Mr. Christiansen's involvement was in direct violation of AERM's due process rights since the impartiality of the Planning Commission was impermissibly biased or there was an unacceptable risk of such impermissible bias, which is contrary to law and therefore illegal.

*ii. Equal Protection*

The Fourteenth Amendment forbids any person acting under color of state law from depriving an individual of the equal protection of the laws.[33] Indeed, it is unconstitutional for the Planning Commission to deliberately treat AERM different than the Altaview Facility, as they are similarly situated, and such disparate treatment lacks any rational basis.[34] In all material respects, AERM's Operation and the Altaview Facility's operation are similarly situated. In sum, they are within the same I-1 zoning district, both concrete ready-mix facilities are located on the same street (within five hundred feet (500') of each other), and AERM, as shown above, has implemented the same, if not more, mitigative actions to address the performance standards than that of the Altaview Facility. As such, the Planning Commission's denial appears to be a result of some personal animus towards AERM and is in violation of AERM's constitutional rights to equal protection under the laws.

## IV. Conclusion

In conclusion, to affirm the denial of AERM's site plan would be arbitrary and capricious as the denial is not supported by substantial evidence, as shown by the corrected Errors by the Planning Commission above. Indeed, the Operation is permitted in the I-1 zoning district, AERM has addressed each of the performance standards delineated by City Code, and the site plan otherwise meets all requirements of City Code. Additionally, to affirm this denial would be illegal as the Planning Commission based its decision on an incorrect interpretation of the City Code by not finding the Operation permitted by the plain language of the City Code and for applying standards not stated therein. The denial was likewise illegal for being contrary to law as the Planning Commission failed to adhere to the principle that municipalities must "interpret and apply

[32] *Id.*
[33] U.S. Const. amend. XIV, § 1.
[34] *See Patterson v. American Fork City*, 67 P.3d 466, 475-76 (Utah 2003); *see also Farley v. Utah County*, 440 P.3d 856, 863–64 (Ut. Ct. App. 2019).



Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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a land use regulation to favor a land use application." Finally, to affirm the denial would be contrary to law since it violates AERM's constitutional right to procedural due process since an impartial decision maker was allowed to influence the Planning Commission and violates AERM's constitutional right to equal protection under the laws for treating a similarly situated property (i.e. the Altaview Facility) differently without a rational basis for doing so. For the aforementioned reasons, AERM respectfully requests that City Council reverse the Planning Commission's decision to deny its site plan for the Operation.

Sincerely,

Wade R. Budge
M. McKay Ozuna

WRB

Enclosures as Stated

cc: Doug Clements, Dclements@aermut.com

Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

# EXHIBIT A

## AERM's Calculations of its Hazardous Air Pollutants from the Operation

The following charts show that AERM is producing, at most, 120,000 cubic yards per year, and that, producing at that amount, does not produce anywhere near the emission rates and quantities which would require AERM to obtain a full DAQ approval:

**Input Data for American Eagle Concrete Plant Annual Emission Calculations**

| | |
|---|---|
| Plant Location: | American Fork |
| Production Rate: | 120,000 cu yd/yr |

2019 Annual Emission Calculations

Source: **Emission Summary**
Company: American Eagle
Site: American Fork
Date: 05/07/2020

| Source | Emission Rates PM10 (ton/yr) | PM2.5 (ton/yr) | SO2 (ton/yr) | NOx (ton/yr) | CO (ton/yr) | VOC (ton/yr) |
|---|---|---|---|---|---|---|
| Material Handling (Drops) | 0.270 | 0.041 | -- | -- | -- | -- |
| Material Handling (Conveyors) | 0.005 | 0.001 | -- | -- | -- | -- |
| Storage Piles | 0.190 | 0.095 | -- | -- | -- | -- |
| Unpaved Road Dust | 0.356 | 0.036 | -- | -- | -- | -- |
| Wheeled Loader Exhaust (Diesel) | 0.133 | 0.133 | 0.142 | 1.462 | 0.449 | 0.196 |
| Concrete Batching | | | | | | |
| Aggregate transfer to elevated bin | 0.185 | 0.092 | -- | -- | -- | -- |
| Sand transfer to elevated bin | 0.042 | 0.021 | -- | -- | -- | -- |
| Cement loading to storage silo (pneumatic) | 0.005 | 0.003 | -- | -- | -- | -- |
| Cement supplement loading to storage silo (pneumatic) | 0.011 | 0.005 | -- | -- | -- | -- |
| Weigh hopper loading | 0.237 | 0.119 | -- | -- | -- | -- |
| Mixer loading (central mix) | 0.093 | 0.047 | -- | -- | -- | -- |
| Natural Gas Boilers | 0.029 | 0.029 | 0.002 | 0.193 | 0.324 | 0.021 |
| Total | 1.556 | 0.622 | 0.144 | 1.654 | 0.773 | 0.218 |

Actual PM10, SO2, NOX, CO, VOC and Ozone emissions must be less than 5 ton/yr for each pollutant in order to qualify for the small source exemption.

| Pollutant | Cement Silo Filling (lb/yr) | Supplement Silo Filling (lb/yr) | Central Mix Batching (lb/yr) | Natural Gas Boiler (lb/yr) | Total (lb/yr) |
|---|---|---|---|---|---|
| Arsenic | 1.25E-04 | 4.38E-03 | 1.00E-02 | 1.54E-03 | 1.61E-02 |
| Benzene | -- | -- | -- | 1.62E-02 | 1.62E-02 |
| Beryllium | 1.43E-05 | 3.96E-04 | -- | -- | 4.10E-04 |
| Cadmium | -- | 8.67E-07 | 2.40E-05 | 8.49E-03 | 8.51E-03 |
| Chromium | 8.54E-04 | 5.34E-03 | 4.30E-03 | 1.08E-02 | 2.13E-02 |
| Cobalt | -- | -- | -- | 6.48E-04 | 6.48E-04 |
| Dichlorobenzene | -- | -- | -- | 9.26E-03 | 9.26E-03 |
| Formaldehyde | -- | -- | -- | 5.79E-01 | 5.79E-01 |
| Hexane | -- | -- | -- | 1.39E+01 | 1.39E+01 |
| Lead | 3.21E-04 | 2.28E-03 | 1.24E-03 | 3.86E-03 | 7.69E-03 |
| Manganese | 3.45E-03 | 1.12E-03 | 1.28E-01 | 2.93E-03 | 1.35E-01 |
| Mercury | -- | -- | -- | 2.01E-03 | 2.01E-03 |
| Naphthalene | -- | -- | -- | 4.71E-03 | 4.71E-03 |
| Nickel | 1.23E-03 | 9.99E-03 | 8.39E-03 | 1.62E-02 | 3.58E-02 |
| Phosphorus | -- | 1.55E-02 | 4.06E-02 | -- | 5.61E-02 |
| Polycyclics | -- | -- | -- | 6.80E-04 | 6.80E-04 |
| Selenium | -- | 3.17E-04 | -- | -- | 3.17E-04 |
| Toluene | -- | -- | -- | 2.62E-02 | 2.62E-02 |
| Total | | | | | 1.48E+01 |

Actual HAP emissions must be less than 500 lb/yr for any one HAP and less than 2,000 lb/yr for any combination of HAP in order to qualify for the small source exemption.

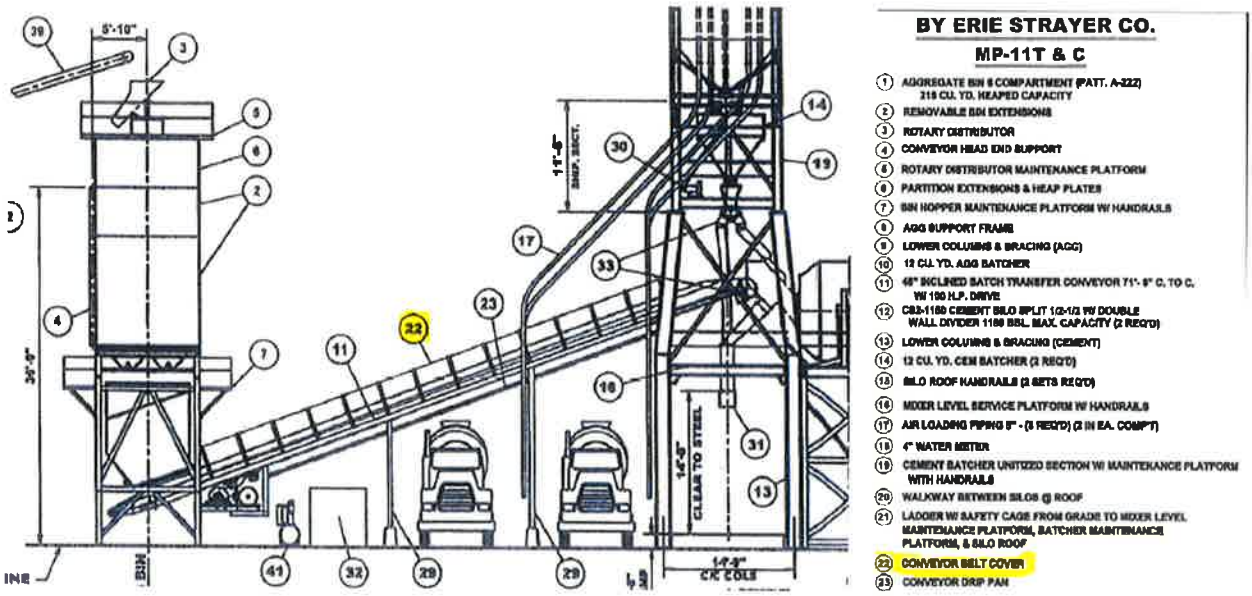
Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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## EXHIBIT B

### Evidentiary Support that AERM's Operation Includes Covered Conveyor Belts

The following is an image from the elevation drawing submitted to the Planning Commission showing the Erie Strayer equipment utilized by AERM has covered conveyor belts (see No. 22):




The following are images from the concrete batch plant equipment, presently on the Property, which shows that covered conveyor belts are being utilized by AERM:





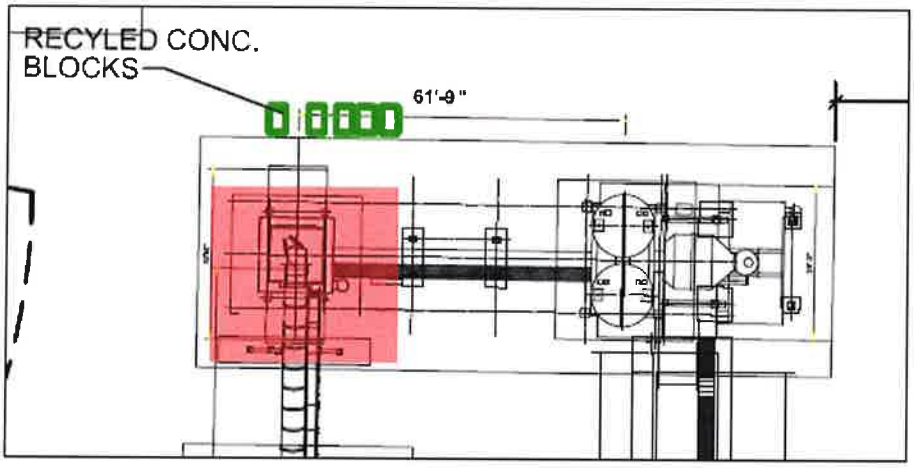
Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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## EXHIBIT C

### Evidentiary Support that AERM's Operation will be Enclosed

The area proposed to be enclosed for AERM's Operation is the area of the aggregate bins, which is the same area enclosed by the Altaview Facility and is approximately depicted in red below:




The following is a rendering of AERM's proposed site plan, including the enclosure of the aggregate bins (behind the silos):





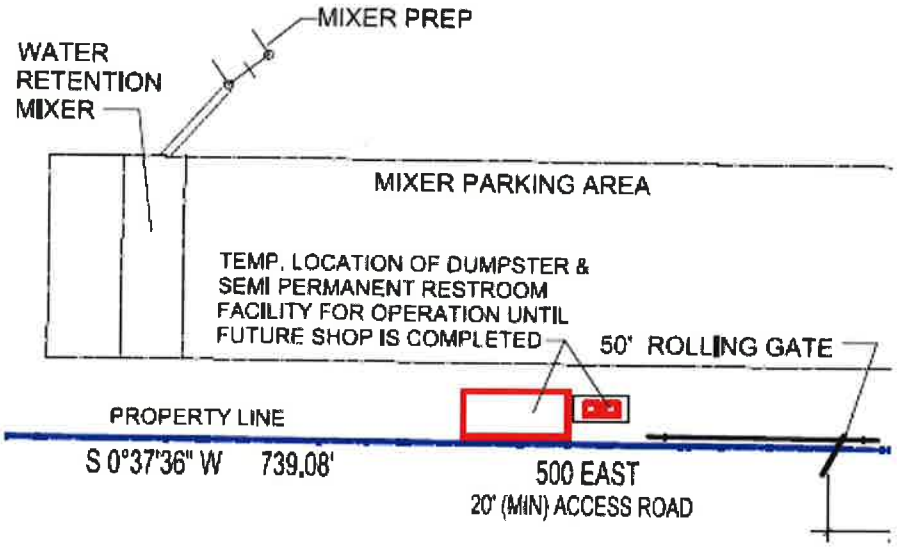
Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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## EXHIBIT D

### Evidentiary Support that AERM's Operation Includes a Truck Washing Station

The following is an image of a portion of AERM's site plan, which includes a truck washing station (called "MIXER PREP"):




The following image depicts the style of truck washing stations used at AERM's other facilities and is being proposed for the Operation:





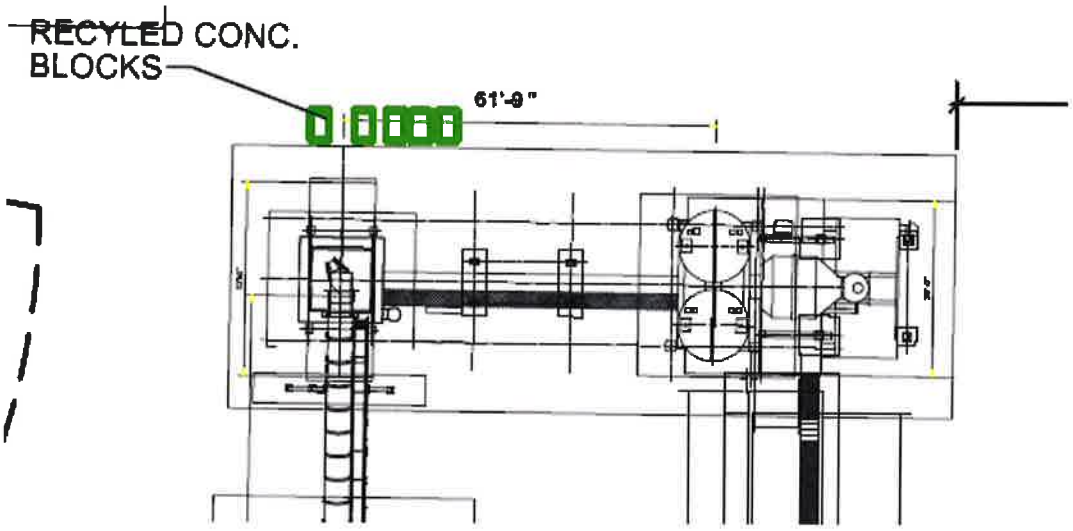
Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

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## EXHIBIT E

### Evidentiary Support that AERM's Operation Addressed Haul Back Concrete

The following image is from a portion of AERM's site plan and depicts the area proposed to store the recycled concrete blocks, which will be created from any haul back concrete:




4848-7880-7486

Attachment: AERM - Letter to AF City Council (American Eagle Appeal)

MCDONALD|FIELDING
ATTORNEYS AT LAW

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June 19, 2020

The Honorable Members of the American Fork City Council
(sitting in their capacities as the Appeal Authority)
c/o Cherylyn Egner, Esq.
City Attorney
Via Email: cegner@centralutahlaw.com / cegner@hmmutah.com

c/o The Honorable Terilyn Lurker
City Recorder
Via Email: terilyn@afcity.net

**Re: Appeal of American Eagle Ready Mix Site Plan Denial**

Dear Honorable City Council Members:

This firm represents Roderick Enterprises, which owns the Catalyst Business Park consisting of nine Class A buildings totaling more than 1.2 million square feet located immediately north and across the street from the proposed American Eagle Ready Mix ("AERM") operation. AERM has appealed the Planning Commission's May 6, 2020, denial of AERM's site plan application. We urge you to affirm the Planning Commission's well-reasoned and carefully-considered decision.

## I. YOUR ROLE AS A QUASI-JUDICIAL BODY – STANDARD OF REVIEW

This matter comes to you on AERM's appeal from the Planning Commission. That means you are *not* sitting in your *legislative* capacity. Instead, you are sitting in your *quasi-judicial* capacity as the appeal authority.[1] Your role in this matter is much like an appeals court. It is not your job to decide whether you want this facility or not. Rather, it is your duty to decide whether the Planning Commission made a correct decision based on the information that it had at the time it made its decision.

State law governs your role and the scope of your authority. The Municipal Land Use, Development, and Management Act ("LUDMA") provides that "the appeal authority shall review the matter de novo."[2] Under this standard, you can review the matter anew with a fresh set of eyes.

[1] *See* American Fork City Code §§ 17.1.700.B; 17.6.101.C; Utah Code Ann. § 10-9a-707(5)(a).

[2] Utah Code Ann. § 10-9a-707(2).

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

However, you are limited to considering only "the record made before the lower tribunal[,]" which is the Planning Commission.[3] That record consists of 1,462 pages of materials submitted to the Planning Commission and is accessible to you at the following link: https://1drv.ms/u/s!Aol8txdXPS4_jLJU6KK8Nq4GLw_CIQ?e=TVEcPl .

Each page of the record has been marked "RECORD 0001-01462" for ease of reference. No new evidence or materials should be allowed on review.

With regard to how the Planning Commission interpreted the relevant ordinances, state law mandates that you "determine the ***correctness*** of the [Planning Commission's] interpretation and application of the plain meaning of the land use regulations,"[4] which, in this case, are the following provisions of the City Code:

- 17.1.200 (Uses Prohibited Unless Expressly Permitted)
- 17.4.503 (I-1 Industrial Zone)
- 17.5.116 (Pollution Prevention)
- 17.6.101 (Administrative Site Plan Review).

With regard to factual matters that were disputed, the City Council's role is limited by state law to "determin[ing] whether the record on appeal includes substantial evidence[5] for each essential finding of fact" made by the Planning Commission.[6]

---

[3] *Salt Lake City Corp. v. Jordan River Restoration Network,* 2018 UT 62, ¶ 69, 435 P.3d 179. *See also Pledger v. Cox,* 626 P.2d 415, 416 (Utah 1981) (citations omitted) (emphasis added)); *Denver & R.G.W.R. Co. v. Pub. Serv. Comm'n,* 100 P.2d 552, 554-55 (Utah 1940). *See also* RECORD 1457-59.

[4] Utah Code Ann. § 10-9a-707(4)(a) (emphasis added).

[5] Utah Code Ann. § 10-9a-707(3). We note that to uphold a land use body's decision, the reviewing body must "determine[e] whether substantial evidence supports the [body's] decision" and in doing so must "consider all the evidence ***in the record***, both favorable and contrary to the [body's] decision." *Patterson v. Utah County Board of Adjustment,* 893 P.2d 602, 604 (Utah Ct. App. 1995) (emphasis added).

[6] Utah Code Ann. § 10-9a-707(3). While the "appeal authority shall … interpret and apply a land use regulation to favor a land use application unless the land use regulation plainly restricts the land use application[,]" *id.* § 10-9a-707(4)(b), the American Fork City Code's land use regulations plainly restrict any uses unless they are expressly permitted under the City Code. *See* City Code § 17.1.200. And concrete batch plants are not expressly permitted in the I-1 zone. *See* City Code § 17.4.503.

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

## II. THE PLANNING COMMISSION WAS CORRECT IN DENYING SITE PLAN APPROVAL BECAUSE AERM'S APPLICATION DID NOT MEET CODE.

It was AERM's burden to show the Planning Commission that its proposed facility met the zoning requirements of the I-1 Industrial Zone. Among other reasons, this is because the City Code provides, "[u]ses of land which are not expressly permitted within a zone are hereby declared to be expressly prohibited therein[] …. Neither the planning commission, board of adjustment, nor the building inspector shall permit a use within a zone which is not expressly permitted by the terms of this code."[7] AERM clearly failed to meet its burden of showing that its project was expressly permitted and complies with the City Code.

First, a concrete batching plant is not listed as a permitted use in the I-1 zone. *See* City Code § 17.4.503. Additionally, the following comparison charts summarize what the code requires, why AERM doesn't meet the code, and what evidence in the record supports the Planning Commission's decision:

| **What the code says:** | **Why AERM doesn't meet the code:** |
|---|---|
| "The I-1 ***light*** industrial zone has been established for the purpose of … ***light*** manufacturing, processing, warehousing and fabrication …."<br><br>(City Code § 17.4.503.A.)<br><br>"Representative of the uses within the zone are … ***light*** manufacturing, fabrication, processing, storage, warehousing and wholesale distribution."<br><br>(City Code § 17.4.503.A.) | • AERM's plant has the mechanical potential to batch up to 366 cubic yards per hour and provide approximately 40 heavy truckloads of ready mix per day. (RECORD 0260, 0264, 0312, 0429)<br><br>• One yard of ready-mix equals 3,600 lbs.[8] (RECORD 0425). According to AERM's own testimony "[a] typical early morning load will be around 100 yards an hour, but most times of the day will be on the order of 50-60 yards per hour." (RECORD 0331). That means that **between 180,000 to 360,000 lbs. of material <u>per hour</u> will be processed at the plant**. Assuming an 8-hour operation, Monday-Friday, that is |

[7] City Code § 17.1.200.

[8] If we're speaking in terms of cement, one cubic yard of cement weighs 420 lbs. (RECORD 0425). Consequently, if AERM's testimony was meant to be stated in terms of cement then AERM would process 42,000 lbs. of cement per hour, 336,000 lbs. per day, 1,680,000 lbs. per week, and 87,360,000 lbs. per year. That is not a "light" industrial use.

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

| | |
|---|---|
| (cont.) | **7,200,000 lbs – 14,400,000 lbs per week**.[9]<br><br>• The operation utilizes heavy equipment and heavy trucks (RECORD 0265)<br><br>• Roderick's concrete batching experts[10] testified the facility will attract "large long trucks carrying sand, gravel, pow[d]ers, to the batch plant" (RECORD 0265) |

[9] If anything, these are ***understimates*** since, according to AERM's Utah Division of Air Quality small source exemption application, AERM will be operating Monday through Saturday at +/- 12 hours per day. (RECORD at 0289.) Also, AERM's production estimates are wildly varying and seem to change, depending upon what regulatory body AERM is speaking to. For example, it seems that the information AERM provided the Utah Division of Air Quality led the DAQ to model air pollution based upon the assumption that AERM's hourly production was 30 cubic yards per hour. (*See* RECORD at 0260,0296.) At 12 hours per day, at 30 cyh, that equates to roughly 112,320 cubic yard per year. In its April 16, 2020, letter to the Planning Commission AERM said, "In the current configuration AERM should expect 180 cyph. Enough to get our trucks out in a timely manner and average 60 cyph for the remainder of the day." (RECORD at 0346.) Of course, 60 cyph is twice the production of 30 cyph and equates to 224,640 cubic yards of production per year. But then AERM's attorneys stated to the Planning Commission that "It has always been AERM's intention to operate at or below 120,000 cubic yards per year …" (RECORD 0955, n.4.) It's difficult to know what version of AERM's facts to believe.

[10] Roderick's experts are Roy Bosley and Keith Sorenson, who are titans of the construction and development industry with more than 100 years combined experience, having worked for well-respected industry goliaths such as Parsons, Sahara and Layton Construction. Their CVs can be found at RECORD 0313-0314.

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

| What the code says: | Why AERM doesn't meet the code: |
|---|---|
| "can locate with minimum conflict or deleterious effect on surrounding properties and uses"<br><br>(City Code § 17.4.503.A.) | • Roderick's construction/concrete batching experts testified that dust from the plant will cause damage to Roderick's HVAC system and potential respiratory issues for its tenants/occupants (RECORD 0261-0262, 0265)<br><br>• Roderick's construction/concrete batching experts testified that the visual impact of AERM will deter tenants/occupants for Roderick. (RECORD 0262)<br><br>• Roderick's construction/concrete batching experts testified that the plant's neighbors will have to put up with constant noise, pollution, and dust. (RECORD 0265-0266)<br><br>• Roderick's concrete batching experts testified that these "businesses operate the heaviest of trucks going up and down the road" and that "[t]hey will shake the ground very noticeably" (RECORD 0265)<br><br>• Roderick's concrete batching experts testified the facility will attract "large long trucks carrying sand, gravel, pow[d]ers, to the batch plant" (RECORD 0265) |

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

| What the code says: | Why AERM doesn't meet the code: |
|---|---|
| "under conditions which limit the generation of ***noise***, ***vibration,*** smoke, odor, ***dust,*** fumes, or hazard from explosion"<br><br>(City Code § 17.4.503.A.) | • It is well-documented in the regulatory and scientific literature that batching plants generate substantial noise, vibration and dust that migrates to neighboring properties. (RECORD 0002, 0005-0006, 0159-0162, 0165. 0173-74, 0178, 0225, 0227-0228)<br><br>• United States Department of Transportation Federal Highway Administration's Roadway Construction Noise Model (RCNM) Construction Noise Handbook concrete batch plants, concrete mixer trucks, and concrete pump trucks, ***operate at an A-weighted decibel spec level of 83, 85 and 82 dBA***, respectively **(the same noise range as chain saws, compressors, jackhammers, and pneumatic tools)** (RECORD 0212, 219, 221)<br><br>• Roderick's construction/concrete batching experts testified that the plant will generate significant noise, vibration and dust (RECORD 0258, 0265)<br><br>• Roderick's concrete batching experts testified that these "businesses operate the heaviest of trucks going up and down the road" and that "[t]hey will shake the ground very noticeably" (RECORD 0265)<br><br>• AERM's equipment, which will run continuously, will "make a terrible beep beep" sound when they back up and the processing of concrete haul back "will sound like guns shooting all the time "(RECORD 00265) |

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

| | |
|---|---|
| (cont.)<br><br>"under conditions which limit the generation of ***noise***, ***vibration,*** smoke, odor, ***dust,*** fumes, or hazard from explosion"<br><br>(City Code § 17.4.503.A.) | (cont.)<br><br>• The site plan lacked dust mitigation features such as a "wash out area" (RECORD 1439; 1451:18.)<br><br>• No dust mitigation features like a street sweeper (which the neighboring facility, Altaview, has) is part of AERM's site plan or proposal (RECORD 1444)<br><br>• AERM uses open conveyors instead of shute sleeves (RECORD 1441) |

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

| What the code says: | Why AERM doesn't meet the code: |
|---|---|
| "None of the activities carried out on the premises shall produce … any fumes, smoke, ***noise***, vapor, vibration, glare ***or similar condition*** which is ***harmful to persons*** …."<br><br>(City Code § 17.4.503.B.1.a.)<br><br>"The planning commission[] … shall have the … duty … to … disapprove a project plan … to ensure that the project will not pose any detrimental effect to persons or property, or to protect the health, safety, and general welfare of the citizens of the city."<br><br>(City Code § 17.6.101.A.) | • The EPA's Emission Factor Documentation for AP-42 Section 11.12 – Concrete Batching – Final Section has documented that concrete batching plants cause the dissemination of harmful particulate matter and other contaminants such as silica, arsenic, lead and mercury. (RECORD 0016-0017, 0018, 0024-26)<br><br>• OSHA warns that eye, skin and respiratory tract irritation/harm occurs from exposure to cement dust. (RECORD 0142-0144)<br><br>• Batching plants emit harmful silica, cytotoxins and carcinogens. (RECORD 0160, 0161, 0165, 0227-0228)<br><br>• Cement dust pollution leads to the alkalization and changes in the chemical composition of soils. (RECORD 0173-0174, 0178)<br><br>• Utah Physicians for a Healthy Environment's 2019 Report on Air Pollution and Health Research says exposure to particulate matter increases community death rates by about 1%. (RECORD 0181-0186)<br><br>• Utah Department of Health, Bureau of Epidemiology's Environment Epidemiology Program (EEP) report – "EEP cannot state that exposure to rc-silica is 'safe.'" (RECORD 0190, 0195, 0197, 0199, 0202, 0205-0206) |

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

| What the code says: | Why AERM doesn't meet the code: |
|---|---|
| Such activities/uses shall not "***create an adverse visual impact readily discernible from the public roads***."<br><br>(City Code § 17.4.503.B.1.a.) | • AERM is an eyesore that is readily visible from the public road. (RECORD 0239-0245, 0279-0283, 0423, 1440)<br><br>• Roderick's construction/concrete batching experts testified that the visual impact of AERM will deter tenants/occupants for Roderick. (RECORD 0262)<br><br>• Roderick's construction/concrete batching experts testified that these are very unsightly businesses that are typically disallowed by cities except for in remote locations, existing gravel pits, or heavy manufacturing zones. (RECORD 0258-0259,0266)<br><br>• AERM's 92-foot tall tower will be readily visible from the public roads and from Utah Lake. As Commissioner Hunter opined, "we are dumping our most unsightly things along our beautiful lakeshore." (RECORD 1437, 1451:9-10)<br><br>• Unlike the Altaview plant, which is tucked away in a cul-de-sac and is hardly visible from the road, AERM's operation sits right on a public road and is clearly visible from the public road (RECORD 0421, 0423, 1440) |

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

| What the code says: | Why AERM doesn't meet the code: |
|---|---|
| "Prior to commencing operation or construction of any industrial building or the establishment of any industrial use or buildings, a site plan shall be submitted to and approved in accordance with the provisions of Section 17.6.101."<br><br>(City Code § 17.4.503.H.)<br><br>"Any construction not in conformance with an approved site plan shall be considered a violation of this code."<br><br>(City Code § 17.6.101.D.) | • The majority of the batch plant had been constructed before AERM ever sought site plan approval (RECORD 0259, 0332-0333, 0426)<br><br>• AERM admits that it poured footings and erected its facility at the site before getting site plan approval or a building permit from the City. (RECORD 0332)<br><br>• "things weren't done the way they should have been" (RECORD 0332-0333)<br><br>• There is no evidence AERM obtained any approvals from the County.<br><br>• The City has red-tagged the operation due to AERM's admitted violation of the law. Despite being red-tagged AERM has *still* been operating and crushing concrete/debris on site. (RECORD 0257, 0259, 0426-0427; 1438) |
| "All uses shall be conducted entirely within a fully enclosed building, except those uses deemed by the city to be customarily and appropriately conducted in the open."<br><br>(City Code § 17.4.503.I.1.)<br><br>"All materials and vehicles used in the conduct of the business activity shall be stored within an enclosed building or within an area designated for such use as shown on the approved site plan."<br><br>(City Code § 17.4.503.I.2.) | • AERM is an open operation. (RECORD 1450:29-34; 1451:12-17; 1437)<br><br>• Unlike the neighboring Altaview plant, which is enclosed, "the open operation at American Eagle … will do little to nothing to contain migrant dust, particulate matter, or noise" (RECORD 0421; 1437, 1441) |

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

| What the code says: | Why AERM doesn't meet the code: |
|---|---|
| "The site plan and improvements shall provide for the efficient removal and proper disposal of surface water generated by the use."<br><br>(City Code § 17.4.503.I.6.) | • AERM failed to address wastewater concerns and the potential contamination of the aquifer and Utah Lake, which is immediately south of the property. (RECORD 0261; 1451:10-11;1451:19-29) |
| "Any use shall be prohibited which emits or discharges gasses, fumes, or other pollutants into the atmosphere in amounts which exceed the standards as prescribed by the Utah State Air conservation Board, the board of health, or such appropriate body as may be appointed by the city council."<br><br>(City Code § 17.5.116.) | • Unlike the neighboring Altaview facility which is regulated and monitored by the Utah Division of Air Quality under an approval order, AERM has applied for and obtain a DAQ exemption.[11] (RECORD 0420-0421, 0422; 0285-0289 (AERM's small source exemption); 0433-0502 (Altaview's DAQ Approval Order); 1436, 1442-1443).) |
| "Any use shall also be prohibited which emits or discharges liquids or solid material onto the soil or water in amounts which result in pollutants entering any water or drainage system in amounts exceeding the standards prescribed by the Utah State Water Pollution Control Board or the state board of health."<br><br>(City Code § 17.5.116.) | • AERM failed to address the potential contamination of the aquifer and Utah Lake, which is immediately south of the property. (RECORD 0261; 1451:10-11; 1451:19-29)<br><br>• The city engineer, Ben Hunter, agreed that AERM creates the "potential of pollutants infiltrating into the ground water." (RECORD 1451:24-25.) |

[11] The small source exemption regulations, Utah Administrative Code R307-401-9, can be found at this link: https://rules.utah.gov/publicat/code/r307/r307-401.htm#T9. Helpful information can also be found at this link: https://rules.utah.gov/publicat/code/r307/r307-401.htm#T9. AERM's small source exemption materials can be found at RECORD 0285-0311. Basically, a business such as AERM can qualify for DAQ exemption if a source of air pollution produces pollutants under certain DAQ emission thresholds set out in those regulations. AERM represented to the DAQ in its application materials that its operation volumes would not exceed those emission thresholds. (RECORD at 0289.)

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

Roderick Enterprises summarized these deficiencies for the Planning Commission in the attached **Exhibit A**, which we would urge you to review. Having considered the exhaustive record, the legal briefs that were submitted by the parties, and considering their own specialized experience, the members of the Planning Commission that voted to deny AERM's site plan application were fully aware of and rightfully concerned about these problems and deficiencies as is evidenced by the references to the record above and by Planning Commission discussion on the record at the May 6, 2020, hearing.

Commissioner Chris Christiansen was "concerned that AERM is not enclosed. He's studied several batch plants and sees that most are enclosed. If that was what AERM intended, he'd be more likely to approve the application. What is set up is just the machine, which is typical of a temporary project. Without the commitment of an enclosure to mitigate noise and dust, he is concerned about this site plan." (RECORD 1450:29-32)

Commissioner Ryan Hunter stated:

> The code certainly didn't anticipate several batch plants in the area. The 92 ft tall tower near the lake is a concern for him. It seems that we are dumping our most unsightly things along our beautiful lakeshore. He has concerns about wastewater requirements, he doesn't like the small exemption instead of DAQ compliance, and doesn't feel that city staff should be the enforcer of air quality. That's why DAQ exists. The open building and rock crushing are other concerns. He doesn't see rock crushing as being a light industrial function.

(RECORD 1451:7-14) Commissioner Geoff Dupaix agreed with these concerns. (RECORD 1451:15.)

A large issue for the Planning Commission that AERM failed to address was the issue of ready mix/concrete haul back (unused product that is brought back to the plant). As Commissioner Christiansen correctly pointed out:

> This was not addressed in their plans, and they will have a loader going back and forth. In the last meeting it was mentioned that they would be crushing and recycling, their statements regarding this have been inconsistent.

(RECORD 1452:1-6) While AERM denies any crushing activities (RECORD 0337, 0344-0345), please keep in mind that (a) Roderick Enterprises's experts witnessed crushing and crushers on the property (RECORD 0257, 0259, 0283, 0284, 0426-0427) and (b) haul back (and storage/processing of haul back) is a routine aspect of the batch plant business as the Planning Commission members were keenly aware. (*See* RECORD 1452:1-10.) As even Elizabeth Phelon (AERM's landlord/the property owner) admitted on the record, "Mr. Roderick has brought up that the concrete recycling is a trash dumping receptacle. Recycling is an essential to all our future in every sense." (RECORD 0338.) Even AERM acknowledged the reality of "comeback" or haul

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

back concrete and admitted that the concrete will be recycled. (*See* RECORD at 0344.)[12] AERM's site plan shows an area for "RECYCLED CONC. BLOCKS" (*See* RECORD 1004.)

The Planning Commission was also rightly concerned about the lack of a concrete base (RECORD 1452:1-6), dust-generation problems and the lack of dust-mitigating measures in the site plan. (RECORD 0329:27-36; 1450:29-34; 1451:15-17; 1452:5-6.)

The Planning Commission correctly ignored AERM's apples to oranges comparison to the nearby Altaview plant. (RECORD at 1452:6.) Roderick's experts pulled the Utah DAQ records and plans for both facilities. They also did a site visit to both facilities. Based upon that, they identified approximately 20 material differences between the two facilities. (*See* RECORD 0422-0424; RECORD 1436-1444, 1449.) Exhibit A to this letter summarizes and depicts most of the critical differences.

Finally, while the Planning Commission was very diplomatic in how it handled AERM's credibility issues it is quite clear that AERM's credibility should be questioned at the very least. For example, as mentioned, the information AERM provided the Utah Division of Air Quality led the DAQ to model AERM's air pollution emissions based upon the assumption that AERM's hourly rating was 30 cubic yards per hour. (*See* RECORD at 0260,0296.) Assuming the truth of AERM's representation to the DAQ that it would operate "M-S - +- 12 hours per day" (RECORD at 289, ¶ 9), that amounts to production of about 112,320 cubic yards per year. But in its April 16, 2020, letter to the Planning Commission AERM admitted, "In the current configuration AERM should expect 180 cyph. Enough to get our trucks out in a timely manner and average 60 cyph for the remainder of the day." (RECORD at 0346.) Of course, 60 cyph is twice the production of 30 cyph and equates to 224,640 cubic yards of production per year. But then AERM's attorneys stated to the Planning Commission that "It has always been AERM's intention to operate at or below 120,000 cubic yards per year …" (RECORD 0955, n.4.) This statement contradicts what AERM previously told the Planning Commission and what the DAQ relied upon.

The bottom line—it seems that AERM represented to the DAQ that it was operating a much smaller-scale operation so that it could qualify for the DAQ exemption. This was the opinion of Roderick's expert witnesses, who stated, "Based on my review I am left with the concern that the reliance made by the DEQ may be 'inaccurate' and therefore leads us to believe that American Eagle will operate at a substantially higher capacity than what was represented to the DEQ." (RECORD at 0260.) Of course, AERM disputes this but the evidence speaks for itself.

As another example of AERM's duplicity please consider other things that Mr. Clements of AERM represented to the DAQ in its small source exemption application and compare that to what you see in the site plan application and the Planning Commission record. AERM told the DAQ that the facility would have the following pollution control equipment: "Dust collectors, bag

[12] AERM admitted on the record that Phelon's company, "ESP … will recycle the material into topsoil and engineered fill." (RECORD at 0345.)

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

house, covered conveyors, water, washed material, water truck." (RECORD at 0289, ¶ 8.) But the site plan and evidence presented to the Planning Commission showed no truck washing station, no street sweeper, no covered conveyors, and no water trucks, among other things.[13] (*See* RECORD AT 0423-0424 (Roderick's expert witness report); RECORD 1437 (open production); 1441 (open conveyors); 1450:29-34 (noting open production concerns); 1451:12-17 (noting open production concerns); RECORD 1439, 1451:18 (no washout areas).)[14] Roderick's experts also identified more than a dozen misstatements, unsubstantiated statements or contradictory statements made by AERM to the Planning Commission. (*See* RECORD 0424-0427.)

Based upon these concerns and the substantial evidence in the record presented by Roderick Enterprises, the Planning Commission correctly found that the site plan application was deficient and did not comply with the City Code in at least 8 ways. (*See* RECORD 1452-1453.) The Planning Commission's decision was correct in every aspect. This was a woefully deficient site plan application for a heavy industrial use that is clearly not allowed in the I-1 zone.

## CONCLUSION

Due to the significant, multi-million-dollar investment Roderick Enterprises has made in reliance upon the City's zoning laws, it will do what is necessary to ensure that AERM complies with the law. Roderick Enterprises will exhaust any and all administrative remedies that it has under the City Code and seek relief on appeal in the district court, if necessary, pursuant to Utah Code Ann. § 10-9a-801(3)(b)-(c) based upon the fact that, among other things, any reversal of the Planning Commission's decision and approval of this woefully deficient project would be "illegal" and "not supported by substantial evidence in the record." Accordingly, we respectfully request that you affirm the Planning Commission's decision.

Sincerely,

**MCDONALD FIELDING** PLLC

Daniel J. McDonald

[13] AERM's site plan can be found at RECORD 0998-01000 & 1004. In contrast to AERM's site plan, the neighboring Altaview site plan (RECORD 0484-0485) showed dust mitigation features such as mixer wash out pits, a stormwater total containment pond, washed aggregated piles, and truck washing stations.

[14] AERM's lawyers claimed that some of these dust-mitigating features would be part of AERM's operation (RECORD 0954-0955) but the pictures of the operation, the site plan and the testimony of Roderick's knowledgeable construction experts rebuts this unsupported conclusory assertions by AERM's lawyers.

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

Encl.: Exhibit A

c: Roderick Enterprises; Wade Budge

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle Appeal)

Exhibit A

# AMERICAN FORK CITY PLANNING COMMISSION

May 6, 2020

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle

# THE APPLICANT HAS NOT DEMONSTRATED COMPLIANCE WITH CITY CODE § 17.5.116 – AIR QUALITY

- "Any use shall be prohibited which emits or discharges gasses, fumes, or other pollutants into the atmosphere in amounts which exceed the standards as prescribed by the Utah State Air Conservation Board, the board of health, or such appropriate body as may be appointed by the city council."

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle

# WHAT THE APPLICANT WANTS YOU TO BELIEVE …

IT INSTALLED A PLANT WITH THE CAPACITY TO PRODUCE UP TO …

366 CY/HOUR



BUT, AS IT REPRESENTED TO THE DAQ, TO GET ITS EXEMPTION, IT WILL ONLY OPERATE AT A MAX OF …

30 CY/HOUR




Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle

# THE APPLICANT HAS NOT DEMONSTRATED COMPLIANCE WITH CITY CODE § 17.5.116 – WASTEWATER

"Any use shall also be prohibited which emits or discharges liquids or solid material onto the soil or water in amounts which result in pollutants entering any water or drainage system in amounts exceeding the standards prescribed by the Utah State Water Pollution Control Board or the state board of health."

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1434

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle

# THERE IS NO RISK OF AN EQUAL PROTECTION VIOLATION
--
# THERE ARE MORE THAN 20 KEY OPERATIONAL, SIZE, AND SCOPE DIFFERENCES BETWEEN THE AMERICAN EAGLE AND THE ALTAVIEW PLANTS

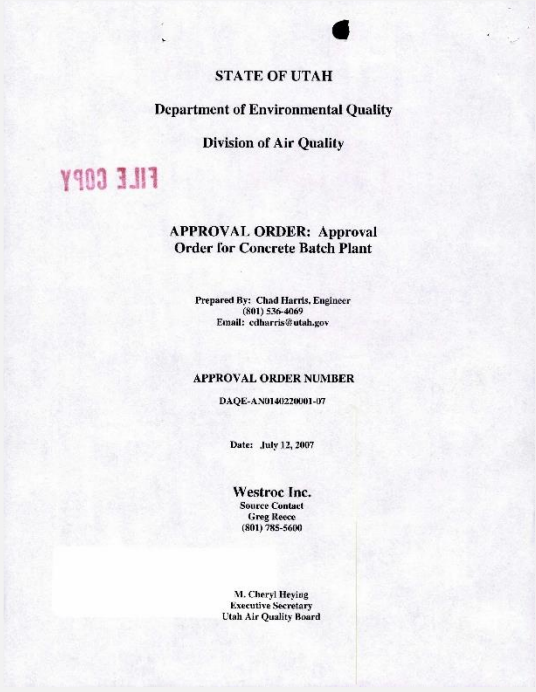


RECORD 1435

# ALTAVIEW v. AMERICAN EAGLE

## ALTAVIEW

- Operates under a Utah DAQ ***Approval Order***



STATE OF UTAH

Department of Environmental Quality

Division of Air Quality

FILE COPY

APPROVAL ORDER: Approval Order for Concrete Batch Plant

Prepared By: Chad Harris, Engineer
(801) 536-4069
Email: cdharris@utah.gov

APPROVAL ORDER NUMBER

DAQE-AN0140220001-07

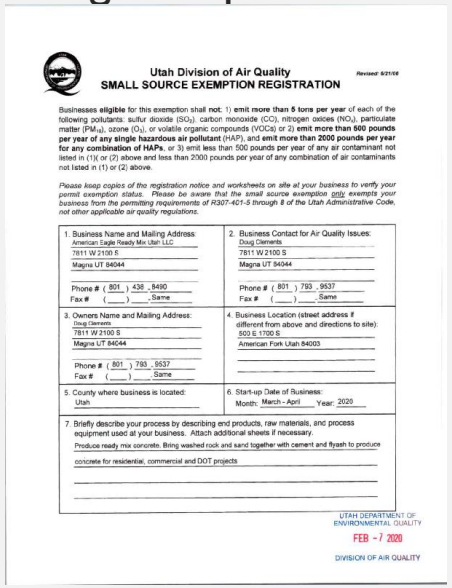
Date: July 12, 2007

Westroc Inc.
Source Contact
Greg Reece
(801) 785-5600

M. Cheryl Heying
Executive Secretary
Utah Air Quality Board

## AMERICAN EAGLE

- Operates under a Utah DAQ ***<u>small source exemption</u>*** (based upon American Eagle's representations to the DAQ)



Utah Division of Air Quality
SMALL SOURCE EXEMPTION REGISTRATION

Revised: 6/21/06

Businesses **eligible** for this exemption shall **not**: 1) **emit more than 5 tons per year** of each of the following pollutants: sulfur dioxide ($SO_2$), carbon monoxide (CO), nitrogen oxides ($NO_x$), particulate matter ($PM_{10}$), ozone ($O_3$), or volatile organic compounds (VOCs) or 2) **emit more than 500 pounds per year of any single hazardous air pollutant** (HAP), and **emit more than 2000 pounds per year for any combination of HAPs**, or 3) emit less than 500 pounds per year of any air contaminant not listed in (1)( or (2) above and less than 2000 pounds per year of any combination of air contaminants not listed in (1) or (2) above.

*Please keep copies of the registration notice and worksheets on site at your business to verify your permit exemption status. Please be aware that the small source exemption only exempts your business from the permitting requirements of R307-401-5 through 8 of the Utah Administrative Code, not other applicable air quality regulations.*

| | |
|---|---|
| 1. Business Name and Mailing Address: American Eagle Ready Mix Utah LLC<br>7811 W 2100 S<br>Magna UT 84044<br>Phone # ( 801 ) 438 - 8490<br>Fax # ( ) - Same | 2. Business Contact for Air Quality Issues: Doug Clements<br>7811 W 2100 S<br>Magna UT 84044<br>Phone # ( 801 ) 793 - 9537<br>Fax # ( ) - Same |
| 3. Owners Name and Mailing Address: Doug Clements<br>7811 W 2100 S<br>Magna UT 84044<br>Phone # ( 801 ) 793 - 9537<br>Fax # ( ) - Same | 4. Business Location (street address if different from above and directions to site): 500 E 1700 S<br>American Fork Utah 84003 |
| 5. County where business is located: Utah | 6. Start-up Date of Business: Month: March - April Year: 2020 |
| 7. Briefly describe your process by describing end products, raw materials, and process equipment used at your business. Attach additional sheets if necessary. Produce ready mix concrete. Bring washed rock and sand together with cement and flyash to produce concrete for residential, commercial and DOT projects | |

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
FEB - 7 2020
DIVISION OF AIR QUALITY

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1436

# ALTAVIEW v. AMERICAN EAGLE

## ALTAVIEW

- Enclosed production



## AMERICAN EAGLE

- Open production



Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1437

# AMERICAN EAGLE ENGAGES IN CRUSHING AND CONCRETE RECYCLING



Exhibit "F"




Exhibit "E"

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1438

# ALTAVIEW v. AMERICAN EAGLE

## ALTAVIEW

- Truck washing station



## AMERICAN EAGLE

- No truck washing station on site plan

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1439

# ALTAVIEW v. AMERICAN EAGLE

## ALTAVIEW

- Hardly visible from public road in a cul-de-sac

## AMERICAN EAGLE

- Clearly visible from the public road




Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1440

# ALTAVIEW v. AMERICAN EAGLE

## ALTAVIEW

- Shute sleeves



## AMERICAN EAGLE

- Open conveyors

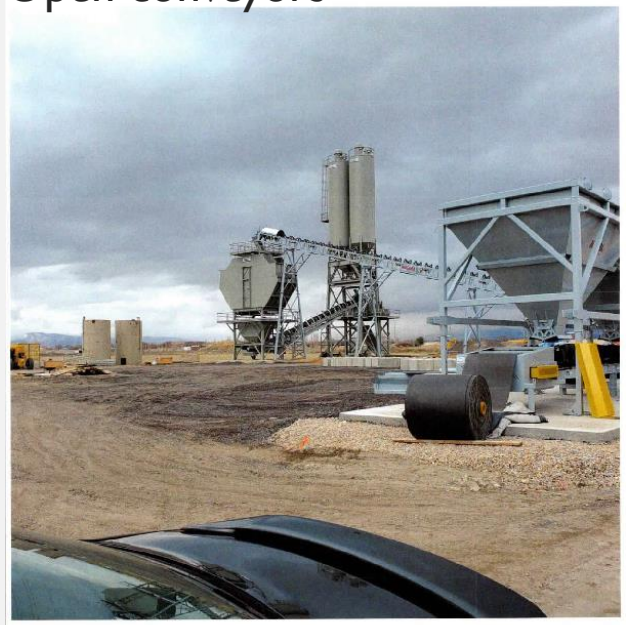


Exhibit "D"

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle

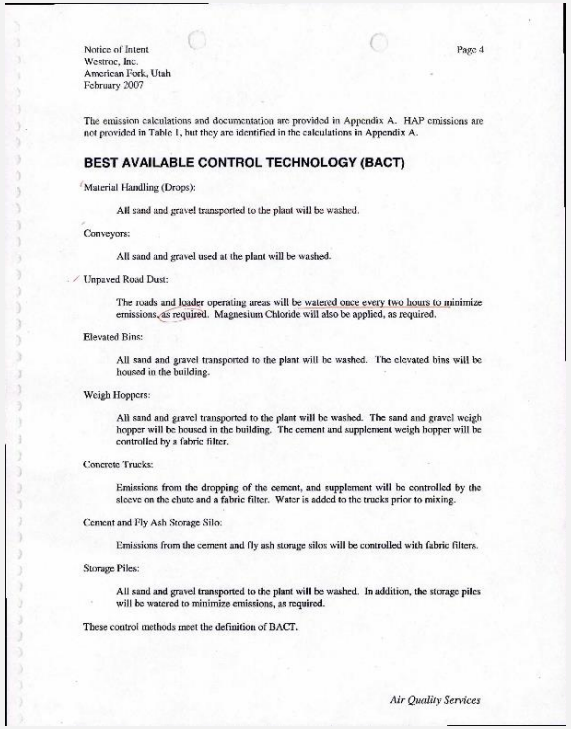


RECORD 1441

# ALTAVIEW v. AMERICAN EAGLE

## ALTAVIEW

- Best Available Control Technology (BACT) required by DAQ



Notice of Intent
Westroc, Inc.
American Fork, Utah
February 2007

Page 4

The emission calculations and documentation are provided in Appendix A. HAP emissions are not provided in Table 1, but they are identified in the calculations in Appendix A.

**BEST AVAILABLE CONTROL TECHNOLOGY (BACT)**

Material Handling (Drops):

All sand and gravel transported to the plant will be washed.

Conveyors:

All sand and gravel used at the plant will be washed.

Unpaved Road Dust:

The roads and loader operating areas will be watered once every two hours to minimize emissions, as required. Magnesium Chloride will also be applied, as required.

Elevated Bins:

All sand and gravel transported to the plant will be washed. The elevated bins will be housed in the building.

Weigh Hoppers:

All sand and gravel transported to the plant will be washed. The sand and gravel weigh hopper will be housed in the building. The cement and supplement weigh hopper will be controlled by a fabric filter.

Concrete Trucks:

Emissions from the dropping of the cement, and supplement will be controlled by the sleeve on the chute and a fabric filter. Water is added to the trucks prior to mixing.

Cement and Fly Ash Storage Silo:

Emissions from the cement and fly ash storage silos will be controlled with fabric filters.

Storage Piles:

All sand and gravel transported to the plant will be washed. In addition, the storage piles will be watered to minimize emissions, as required.

These control methods meet the definition of BACT.

*Air Quality Services*

## AMERICAN EAGLE

- BACT not required as part of exemption

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1442

# ALTAVIEW v. AMERICAN EAGLE

## ALTAVIEW

Best Available Control Technology (BACT) required by DAQ

1. material handling - all sand and gravel transported to the plant will be washed
2. conveyors - all sand and gravel used at the plant will be washed
3. unpaved road dust - roads and loader equipment are watered once every two hours; mag water (magnesium chloride) applied as required to control dust
4. elevated bins are housed in the enclosed structure
5. sand and gravel weight hopper is enclosed in the building
6. weigh hopper is controlled by a fabric filter
7. cement chute sleeves (shown in Ex. D) and fabric filters to control emissions
8. emissions from the cement and fly ash are controlled by fabric filters
9. storage piles are washed

## AMERICAN EAGLE

- BACT not required as part of exemption

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1443

# ALTAVIEW v. AMERICAN EAGLE
(OTHER DIFFERENCES)

## ALTAVIEW

- Transit mix / "dry batch" plant
- Noise mitigating structures such as enclosed facilities
- Street sweeper present
- Good dust and particulate matter controls
- Enclosed garage

## AMERICAN EAGLE

- Ready mix plant
- No noise mitigating structures or measures noted
- No street sweeper noted in plans
- Poor to no dust and particulate matter controls noted in plans
- No requirement/commitment of enclosed garage

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1444

# THE BOTTOM LINE …THIS USE IS NOT ALLOWED UNDER CITY CODE § 17.4.503 (THE I-1 INDUSTRIAL ZONE)

- This is NOT "**light** manufacturing, processing, warehousing and fabrication"
- AERM does NOT operate "under conditions which limit the generation of noise, vibration, smoke, odor, dust, fumes, or hazard from explosion"
- "the activities carried out on the premises … produce … fumes, …, noise, vapor, vibration,…or similar condition[s]"
- These conditions "create an adverse visual impact readily discernible from the public roads"
- The "materials and vehicles" will not all "be stored within an enclosed building" or "an area designated for such use [i.e., enclosed] as shown on the approved site plan"

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1445

# WHAT SHOULD THE PLANNING COMMISSION DO?

## DENY THE APPLICATION BECAUSE:

- This is NOT "**light** manufacturing, processing, warehousing and fabrication"
- AERM does NOT operate "under conditions which limit the generation of noise, vibration, smoke, odor, dust, fumes, or hazard from explosion"
- "the activities carried out on the premises … produce … fumes, …, noise, vapor, vibration,…or similar condition[s]"
- These conditions "create an adverse visual impact readily discernible from the public roads"
- The "materials and vehicles" will not all "be stored within an enclosed building" or "an area designated for such use [i.e., enclosed] as shown on the approved site plan"

## ALTERNATIVELY, APPROVE IT WITH THE FOLLOWING CONDITIONS:

- AERM must submit to a quarterly volume audit to ensure it is not operating at volumes greater than that represented to the DAQ
- Demonstrate compliance with City Code § 17.5.116 (wastewater) by engineered plans
- AERM must engage in enclosed production like the Altaview plant
- Concrete crushing and recycling are prohibited
- AERM must create and use a truck washing facility like the Altaview plant
- AERM must plant mature trees all along the public road to ensure the plant is not readily visible from the public road and to absorb fugitive dust
- AERM must implement all of the BACT technology that the Altaview plant is required to implement by the DAQ
- Every aspect of AERM's mitigation response plan in the 4/29/2020 letter from its legal counsel must be implemented within 3 months of approval

Attachment: 2020.06.19 Roderick Enterprises Brief to City Council (American Eagle



RECORD 1446

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Finance **Director Approval** *Anna Montoya*

**AGENDA ITEM** Review and action on a resolution adopting the American Fork City budget for fiscal year ending June 30, 2021.

**SUMMARY RECOMMENDATION**
Staff recommends approval of the fiscal year ending June 30, 2021 budget.

**BACKGROUND**
American Fork City is required by state statute to adopt and maintain an operating and capital budget by June 30 if no tax increase is being proposed. The proposed budget has been discussed in multiple work sessions and the budget retreat. The City Council has adopted a tentative budget on May 12, 2020. Attached is a summary of the changes made since the tentative budget.

**BUDGET IMPACT**
Adoption of the budget would allow for continued operations and meet statutory requirements for City funds.

**SUGGESTED MOTION**
I move to approve a resolution adopting the American Fork City budget for the fiscal year ending June 30, 2021, and the filing of appropriate documents with the State of Utah.

**SUPPORTING DOCUMENTS**

Budget Changes (PDF)
FY2021 Budget-Final 6.30.20 (PDF)
06-30-2020 - FYE 2021 budget resolution (DOCX)

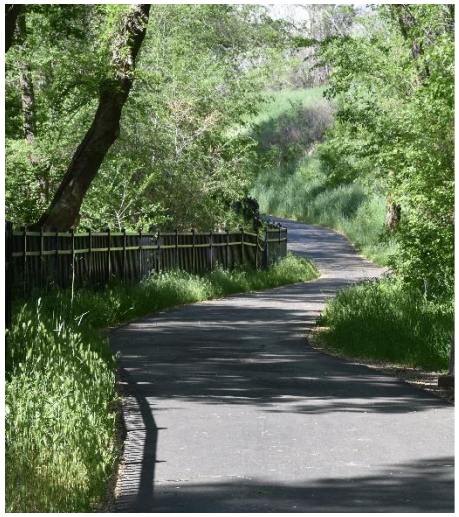
**American Fork City**
**Budget Changes Since May 13, 2020**
**Fiscal Year 2020-21**

| Tentative Budget Page | Final Budget Page | Fund | Line Item | Description | Tentative Amount | Final Amount | Difference |
|---|---|---|---|---|---|---|---|
| 76 | 82 | GF/Community Services Admin | Diversity Training | Add inclusion training citywide | - | 2,500 | 2,500 |
| 76 | 82 | GF/Community Services Admin | Promotional | Increase rebranding budget | 20,895 | 38,298 | 17,403 |
| 91 | 98 | GF/Police | Diversity/De-escalation Training | Add diversity training for police officers | - | 5,000 | 5,000 |
| 102 | 109 | GF/Streets | Professional & Technical | Increased for road plan study | 20,000 | 50,000 | 30,000 |
| 113 | 120 | Citizens Committee | Beautification | Carryover FY2020 balance to FY2021 | 4,000 | 8,500 | 4,500 |
| 120 | 127 | Celebration Fund | Other Event Income | Remove program revenue | (12,000) | - | 12,000 |
| 120 | 127 | Celebration Fund | Fireworks show | Remove program expense | 17,000 | - | (17,000) |
| 120 | 127 | Celebration Fund | Miss American Fork | Remove program expense | 12,000 | - | (12,000) |
| 122 | 129 | RDA East Side | Transfer to General Fund | Adjusted per project plan budget | - | 42,063 | 42,063 |
| 123 | 130 | RDA Business Park | Net Revenues | Adjusted per project plan budget | - | - | - |
| 124 | 131 | RDA Egg Farm | Total Revenues | Adjusted per project plan budget | (928,844) | (970,017) | (41,173) |
| 124 | 131 | RDA Egg Farm | Total Expenditures | Adjusted per project plan budget/added widening of Sam White Lane per project plan | 516,989 | 1,459,043 | 942,054 |
|  | 132 | CRA Patriot Station |  | Added to budget document | - | - | - |
| 126 | 134 | Debt Service | Transfer from Fire Impact | Debt service paid from sinking bond fund | (78,000) | - | 78,000 |
| 126 | 134 | Debt Service | Transfer from Police Impact | Debt service paid from sinking bond fund | (26,000) | - | 26,000 |
| 126 | 134 | Debt Service | Property Tax | Per debt service schedule (adjusted for 2020 GO Bonds) | (784,125) | (760,393) | 23,732 |
| 128 | 136 | Capital Projects | Grants-PARC Tax | Re-allocated project to other purposes | (260,000) | (223,401) | 36,599 |
| 129 | 137 | Capital Projects | PARC-Boat Harbor | Re-allocated project to other purposes | 150,000 | - | (150,000) |
| 129 | 137 | Capital Projects | PARC-Quail Cove Restroom | Re-allocated project to other purposes | - | 100,000 | 100,000 |
| 129 | 137 | Capital Projects | PARC-Scoreboard Replacement | Re-allocated project to other purposes | - | 15,301 | 15,301 |
| 129 | 137 | Capital Projects | PARC-Library Expansion | Re-allocated project to other purposes | 110,000 | 108,100 | (1,900) |
| 132 | 140 | Capital Equipment | Loader/Sale of Capital Asset | Re-allocated rebate on Loader as Sale of Capital Asset | 5,000 | 5,000 | - |
| 135 | 143 | Road Impact Fees | 36" Water Line | Included street widening estimate | - | 973,732 | 973,732 |
| 136 | 144 | Fire Impact | Transfer to Debt Service | Debt service paid from sinking bond fund | 78,000 | - | (78,000) |
| 137 | 145 | Police Impact | Transfer to Debt Service | Debt service paid from sinking bond fund | 26,000 | - | (26,000) |
| 142 | 151 | Culinary Water | Professional & Technical | Increased for road plan study (water portion) | 50,000 | 60,000 | 10,000 |
| 143 | 152 | Culinary Water | Fund Balance | Changed "Fund Balance" to "Available Fund Balance" | N/A | N/A |  |
| 145 | 155 | Secondary Water | Fund Balance | Changed "Fund Balance" to "Available Fund Balance" | N/A | N/A |  |
| 149 | 160 | Sewer | Fund Balance | Changed "Fund Balance" to "Available Fund Balance" | N/A | N/A |  |
| 149 | 159 | Sewer | Professional & Technical | Increased for road plan study (sewer portion) | 15,000 | 25,000 | 10,000 |
| 152 | 162 | Storm Drain | 36" Water Line | Adjusted project costs for Storm Drain portion per revised estimate | 776,880 | 266,788 | (510,092) |
| 152 | 163 | Storm Drain | Fund Balance | Changed "Fund Balance" to "Available Fund Balance" | N/A | N/A |  |

Attachment: Budget Changes (Review and action on a resolution adopting the American Fork City budget







# AMERICAN FORK CITY

## Utah

## Fiscal Year 2020-2021

# ANNUAL BUDGET

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# American Fork City, Utah

# Tentative Budget

## Fiscal Year 2020-2021

**Prepared by:**
**American Fork City Administration**
**51 E Main St**
**American Fork, UT 84003-2381**
**www.afcity.org**
**Phone: (801) 763-3000**
**amontoya@afcity.net**



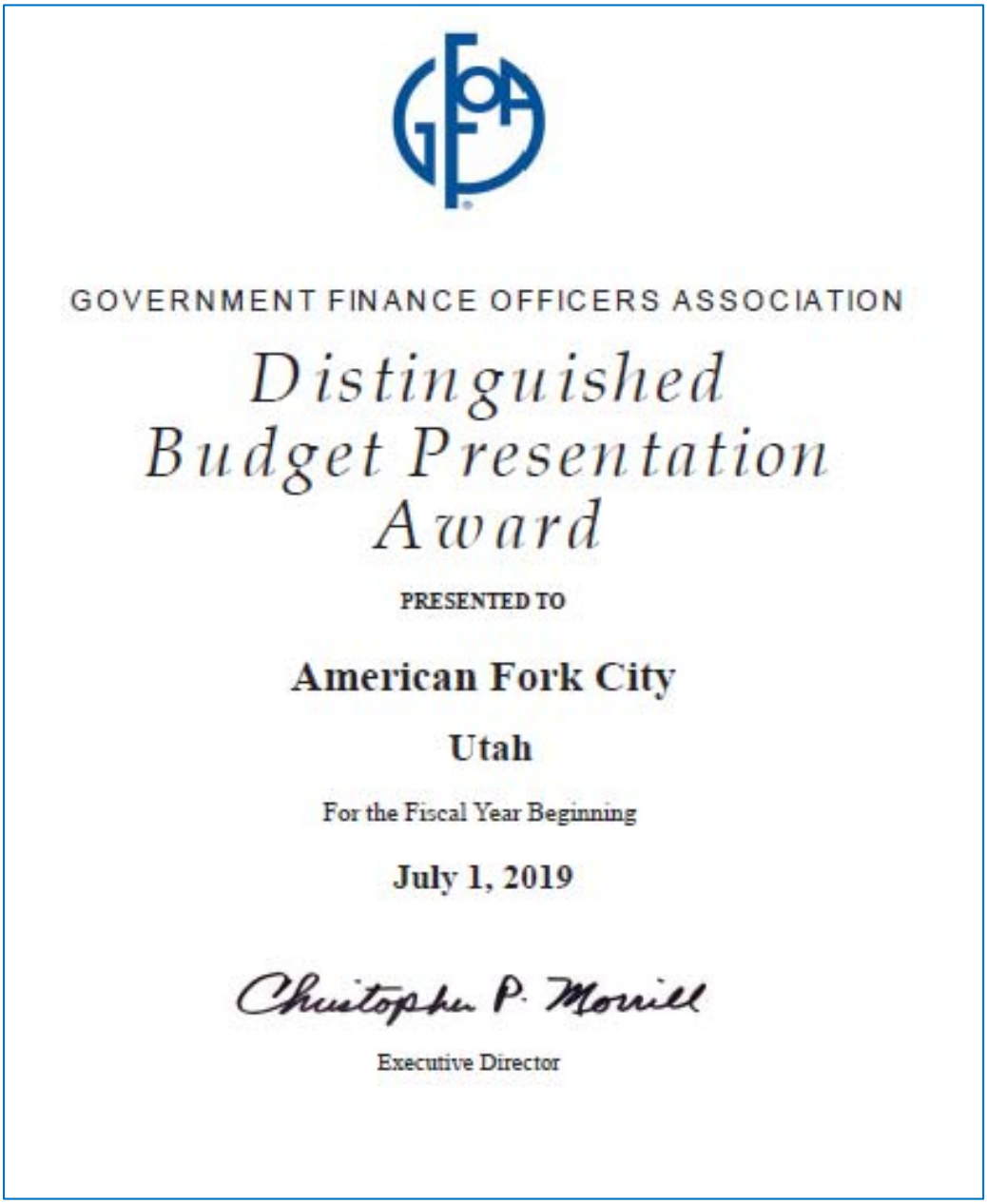

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Budget Award

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to American Fork City, Utah for its annual budget for the fiscal year beginning July 1, 2019.

In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communications device.

The award is valid for a period of one year. We believe our current budget continues to conform to program requirements, and we are submitting it to the GFOA to determine its eligibility for another year.


GOVERNMENT FINANCE OFFICERS ASSOCIATION

*Distinguished Budget Presentation Award*

PRESENTED TO

**American Fork City**

**Utah**

For the Fiscal Year Beginning

**July 1, 2019**

Christopher P. Morrill

Executive Director

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Table of Contents


## INTRODUCTION

Elected/Appointed Officials ....2
City-Wide Organizational Chart ....3
Budget Message ....4
Strategic Goals ....8
Community Profile ....9

## BUDGET AND FINANCIAL OVERVIEW

Budget Process and Timeline ....12
Fund Types and Financial Structure ....14
Revenue Overview ....17
Financial Policies ....29
Debt Overview ....44
Capital Projects Overview ....46
Capital Projects—5 Year Plan ....51

## BUDGET SUMMARIES

Fund Balances ....60
Combined Revenue Summary – All Funds ....62
Combined Expenditure Summary – All Funds ....64
Full-Time Equivalent Summary ....65

## GENERAL FUND

General Fund Summary ....68
General Fund Revenue Detail ....69
General Fund Expenditure Summary ....72
Department Budgets
- Executive ....73
- Legislative ....74
- Legal ....75
- Administration ....76
- Community Services Administration ....81
- Parks and Boat Harbor ....83
- Cemetery ....86
- Library and Learning Center ....88
- Police ....93
- Fire and Rescue ....100
- Public Works Administration ....106
- Streets ....108
- Building Maintenance ....110
- Building Inspection ....112
- Engineering ....114
- Recreation ....115
- Planning ....117
- Citizen Committees ....119




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Table of Contents


## SPECIAL REVENUE FUNDS

Municipal Building Authority Fund ..... 122
Fitness Center Fund ..... 123
PARC Tax Fund ..... 126
Celebration Fund ..... 127
Downtown Redevelopment Fund ..... 128
East Side Redevelopment Fund ..... 129
Business Park Redevelopment Fund ..... 130
Egg Farm Economic Development Fund ..... 131
Patriot Station Community Reinvestment Area ..... 132

## DEBT SERVICE FUND

Debt Service Fund ..... 134

## CAPITAL PROJECTS FUNDS

General Capital Projects ..... 136
Bond Capital Projects ..... 139
Capital Equipment ..... 140
Park Impact Fee Fund ..... 142
Road Impact Fee Fund ..... 143
Fire Impact Fee Fund ..... 144
Police Impact Fee Fund ..... 145

## PERMANENT FUND

Perpetual Care Fund ..... 148

## PROPRIETARY FUNDS

Culinary Water and Secondary Irrigation Funds ..... 150
Sewer and Storm Drain Funds ..... 158
Sanitation and Recycling Fund ..... 165
Broadband Fund ..... 166
Fleet Operations and Maintenance Fund ..... 168
Fleet Capital Fund ..... 169
Information Technology Fund ..... 170

## APPENDIX

Glossary ..... 172


Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending




# Introduction

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Elected Officials and Leadership Team



Mayor
Brad Frost



Councilman
Kevin Barnes



Councilman
Staci Carroll



Councilman
Barbara
Christiansen



Councilman
Rob Shelton



Councilman
Clark Taylor

## APPOINTED OFFICIALS

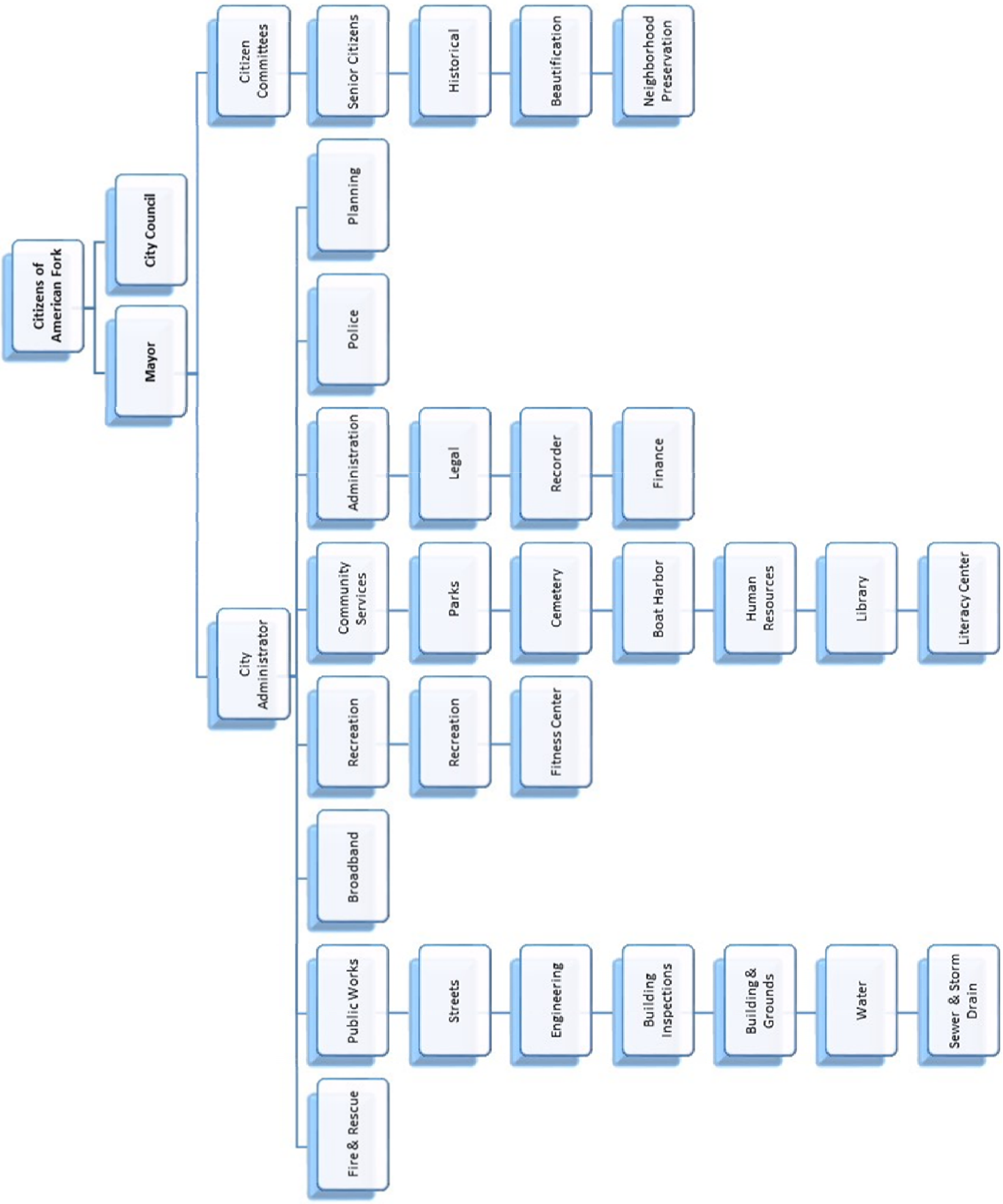
City Administrator / City Treasurer ..... David Bunker
City Recorder ..... Terilyn Lurker

## DEPARTMENT DIRECTORS

Police Chief ..... Darren Falslev
Fire Chief ..... Aaron Brems
City Attorney (Contract) ..... Cherylyn Egner
Public Works Director ..... R. Scott Sensanbaugher
Finance Director ..... Anna Montoya
Planning Director ..... Adam Olsen
Community Services Director ..... Camden Bird
Recreation & Fitness Center Director ..... Derric Rykert
Broadband & Technology Director ..... George Schade

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# City-Wide Organizational Chart




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Budget Message

**Mayor, City Council, and Citizens of American Fork City,**

We are pleased to provide the American Fork City budget for fiscal year 2021 for your review. The 2021 fiscal year, which begins July 1, 2020, and ends June 30, 2021, represents the estimated annual revenues and expenses throughout each fund within the budget. This budget has been prepared using budgetary practices and techniques recommended by the Government Finance Officers Association (GFOA). As required by State law, the adopted budget is balanced, meaning governmental expenditures will not exceed governmental revenues. In addition, the prepared budget also complies with City Code Sec. 3: Statutory Provisions Regulating Budget, Financial Reporting, and Auditing. All matters with respect to adoption of a budget, financial reporting, and auditing shall also be conducted within the City pursuant to the requirements of the Uniform Fiscal Procedures Act for Utah Cities, as contained in Chapter 6 of Title 10 of the Utah Code Annotated, 1953, as amended.

As the coronavirus continues to impact the world and across the U.S., staying physically healthy is a top priority. At the same time, the City is juggling new challenges as we navigate the uncertainty of the COVID-19 pandemic and its impact on our citizens, local businesses, and City finances. The City has made every effort to do its part by closing the library, fitness center, and lobbies. However, as retailers and other businesses shut their doors in an effort to support social distancing and help contain the COVID-19 pandemic and record number of the workforce have filed for unemployment, the City has yet to see the impact on sales tax revenues as economic uncertainty mounts.

Unprecedented times require unprecedented strategies and actions. The City has been extremely conservative in forecasting revenues as a result of the pandemic. Much of the sales tax revenue, development revenue and charges for services including recreation, library and fitness center have been reduced significantly. Consequently, department programing and expenses have been decreased citywide. Despite these reductions, staff continues to monitor economic conditions on a regular basis, keeping a pulse on the ever changing indictors. As the risk factors move the dial from high risk to moderate to normal and as businesses begin to reopen, we are hopeful that economic conditions will trend upward towards full recovery and stability.

Understanding the unknown impacts of COVID-19, and within the framework and policies established by the City Council, this budget has been prepared after reviewing and analyzing detailed requests from each of the City departments, City administration, and the City Council. In fact, the City employs a Zero Based Budgeting model. Under Zero Based Budgeting, all expenses must be justified each fiscal year, and every function within the City is analyzed for its needs and costs. The foundation of building the budget is what is needed for the upcoming period within the restraints of resources allocated, not how much the budget increases or decreases from the prior fiscal year.

As part of the planning and prioritization efforts for the fiscal year 2021 budget, please consider the following highlights:

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Budget Message




## PUBLIC SAFETY

Public safety continues to be a top priority for both the City Council and staff of American Fork City. The Fire & Rescue department is seeing an ever increasing number of ambulance transport calls. In fact, approximately 78 percent of the Department's calls are medical-related. This increase in call volume has led to increased wear and tear on the City's first-out ambulances, and the high number of calls adds additional workload related stress on employees. The budget includes the addition of three Firefighter/Paramedics and one Battalion Chief. The added personnel and supply costs for the additional unit will be funded through increased ambulance transport revenue.

Our police department's dedicated, professional Law Enforcement Officers are responding to an increasing number of calls. To ensure our officers are able to provide timely service and address the community's needs, the budget includes hiring one additional Police Officer and one Police Sergeant and two additional part time records specialists to assist with reporting and administrative duties.

## PERSONNEL

According to the parameters set in the "Utah Leads Together Plan" resulting from the COVID-19 pandemic, the City continues to adjust facility hours and service levels within the guidelines for the pandemic recovery. As such, part time seasonal positions have been reduced within the fitness center, library, and parks departments. As these services and facilities are expanded and back up to benchmark levels, staff will reevaluate these positions to meet the needs of residents.

The City's population growth, unprecedented developmental interest, and increased capital projects activity has placed additional demands on the City's existing personnel within the Public Works department. In addition to the approved public safety personnel additions addressed above, staff recommends the addition of a City Engineer.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Budget Message

## CAPITAL PROJECTS

A number of capital projects are included within the framework of the fiscal year 2020-21 budget.

Currently, Fire Station 51 is the busiest fire station in Utah County that responds out of a single station. The Fiscal Year 2021 budget includes $8,500,000 to build a second public safety station with an integrated police shooting range in the northeast portion of the City. Once complete, the new Station 52 will be able to effectively service the northeast portion of the City providing adequate response times to this area of the City. Station 52 will also serve the 10,000 residents in the City of Cedar Hills.

Water system improvements projects in the amount of $21 million are necessary to provide adequate fire protection and culinary water services to high-growth areas, which mainly consist of affordable housing projects. Several segments will replace dilapidated main lines which routinely suffer from system outages due to breaks and leaks. This project will also replace old and undersized main line pipes with larger ductile iron pipe along the network backbone of the culinary water system. New pipe sizes will range from 18" to 36" in diameter, depending on location. The project will be completed in three segments, but all three segments are needed for the project to be able to deliver the needed water to areas of high growth and affordability. Work includes installing new culinary service connections and fire hydrants within the project area. The design for the first segment is complete. The design for the other two segments is underway. The City is currently evaluating and securing funding for the waterline projects.

The City funds the pavement management plan through the Utah Department of Transportation allocation of Class B and C Road Funds, a fourth quarter cent sales tax dedicated to roads and transit approved by the Utah County Tax Commission beginning April 1, 2019, and a discretionary allocation of property tax. Any costs above these dedicated revenues would be funded by the General Fund. Year four of the 10-year pavement management program is included at a cost of $2,093,750. However, this is less than requested by the Public Works Director, and falls short of the 10-year road funding plan. Rising construction costs fall short of the resources available to complete all projects outlined in the first three years of the plan.

A bike and pedestrian path along 200 South in the southwest quadrant of the City is included in the budget at a cost of $5,000,000. Approximately 94 percent of the anticipated project cost is covered by a grant from the Mountainland Association of Governments (MAG). Other street projects include reconstruction of 200 South, and construction of 700 North Connection.

Many projects requested were not funded due to decreased resources resulting from COVID-19. However, some recommended water projects are noted as follows:

- Well repairs in the amount of $250,000
- Spring Line replacement for $600,000
- 100 East Water Improvements $500,000
- Pressurized Irrigation meters in the amount of $3.1 million (partially funded by a grant from the Bureau of Reclamation)

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Budget Message

## CHALLENGES AND OPPORTUNITIES

Unparalleled economic uncertainty, business and facility closures, reduced resources and increased unemployment made the creation of the fiscal year 2020-21 budget challenging at best. Despite these challenges, it is an exciting and great time to be in American Fork. The City is making well-informed, calculated and conservative decisions using a myriad of economic and industry data. Fortunately, American Fork is an economic hub of Northern Utah County, has a diversified community, employment and industry base and is well positioned to weather the storm.

Due to limited funding, over $10 million in department requested projects are not recommended for funding in fiscal year 2020-21. All of these projects and equipment requests are needed, but only the most critical were included in the budget. These deferred requests will need to be addressed in upcoming budgets, reevaluated for potential reduced estimates, and a reliable source of funding will be needed to provide the necessary funding.

We extend sincere appreciation to the City's elected officials, dedicated employees, administration, and stakeholders participating in this important process. This document could not have been prepared without their dedicated service and input. We look forward to the continued collaboration with the Mayor and City Council, City staff, and American Fork residents.

Thank you for taking the time to read through and understand the 2020-21 budget. The priorities of the budget target the priorities of our community and address the impacts of the recent economic difficulties. We welcome your questions, input, and ideas as we finalize the budget process. The Mayor and City Administrator are available to discuss any concerns or input you may have. Thank you for your trust and allowing us to serve you and your family.

Sincerely,

David H. Bunker
City Administrator

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Strategic Goals

The Mayor and City Council have identified several areas to support the mission of American Fork City during fiscal year 2021. These principals guide the creation and preparation of this budget.



## Fiscal Responsibility

- Develop a plan if or when a property tax increase is needed for long term sustainability




## Infrastructure Improvements

- Secure financing and begin construction for water line projects
- Develop a workable infrastructure plan to include roads, sidewalks and utilities
- Develop a plan to provide fiber to residents and businesses in American Fork



## Communication

- Implement an opt-in communication system to disiminate information electronically to residents regarding city events and notifications



## Water Preservation

- Develop a pressurized irrigation metering plan and determine the viability of water re-use programs



## Quality of Life

- Complete construction of phases 1-3 of Art Dye Park and develop a plan to begin remaining improvement phases of the park including parking, trail, intersection, and undeveloped areas

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Profile

American Fork City, incorporated in 1853, covers a land area of approximately 10.38 square miles. The City lies in the northern portion of Utah County, between two of the state's largest population areas, Salt Lake City (approximately 28 miles north) and Provo City (approximately 12 miles south). The U.S. Census estimates American Fork's population to be 32,519.

## SETTLEMENT

American Fork was settled in 1850 by Mormon pioneers and incorporated as Lake City in 1853. Settlers changed the name from Lake City to American Fork in 1860, due to the river that runs through the City and to avoid confusion with Salt Lake City. In the 1860's American Fork established a public school, making it the first community in the territory of Utah to offer free public education to its citizens.




During World War II the town's population expanded when the Columbia Steel plant was built. The City's annual summer celebration is still called "Steel Days" to honor the economic importance of the mill, which closed in 2001.

## EDUCATIONAL OPPORTUNITIES

There are a number of higher education institutions located in the state. These include Brigham Young University, Utah Valley University, University of Utah, Utah State University, Weber State University, Southern Utah University, Snow College, Dixie State University, and Salt Lake Community College. Alpine School District is located within the City's boundaries, and the City takes great pride in the American Fork High School (AFHS). AFHS was ranked as one of the top-scoring 25 high schools in Utah, and has many successful athletic teams. The American Fork High School marching band is one of the nation's top marching bands, having been invited to parades and celebrations across the nation, including the Rose Parade and former President George W. Bush's second inauguration parade.

## MEDICAL INSTITUTIONS



American Fork Hospital

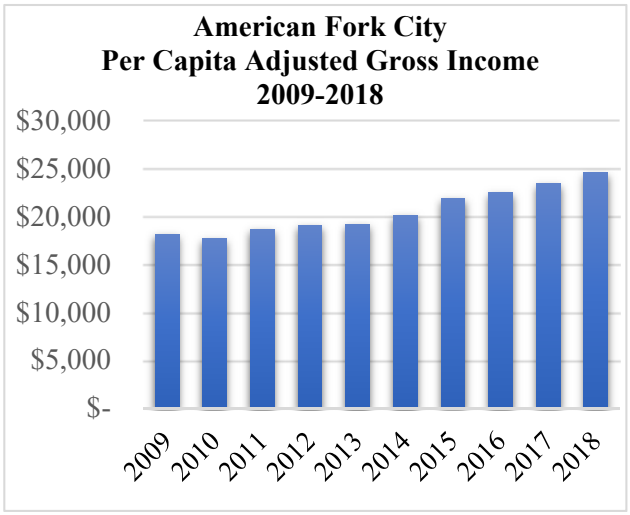
The City built a hospital in 1937. A new facility was built in 1950, which was sold to Intermountain Healthcare in 1977, which in turn replaced that hospital with a new facility in 1981. The hospital recently underwent a significant expansion that included construction of an 84,000 square foot hospital addition and an 85,400 square foot multispecialty clinic. In addition to the hospital, American Fork has several medical clinics and physicians; the City has become a major medical provider for northern Utah county.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Profile

## DEMOGRAPHIC PROFILE

Population 2010 ..... 26,263
Population 2018 ..... 32,519
Households ..... 8,325
Persons per households ..... 3.49
Median home value ..... $265,400
Median household Income ..... $74,192




## ECONOMIC DEVELOPMENT

The City recognizes the need to develop the City's economic base to provide necessary services, such as roads, recreation, and public safety to its citizens.

The City has a mix of retail, light manufacturing, professional office, and commercial space. Located along Interstate 15, "The Meadows," a large shopping and entertainment center located in American Fork, provides a substantial tax base for the City and has become a destination hub in Utah County. The City is also home to a number of automotive dealerships, including Doug Smith Autoplex, Ken Garff Ford, Ken Garff Chevrolet, National Buick GMC, Velocity Auto Sales, Kentson Car Company, Watts Automotive, and many others.




The City has been able to successfully use its Redevelopment Agency to redevelop areas in the City. The City currently has one active project area. The Egg Farm EDA project area has attracted a number of major employers in the City and is the location of the North Pointe Business Park. Overall assessed values have increased 13,095% between 1999 and 2017. The City is actively pursuing creation of a Community Reinvestment Area (CRA) in the southwest portion of the City near the FrontRunner station to facilitate growth in that area.

| Calendar Year | Population (1) | Personal Income - Federal AGI (2) | Per Capita Personal Income (1) | Unemployment Rate (3) |
|---|---|---|---|---|
| **2010** | 26,672 | $471,354,923 | $17,672 | 7.5% |
| **2011** | 27,108 | $506,221,345 | $18,674 | 6.3% |
| **2012** | 27,405 | $522,828,276 | $19,078 | 5.0% |
| **2013** | 27,922 | $535,777,308 | $19,188 | 4.3% |
| **2014** | 28,235 | $568,057,835 | $20,119 | 3.5% |
| **2015** | 28,308 | $619,865,023 | $21,897 | 3.3% |
| **2016** | 28,770 | $646,512,055 | $22,472 | 3.1% |
| **2017** | 29,527 | $691,839,424 | $23,431 | 2.9% |
| **2018** | 32,519 | $794,817,085 | $24,551 | 2.8% |

(1) U.S. Census Bureau
(2) Tax.utah.gov/econstats/income/federal-returns
(3) U.S. Bureau of Labor Statistics



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Budget and Financial Overview

# Budget Process


American Fork River

## OVERVIEW

American Fork City's budget process complies with the Utah Fiscal Procedures Act. The City seeks to maintain budgetary control by monitoring monthly revenues and expenditures and by holding each department responsible for costs incurred within budgeted limits. Financial information and reports are provided to the City Administrator, department directors, department leads, and other City staff to assist them in monitoring expenditures and keeping expenditures within approved limits. In addition, the City Council is provided a monthly budget versus actual report, and all transactions are uploaded to the state of Utah's transparency website monthly. The fiscal year 2019-2020 budget was developed in compliance with state law and was approved by the City Council after a public hearing was held. The proposed fiscal year 2020-2021 budget for each division, department, and fund includes actual expenditures for two prior years, the current year's amended budget, and the proposed budget for the coming fiscal year. The City Council shall approve the fiscal year 2020-2021 budget after thoroughly reviewing policy issues related to the budget and proposals to assist the City in achieving program objectives for the upcoming year. The budget process is intended to provide an opportunity for public participation and full disclosure to the residents of American Fork as to the intent of the City Council in funding the City's various programs and services.

| Fund Type | Accounting Basis | Budgeting Basis |
|---|---|---|
| General Fund | Modified Accrual | Modified Accrual |
| Special Revenue Funds | Modified Accrual | Modified Accrual |
| Capital Projects Funds | Modified Accrual | Modified Accrual |
| Debt Service Funds | Modified Accrual | Modified Accrual |
| Proprietary Funds | Full Accrual | Modified Accrual |

## BASIS OF BUDGETING

The City's proprietary funds (enterprise and internal service) are budgeted on a modified accrual basis, but reported in the City's Comprehensive Financial Report on a full accrual basis. The City's internal monthly reporting for these funds is done on a modified accrual basis, with year-end adjustments to present statements on a full accrual basis for the CAFR. The major year-end adjustments include: Capitalizing fixed assets purchased during the year, reversing principal debt payments, recording depreciation, and recording developer contributions.

## BUDGET AMENDMENTS

Budget amendments are made only with the approval of the City Council upon recommendation by the Finance Director and City Administrator. Financial controls are intended to be a resource for effective financial management, rather than a barrier to achieving results that are consistent with the City's overall

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Budget Process

mission. At the same time, the City must comply with the Utah Fiscal Procedures Act and may not expend monies in excess of those authorized by the City Council. The City Council has authority to transfer budget appropriations between individual departments of any budgetary fund. The Finance Director has authority to transfer budget appropriations between line items within any department of any budgetary fund. Budgets may be amended throughout the fiscal year. The City Council may amend the budget after holding a public hearing, giving residents at least seven days' notice. A copy of the proposed budget amendment shall be made available to residents for their review ten days before the public hearing.

## BUDGET TIMELINE

The following are the procedures and timeline followed by the City in the budget process:

| | |
|---|---|
| December-January | Revenue projections for all funds are made after reviewing current budget year revenue collection trends, state of Utah revenue projections, and consultation with the Finance Director, City Administrator, and Department Heads. |
| December | Department Heads submit proposed budgets to the Finance Director. |
| January-June | The Finance Director facilitates budget discussions during City Council work sessions with the Mayor and City Council. |
| February | A retreat is held with the Mayor, City Council, Department Heads, and other key staff to outline priorities, goals, and initiatives for the upcoming budget year. |
| May | During the first City Council meeting in May, a tentative budget is presented to the Council. The budget document includes the proposed amounts to be spent for operating needs of each department as well as capital needs for all fund types.<br><br>A budget open house is held for the public to answer any questions and solicit feedback regarding the upcoming year's budget. |
| June | On or before June 30, a balanced budget is adopted for the fiscal year beginning July 1 after a public hearing is held to receive input from the residents of American Fork on all aspects of the proposed budget. The hearing is advertised in a local newspaper at least seven days before it is held, and budget documents are available for inspection at least ten days prior to the public hearing. In addition, the City Council adopts the Certified Tax Rate by June 22nd to be used by the City for property tax (assuming no proposed property tax increase). |
| July-June | Budgetary control is maintained at the department level after the budget is approved by the City Council. The Finance Director has the authority to transfer budget appropriations between individual line items within any department of any budgetary fund. All other amendments must be approved by the City Council after a public hearing. |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fund Types and Financial Structure

The City's departments are organized groups with similar functions or programs to manage operations more efficiently. The City's financial structure is organized into various funds within departments used for accounting and reporting. This provides a framework for the budget that is easier to understand. The majority of this document is organized by department to provide budgetary information.

## GOVERNMENTAL FUNDS

**General Fund –** Used to account for resources traditionally associated with a government which are not required legally or by sound financial management to be accounted for in another fund.

**Special Revenue Funds**

- Building Authority—Accounts for the construction of capital facilities within the City.
- Fitness Center Fund—Accounts for fees charged to users and expenditures dealing with the operation and maintenance of the City's Fitness Center.
- PARC Tax Fund—Accounts for revenues received by the City from sales tax and expenditures (mainly grants) relating to the City's Parks, Arts, Recreation, and Culture tax.
- Celebration Fund—Accounts for the activities of Steel Days, the City's annual celebration.
- Redevelopment Agency Fund—Accounts for the activities of the Redevelopment Agency. The Agency is established to further redevelopment of certain City areas. For budgeting purposes, the City's RDA funds are budgeted separately, but rolled together for financial reporting purposes.
- Downtown Redevelopment Fund—Used to enhance and promote the City's core downtown area.

**Debt Service Fund**—Accounts for the accumulation of resources and payment of bond principal and interest from governmental resources.

**Capital Projects Fund**—Accounts for the construction of capital projects of the City. Impact fees, grants, bond proceeds, transfers from other funds, and interest earnings are the principal sources of funding. The City, for budgeting purposes, separates the City's capital projects funds, but reports them as a single column in the financial statements.

**Permanent Fund**

- Perpetual Care Fund—Accounts for funds received for the perpetual care of the City's cemetery.

## PROPRIETARY FUNDS

**Enterprise Funds**

- Culinary Water and Secondary Water Fund—The culinary and secondary water funds account for the City's water operations. For financial reporting purposes, these funds are rolled together, but are budgeted separately.
- Sewer Fund—Accounts for construction and maintenance of the City's sewer system.
- Storm Drain Fund—Used to track revenue from a monthly fee paid by City residents and businesses for the construction and maintenance of the City's storm drain system.
- Sanitation and Recycling Fund—Accounts for the activities of the City's sanitation and recycling operations.

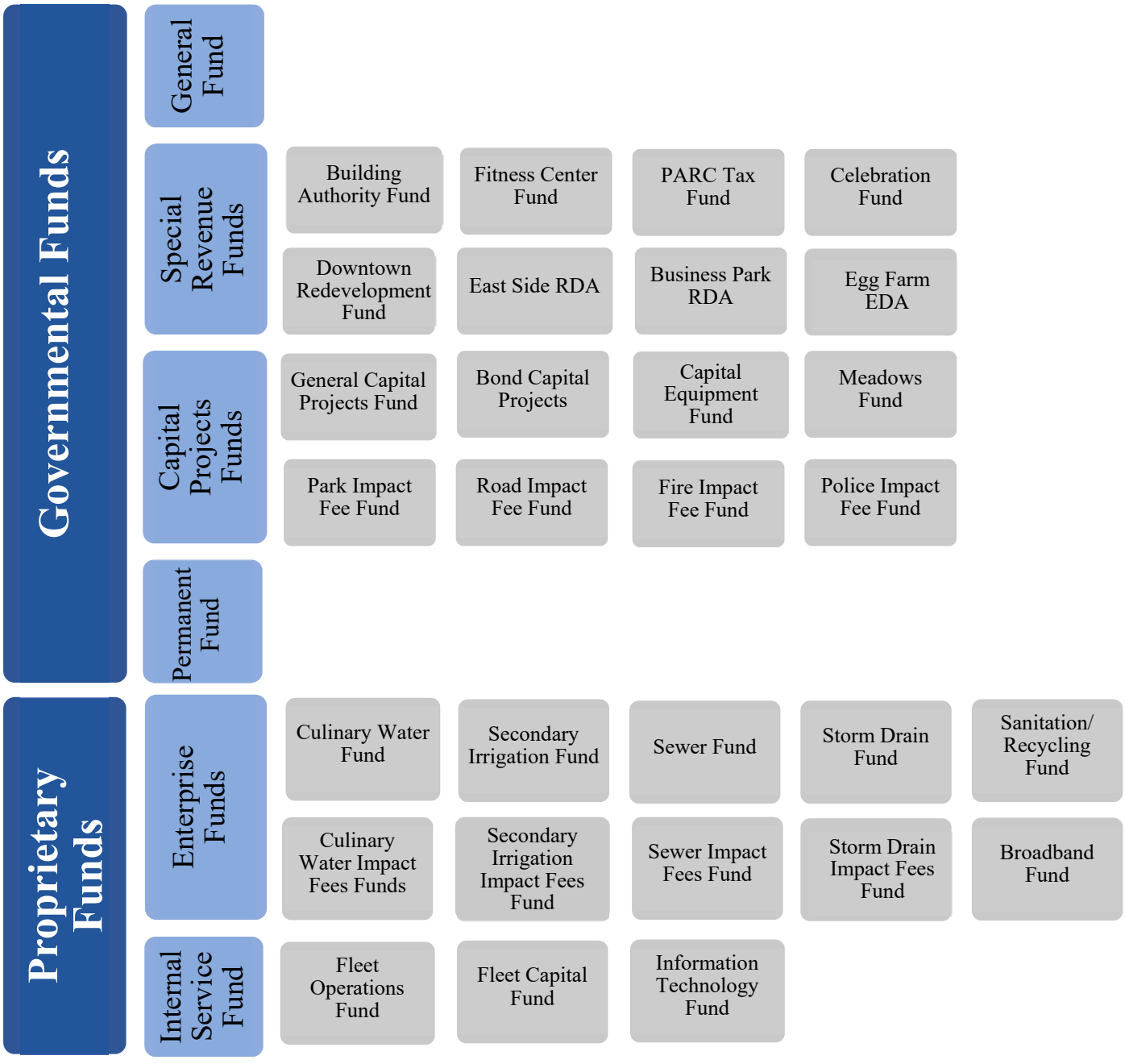
Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fund Types and Financial Structure

**Internal Service Funds**

- Fleet Fund—The fleet fund accounts for the acquisition and maintenance of the City's vehicle fleet. This fund is accounted for as an internal service fund.
- Information Technology Fund—Accounts for the acquisition and maintenance of the City's information technology. This fund is accounted for as an internal service fund.

The following is a graphical representation of the funds subject to appropriation that make up the City's financial structure:




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fund Types and Financial Structure

The following chart shows the relationship between funds and operational departments. Departments are further broken down into divisions in the General Fund:

## Governmental Funds

### General Fund

- Executive
- Legislative
- Administration
  - Administration
  - Recorder
  - Finance
  - Legal
- Community Services
  - Administration
  - Human Resources
  - Parks
  - Boat Harbor
  - Library
  - Communications
- Police
- Fire & Rescue
- Public Works
  - Administration
  - Building and Grounds
  - Engineering
  - Streets
  - Building Inspection
  - Cemetery
- Recreation
- Planning

### Special Revenue Funds

- Building Authority Fund
  - Administration
- Fitness Center Fund
  - Recreation
- PARC Tax Fund
  - Legislative
- Celebration Fund
  - Administration
- RDA/EDA Funds
  - Administration
  - Planning

### Capital Projects Funds

- General Capital Projects Fund
  - All departments
- Capital Equipment Fund
  - All departments
- Park Impact Fee Fund
  - Administration
  - Parks
- Road Impact Fee Fund
  - Public Works
- Fire Impact Fee Fund
  - Fire
- Police Impact Fee Fund
  - Police
- Bond Capital Projects Fund
  - All departments

## Proprietary Funds

### Internal Service Funds

- Fleet Maintenance and Operations Fund
  - All departments
- Fleet Capital Fund
  - All departments
- Information Technology Fund
  - All departments

### Enterprise Funds

- Culinary Water and Secondary Irrigation Funds
  - Public Works
  - Engineering
  - Water
- Sewer and Storm Drain Funds
  - Public Works
  - Engineering
  - Sewer
  - Storm Drain
- Sanitation and Recycling Funds
  - Administration
- Broadband Fund
  - Broadband

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

The first step in building the budget is to determine the estimated revenues for the budget year. American Fork City receives revenue from a variety of sources. The principal revenue sources are property taxes, sales taxes, permits and licensing and charges for services and user fees. The City revenues in this section are generally organized by:

1. State authorized revenues
2. Franchise fees
3. Charges for services
4. Other miscellaneous revenues
5. Other funds

The revenue section provides basic information about revenues sources that exceed $100,000, excluding impact fees. Each of the following revenue sources includes the fund number, responsible department, current formulas and rates or methods received, authorized uses and revenue history and projections:

- Property tax
- Sales & use tax
- Energy sales & use franchise tax
- Municipal telecommunications license tax
- Cable television franchise tax
- Class C road funds
- Licenses and permits
- Charges for services
- Fitness Center
- PARC Tax
- Culinary water fund
- Secondary irrigation fund
- Sewer fund
- Storm drain fund
- Sanitation & recycling fund
- Redevelopment Agencies

## PROPERTY TAX

Property Tax is Ad Valorem Tax levied against the taxable value of property. The rate is applied to the most recent taxable assessed value. Taxable assessed value equals total assessed value less allowable exemptions.

Property tax is American Fork's second largest source of revenue in the general fund, accounting for approximately 15.4 percent of general fund revenue. Relevant factors in the preliminary property tax forecast include changes to the certified tax rate, property tax appreciation (or depreciation), and new growth.

In order to understand property tax in Utah, it is necessary to understand a section of Utah state law known as "truth in taxation." Each county in the state is responsible for administrating property taxes. Each June, Utah County submits to the City a certified tax rate, a rate that will generate the same amount of revenue as the

**Property Tax Summary**

Current Tax Rate (2020-2021) – 1.906%

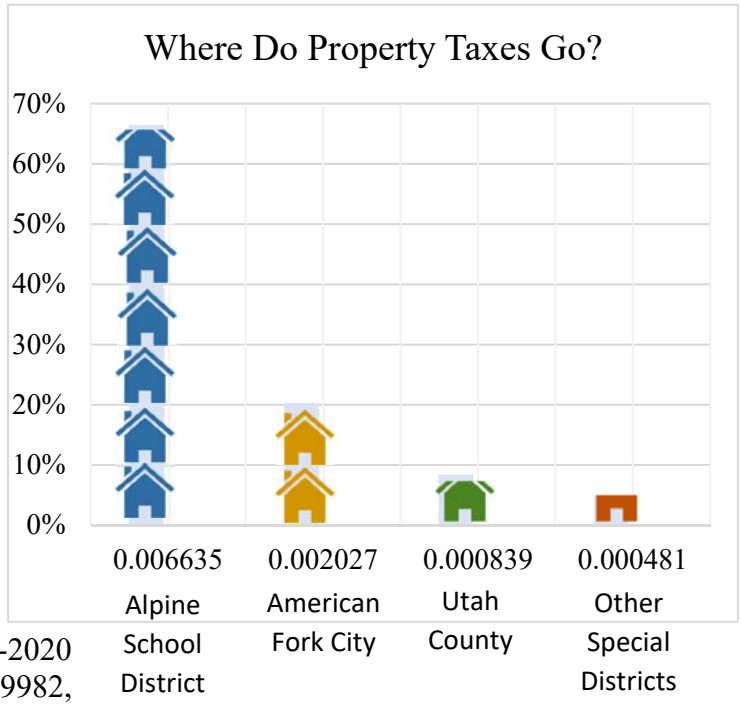
Authorized Uses – unrestricted General Fund, Capital Projects, and Debt Service

Method Received – Distributed by Utah County Treasurer on a monthly basis. A final reconciliation for the prior year occurs each March.

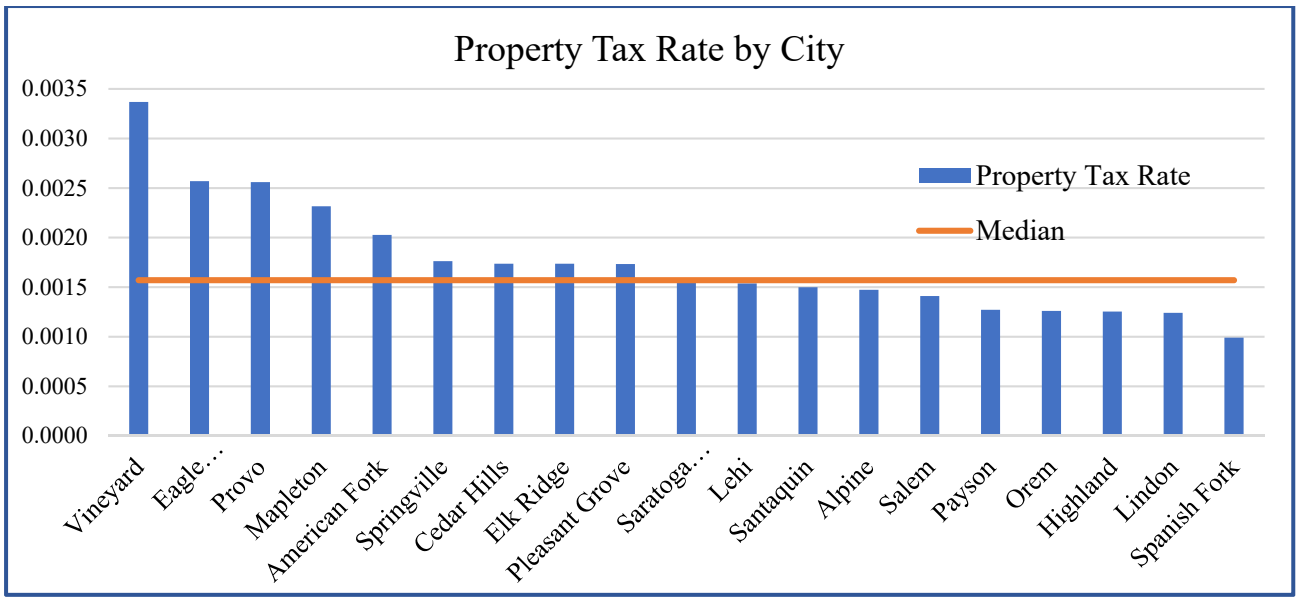
Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

previous year plus any new growth. The certified tax rate does not provide for additional tax revenue due to increased valuation of existing property. If the City chooses to adopt a tax rate higher than the certified tax rate, state law has specific requirements for newspaper advertisements and public hearings from which the name "truth in taxation" is derived. The last time that American Fork adopted a rate higher than the certified rate was fiscal year 2006-2007. This increase was set aside for road improvement and repair, which is recorded in the capital projects fund. In addition, the City assesses a for debt service portion of property on General Obligation Bonds previously approved by voters. Although the total tax rate during the Fiscal Year 2019-2020 for American Fork property owners was .009982, only 20 percent or .002027 was received by American Fork City. The remaining allocations went to Alpine School District, Utah County, Central Utah Water Conservation District, and other districts.




For fiscal year 2020-2021, the City is proposing to accept the Certified Tax Rate of .001906. However, due to increasing costs of providing services and the need to address crucial core services deficiencies, the City may need to increase tax revenue in the future. The following chart shows the City's base property tax rate relative to other Utah County cities for 2019.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## SALES TAX

Sales tax in Utah County is a consumption tax imposed on the sale of goods and services purchased at the retail level. The tax is collected and remitted by businesses/retailers on a regular basis. Sales tax is the largest revenue source for the City, compromising approximately 31 percent of general fund revenues. Sales tax revenues are forecasted utilizing existing collection trends, state budget forecasts, economic forecasts, and other economic data which may influence the level of sales tax within the City.

**Sales Tax Summary**

Current Tax Rate (2020-2021) – 7.25%; see distribution table below

Authorized Uses – unrestricted General Fund, Capital Projects (transportation Infrastructure portion), and PARC Fund

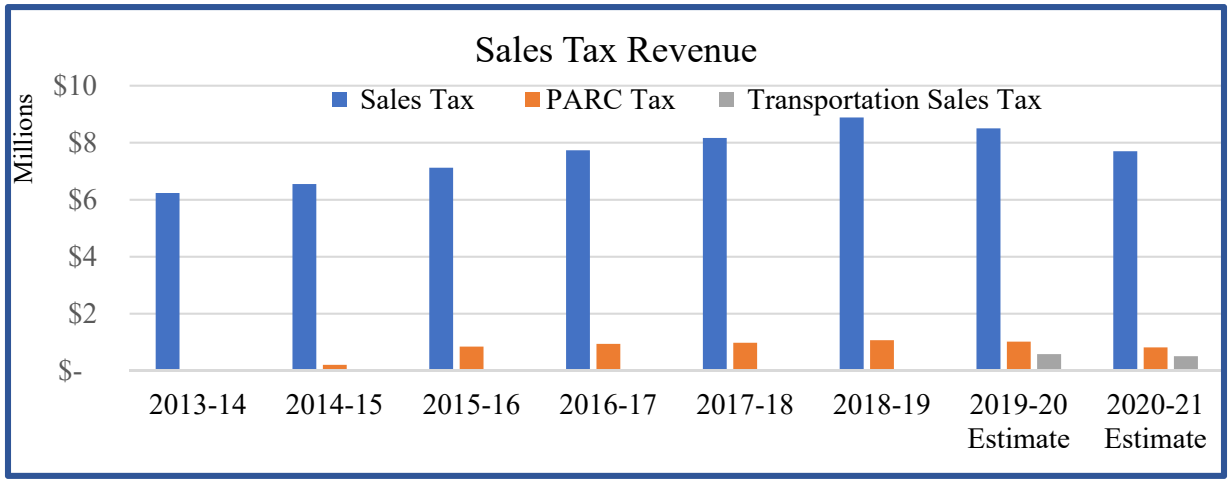
Method Received – collected and distributed by the Utah State Tax Commission on a monthly basis. Distribution is two months after collection at point of sale.

On December 18, 2019, the Utah County Commission voted to implement a quarter cent sales tax increase to fund roads and transit. On July 1, 2019, and afterward, 20 percent of this revenue will go to Utah County, 40 percent will go to American Fork City, and 40 percent will go to the Utah Transit Authority (UTA). This additional sales tax allocation will be recorded in the Capital Projects Fund to be used for the City's Pavement Management Program.

| *Sales Tax Allocation* | *Rate* |
|---|---|
| *State of Utah* | 4.85% |
| *American Fork City** | 1.00% |
| *Mass Transit* | 0.55% |
| *Utah County* | 0.25% |
| *County Airport, Highway, Mass Transit* | 0.25% |
| *Transportation Infrastructure*** | 0.25% |
| *PARC (Parks, Arts, Recreation, Culture)* | 0.10% |
| *Total* | 7.25% |

** Of location option tax collected (1.00%), 50% is distributed to the City. The remaining 50% is collected in a statewide pool and then allocated to each local jurisdiction based on each City's population as a percentage of statewide population.*

***20% distributed to Utah County, 40% to American Fork City, and 40% to UTA beginning July 1, 2020. To be used for transportation projects.*




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## FRANCHISE TAX

Franchise fees are levied on utilities that operate within the City's geographical boundaries as outlined in state statute. Three types of utility franchise taxes are collected in American Fork City.

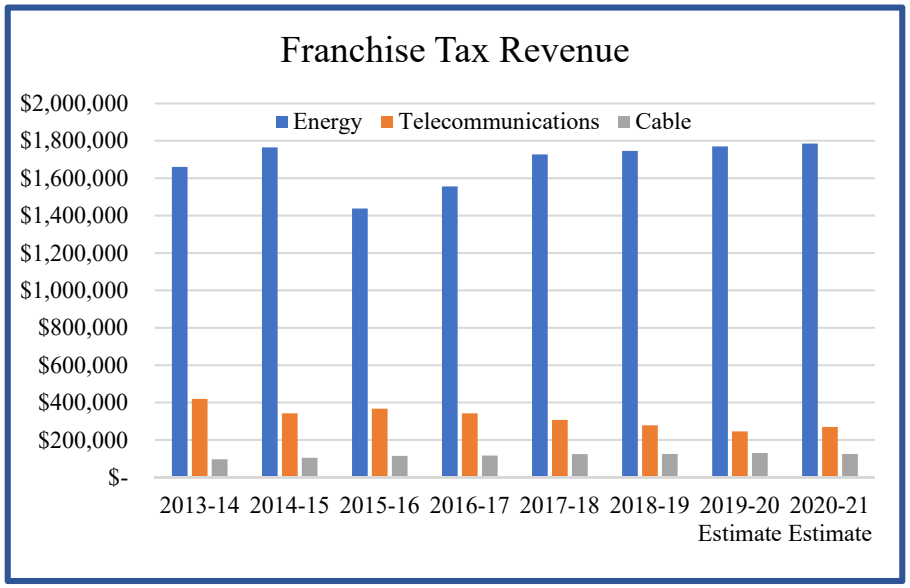
**Franchise Tax Summary**

Current Tax Rate (2020-2021):
Energy – 6%
Telecommunications – 3.5%
Cable TV – 5%

Authorized Uses – unrestricted General Fund

Method Received – Electric and Cable franchise tax is collected and distributed by the utility provider on a monthly and quarterly basis, respectively. Telecommunications franchise tax is distributed by the Utah State Tax Commission

- **Energy Sales & Use Tax** - levied on electric and gas utilities and has a maximum allowable rate of 6%. The electric and natural gas utilities tax is remitted to the City by Dominion Energy (formerly Questar Gas) and Pacificorp (parent company of Rocky Mountain Power) on a monthly basis.
- **Telecommunication Tax** - business providing telecommunication services is required to have a Telecommunication Franchise Agreement with the City. These agreements ensure the collection of the tax equal to 3.5% of revenue earned from land line and cellular services in American Fork goes to the City. The long-term trend is declining revenues due to lower-priced cell phone plans and residents discontinuing their landline phones. The telecommunications license tax is distributed to the City by the Utah State Tax Commission on a monthly basis.
- **Cable Television Tax** - Any entity in American Fork City providing cable television services is subject to this tax. As of fiscal year 2020-2021, the only entity providing this service is Comcast (also known as Xfinity). As of fiscal year 2019-2020, the current rate is 5%. Revenue is projected to decrease in fiscal year 202-2021 due to "cord cutting," a phenomenon where customers replace cable television with streaming or internet video services (which are not subject to the cable TV tax). Comcast (Xfinity) collects and remits the 5% fee to the City on a quarterly basis.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## LICENSES AND PERMITS

**Licenses and Permits Summary**

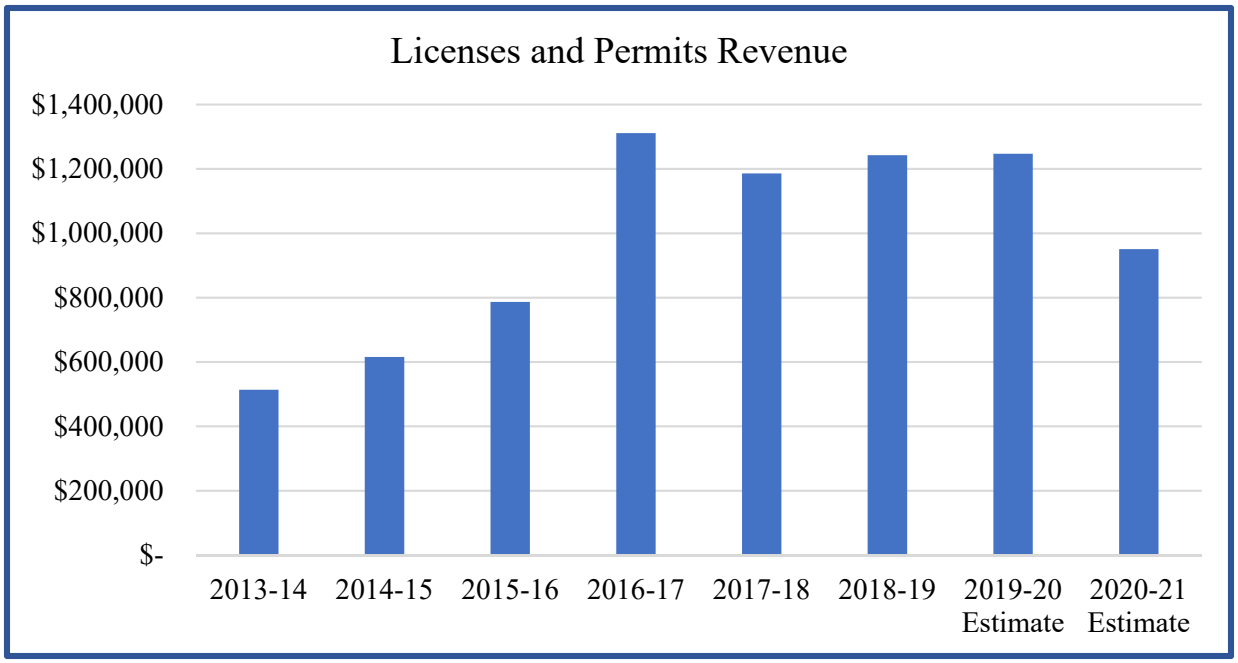
Current Rate (2020-2021):
Rates are set in a separate fee schedule available on the City's website or at City offices.

Authorized Uses – unrestricted General Fund

Method Received – License and permit fees are collected by the City as permits are applied for and services are received.

Licenses and permits are fees collected to provide the respective service. Permits are collected for several items, including building permits, sign permits, burn permits, landlord permits, and special events. License fees are collected for dog licenses (passed through to the North Utah Valley Animal Services Special Service District), and alarm licenses. Rates are set in a separate fee schedule available on the City's website or at City offices.

American Fork continues to see increased interest in developing within the City. In addition, the City is expecting rapid growth of the southwest portion of the City in upcoming years. Business license fees were decreased during fiscal year 2017-2018, which led to a 40% decrease in business license fee revenue. Much of this change was due to legislative changes made at the state level. Due to COVID-19 pandemic, development is expected to be affected negatively with an estimated 36% decrease in revenue.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## CHARGES FOR SERVICES

The City collects a variety of fees for services rendered. Examples of these include: Cemetery fees, ambulance fees, leases, Cedar Hills police and fire contract, and a variety of development services fees. In addition, an administrative charge is charged to various departments to compensate for services provided by other funds. For example, accounting and payroll is paid out of the General Fund, but its services are used by multiple funds.

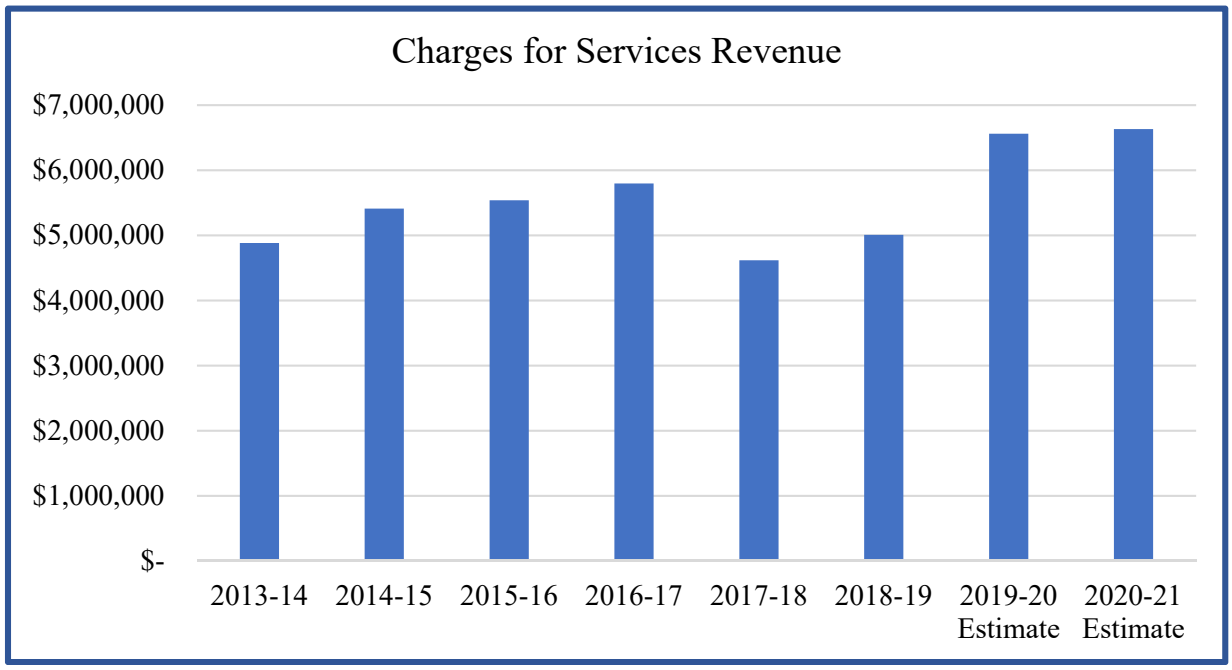
The City expects to see a significant increase between fiscal years 2019 and 2020 due to the City of Cedar Hills fire contract beginning July 2019 and increased ambulance billing revenue. Both revenue increases are already dedicated to providing fire service to Cedar Hills City and increasing ambulance transport personnel. During fiscal year 2020-2021 there are several flat or declining revenue sources. The City is expecting a decrease in recreation fees based impacts of COVID-19 pandemic as well as an anticipated decrease in development. The dramatic decrease in charges for services revenue between fiscal year 2017 and fiscal year 2018 is due to sanitation, recycling, and utility late fee revenue being moved to an enterprise fund.

### Charges for Services Summary

Current Rate (2020-2021):
Rates are set in a separate fee schedule available on the City's website or at City offices.

Authorized Uses – unrestricted General Fund

Method Received – Charges for services are collected by the City as permits are applied for or services are rendered. The City's ambulance billing contractor employs the use of a collection agency on past due billings.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## CLASS C ROAD ALLOTMENT

The Class B and C road system funding program was established by the Utah legislature in 1937 as a means of providing assistance to cities and counties for the improvement of roads and streets throughout the state. This program is funded through 30% of the state highway user taxes and fees. Funds are distributed 50% based on population and 50% on weighted road miles. Revenues are estimated based on historical trends and guidance provided by UDOT (Utah Department of Transportation) and MAG (Mountainland Association of Governments). The City's Public Works division sends updated road miles to UDOT yearly.

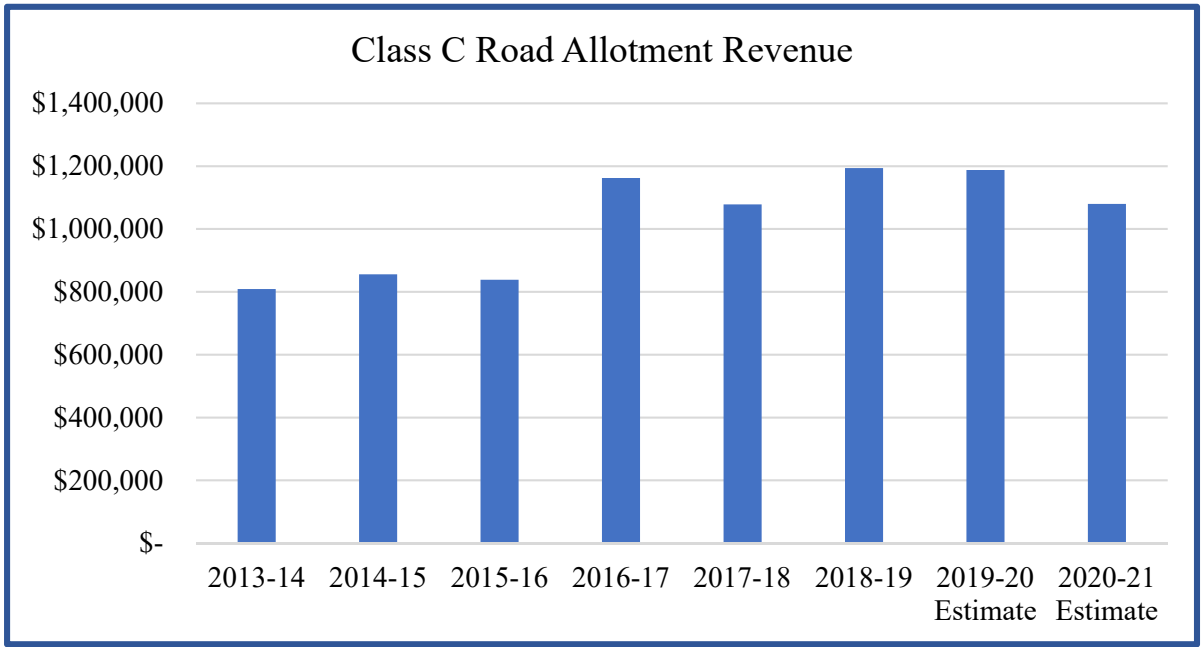
### Class C Road Allotment Summary

Current Rate (2020-2021):
Funds are distributed 50% based on population and 50% on weighted road miles.

Authorized Uses – restricted road maintenance and improvements

Method Received – Utah Department of Transportation (UDOT) makes a bi-monthly distribution.

Prior to fiscal year 2018-2019, revenue was recorded in the general fund and was used for street maintenance. To mirror the Pavement Management Plan presented in FY 2017-2018, Class C Road Funds are now allocated to the Pavement Management Plan in the Capital Projects Fund. With this change, however, other revenue sources must be used to fund street maintenance and repair expenditures in the general fund. Because the revenue allocation is based partially on weighted road miles, revenues are anticipated to decrease in fiscal year 2020-2021 due to the COVID-19 pandemic travel restrictions.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## FITNESS CENTER FEES

The Fitness Center Fund accounts for the activities of the City's fitness center. Fitness center revenue is projected using a number of methodologies, including trend analysis, current fee schedule rates, class participation, and available programming space. Most of the center's revenue comes from user charges.

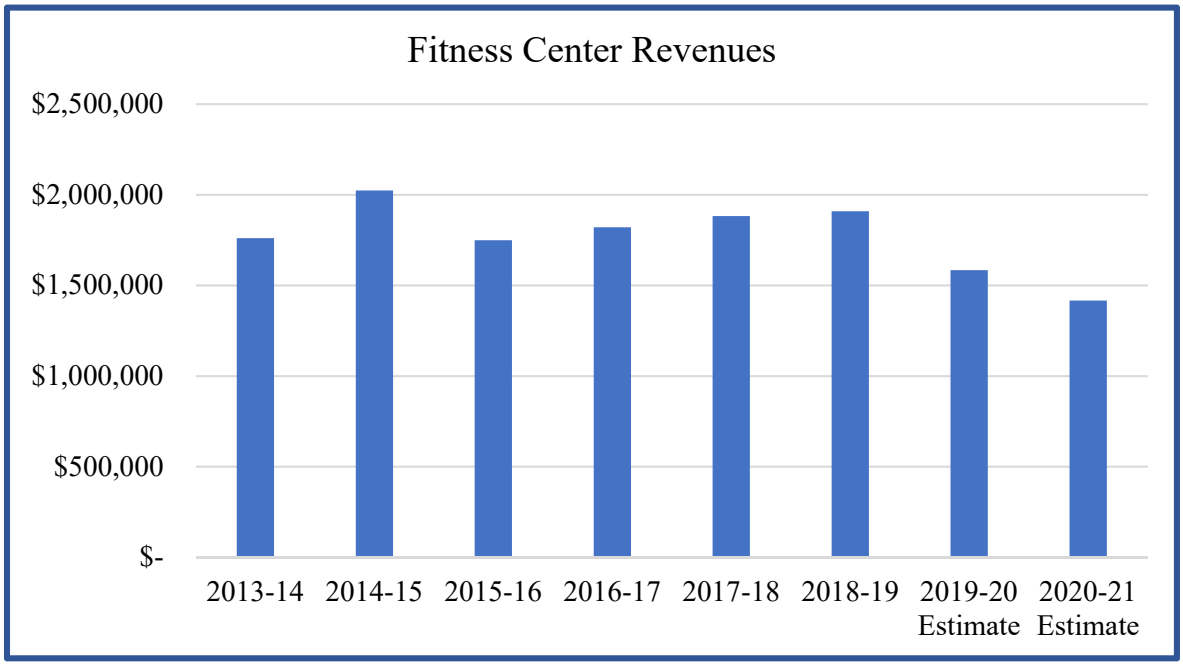
For fiscal year 2020-2021, approximately 34% of the center's operating expenditures are subsidized by the general fund (subsidy not included below), up from 25% in previous years. The center's general fund subsidy has been increasing faster than fitness center revenues. The City will need to address this in the upcoming years. The large increase in FY2015 revenue is due to an insurance payment received for damage. The fiscal years 2019-2020 and 2020-2021 estimated revenues are down due facility closures as a result of the COVID - 19 restrictions.

### Fitness Center Revenue Summary

Current Fees (2020-2021):
Fees are set in a separate fee schedule available on the City's website or at City offices.

Authorized Uses – All collected funds are used to operate the fitness center.

Method Received – The majority of the center's revenue comes from user charges for programming and use of the facility.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## CULINARY WATER AND SECONDARY IRRIGATION RATES

The Culinary Water Fund accounts for the culinary water distribution system of the City and the Secondary Irrigation Fund accounts for the secondary irrigation distribution system of the City. Both the water and irrigation revenues are projected using several methodologies, including trend analysis, connection estimates (tied with new building permits), water rate studies, and weather forecasts. Predicted rate increases are also factored into future estimates.

### Water Rates Summary

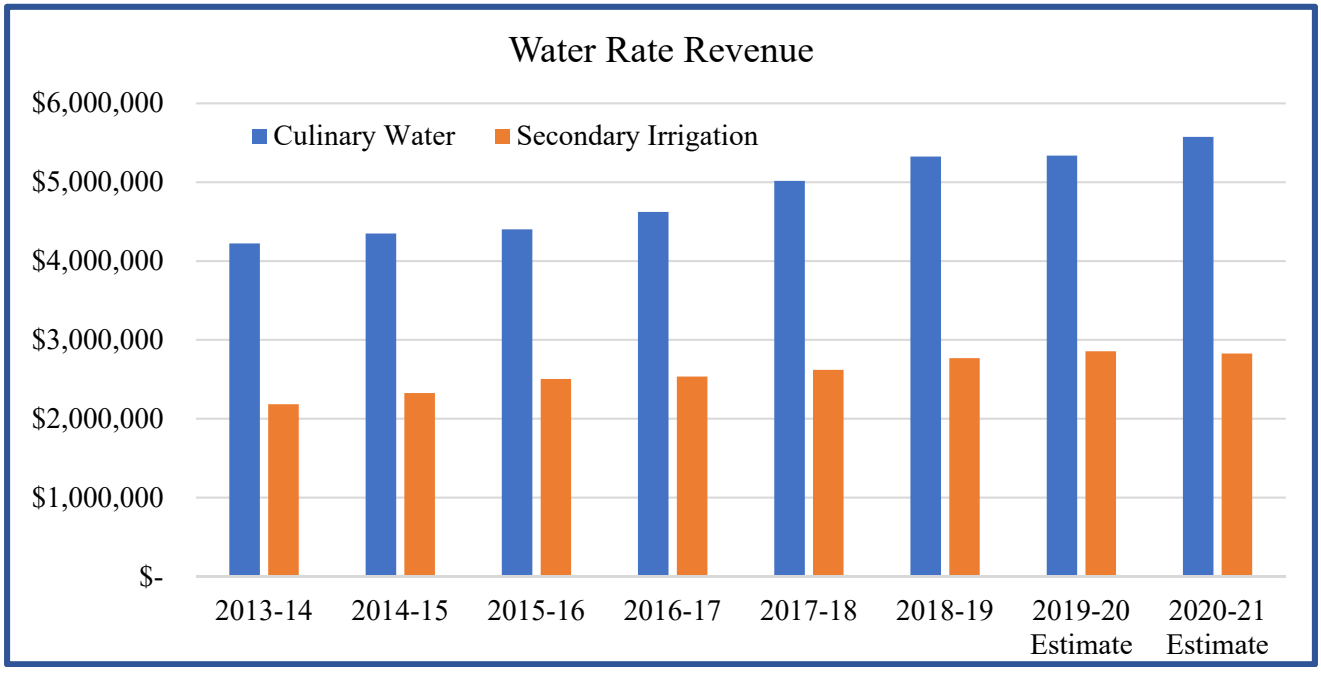
Current Rate (2020-2021) – Rates are set in a separate fee schedule available on the City's website or at City offices.

Authorized Uses – All collected funds are restricted to use within the Culinary Water Fund and Secondary Irrigation Fund, respectively.

Method Received – Water users receive monthly utility billing statements from the City. Meters are currently read quarterly.

The City is seeing small year over year increases due to population growth. Water users receive monthly utility billing statements from the City and meters are currently read quarterly. All collected funds are restricted to use within their respective funds.

A rate study was performed in fiscal year 2018-2019 that resulted in the adoption of water rate increases on May 8, 2019. Resolution 2018-05-16R incorporated biannual rate increases every other year for base rates and user rates through fiscal year 2022-2023.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## SEWER AND STORM DRAIN RATES

The Sewer Fund accounts for the sewage collection systems of the City for its residents. The Storm Drain Fund accounts for the maintenance, cleaning, inspection, and construction of storm drain infrastructure within the City. Rates are set in a separate fee schedule available on the City's website, at City offices, or in this budget document.

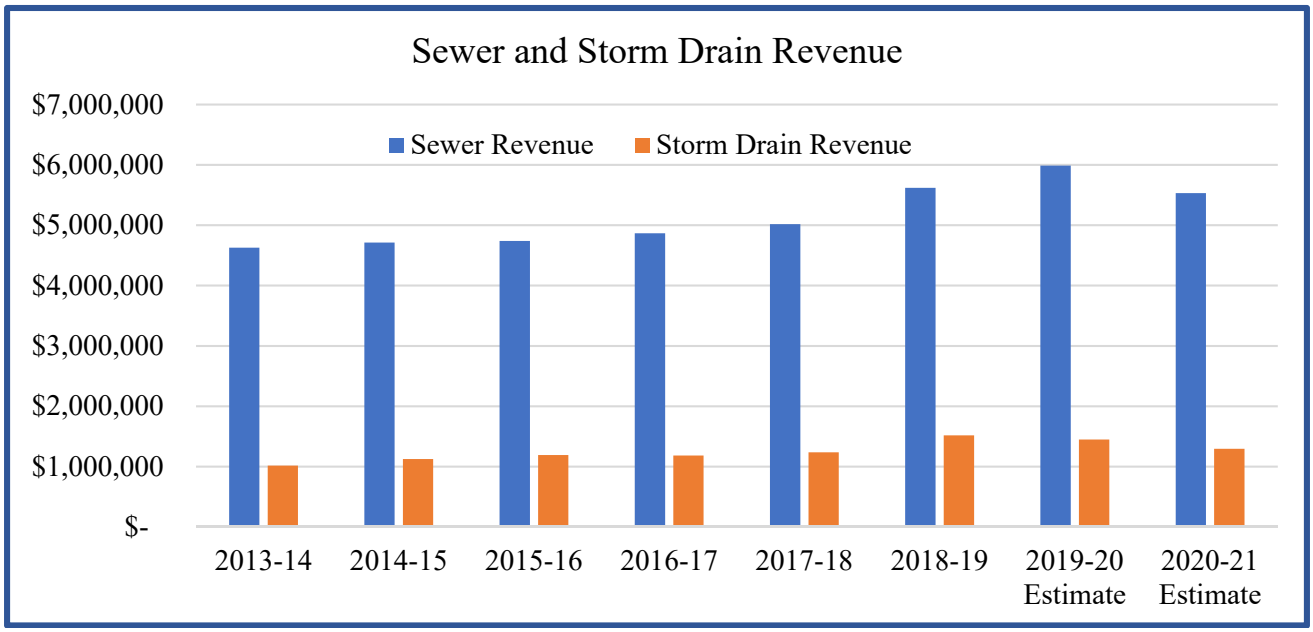
Sewer revenue is projected using several methodologies, including trend analysis, connection estimates (tied with new building permits), utility rate studies, and projected culinary water consumption. Approved rate increases are also factored into future estimates. Sewer users receive monthly utility billing statements from the City. The sewer rate charged to residents is adjusted yearly based on culinary water usage. All collected funds are restricted to use within the Sewer and Storm Drain funds, respectively.

### Sewer and Storm Drain Rates Summary

Current Rate (2020-2021) – Rates are set in a separate fee schedule available on the City's website or at City offices.

Authorized Uses – All collected funds are restricted to use within the Sewer Fund and Storm Drain Funds, respectively.

Method Received – Utility users receive monthly utility billing statements from the City.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## SANITATION AND RECYCLING RATES

The Sanitation and Recycling Fund accounts for the revenue and expenditures of providing sanitation and recycling services to the residents of the City and internal City departments. The City contracts with an outside provider (currently Republic Services) for these functions. Rates are set in a separate fee schedule available on the City's website, at City offices, or in this budget document.

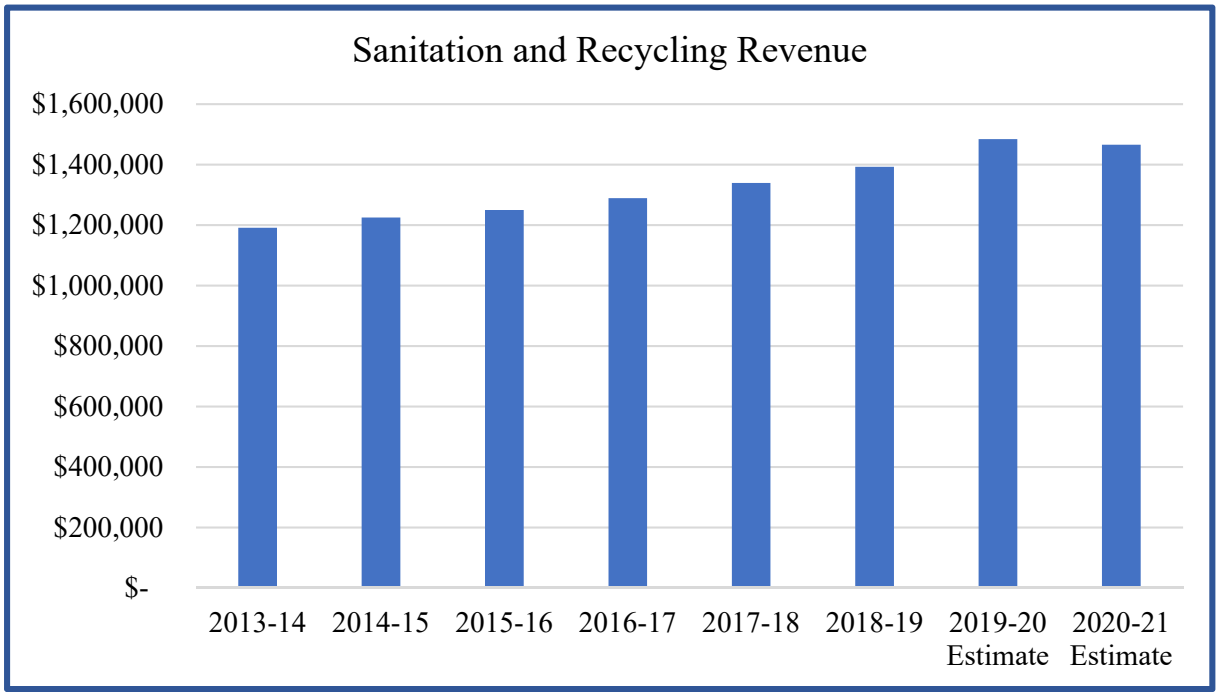
Sanitation and recycling fund revenue is projected using several methodologies, including trend analysis, new accounts, and rates charged by the City's outside providers. Predicted rate increases from external providers are also factored into future estimates. Sanitation and recycling users receive monthly utility billing statements from the City. All collected funds are restricted to use within the Sanitation and Recycling fund.

### Sanitation and Recycling Revenue Summary

Current Rate (2020-2021) – Rates are set in a separate fee schedule available on the City's website or at City offices.

Authorized Uses – All collected funds are restricted to use within Sanitation Fund, respectively.

Method Received – Utility users receive monthly utility billing statements from the City.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Revenue Overview

## TAX INCREMENT REVENUE

Tax increment is a property tax collected as a result of increased valuation within a redevelopment area. The City has several redevelopment areas as follows:

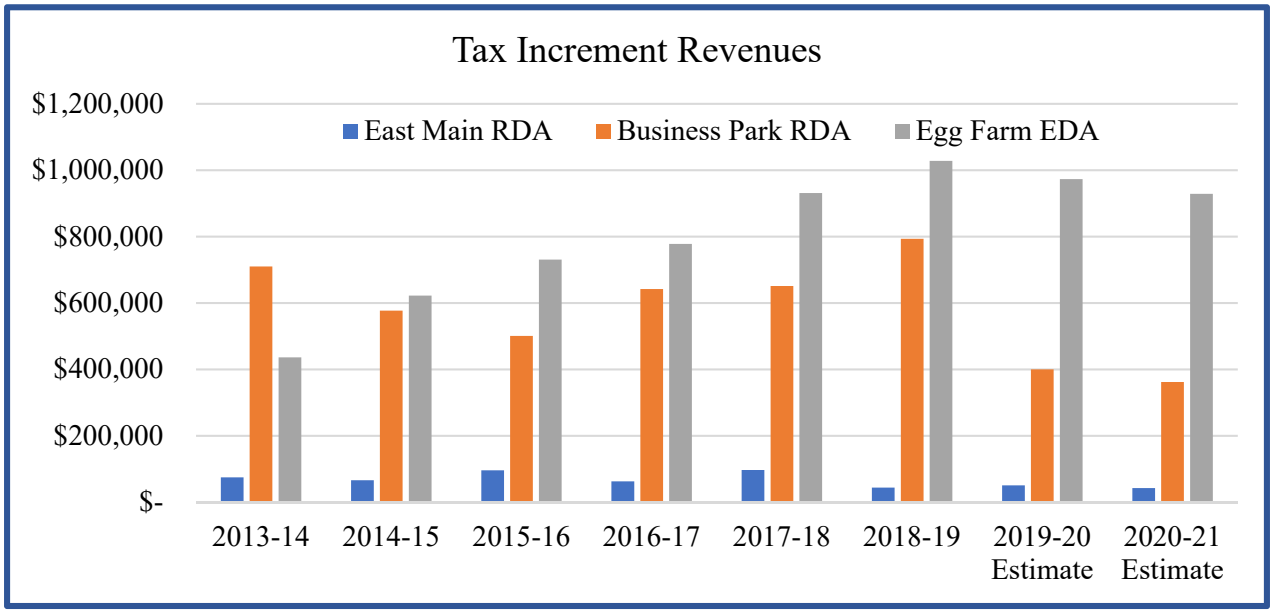
- The East Side RDA fund accounts for activities of the East Main RDA Project Area created in 1992 (triggered in 1994). The City received its last tax increment distribution in fiscal year 2018. The City will continue to receive tax increment "haircut" monies through FY2024. All collected funds are used for activities within the East Main RDA project area.
- The Business Park RDA fund accounts for activities of the North Valley RDA Project Area created in 1987 (triggered in 1995). The City will receive its last tax increment distribution in fiscal year 2019. The City will continue to receive tax increment "haircut" monies through FY2024. All collected funds are used for activities within the North Valley RDA project area.
- The Egg Farm EDA fund accounts for activities of the Egg Farm EDA Project Area created in 2001 (triggered in 2005). The City will receive its last tax increment distribution in fiscal year 2028, or sooner if the maximum cap is reached. The City is required to distribute 20% of tax increment received to affordable housing projects. All collected funds are used for activities within the Egg Farm EDA project area.

### Tax Increment Revenue Summary

Current Tax Rate (2020-2021) – Revenue is dependent on the incremental property valuation determined at the adoption of the various project areas.

Authorized Uses – All collected funds are used for activities within their respective project areas.

Method Received – Utah County collects and distributes tax increment and haircut monies on a yearly basis.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

## FUND BALANCE AND RESERVES

General Fund
(Adopted May 28, 2019)

**Purpose**

This policy, adopted May 28, 2019, strives to ensure the City maintains adequate fund balances and reserves in the General Fund in order to:

- Provide sufficient cash flow for daily financial needs.
- Secure and maintain investment grade bond ratings.
- Offset significant economic downturns or revenue shortfalls.
- Provide funds for unforeseen expenditures related to emergencies.

For purposes of this Policy, the definition of "reserves" is limited to committed, assigned, and unassigned fund balance categories as defined by Generally Accepted Accounting Principles (GAAP).

**Amounts Held in Reserve**

The City will strive to maintain a minimum level of reserves in the General Fund equivalent to 2 months of regular operating revenues and a maximum reserve as allowed by state law (currently 25% of revenues, excluding other financing sources). This amount will be calculated by taking the General Fund revenues for the year (excluding other financing sources) and dividing by 6. Under no circumstances will fund balance be lower or higher than allowed by state law (currently 5% minimum and 25% maximum). The amount in reserves will be calculated by adding the fiscal year ending committed, assigned, and unassigned fund balances less fund balance appropriated in the subsequent fiscal year.

The City will seek to achieve recommended minimum and maximum fund balances by increasing fund balance 10% a year until the 25% maximum is reached. Fund balance will be increased in years when revenues will exceed expenditures, or when the City has excess one-time revenues. In the case of revenues exceeding expenditures in excess of the 10% contribution, or if the City is at the 25% maximum, the difference will be transferred to the Capital Projects fund for future City Council appropriation.

In the event reserves are used resulting in a balance below the 2-month minimum, a plan for replenishment will be developed and included in the five-year financial forecast presented during the annual budget process.

**Conditions for Use of Reserves**

The use of reserves shall be limited to unanticipated, non-recurring needs, or anticipated future obligations. Fund balances shall not be used for normal or recurring annual operating expenditures. The City Administrator is authorized to make recommendations to the City Council for use of reserves. A majority vote of the City Council will be required to use reserves. Any recommendation shall be accompanied by a proposal for the replacement of reserves to the City Council.

**Proprietary (Enterprise and Internal Service) Funds**

The state of Utah does not impose limits on the accumulation of fund balances in proprietary (enterprise or internal service funds) or special revenue funds. The City defines fund balance for proprietary funds

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

as current assets minus current liabilities. The City strives to maintain a target reserve of 20 percent of revenues for the City's enterprise funds. Internal service funds are designed to function on a cost-reimbursement basis and should not accumulate significant reserves. Reserves will be accumulated, however, for the purchase and replacement of capital assets.

**Debt Service Funds**

Debt service reserve funds are established to protect bondholders from payment defaults. Adequate debt reserves are essential in maintaining good bond ratings and the marketability of bonds. The amount of debt reserves is established by bond ordinance for each fund in association with each bond issuance. At times, it may be desirable to use bond insurance rather than debt reserves. This is generally based on the recommendation from the City's financial advisor.

## DEBT MANAGEMENT

State statutes limit the amount of General Obligation debt the City may issue for general purposes to 4 percent of the fair market value of the taxable property within the City's general jurisdiction. An additional 8 percent of indebtedness may be issued for water or sewer projects when such utilities are owned or controlled by the City. The City's revenue debt levels are to be limited by debt service coverage ratios (e.g., annual net pledged revenues to annual debt service) or credit rating impacts (e.g., additional bonds should not lower ratings) contained in bond covenants.



Tibble Fork Reservoir
American Fork Canyon

The City will not issue debt obligations or use debt proceeds to finance current operations. The issuance of long-term debt should only be considered when current revenues cannot be used to finance the project, or are not sufficient, or in cases where it is more equitable to finance the project over its useful life. The payback period of the debt should never exceed the estimated useful life of the capital project. An analysis of the effect of the issuance on the City's debt ratio, as well as the impact on the City's ability to finance future projects, should be prepared prior to the issuance of debt. In addition, the identification of a revenue source to cover debt service payments will be required.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

Principal and interest on all outstanding debt will be paid in full and in a timely manner. The payment of debt will be secured by the full faith, credit, and taxing power of the City in the case of General Obligation bonds, and the pledge of specified, limited revenues in the case of revenue bonds. Debt service payments should be analyzed and structured to meet the City's financing objectives for each project. In general, bonds should be structured for level payments over the useful life of the issue unless anticipated revenues dictate otherwise, or if the useful life of the financial project(s) suggest a different maturity schedule.

**Refunding**

Whenever feasible, short or long-term borrowing should be utilized to take advantage of opportunities to restructure or refund current debt when possible. In general:

1. The City will refund debt when it is in the best financial interest of the City to do so, and the Finance Director will have the responsibility of analyzing outstanding bond issues for refunding opportunities. The decision to refinance must be explicitly approved by the City Council, and all plans for refunding of debt must be in compliance with state laws and regulations.

2. The Finance Director will consider the following issues when analyzing possible refunding opportunities:
   - Onerous Restrictions—Debt may be refinanced to eliminate onerous or restrictive covenants contained in existing debt documents, or to take advantage of changing financial conditions or interest rates.
   - Restructuring for Economic Purposes—The City will refund debt when it is in the best financial interest of the City to do so. Such refunding may include restructuring to meet unanticipated revenue expectations, achieve cost savings, mitigate irregular debt service payments, or to release reserve funds. Current refunding opportunities may be considered by the Finance Director if the refunding generates positive present value savings, and the Finance Director must establish minimum present value savings and negative arbitrage thresholds for any financing. Currently, the Finance Director has set a minimum Net Present Value (NPV) savings threshold of 3 percent (net of any applicable negative arbitrage).
   - Term of Refunding Issues—The City will refund bonds within the term of the originally issued debt. However, the Finance Director may consider a maturity extension, when necessary, to achieve a desired outcome, provided such extension is legally permissible. The Finance Director may also consider shortening the term of the originally issued debt to realize greater savings. The remaining useful life of the financed facility and the concept of inter-generational equity should guide this decision.
   - Escrow Structuring—The City will refund bonds within the term of the originally issued debt. However, the Finance Director may consider maturity extension, when necessary, to achieve a desired outcome.

**Conduit Debt**

Conduit debt will be limited on a transaction basis as approved by the City. Approval of conduit debt issuance will be based on the borrower's creditworthiness, the purpose of the borrowing issue, borrower's credit rating, size of proposed issuance, and other limitations as imposed by the City. Under no circumstances will the City pledge any City revenues, credit, assets, etc., towards conduit debt. Debt

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

service on conduit debt will be solely the responsibility of the borrower. The City will charge the borrower a reasonable fee for any conduit issuance plus additional fees based on the work associated with the conduit issuance.

## GRANTS

A grant is an award of financial assistance in the form of money or property by a funding source including the Federal Government, State Government, other local governments, non-profit agencies, and private businesses and citizens. The City will seek grant funding whenever possible and feasible. The City program, department, or division desiring to submit a grant application soliciting funds will prepare a request as outlined by the grantor's requirements. The department head or designee should sign the grant application as approval that funds are available and that they are supportive of the fiscal impacts to the department. The department applying for the grant should make every effort to project all initial and ongoing costs associated with the grant program, including but not limited to staff support, needed assistance for computer systems, office space, utilities, systems furniture, vehicles, office equipment, office supplies, computer software, and hardware/telephone charges.




Prior to submission, all grant applications with a monetary impact will be reviewed by the Finance Director to identify potential budgetary, cash flow, procurement, financial reporting, or compliance requirements. The Finance Director will obtain the City Administrator's approval and notify the City department that the application has been approved. Under no circumstances will a grant be accepted that will incur management reporting costs greater than the grant amount.

Awarded grants will be submitted to the Finance Department for inclusion in the City's budget. The grant award letter/acceptance agreement (notification received detailing the amount of the grant awarded, grant assurances and special conditions, and guidelines that must be followed to comply with the grant requirements) will be forwarded to the Finance Department, who will review the grant award for reporting requirements, special conditions, and deadlines related to administering the grant.

City departments should notify the Finance Department if:

1. There is a subsequent alteration in the funding configuration.
2. There is a subsequent alteration in the City's financial obligations.
3. Grant funds will be carried forward into the next year.
4. There is notification that the grant will be terminated.

All grant expenses must comply with the terms set forth in the grant application, grant award letter, and City procurement policies (if not outlined in the grant award). Documentation for all expenditures must be retained by the department for audit purposes. The Finance Department, with the assistance of City departments, will maintain a list of all federal and state awards received and expended, along with the

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

Catalog of Federal Domestic Assistance (CFDA) title and number, award number, award, year, name of federal agency, and name of pass-through agency (if applicable).

Departments are responsible for ensuring that all funds are expended or encumbered prior to the end of the grant period for funds to be used adequately and not lost in future award periods. Each department is responsible to apply for grant extensions, if necessary. Departments are also responsible for monitoring the financial status of their grants. Departments must also monitor grants for compliance with all applicable federal, state, and local regulations, and ensure that grant expenditures are in compliance with grant procurement policies and procedures. The requesting department is responsible for providing financial reports to grantors. If it is determined that the report preparation is to be handled by the Finance department, this must be indicated to the Finance Director during the initial grant application review.

## AUDITING AND FINANCIAL REPORTING

**Accounting Practices**

The City's accounting and financial reporting systems will be maintained in accordance with Generally Accepted Accounting Principles (GAAP), standards of the Governmental Accounting Standards Board (GASB), and the Government Finance Officers Association (GFOA).

The government-wide, proprietary, and fiduciary fund financial statements (if using) will be prepared using the economic resources measurement focus and accrual basis of accounting. Governmental fund financial statements will be reported using the current financial resources measurement focus and modified accrual basis of accounting.

In general, the City is able to collect most of its receivables, the majority relating to taxes and utility billing. The City will record an allowance for uncollectible accounts in the General Fund for ambulance billing and development fees billed, in the Enterprise Funds for utility billing, and the Broadband Fund for leased fiber lines.

For inventory, the City will use a "first in, first out" (FIFO) basis.

The Finance Director, under the direction of the City Administrator, will have the authority to make procedural decisions with respect to specific accounting treatments, such as interpretation of accounting principles, design of the general ledger and chart of accounts, and similar items. However, in certain special or unique situations, review by the City Council may be necessary. The City Council will be made known of any issue that:

1. Creates controversy among those responsible for audit oversight, or between said individuals and the external auditors.
2. Is or will be material to the financial statements.
3. Involves significant uncertainty or volatility that could materially affect an estimate.
4. Is or will be a matter of public interest or exposure.
5. Must be reported to an external body, and those responsible for audit oversight are unclear or undecided on its presentation.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

6. Relates to the application of a standard in a way that is not consistent with general practice or in a way that is different from how it has been applied in previous years.
7. Relates to key controls over financial information that are being designed or redesigned, or have failed or are otherwise being addressed by the City.

**Financial Reporting**

The Comprehensive Annual Financial Report (CAFR) will include the General Fund, all special revenue, debt service, capital project, permanent, proprietary, fiduciary funds (if using), and component units, which the City is required to report under GAAP. The report will be made for general public as soon as possible.


American Fork Pool

It is the City's policy that all external financial reporting be in conformance with GAAP. As an additional independent confirmation of the quality of the City's financial reporting, the City will seek to obtain the Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting. The City will upload revenue and expense transaction data to the Utah Public Finance website monthly. Employee compensation data will be uploaded to the Utah Public Finance website yearly, or as prescribed by state law and the Utah State Auditor's Office. As an additional independent confirmation of the quality of the City's budget document, the City will annually seek to obtain the GFOA Distinguished Budget Presentation Award. The budget will satisfy criteria as a financial and programmatic policy document, a comprehensive financial plan, an operations guide for all organizational units, and a communication device. The Adopted Budget will be posted online and in compliance with State statutes. The City will follow all state statutes regarding financial reporting.

The Finance Director, under direction of the City Administrator, will prepare financial reports for the Mayor and City Council in a format consistent with the annual adopted budget monthly. Such reports will enable the City Council to be constantly informed of the financial status of the City. The City Administrator and Department heads will also be issued monthly reports. Upon issuance of the financial reports, the previous month will be closed in the accounting system to prevent back-dated transactions that could materially change the issued reports.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

The CAFR will be audited annually by a Certified Public Accounting firm. The annual audit encompasses areas of financial reporting, internal control, federal grants, and departmental audits.

**Audit Oversight**

As required by Utah State Code, an independent audit of the City's financial condition and procedures shall be obtained by means of a third-party independent certified audit firm. The Finance Director shall be the primary contact with the independent auditors, and is in charge of arranging audit schedules and managing requirements of the annual audit.

The Finance Director will bring important issues identified during, or related to, the audit to the Mayor, City Council, and City Administrator as necessary. The City will request proposals for audit services from qualified independent Certified Public Accounting Firms a minimum of every five (5) years through a

Request for Proposal (RFP) process. In accordance with the Government Finance Officers Association (GFOA) best practice guidelines, the current auditors can be included in the RFP process.
While price is an important part of the selection process, the principal factor in the selection of an independent auditor is the auditor's ability to perform a quality audit.

In addition, general oversight will be conducted by the Mayor, City Administrator, and Finance Director. At the Mayor's discretion, an Audit Committee may be formed and duly appointed. The audit committee, if constituted, shall provide oversight of the financial reporting process, the audit process, the system of internal controls and general compliance with laws and regulations.

## INTERNAL CONTROL

**Overall Objective**

The City's system of internal controls should be able to provide reasonable, but not absolute, assurance that the following objectives have been met:

1. Reliable reporting of financial transactions.
2. Effective and efficient City operations.
3. Compliance with applicable laws, regulations, contracts, and grant agreements.

**Control Environment**

The control environment is the foundation for all other components of internal control, providing discipline and structure. Management establishes the "tone at the top" regarding the importance of internal control and expected standards of conduct, and reinforces expectations at various levels. Control environment factors include the integrity, ethical values, and competence of the City's personnel; the way management assigns authority, responsibility, and organizes and develops its personnel; and the attention and direction provided by the Mayor and City Council.

The legislative body has adopted a personnel policies and procedures manual, prepared by the City Administrator, that details policies, expectations, and other employment-related topics. This manual is to be reviewed annually to determine needed revisions to comply with state and federal laws, as well as

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

practices of the City. Each employee receives a copy of the personnel manual, which includes a policy on business ethics and conduct, and signs an acknowledgement of receipt. The City will hold a minimum of one training a year where human resource topics are covered.

Management has developed job descriptions for each position and reviews employee compliance on a semi-annual basis (at a minimum) through performance evaluations. Each Department Head will review applicable job descriptions annually to ensure accuracy and completeness.

The City Administrator prepares an annual budget with input from Department Heads, using historical data from the three previous years. The City Administrator, with input from the Department Heads, will also prepare an annual capital budget. A proposed budget is presented to the Mayor and City Council during at least one budget workshop. The City Administrator, Finance Director, and Department Heads are present to explain their budgets. Finally, organizational charts reviewed periodically as job descriptions and positions are added or changed to determine if the reporting structure, authority, and responsibility documented is still accurate.

## RISK ASSESSMENT

City officials and management assess the risk of operations continually. The City has chosen to transfer the most common types of risk, such as property, casualty, liability, errors, omissions, worker's compensation, and surety bonds, through the purchase of insurance.

The City faces a number of financial risks in normal operations, including the following:

- Collections could be lost or misappropriated.
- Collections could be recorded improperly.
- Collections may not be deposited in the bank and recorded timely.
- Disbursements could be unauthorized.
- Disbursements could be made for personal items.
- Disbursements could be made for items never received.
- Bank balances may be inaccurate due to a failure to reconcile bank accounts.
- Capital assets or inventory items could be missing.
- Inventory is not available when needed.
- Grant funds could be spent for unallowable items.
- Grant rules may not be followed which could result in having to return funds.
- Reporting requirements are not met.




## CONTROL ACTIVITIES

Control activities are objectives, policies, and implemented procedures designed to address significant areas identified in the Risk Assessment section.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

**Collections/ACH**

The City has implemented a number of policies regarding collections and ACH:

1. All collections will be receipted in the appropriate fund and revenue code, and recorded in the general ledger daily.
2. A pre-numbered receipt will be issued for each collection made. Walk-in customers must be offered a receipt.
3. The cash drawer and night drop box (if applicable) will be reconciled daily by two personnel. One of the personnel must be independent of the collections process.
4. No checks will be cashed from the cash drawer.
5. All funds will be deposited within three business days or state statute, whichever is shorter.
6. The cash drawer will be locked when unattended and placed in a designated area after hours.
7. At no time will cash be unattended.
8. Employees are prohibited from comingling City assets with personal assets.
9. Chart of accounts coding will be reviewed by the Finance Director monthly as part of the month-end closing procedure.
10. Bank reconciliations will be performed monthly by the Finance Director or designee and completed no later than the 15th of the following month. If the reconciliation is performed by a person other than the Finance Director, the Finance Director will review and sign the bank reconciliation upon completion.
11. The Finance Director and City Treasurer will perform unscheduled cash counts to ensure no personal checks are in cash drawers and ensure the drawers are in balance.

**Disbursements/Drafts**

The City has a number of objectives related to the disbursement of City monies. These objectives include:

1. Ensuring each disbursement is for a valid City purpose and is necessary.
2. Disbursements occur in a timely manner.
3. Disbursements are accurately coded in the accounting system.
4. Disbursements are legally appropriated.

To achieve these objectives, the City follows a number of policies, including:

1. The City has adopted a purchasing policy that complies with state law.
2. Department heads (or designees) approve all department expenditures, excluding utilities. Department heads will be provided a copy of utility statements after payment.
3. Accounts Payable will prepare weekly check runs using backup documentation and present the runs to the Finance Director for review and approval. In addition, the City Treasurer and City Administrator will also approve the check runs.
4. All checks require two signatures—the City Administrator and City Treasurer.
5. Each check register will be submitted for review by the City Council.

**Safeguarding of Assets**

In order to ensure City assets are properly valued and protected, a number of policies and procedures have been implemented, including the following:

1. All bank account statements (checking savings, investment, trust, etc.) are reconciled to the general

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

ledger within 15 days of the date of the statement. Bank reconciling items will not be carried forward more than sixty (60) days.
2. All bank accounts are held in financial institutions under the City's name only and only authorized employees (two signatures required) are allowed to open new accounts. Under no circumstances should the Finance Director be a signer on any bank or investment account. The City Treasurer must be listed as a signer on all bank accounts.
3. All withdrawals, checks, liquidations, etc., from any bank account requires two signatures.
4. Inventory records will contain enough information to readily identify corresponding capital assets. Capital assets are tagged or otherwise identified during a physical inventory. Inventories are to be performed biennially and staggered (in other words, half of the City's assets should be inventoried one year and the remaining assets the next). Disposal of inventory or fixed assets are done according to City policy.
5. Insurance policies are reviewed annually for accuracy of covered assets.
6. Surety bonds are reviewed and renewed on an annual basis in accordance with state law.
7. Additionally, proper safeguards are in place to prevent theft or loss of assets.

**Compliance**

To ensure the City is in compliance with state and federal laws, the following policies have been implemented regarding compliance:

1. The City maintains and follows the debt management policy prescribed earlier in this policy.
2. The Finance Director and City Administrator will consult with the City's financial advisor on all debt-related issues.
3. The City will maintain and follow the prescribed grant management policy outlined earlier.



Fox Hollow Golf Course

**Information and Communication**

City management has the responsibility to adequately communicate and provide financial information to both internal and external parties. It is important that employees know the objectives, policies, and procedures management has established and what the expectations are for internal controls. External stakeholders (citizens, developers, creditors) also seek information regarding objectives and reliable financial information. To accomplish this, the following policies and procedures have been implemented:

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

1. The City will maintain data in a computerized accounting system. Requests for financial information should be provided through a computer-generated report whenever possible to maintain the integrity of the data.
2. The City will comply with the Utah Government Records Access and Management Act (GRAMA), Utah Open and Public Meetings Act, and Utah Code relating to public transparency. All requests, with the exception of Police requests, will be forwarded to the City Recorder to ensure compliance with state law. Personally identifiable, confidential, or protected information will be redacted in accordance with state law.

**Monitoring**

The internal control system of the City will change as technology, staff, objectives, and policies change. Management is charged with continually monitoring the internal control system to ensure it is operating as it was designed to do and ensure the following policies and procedures are being followed:

1. An annual risk assessment will be conducted to ensure that internal controls continue to work as designed over time.
2. Management evaluate, and if needed, change the design of the internal control system or implement corrective actions to improve the effectiveness of the existing system.
3. Members of management will periodically review the procedures outlined in this manual to ensure policies are being implemented and objectives are being met.

## LONG-TERM FINANCIAL PLANNING

The City will work towards creating a long-term financial plan to maintain long-term fiscal solvency of the City by identifying significant future expenses, liabilities, problems, and resources that are not included or recognized in the current budget. This plan should contain the following components:

1. Annually prepare a five-year forecast that maintains the current level of services, including known changes that will occur during the forecast period. If the forecast does not depict a positive operating position in all five years of the forecast, the City will strive to balance the operating budget for all years included in the financial forecast.
2. Annually evaluate trends from a budget-to-actual perspective and from a historical year-to-year perspective to identify areas where resources have been over allocated. This will improve the accuracy of revenue and expenditure forecasts by eliminating the impact of recurring historical variances.
3. The forecast should include, but not be limited to, an analysis that may include such factors as:
    - Economic growth rates
    - Retail sales activity
    - State of Utah revenue and expenditure impacts
    - Census data
    - Residential development activity
    - Industrial activity
    - Demographic changes
    - Legal and regulatory changes
    - Costs that are deferred or postponed until the future
    - Full ongoing impact of grants
    - Future costs of URS (Utah Retirement Systems) and pension assets/liabilities

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

- Costs of new programs that are not fully funded
- Difference between ongoing and one-time expenses and revenue
- Operating costs associated with capital improvement projects
- Impact of demographic and economic changes on services, revenue, and program costs
- Financial trends
- Problems and opportunities facing the City
- Alternative strategies to address the issues



## CAPITAL ASSET PROGRAM PLAN

The capital asset plan covers any facility, equipment purchase, or construction which results in a capitalized asset cost equal to or greater than $10,000 and a useful life (depreciable life) of five years or more. Also included are major maintenance projects of $10,000 or more that have a useful life of at least five years.

The City will operate and maintain its physical assets in a manner that protects the public investment and ensure achievement over their maximum useful life and will consider a Renewal and Maintenance Reserve account for each operating fund responsible for major capital assets. Each year a five-year Capital Improvement Plan (CIP) will be prepared. The plan will identify and set priorities for all major capital assets to be acquired or constructed by the City. The first year of the CIP will be included in the proposed budget.
An assessment of each City facility will be conducted at least every five years. The report should identify repairs needed in the coming five years to ensure the maximum useful life of the asset. This information will be the basis for capital improvement planning for existing facilities and in determining the adequacy of the Renewal and Maintenance Reserve account. The CIP will identify adequate funding to support repair and replacement of deteriorating capital assets and avoid a significant unfunded liability from deferred maintenance.

To the extent possible, improvement projects and major equipment purchases will be funded on a pay-as-you-go basis from existing or foreseeable revenue sources. Fund balances, in accordance with the City's Fund Balance policy, may be used for one-time expenditures such as capital equipment or financing of capital improvements.

Debt (including capital leases) may only be used to finance capital projects, including land acquisition, and not ongoing operations. Debt issued must be in accordance with the City's Debt Management policy. Acquisition or construction of new facilities should be done in accordance with adopted facility and/or master plans. Prior to approving the acquisition or construction of a new asset, the City Council should be presented with an estimate of the full cost to operate and maintain the facility through its useful life

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

and the plan for meeting those costs. No capital project should be funded unless operating impacts have been assessed and the necessary funds can be reasonably anticipated to be available when needed.

## REVENUE POLICY

The City should strive to maintain a diversified mix of revenues in order to balance the sources of revenue amongst taxpayers and to provide ongoing stability and predictability. Sales tax is a major source of revenue for the General Fund, which is a direct function of business cycles and inflation, making it a volatile source of revenue.

1. Property taxes and other stable revenues provide a reliable base of revenues during periods of economic downturn.
2. The City's overall revenue structure should be designed to recapture for the City some of the financial benefits resulting from City economic and community development investments.
3. The City will strive to keep a total revenue mix that encourages growth, and keeps the City economically competitive and a City of choice for people to live and do business.

Tax dollars should support essential City services that benefit and are available to everyone in the community (such as parks, police, and fire protection). User charges in lieu of general revenue sources should be implemented for identifiable services where the costs are related to the level of service.



Timpanogos Cave
American Fork Canyon

User charges and fees should be at a level that reflect service costs. Components of user charges should include operating and capital costs, as well as the direct and indirect costs of providing that service. Full cost charges should be imposed unless it is determined that policy, legal, or market factors require lower fees. The City, when setting fees and charges, should consider policy objectives, market rates, and charges levied by other public and private organizations for similar services. Non-resident fees should be set at market levels to minimize the tax burden on City residents.

User charges for Enterprise Fund services such as water, sewer, storm water, and solid waste collection should be set at rates sufficient to finance all direct and indirect operating, capital, reserve/working capital, and debt service costs. Overhead expenses and general government services provided to the enterprise activities should be included as indirect costs. Rates will be set such that these enterprise funds

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

are never in a cash deficit during the year. User fees should not exceed the full cost of providing the service. Internal service fees should be set to capture full costs, including direct and indirect expenses. Cost for services should be allocated to departments using a rate model.

Administrative fees should be assessed on all non-general fund supported capital projects. These fees allocate the proportionate share of general government services to those projects so that the general fund is not required to subsidize infrastructure or economic development projects.

All private money donated, contributed, or lent to the City are subject to grant solicitation and acceptance procedures, and should be deposited in the appropriate City fund and accounted for as public money through the City's budget process and accounting system. Finally, one-time revenue sources should only be used for one-time expenditures and not for ongoing expenditures.

## EXPENDITURE POLICY

The City Council will approve the budget by fund at the category or program level. Expenditures anticipated to be in excess of these levels require approval of the City Council through a budget amendment.

The City will follow employee compensation policies consistent with the City's adopted Personnel Policies and Procedures manual. The City will follow the adopted purchasing policy for public procurements and improvements. All expenditures will be approved by a Department Head or designee. The City will make every effort to control expenditures and ensure City services and programs provided to its citizens and taxpayers are cost effective and efficient.

## OPERATING BUDGET POLICY

The City will prepare an annual budget with the participation of all City departments. Budgetary procedures will conform to state and local regulations, including adoption of a balanced budget. A balanced budget is achieved when the amounts available from taxation and other sources, including amounts carried over from prior fiscal years, equals the total appropriations for expenditures and reserves. The City's budget will support City Council strategic goals and priorities, and the long-range needs of the City. Essential services will receive first priority for funding. The City will attempt to maintain current service levels for all essential services. The City will identify low priority services for reduction or elimination, if necessary, before essential services. The City will consider the establishment of user fees as an alternative to service reductions or elimination.

In all actions to balance the budget, the City will attempt to avoid layoffs of permanent employees, if possible. Personnel reductions will be scheduled to come primarily from attrition. The City will avoid budgetary procedures that balance current expenditures at the expense of meeting future years' expenses, such as postponing necessary expenditures or accruing future years' revenues.

The budget will provide sufficient funding to cover annual debt retirement costs. The City will consider technological and capital investment programs which are cost effective and which will reduce operating costs as high funding priorities.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Financial Policies

The City will manage each fund as an independent entity in accordance with applicable statutes and generally accepted accounting principles (GAAP). Direct and administrative costs will be allocated to each fund based upon the costs of providing those services.

The City will take immediate corrective action if, at any time during the fiscal year, financial monitoring indicates that an operating fund's anticipated expenditures will exceed its anticipated revenues. In order to ensure this, the City will maintain a budgetary control system and use a budget/encumbrance control system to ensure proper budgetary control.
Finally, the City will prepare a budget document which complies with the standards necessary to obtain the Award for Distinguished Budget Presentation from the Government Finance Officers Association (GFOA). The City will submit its budget for award consideration annually.



American Fork Front Runner Station

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Debt Overview

## LEGAL DEBT MARGIN

State statutes limit the amount of general obligation debt the City may issue for general purposes to 4% of the fair market value of taxable property within the City's general jurisdiction. An additional 8% of indebtedness may be issued for water or sewer projects when such utilities are owned or controlled by the City. Below is the City's legal debt margin as of June 30, 2019 (expressed in thousands):

| *Computation of Legal Debt Margin – June 30, 2019 (in thousands)* | |
|---|---|
| Assessed Valuation | $2,414,544 |
| Estimated Actual Value | 3,467,040 |
| Debt Limit (12% of estimated actual value) | 416,045 |
| Less Outstanding General Obligation Bonds | 36,380 |
| Total Amount of Debt Applicable to Debt Limit | 36,380 |
| Legal Debt Margin | $379,665 |

A brief description of American Fork City's debt issues (as of June 30, 2020) is included below:

**Lease Commitments**

- The City entered into a capital lease agreement in November 2016 to purchase two ambulances for the fire department. The City financed the purchase over 72 months with a stated interest rate of 1.60 percent and annual payments of $103,245 through June 2022.
- During fiscal year 2018 the City entered into a capital lease agreement for the purchase of a fire engine. The purchase was financed over 60 months with a stated interest rate of 2.27 percent and annual payments of $145,680 through September 2022.
- During fiscal year 2019 the City entered into a capital lease agreement for the purchase of six police vehicles. The City financed the purchase over 60 months with a stated interest rate of 3.13 percent and annual payments of $52,807 through July 2023.

**General Obligation Bonds**

- 2011 General Obligation Refunding Bonds: $1,650,000 General Obligation Refunding Bonds, due in annual principal and interest payments through June 2021 – Interest is at a variable interest rate ranging from 0.067% to 3.00%. Proceeds were used to build and equip the City's fire station.
- 2015 General Obligation Refunding Bonds: $7,020,000 General Obligation Refunding Bonds due in annual principal and semi-annual interest payments through May 2035 – Interest is at a varying rate of 2.25% to 4.00%. Proceeds were used to advance refund the 2007 GO Bonds, which partially financed the City's pressurized irrigation system.
- 2016 General Obligation Refunding Bonds: $30,285,000 General Obligation Refunding Bonds due in annual Principal and semi-annual interest payments through May 2035 – Interest is at a varying rate of 2.00% to 5.00%. Proceeds were used to advance refund the 2008 GO Bonds, which partially financed the City's pressurized irrigation system.
- 2020 General Obligation Bonds: Voters authorized the issuance of General Obligation Bonds in an amount not to exceed $8,500,000 for the purpose of constructing and equipping a new fire station. Anticipated issuance date is May 2020 in the amount of $7,725,000.

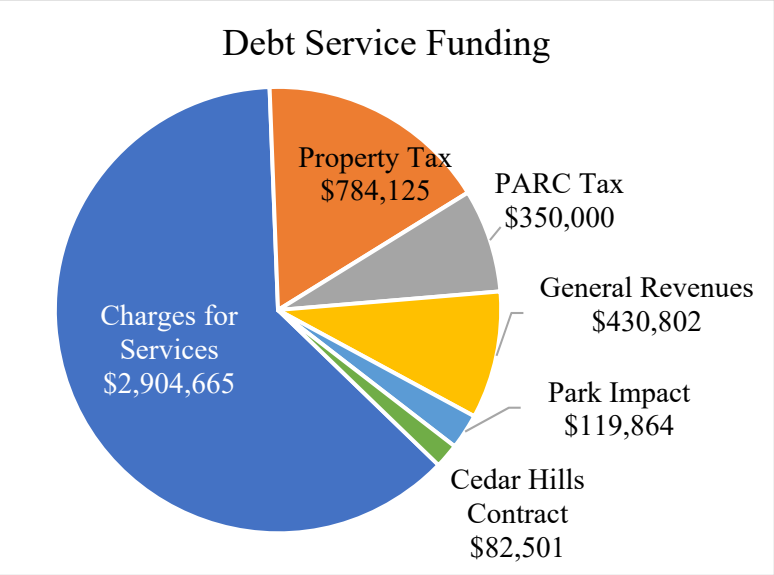
Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Debt Overview

| Description | End Balance June 30, 2020 | Additions FY2021 | Debt Service Due FY 2021 | End Balance June 30, 2021 |
|---|---|---|---|---|
| 2011 General Obligation Bonds | $175,000 | | $180,250 | $0 |
| 2015 General Obligation Bonds | 6,075,000 | | 513,038 | 5,760,000 |
| 2016 General Obligation Bonds | 27,785,000 | | 2,473,250 | 26,435,000 |
| 2020 General Obligation Bonds | 0 | $7,725,000 | 320,000 | 7,405,000 |
| 2012 Water Revenue Bonds | 567,000 | | 52,252 | 530,000 |
| 2018 Sales Tax Revenue Refunding Bonds | 3,285,000 | | 469,864 | 2,915,000 |
| 2016 Capital Lease – Ambulances | 201,603 | | 103,245 | 101,583 |
| 2017 Capital Lease – Fire Engine | 417,925 | | 145,680 | 281,732 |
| 2018 Capital Lease – Police Vehicles | 195,679 | | 52,807 | 148,997 |
| 2019 Capital Lease – Ambulance/Brush Truck | 469,403 | | 77,959 | 400,111 |
| 2019 Capital Lease – Ladder Truck | 1,463,974 | | 212,323 | 1,278,826 |
| Total Long-term Debt | $40,635,584 | $7,725,000 | $4,600,668 | $45,256,249 |

**Revenue Bonds:**

- 2012 Water Revenue Bonds: $800,000 Water Revenue Bonds due in annual principal and interest payments through January 2033 – Interest is at varying rates from 2.69 to 5.60%. Proceeds were used to improve the City's water infrastructure.
- 2018 Sales Tax Revenue and Refunding Bonds: $4,000,000 Sales Tax Revenue and Refunding Bonds due in annual principal and semi-annual interest payments through May 2028 – Interest is at a rate of 3.04%. Proceeds will be used expand Art Dye park and to refinance the 2012 Sales Tax Revenue Bonds.




The majority of debt service payments are paid through user rates in the secondary irrigation fund. The City's 2015 and 2016 General Obligation Refunding bonds, issued to construct the City's secondary irrigation system, will continue until 2035. Currently, secondary irrigation revenues are not sufficient to cover operational costs and debt service payments of the system. However, as the City continues to grow, additional revenues through an expanded user base will narrow this gap.

As of June 30, 2019, the total general obligation bonded debt equals $1,219 per capita. Total Water Revenue Bonds debt represents approximately $62 per utility rate customer.

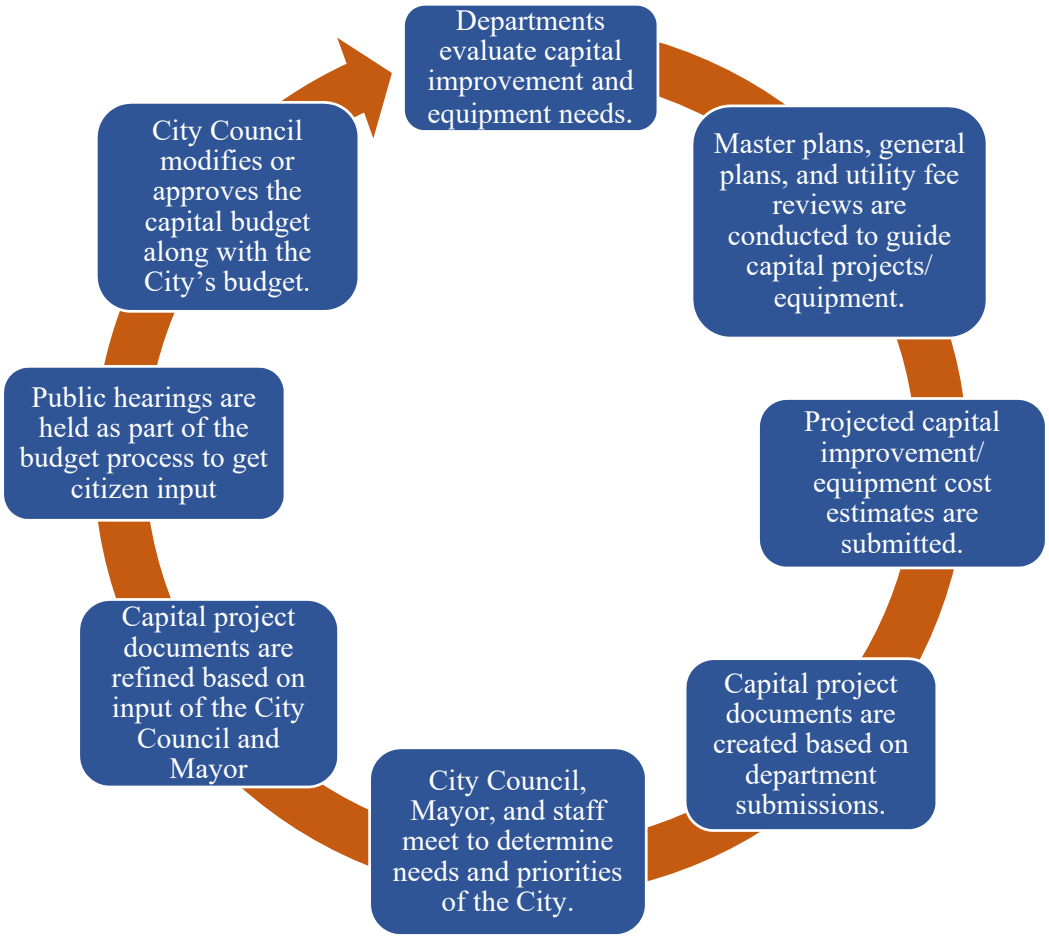
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# Capital Projects Overview

A capital project is a new construction, expansion, renovation, or replacement project for an existing facility or new facilities. It is a project that helps maintain or improve a City asset, often called infrastructure. The capital project section also includes major equipment purchases and leases. The capitalization threshold for City assets, both capital assets and equipment, is $5,000. As a general rule, the Capital Project funds include projects $50,000 or greater. However, the City has elected to include all equipment leases in capital equipment for greater accountability and tracking. In addition, multi-year projects under $50,000 may be included in the capital project funds to ensure funds are available in subsequent periods.

## CAPITAL BUDGET PROCESS

The City views itself as primarily a service organization. As such, the City continually seeks a balance between maintaining operational needs and seeking remedies to cover expenses for needed infrastructure, aging fleet, and equipment. During the budget process, departments submit reasonable goals for capital requests that balance the need to purchase equipment or construct capital projects, while also being realistic about the City's ability to meet all requested capital needs with the available funding resources.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Capital Projects Overview

## PLANS AND STUDIES

The following plans and studies guide the City in setting capital improvement/equipment budgets whether through funding options or through plans setting construction standard, sites, and projects. The City's plans and studies include:

| *Plan* | Description |
|---|---|
| *Transportation Element of the General Plan* | Roadway element for automobile travel. |
| *Bicycle and Pedestrian Element of the General Plan* | Plan for all non-motorized transportation and public transit. |
| *Main Street Vision* | Vision study that is intended to be the foundation for City ordinances and policies to support the revitalization of the downtown area. |
| *Water Systems Component of the General Plan* | Master plan for culinary water and pressurized irrigation systems. |
| *Sewer Systems Element of the General Plan* | Master plan for sanitary sewer systems. |
| *Storm Drain Element of the General Plan* | Master plan for storm drain systems. |
| *Parks, Trails, and Open Space Element of the General Plan* | Defines the acceptable level of park and open space facilities in the City. |
| *Land Use Element of the General Plan* | Defines the City's plan for the acceptable land use patterns of the City and guides the City's zoning decisions. |
| *Rate Studies* | Analysis conducted to determine the correct user charges for City-provided services. This includes water, secondary irrigation, sewer, and storm drain. |
| *Capital Facility Plans* | Analysis outlining the capital facilities necessary to accommodate growth. This can be in the area of utilities, transportation, police, fire, or parks. |
| *Impact Fee Studies* | Analysis conducted to determine the amount of "impact" from new growth on existing or projected systems. Uses the Capital Facility Plan as a guide. |
| *Regional Planning Documents* | Planning documents provided by MAG (Mountainland Association of Governments) developed to provide a cohesive regional plan. |

Priority capital projects and improvements are those that:

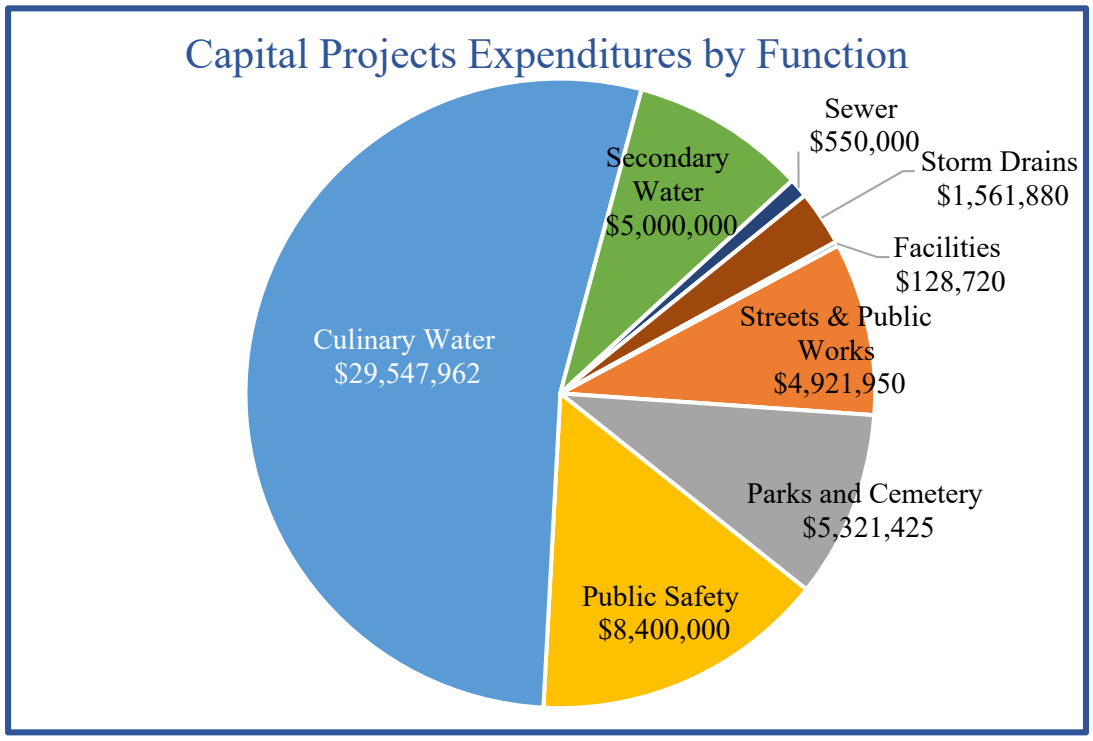
1. Have their own funding source.
2. Remedy safety issues.
3. Are necessary for the continuation of the City's core services.

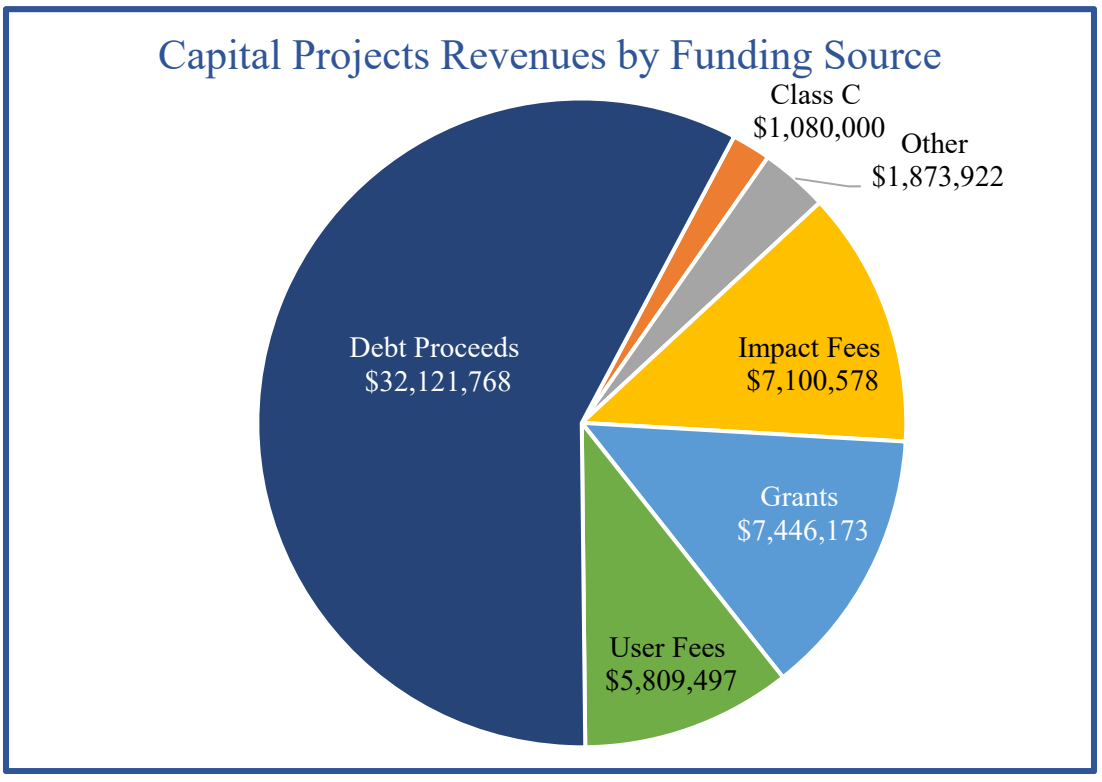
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# Capital Projects Overview

## CAPITAL PROJECT FUNDING SOURCES AND USES

City-wide capital project funding is shown in the following table and graph:




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Capital Projects Overview

## FISCAL YEAR 2021 CAPITAL PROJECTS

Total Capital projects proposed for fiscal year 2020-2021 totals $55,431,938. Significant recommended projects (greater than $1,000,000) are as follows:

- **Pavement Management Plan—$2,093,750—**This is the fourth year of the City's Pavement Management Plan. This program addresses improvements and rehabilitation to existing road infrastructure. Funding comes from transportation sales tax, discretionary property tax, and Class C road funds.
- **700 North Connection – $1,923,000** - This project constructs 700 North between 100 East and 200 East to complete a regional east and west connection. Most of the funding for this project is through federal fund through Mountainland Association of Governments, with matching portions from Utah Department of Transportation and road impact fees.
- **200 S Bike/Pedestrian Path—$4,172,925—**This is funded through a grant from Mountainland Association of Governments and impact fees. The path will be along 200 South in the southwest portion of the City.
- **Fire Station 52—$8,400,000—**This is for a second fire station and police shooting range in the northeast quadrant of the City. General obligation bonds were issued May 2020 to finance the construction. Site selection and architectural/engineering work is ongoing, and construction is anticipated to be completed summer of 2021.
- **36" Water Line Replacement—$27,907,962—** This project will replace old and undersized main line pipes with larger ductile iron pipe along the network backbone of the culinary water system. New pipe sizes will range from 18" to 36" in diameter, depending on location. The project will be completed in five segments, but all five segments are needed for the project to be able to deliver the needed water to areas of high growth and affordability. Work includes installing new culinary service connections and fire hydrants within the project area. The design for the first segment is complete. The design for the other segments is nearing completion and staff is in the process of securing financing. The project will be funded through debt proceeds, culinary water fund and impact fees.
- **Pressurized Irrigation Meters—$3,000,000—**This is phase one of a project to install pressurized irrigation meters throughout the City. A grant was secured through the Bureau of Reclamation in the amount of $1,500,000, with the remaining funding from secondary irrigation. Phase one is estimated to be completed in December 2021.
- **Pressurized Irrigation Pump and Land –$2,000,000—**This project is to perform a study and purchase land for increased pressurized irrigation capacity for new growth in the south area of city.

## SIGNIFICANT CAPITAL PROJECT CHALLENGES

The City has identified several significant capital project issues that will affect the City in upcoming years:

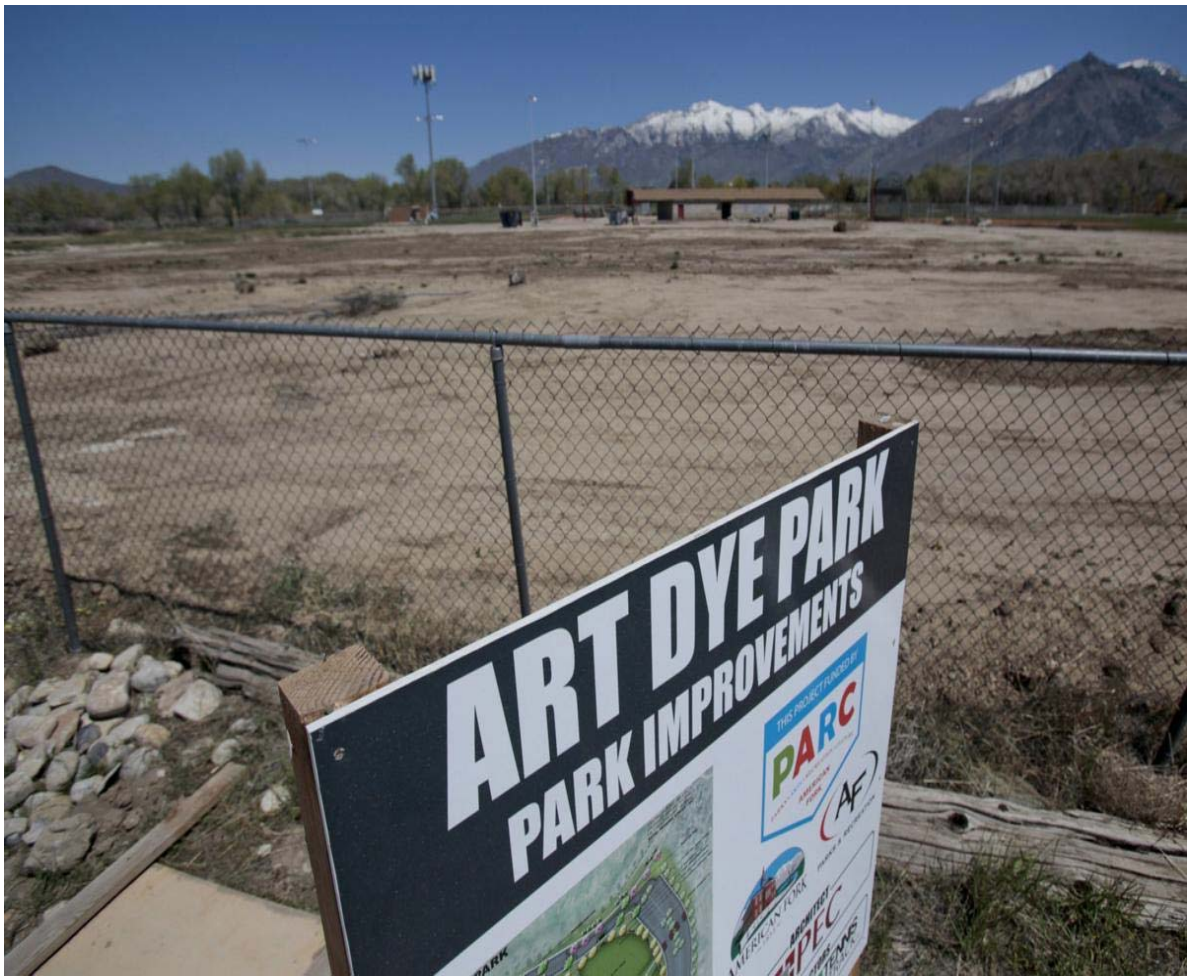
- Lack of Stable Funding Source for Pavement Management Plan—The City created a 10-year pavement management plan in fiscal year 2017 to address the City's failing road infrastructure. The City funded the first three years of the plan through fund balance, Class C road funds, and property tax. The use of fund balance is not sustainable. Until other dedication funding sources can be

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Capital Projects Overview

obtained, the City can only fund general street improvement using transportation sales tax, Class C road funds, and discretionary property tax.

- Funding for a Citywide Vehicle Replacement Program—The City's fleet is aging rapidly and requires increasing maintenance. In addition, mission critical services (such as Public Safety) rely on reliable vehicles. The City may use capital leases to update the City's fleet, however, future capital lease payments will be a future obligation to the City.
- 200 South Reconstruction/Expansion—The City is currently redesigning 200 South, a key component of the City's Transit Oriented Development (TOD). The City's efforts to create a CRA (Community Reinvestment Area) to fund a portion of the road project has been deterred and other financing options are being evaluated. Road impact fees can also be used as a funding source. However, a portion may need to come out of the City's general resources.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Capital Projects - General Capital Projects

## GOVERNMENTAL FUNDS

| Deptartment/Project | Funding 2020-21 | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|---|
| **Streets & Public Works** | | | | | | | |
| Pavement Management Plan | Various | $ 2,958,770 | $ 2,093,750 | $ 3,596,111 | $ 3,672,670 | $ 3,666,219 | $ 3,568,539 |
| 400 S Connection to 500 E | Impact Fees | 300,000 | 300,000 | 250,000 | - | - | - |
| 700 N Connection | Grants | 1,098,200 | 1,651,000 | - | - | - | - |
| 700 N Connection ROW | Impact Fees | | 272,000 | | | | |
| 300 N 600 E Intersection | Impact Fees | 300,000 | 300,000 | - | - | - | - |
| 300 W Pacific Dr Improvements | Impact Fees | 50,000 | 50,000 | 850,000 | - | - | - |
| 100 E 200 S to Roundabout | Various | - | - | - | - | 1,995,000 | - |
| 200 S Improvements | Impact Fees | 25,000,000 | - | - | - | - | - |
| 36" Water Line Replacement (Roads) | Impact Fees | - | 973,732 | - | - | - | - |
| ADA/Sidewalk Improvements | General Funds | 50,000 | 40,000 | 52,000 | 55,000 | 57,000 | 60,000 |
| HAWK Advanced Detection Upgrade | General Funds | - | - | 11,000 | - | - | - |
| Safe Route to Schools | Grants | 70,200 | 70,200 | 90,720 | 105,840 | 189,000 | 135,000 |
| Traffic Calming | General Funds | 30,000 | - | 32,000 | 35,000 | 37,000 | 40,000 |
| Transit Loop Feasibility | Grants | 95,000 | 95,000 | - | - | - | - |
| Street Lighting Upgrades | General Funds | 100,000 | 50,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| Sam White Lane Widening | Redevelopment | 1,103,313 | 1,103,313 | 540,674 | - | - | - |
| Storm Drain Pipe | Redevelopment | - | - | - | - | 589,671 | - |
| 1500 South Widening | Redevelopment | - | - | - | - | - | 2,002,725 |
| Public Works Building Design | Impact Fees | - | - | - | - | - | 1,000,000 |
| **Total Streets & Public Works** | | 31,155,483 | 6,998,995 | 5,522,505 | 3,968,510 | 6,633,890 | 6,906,264 |
| **Cemetery** | | | | | | | |
| Pioneer Grove Road Improvements | General Funds | 30,000 | - | 120,000 | - | - | - |
| Expansion Land Purchase | Perpetual Care | 40,000 | 40,000 | - | - | - | - |
| Wall Repair | General Funds | 10,000 | - | 10,000 | 10,000 | 10,000 | 10,000 |
| **Total Cemetery** | | 80,000 | 40,000 | 130,000 | 10,000 | 10,000 | 10,000 |



Packet Pg. 577

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

5.3.b

# Capital Projects - General Capital Projects

## GOVERNMENTAL FUNDS

| Deptartment/Project | Funding 2020-21 | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|---|
| **Parks** | | | | | | | |
| Fox Hollow Subsidy | General Funds | $ 240,000 | $ 240,000 | $ - | $ - | $ - | $ - |
| 200 South Bike/Pedestrian Path | Grants | 4,172,925 | 4,172,925 | - | - | - | - |
| Trail Maintenance | General Funds | 4,200 | 3,000 | 1,630 | 1,630 | 1,630 | 1,630 |
| Playground Replacement | General Funds | 160,000 | - | 160,000 | 160,000 | 160,000 | 160,000 |
| Parking Lot Maintenance | General Funds | 20,000 | 15,000 | 10,000 | 5,000 | 5,000 | 5,000 |
| Pickleball Resurfacing | General Funds | 8,000 | 5,500 | 8,000 | 8,000 | 8,000 | 8,000 |
| Hindley Filter Relocation | General Funds | 15,000 | 13,500 | - | - | - | - |
| Sprinkler Automation | General Funds | 23,000 | 21,500 | - | - | - | - |
| Art Dye Roundabout | Impact Fees | 500,000 | 350,000 | - | - | - | - |
| Art Dye Trail | Grants | - | 44,000 | 637,000 | - | - | - |
| Trail Expansion/Connection | Impact Fees | 200,000 | 200,000 | | | | |
| PARC-Quail Cove Restroom | PARC | - | 100,000 | - | - | - | - |
| PARC-Scoreboard Replacement | PARC | - | 15,301 | - | - | - | - |
| PARC-Library Expansion | PARC | - | 108,100 | - | - | - | - |
| **Total Parks** | | 5,343,125 | 5,288,826 | 816,630 | 174,630 | 174,630 | 174,630 |
| **Fitness Center** | | | | | | | |
| Deck Drain Replacement | General Funds | 18,000 | 18,000 | - | - | - | - |
| Front Entry Remodel | General Funds | 91,000 | - | - | - | - | - |
| Facility Paint and Flooring | General Funds | 10,000 | - | 10,000 | - | - | - |
| Pool Replaster | General Funds | - | - | - | - | 250,000 | |
| Splashpad | General Funds | - | - | - | 1,000,000 | - | - |
| Flooring-Group Fitness | General Funds | - | - | 15,000 | - | - | - |
| Sand Filter Replacement | General Funds | - | - | - | 80,000 | - | - |
| Pool Soft Start | General Funds | - | - | 15,000 | - | - | - |
| Classroom Upgrades | General Funds | 14,000 | - | - | - | - | - |
| Slip Control | General Funds | 21,000 | - | - | - | - | - |
| Weight Room Expansion | General Funds | 46,000 | 27,720 | - | - | - | - |
| Architect (Expansion) | General Funds | 10,000 | - | - | - | - | - |
| **Total Fitness Center** | | 210,000 | 45,720 | 40,000 | 1,080,000 | 250,000 | - |

# Capital Projects - General Capital Projects

## GOVERNMENTAL FUNDS

| Deptartment/Project | Funding 2020-21 | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|---|
| **Building & Grounds** | | | | | | | |
| HVAC System Replacements | General Funds | $ - | $ - | $ 35,000 | $ - | $ - | $ - |
| Fire Panel Replacements | General Funds | 50,000 | 40,000 | - | - | - | - |
| Fire Station Bay Lighting to LED | General Funds | 10,000 | - | 10,000 | - | - | - |
| Flooring-Library | General Funds | 51,000 | - | - | - | - | - |
| Flooring-Fire Station | General Funds | - | - | 35,000 | - | - | - |
| Flooring-Broadband | General Funds | - | - | - | - | 8,000 | - |
| Boiler Replacements | General Funds | 28,000 | 28,000 | 50,000 | 50,000 | - | - |
| Electrical Transmitters | General Funds | 15,000 | 15,000 | - | - | - | - |
| Learning Center Renovation | General Funds | 15,000 | - | - | - | - | - |
| **Total Building & Grounds** | | 169,000 | 83,000 | 130,000 | 50,000 | 8,000 | - |
| **Other** | | | | | | | |
| Main Street Revitalization | Redevelopment | 100,000 | - | 100,000 | 100,000 | 100,000 | 100,000 |
| Fire-Station 52 & Shooting Range | Bonds | 8,500,000 | 8,400,000 | - | - | - | - |
| Fire-Station 53-Design/Engineering | Impact Fees | - | - | - | - | - | 500,000 |
| **Total Other** | | 8,600,000 | 8,400,000 | 100,000 | 100,000 | 100,000 | 600,000 |
| **TOTAL EXPENDITURES** | | **$ 45,557,608** | **$ 20,856,541** | **$ 6,739,135** | **$ 5,383,140** | **$ 7,176,520** | **$ 7,690,894** |

# Capital Projects - General Capital Projects

## ENTERPRISE FUNDS

| Deptartment/Project | Funding 2020-21 | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|---|
| **Culinary Water** | | | | | | | |
| 36" Water Line Replacement | Various | $ 27,907,962 | $ 27,907,962 | $ - | $ - | $ - | $ - |
| New Culinary Well in TOD Area | Impact Fees | - | - | 250,000 | 4,062,500 | - | - |
| Phase II of Spring Water Line | Culinary Water | 600,000 | 600,000 | - | - | - | - |
| Rehab of Country Club Well | Culinary Water | 250,000 | 250,000 | - | - | - | - |
| West State Street Water Improvements | Culinary Water | 460,000 | - | - | - | - | - |
| East State Street Water Improvements | Culinary Water | 325,000 | - | - | - | - | - |
| Rehab of Hospital well | Culinary Water | - | - | - | 1,690,000 | - | - |
| Large Meter Replacement | Culinary Water | - | 25,000 | - | - | - | - |
| Fire Hydrants | Culinary Water | - | 25,000 | - | - | - | - |
| Fire Hydrants-City Facilities | Culinary Water | - | 40,000 | - | - | - | - |
| Annual CDBG Water Line Replacement | Grants | 650,000 | - | 650,000 | 650,000 | 650,000 | 650,000 |
| Annual Water Line Replacement | Culinary Water | 500,000 | 100,000 | 500,000 | 500,000 | 500,000 | 500,000 |
| Water Line Repairs | Culinary Water | 300,000 | 100,000 | - | - | - | - |
| 100 E Water Improvements | Culinary Water | 800,000 | 500,000 | - | - | - | - |
| **Total Culinary Water** | | 31,792,962 | 29,547,962 | 1,400,000 | 6,902,500 | 1,150,000 | 1,150,000 |
| **Secondary Irrigation** | | | | | | | |
| Filter Screens | Secondary | 30,000 | - | - | 400,000 | - | - |
| PI Meters for City Facilities | Secondary | 50,000 | - | 50,000 | 50,000 | 50,000 | 50,000 |
| PI Meters throughout City | Various | 1,500,000 | 3,000,000 | 1,500,000 | 2,800,000 | 2,800,000 | - |
| Study & Land for PI Capture TSSD | Impact Fees | - | 2,000,000 | - | - | - | - |
| Mitchell Springs Booster | Secondary | - | - | - | - | 83,000 | 725,000 |
| **Total Secondary Irrigation** | | 1,580,000 | 5,000,000 | 1,550,000 | 3,250,000 | 2,933,000 | 775,000 |
| **Sewer** | | | | | | | |
| 36" Water Line (Storm Drain) | Sewer | - | 250,000 | - | - | - | - |
| Annual Slip lining | Sewer | 312,000 | 300,000 | 325,000 | 338,000 | 352,000 | 367,000 |
| Semi-annual Pipe Bursting | Sewer | - | - | 540,000 | - | 585,000 | - |
| **Total Sewer** | | 312,000 | 550,000 | 865,000 | 338,000 | 937,000 | 367,000 |



Packet Pg. 580

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

5.3.b

# Capital Projects - General Capital Projects

## ENTERPRISE FUNDS

| Deptartment/Project | Funding 2020-21 | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|---|
| **Storm Drains** | | | | | | | |
| 36" Water Line (Storm Drain Portion) | Sewer | $ - | $ 266,788 | $ - | $ - | $ - | $ - |
| Curb and Gutter Replacement | Storm Drain | 35,000 | 35,000 | 40,000 | 45,000 | 50,000 | 55,000 |
| Curb and Gutter Replacement -Streets | Storm Drain | 650,000 | 650,000 | 650,000 | 650,000 | 650,000 | 650,000 |
| 36" storm drain 200 E 200 N | Storm Drain | - | - | 500,000 | - | - | - |
| Storm Drain 400 S @ 100 E to 200 E | Storm Drain | 100,000 | - | - | - | - | - |
| Storm Drain 400 S @ Orchard | Storm Drain | - | 100,000 | - | - | - | - |
| River Rehab Channel South Main St. | Storm Drain | - | - | - | 705,650 | - | - |
| AF River Rehab 400 North and 400 East | Storm Drain | - | - | 597,500 | - | - | - |
| **Total Storm Drains** | | 785,000 | 1,051,788 | 1,787,500 | 1,400,650 | 700,000 | 705,000 |
| **TOTAL EXPENDITURES** | | **$ 34,469,962** | **$ 36,149,750** | **$ 5,602,500** | **$ 11,891,150** | **$ 5,720,000** | **$ 2,997,000** |
| **TOTAL CITY-WIDE** | | **$ 80,027,570** | **$ 57,006,291** | **$ 12,341,635** | **$ 17,274,290** | **$ 12,896,520** | **$ 10,687,894** |

## PROJECT FUNDING

| Description | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|
| Class B & C Allotment | $ 1,080,000 | $ 1,080,000 | $ 1,112,400 | $ 1,145,772 | $ 1,180,145 | $ 1,215,550 |
| Sales Tax | 513,750 | 513,750 | 529,163 | 545,037 | 561,388 | 578,230 |
| Property Tax | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 |
| Redevelopment | 1,203,313 | 1,103,313 | 640,674 | 100,000 | 689,671 | 2,102,725 |
| General Funds | 1,977,172 | 563,252 | 2,197,356 | 3,014,009 | 2,110,455 | 1,694,489 |
| Impact Fees | 4,698,955 | 8,074,310 | 1,350,000 | 4,062,500 | 139,650 | 1,500,000 |
| Debt Proceeds | 57,221,768 | 32,121,768 | - | - | - | - |
| Grants | 6,043,373 | 7,487,093 | 1,309,543 | 728,322 | 2,645,210 | 749,900 |
| Perpetual Care Funds | 40,000 | 40,000 | - | - | - | - |
| PARC Tax | - | 223,401 | - | - | - | - |
| Culinary Water | 4,072,239 | 2,197,617 | 500,000 | 2,190,000 | 500,000 | 500,000 |
| Secondary Irrigation | 1,580,000 | 1,500,000 | 1,550,000 | 3,250,000 | 2,933,000 | 775,000 |
| Sewer | 312,000 | 550,000 | 865,000 | 338,000 | 937,000 | 367,000 |
| Storm Drain | 785,000 | 1,051,788 | 1,787,500 | 1,400,650 | 700,000 | 705,000 |
| **TOTAL REVENUES** | **$ 80,027,570** | **$ 57,006,292** | **$ 12,341,635** | **$ 17,274,290** | **$ 12,896,520** | **$ 10,687,894** |

# Capital Projects - Capital Equipment

## GOVERNMENTAL FUNDS

| Deptartment/Project | Funding 2020-21 | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|---|
| **Streets & Public Works** | | | | | | | |
| Tow-behind air compressor | General Funds | $ - | $ - | $ 24,000 | $ - | $ - | $ - |
| 2014 backhoe (lease) | General Funds | 52,000 | 52,000 | - | - | - | - |
| S4 10-wheeler | General Funds | - | - | - | - | 220,000 | - |
| S5 10-wheeler | General Funds | - | - | 220,000 | - | - | - |
| S7 bobtail | General Funds | - | - | - | - | 90,000 | - |
| Crack sealer | General Funds | - | - | 75,000 | - | - | - |
| Trackhoe (lease) | General Funds | 23,000 | 23,000 | 160,000 | - | - | - |
| Grader | General Funds | - | - | - | 100,000 | - | - |
| Chip box | General Funds | 12,000 | 12,000 | 8,000 | - | 8,000 | - |
| Chip roller | General Funds | - | - | - | 10,000 | - | - |
| Roller | General Funds | - | - | - | 80,000 | - | - |
| Sweeper | General Funds | - | - | - | - | - | 240,000 |
| 2015 vac truck | General Funds | - | - | - | 480,000 | - | - |
| 2018 backhoe (lease) | General Funds | 11,500 | 11,500 | 11,500 | 11,500 | 15,000 | 15,000 |
| Skid Steer | General Funds | 19,360 | - | - | - | - | - |
| Mini-X/Trailer/Compactor/Hammer | General Funds | 18,560 | - | - | - | - | - |
| Boom Truck | General Funds | 147,000 | - | - | - | - | - |
| Trimble GPS Unit (R2 Receiver) | General Funds | 10,000 | - | - | - | - | - |
| **Total Streets & Public Works** | | **293,420** | **98,500** | **498,500** | **681,500** | **333,000** | **255,000** |
| **Cemetery** | | | | | | | |
| Truck Mount Salter | General Funds | 6,000 | - | - | - | - | - |
| Mower Program | General Funds | 11,660 | - | - | 12,320 | - | 12,980 |
| Backhoe Lease (3 year 2018-2021) | General Funds | 8,079 | 8,079 | - | - | - | - |
| Mini X Lease (3 year 2018-2021) | General Funds | 8,409 | 8,409 | 600,000 | - | - | - |
| **Total Cemetery** | | **34,148** | **16,488** | **600,000** | **12,320** | **-** | **12,980** |
| **Parks** | | | | | | | |
| Truck Mount Salter | General Funds | 6,000 | - | - | - | - | - |
| Dump Trailer | General Funds | 10,000 | 10,000 | - | - | - | - |
| **Total Parks** | | 16,000 | 10,000 | - | - | - | - |



Packet Pg. 582

5.3.b

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Capital Projects - Capital Equipment

## GOVERNMENTAL FUNDS

| Deptartment/Project | Funding 2020-21 | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|---|
| **Recreation** | | | | | | | |
| Portable Pitching Mounds-Art Dye | General Funds | $ 6,000 | $ - | $ - | $ - | $ - | $ - |
| Machine Pitch Machine | General Funds | 3,500 | - | - | 12,320 | - | 12,980 |
| Soccer Goals for Goodsell Prop. | General Funds | 5,500 | 5,500 | - | - | - | - |
| Ice Rink | General Funds | - | - | 600,000 | - | - | - |
| **Total Recreation** | | 15,000 | 5,500 | 600,000 | 12,320 | - | 12,980 |
| **Fitness Center** | | | | | | | |
| Cardio & Weight Equipment | General Funds | 25,000 | 5,000 | 25,000 | 20,000 | 25,000 | 20,000 |
| Gymnastics Spring Floor | General Funds | - | - | 16,000 | - | - | - |
| Display Monitors-in facility | General Funds | 8,000 | - | - | - | - | - |
| Pool Robot Cleaner | General Funds | 6,500 | - | - | - | - | - |
| Shade Structures for Pool Deck | General Funds | 10,000 | - | - | - | - | - |
| Update fire panel | General Funds | 20,000 | - | - | - | - | - |
| Black Tarp Replacement | General Funds | - | - | 25,000 | - | - | - |
| Leisure Pool Boiler Replacement | General Funds | - | - | 45,000 | - | - | - |
| Wibit System for Pool | General Funds | - | - | 17,000 | - | - | - |
| Outdoor Fitness Equipment | General Funds | 50,000 | - | - | - | - | - |
| Camera Upgrades | General Funds | 1,100 | 1,100 | - | - | - | - |
| **Total Fitness Center** | | 120,600 | 6,100 | 128,000 | 20,000 | 25,000 | 20,000 |
| **Fire** | | | | | | | |
| Technical Rescue Gear | General Funds | 20,000 | 10,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| Thermal Imaging Cameras | General Funds | 17,393 | - | - | - | - | - |
| Station 51 Upgrades for Dispatch | General Funds | 30,000 | 15,000 | - | - | - | - |
| Forcible Entry Door Simulator | General Funds | 7,500 | - | - | - | - | - |
| (2) Zoll Vents for ICU Transports | General Funds | 27,000 | 27,000 | - | - | - | - |
| Inflatable Fire House | General Funds | 10,000 | - | - | - | - | - |
| SCBA air packs and bottles | General Funds | - | - | - | - | 300,000 | 300,000 |
| PPE washer for Station 51 | General Funds | - | - | - | - | - | 15,000 |
| **Total Fire** | | 111,893 | 52,000 | 20,000 | 20,000 | 320,000 | 335,000 |

# Capital Projects - Capital Equipment

## GOVERNMENTAL FUNDS

| Deptartment/Project | Funding 2020-21 | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|---|
| **Police** | | | | | | | |
| Radio Replacement | General Funds | $ 15,540 | $ 10,000 | $ 16,006 | $ 16,486 | $ 16,981 | $ 17,490 |
| Equipment, Radios, Tasers | General Funds | 15,540 | 10,000 | 16,006 | 16,486 | 16,981 | 17,490 |
| **Total Police** | | 31,080 | 20,000 | 32,012 | 32,972 | 33,962 | 34,980 |
| **Other** | | | | | | | |
| Holiday Decorations | General Funds | 15,000 | 5,000 | - | - | - | - |
| **Total Other** | | 15,000 | 5,000 | - | - | - | - |
| **TOTAL EXPENDITURES** | | **$ 637,141** | **$ 213,588** | **$ 1,878,512** | **$ 779,112** | **$ 711,962** | **$ 670,940** |

## ENTERPRISE FUNDS

| Deptartment/Project | Funding 2020-21 | Requested 2020-21 | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|---|---|
| **Public Works** | | | | | | | |
| Vac truck | Various | $ 400,000 | $ 400,000 | $ - | $ - | $ - | $ - |
| Skid steer | Various | 27,840 | - | - | - | - | - |
| Heater bed | Various | 20,000 | - | - | - | - | - |
| Valve exercise machine | Various | - | - | 75,000 | - | - | - |
| **Total Public Works** | | 447,840 | 400,000 | 75,000 | - | - | - |
| **TOTAL EXPENDITURES** | - | **$ 447,840** | **$ 400,000** | **$ 75,000** | **$ -** | **$ -** | **$ -** |
| **TOTAL CITY-WIDE** | | **$ 1,084,981** | **$ 613,588** | **$ 1,953,512** | **$ 779,112** | **$ 711,962** | **$ 670,940** |

## PROJECT FUNDING

| Description | Recommended 2020-21 | Requested 2021-22 | Requested 2022-23 | Requested 2023-24 | Requested 2024-25 |
|---|---|---|---|---|---|
| General Funds | $ 213,588 | $ 1,878,512 | $ 779,112 | $ 711,962 | $ 670,940 |
| Culinary Water | 160,000 | 37,500 | | | |
| Secondary Irrigation | 120,000 | 37,500 | | | |
| Storm Drain | 120,000 | | | | |
| **TOTAL REVENUES** | **$ 613,588** | **$ 1,953,512** | **$ 779,112** | **$ 711,962** | **$ 670,940** |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Budget Summaries

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fund Balances

## GOVERNMENTAL FUNDS

| Fund | Available Fund Balance 2018-19 | Estimated Fund Balance 2019-20 | Estimated Revenues 2020-21 | Proposed Expenditures 2020-21 | Net Transfers 2020-21 | Increase (Decrease) 2020-21 | Estimated Fund Balance 2020-21 |
|---|---|---|---|---|---|---|---|
| **General Fund** | **$ 2,992,132** | **$ 4,271,611** | **$ 22,718,079** | **$ 23,105,777** | **$ 387,698** | **$ -** | **$ 4,271,611** |
| **Special Revenue Funds** | | | | | | | |
| Municipal Building Authority | 901 | 901 | - | - | - | - | 901 |
| Fitness Center | 100,692 | - | 1,416,550 | 2,114,865 | 698,315 | - | - |
| PARC Tax | 95,784 | 48,296 | 828,000 | 837,725 | - | (9,725) | 38,571 |
| Celebration | 53,368 | - | - | 20,000 | 20,000 | - | - |
| Downtown Redevelopment | 134,106 | 96,321 | 3,000 | - | - | 3,000 | 99,321 |
| RDA - East Side | 140 | 51,055 | 42,403 | - | (42,403) | - | 51,055 |
| RDA - Business Park | 1,697,998 | 1,765,339 | 332,735 | 332,735 | - | - | 1,765,339 |
| EDA - Egg Farm | 2,560,991 | 2,417,280 | 970,017 | 1,459,043 | - | (489,026) | 1,928,254 |
| CRA - Patriot Station TOD | (145,699) | (145,699) | - | - | - | - | (145,699) |
| **Total Special Revenue Funds** | **4,498,281** | **4,233,493** | **3,592,705** | **4,764,368** | **675,912** | **(495,751)** | **3,737,742** |
| **Debt Service Fund** | **1,292,793** | **369,428** | **1,128,268** | **1,232,007** | **119,864** | **16,125** | **385,553** |
| **Capital Projects Funds** | | | | | | | |
| General Capital Projects | 4,732,829 | 5,239,364 | 8,423,070 | 8,863,496 | (1,559,574) | (2,000,000) | 3,239,364 |
| Bond Capital Projects | 2,580,001 | 8,435,580 | 15,000 | 8,400,000 | - | (8,385,000) | 50,580 |
| Capital Projects - Equipment | 97,921 | - | 5,000 | 213,588 | 208,588 | - | - |
| Park Impact Fees | 5,110,379 | 4,505,648 | 1,564,000 | 594,000 | (119,864) | 850,136 | 5,355,784 |
| Road Impact Fees | 5,119,487 | 5,515,074 | 1,520,000 | 1,895,732 | - | (375,732) | 5,139,342 |
| Fire Impact Fees | 1,138,661 | 1,598,807 | 230,000 | - | - | 230,000 | 1,828,807 |
| Police Impact Fees | 1,323,379 | 1,642,045 | 216,000 | - | - | 216,000 | 1,858,045 |
| **Total Capital Project Funds** | **20,102,657** | **26,936,518** | **11,973,070** | **19,966,816** | **(1,470,850)** | **(9,464,596)** | **17,471,922** |
| **Permanent Fund** | | | | | | | |
| Perpetual Care Fund | 783,561 | 828,336 | 67,500 | - | (9,000) | 58,500 | 886,836 |
| **Total Permanent Fund** | **783,561** | **828,336** | **67,500** | **-** | **(9,000)** | **58,500** | **886,836** |
| **TOTAL GOVERNMENTAL FUNDS** | **$ 29,669,424** | **$ 36,639,386** | **$ 39,479,622** | **$ 49,068,968** | **$ (296,376)** | **$ (9,885,722)** | **$ 26,753,664** |

# Fund Balances

## ENTERPRISE FUNDS

| Fund | Available Fund Balance 2018-19 | Estimated Fund Balance 2019-20 | Estimated Revenues 2020-21 | Proposed Expenditures 2020-21 | Net Transfers 2020-21 | Increase (Decrease) 2020-21 | Estimated Fund Balance 2020-21 |
|---|---|---|---|---|---|---|---|
| **Enterprise Funds** | | | | | | | |
| Culinary Water | $ 13,988,974 | $ 13,372,403 | $ 29,295,848 | $ 29,009,082 | $ - | $ 286,766 | $ 13,659,169 |
| Culinary Water Impact Fees | 995,729 | 1,012,770 | 715,000 | 4,772,578 | - | (4,057,578) | (3,044,808) |
| Secondary Irrigation | 11,783,483 | 10,986,102 | 4,327,563 | 6,815,243 | - | (2,487,680) | 8,498,422 |
| Secondary Irrigation Impact Fees | (15,392,520) | (14,808,769) | 630,000 | 2,200,000 | - | (1,570,000) | (16,378,769) |
| Sewer | 6,513,622 | 7,737,188 | 5,532,328 | 4,656,126 | - | 876,202 | 8,613,390 |
| Sewer Impact Fees | 1,243,467 | 1,673,416 | 301,774 | 150,000 | - | 151,774 | 1,825,190 |
| Storm Drain | 2,157,197 | 1,968,459 | 1,295,220 | 1,864,608 | - | (569,388) | 1,399,071 |
| Storm Drain Impact Fees | 1,338,965 | 1,860,625 | 305,218 | 100,000 | - | 205,218 | 2,065,843 |
| Sanitation and Recycling | 327,127 | 372,219 | 1,465,745 | 1,496,686 | - | (30,941) | 341,278 |
| Broadband | (2,049,610) | (2,049,610) | 192,640 | 489,016 | 296,376 | - | (2,049,610) |
| **Total Enterprise Funds** | **20,906,434** | **22,124,803** | **44,061,336** | **51,553,339** | **296,376** | **(7,195,627)** | **14,929,176** |
| **Internal Service Funds** | | | | | | | |
| Fleet Operations & Maintenance | 105,572 | 124,449 | 473,042 | 473,042 | - | - | 124,449 |
| Fleet Capital | 2,504,226 | 1,878,874 | 963,185 | 971,185 | - | (8,000) | 1,870,874 |
| Information Technology | - | 73,318 | 462,388 | 505,706 | - | (43,318) | 30,000 |
| **Total Internal Service Funds** | **2,609,798** | **2,076,641** | **1,898,615** | **1,949,933** | **-** | **(51,318)** | **2,025,323** |
| **TOTAL ENTERPRISE FUNDS** | **$ 23,516,232** | **$ 24,201,444** | **$ 45,959,951** | **$ 53,503,272** | **$ 296,376** | **$ (7,246,945)** | **$ 16,954,499** |
| **TOTAL CITY-WIDE** | **$ 53,185,656** | **$ 60,840,830** | **$ 85,439,573** | **$ 102,552,337** | **$ -** | **$ (17,112,764)** | **$ 43,728,066** |



Packet Pg. 587
5.3.b
Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Combined Revenue Summary - All Funds

## BY FUND

| Fund | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES (Excludes Transfers)** | | | | | |
| **General Fund** | **$ 23,218,111** | **$ 23,082,531** | **$ 24,110,078** | **$ 24,643,350** | **$ 22,718,079** |
| **Special Revenue Funds** | | | | | |
| Fitness Center | 1,882,736 | 1,909,084 | 1,584,394 | 1,874,400 | 1,416,550 |
| PARC Tax | 985,602 | 1,090,747 | 888,152 | 1,030,750 | 828,000 |
| Celebration | 108,440 | 9,114 | 3,800 | 4,075 | - |
| Downtown Redevelopment | 27,332 | 3,520 | 3,215 | 3,000 | 3,000 |
| RDA - East Side | 96,901 | 43,835 | 50,915 | 42,063 | 42,403 |
| RDA - Business Park | 651,095 | 793,715 | 400,076 | 332,735 | 332,735 |
| EDA - Egg Farm | 931,465 | 1,028,141 | 956,484 | 896,844 | 970,017 |
| **Total Special Revenue Funds** | **4,683,571** | **4,878,156** | **3,887,036** | **4,183,867** | **3,592,705** |
| **Debt Service Fund** | **374,516** | **767,039** | **1,153,921** | **1,158,125** | **1,128,268** |
| **Capital Projects Funds** | | | | | |
| General Capital Projects | 1,025,954 | 2,191,582 | 2,975,734 | 8,926,793 | 8,423,070 |
| Bond Capital Projects | 4,000,000 | 97,000 | 8,535,579 | 5,100,000 | 15,000 |
| Capital Projects - Equipment | 899 | 5,046 | 167,245 | 165,000 | 5,000 |
| Park Impact Fees | 2,110,277 | 1,693,940 | 2,328,973 | 100,000 | 1,564,000 |
| Road Impact Fees | 1,992,300 | 2,125,998 | 2,740,368 | 2,080,000 | 1,520,000 |
| Fire Impact Fees | 291,940 | 285,317 | 470,723 | 313,000 | 230,000 |
| Police Impact Fees | 272,555 | 244,624 | 336,387 | 296,000 | 216,000 |
| **Total Capital Project Funds** | **9,693,925** | **6,643,507** | **17,555,009** | **16,980,793** | **11,973,070** |
| **Permanent Fund** | | | | | |
| Perpetual Care Fund | 44,803 | 60,955 | 56,004 | 58,500 | 67,500 |
| **Total Permanent Fund** | **44,803** | **60,955** | **56,004** | **58,500** | **67,500** |
| **Enterprise Funds** | | | | | |
| Culinary Water | 9,800,184 | 11,889,473 | 5,958,380 | 5,486,943 | 29,295,848 |
| Culinary Water Impact Fees | 769,321 | 1,099,306 | 1,111,137 | 1,006,000 | 715,000 |
| Secondary Irrigation | 2,917,975 | 3,889,798 | 2,854,676 | 2,744,750 | 4,327,563 |
| Secondary Irrigation Impact Fees | 861,467 | 839,691 | 831,605 | 900,000 | 630,000 |
| Sewer | 5,414,361 | 6,184,686 | 5,989,430 | 5,368,210 | 5,532,328 |
| Sewer Impact Fees | 340,688 | 392,425 | 443,822 | 420,000 | 301,774 |
| Storm Drain | 1,579,307 | 2,783,502 | 1,448,570 | 1,290,720 | 1,295,220 |
| Storm Drain Impact Fees | 362,985 | 349,486 | 603,693 | 425,200 | 305,218 |
| Sanitation and Recycling | 1,339,450 | 1,392,773 | 1,484,688 | 1,464,895 | 1,465,745 |
| Broadband | 242,740 | 233,303 | 166,255 | 193,282 | 192,640 |
| **Total Enterprise Funds** | **23,628,478** | **29,054,443** | **20,892,256** | **19,300,000** | **44,061,336** |
| **Internal Service Funds** | | | | | |
| Fleet Operations & Maintenance | 505,940 | 457,773 | 510,683 | 503,784 | 473,042 |
| Fleet Capital | 671,321 | 299,289 | 2,988,712 | 3,018,349 | 963,185 |
| Information Technology | - | - | 518,040 | 548,038 | 462,388 |
| **Total Internal Service Funds** | **1,177,261** | **757,062** | **4,017,435** | **4,070,171** | **1,898,615** |
| **TOTAL REVENUES** | **$ 62,820,665** | **$ 65,243,693** | **$ 71,671,739** | **$ 70,394,806** | **$ 85,439,573** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Combined Revenue Summary - All Funds

## BY TYPE

| Fund | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES (Excludes Transfers)** | | | | | |
| Property Taxes | $ 5,932,390 | $ 6,404,027 | $ 6,676,621 | $ 6,339,866 | $ 6,369,714 |
| Sales Taxes | 9,489,074 | 10,305,823 | 10,307,250 | 11,058,750 | 9,382,750 |
| Other Taxes | 2,492,513 | 2,498,040 | 2,530,663 | 2,593,000 | 2,508,000 |
| Licenses & Permits | 1,185,745 | 1,242,592 | 1,247,092 | 1,489,250 | 950,600 |
| Intergovernmental | 2,583,272 | 4,780,328 | 2,153,982 | 7,951,398 | 9,028,581 |
| Charges for Services | 21,675,692 | 23,034,275 | 25,174,282 | 24,402,857 | 24,522,280 |
| Impact Fees | 6,840,722 | 6,648,135 | 8,409,982 | 5,300,000 | 5,096,000 |
| Fines & Forfeitures | 320,271 | 348,056 | 281,109 | 350,000 | 320,000 |
| Miscellaneous | 327,587 | 647,850 | 103,797 | 132,513 | 105,300 |
| Note Receivable | 32,378 | 33,751 | 19,100 | 35,000 | - |
| Financing Sources | 4,000,000 | - | 10,609,195 | 7,209,195 | 23,721,767 |
| Developer Contributions | 5,514,943 | 6,693,418 | 123,855 | 100,000 | 318,394 |
| Interfund Loan | - | - | 166,825 | 165,000 | - |
| Administrative Charges | 1,219,899 | 708,013 | 1,859,140 | 2,054,258 | 1,775,933 |
| Use of Money & Property | 1,206,179 | 1,899,385 | 2,008,846 | 1,213,719 | 1,340,254 |
| **TOTAL REVENUES** | **$ 62,820,665** | **$ 65,243,693** | **$ 71,671,739** | **$ 70,394,806** | **$ 85,439,573** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Combined Expenditure Summary - All Funds

| Fund | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **EXPENDITURES (Excludes Transfers)** | | | | | |
| **General Fund** | **$ 19,325,611** | **$ 19,603,657** | **$ 21,049,170** | **$ 23,220,829** | **$ 23,105,777** |
| **Special Revenue Funds** | | | | | |
| Municipal Building Authority | 10 | 103 | - | 100 | - |
| Fitness Center | 2,313,423 | 2,484,399 | 2,241,878 | 2,515,840 | 2,114,865 |
| PARC Tax | 1,885,623 | 1,205,896 | 935,640 | 935,640 | 837,725 |
| Celebration | 118,022 | 34,769 | 77,505 | 64,435 | 20,000 |
| Downtown Redevelopment | - | - | 41,000 | 41,000 | - |
| RDA - East Side | 378 | - | - | - | - |
| RDA - Business Park | 41,415 | 27,005 | 332,735 | 332,735 | 332,735 |
| EDA - Egg Farm | 505,276 | 488,843 | 1,100,195 | 1,159,133 | 1,459,043 |
| CRA - Patriot Station TOD | 24,509 | 65,437 | - | - | - |
| **Total Special Revenue Funds** | **4,888,656** | **4,306,452** | **4,728,953** | **5,048,883** | **4,764,368** |
| **Debt Service Fund** | **3,164,977** | **1,909,885** | **1,356,683** | **1,256,683** | **1,232,007** |
| **Capital Projects Funds** | | | | | |
| General Capital Projects | 1,652,299 | 2,942,186 | 4,378,560 | 9,756,405 | 8,863,496 |
| Bond Capital Projects | 21,750 | 590,966 | 2,580,000 | 5,100,000 | 8,400,000 |
| Capital Projects - Equipment | 358,388 | 265,077 | 456,397 | 463,259 | 213,588 |
| Park Impact Fees | 52,676 | 103,611 | 2,522,263 | 2,607,179 | 594,000 |
| Road Impact Fees | 61,108 | 516,181 | 2,344,781 | 1,568,073 | 1,895,732 |
| Fire Impact Fees | 5,974 | - | 10,577 | 507,500 | - |
| Police Impact Fees | 5,434 | - | 17,721 | 7,500 | - |
| **Total Capital Project Funds** | **2,157,629** | **4,418,021** | **12,310,299** | **20,009,916** | **19,966,816** |
| **Enterprise Funds** | | | | | |
| Culinary Water | 3,693,080 | 3,110,498 | 6,574,951 | 8,399,651 | 29,009,082 |
| Culinary Water Impact Fees | 5,434 | 44,961 | 1,094,096 | 6,860,215 | 4,772,578 |
| Secondary Irrigation | 2,960,585 | 3,354,748 | 3,652,057 | 3,716,766 | 6,815,243 |
| Secondary Irrigation Impact Fees | 4,078 | 23,195 | 247,854 | 135,622 | 2,200,000 |
| Sewer | 3,637,065 | 3,652,743 | 4,765,864 | 5,770,849 | 4,656,126 |
| Sewer Impact Fees | 40,622 | 38,694 | 13,873 | 191,454 | 150,000 |
| Storm Drain | 791,804 | 880,643 | 1,637,308 | 1,397,497 | 1,864,608 |
| Storm Drain Impact Fees | - | 163,407 | 82,033 | 115,440 | 100,000 |
| Sanitation and Recycling | 1,233,454 | 1,284,101 | 1,439,596 | 1,447,099 | 1,496,686 |
| Broadband | 332,660 | 478,165 | 513,240 | 469,092 | 489,016 |
| **Total Enterprise Funds** | **12,698,782** | **13,031,155** | **20,020,872** | **28,503,685** | **51,553,339** |
| **Internal Service Funds** | | | | | |
| Fleet Operations & Maintenance | 440,256 | 417,885 | 491,806 | 503,784 | 473,042 |
| Fleet Capital | 785,394 | 917,609 | 3,614,064 | 3,051,414 | 971,185 |
| Information Technology | - | - | 444,722 | 548,038 | 505,706 |
| **Total Internal Service Funds** | **1,225,650** | **1,335,494** | **4,550,592** | **4,103,236** | **1,949,933** |
| **TOTAL EXPENDITURES** | **$ 43,461,305** | **$ 44,604,664** | **$ 64,016,569** | **$ 82,143,232** | **$ 102,572,240** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Full-time Equivalent Summary

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| **GENERAL FUND** | | | | | |
| Executive | 0.50 | 0.50 | 0.50 | 0.50 | - |
| Legislative | 2.50 | 2.50 | 2.50 | 2.50 | - |
| Adminstration | 12.34 | 12.34 | 11.00 | 10.50 | (0.50) |
| Community Services | - | - | 2.50 | 2.50 | - |
| Parks and Boat Harbor | 13.23 | 14.23 | 16.17 | 12.48 | (3.69) |
| Cemetery | 7.24 | 6.31 | 6.31 | 5.88 | (0.43) |
| Library and Learning Center | 13.40 | 13.40 | 13.74 | 13.33 | (0.41) |
| Police | 51.25 | 53.22 | 55.22 | 58.22 | 3.00 |
| Fire and Rescue | 39.92 | 37.34 | 48.02 | 52.02 | 4.00 |
| Public Works Administration | 1.00 | 2.75 | 2.75 | 2.75 | - |
| Streets | 7.00 | 7.00 | 7.00 | 7.00 | - |
| Building Maintenance | 3.75 | 4.00 | 4.00 | 4.00 | - |
| Building Inspection | 7.00 | 7.50 | 7.50 | 7.50 | - |
| Engineering | 5.95 | 6.00 | 6.00 | 7.00 | 1.00 |
| Recreation | 8.59 | 8.80 | 8.39 | 8.39 | - |
| Planning | 3.00 | 2.50 | 2.50 | 2.50 | - |
| Senior Center | 4.00 | 4.75 | 4.75 | 4.75 | - |
| **Total General Fund** | 180.67 | 183.14 | 198.85 | 201.82 | 2.97 |
| **SPECIAL REVENUE FUNDS** | | | | | |
| Fitness Center | 50.37 | 48.99 | 48.99 | 40.06 | (8.93) |
| **ENTERPRISE FUNDS** | | | | | |
| Culinary Water | 5.00 | 5.25 | 4.75 | 6.15 | 1.40 |
| Secondary Irrigation | 2.00 | 3.25 | 3.75 | 2.35 | (1.40) |
| Sewer | 3.00 | 2.75 | 3.00 | 3.00 | - |
| Storm Drain | 3.00 | 2.75 | 2.50 | 2.50 | - |
| Broadband | 2.00 | 2.00 | 2.00 | 2.00 | - |
| **Total Enterprise Funds** | 15.00 | 16.00 | 16.00 | 16.00 | (0.00) |
| **TOTAL FTE POSITIONS** | **246.04** | **248.13** | **263.84** | **257.88** | **(5.96)** |

## STAFFING NOTES

1) Administration - the Executive Assistant position moved from full-time to part-time beginning fiscal year 2020-21
2) Parks / Boat Harbor - Part-time seasonal positions were reduced due to facility closures resulting from COVID-19
3) Cemetery - Part-time seasonal positions were reduced due to facility closures resulting from COVID-19
4) Library / Learning Center - Part-time seasonal positions were reduced due to facility closures resulting from COVID-19
5) Police - one full-time Police Officer, one full-time Police Sergeant, and two part-time records specialist have been ad
6) Fire and Rescue - three Firefigher/Paramedics and one Battalion Chief have been added
7) Engineering - one full-time City Engineer was added to be funded by an administrative charge to the Enterprise Fund
8) Fitness Center - Part-time seasonal positions were reduced due to facility closures resulting from COVID-19
9) Culinary Water and Secondary Irrigation - positions were reallocated to reflect winter closures of secondary irrigatio

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# General Fund

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# General Fund Summary

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Taxes | $ 14,960,778 | $ 15,101,609 | $ 15,106,974 | $ 15,391,093 | $ 14,013,500 |
| Licenses & Permits | 1,185,745 | 1,242,592 | 1,247,092 | 1,489,250 | 950,600 |
| Grants & Intergovernmental | 1,358,778 | 404,569 | 295,143 | 217,030 | 203,686 |
| Charges for Services | 4,618,977 | 5,007,973 | 6,531,623 | 6,497,664 | 6,601,518 |
| Fines & Forfeitures | 320,271 | 348,056 | 281,109 | 350,000 | 320,000 |
| Miscellaneous | 230,251 | 401,127 | 68,870 | 92,313 | 65,000 |
| Other Financing Sources | 543,311 | 576,605 | 579,267 | 606,000 | 563,775 |
| Transfers In | 59,753 | 80,131 | 301,862 | 299,633 | 2,051,403 |
| **TOTAL REVENUES** | **$ 23,277,864** | **$ 23,162,662** | **$ 24,411,940** | **$ 24,942,983** | **$ 24,769,482** |
| **EXPENDITURES** | | | | | |
| General Services | $ 2,260,193 | $ 2,381,049 | $ 1,863,903 | $ 2,114,792 | $ 1,982,462 |
| Community Services | 2,621,562 | 2,373,203 | 2,677,089 | 3,090,398 | 2,888,156 |
| Public Safety | 9,319,651 | 9,477,552 | 11,037,019 | 12,082,173 | 12,475,458 |
| Public Works | 4,079,848 | 4,341,664 | 4,412,133 | 4,790,753 | 4,669,719 |
| Recreation | 660,022 | 636,285 | 632,782 | 689,968 | 637,827 |
| Planning | 251,483 | 293,994 | 311,445 | 320,456 | 333,176 |
| Citizens Committees | 132,852 | 99,910 | 114,799 | 132,289 | 118,979 |
| Transfers Out | 5,123,816 | 3,449,987 | 2,083,291 | 2,003,429 | 1,663,705 |
| **TOTAL EXPENDITURES** | **$ 24,449,427** | **$ 23,053,644** | **$ 23,132,461** | **$ 25,224,258** | **$ 24,769,482** |
| General Fund Net Revenue | (1,171,563) | 109,018 | 1,279,479 | (281,275) | - |
| Beginning Fund Balance | 4,054,669 | 2,883,106 | 2,992,124 | 2,992,124 | 4,271,603 |
| **Ending Fund Balance** | **$ 2,883,106** | **$ 2,992,124** | **$ 4,271,603** | **$ 2,710,849** | **4,271,603** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# General Fund Revenue Detail

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| **Taxes** | | | | | |
| Property Taxes | $ 4,017,772 | $ 3,484,244 | $ 3,729,553 | $ 3,533,000 | $ 3,533,000 |
| Motor Vehicle Fees | 333,079 | 348,406 | 384,495 | 363,000 | 328,000 |
| Delinquent Taxes | 270,985 | 223,958 | 332,467 | 250,000 | 257,500 |
| Sales Tax | 8,164,124 | 8,881,644 | 8,500,000 | 9,000,000 | 7,700,000 |
| Cable TV Franchise Tax | 124,219 | 125,243 | 130,312 | 125,000 | 125,000 |
| Energy Sales & Use Tax | 1,727,350 | 1,745,911 | 1,770,000 | 1,835,000 | 1,785,000 |
| Municipal Telephone Tax | 307,865 | 278,480 | 245,856 | 270,000 | 270,000 |
| Penalties and Interest | 15,384 | 13,723 | 14,291 | 15,093 | 15,000 |
| **Total Taxes** | **14,960,778** | **15,101,609** | **15,106,974** | **15,391,093** | **14,013,500** |
| **Licenses & Permits** | | | | | |
| Business Licenses | 89,184 | 105,977 | 84,745 | 96,800 | 85,000 |
| Building Permits | 1,005,068 | 1,056,186 | 1,097,571 | 1,300,000 | 800,000 |
| Beer & Liquor Licenses | 300 | 600 | 3,000 | - | - |
| Occupancy Fee | - | - | - | - | 30,300 |
| Alarm Permit | - | - | - | - | 6,300 |
| Other Permits | 77,068 | 69,329 | 60,626 | 85,000 | 24,000 |
| Special Events Permits | 14,125 | 10,500 | 1,150 | 7,450 | 5,000 |
| **Total Licenses & Permits** | **1,185,745** | **1,242,592** | **1,247,092** | **1,489,250** | **950,600** |
| **Grants & Intergovernmental** | | | | | |
| Grants-Library | 8,200 | 9,700 | 9,780 | 8,000 | 8,000 |
| Grants-Police | 60,128 | 35,590 | 7,080 | 6,500 | 6,500 |
| Grants-Police-VOCA | 47,738 | 47,565 | 75,127 | 68,744 | 75,000 |
| Grants-COPS | 15,370 | 44,631 | 55,444 | 44,330 | 30,000 |
| Grants-Federal | - | 18,094 | 5,608 | 2,338 | 2,500 |
| Grants-Police-State | - | 37,477 | 29,085 | 11,634 | 11,634 |
| Grants-Police-County | - | 3,657 | 23,382 | 11,932 | 6,500 |
| Grants-Fire | - | 4,647 | - | 6,161 | 6,161 |
| Grants-Other | 10,000 | - | 2,875 | - | - |
| Other Reimbursements | 113,112 | 151,841 | 43,565 | 27,391 | 27,391 |
| Road Fund Allotment | 1,078,565 | - | - | - | - |
| State Liquor Fund Allotment | 25,665 | 51,367 | 43,197 | 30,000 | 30,000 |
| **Total Grants & Intergovernmenta** | **1,358,778** | **404,569** | **295,143** | **217,030** | **203,686** |
| **Charges for Services** | | | | | |
| Fire Protection Agreement-County | 14,660 | 11,508 | 6,378 | 9,200 | 9,200 |
| Ambulance Fees | 1,632,507 | 1,812,972 | 2,000,011 | 1,943,950 | 1,943,950 |
| Admin Charge-Water Fund | 409,000 | 402,265 | 426,480 | 426,475 | 473,721 |
| Admin Charge-Sewer Fund | 409,000 | 301,853 | 414,036 | 414,036 | 486,502 |
| Admin Charge-Storm Water | 250,000 | 246,082 | 266,112 | 266,111 | 290,066 |
| Admin Charge-Irrigation | - | 251,214 | 253,956 | 253,957 | 271,503 |
| Admin Charge-Sanitation Fund | - | 26,003 | 96,480 | 96,485 | 102,757 |
| Admin Charge-Fitness Center | - | 256,433 | 241,104 | 241,100 | 221,066 |
| Admin Charge-PARC Tax Fund | - | - | 9,360 | 9,356 | 7,794 |
| Admin Charge-Egg Farm EDA | - | - | 33,948 | 33,942 | 39,947 |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# General Fund Revenue Detail

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Admin Charge-Broadband Fund | - | - | 40,212 | 40,215 | 33,483 |
| Capital Projects Inspection | - | - | 100,000 | - | 180,000 |
| Development Inspection | 55,151 | 136,922 | 199,521 | 189,279 | 190,000 |
| Development Fees | 165,462 | 28,335 | 28,290 | 50,000 | 35,000 |
| **Charges for Services** | | | | | |
| Plan Check Fees | 427,362 | 300,148 | 425,233 | 430,000 | 301,000 |
| Fire Plan Check Fees | 5,895 | 12,634 | 75 | 15,000 | - |
| Fire Site Inspection Fees | 32,610 | 24,685 | 31,998 | 35,000 | 31,500 |
| Site Inspection Fees | 32,045 | - | - | - | - |
| Police Services-Cedar Hills | 444,795 | 414,795 | 533,858 | 533,858 | 544,535 |
| Alpine School District Officers | - | 55,000 | 85,000 | 70,000 | 100,000 |
| Fire-Cedar Hills Contract | - | - | 689,700 | 689,700 | 703,494 |
| Boat Harbor Fees | 46,575 | 37,136 | 31,666 | 45,000 | 45,000 |
| Park Fees | 12,114 | 9,607 | 6,622 | 7,000 | 5,250 |
| Amphitheater Reservation Fees | 19,800 | 25,490 | 16,800 | 22,000 | 16,500 |
| Recreation Fees | 374,371 | 359,762 | 380,935 | 378,000 | 283,500 |
| Library Development Funds | 6,622 | 6,730 | 3,488 | 6,000 | 4,500 |
| Library Fees | 47,885 | 37,667 | 23,215 | 45,000 | 33,750 |
| Senior Citizen Fees | 89,993 | 86,028 | 52,576 | 92,000 | 69,000 |
| Fire Fees | 2,260 | 2,094 | 1,846 | 2,000 | 2,000 |
| Cemetery Lot Sales | 31,150 | 40,300 | 36,660 | 38,500 | 45,500 |
| Grave Opening Fees | 105,450 | 120,050 | 93,813 | 110,000 | 126,500 |
| Other Cemetery Fees | 3,520 | 1,760 | 1,500 | 4,500 | 4,500 |
| After Hours Fees | 750 | 500 | 750 | - | - |
| **Total Charges for Services** | **4,618,977** | **5,007,973** | **6,531,623** | **6,497,664** | **6,601,518** |
| **Fines & Forfeitures** | | | | | |
| Fines | 232,966 | 281,816 | 223,509 | 260,000 | 260,000 |
| Traffic School | 87,305 | 66,240 | 57,600 | 90,000 | 60,000 |
| **Total Fines & Forfeitures** | **320,271** | **348,056** | **281,109** | **350,000** | **320,000** |
| **Miscellaneous** | | | | | |
| Rents and Concessions | 5,634 | 1,219 | - | - | - |
| Sale of AF History Books | 344 | 212 | 194 | 300 | 300 |
| Safe Sidewalk Funds | 763 | - | - | - | 200 |
| Recycling Revenue | 110 | 2,586 | 288 | 500 | 500 |
| Youth Council | 1,680 | 1,325 | 870 | 2,000 | 1,000 |
| Donations-Library | 40 | - | - | - | - |
| Donations-Parks | 5,000 | - | - | - | - |
| Donations-Police | 560 | 14,740 | - | - | - |
| Donations-Fire | - | 1,245 | 4,000 | 4,000 | - |
| Donations-Senior Citizens | - | 6,500 | - | - | - |
| Donations-Other | 5,605 | - | 1,316 | - | - |
| Purchasing Card Rebate | - | 27,671 | 27,610 | 32,584 | 20,000 |
| Other Revenue | 86,655 | 76,076 | 5,000 | 12,929 | 13,000 |
| Police Revenue | - | - | 29,592 | 40,000 | 30,000 |
| Over & Short | (49) | (64) | - | - | - |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# General Fund Revenue Detail

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Developer Contributions-St Lights | 123,909 | 269,617 | - | - | - |
| **Total Miscellaneous** | **230,251** | **401,127** | **68,870** | **92,313** | **65,000** |
| **Use of Money & Property** | | | | | |
| Interest Earnings | 93,377 | 133,355 | 106,845 | 130,000 | 90,000 |
| Sale of Capital Assets | 4,500 | - | 575 | - | - |
| Police/Courts Building Lease | 445,434 | 443,250 | 438,400 | 445,000 | 442,775 |
| Cell Tower Lease | - | - | 33,447 | 31,000 | 31,000 |
| **Total Use of Money & Property** | **543,311** | **576,605** | **579,267** | **606,000** | **563,775** |
| **Transfers In** | | | | | |
| Transfer From Perpetual Care | 1,753 | 7,254 | 11,229 | 9,000 | 9,000 |
| Transfer From RDA | 58,000 | 72,877 | - | - | 42,403 |
| Transfer From Capital Projects | - | - | - | - | 2,000,000 |
| Transfer From Park Impact Fee | - | - | 290,633 | 290,633 | - |
| **Total Transfers In** | **59,753** | **80,131** | **301,862** | **299,633** | **2,051,403** |
| **TOTAL REVENUES** | **$ 23,277,864** | **$ 23,162,662** | **$ 24,411,940** | **$ 24,942,983** | **$ 24,769,482** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# General Fund Expenditure Summary

## BY FUNCTION AND DEPARTMENT

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **EXPENDITURES** | | | | | |
| **General Services** | | | | | |
| Executive | $ 44,275 | $ 51,900 | $ 51,893 | $ 64,062 | $ 46,171 |
| Legislative | 155,755 | 155,268 | 154,968 | 190,335 | 183,410 |
| Legal | 375,220 | 386,151 | 397,073 | 411,250 | 432,850 |
| Administration | 1,454,247 | 1,489,929 | 1,259,969 | 1,449,145 | 1,320,031 |
| Information Technology | 230,696 | 297,801 | - | - | - |
| **Total General Services** | **2,260,193** | **2,381,049** | **1,863,903** | **2,114,792** | **1,982,462** |
| **Community Services** | | | | | |
| Community Services Admin | - | - | 282,159 | 355,802 | 410,329 |
| Parks & Boat Harbor | 1,065,461 | 924,896 | 896,579 | 1,121,120 | 965,498 |
| Cemetery | 623,431 | 516,547 | 502,586 | 538,071 | 507,171 |
| Library & Literacy Center | 932,670 | 931,760 | 995,765 | 1,075,405 | 1,005,158 |
| **Total Community Services** | **2,621,562** | **2,373,203** | **2,677,089** | **3,090,398** | **2,888,156** |
| **Public Safety** | | | | | |
| Police | 5,508,642 | 5,379,431 | 5,911,079 | 6,427,492 | 6,843,066 |
| Fire | 3,811,009 | 4,098,121 | 5,125,940 | 5,654,681 | 5,632,392 |
| **Total Public Safety** | **9,319,651** | **9,477,552** | **11,037,019** | **12,082,173** | **12,475,458** |
| **Public Works** | | | | | |
| Public Works Administration | 168,483 | 290,620 | 301,881 | 332,210 | 332,749 |
| Streets | 1,559,485 | 1,525,637 | 1,650,826 | 1,713,309 | 1,454,241 |
| Building Maintenance | 910,303 | 974,708 | 958,386 | 1,033,619 | 982,443 |
| Building Inspection | 707,622 | 796,962 | 838,114 | 902,397 | 896,060 |
| Engineering | 733,955 | 753,737 | 662,926 | 809,218 | 1,004,226 |
| **Total Public Works** | **4,079,848** | **4,341,664** | **4,412,133** | **4,790,753** | **4,669,719** |
| **Recreation** | **660,022** | **636,285** | **632,782** | **689,968** | **637,827** |
| **Planning** | **251,483** | **293,994** | **311,445** | **320,456** | **333,176** |
| **Citizens Committees** | **132,852** | **99,910** | **114,799** | **132,289** | **118,979** |
| **Transfers Out** | | | | | |
| Transfer to Fitness Center Fund | 489,213 | 622,198 | 679,621 | 652,043 | 750,135 |
| Transfer to Celebration Fund | - | - | 20,335 | 10,721 | 20,000 |
| Transfer to Debt Service Fund | 1,385,975 | 354,939 | - | - | - |
| Transfer to Meadows SID Fund | - | 70,000 | - | - | - |
| Transfer to Capital Projects Fund | 2,565,288 | 1,593,741 | 875,457 | 842,367 | 394,706 |
| Transfer to Capital Equipment | 384,203 | 268,521 | 160,893 | 222,488 | 202,488 |
| Transfer to Culinary Water Fund | 22,727 | - | - | - | - |
| Transfer to Sanitation Fund | 112,459 | - | - | - | - |
| Transfer to Broadband Fund | - | 251,723 | 346,985 | 275,810 | 296,376 |
| Transfer to Fleet Capital Fund | 163,951 | 288,865 | - | - | - |
| **Total Transfers Out** | **5,123,816** | **3,449,987** | **2,083,291** | **2,003,429** | **1,663,705** |
| **TOTAL EXPENDITURES** | **$ 24,449,427** | **$ 23,053,644** | **$ 23,132,461** | **$ 25,224,258** | **$ 24,769,482** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Executive

## DEPARTMENT SUMMARY

The executive of the City is the Mayor who, in conjunction with the City Council, provides governance of the City. The Mayor is also responsible for the operations of the City and has appointed a City Administrator to manage

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Wages & Salaries | $ 25,295 | $ 34,295 | $ 36,232 | $ 37,362 | $ 38,471 |
| Travel Allowance | 4,119 | 4,200 | 4,200 | 4,200 | 4,200 |
| Education and Travel | 1,335 | 877 | - | 1,500 | 1,500 |
| Auditing | 10,000 | 11,172 | 10,461 | 12,000 | - |
| Public Relations | 606 | - | - | 5,000 | - |
| Other | 2,920 | 1,356 | 1,000 | 4,000 | 2,000 |
| **TOTAL EXECUTIVE** | **$ 44,275** | **$ 51,900** | **$ 51,893** | **$ 64,062** | **$ 46,171** |

## DEPARTMENT PERSONNEL

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Mayor | 0.50 | 0.50 | 0.50 | 0.50 | - |
| **Total Executive Positions** | **0.50** | **0.50** | **0.50** | **0.50** | **-** |

## STAFFING NOTES

The Mayor's compensation is a set amount and not dependent on the number of hours worked. Therefore, the position has been counted as 0.50 FTE on this schedule.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Legislative

## DEPARTMENT SUMMARY

The legislative department is comprised of the elected City Council. The purpose of the City Council is to provide governance in conjunction with the Mayor of the City. Special projects in the fund include dues for the Utah League of Cities and Towns, Utah Lake Commission, and Mountainland Association of Governments.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Wages & Salaries | $ 92,612 | $ 92,128 | $ 95,200 | $ 100,335 | $ 100,710 |
| Travel Allowance | 15,022 | 14,999 | 14,999 | 15,000 | 15,000 |
| Education and Travel | 4,488 | 3,678 | 40 | 6,000 | 6,000 |
| Planning Commission | 777 | 2,643 | 1,831 | 2,800 | 2,800 |
| Other Council Unassigned | 3,487 | 685 | 1,500 | 2,500 | 2,500 |
| Special Projects | 39,369 | 41,135 | 41,398 | 60,000 | 56,400 |
| Youth Council | - | - | - | 2,200 | - |
| Equipment | - | - | - | 1,500 | - |
| **TOTAL LEGISLATIVE** | **$ 155,755** | **$ 155,268** | **$ 154,968** | **$ 190,335** | **$ 183,410** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| City Council Members | 2.50 | 2.50 | 2.50 | 2.50 | - |
| **Total Legislative Positions** | **2.50** | **2.50** | **2.50** | **2.50** | **-** |

## STAFFING NOTES

The Council's compensation is a set amount and not dependent on the number of hours worked. Therefore, the City Council has been counted as 2.50 FTE on this schedule.






Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Legal

## DEPARTMENT SUMMARY

The Legal budget is established to process expenditures for legal and attorney purposes. All attorneys for the City currently act on a contract basis. The attorney services that are expensed out of this department include: Personnel attorneys, defense attorneys for criminal actions (when the accused cannot provide an attorney for themselves), conflict attorneys for criminal actions (when there is a conflict between the defense attorney and another individual), the City's criminal attorney, and the City's civil attorney. Other attorneys engaged by the City are used on an as-needed basis and are expended out of different funds. Specialized attorneys used include broadband attorneys and water right

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Youth Court | $ 281 | $ 941 | $ - | $ 2,000 | $ 2,000 |
| Attorney-Civil | 130,112 | 132,000 | 132,000 | 140,000 | 140,000 |
| Attorney-Special Assignments | 8,033 | 10,014 | 15,000 | 30,850 | 30,850 |
| Attorney-Public Defender | 77,253 | 77,610 | 77,215 | 80,000 | 80,000 |
| Attorney-Criminal | 159,541 | 165,586 | 172,858 | 158,400 | 180,000 |
| **TOTAL LEGAL** | **$ 375,220** | **$ 386,151** | **$ 397,073** | **$ 411,250** | **$ 432,850** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Administration

## DEPARTMENT SUMMARY

The administration department encompasses administrative, financial, utility billing, business licensing, and recorder functions. The City Administrator administers the day-to-day functions of the City and makes executive-level decisions regarding operations. The finance staff is responsible for the fiscal responsibilities of the City, including accounting, payroll, purchasing, accounts receivable, treasury, accounts payable, bonding, and budgeting. The recording function is responsible for custody and maintenance of all City records. Finally, the utility billing function is responsible for all incoming payments, utility and business license maintenance management, front desk reception and customer service, along with ensuring all utility billing accounts are billed monthly in an accurate and timely manner.

During fiscal year 2019, the Community Services department was formed. The former Assistant to the City Administrator became the Community Services Director, and the Human Resources, Library, Parks, and Cemetery divisions were moved into this department. The fiscal year 2020 budget was the first year a separate budgetary department for Community Services administration was formed, which will include the Community Services Director, Human Resources, and Communications.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Administration

## DEPARTMENT ACCOMPLISHMENTS

**Administration**

- Strategic Goals—Developed work plan and monitoring for the City Council's FY2020 Strategic Goals and formation of the FY2021 Strategic Goals.
- Citizen Survey—Completed Citizen Survey to identify areas of success and areas in need of improvement.
- Secured financing for Fire Station 52 project.

**City Recorder**

- Implemented Municipal Code Online allowing updates to the Municipal Code as ordinances are passed rather than waiting until codified.
- Scanned all Planning Commission minutes into a searchable database.
- Record Digitization—Continued digitizing City records and audio recordings.

**Finance**

- CAFR—Received Certificate of Achievement for Excellence in Financial Reporting for the 2019 Comprehensive Annual Financial Report.
- PAFR—Received Award for Outstanding Achievement in Popular Annual Financial Reporting for the 2019 Popular Annual Financial Report (Citizen's Report).
- 2020 Budget—Received Distinguished Budget Presentation Award for the City's 2020 budget book.
- SciQuest Online Procurement Tool—Received training on SciQuest, the state's online procurement website and have posted multiple bid postings to this site.
- Implementation of ACH Payment Option to vendors.
- Initiated e-signature process for invoice and purchase order approval.
- Online Paycheck Stubs/W-2's—Implemented online paycheck stubs and stopped printing physical paycheck stubs.
- Integrated a new business license program to increase efficiencies of workflow and allow online payments and applications.

## DEPARTMENT GOALS

**City Recorder**

- Digitization of City Records—Scan all City Council and Planning Commission minutes; scan all Ordinances, Resolutions, and agreements.

**Finance/Utility Billing**

- Investment Policy—Revise the investment policy and diversify the city's investment portfolio.
- Purchasing Policy—Work with departments and the City Council to revise the City's current purchasing policy.
- Online Timekeeping/W2-s—Implement online timecards and W2's through the City's accounting software once the City's accounting server is upgraded.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Administration

- Online Department Access to Accounting Information—Implement the online portal of the City's accounting system to allow department real-time access to information once the City's accounting server is upgraded.
- Identify Additional Policies Needed—Identify any additional financial policies that are needed/recommended by the State Auditor's Office, GFOA (Government Finance Officers Association), and IRS (Internal Revenue Service). Depending on number, complete policy creation.
- Create paperless accounting system to more efficiently access accounting records and reduce carbon footprint.

## DEPARTMENT OPERATING INDICATORS

| City Recorder | 2018 | 2019 |
|---|---|---|
| Number of Action Items | 268 | 295 |
| Number of Discussion Items | 73 | 67 |
| Hours of Council Meetings | 86 | 93 |
| Resolutions | 45 | 50 |
| Ordinances | 53 | 84 |
| Approved Annexations | 4 – 58.172 acres | 10 – 222.864 acres |
| Recorded Annexations | 6 – 60.040 acres | 9 – 220.026 acres |
| Annexations Started, but Not Recorded | 7 – 193.547 acres | 6 – 76.152 acres |

| Finance | 2018 | 2019 |
|---|---|---|
| Number of Utility Billing Accounts | 8,974 | |
| Number of Utility Bills Created | 97,649 | |
| Business Licenses Issued | 1,268 | |
| Cash Receipts Processed (Excluding Online) | 34,347 | |
| Accounts Payable Checks Issued | 4,318 | 5,367 |
| Invoices Processed | 12,324 | |
| Payroll Issued | 12,051 | 12,438 |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Administration

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 994,990 | $ 1,061,042 | $ 838,914 | $ 969,352 | $ 951,729 |
| Promotional | 219 | - | - | - | - |
| Subscriptions and Memberships | 6,099 | 6,652 | 6,200 | 6,206 | 6,167 |
| Ordinances and Publications | 21,784 | 18,672 | 27,020 | 25,000 | 25,000 |
| Education and Travel | 6,123 | 5,872 | 356 | 7,750 | 6,500 |
| Office Supplies and Expense | 17,873 | 8,025 | 8,144 | 9,000 | 9,000 |
| Telephone | 9,890 | 8,712 | 2,160 | 2,160 | 2,160 |
| Professional and Technical | 39,269 | 47,500 | 59,960 | 59,960 | 42,000 |
| Auditing | - | - | - | - | 12,000 |
| Communications | 25,986 | 41,088 | - | - | - |
| Employee Appreciation | 11,800 | 16,431 | - | - | - |
| Human Resources | 5,517 | 5,771 | - | - | - |
| Human Resources-Health/Wellness | 16,869 | 10,701 | - | - | - |
| Department Expense and Supplies | 37,223 | 35,705 | 24,179 | 35,395 | 12,000 |
| Insurance Premium | 204,833 | 206,711 | 204,713 | 217,300 | 217,300 |
| Postage and Shipping | 6,600 | 7,247 | 5,708 | 8,000 | 6,000 |
| Credit Card/Bank Processing Fees | 11,360 | 7,800 | 10,028 | 10,000 | 10,000 |
| Election Expense | 35,812 | - | 25,491 | 54,000 | - |
| Recording Fees | - | - | 4,388 | 2,300 | 3,000 |
| Admin Charge-Broadband | - | - | 4,692 | 4,693 | 2,151 |
| Internal Charges-Fleet Operations | 2,000 | 2,000 | 1,392 | 1,400 | 1,000 |
| Internal Charges-Technology | - | - | 36,624 | 36,629 | 14,024 |
| **TOTAL ADMINISTRATION** | **$ 1,454,247** | **$ 1,489,929** | **$ 1,259,969** | **$ 1,449,145** | **$ 1,320,031** |

## BUDGET NOTES

1) Community Services Director and Human Resources Manager were moved to the Community Services Adminstration department beginning fiscal year 2019-20. A portion of the operating expenditures, including communications, employee appreciation, human resources and health and wellness were also moved.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Administration

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| City Administrator | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Assistant to the City Administrator | 1.00 | - | - | - | - |
| Community Services Director | - | 1.00 | - | - | - |
| Finance Director | 1.00 | 1.00 | 1.00 | 1.00 | - |
| City Recorder | 1.00 | 1.00 | 1.00 | 1.00 | - |
| UB/Business Licensing Supervisor | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Accountant | - | - | 1.00 | 1.00 | - |
| Administrative Assistant | 1.00 | 1.00 | 1.00 | 0.50 | (0.50) |
| Human Resources Manager | 1.00 | 1.00 | - | - | - |
| Accounts Payable Specialist | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Payroll Coordinator | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Utility Billing Clerk | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Deputy City Recorder | 0.40 | 0.40 | 0.40 | 0.40 | - |
| Utility Billing Clerk | 1.60 | 1.60 | 1.60 | 1.60 | - |
| Accounting Intern | 0.34 | 0.34 | - | - | - |
| **Total Administration Positions** | **12.34** | **12.34** | **11.00** | **10.50** | **(0.50)** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services - Administration

## DEPARTMENT SUMMARY

The Community Services department focuses building and supporting the social infrastructure needed for a healthy, well-rounded community. This social infrastructure are those public spaces that allow people to gather, communicate, recreate, socialize, learn and bond in safe and enjoyable ways. The department primarily focuses on developing and maintaining parks, trails, a cemetery, and a library. The Community Services Director also provides some internal services, such as Human Resources and Communications, for the City.

## DEPARTMENT ACCOMPLISHMENTS

- Park Rules—City passed an ordinance officially outlining park rules. Establishing rules for city parks are important for the preservation of park grounds and safety of patrons. They were not intended to be overly restrictive.
- Communication Policy—City approved an official communication policy that dictates how the city responds to requests from the media, public vs private use of social media by employees, standardizing website design, and establishing user agreements for social media use.
- Personnel Policy—Reviewed the personnel policy and procedures manual for employees to ensure all practices are up to date.
- Fire Station Bond Video—Produced two videos to educate the public regarding the city's intent to bond for a second fire station to help educate the public on the issue.
- New logo—After over a year of review the city was able to finalize our brand and new logo. The city hired Jibe Media to identify our brand and determine a logo that best fit our brand. As part of the process Jibe engaged a number of focus groups, including one made up completely of residents.
- Communication Specialist—with communication a top priority this year city council approved funds to hire a part time communication specialist that would focus on social media, website improvement, and videos and graphics to help communication the good, including all the work the city is doing for its residents. With this position filled we were able to film the mayor's state of the city address as well as a video promoting our city hall for virtual weddings during the coronavirus social distancing.
- Performance Evaluations—This year the city transitioned performance evaluations completely online using NEOGOV. This will improve the efficiency of the evaluation process and provide better and more real time feedback to employees.

## DEPARTMENT GOALS

- Update personnel policy
- Update tree trimming policy
- Implement new logo
- Impellent a public report a concern software
- Update the city website

## DEPARTMENT OPERATING INDICATORS

| Community Services - Administration | 2018 | 2019 |
|---|---|---|
| Total city social media posts (not including dept. specific platforms) | 377 | 405 |
| Employee Turnover Rate | 10% | 14% |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services-Administration

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ - | $ - | $ 213,769 | $ 237,741 | $ 251,243 |
| Promotional | - | - | - | 3,500 | 38,298 |
| Subscriptions and Memberships | - | - | 30 | 294 | 320 |
| Education and Travel | - | - | 610 | 2,250 | 2,500 |
| Inclusion Training | - | - | - | - | 2,500 |
| Office Supplies and Expense | - | - | 1,186 | 2,000 | 500 |
| Telephone | - | - | 960 | 960 | 960 |
| Communications | - | - | 30,496 | 60,550 | 30,110 |
| Community Events | - | - | 2,480 | 2,500 | 2,500 |
| Employee Appreciation | - | - | 9,570 | 20,000 | 20,000 |
| Human Resources | - | - | 2,752 | 5,536 | 16,160 |
| Human Resources-Health/Wellness | - | - | 14,990 | 14,400 | 36,150 |
| Department Supplies and Expense | - | - | - | 750 | 2,250 |
| Admin Charge-Broadband | - | - | 720 | 722 | 520 |
| Internal Charges-Technology | - | - | 4,596 | 4,599 | 6,318 |
| **TOTAL COMMUNITY SERVICES** | **$ -** | **$ -** | **$ 282,159** | **$ 355,802** | **$ 410,329** |

## BUDGET NOTES

1) Community Services Director and Human Resources Manager were moved to the Community Services Adminstration department beginning fiscal year 2019-20. A portion of the operating expenditures, including communications, employee appreciation, human resources and health and wellness were also moved.

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Community Services Director | - | - | 1.00 | 1.00 | - |
| Human Resources Manager | - | - | 1.00 | 1.00 | - |
| Communications Specialist | - | - | 0.50 | 0.50 | - |
| **Total Community Services Positions** | | **-** | **2.50** | **2.50** | **-** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services – Parks & Boat Harbor

## DEPARTMENT SUMMARY

The Parks division is responsible for the maintenance of the parks system throughout the City. The Parks division also manages the grounds of less traditional open spaces, such as those at City facilities, park strips, flowers on Main Street, and even the City's freeway interchanges.

## DEPARTMENT ACCOMPLISHMENTS

- Robinson Playground—This PARC funded playground replaced a 15-year-old playground that is heavily used and highly visible from AF Main St. When you visit please note the PARC logo stamped directly onto the playground panel.
- Rotary Playground—This city funded playground replaced a large and heavily used 15-year-old playground with a unique and colorful design more commonly expected in today's parks.
- Hindley Parking Lot—Hindley park was created in 2000, but the dirt parking lot was never finished, until now. With this project we finally completed the park with a beautifully paved parking lot with expanded sidewalk, proper drainage, and 41 stalls. Funded by PARC tax funds.
- Quail Cove Entrance—Quail Cove Amphitheater is a historic place built during the great recession of the 1930's. Through PARC funds we have been able to add a paved parking lot last year and now were able to redo the entrance this year, leveling and landscaping the ground, adding sidewalk to the roundabout, and removing the chain-link fencing. Funded by PARC tax funds.
- Evergreen Park Irrigation—Evergreen Park is one of the larger and more heavily utilized parks it he community. The sprinkler system was old and had always struggled to provide proper watering for the space. This year we renovated the irrigation system, ensuring a healthier grass to play on.
- Art Dye Sports Complex—We were able to complete the Art Dye Sports Complex which added 8 acres of additional recreation grass space, additional parking, and two more baseball fields. The baseball complex also received new infield mix for all fields, new sprinklers, state of the art lighting, and a scorekeeper tower with lunch area.

## DEPARTMENT GOALS

- Begin to quantify and map park equipment, which includes sprinkler heads, trees, benches, etc.
- Determine basic operational metrics, such as cost per FTE and cost per acre, to better plan for growth in the Parks division.
- Work with Parks and Trails committee to update the Parks and Trails master plan.
- Work with Parks and Trails committee to submit projects for PARC tax funding.

## DEPARTMENT OPERATING INDICATORS

| Parks and Boat Harbor | 2018 | 2019 |
|---|---|---|
| Acres of Landscaped Parks | 120 | 132 |
| Total Acres of Park Space (excluding Fox Hollow golf course and Meadows shopping center wetlands) | 222 | 235 |
| Boat Harbor Passes Sold | 85 | 125 |
| Playgrounds | 27 | 27 |
| Swing sets | 10 | 10 |
| Number of Parks | 30 | 30 |
| Existing Bike/Shared Use Pathways | 6.76 | 6.76 |

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# Community Services - Parks

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 685,741 | $ 646,493 | $ 596,603 | $ 753,937 | $ 632,393 |
| Education and Travel | 3,349 | 2,216 | 1,811 | 3,500 | 3,500 |
| Mower Supplies & Maintenance | 13,465 | 18,876 | 22,396 | 13,800 | 20,000 |
| Building & Grounds Maintenance | 44,783 | 37,201 | 13,473 | 27,000 | 27,000 |
| Irrigation Repair & Maintenance | - | - | 27,800 | 27,800 | 27,800 |
| Utilities | 22,752 | 21,647 | 24,918 | 25,000 | 25,000 |
| Telephone | 5,162 | 5,116 | 4,565 | 5,920 | 5,440 |
| Clothing Allowance | 2,234 | 1,800 | 1,200 | 2,040 | 1,200 |
| Department Supplies | 26,884 | 10,097 | - | - | 3,500 |
| Interchange Landscaping | - | 4,901 | 9,700 | 15,700 | 6,000 |
| Christmas Decorations | 11,912 | 6,672 | 7,135 | 6,918 | 7,000 |
| Insurance Claims | - | 2,398 | - | - | - |
| Contract Maintenance | 31,937 | 29,580 | 33,765 | 33,200 | 33,400 |
| Chemical Toilets | 4,590 | 4,958 | 3,186 | 5,780 | 5,000 |
| Miscellaneous | 42,646 | 4,695 | 2,882 | 2,800 | - |
| Tree Purchase & Maintenance | 20,916 | 15,599 | 35,380 | 26,000 | 20,000 |
| City Wide Horticulture | - | 8,525 | 2,383 | 10,100 | 8,500 |
| Donation Expenditures | 4,532 | - | - | - | - |
| Admin Charge-Broadband | - | - | 360 | 361 | 1,901 |
| Internal Charges-Fleet Operations | 55,310 | 51,000 | 59,004 | 59,000 | 42,000 |
| Internal Charges-Technology | - | - | 2,808 | 2,802 | 5,193 |
| Park Furnishings | 10,774 | 7,560 | 11,636 | 17,000 | 12,000 |
| Improvements | 15,711 | 6,224 | - | 22,000 | 20,000 |
| Equipment Purchases | 6,299 | 5,106 | 2,528 | 6,000 | 6,000 |
| **TOTAL PARKS** | **$ 1,008,997** | **$ 890,664** | **$ 863,533** | **$ 1,066,658** | **$ 912,827** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Parks Superintendent | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Parks Supervisor | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Horticulture Specialist | - | 1.00 | 1.00 | 1.00 | - |
| Parks Maintenance Operator | 4.00 | 4.00 | 2.00 | 2.00 | - |
| Parks Maint Operator/Arborist | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Parks Laborer | 4.85 | 4.85 | 8.79 | 5.10 | (3.69) |
| **Total Parks Positions** | **11.85** | **12.85** | **14.79** | **11.10** | **(3.69)** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services - Boat Harbor

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 42,626 | $ 21,237 | $ 24,871 | $ 36,640 | $ 37,705 |
| Building & Grounds Maintenance | - | - | 2,000 | 2,260 | 2,260 |
| Restroom Maintenance | - | - | 1,954 | 850 | 1,000 |
| Telephone | 308 | 735 | 890 | 1,180 | 2,818 |
| Department Expense and Supplies | 7,396 | 4,360 | 1,817 | 1,492 | 1,492 |
| Credit Card/Bank Processing Fees | 1,555 | 1,021 | 1,514 | 2,040 | 2,040 |
| Admin Charge-Broadband | - | - | - | - | 356 |
| Improvements | 4,579 | 6,879 | - | 10,000 | 5,000 |
| **TOTAL BOAT HARBOR** | **$ 56,464** | **$ 34,232** | **$ 33,046** | **$ 54,462** | **$ 52,671** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Boat Harbor | 1.38 | 1.38 | 1.38 | 1.38 | - |
| **Total Boat Harbor Positions** | **1.38** | **1.38** | **1.38** | **1.38** | **-** |


American Fork Boat Harbor

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services – Cemetery

## DEPARTMENT SUMMARY

The Cemetery division is responsible for the care and maintenance of the Cemetery grounds, handling burial lot purchases, and opening/closing of lots.

## DEPARTMENT ACCOMPLISHMENTS

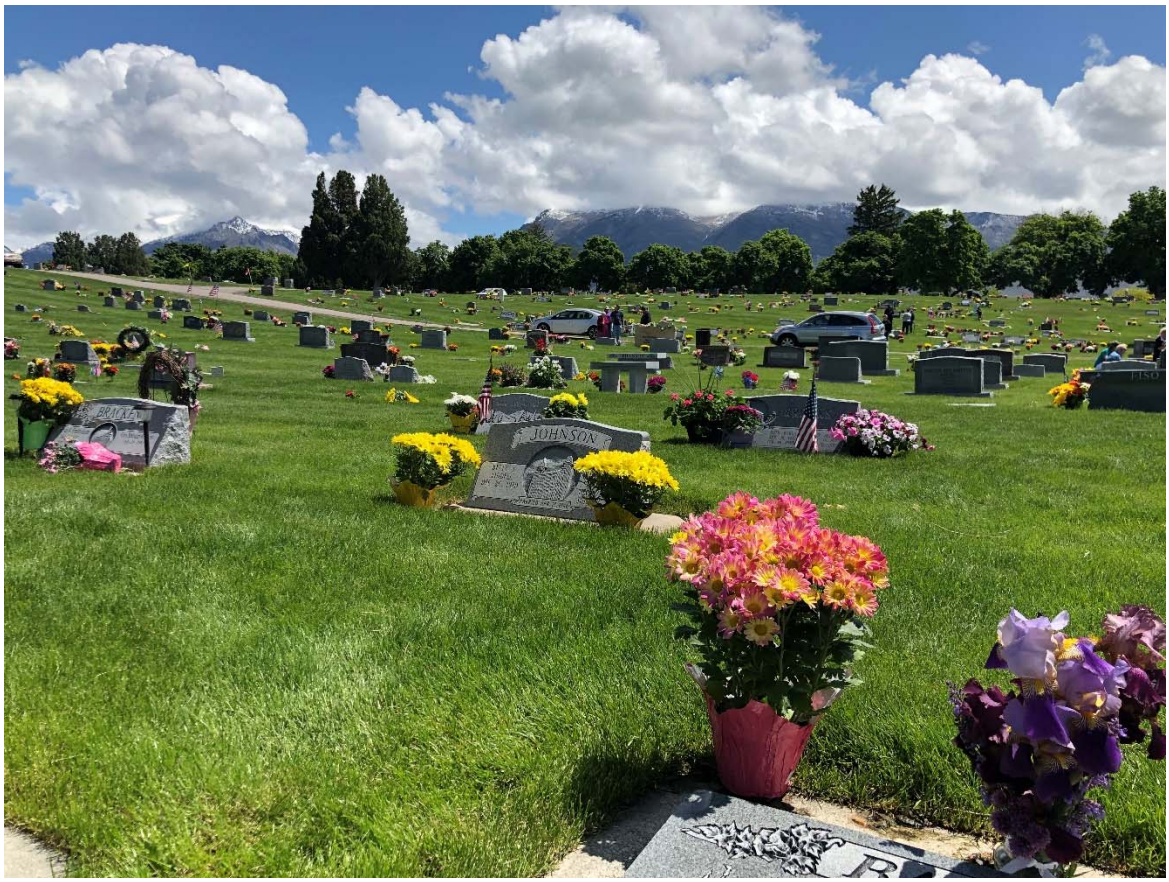
- Update irrigation system wiring
- Replaced cemetery street signs
- 2019 Memorial Day Program

## DEPARTMENT GOALS

- Repair portions of historic stone wall.
- Identify opportunities for Cemetery expansion.
- Begin engineering work to improve road north of Cemetery facility.

## DEPARTMENT OPERATING INDICATORS

| Cemetery | 2018 | 2019 |
|---|---|---|
| Burials | 163 | 166 |
| Lot Sales | 121 | 106 |




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services - Cemetery

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 492,628 | $ 386,929 | $ 348,453 | $ 401,327 | $ 391,093 |
| Education and Travel | 350 | 793 | 734 | 950 | 1,500 |
| Office Supplies and Expense | - | - | - | - | 3,800 |
| Small Engine Repair | 10,379 | 17,384 | 17,146 | 20,000 | 17,500 |
| Tools and Equipment | 29,033 | 26,969 | 32,483 | 26,650 | 24,650 |
| City-Wide Horticulture | 9,587 | - | - | - | - |
| Tree Purchase & Maintenance | - | 14,400 | 5,829 | 13,100 | 13,000 |
| Telephone | 3,329 | 2,740 | 1,920 | 1,680 | 1,680 |
| Employee Appreciation | - | 780 | 298 | - | - |
| Clothing Allowance | 1,703 | 1,400 | 600 | 1,075 | 600 |
| Department Expense and Supplies | 22,978 | 9,591 | 4,270 | 9,800 | 2,430 |
| Headstone Replacement | 4,229 | 2,531 | 2,971 | 4,500 | 3,000 |
| Flag Rotation & Maintenance | - | 3,357 | 7,635 | 6,945 | 6,500 |
| Christmas Decorations | - | - | 1,607 | 1,250 | 1,250 |
| Credit Card/Bank Processing Fees | 2,061 | 2,547 | 2,041 | 3,400 | 2,500 |
| Admin Charge-Broadband | - | - | 1,080 | 1,083 | 853 |
| Internal Charges-Fleet Operations | 30,000 | 15,325 | 15,000 | 15,000 | 13,000 |
| Internal Charges-Technology | - | - | 6,408 | 6,411 | 6,815 |
| Improvements | 12,162 | 18,574 | 5,211 | 16,000 | 10,000 |
| Equipment Purchases | 4,992 | 13,227 | 8,900 | 8,900 | 7,000 |
| Internal Charges-Fleet Capital | - | - | 40,000 | - | - |
| **TOTAL CEMETERY** | **$ 623,431** | **$ 516,547** | **$ 502,586** | **$ 538,071** | **$ 507,171** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Cemetery Superintendent | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Cemetery Supervisor | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Park Maintenance Operator | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Horticulture Specialist | 1.00 | - | - | - | - |
| Administrative Assistant | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Laborer | 2.24 | 2.31 | 2.31 | 1.88 | (0.43) |
| **Total Cemetery Positions** | **7.24** | **6.31** | **6.31** | **5.88** | **(0.43)** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services – Library

## DEPARTMENT MISSION

*Engage the community by connecting people, information, and technology to create an environment that inspires learning and discovery.*

## DEPARTMENT SUMMARY

American Fork Library's values: Hope, Community, Life-Long Learning, Respect. We seek to give our community members access, regardless of their circumstances. This means free use of our space, our collection (both digital and physical), our programs, and our one-on-one professional assistance. We serve American Fork residents as we provide reference and independent learning services; actively meet the needs of the community for timely, accurate information in their pursuit of job-related, personal interest, and education objectives; and encourage children to discover the excitement of learning and exploring a wide range of educational opportunities programs and services; and to emphasize high interest, popular materials in a variety of formats for persons of all ages.

The Bryan McKay Eddington Learning Center provides one-on-one reading, tutoring, and homework help to K-12 students throughout the community. The tutoring is provided as a public service from the City, as an ongoing part of the community's commitment to enhance basic literacy skills of all our citizens. The Learning Center helps students with homework in all subjects. The Learning Center has previously been budgeted separately, but was included in the Library budget for fiscal year 2021.

## DEPARTMENT ACCOMPLISHMENTS

- Quality Library Selection by Utah State Library for the second time—The library received this prestigious award as a result of high standards of our collection, programs, and partnerships in the American Fork community.
- Summer Reading 2019—Sign up numbers increased by 196%. Families enjoyed the simplified the program that encouraged them to participate together. The Library also found success by reaching out more to teens and adults.
- Aware AF—The U.S. National Library of Medicine awarded the American Fork Library with a grant to create a program that promotes Mental Health Awareness and Treatment. The grant funded professional therapists to address challenging topics such as suicide, anxiety, and developing healthy relationships. Teens and parents were able to get answers to their questions and discover local resources for further treatment. In addition, the grant allowed the library to add a significant number of non-fiction books on mental health for check out.
- Non-traditional Items—With help from the PARC grant and Friends of the Library, patrons can now check out new types of materials. These include literacy kits for preschool-aged children, games, book club sets that include supplementary materials, and kindles with all titles from the Battle of the Books program.
- Writing Events—Professional authors joined the library for a Science Fiction writing panel where they gave guidance to young writers. Through this connection, short stories written by our patrons are now in the process of being published as an ebook.
- eBooks and eAudiobooks—Checkouts for downloadable eBooks & eAudiobooks increased by 25,000, with demand increasing daily. Patrons checked out around 80,000 electronic books in all.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services – Library

- Children's Library—Programming opportunities and participation increased this year as the library expanded story time from 8 to 10 months. In order to keep up with demand, the library received a PARC grant to expand the area to include a Children's Programming Room. Thanks to the PARC grant committee and the American Fork City Council for catching the vision of what Children's Programming brings to our community, especially to the youngest of American Fork Library's patrons.
- Updated Conference Room—After a grant from Library Services and Technology allowed the library to add a projector and screen last year, the city council provided funds to update the conference table and chairs. The conference room now features a brand new table with plug in jacks that connect to the projector and allow for charging. The technology is easy and is constantly in use by patrons, library staff, and city committees.
- Spanish Resources—The library's new Spanish Outreach clerk has helped connect the library and Learning Center to the Latino community in American Fork. The Learning Center also hired a part-time ESL teacher who has revitalized the program. Interest and attendance have continued to rise since he took over last fall.
- New Carpet—In November of 2019, the first floor of the library was re-carpeted to provide a clean, new look. The project stayed on schedule and has been well received by the public.

## DEPARTMENT GOALS

- Access to Books and Materials—Provide and promote excellent materials and resources. Respond to requests for specific items, including digital content.
- Build the Community—Make American Fork a better place. Collaborate with local organizations to enhance services. Provide a central location for events, programs, performances, classes, discussions, and free time. Create and maintain spaces at the Library that are welcoming, equipped with current technology, and available to all groups. Continue to produce a vibrant online presence.
- Personal engagement—Interact as Library staff to satisfy the needs and expectations of patrons. Actively serve the residents of American Fork in a friendly, helpful, and engaging manner.
- Basic Literacy Skills—Enhance basic literacy skills to empower individuals, strengthen families, and build community. Explore partnership with Alpine School District in this endeavor.
- Tutoring—Provide one-on-one tutoring services to K-12 students who need help to improve grade level reading and homework.
- ESL Classes—Offer an evening class taught two times per week by trained and qualified instructors for English as a Second Language (ESL).
- Update Space—Continue the re-carpeting project on the 2nd floor and in the Learning Center. Touch up the paint and update study rooms throughout.

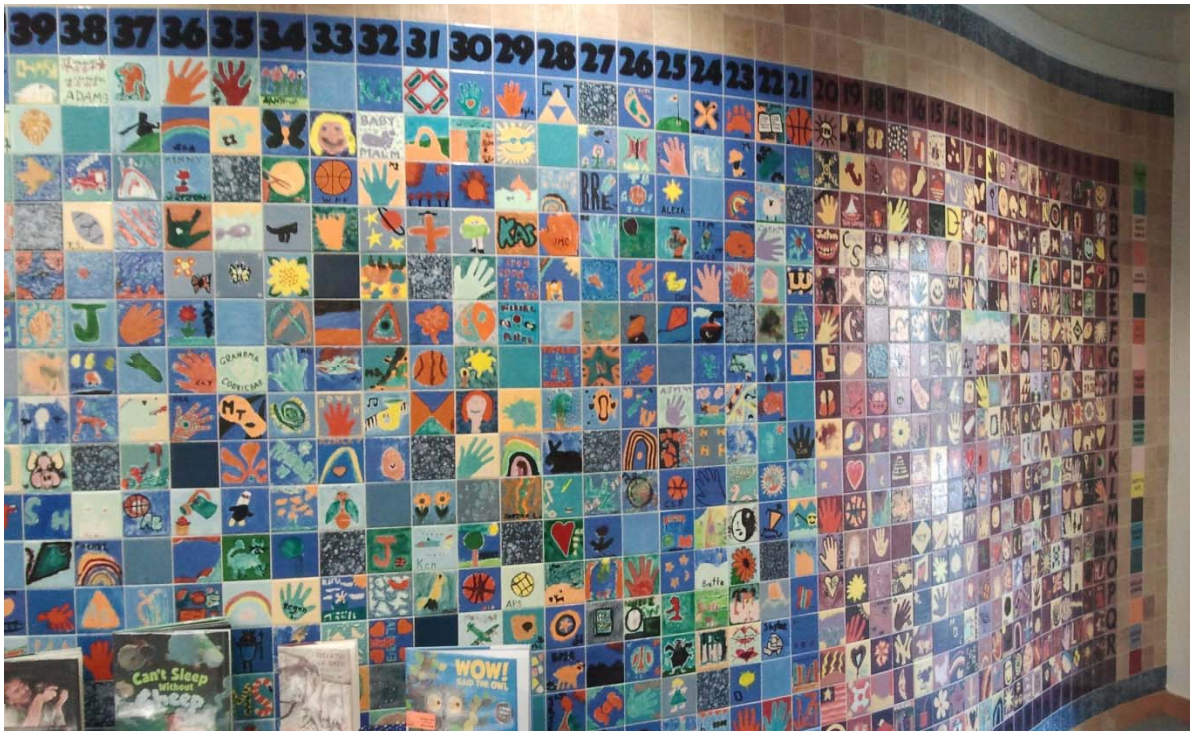
Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services – Library

## DEPARTMENT OPERATING INDICATORS

| Library | 2018 | 2019 |
|---|---|---|
| Registered Users | 19,997 | 22,517 |
| Items Checked Out | 335,532 | 388,790 |
| Physical Volumes | 87,278 | 80,255 |
| Teen Programs | 30 | 70 |
| Public Computer Internet Sessions | 12,480 | 12,753 |
| Wireless Network Sessions | 7,291 | 33,884 |
| Library Volunteer Hours | 2,718 | 4,942 |
| Downloadable Volumes | 45,763 | 101,854 |
| Library Program Attendance | 16,358 | 26,538 |
| Children's Programs | 412 | 470 |
| All Programs | 485 | 800 |
| Library Visits | 172,073 | 198,737 |

| Learning Center | 2018 | 2019 |
|---|---|---|
| Number of Visits | 6,344 | 6,910 |
| Volunteer Hours | 3,719 | 4,170 |
| Number of Days Open | 158 | 145 |
| ESL Students | 683 | 534 |
| ESL Hours Attended | 670 | 510 |
| ESL Volunteers | 432 | 345 |




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services - Library

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 693,698 | $ 700,197 | $ 700,983 | $ 751,403 | $ 776,553 |
| Audio/Visual | 4,580 | 4,984 | 4,073 | 6,180 | 6,180 |
| Subscriptions & Memberships | 2,609 | 2,498 | 4,372 | 3,065 | 3,030 |
| Non-Fiction Material | 31,789 | 14,907 | 13,106 | 24,600 | 22,000 |
| Fiction Material | 31,487 | 28,340 | 26,822 | 27,800 | 23,000 |
| Children's Material | 24,156 | 26,604 | 22,977 | 27,600 | 24,000 |
| Young Adult Fiction | 9,808 | 10,569 | 8,543 | 10,600 | 9,500 |
| Electronic Resources | 12,411 | 17,245 | 23,003 | 21,190 | 21,000 |
| Cataloging | - | - | - | - | 10,750 |
| Programs Expense and Supplies | 6,622 | 10,006 | 8,438 | 10,850 | 8,000 |
| Literacy | - | - | - | - | 3,500 |
| Education and Travel | 3,695 | 5,012 | 2,152 | 3,500 | 3,500 |
| Employee Appreciation | - | 758 | 569 | 600 | 660 |
| Office Supplies and Expense | - | - | - | - | 4,100 |
| Telephone | 6,380 | 5,241 | 480 | 480 | 480 |
| Department Expense and Supplies | 19,459 | 19,207 | 24,071 | 20,200 | 5,000 |
| Miscellaneous | 3,362 | 1,438 | 1,068 | 1,100 | - |
| Postage and Shipping | - | - | 5,620 | - | - |
| Credit Card/Bank Processing Fees | 1,952 | 1,946 | 1,296 | 2,000 | 2,000 |
| Maintenance Agreement | 35,622 | 32,983 | 160 | - | - |
| Admin Charge-Broadband | - | - | 6,504 | 6,498 | 2,221 |
| Internal Charges-Technology | - | - | 105,168 | 105,163 | 64,684 |
| Grant Expenditures | 8,238 | 9,700 | 4,273 | 8,000 | 8,000 |
| Equipment Purchases | 4,459 | 5,034 | 3,517 | 3,500 | 7,000 |
| **TOTAL LIBRARY** | **$ 900,327** | **$ 896,669** | **$ 967,195** | **$ 1,034,329** | **$ 1,005,158** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Director | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Technical Services/Assistant Directc | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Librarians | 5.00 | 5.00 | 5.00 | 5.00 | - |
| Literacy Center Coordinator | - | - | - | 0.60 | 0.60 |
| Literacy Center Clerk | - | - | - | 0.38 | 0.38 |
| Assistant Librarian | 0.30 | 0.30 | 0.40 | 0.40 | - |
| Clerks/Pages | 4.90 | 4.90 | 5.14 | 4.94 | (0.20) |
| **Total Library Positions** | **12.20** | **12.20** | **12.54** | **13.33** | **0.79** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Community Services - Literacy Center

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 28,039 | $ 29,796 | $ 27,551 | $ 36,576 | $ - |
| Education and Travel | - | - | - | 200 | - |
| Employee Appreciation | - | 522 | 60 | 600 | - |
| Department Expense and Supplies | 2,398 | 2,212 | 505 | 1,700 | - |
| Miscellaneous | 997 | 563 | - | - | - |
| Equipment Purchases | 909 | 1,998 | 454 | 2,000 | - |
| **TOTAL LITERACY CENTER** | **$ 32,343** | **$ 35,091** | **$ 28,570** | **$ 41,076** | **$ -** |

## BUDGET NOTES

1) Literacy Center department was combined with the Library department beginning fiscal year 2020-21.

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Coordinator | 0.60 | 0.60 | 0.60 | - | (0.60) |
| Assistant Coordinator | 0.60 | 0.60 | 0.30 | - | (0.30) |
| Math Tutor | - | - | 0.30 | - | (0.30) |
| **Total Literacy Center Positions** | **1.20** | **1.20** | **1.20** | **-** | **(1.20)** |




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety - Police

## DEPARTMENT MISSION

*Build Community, Enforce with Equity, Serve with Honor*

## DEPARTMENT SUMMARY

The American Fork Police Department consists of 43 sworn officers, 8 civilian employees, and 7 volunteers who serve a population of over 42,736 (American Fork—32,519 residents and Cedar Hills—10,217 residents). The Department operates using a Community Policing philosophy, which emphasizes building partnerships with citizens and community organizations. The American Fork Police Department is a full-service police agency that includes traditional uniformed patrol, investigations, community-oriented policing, school resource officers, K9, bicycle patrol, motors, SWAT, NOVA courses for elementary age students, Special Enforcement Drug RAD, and hostage negotiations. The Department handles approximately 33,000 calls a year, one of the highest in the County. The American Fork Police Department strives to provide excellence in every contact and to maintain a high level of professionalism.

## DEPARTMENT ACCOMPLISHMENTS

- **New K9s** - Through private funding of $20,000, the Department was able to add two Jagdterriers to the department. The donation was enough to cover the dog, training, equipment and food. The Jagdterriers are a smaller dog that will not be used to confront suspects or building clearing. The will be used for drug-related searched and tracking such as lost children and those with mental issues.
- **CCJJ Grant** - The department received a $20,000 grant to purchase 32 gas masks for the SWAT Team and patrol. This is a critical purchase that could not have been made without the grant funding.
- **CCJJ Grant -** The department applied for and received a CCJJ Grant for $3,350 that was used to purchase a drone that can be used for crime scene processing, suspect and missing person searches, and other tactical operations.
- **JAG Grant -** The department applied for and received a $4,500 JAG Grant that was used to purchase several driver's license scanners for the patrol cars. It is hoped that more can be purchased in the future. The grant was also used to purchase two copies of a crime scene diagraming software that will help with major case preparation and court.
- **Highway Safety Grant** - The Department received a grant from the Utah Highway Safety Office for two new lasers for traffic enforcement. These lasers are valued at over $16,000, and were awarded to American Fork because of its consistently high performance on the traffic enforcement shifts that are provided by the Highway Safety Office. One of the lasers was a specialized device, and was one of only two of these expensive lasers given to agencies within the State.
- **Kohl's Grant (ERAD)** - The department received a $4,000 grant from Kohl's that was used to pay for an ERAD device and yearly subscription fees. This device is used to investigate credit and gift card fraud. The device has been used to investigate over $100,000 in fraud.
- **Part-Time Victim Advocate** - In 2019, our police department applied for additional funds to allow for the hiring of a part-time victim advocate. The application was accepted and funds were awarded. Our new part-time victim advocate, Suzanne Smith, began her position and she has been very valuable in helping victims, increasing communication, and establishing new social media lines of education.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety - Police

- **SWAT School** - Three new SWAT operators attended the Utah County Sheriff's Department SWAT School. Officer Konecny received a team leader award from her team, which is a highly coveted award that is very difficult to achieve.
- **Action Target Award** - Officer Konecny received an award/scholarship from Action Target in the name of Provo Police Master Officer Shinners, who was killed in the line of duty. This scholarship is awarded to one single cadet who has graduated from Utah Valley University Police Academy. The scholarship is for the tuition for Action Target's Law Enforcement Training Camp, which is a weeklong extensive training in firearms and hand-to-hand combat. The dollar value of this scholarship is over $2,000.
- **2019 NAACP First Responder Award** - At the end of 2019, Officer Reyna Pedro received a 2019 NAACP First Responder Award for her efforts in building community, K-9 work and accomplishments, and her work with the NOVA program at a local elementary school.
- **Adobe Photoshop** - Through a private donation, we were able to acquire two annual licenses for Adobe Photoshop to use in investigations to enhance video clips or photos. It is also used by the Evidence Technician to do fingerprint verifications for the county's lab as they, in turn, do it for us.
- **Evidence Bar-Code Scanning** - As a department, we wanted to update our evidence section to use barcodes and barcode stickers. It was originally believed it would cost approximately $5,000. However, after conducting further research and testing, it was found we could accomplish the goal by simply purchasing an inexpensive barcode scanner and label printer. This saved the city an enormous amount of money.
- **NIBRS Crime Reporting System** - The department has been able to successfully transition to the new NIBRS reporting system. The system requires a lot more data to be collected and submitted to the State, which then submits a report to the FBI database. The FBI requires that all agencies make the transition by 2021.




- **CTC Coordinator** - The Communities that Care Program has been fully implemented. The stakeholders have been put in place and there are regular meetings being held to advance the program.
- **Mental Health Response Plan** - The department has used an internship from UVU to develop an individualized response plan for those individuals we encounter that will help officers understand the subject's history, mental health condition and potential points of contact. The program is proving effective and has been implemented by another Utah County agency who has copied the program.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety - Police

- **Crisis Intervention Training** - In keeping with the Department's priority to have all of its officers trained for crisis intervention, ten more officers received CIT training. This training teaches officers to de-escalate situations when dealing with any person in crisis, which would include individuals experiencing mental episodes and individuals that are posing a high risk to themselves or others. This has reduced repeated calls for service from individuals and has helped them get the help they need.
- **Fuming Chamber** - Investigations was able to acquire a fuming chamber from the Utah County Sheriff's Office for free. These chambers are used to fume for fingerprints on odd-shaped objects and different surfaces. These are normally thousands of dollars to purchase.
- **Cellebrite UFED Training -** A detective was able to attend a weeklong Cellebrite training in Sandy and received certifications for Cellebrite Operator and Cellebrite Physical Analyst. The cost of this course is $3,850, however, with the help of WRCTC and B.L. Smith at Sandy Police Department, he was able to attend for free. This required training is to process cell phones and digital evidence.
- **Drone Team -** In 2019, our department's drone team was fully implemented. We have registered our drone with the FAA and two officers have received their UAV (unmanned aerial vehicle) pilot licenses. The team is fully in compliance with FAA regulations.
- **San Diego Family Maltreatment Conference** - Two detectives were awarded scholarships to attend the San Diego Family Maltreatment Conference in San Diego in 2019. This conference is an annual, international conference that mainly addresses issues regarding family/domestic violence and sexual assault and abuse. It was excellent training and some changes have been implemented as a result of it.
- **Radio Replacement** - As part of the Department's long-term goals to comply with Federal and State P25 radio requirements, six additional car radios were replaced with updated models.
- **Extra Patrols** - The patrol division was able to place an emphasis on several grant-funded extra patrols in American Fork and Cedar Hills, including over 171 additional shifts addressing driving under the influence, seatbelt safety, pedestrian safety, distracted driving, and school bus safety.
- **Dashcam Updates** - As part of the Department's program to update all vehicle dashcam video systems, five new dashcams were installed in Department vehicles this year. Twelve vehicles still need this update.
- **Radar Updates** - The Department replaced and update four radars to issue to patrol officers.
- **Drug Recognition Expert Training** - The Department was able to put three more officers through Drug Recognition Expert (DRE) training. This extensive training expands the officers' ability to detect the presence or use of narcotics. These officers will be a great asset to the Department in future drug investigations.
- **Designated Marksman Program** - This year the Department expanded its designated marksman program which qualifies a team of officers within the Department. It included the acquisition of additional precision rifles with magnified optics as well as additional, extensive training for those officers involved. The team has grown in number from last year and now has 11 members. At least one other Utah County Agency has contacted the department and intends to copy the program.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety - Police

- **Drug Diversion** - The Department has begun to put together a Drug Diversion Program to help those addicted to drugs in our community. This will help individuals get into drug-related treatment prior to entering into the criminal justice system with an arrest. There have been partnerships created with Wasatch Mental Health, public service providers, and private service providers. Several professors from BYU are also involved in the process of designing this program. As part of this program, we have implemented an initiative entitled, "Save them Twice", which involves working with those who have been saved through the use of Narcan and offering to help them get into treatment to avoid repeated overdoses, thus reducing the chances of a fatal event.
- **Personnel Management Software** – Department supervisors were trained on the utilization of a new personnel management software, which was then deployed for immediate use. The software will allow for more precise and effective recordkeeping.

## DEPARTMENT GOALS

- **Mobile/Portable Radios** - The Department has been able to bring all radios into compliance with




phase one of the P25 upgrade. The Department now has 30 portable and 14 mobile radios compliant with phase two of the P25 upgrade, which is required by state and federal legislation. It will cost approximately $150,000 over the next eight years to bring the remaining radios into compliance. Phase one will become inoperable in eight years according to current information.

- **Patrol Rifles** - The Department is working towards equipping all officers with Department-issued patrol rifles. This goal is close to being achieved and should be fully completed this year.
- **FTO Program**—A Department Sergeant has received extensive training on the current best practices in new officer training and has been assigned to update and improve our currently existing FTO program. These improvements are expected to take place over the next year.
- **Investigations FTO Program** – The Department is developing an FTO program to train new investigators.
- **Nuisance and Animal Control** – The Department's Nuisance and Animal Control division was overwhelmed with calls for service. The Nuisance/Animal Control officer took more incident reports than any other officer at the Department this year. In response, the Department plans to take steps to increase the Department's capacity to handle these calls in the coming year by utilizing the VIPS and secretarial staff.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety - Police

- **Response Planning** - The department will update all its plans for all of the potential major targets to a grid system to facilitate a faster, more efficient response. This will be rolled out at this year's annual active shooter training this summer.
- **Officer Training** – The department will train at least 20 officers on the Arbinger Institute's Outward Mindset to help improve public interactions, as well as interdepartmental relationships. The program emphasizes treating people as people regardless of their demeanor and circumstances and accepting personal accountability for their actions and behavior.
- **VIPS** – Increase the size of the volunteer program by at least 30 % to help facilitate extra patrols, traffic control and abandoned vehicle enforcement.
- **CIT** – The Department will train all new hires in the principles of CIT to help with those who have mental illness.
- **USE OF FORCE –** The Department will have all officers complete a Use of Force/De-escalation training this year to help ensure that proper training has been received and re-emphasized.
- **COMPSTAT/MEADOWS AREA –** The department has made a significant impact on crime in the Meadows. This next year the department will further analyze the data and try and develop strategies to bring even greater levels of crime prevention to the area.

## DEPARTMENT OPERATING INDICATORS

| Police | 2018 | 2019 |
|---|---|---|
| Calls for Service | 29,946 | 33,048 |
| Calls for Service Officer | 1,302 | 1,377 |
| Arrests | 1,237 | 1,306 |
| Traffic Accidents | 1,352 | 1,484 |
| The Meadows criminal incidents | 595 | 637 |
| Vehicle Burglaries | 100 | 119 |
| Burglaries | 37 | 51 |
| Vehicle Theft | 26 | 31 |
| Larceny Theft | 680 | 711 |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety - Police

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 4,274,453 | $ 4,461,649 | $ 4,669,230 | $ 4,990,201 | $ 5,423,216 |
| Subscriptions and Memberships | 3,277 | (29) | 1,137 | 3,000 | 3,000 |
| Education and Travel | 14,437 | 12,935 | 6,825 | 14,500 | 14,500 |
| Diversity/De-escalation Training | - | - | - | - | 5,000 |
| Office Supplies and Expense | - | - | - | - | 2,640 |
| Telephone | 43,020 | 46,912 | 16,211 | 44,220 | 44,220 |
| Professional and Technical | 36,620 | 35,943 | - | 5,642 | 2,300 |
| Human Resources-Health/Wellness | - | - | - | - | 3,000 |
| Dispatch/UCAN Fees | 268,996 | 240,825 | 275,000 | 275,588 | 312,668 |
| Professional Fees | 6,148 | 5,486 | 1,100 | 2,300 | 5,642 |
| DOJ Vest Grant | 2,937 | 3,789 | 2,804 | 2,338 | - |
| Miscellaneous Grant Expense | 16,604 | 46,892 | 7,539 | 7,500 | - |
| Communities that Care | - | 260 | 1,733 | 1,456 | - |
| VOCA Grant | 2,218 | 5,651 | 2,551 | 5,899 | 60,000 |
| Uniforms & Accessories | 75,322 | 58,636 | 49,215 | 70,800 | 79,660 |
| Department Expense and Supplies | 61,462 | 60,505 | 39,015 | 70,000 | 60,000 |
| Ammunition | - | 8,010 | - | 8,200 | 8,600 |
| Miscellaneous | 3,725 | 5,480 | 2,115 | 4,000 | - |
| Special Enforcement Fund | 28,096 | 28,361 | 25,086 | 38,581 | 38,581 |
| Credit Card/Bank Processing Fees | 951 | 1,185 | 926 | 1,500 | 1,000 |
| Animal Control | 55,110 | 51,712 | 48,396 | 59,000 | 59,000 |
| Deer Mitigation | 855 | 4,500 | 4,500 | 6,000 | 4,500 |
| NOVA & Citizens Programs | 8,398 | 10,265 | 10,683 | 11,000 | 12,000 |
| K-9 Program | 3,918 | 15,029 | 30,242 | 43,237 | 4,600 |
| Alcohol Grant Expenditures | 32,650 | 28,930 | 4,324 | 33,088 | 30,000 |
| Admin Charge-Broadband | - | - | 13,356 | 13,357 | 17,605 |
| Internal Charges-Fleet Operations | 148,400 | 132,000 | 141,348 | 141,342 | 149,342 |
| Internal Charges-Technology | - | - | 149,256 | 149,255 | 95,914 |
| Equipment Purchases | 38,113 | 62,020 | - | 19,100 | 19,100 |
| Internal Charges-Fleet Capital Fund | 382,932 | 52,485 | 408,487 | 406,388 | 386,978 |
| **TOTAL POLICE** | **$ 5,508,642** | **$ 5,379,431** | **$ 5,911,079** | **$ 6,427,492** | **$ 6,843,066** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety - Police

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Chief of Police | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Lieutenant | 2.00 | 2.00 | 2.00 | 2.00 | - |
| Management Analyst II | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Sergeant | 7.00 | 7.00 | 7.00 | 8.00 | 1.00 |
| Officer/Master Officer/Detective | 30.00 | 30.00 | 32.00 | 33.00 | 1.00 |
| Records Supervisor | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Records/Information Specialist | 2.00 | 2.00 | 2.00 | 3.00 | 1.00 |
| Evidence Technician | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Code Enforcement/Animal Control | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Victim Advocate | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Police Officer | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Crossing Guard | 3.25 | 3.72 | 3.72 | 3.72 | - |
| Records Clerk | - | 1.00 | 1.00 | 1.00 | - |
| Communities that Care Coordinator | - | 0.50 | 0.50 | 0.50 | - |
| **Total Police Positions** | **51.25** | **53.22** | **55.22** | **58.22** | **3.00** |

## STAFFING NOTES

1) Propose to add one full-time Police Officer, one full-time Police Sergeant, and two part-time Records Specialists for the fiscal year 2020-21 budget

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety – Fire and Rescue

## DEPARTMENT MISSION

*We believe in creating a safer everyday life, so you can live better. We back that up with our passionate people, premier performance, and an almost obsessive drive to innovate and improve as progressive partners-with both the citizens of American Fork, as well as other in the Fire and Rescue community.*

## DEPARTMENT SUMMARY

American Fork Fire & Rescue provides emergency medical services to American Fork City and parts of surrounding Utah County areas. The department is staffed 24 hours a day, 7 days a week with full-time personnel, which are supplemented with paid-call staff when needed. Three ambulances are staffed with both Paramedics and Advanced EMT's (Emergency Medical Technicians). Fire department members are cross trained as both EMT's and firefighters, which gives them the training they need to best serve the public in any kind of emergency.




The Fire department is charged with fire suppression and prevention as their basic purpose. The goal of the Fire department is to prevent the loss of life and property as it relates to fire incidents. The Fire department is also responsible for enforcing the International Fire Code, conducting fire inspections, and promoting fire safety education within the community through a proactive approach to community risk reduction.

American Fork Fire & Rescue provides fire protection services to American Fork City and supports the surrounding Utah County areas with an Insurance Service Office (ISO) rating of two. These services include structural and wildland fire protection. The Fire department has capabilities for extrication of entrapped victims, aerial capabilities up to 105 feet, and various other technical rescue specialties. The Fire department has a highly respected reputation for its dedication to serving the community through activities such as the Memorial Day Firefighters' breakfast.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety – Fire and Rescue

## DEPARTMENT ACCOMPLISHMENTS

**Staffing/Service Delivery**

- Hired 5 Firefighter/AEMT.
- Promoted 3 Captains
- Promoted 3 Lieutenants
- Hired one new Firefighter/Paramedic.
- Staffed Cedar Hills station with 4 firefighters/paramedics 24/7 every day since July 1, 2019
- Hosted the 110th State Firefighters Convention for the State of Utah.
- Won 1st place in the Fighter Combat Challenge for State of Utah
- Maintained ISO rating of 2. **Second best in the state.**
- Placed newly constructed Type IV Brush Truck into service.
- Took delivery and placed into service a 2019 Horton Ambulance
- Took delivery and placed into service a 2019 Type 6 Brush/Rescue.
- Utilized training tower to conduct live fire training, high-rise, search & rescue, and multi-agency training.
- At the request from the State of Utah, our wildland fire staff deployed on one in State wildland fire as a line Paramedic.
- Took delivery of and placed into service two P25 compatible Motorola APX6000XE portable radios.
- New physical fitness combat evaluation was designed, and standard times were established and implemented for the department.
- 2 Physical fitness evaluations conducted for all combat members of the department.
- Physical exams completed for all full-time combat staff.
- Firefighter Standards were adopted and implemented for all department members.
- Station 52 Bond was passed. 72% approval vote.
- Implemented and conducted fire station tours for Cedar Hills community.
- Most productive fire station in Utah County
- Retained all full-time employees during the same time (7) full-time departments were hiring full-time firefighters
- Maximized Mutual Aid and Auto Aid with other surrounding agencies and built new operational dispatch stacks for high level calls.
- Helped get funding and approval for redundancy in another tower for dispatch.

**Emergency Operations Center (EOC)/Emergency Management**

- Created and handed out over 800 Emergency Family Preparedness booklets to the citizens of American Fork.
- Conducted EOC training for City staff.
- Conducted EOC training for church leaders.
- Added new overhead projector and televisions to EOC (Emergency Operations Center).

**Fire Prevention**

- 900 business inspections and pre/plans conducted.
- All City fire hydrants inspected twice a year to maintain readiness and help maintain ISO rating.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety – Fire and Rescue

- 8,000 residents contacted through fire prevention and safety events.
- Car seat and bike helmet donation program continued with great success.
- Contact with all 2nd grade students in American Fork elementary schools made as they participated in the annual fire prevention coloring contest.
- Contact with all 5th grade students in American Fork elementary schools as they participated in a home safety checklist program.
- Fire prevention assemblies conducted in all American Fork elementary schools.
- 100 smoke detectors donated through the smoke detector donation program.
- Fire prevention week open house was conducted with over 900 citizens attending.
- Community code enforcement committee established.
- Memorial Day Firefighters' Breakfast and Safety Fair tradition continued.
- Home Base and Low Risk Self Inspection fire inspection program continued.
- Hazardous Materials Inspection Program maintained and continued yielding a decrease in dollar loss within American Fork.



**Certification & Training**

- All full-time personnel re-certified as Ice Rescue Technicians.
- 2 AFFR UVSRT personnel certified in Rope Rescue, Confined Space, and Trench Rescue Technician disciplines.
- All full-time Chief's, Captain's and Lieutenant's attended the 2 Day Utah County Leadership Academy.
- 8 personnel attended the Utah Fire Rescue Academy Winter Fire School in St. George, Utah
- Fire Department staff trained Police Department staff in Narcan administration training.
- Full-time staff recertified in Advanced Cardiac Life Support.
- Lieutenant completed National Fire Academy Managing Officer Program.
- 4 personnel attended courses at the National Fire Academy.
- All full-time staff trained with American Fork Police Department in Rescue Task Force training for active shooter scenarios.
- De-escalation training provided by AFPD for Fire Department Staff.
- 2 personnel attended FDIC International Firefighter Training in Indianapolis, Indiana.
- 10 personnel certified in Inspector 1.
- Drowning and Burns training attend by all full-time staff at Mt. Point Hospital.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety – Fire and Rescue

- 12-lead EKG training attended by full-time staff at Mt. Point Hospital.
- Multiple Multi-Company/Mutual Aide Live Fire Trainings conducted at AFFR Fire Training Tower.
- Helmet and Shoulder Pad removal training conducted by AF High School Training staff for personnel.
- 11 personnel certified in Fire Officer 1.
- Hosted IFSTA ADO – P and ADO-A.
- Hosted ICS 300 & 400 Courses.
- Wildland Red Card Recertification Course attended by all Fire Department Staff.
- Wildland Urban Interface course hosted and attended by department personnel.
- Vehicle Extrication Training provided in house and attended by department personnel.
- 2 personnel certified as wildland fire investigators.
- 2 personnel recertified ICC certifications.
- 3 personnel attended Utah State Fire Chief's Leadership training.
  Fire Marshal attended Utah State Fire Marshal annual training.

## DEPARTMENT GOALS

- Continual evaluation of our fire and EMS response area to analyze the current deployment of emergency service resources in relation to demand and response times.
- Maintain ISO rating of 2.
- Hydrant inspections 2 times a year.
- Determine performance indicators to measure if the quality of department services is adequate.
- Review performance indicators on a regular basis.
- Begin construction on station 52. Starting June 1, 2020
- Station 52 operational estimated April 1, 2021
- Start development of response model and staffing for adequate response when station 52 comes online for Cedar Hills and American Fork.
- Continue good working relations with American Fork Hospital and Health Care Facilities within American Fork City and Cedar Hills.
- Provide the highest quality of fire and EMS services and staff to the citizens of Cedar Hills.
- Hire additional full-time Firefighters' to staff Station 52.
- Hire additional administration staff for Station 52
- Retain all full-time members

## DEPARTMENT OPERATING INDICATORS

| Fire and Rescue | 2018 | 2019 |
|---|---|---|
| Calls for Service | 3,181 | 3,910 |
| EMS Related Calls for Service | 2,514 | 3,017 |
| Fire Related Calls for Service | 667 | 893 |
| Mutual Aid Responses | 31 | 126 |
| Man Hours of Fire/EMS Training | 1,000+ | 1,000+ |
| Medical Transports from AF Hospital | 905 | 1,083 |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety - Fire

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 3,185,235 | $ 3,327,377 | $ 3,911,353 | $ 4,351,839 | $ 4,477,725 |
| Subscriptions & Memberships | 1,420 | 2,876 | 1,571 | 1,000 | 1,100 |
| Education and Travel | 28,176 | 28,373 | 21,172 | 30,000 | 40,500 |
| Office Supplies and Expense | - | - | - | - | 7,200 |
| Telephone | 14,730 | 15,424 | 13,416 | 12,520 | 13,420 |
| Professional & Technical | 51,728 | 39,599 | 32,787 | 27,286 | 33,286 |
| Dispatch/UCAN Fees | 35,923 | 34,793 | 44,719 | 47,133 | 52,233 |
| Attorney Fees | - | 63,218 | 250,000 | 200,000 | 30,000 |
| Fire Prevention & Education | 9,824 | 12,214 | 15,976 | 19,200 | 15,200 |
| Miscellaneous Grant Expense | - | - | 4,465 | 6,161 | - |
| Employee Appreciation | - | 4,701 | 5,156 | - | - |
| Clothing Allowance | 23,549 | 24,549 | 31,895 | 29,200 | 29,200 |
| Human Resources-Health/Wellness | - | - | - | - | 3,000 |
| Department Expense and Supplies | 129,910 | 129,887 | 51,403 | 43,600 | 43,600 |
| Medical Supplies | - | - | 98,632 | 109,350 | 109,350 |
| New Members Equipment | 39,995 | 40,893 | 47,627 | 55,000 | 55,000 |
| Janitorial Services and Supplies | 7,674 | 7,927 | 9,023 | 8,000 | 5,000 |
| Credit Card/Bank Processing Fees | 7,526 | 8,632 | 14,198 | 8,200 | 10,000 |
| Equipment Maintenance Agreement | 9,085 | 5,057 | 6,182 | 9,800 | 5,000 |
| Ambulance Billings | 131,857 | 92,225 | 108,696 | 106,918 | 106,918 |
| Ambulance Assessments | - | 54,430 | 65,180 | 51,726 | 51,726 |
| Admin Charge-Broadband | - | - | 3,612 | 3,610 | 4,930 |
| Internal Charges-Fleet Operations | 100,000 | 100,000 | 126,144 | 126,142 | 117,000 |
| Internal Charges-Technology | - | - | 36,576 | 36,570 | 27,119 |
| Equipment Purchases | 34,377 | 48,336 | 35,000 | 35,000 | 22,000 |
| Internal Charges-Fleet Capital | - | 57,610 | 191,157 | 336,426 | 371,885 |
| **TOTAL FIRE** | **$ 3,811,009** | **$ 4,098,121** | **$ 5,125,940** | **$ 5,654,681** | **$ 5,632,392** |




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Safety - Fire

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| **Fire Station 51 Positions** | | | | | |
| Fire Chief | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Battalion Chief | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Captain | 3.56 | 3.72 | 3.72 | 3.72 | - |
| Deputy Fire Marshal/Captain | - | 1.36 | 1.36 | 1.36 | - |
| Lieutenant | - | 4.69 | 4.69 | 4.69 | - |
| Inspector | 1.76 | - | - | - | - |
| Fire Marshal | 1.00 | 1.00 | 1.00 | 1.00 | - |
| EMT | 11.94 | 6.69 | 6.69 | 6.69 | - |
| Firefighter/Paramedic | 18.38 | 16.88 | 16.88 | 19.88 | 3.00 |
| Ambulance Transport | - | - | 3.17 | 3.17 | - |
| Office Manager | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Intern | 0.28 | - | - | - | - |
| **Total Station 51 Positions** | **39.92** | **37.34** | **40.51** | **43.51** | **3.00** |
| | | | | | |
| **Cedar Hills Station Positions** | | | | | |
| Battalion Chief | - | - | - | 1.00 | 1.00 |
| Captain | - | - | 3.00 | 3.00 | - |
| Lieutenant | - | - | 3.00 | 3.00 | - |
| EMT | - | - | 1.51 | 1.51 | - |
| **Total Cedar Hills Positions** | **-** | **-** | **7.51** | **8.51** | **1.00** |
| | | | | | |
| **Total Fire Positions** | **39.92** | **37.34** | **48.02** | **52.02** | **4.00** |

## STAFFING NOTES

1) During fiscal year 2019-20, 7.51 full-time equivalent positions were added as part of the contract to provide fire service to the City of Cedar Hills. This increase is funded by contract revenue paid by the City of Cedar Hills. Additional EMT and ambulance transport personnel are funded through ambulance transport revenue.

2) Propose to add three full-time Fire Fighters and one full-time Battalion Chief for the fiscal year 2020-21 budget.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

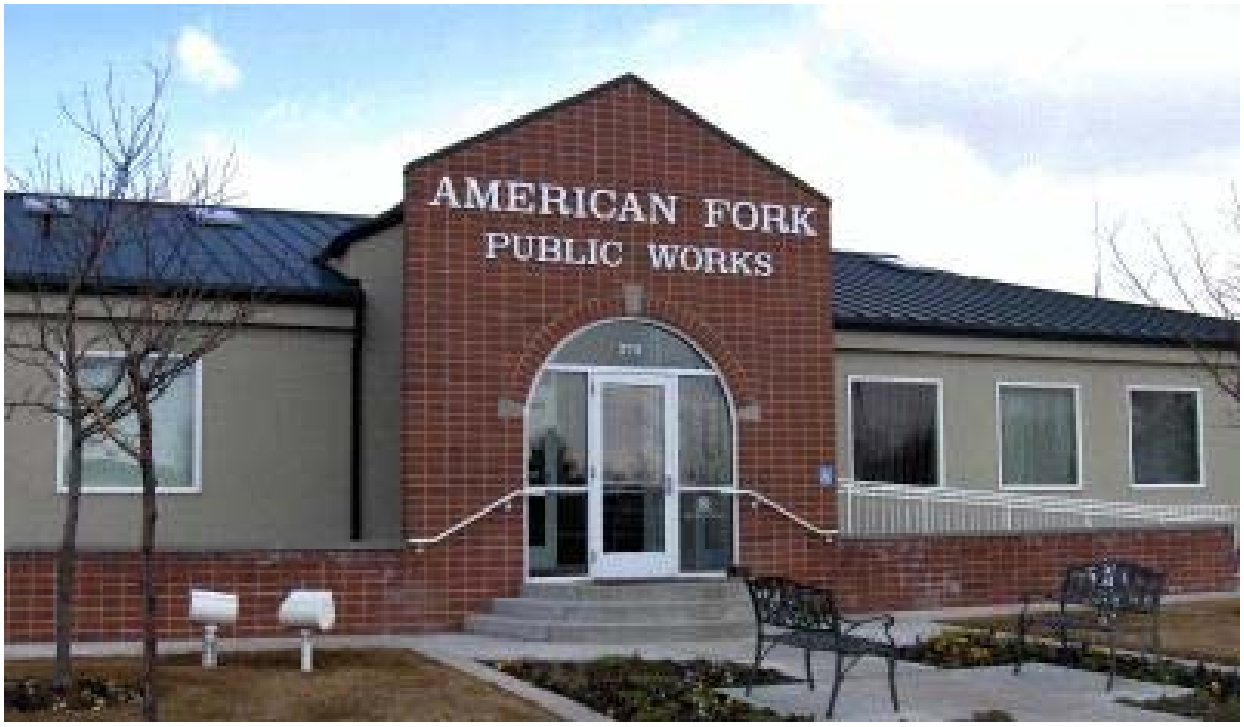
# Public Works – Administration

## DEPARTMENT MISSION

*The mission of the American Fork City Public Works department is to provide, in a courteous and professional manner, quality services that are essential to the lives of residents. Talented, qualified, and certified personnel work to ensure that the City has good, safe, and dependable water, sewer, road, and building infrastructure.*

## DEPARTMENT SUMMARY

The Public Works department is vital to the lives of American Fork City residents. Our goal is to ensure that the City's water and wastewater operations and road network are safe and dependable, while using our expertise to seek improvements, as necessary. We also maintain City buildings and permit new homes and commercial buildings within the City. Our Engineering team is also helping to build a solid future with development reviews and capital projects to improve the City.




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Administration

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 133,911 | $ 270,344 | $ 280,478 | $ 298,048 | $ 300,811 |
| Subscriptions & Memberships | 281 | - | - | 1,000 | 1,000 |
| Education and Travel | 180 | 854 | 249 | 1,500 | 2,000 |
| Office Supplies and Expense | - | - | - | - | 4,575 |
| Telephone | 9,454 | 1,850 | 960 | 960 | 960 |
| Clothing Allowance | 34 | - | - | - | - |
| Department Expense and Supplies | 9,908 | 4,575 | 3,303 | 10,500 | 7,900 |
| Postage and Shipping | - | - | - | - | 525 |
| Credit Card/Bank Processing Fees | 4,654 | 5,485 | 4,841 | 5,000 | 5,000 |
| Miscellaneous | 4,061 | 3,312 | 1,850 | 2,500 | - |
| Admin Charge-Broadband | - | - | 2,172 | 2,166 | 981 |
| Internal Charges-Fleet Operations | 6,000 | 4,200 | 1,392 | 1,400 | 1,400 |
| Internal Charges-Technology | - | - | 6,636 | 6,636 | 7,597 |
| Equipment Purchases | - | - | - | 2,500 | - |
| **TOTAL PUBLIC WORKS ADMIN** | **$ 168,483** | **$ 290,620** | **$ 301,881** | **$ 332,210** | **$ 332,749** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Public Works Director | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Administrative Assistant | - | 1.75 | 1.75 | 1.75 | - |
| **Total Public Works Admin Positio** | **1.00** | **2.75** | **2.75** | **2.75** | **-** |





Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works – Streets

## DEPARTMENT SUMMARY

The Streets division maintains the road system in the City, including sidewalks, snowplowing, traffic controls, and pavement management. The division also oversees maintenance of the street light system.

## DEPARTMENT ACCOMPLISHMENTS

- Identified and inventoried remaining 25 percent of sidewalk hazards
- Replaced over 120 non-compliant street signs
- Patched 1,500 Potholes and cut out and replaced several thousands of tons of asphalt roadway
- Constructed and paved Quail Cove drop off
- Constructed and paved Hindley Park
- 4,548 Miles of snow and Ice removal
- 45 sidewalk defects repaired

## DEPARTMENT GOALS

- Continued pavement management (chip seal and high density mineral bond treatments).
- Continued crack sealing projects.
- Continue replacement of street signs to ensure meeting of MUTCD (manual on uniform traffic control devices) requirements.

## DEPARTMENT OPERATING INDICATORS

| Streets | 2019 | 2020 |
|---|---|---|
| Cut and T-patched water leaks | 100+ | 74 |
| Out of compliance street signs replaced | 200+ | 225 |
| Miles of Snow and Ice Removal | 5,359 | 4,548 |
| Potholes replaced | 2,200 | 1,800 |
| Sidewalk Defects Repaired | 187 | 115 |
| Roadways treated with chip seal | | 718,571 Square feet |
| Roadways treated with high density mineral bond | | 563,776 Square feet |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Streets

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 504,509 | $ 521,325 | $ 563,864 | $ 594,754 | $ 605,885 |
| Education and Travel | 4,563 | 925 | 224 | 3,250 | 3,000 |
| Equipment Supplies & Maintenance | 17,970 | 28,008 | 29,430 | 30,000 | 30,000 |
| Street Lights Power | 63,046 | 64,663 | 65,327 | 70,000 | 70,000 |
| Street Lights Maintenance | 65,183 | 113,559 | 71,325 | 100,000 | 100,000 |
| Traffic Signal Maintenance | 1,341 | 4,682 | 3,000 | 5,000 | 5,000 |
| Telephone | 6,270 | 7,438 | 6,277 | 6,480 | 6,480 |
| Professional & Technical | 16,807 | 14,965 | 29,938 | 20,000 | 50,000 |
| Clothing Allowance | 2,673 | 2,200 | 1,200 | 1,400 | 1,200 |
| Department Expense and Supplies | 17,742 | 13,446 | 7,969 | 15,400 | 15,000 |
| Debris Hauling | 2,297 | 1,598 | 2,071 | 3,000 | 2,500 |
| Pavement Markings/Signs | 64,432 | 77,364 | 123,164 | 128,204 | 120,000 |
| Sidewalk Repair | 52,815 | 26,023 | 193,343 | 193,978 | 110,000 |
| Road Maintenance & Repair | 315,786 | 231,526 | 385,600 | 388,474 | 260,000 |
| Admin Charge-Broadband | - | - | 720 | 722 | 722 |
| Internal Charges-Fleet Operations | 73,493 | 71,288 | 75,000 | 75,000 | 68,000 |
| Internal Charges-Technology | - | - | 6,024 | 6,022 | 6,454 |
| Equipment Purchases | - | 2,010 | 4,850 | - | - |
| Street Lights Capital Improvement | 150,558 | 269,617 | - | - | - |
| Internal Charges-Fleet Capital | 200,000 | 75,000 | 81,500 | 71,625 | - |
| **TOTAL STREETS** | **$ 1,559,485** | **$ 1,525,637** | **$ 1,650,826** | **$ 1,713,309** | **$ 1,454,241** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Street Superintendent | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Street Lead Maintenance Operator | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Street Traffic Safety Specialist/Sr O[illegible] | 1.00 | - | - | - | - |
| Street Maintenance Operator | 4.00 | 5.00 | 3.00 | 3.00 | - |
| Street Maintenance Operator II | - | - | 2.00 | 2.00 | - |
| **Total Streets Positions** | **7.00** | **7.00** | **7.00** | **7.00** | **-** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works – Building Maintenance

## DEPARTMENT SUMMARY

The Building Maintenance division has responsibility for the maintenance and upkeep of the City's buildings.

## DEPARTMENT ACCOMPLISHMENTS

- Replaced 1st floor carpet at Library and Police and Courts.
- Replaced roof at fitness center over track and courts.
- Replaced stairs on back of the Administration building.
- Finish remodel of office are in Fire Station
- LED upgrade to Fire Station Bays.
- Replaced Two Furnaces A/C units at Senior Center and one at Engineering building, and two swamp
- coolers on Streets building.
- Installed new Transformer for broadband in Police and courts building.
- Rented 80 lift to repair rain gutters re caulk seams and get rid of bird problem
- Repainted historic city hall's bell tower.
- Painted all Handrails around Senior Center.
- Refinished rotunda floor at library to high shine.
- Installed ADA handrails at the legion Hall, and painted the outside of building.
- Installed safety ladder at library, and lockout/tag out kits throughout city buildings.
- Painted most of the fitness center
- Installed noise canceling ceiling grid in classrooms at fitness center.
- LED lighting upgrade in classrooms and basement of fitness center.
- New pool valves and pool Boilers at Fitness center.

## DEPARTMENT GOALS

- Change upstairs of library over to LED lighting.
- Replace outdated fire panels at Fire Station, Fitness Center, and Library.
- New carpet on 2nd floor and basement of library.
- New carpet 2nd floor of police and court building.
- Install new roof on Legion Hall.

## DEPARTMENT OPERATING INDICATORS

| Building Maintenance | 2019 | 2020 |
|---|---|---|
| Toilet and shower fixes | 75 | 82 |
| Service of City A/C and heating units | 4 | 5 |
| Lights changed throughout city | 355 | 406 |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Building Maintenance

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 330,685 | $ 377,352 | $ 372,572 | $ 404,051 | $ 410,947 |
| Education and Travel | - | 353 | - | 2,250 | 4,000 |
| Telephone | 1,425 | 3,825 | 2,770 | 2,910 | 2,910 |
| Clothing Allowance | 600 | 1,600 | 800 | 800 | 800 |
| Department Expense and Supplies | 2,596 | 1,284 | - | - | - |
| Maintenance - Legion Hall | 3,446 | 5,639 | 3,610 | 5,000 | 4,000 |
| Maintenance - Public Works | 61,637 | 54,407 | 64,148 | 61,915 | 55,000 |
| Maintenance - Library | 83,044 | 71,072 | 79,563 | 67,000 | 67,000 |
| Maintenance - Senior Center | 13,188 | 14,422 | 10,489 | 9,000 | 10,000 |
| Maintenance - Admin Building | 20,202 | 26,604 | 19,227 | 20,000 | 20,000 |
| Maintenance - Cemetery | 10,083 | 10,206 | 9,717 | 14,000 | 10,000 |
| Maintenance - Police/Courts | 157,838 | 162,137 | 168,058 | 160,000 | 160,000 |
| Maintenance - City Hall | 13,989 | 17,974 | 11,807 | 16,000 | 16,000 |
| Maintenance - Fire/Ambulance | 40,969 | 49,791 | 44,950 | 45,000 | 45,000 |
| Asphalt Maintenance | 9,945 | 15,589 | - | 20,000 | - |
| Janitorial Service and Supplies | 75,090 | 75,248 | 84,995 | 120,000 | 90,000 |
| Admin Charge-Broadband | - | - | 360 | 361 | 993 |
| Internal Charges-Utility Funds | 82,072 | 82,305 | 75,000 | 75,000 | 75,000 |
| Internal Charges-Fleet Operations | 3,494 | 4,900 | 4,692 | 4,700 | 4,700 |
| Internal Charges-Technology | - | - | 5,628 | 5,632 | 6,093 |
| **TOTAL BUILDING MAINTENANC** | **$ 910,303** | **$ 974,708** | **$ 958,386** | **$ 1,033,619** | **$ 982,443** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Building Maint Superintendent | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Facility Maint Supervisor | - | 1.00 | 1.00 | 1.00 | - |
| Building Maint Lead Technician | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Building Maint Technician | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Janitor | 0.75 | - | - | - | - |
| **Total Building Maintenance Positi** | **3.75** | **4.00** | **4.00** | **4.00** | **-** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works – Building Inspection

## DEPARTMENT SUMMARY

The Building Inspection division is responsible for maintaining the integrity of the buildings throughout the City through permitting and inspections during the construction process. The division is also responsible for calculating and collecting impact fees during the inspection process.

## DEPARTMENT ACCOMPLISHMENTS

- Processed 795 building permits, an increase of 100 permits over fiscal year 2019.
- Performed 12,883 inspections, a decrease of 1,849 inspections over fiscal year 2019.
- Provide full day Friday inspections.

## DEPARTMENT GOALS

- Improve overall turnaround time for plan reviews.
- Update technology for permit tracking.
- Expand My City Inspector program to include all active permits.
- Fully certify new inspectors.

## DEPARTMENT OPERATING INDICATORS

| Building Inspection | 2019 | 2020 |
|---|---|---|
| Permits issued | 695 | 795 |
| Number of inspections performed | 14,732 | 12,883 |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Building Inspection

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 655,271 | $ 735,367 | $ 745,077 | $ 804,465 | $ 807,417 |
| Subscriptions & Memberships | 2,863 | 3,256 | 2,172 | 5,000 | 3,000 |
| Education and Travel | 3,847 | 2,712 | 3,554 | 4,500 | 3,500 |
| Office Supplies and Expense | - | - | - | - | 2,000 |
| Telephone | 4,962 | 6,788 | 5,557 | 7,560 | 7,560 |
| Plan Check Fees | 18,003 | 22,265 | 19,371 | 20,000 | 20,000 |
| Professional & Technical | 13,588 | 16,762 | 26,850 | 21,451 | 22,000 |
| Clothing Allowance | 1,200 | 1,600 | 1,200 | 1,200 | 1,200 |
| Department Expense and Supplies | 1,313 | 1,827 | 3,361 | 2,500 | 1,500 |
| Miscellaneous | 186 | 294 | 540 | 1,000 | - |
| Administrative Charge-Broadband | - | - | 2,712 | 2,707 | 3,145 |
| Internal Charges-Fleet Operations | 5,500 | 6,023 | 7,704 | 7,700 | 6,700 |
| Internal Charges-Technology | - | - | 20,016 | 20,015 | 18,038 |
| Equipment Purchases | 889 | 68 | - | - | - |
| Internal Charges-Fleet Capital | - | - | - | 4,299 | - |
| **TOTAL BUILDING INSPECTION** | **707,622** | **796,962** | **838,114** | **902,397** | **896,060** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Chief Building Official | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Deputy Building Official | - | 1.00 | 1.00 | 1.00 | - |
| Assistant Building Official | 1.00 | - | - | - | - |
| Plans Examiner | 1.00 | - | - | - | - |
| Building Inspector | 3.00 | 4.00 | 4.00 | 4.00 | - |
| Administrative Assistant | 1.00 | 1.50 | 1.50 | 1.50 | - |
| **Total Building Inspection Position** | **7.00** | **7.50** | **7.50** | **7.50** | **-** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Engineering

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 499,625 | $ 465,964 | $ 474,405 | $ 562,024 | $ 747,291 |
| Subscriptions & Memberships | 623 | 1,939 | 2,085 | 2,565 | 4,610 |
| Education and Travel | 1,799 | 3,845 | 2,495 | 6,500 | 5,000 |
| Telephone | 3,686 | 4,337 | 2,322 | 2,436 | 3,156 |
| Professional & Technical | 198,325 | 55,052 | 23,299 | 25,000 | 25,000 |
| Development Inspections | - | 189,860 | 103,570 | 124,678 | 100,000 |
| Clothing Allowance | - | 1,600 | 1,084 | 1,200 | 1,400 |
| Department Expense and Supplies | 1,207 | 3,360 | 2,346 | 3,000 | 3,000 |
| Miscellaneous | 201 | 387 | - | 500 | 500 |
| Admin Charge-Broadband | - | - | 2,532 | 2,527 | 1,542 |
| Internal Charges-Fleet Operations | 9,000 | 5,000 | 5,400 | 5,400 | 3,900 |
| Internal Charges-Technology | - | - | 41,388 | 71,388 | 106,827 |
| Computer Software | 19,489 | 16,306 | - | - | - |
| Equipment Purchases | - | 1,087 | 2,000 | 2,000 | 2,000 |
| Internal Charges-Fleet Capital | - | 5,000 | - | - | - |
| **TOTAL ENGINEERING** | **$ 733,955** | **$ 753,737** | **$ 662,926** | **$ 809,218** | **$ 1,004,226** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| City Engineer | - | - | - | 1.00 | 1.00 |
| GIS Supervisor | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Project Engineer | 2.00 | 2.00 | 2.00 | 2.00 | - |
| Engineer | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Construction Inspector | 0.20 | 1.00 | 1.00 | 1.00 | - |
| Administrative Assistant | 0.75 | - | - | - | - |
| Intern | 1.00 | 1.00 | 1.00 | 1.00 | - |
| **Total Engineering Positions** | **5.95** | **6.00** | **6.00** | **7.00** | **1.00** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Recreation

## DEPARTMENT MISSION

*Through diverse recreation programs and leisure opportunities foster civility, physical, and emotional wellness, and FUN!*

## DEPARTMENT ACCOMPLISHMENTS

- Over 5,000 youth program registrations.
- Background checks conducted on all volunteer coaches.

## DEPARTMENT GOALS

- Participate in the completion of construction at Art Dye Park.
- Add more programs and participants as facilities become available.

## DEPARTMENT OPERATING INDICATORS

| Recreation Participants | 2019 | 2020 |
|---|---|---|
| Flag Football | 900 | n/a |
| Spring Soccer | 1067 | n/a |
| Fall Soccer | 713 | n/a |
| Baseball/Softball | 650 | n/a |
| Ultimate Frisbee | 50 | n/a |
| Tennis | 175 | n/a |
| Golf | 85 | n/a |
| Ski Bus | 50 | n/a |
| Skate Camp | 55 | n/a |
| Basketball | 1900 | n/a |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Recreation

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 506,808 | $ 490,723 | $ 496,007 | $ 540,046 | $ 507,705 |
| Subscriptions & Meberships | 360 | 495 | 495 | 600 | 500 |
| Advertising | 1,240 | 17 | 101 | 1,000 | 500 |
| Education and Travel | 1,203 | 1,980 | 1,055 | 2,200 | 2,250 |
| Recreation Supplies & Maintenance | 212 | 1,113 | 2,781 | 3,300 | 500 |
| Office Supplies and Expense | - | - | - | - | 8,000 |
| Telephone | 7,083 | 2,562 | 2,519 | 2,160 | 6,000 |
| Programs Expense and Supplies | 116,629 | 117,572 | 105,920 | 113,500 | 95,800 |
| Department Expense and Supplies | 13,507 | 15,053 | 7,824 | 9,848 | 500 |
| Employee Appreciation | - | 704 | 60 | 320 | 320 |
| Clothing Allowance | - | - | - | 600 | - |
| Miscellaneous | 2,561 | 266 | - | 500 | - |
| Admin Charge-Broadband | - | - | 1,260 | 1,264 | 1,055 |
| Internal Charges-Fleet Operations | 10,419 | 5,800 | 4,404 | 4,400 | 4,400 |
| Internal Charges-Technology | - | - | 10,356 | 10,230 | 10,297 |
| **TOTAL RECREATION** | **$ 660,022** | **$ 636,285** | **$ 632,782** | **$ 689,968** | **$ 637,827** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Recreation & Fitness Center Directo | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Recreation Superintendent | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Recreation Program Manager | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Rec Supervisors/Scorekeepers/Refer | 5.09 | 5.30 | 4.89 | 4.89 | 3.53 |
| **Total Recreation Positions** | **8.59** | **8.80** | **8.39** | **8.39** | **7.03** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Planning

## DEPARTMENT SUMMARY

The duties of the Planning Department are generally divided into the following areas of responsibility:

- Provide prospective developers, City Council, Planning Commission, City staff, and the general public with accurate and timely information regarding the City's General Plan elements, development requirements and policies, and general information about the City.
- Serve as staff to the Planning Commission and City Council, providing materials and recommendations as necessary for them to make the judgements and decisions required by state law and City ordinance.
- Working in conjunction with the Planning Commission, "look out" for the future of the City. This involves planning for growth and redevelopment in ways that ensures American Fork remains a desirable place to live for residents of all income levels, while at the same time providing opportunities for business growth and retention.
- Propose amendments to City plans, ordinances, and standards as deemed necessary or as requested.
- Provide zoning clearance functions for business license applications.

## DEPARTMENT ACCOMPLISHMENTS

- Updated portions of TOD code related to Mixed-Use standards.
- Continued updates to the City's land use element of the General Plan.
- Continued coordination with Engineering Division and UDOT to implement City's Main Street Vision Plan, as UDOT looks to start reconstruction on the west side of American Fork.

## DEPARTMENT GOALS

- Continue coordination with Chamber and Advisors Inc. to finalize downtown economic development plan.
- Coordinate with Public Works to implement the Bike/Pedestrian plan as future road projects progress.
- Coordinate with Legal on updates to the Development Code as needed.
- Continue Planning Commission training with Planning staff and Legal counsel (when requested).

## DEPARTMENT OPERATING INDICATORS

| Planning | 2018 | 2019 |
|---|---|---|
| Acres in process of annexation | 193.5 | 97.6 |
| Units approved – residential lots | 609 | 795 |
| Site plan meetings | Not available | 7 |
| Commercial site plan approvals | 14 | 16 |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Planning

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 231,842 | $ 271,063 | $ 275,451 | $ 275,210 | $ 281,654 |
| Subscriptions & Memberships | 1,576 | 1,576 | 1,600 | 1,623 | 1,625 |
| Education and Travel | 2,196 | 1,780 | 1,450 | 2,530 | 2,000 |
| Office Expense and Supplies | - | - | - | - | 600 |
| Telephone | 1,320 | 2,181 | 1,440 | 1,440 | 1,440 |
| Professional & Technical | 249 | 848 | - | 1,000 | - |
| Economic Development | 9,150 | 12,195 | 24,000 | 25,400 | 25,400 |
| Department Expense and Supplies | 2,251 | 237 | 1,000 | 750 | 2,750 |
| Miscellaneous | 2,899 | 3,114 | - | 1,000 | - |
| Admin Charge-Broadband | - | - | 900 | 902 | 723 |
| Internal Charges-Fleet Operations | - | 1,000 | 804 | 800 | 800 |
| Internal Charges-Technology | - | - | 4,800 | 4,801 | 16,184 |
| Internal Charges-Fleet Capital | - | - | - | 5,000 | - |
| **TOTAL PLANNING** | **$ 251,483** | **$ 293,994** | **$ 311,445** | **$ 320,456** | **$ 333,176** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Planning Director | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Planner | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Administrative Assistant | 1.00 | 0.50 | 0.50 | 0.50 | - |
| **Total Planning Positions** | **3.00** | **2.50** | **2.50** | **2.50** | **-** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Citizen Committees - Senior Center

## DEPARTMENT SUMMARY

The Senior Citizens Center provides programs and support for the seniors in American Fork and surrounding communities. The center strives to give the community a central place to gather and to get access to resources to help meet the needs they face in their daily lives.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Salaries & Wages | $ 20,732 | $ 32,292 | $ 30,311 | $ 41,625 | $ 41,218 |
| Office Expense and Supplies | - | - | - | - | 1,000 |
| Telephone | 586 | 1,090 | - | - | - |
| Programs Expense and Supplies | - | - | - | | 25,000 |
| Programs-Senior Meals | - | - | - | - | 27,200 |
| Department Expense and Supplies | - | - | - | | 8,800 |
| Sundry Charges | 74,916 | 58,711 | 68,171 | 69,000 | - |
| Admin Charge-Broadband | - | - | 1,080 | 1,083 | 346 |
| Internal Charges-Technology | - | - | 3,576 | 3,581 | 5,915 |
| Equipment Purchases | 10,576 | 1,659 | 3,161 | 3,000 | - |
| **TOTAL SENIOR CENTER** | **$ 106,810** | **$ 93,752** | **$ 106,299** | **$ 118,289** | **$ 109,479** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Center Director | 0.50 | 0.50 | 0.50 | 0.50 | |
| Assistant Director | 0.50 | 0.50 | 0.50 | 0.50 | |
| Secretary | 0.50 | 0.50 | 0.50 | 0.50 | |
| Aides | 2.50 | 2.50 | 2.50 | 2.50 | |
| Janitor | - | 0.75 | 0.75 | 0.75 | |
| **Total Senior Center Positions** | **4.00** | **4.75** | **4.75** | **4.75** | |

## STAFFING NOTES

1) Senior Center's positions are compensated with a stipend, with the exception of janitor, and is not dependent on number of hours worked. Therefore, each position is budgeted at 0.50 hours full-time equivalent.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Citizen Committees-Historical & Beautification

## DEPARTMENT SUMMARY

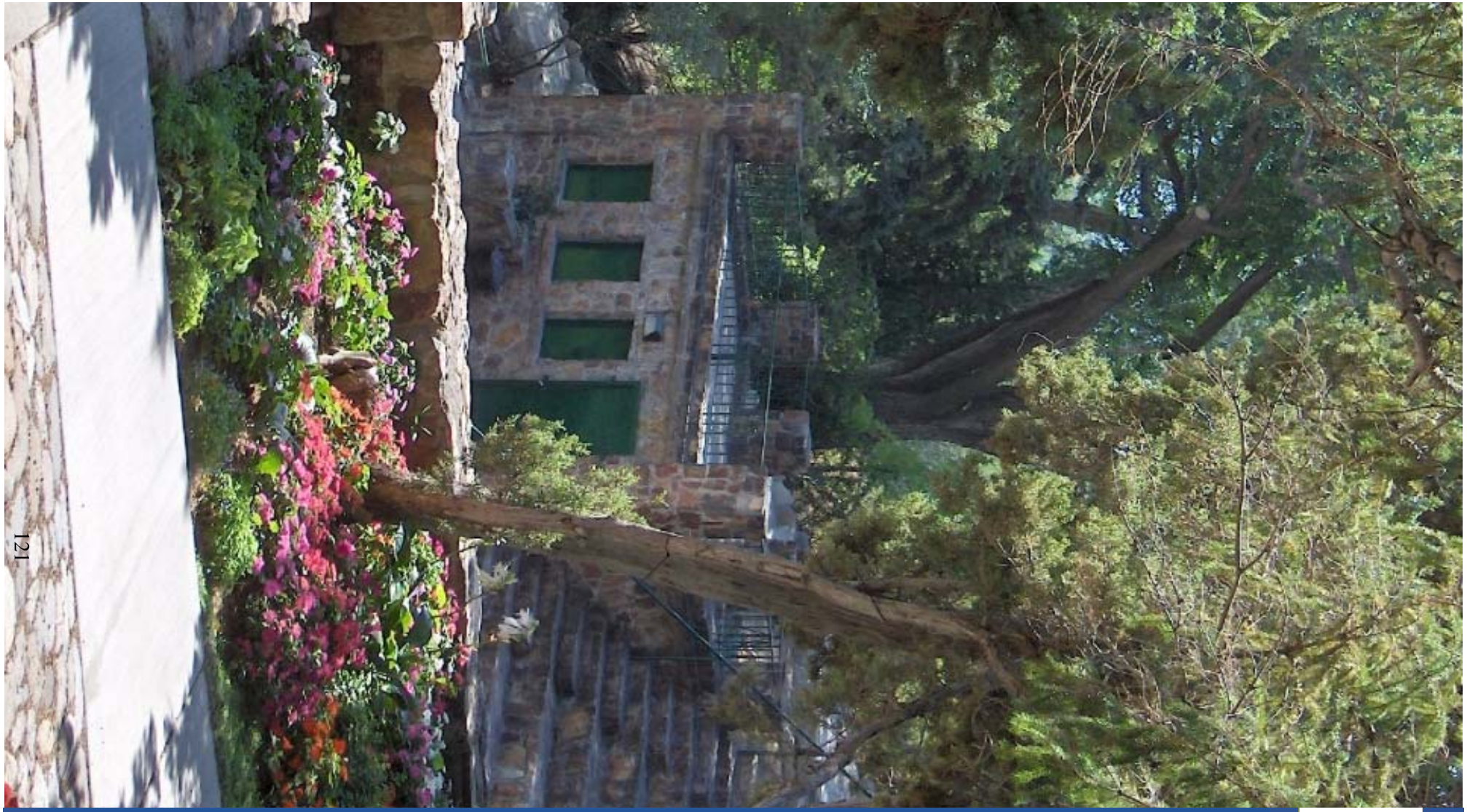
Citizen committees are volunteer boards who support the City in many ways. The Historical Committee and Beautification Committee have small budgets for expenditures furthering the purpose of their respective boards.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| Historical Committee | $ 23,052 | $ - | $ 6,000 | $ 7,000 | $ 1,000 |
| Beautification | 2,990 | 6,158 | 2,500 | 7,000 | 8,500 |
| **TOTAL CITIZEN COMMITTEES** | **$ 26,042** | **$ 6,158** | **$ 8,500** | **$ 14,000** | **$ 9,500** |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending



# Special Revenue Funds



Packet Pg. 647

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

5.3.b

# Municipal Building Authority Fund

## FUND SUMMARY

The Municipal Building Authority fund was created to account for the activities of the City's Municipal Building Authority. The Authority was created to provide continuity between City Council changes. This method allows for small institutions to participate in financing. The City does not currently have any bonds outstanding issued by the Building Authority, but sees the organization as a "backstop" if needed. The yearly expenditures for the building

## FUND BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **EXPENDITURES** | | | | | |
| Ordinances and Publications | $ 10 | $ 103 | $ - | $ 100 | $ - |
| **TOTAL EXPENDITURES** | **$ 10** | **$ 103** | **$ -** | **$ 100** | **$ -** |
| Municipal Building Fund Net Revenue | (10) | (103) | - | (100) | - |
| Beginning Fund Balance | 1,014 | 1,004 | 901 | 901 | 901 |
| **Ending Fund Balance** | **$ 1,004** | **$ 901** | **$ 901** | **$ 801** | **$ 901** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fitness Center

## FUND DESCRIPTION

The American Fork Fitness Center has been in operation since 1993, serving hundreds of thousands of patrons since that time. With 270,000 unique visits each year, the Center is a heavily used facility. The facility is complete with an indoor/outdoor competition type swimming pool, seasonal leisure pool, indoor track, 3 racquetball courts, cardio 7 weight rooms, group fitness areas, multi-purpose rooms, locker rooms, and a host of other amenities. A full range of programming available at the Center includes, but is not limited to: Lap swimming, land & water fitness classes, swim team, day care, preschool, cycling classes, senior fit classes, itty bitty sports, personal training, karate, gymnastics, Jr. Ninja Warrior, and many others. The mission statement of the Fitness Center is "*Something for Everyone, Family * Fitness * Fun.*"

## DEPARTMENT ACCOMPLISHMENTS

Last year we had over 270,000 unique visits to use the facility. We had an additional 100,000 visits to the facility to participate in swim team, gymnastics, itty bitty classes, merit badge classes, pre-school, karate and many other classes. 29,000 visits were from Seniors in our community that are committed to staying active and healthy!

For five consecutive years, AFFC has had over 3,000 swimmers enrolled in our "Learn-to-Swim" program annually. Participation in swim lessons are vital to a community's health and safety for young children. We had over 250 participants on our swim team. We have 6 High School swim teams that use our facility for practices and meets.

## DEPARTMENT OPERATING INDICATORS

| Fitness Center | 2018 | 2019 |
|---|---|---|
| Memberships | 3,200 | n/a |
| Members | 14,000 | n/a |
| Unique visits to facility/program participation | 285,000 | 270,000 |
| Program visits | 100,000 | 100,000 |
| Swim lesson participants | 3,500 | 3,000 |
| Gymnastics registrations | n/a | 3,491 |
| Itty Bitty registrations | n/a | 501 |
| Karate registrations | n/a | 383 |
| Ninja class registrations | n/a | 1,056 |
| Running Camp registrations | n/a | 61 |
| Preschool registrations | n/a | 28 |
| Princess Camp registrations | n/a | 113 |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fitness Center

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| General Admissions | $ 197,969 | $ 186,749 | $ 166,842 | $ 185,000 | $ 138,750 |
| Passes | 673,590 | 692,973 | 679,175 | 676,000 | 507,000 |
| Lessons | 193,415 | 175,163 | 62,401 | 192,000 | 144,000 |
| Swim Team | 263,756 | 339,167 | 287,617 | 339,000 | 265,000 |
| Specialty Classes | 363,992 | 335,033 | 208,857 | 319,000 | 239,250 |
| Gymnastics | - | - | 28,688 | 25,000 | 18,750 |
| Personal Training & Merit Badge | 59,254 | 39,853 | 25,333 | 12,500 | 9,375 |
| Equipment Rental | 1,076 | 1,000 | 917 | 1,400 | 1,050 |
| Jogging Track | 4,364 | 4,823 | 4,866 | 3,500 | 2,625 |
| Child Care | 32,418 | 35,415 | 30,002 | 31,000 | 23,250 |
| Resale Merchandise & Concessions | 57,581 | 61,290 | 40,680 | 59,000 | 44,250 |
| Room & Pool Rental | 30,210 | 32,846 | 42,949 | 28,000 | 21,000 |
| Miscellaneous | 2,430 | 4,080 | 5,043 | 3,000 | 2,250 |
| Donations | 2,681 | 692 | 1,024 | - | - |
| **Total Revenues** | **1,882,736** | **1,909,084** | **1,584,394** | **1,874,400** | **1,416,550** |
| **TRANSFERS IN** | | | | | |
| Transfer From General Fund | 489,213 | 622,198 | 679,621 | 652,043 | 750,135 |
| **Total Transfers In** | **489,213** | **622,198** | **679,621** | **652,043** | **750,135** |
| **TOTAL REVENUES** | **$ 2,371,949** | **$ 2,531,282** | **$ 2,264,015** | **$ 2,526,443** | **$ 2,166,685** |
| | | | | | |
| **EXPENDITURES** | | | | | |
| Wages & Salaries | $ 1,560,103 | $ 1,460,794 | $ 1,263,260 | $ 1,532,253 | $ 1,224,148 |
| Subscriptions & Memberships | 730 | 175 | 1,172 | 1,300 | 1,300 |
| Advertising | 6,239 | 4,582 | 5,534 | 6,000 | 4,500 |
| Education & Travel | 3,143 | 2,285 | 1,000 | 2,900 | 2,750 |
| Employee Appreciation | - | 3,561 | 1,954 | 900 | 900 |
| Equipment Supply & Maintenance | 14,144 | 17,083 | 16,366 | 17,477 | 17,000 |
| Building Supply & Maintenance | 70,080 | 78,824 | 69,585 | 70,000 | 70,000 |
| Utilities | 212,326 | 218,624 | 174,136 | 180,300 | 162,270 |
| Office Supplies and Expense | - | - | - | - | 21,010 |
| Telephone | 11,051 | 9,974 | 4,348 | 5,820 | 5,820 |
| Contracted Janitorial Service | 89,375 | 96,686 | 114,332 | 103,200 | 103,200 |
| Professional and Technical | 1,667 | 577 | 912 | 1,000 | 1,000 |
| Resale Merchandise & Concessions | 33,853 | 33,240 | 27,872 | 33,300 | 24,975 |
| Copier Supply & Maintenance | 1,674 | 281 | - | 4,000 | - |
| Clothing Allowance | 1,130 | 4,247 | 2,480 | 800 | 800 |
| Computer Supply & Maintenance | 989 | 3,000 | - | 403 | - |
| Department Expense and Supplies | 29,224 | 17,899 | 13,500 | 17,010 | 2,000 |
| Pool Chemicals | 76,155 | 60,767 | 68,443 | 61,200 | 61,200 |
| Insurance | 39,219 | 36,589 | 37,637 | 40,000 | 40,000 |
| Miscellaneous | 1,601 | - | - | - | - |
| Programs Expense and Supplies | 16,074 | 8,750 | 7,430 | 7,500 | 7,500 |

(continued on next page)



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fitness Center

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **EXPENDITURES** | | | | | |
| Credit Card/Bank Processing Fees | 57,297 | 57,636 | 43,555 | 60,000 | 50,000 |
| Child Care | 1,385 | 1,932 | 4,096 | 3,600 | 3,600 |
| Merit Badge | 2,880 | 2,792 | 265 | 500 | - |
| Group Fitness | 3,152 | - | - | - | - |
| Gymnastics | 23,571 | 23,252 | 20,286 | 25,000 | 18,750 |
| Swim Team | 40,364 | 67,497 | 80,348 | 60,900 | 45,675 |
| Swimming Pool Programs | 6,713 | 12,225 | 11,280 | 6,000 | 4,500 |
| Donation | 172 | 1,851 | - | - | - |
| Admin Charge-General Fund | - | 256,433 | 241,104 | 241,100 | 221,066 |
| Admin Charge-Broadband | - | 1,083 | 3,084 | 3,084 | 3,082 |
| Internal Charges-Fleet Operations | 1,000 | 1,000 | 996 | 1,000 | 1,000 |
| Internal Charges-Technology | - | - | 23,868 | 23,873 | 16,819 |
| Equipment | 8,112 | 760 | 3,035 | 5,420 | - |
| **Total Expenditures** | **2,313,423** | **2,484,399** | **2,241,878** | **2,515,840** | **2,114,865** |
| **TRANSFERS OUT** | | | | | |
| Transfer to Capital Projects | - | - | 92,493 | 92,493 | 45,720 |
| Transfer to Capital Equipment | 4,717 | - | 30,336 | 370 | 6,100 |
| **Total Transfers Out** | **4,717** | **-** | **122,829** | **92,863** | **51,820** |
| **TOTAL EXPENDITURES** | **$ 2,318,140** | **$ 2,484,399** | **$ 2,364,707** | **$ 2,608,703** | **$ 2,166,685** |
| Fitness Center Fund Net Revenue | 53,809 | 46,883 | (100,692) | (82,260) | - |
| Beginning Fund Balance | - | 53,809 | 100,692 | 100,692 | - |
| **Ending Fund Balance** | **$ 53,809** | **$ 100,692** | **$ -** | **$ 18,432** | **$ -** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Recreation & Fitness Center Directo | 0.50 | 0.50 | 0.50 | 0.50 | - |
| Aquatics/Head Swim Coach | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Aquatics Manager | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Facility Maintenance Supervisor | 1.00 | - | - | - | - |
| Fitness Center Program Manager | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Fitness Center Office Manager | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Part-Time Positions (Multiple Titles) | 44.87 | 44.49 | 44.49 | 35.56 | (8.93) |
| **Total Fitness Center Positions** | **50.37** | **48.99** | **48.99** | **40.06** | **(8.93)** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# PARC Tax Fund

## FUND SUMMARY

The PARC tax fund collects and expends funds received from the City's Parks, Arts, Recreation, and Culture (PARC) sales and use tax option. The state of Utah allows cities to impose a sales and use tax for the purpose of enhancing public financial support of publicly owned and operated recreational and zoological facilities, and botanical, cultural, and zoological organizations owned or operated by institutions or private nonprofit organizations. The one-tenth of one percent sales tax collected by businesses within American Fork is accounted for in this fund, along with grants awarded by the City Council upon recommendation by the PARC tax board.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Sales Tax | $ 974,823 | $ 1,074,179 | $ 875,000 | $ 1,023,750 | $ 819,000 |
| Grants Returned | 127 | - | - | - | - |
| Interest Earnings | 10,652 | 16,568 | 13,152 | 7,000 | 9,000 |
| **TOTAL REVENUES** | **$ 985,602** | **$ 1,090,747** | **$ 888,152** | **$ 1,030,750** | **$ 828,000** |
| **EXPENDITURES** | | | | | |
| Administrative | $ 55 | $ 420 | $ 6,000 | $ 6,000 | $ 500 |
| Fitness Center | - | - | - | - | - |
| Parks | 1,257,158 | 672,127 | 465,301 | 465,301 | - |
| Boat Harbor | - | - | - | - | - |
| Alpine Community Theater | 60,000 | 38,500 | 30,000 | 30,000 | - |
| Fox Hollow Golf Course | 15,380 | 30,000 | - | - | - |
| Friends of American Fork Library | 15,400 | 14,396 | 21,383 | 21,383 | - |
| American Fork Library | - | 68,791 | 108,100 | 108,100 | - |
| Timpanogos Arts Foundation | 527,500 | 335,000 | 240,800 | 240,800 | - |
| Harrington Center for the Arts | 10,130 | 26,422 | 35,500 | 35,500 | - |
| New Friends Quilt Circle | - | 13,840 | 8,400 | 8,400 | - |
| Timpanogos Symphony | - | 6,400 | 5,600 | 5,600 | - |
| Other Grants | - | - | 5,200 | 5,200 | 829,431 |
| Admin Charge-General Fund | - | - | 9,356 | 9,356 | 7,794 |
| **TOTAL EXPENDITURES** | **$ 1,885,623** | **$ 1,205,896** | **$ 935,640** | **$ 935,640** | **837,725** |
| PARC Tax Fund Net Revenue | (900,021) | (115,149) | (47,488) | 95,110 | (9,725) |
| Beginning Fund Balance | 1,110,954 | 210,933 | 95,784 | 95,784 | 48,296 |
| **Ending Fund Balance** | **$ 210,933** | **$ 95,784** | **$ 48,296** | **$ 190,894** | **38,571** |






Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Celebration Fund

## FUND SUMMARY

The Celebration fund was initially created to track the revenues and expenditures associated with the City's annual American Fork Steel Days celebration. In fiscal year 2018, the City entered into a contract with the American Fork Chamber of Commerce to run the majority of Steel Days events. The City now has a limited number of responsibilities regarding the yearly event. The proposed budget for fiscal year 2021 includes the items the City is contractually obligated for. After fiscal year 2021, it is expected the Celebration Fund will be dissolved and recurring expenditures

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Contributions/Donations | $ 41,703 | $ 9,114 | $ - | $ - | $ - |
| Carnival Tickets | 53,691 | - | - | - | - |
| Other Event Income | 13,046 | - | 3,800 | 4,075 | - |
| **Total Revenues** | **108,440** | **9,114** | **3,800** | **4,075** | **-** |
| **TRANSFERS IN** | | | | | |
| Transfer From General Fund | - | - | 20,337 | 10,721 | 20,000 |
| **Total Transfers In** | **-** | **-** | **20,337** | **10,721** | **20,000** |
| **TOTAL REVENUES** | **$ 108,440** | **$ 9,114** | **$ 24,137** | **$ 14,796** | **$ 20,000** |
| **EXPENDITURES** | | | | | |
| Wages & Salaries | $ - | $ - | $ 22,701 | $ 21,860 | $ - |
| Advertising | 332 | - | - | - | - |
| Carnival | 31,550 | - | - | - | - |
| Fireworks Show | 15,990 | 16,000 | 17,000 | 17,000 | - |
| Miss American Fork Pageant | 6,052 | 8,769 | 10,804 | 12,000 | - |
| Other Programs | 43,968 | - | - | - | - |
| Float | 130 | - | 7,000 | 3,575 | - |
| Steel Days Contract | 20,000 | 10,000 | 20,000 | 10,000 | 20,000 |
| **TOTAL EXPENDITURES** | **$ 118,022** | **$ 34,769** | **$ 77,505** | **$ 64,435** | **$ 20,000** |
| Celebration Fund Net Revenue | (9,582) | (25,655) | (53,368) | (49,639) | - |
| Beginning Fund Balance | 88,605 | 79,023 | 53,368 | 53,368 | - |
| **Ending Fund Balance** | **$ 79,023** | **$ 53,368** | **$ -** | **$ 3,729** | **-** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# RDA - Downtown Redevelopment Fund

## FUND SUMMARY

The Downtown Redevelopment fund is used to enhance and promote the City's core downtown area and to account for one small business revolving loan issued by the City that is still outstanding.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Interest Revenue | $ 2,332 | $ 3,520 | $ 3,215 | $ 3,000 | $ 3,000 |
| Miscellaneous | 25,000 | - | - | - | - |
| **TOTAL REVENUES** | **$ 27,332** | **$ 3,520** | **$ 3,215** | **$ 3,000** | **$ 3,000** |
| **EXPENDITURES** | | | | | |
| Professional & Technical | - | - | 41,000 | 41,000 | - |
| **TOTAL EXPENDITURES** | **$ -** | **$ -** | **$ 41,000** | **$ 41,000** | **$ -** |
| Downtown Redevelopment Net Revenu | 27,332 | 3,520 | (37,785) | (38,000) | 3,000 |
| Beginning Fund Balance | 103,254 | 130,586 | 134,106 | 134,106 | 96,321 |
| **Ending Fund Balance** | **$ 130,586** | **$ 134,106** | **$ 96,321** | **$ 96,106** | **$ 99,321** |




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# RDA-East Side Redevelopment Agency Fund

## FUND SUMMARY

The East Side RDA fund (also known as the East Main RDA fund) was created to account for the revenues and expenditures for the East Main RDA project area created December 1992. The goal of the East Main RDA project area is to incentivize the commercial and industrial development of several blocks along Main Street in American Fork where conditions of blight were determined to be present. The fund will continue to receive "haircut" monies until

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Tax Increment | $ 81,758 | $ - | $ 5,114 | $ 1,700 | $ 1,700 |
| Haircut-East Side | 14,393 | 43,163 | 45,071 | 40,003 | 40,003 |
| Interest Earnings | 750 | 672 | 730 | 360 | 700 |
| **TOTAL REVENUES** | **$ 96,901** | **$ 43,835** | **$ 50,915** | **$ 42,063** | **$ 42,403** |
| **EXPENDITURES** | | | | | |
| Administrative Expenses | $ 378 | $ - | $ - | $ - | $ - |
| **Total Expenditures** | **378** | **-** | **-** | **-** | **-** |
| **TRANSFERS OUT** | | | | | |
| Transfer to Capital Projects Fund | 45,812 | 8,520 | - | - | - |
| Transfer to General Fund | 2,900 | - | - | 42,063 | 42,403 |
| Transfer to Debt Service Fund | 47,585 | 35,175 | - | - | - |
| **Total Transfers Out** | **96,297** | **43,695** | **-** | **42,063** | **42,403** |
| **TOTAL EXPENDITURES** | **$ 96,675** | **$ 43,695** | **$ -** | **$ 42,063** | **$ 42,403** |
| East Side RDA Fund Net Revenue | 226 | 140 | 50,915 | - | - |
| Beginning Fund Balance | (226) | - | 140 | 140 | 51,055 |
| **Ending Fund Balance** | **$ -** | **$ 140** | **$ 51,055** | **$ 140** | **$ 51,055** |





Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# RDA-Business Park Redevelopment Fund

## FUND SUMMARY

The Business Park RDA fund (also known as the North Valley RDA fund) was created to account for the revenues and expenditures of the North Valley RDA Project Area created September 1987. The goal of the North Valley RDA project area is to incentivize the commercial and industrial development along I-15 in American Fork. The fund will receive tax increment revenue through fiscal year 2019, and haircut monies through fiscal year 2026.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Tax Increment | $ 534,033 | $ 620,623 | $ 20,445 | $ - | $ - |
| Haircut | 96,428 | 131,088 | 325,071 | 312,101 | 312,101 |
| Interest Earnings | 20,634 | 42,004 | 54,560 | 20,634 | 20,634 |
| **TOTAL REVENUES** | **$ 651,095** | **$ 793,715** | **$ 400,076** | **$ 332,735** | **$ 332,735** |
| **EXPENDITURES** | | | | | |
| Administrative Expenses | $ 6,415 | $ 3,870 | $ - | $ - | $ - |
| Developer Reimbursement | 35,000 | 23,135 | - | - | - |
| Development Activities | - | - | - | - | - |
| Haircut Expenditures | - | - | 332,735 | 332,735 | 332,735 |
| Admin Charge-General Fund | - | - | - | - | - |
| **Total Expenditures** | **41,415** | **27,005** | **332,735** | **332,735** | **332,735** |
| **TRANSFERS OUT** | | | | | |
| Transfer to General Fund | 23,200 | 34,543 | - | - | - |
| Transfer to Debt Service Fund | 385,007 | 353,417 | - | - | - |
| **Total Transfers Out** | **408,207** | **387,960** | **-** | **-** | **-** |
| **TOTAL EXPENDITURES** | **$ 449,622** | **$ 414,965** | **$ 332,735** | **$ 332,735** | **$ 332,735** |
| Business Park RDA Fund Net Revenue | 201,473 | 378,750 | 67,341 | - | - |
| Beginning Fund Balance | 1,117,775 | 1,319,248 | 1,697,998 | 1,697,998 | 1,765,339 |
| **Ending Fund Balance** | **$ 1,319,248** | **$ 1,697,998** | **$ 1,765,339** | **$ 1,697,998** | **$ 1,765,339** |




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# EDA-Egg Farm Economic Development Area

## FUND SUMMARY

The Egg Farm EDA Fund was created to account for the revenues and expenditures of the Egg Farm EDA project area created in September 2000. The goal of the Egg Farm EDA project area is to incentivize the commercial and industrial development of a former chicken farm in American Fork City. The fund will receive tax increment revenue through fiscal year 2028, depending on when minimum tax increment levels are reached. It is important to note that 20 percent of tax increment received must go towards affordable housing projects in the state of Utah.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Tax Increment | $ 721,310 | $ 773,782 | $ 716,387 | $ 703,075 | $ 760,014 |
| Tax Increment - Housing | 180,327 | 193,446 | 179,097 | 175,769 | 190,003 |
| Interest Earnings | 29,828 | 60,913 | 61,000 | 18,000 | 20,000 |
| **TOTAL REVENUES** | **$ 931,465** | **$ 1,028,141** | **$ 956,484** | **$ 896,844** | **$ 970,017** |
| **EXPENDITURES** | | | | | |
| Administrative Expenses | $ 4,457 | $ 5,229 | $ 42,000 | $ 10,000 | $ 24,510 |
| Developer Reimbursement | 450,819 | 483,614 | 474,253 | 439,422 | 291,273 |
| Development Activities | 50,000 | - | - | 175,769 | - |
| Admin Charge-General Fund | - | - | 33,942 | 33,942 | 39,947 |
| 860 E Reconstruction | - | - | 500,000 | 500,000 | - |
| Widening of 1500 South | - | - | 50,000 | - | - |
| Widening of Sam White Lane | - | - | - | - | 1,103,313 |
| **Total Expenditures** | **505,276** | **488,843** | **1,100,195** | **1,159,133** | **1,459,043** |
| **TRANSFERS OUT** | | | | | |
| Transfer to General Fund | 31,900 | 38,334 | - | - | - |
| Transfer to Storm Drain Fund | - | - | - | - | - |
| **Total Transfers Out** | **31,900** | **38,334** | **-** | **-** | **-** |
| **TOTAL EXPENDITURES** | **$ 537,176** | **$ 527,177** | **$ 1,100,195** | **$ 1,159,133** | **$ 1,459,043** |
| Egg Farm EDA Fund Net Revenue | 394,289 | 500,964 | (143,711) | (262,289) | (489,026) |
| Beginning Fund Balance | 1,665,738 | 2,060,027 | 2,560,991 | 2,560,991 | 2,417,280 |
| **Ending Fund Balance** | **$ 2,060,027** | **$ 2,560,991** | **$ 2,417,280** | **$ 2,298,702** | **$ 1,928,254** |
| | | | | | |
| Fund Balance Restricted For: | | | | | |
| Administration | 111,150 | 115,949 | 84,780 | | 67,825 |
| Affordable Housing | 1,054,864 | 1,248,310 | 1,427,407 | | 1,617,410 |
| Developer Funded Infrastructure | (44,400) | (44,400) | (70,911) | | - |
| Public Infrastructure | 938,413 | 1,241,133 | 976,004 | | 243,019 |
| **Ending Fund Balance** | **$ 2,060,027** | **$ 2,560,992** | **$ 2,417,280** | **$ -** | **$ 1,928,254** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# CRA-Patriot Station Community Reinvestment

## FUND SUMMARY

The Patriot Station CRA Project Area Plan was drafted in October 2018 to define the method and means of transit oriented development (TOD) around the vicinity of the American Fork FrontRunner Station. Future development within the Project Area includes proposed high and medium density multi-family housing and the creation of space for offices and commercial businesses, including numerous infrastructure and improvements to capture the vision and density of the anticipated transit oriented development. As of May 5, 2020, the creation of the CRA has been put on hold pending approval by other taxing entities within the project area.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **EXPENDITURES** | | | | | |
| Administrative Expenses | $ 24,509 | $ 65,437 | $ - | $ - | $ - |
| **TOTAL EXPENDITURES** | **$ 24,509** | **$ 65,437** | **$ -** | **$ -** | **$ -** |
| Patriot Station CRA Fund Net Revenue | (24,509) | (65,437) | - | - | - |
| Beginning Fund Balance | (55,754) | (80,263) | (145,699) | (145,699) | (145,699) |
| **Ending Fund Balance** | **$ (80,263)** | **$ (145,699)** | **$ (145,699)** | **$ (145,699)** | **$ (145,699)** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending




# Debt Service Fund

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Debt Service Fund

## FUND SUMMARY

The Debt Service Fund is used to account for the accumulation of resources for, and the payment of, long-term debt principal, interest, and related costs for the governmental funds (excluding enterprise and internal service fund debt).

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Property Tax | $ - | $ 395,000 | $ 784,125 | $ 784,125 | $ 760,393 |
| PARC Tax Grant | 350,000 | 350,000 | 350,000 | 350,000 | 350,000 |
| Interest Earnings | 24,516 | 22,039 | 19,796 | 24,000 | 17,875 |
| **Total Revenues** | **374,516** | **767,039** | **1,153,921** | **1,158,125** | **1,128,268** |
| **TRANSFERS IN** | | | | | |
| Transfer From General Fund | 1,385,975 | 354,939 | - | - | - |
| Transfer From Bond Capital Project | 904,284 | - | 100,000 | - | - |
| Transfer From Park Impact Fund | 335,226 | 388,060 | 120,808 | 121,558 | 119,864 |
| Transfer From Water Fund | 46,500 | - | - | - | - |
| Transfer From Sewer Fund | 46,500 | - | - | - | - |
| Transfer From East Side RDA | 47,585 | 35,175 | - | - | - |
| Transfer From Business Park RDA | 385,007 | 353,417 | - | - | - |
| **Total Transfers In** | **3,151,077** | **1,131,591** | **220,808** | **121,558** | **119,864** |
| **TOTAL REVENUES** | **$ 3,525,593** | **$ 1,898,630** | **$ 1,374,729** | **$ 1,279,683** | **$ 1,248,132** |
| **EXPENDITURES** | | | | | |
| 2020 General Obligation Bonds | - | - | - | - | 580,143 |
| 2018 Sales Tax Revenue Bonds | - | 469,507 | 470,808 | 470,808 | 469,864 |
| 2015 Sales Tax Revenue Bonds | 430,842 | 388,592 | - | - | - |
| 2014 General Obligation Bonds | 596,622 | 597,901 | 599,027 | 599,027 | - |
| 2013 General Obligation Bonds | 266,123 | 267,054 | - | - | - |
| 2011 General Obligation Bonds | 188,003 | 184,331 | 185,098 | 185,098 | 180,250 |
| 2012 Sales Tax Revenue Bonds | 971,387 | - | - | - | - |
| 2005 General Obligation Bonds | 707,250 | - | - | - | - |
| Trustee Fees | 4,750 | 2,500 | 1,750 | 1,750 | 1,750 |
| Cost of Issuance | - | - | 100,000 | - | - |
| **Total Expenditures** | **3,164,977** | **1,909,885** | **1,356,683** | **1,256,683** | **1,232,007** |
| **TRANSFERS OUT** | | | | | |
| Transfer to Capital Projects Fund | - | - | 941,411 | 941,411 | - |
| **Total Transfers Out** | **-** | **-** | **941,411** | **941,411** | **-** |
| **TOTAL EXPENDITURES** | **$ 3,164,977** | **$ 1,909,885** | **$ 2,298,094** | **$ 2,198,094** | **$ 1,232,007** |
| Debt Service Fund Net Revenue | 360,616 | (11,255) | (923,365) | (918,411) | 16,125 |
| Beginning Fund Balance | 943,430 | 1,304,046 | 1,292,791 | 1,292,791 | 369,426 |
| **Ending Fund Balance** | **$ 1,304,046** | **$ 1,292,791** | **$ 369,426** | **$ 374,380** | **$ 385,551** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Capital Projects Funds

# General Capital Projects Fund

## FUND SUMMARY

The General Capital Projects Fund accounts for financial resources to be used for the acquisition of major capital facilities (other than those financed by enterprise or internal service fund activities). This fund does not account for projects accounted for with impact fees which are accounted for in separate impact fee funds.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Property Tax | $ - | $ 525,000 | $ 525,000 | $ 525,000 | $ 500,000 |
| Sales Tax | - | - | 582,250 | 685,000 | 513,750 |
| Class C Road Funds | - | 1,193,797 | 1,187,683 | 1,200,000 | 1,080,000 |
| Cemetery Lot Sales | 29,200 | 41,600 | 39,000 | 44,000 | 40,000 |
| Grants-PARC Tax | 907,158 | 322,127 | 506,000 | 553,112 | 223,401 |
| Grants-Utah County Recreation | 14,955 | 14,711 | 14,256 | 14,256 | - |
| Grants-MAG | - | - | 900 | 5,817,000 | 5,573,925 |
| Grants-Utah DOT | - | - | - | - | 403,569 |
| Interest Earnings | 74,641 | 94,347 | 120,645 | 88,425 | 88,425 |
| **Total Revenue** | **1,025,954** | **2,191,582** | **2,975,734** | **8,926,793** | **8,423,070** |
| **TRANSFERS IN** | | | | | |
| Transfer From General Fund | 2,565,288 | 1,593,741 | 875,457 | 842,367 | 394,706 |
| Transfer From Fitness Center | - | - | 92,493 | 92,493 | 45,720 |
| Transfer From East Side RDA Fund | 45,812 | 8,520 | - | - | - |
| Transfer From Debt Service Fund | - | - | 941,411 | 941,411 | - |
| Transfer From Police Impact Fund | - | 1,500 | - | - | - |
| **Total Transfers In** | **2,611,100** | **1,603,761** | **1,909,361** | **1,876,271** | **440,426** |
| **TOTAL REVENUES** | **$ 3,637,054** | **$ 3,795,343** | **$ 4,885,095** | **$ 10,803,064** | **$ 8,863,496** |
| **EXPENDITURES** | | | | | |
| **Streets** | | | | | |
| Pavement Management Plan | 364,904 | 2,192,169 | 2,523,095 | 2,523,095 | 2,093,750 |
| 200 E Betterments | 213,205 | - | - | - | - |
| 700 N Connection | - | 1,800 | 900 | 1,098,200 | 1,651,000 |
| ADA/Sidewalk Improvements | - | - | 40,000 | 40,000 | 40,000 |
| Safe Route to Schools | - | - | 50,000 | 50,000 | 70,200 |
| Transit Loop Feasibility | - | - | - | - | 95,000 |
| Street Lighting Upgrades | - | - | 50,000 | 50,000 | 50,000 |
| **Total Streets** | **578,109** | **2,193,969** | **2,663,995** | **3,761,295** | **3,999,950** |
| **Cemetery** | | | | | |
| Parking Lot-Asphalt | - | 6,396 | - | - | - |
| Expansion | 17,388 | 4,380 | - | 44,000 | 40,000 |
| Wall Repair | - | - | - | 10,000 | - |
| **Total Cemetery** | **17,388** | **10,776** | **-** | **54,000** | **40,000** |

(continued on next page)

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# General Capital Projects Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **EXPENDITURES** | | | | | |
| **Parks** | | | | | |
| Evergreen Park Irrigation | - | 15,064 | 24,510 | 5,936 | - |
| Country View Park Irrigation | - | - | - | 20,000 | - |
| Fox Hollow Subsidy | 240,000 | 240,000 | 240,000 | 240,000 | 240,000 |
| Utah County Grant-Art Dye Park | 14,955 | 14,711 | 14,256 | 14,256 | - |
| State Grant-Boat Harbor | 7,300 | - | - | - | - |
| 200 South Bike/Pedestrian Path | - | - | 504,075 | 4,677,000 | 4,172,925 |
| Trail Maintenance | - | - | - | - | 3,000 |
| Parking Lot Maintenance | - | - | - | - | 15,000 |
| Pickleball Resurfacing | - | - | - | - | 5,500 |
| Hindley Filter Relocation | - | - | - | - | 13,500 |
| Sprinkler Automation | - | - | - | - | 21,500 |
| Boat Harbor | - | - | - | 1,842 | - |
| Art Dye Park | - | - | 44,826 | - | - |
| PARC-Benches and Trees | 10,000 | - | - | - | - |
| PARC-Quail Hollow Pavillion | 67,000 | - | - | - | - |
| PARC-Quail Hollow Parking | 37,773 | 20,227 | - | - | - |
| PARC-Art Dye Park | 463,212 | 111,142 | 83,445 | 82,113 | - |
| PARC-Daughters of Utah Pioneers | 1,874 | 5,030 | - | 321 | - |
| PARC-Sculpture | 20,000 | - | - | 3,000 | - |
| PARC-Meadowview Park | 6,040 | 46,942 | 1,863 | 18 | - |
| PARC-Miller Park Parking Lot | 48,606 | - | - | 6,394 | - |
| PARC-Picnic Tables, Trees, Cans | - | 9,650 | 27,885 | 28,450 | - |
| PARC-Meadow View Playground | - | 58,987 | - | 1,013 | - |
| PARC-Rotary Park Pavillion | - | 85,187 | 64,558 | 78,260 | - |
| PARC-Swing Set Replacements | - | 9,996 | - | - | - |
| PARC-Easton Dog Park | - | 2,590 | 31,154 | 31,719 | - |
| PARC-Miller/Evergreen Restrooms | - | - | - | 17,402 | - |
| PARC-Hindley Park Parking Lot | - | - | 105,750 | 105,750 | - |
| PARC-Playground Equipment | - | - | 78,884 | 86,208 | - |
| PARC-Pool Shade Structure | - | - | 24,800 | 24,800 | - |
| PARC-Quail Cove Entrance | - | - | 18,869 | 18,869 | - |
| PARC-Quail Cove Restroom | - | - | - | - | 100,000 |
| PARC-Scoreboard Replacement | - | - | - | - | 15,301 |
| PARC-Library Expansion | - | - | 68,791 | 68,791 | 108,100 |
| **Total Parks** | **916,760** | **619,526** | **1,333,666** | **5,512,142** | **4,694,826** |
| **Fitness Center** | | | | | |
| Deck Drain Replacement | 13,529 | 11,249 | - | - | 18,000 |
| Revolving Door Replacement | - | - | - | 12,000 | - |
| Facility Paint and Flooring | - | 4,584 | 10,767 | 15,416 | - |
| Roof Replacement | 24,900 | - | 36,233 | 46,000 | - |
| HVAC Units | - | 41,550 | - | - | - |
| LED Lighting Upgrades | 15,000 | 10,585 | 11,945 | 11,945 | - |

(continued on next page)

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# General Capital Projects Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **EXPENDITURES** | | | | | |
| **Fitness Center** | | | | | |
| ADA Door Openers | - | 4,700 | - | - | - |
| Slide Repair | - | 5,000 | - | - | - |
| Cinder Block Entry | - | - | - | - | - |
| Security Upgrade | - | - | 14,475 | 15,000 | - |
| Pool Boiler | - | - | 160,940 | 160,940 | - |
| Weight Room Expansion | - | - | - | - | 27,720 |
| Feasibility Study | - | 23,067 | - | - | - |
| **Total Fitness Center** | **53,429** | **100,735** | **234,360** | **261,301** | **45,720** |
| **Building & Grounds** | | | | | |
| HVAC System Replacements | - | 15,680 | 23,085 | 23,085 | - |
| Fire Panel Replacements | - | - | - | - | 40,000 |
| Boiler Replacements | - | - | - | - | 28,000 |
| Electrical Transmitters | - | - | - | - | 15,000 |
| Library-Carpet Replacement | - | - | 53,350 | 60,000 | - |
| Library Chiller | 55,854 | - | - | - | - |
| Public Works HVAC Replacement | 13,400 | - | - | - | - |
| Police Interview Room Remodel | 17,359 | - | - | - | - |
| Police Station Carpet | - | - | 51,295 | 51,157 | - |
| Administration Building Stairs | - | - | 3,384 | 25,000 | - |
| **Total Building & Grounds** | **86,613** | **15,680** | **131,114** | **159,242** | **83,000** |
| **Other** | | | | | |
| Fire-Station 52 | - | 1,500 | - | - | - |
| Parade Float | - | - | 15,425 | 8,425 | - |
| **Total Other** | **-** | **1,500** | **15,425** | **8,425** | **-** |
| **Total Expenditures** | **1,652,299** | **2,942,186** | **4,378,560** | **9,756,405** | **8,863,496** |
| **TRANSFERS OUT** | | | | | |
| Transfer to General Fund | - | - | - | - | 2,000,000 |
| Transfer to Capital Equipment | 8,000 | 50,000 | - | - | - |
| **Total Transfers Out** | **8,000** | **50,000** | **-** | **-** | **2,000,000** |
| **TOTAL EXPENDITURES** | **$ 1,660,299** | **$ 2,992,186** | **$ 4,378,560** | **$ 9,756,405** | **$ 10,863,496** |
| Debt Service Fund Net Revenue | 1,976,755 | 803,157 | 506,535 | 1,046,659 | (2,000,000) |
| Beginning Fund Balance | 1,952,915 | 3,929,670 | 4,732,827 | 4,732,827 | 5,239,362 |
| **Ending Fund Balance** | **$ 3,929,670** | **$ 4,732,827** | **$ 5,239,362** | **$ 5,779,486** | **$ 3,239,362** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Bond Capital Projects Fund

## FUND SUMMARY

The Bond Capital Projects Fund accounts for financial resources received by bond proceeds to be used for the acquisition of major capital facilities (other than those financed by enterprise or internal service fund activities).

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Bond Proceeds | $ 4,000,000 | $ - | $ 8,500,000 | $ 5,100,000 | $ - |
| Interest Earnings | - | 97,000 | 35,579 | - | 15,000 |
| **TOTAL REVENUES** | **$ 4,000,000** | **$ 97,000** | **$ 8,535,579** | **$ 5,100,000** | **$ 15,000** |
| **EXPENDITURES** | | | | | |
| Fire Station 52 | - | - | - | 5,100,000 | 6,400,000 |
| Land-Fire Station 53 | - | - | - | - | 2,000,000 |
| Art Dye Park-Phase I and II | - | 590,966 | 2,580,000 | - | - |
| Bond Cost of Issuance | 21,750 | - | - | - | - |
| **Total Expenditures** | **21,750** | **590,966** | **2,580,000** | **5,100,000** | **8,400,000** |
| **TRANSFERS OUT** | | | | | |
| Transfer to Debt Service Fund | 904,284 | - | 100,000 | - | - |
| **Total Transfers Out** | **904,284** | | **100,000** | | **-** |
| **TOTAL EXPENDITURES** | **$ 926,034** | **$ 590,966** | **$ 2,680,000** | **$ 5,100,000** | **$ 8,400,000** |
| Debt Service Fund Net Revenue | 3,073,966 | (493,966) | 5,855,579 | - | (8,385,000) |
| Beginning Fund Balance | - | 3,073,966 | 2,580,000 | 2,580,000 | 8,435,579 |
| **Ending Fund Balance** | **$ 3,073,966** | **$ 2,580,000** | **$ 8,435,579** | **$ 2,580,000** | **$ 50,579** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Capital Equipment Fund

## FUND SUMMARY

The capital equipment fund accounts for equipment purchases other than those purchased by enterprise or internal service fund activities.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Sale of Capital Assets | $ - | $ 4,000 | $ - | $ - | $ 5,000 |
| Interest Earnings | 899 | 1,046 | 420 | - | - |
| Capital Lease Proceeds | - | - | - | - | - |
| Interfund Loan | - | - | 166,825 | 165,000 | - |
| **Total Revenues** | **899** | **5,046** | **167,245** | **165,000** | **5,000** |
| **TRANSFERS IN** | | | | | |
| Transfer From General Fund | 384,203 | 268,521 | 160,895 | 222,488 | 202,488 |
| Transfer From Fitness Center | 4,717 | - | 30,336 | 370 | 6,100 |
| Transfer From Capital Projects | 8,000 | 50,000 | - | - | - |
| **Total Transfers In** | **396,920** | **318,521** | **191,231** | **222,858** | **208,588** |
| **TOTAL REVENUES** | **$ 397,819** | **$ 323,567** | **$ 358,476** | **$ 387,858** | **$ 213,588** |
| **EXPENDITURES** | | | | | |
| **Police** | | | | | |
| Equipment, Radios & Tasers | $ 12,500 | $ 5,314 | $ 23,000 | $ 23,283 | $ 10,000 |
| Storage Shed | - | - | 52,550 | 52,550 | - |
| Radio Replacement | - | - | 15,000 | 15,000 | 10,000 |
| **Total Police** | **12,500** | **5,314** | **90,550** | **90,833** | **20,000** |
| **Fire** | | | | | |
| Tech/Rescue Equipment | 18,412 | 19,792 | 20,485 | 20,000 | 10,000 |
| Radios | 66,656 | - | - | - | - |
| Dispatch Upgrades | - | - | - | - | 15,000 |
| X-Series 12 Lead Zolls | - | 104,528 | - | - | 27,000 |
| Burn Prop | 49,722 | 14,630 | - | - | - |
| Cascade Air System | 65,693 | - | - | - | - |
| **Total Fire** | **200,483** | **138,950** | **20,485** | **20,000** | **52,000** |
| **Streets** | | | | | |
| Loader Lease | 8,000 | 8,000 | - | - | - |
| Trackhoe Lease | - | 11,500 | 11,500 | 11,500 | 11,500 |
| Backhoe Lease | - | 7,250 | 12,500 | 12,500 | 23,000 |
| Roller Lease | - | - | 7,000 | 7,000 | - |
| Concrete Lifting Machine | 28,475 | - | - | - | - |
| Salter Racks | - | - | 25,000 | 25,000 | - |
| Loader | - | - | 166,825 | 165,000 | - |
| Backhoe | - | - | - | - | 52,000 |
| Chip Box | - | - | - | - | 12,000 |
| Mini-X | - | - | - | - | - |
| Skid Steer | - | - | - | - | - |
| **Total Streets** | **36,475** | **26,750** | **222,825** | **221,000** | **98,500** |

(continued on next page)



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Capital Equipment Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **Parks** | | | | | |
| Excavator Lease | 7,250 | - | - | - | - |
| Mower Lease | 4,527 | - | - | - | - |
| UTV | - | 10,621 | - | - | - |
| Front End Loader Repair | - | 30,000 | - | - | - |
| Bleacher Replacement | 9,595 | - | - | - | - |
| PARC Matching Funds | 36,008 | - | 13,992 | 13,992 | - |
| Playground Replacement | - | - | 50,974 | 60,000 | - |
| Dump Trailer | - | - | - | - | 10,000 |
| **Total Parks** | **57,380** | **40,621** | **64,966** | **73,992** | **10,000** |
| **Cemetery** | | | | | |
| Backhoe Lease | 3,792 | 9,225 | 8,519 | 8,079 | 8,079 |
| Excavator Lease | - | 8,405 | 8,716 | 8,409 | 8,409 |
| Mower | - | 16,388 | - | - | - |
| **Total Cemetery** | **3,792** | **34,018** | **17,235** | **16,488** | **16,488** |
| **Fitness Center/Recreation** | | | | | |
| Pool Start Blocks | 12,988 | - | - | - | - |
| Fitness Equipment | 24,856 | 19,424 | 20,336 | 20,946 | 5,000 |
| Leisure Pool Tarp | - | - | 10,000 | 10,000 | - |
| Camera Upgrades | - | - | - | - | 1,100 |
| Soccer Goals | - | - | - | - | 5,500 |
| **Total Fitness Center/Recreation** | **37,844** | **19,424** | **30,336** | **30,946** | **11,600** |
| **Other** | | | | | |
| Engineering - Trimble GPS Unit | - | - | 10,000 | 10,000 | - |
| Library-Furniture | 9,914 | - | - | - | - |
| Holiday Decorations | - | - | - | - | 5,000 |
| **Total Other** | 9,914 | - | 10,000 | 10,000 | 5,000 |
| **TOTAL EXPENDITURES** | **$ 358,388** | **$ 265,077** | **$ 456,397** | **$ 463,259** | **$ 213,588** |
| Capital Equipment Fund Net Revenue | 39,431 | 58,490 | (97,921) | (75,401) | - |
| Beginning Fund Balance | - | 39,431 | 97,921 | 97,921 | - |
| **Ending Fund Balance** | **$ 39,431** | **$ 97,921** | **$ -** | **$ 22,520** | **$ -** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Park Impact Fees Fund

## FUND SUMMARY

The Park Impact Fee Fund accounts for fees assessed to property developers for new land or park space that must be acquired to maintain the established park land level of service as a result of growth due to new property development. Each impact fee type is separated into its own fund for greater tracking and accountability.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Impact Fees | $ 2,055,039 | $ 1,573,204 | $ 2,200,144 | $ 20,000 | $ 1,400,000 |
| Grants-MAG | - | - | - | - | 44,000 |
| Interest Earnings | 55,238 | 120,736 | 128,829 | 80,000 | 120,000 |
| **TOTAL REVENUES** | **$ 2,110,277** | **$ 1,693,940** | **$ 2,328,973** | **$ 100,000** | **$ 1,564,000** |
| **EXPENDITURES** | | | | | |
| Impact Fee/Master Plan Update | 5,434 | - | 7,500 | 7,500 | - |
| Parking Lots | 2,909 | 35,174 | - | - | - |
| Easton Park | 7,951 | - | - | - | - |
| Art Dye Improvements | - | 42,457 | 2,235,142 | 2,191,877 | 350,000 |
| Art Dye Trail | - | - | - | - | 44,000 |
| 200 S Bike/Pedestrian Path | - | - | - | 323,000 | - |
| Trail Expansion | - | - | - | - | 200,000 |
| Boat Harbor | - | - | - | - | - |
| Developer Reimbursement | 36,382 | 25,980 | 279,621 | 84,802 | - |
| **Total Expenditures** | **52,676** | **103,611** | **2,522,263** | **2,607,179** | **594,000** |
| **TRANSFERS OUT** | | | | | |
| Transfer to General Fund | - | | 290,633 | 290,633 | - |
| Transfer to Debt Service Fund | 335,226 | 388,060 | 120,808 | 121,558 | 119,864 |
| **Total Transfers Out** | **335,226** | **388,060** | **411,441** | **412,191** | **119,864** |
| **TOTAL EXPENDITURES** | **$ 387,902** | **$ 491,671** | **$ 2,933,704** | **$ 3,019,370** | **$ 713,864** |
| Park Impact Fee Fund Net Revenue | 1,722,375 | 1,202,269 | (604,731) | (2,919,370) | 850,136 |
| Beginning Fund Balance | 2,185,735 | 3,908,110 | 5,110,379 | 5,110,379 | 4,505,648 |
| **Ending Fund Balance** | **$ 3,908,110** | **$ 5,110,379** | **$ 4,505,648** | **$ 2,191,009** | **$ 5,355,784** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Road Impact Fees Fund

## FUND SUMMARY

The Road Impact Fee Fund accounts for fees assessed to property developers to reimburse the city for the cost of developing new system capacity that allows new development to occur and allows for transportation level of service to be maintained. Each impact fee type is separated into its own fund for greater tracking and accountability.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Impact Fees | $ 1,944,786 | $ 2,001,660 | $ 2,604,492 | $ 2,000,000 | $ 1,400,000 |
| Interest Earnings | 47,514 | 124,338 | 135,876 | 80,000 | 120,000 |
| **TOTAL REVENUES** | **$ 1,992,300** | **$ 2,125,998** | **$ 2,740,368** | **$ 2,080,000** | **$ 1,520,000** |
| **EXPENDITURES** | | | | | |
| Impact Fee/Master Plan Update | 19,349 | - | 13,433 | 7,500 | - |
| 700 N Land Acquisition | - | - | 272,000 | 272,000 | - |
| 700 N Grant Match | - | - | - | 80,000 | 272,000 |
| 700 N Signal | - | - | - | 250,000 | - |
| 200 S Design & Engineering | - | 358,301 | 4,960 | 4,959 | - |
| Traffic Signal-300 N 600 E | - | - | 2,500 | 2,500 | - |
| Widening 300 N 1100 E | - | - | 40,400 | 40,400 | - |
| 400 S Connection to 500 E | - | - | - | - | 300,000 |
| 300 W Pacific Dr Improvements | - | - | - | - | 50,000 |
| 300 N 600 E Intersection | - | - | - | - | 300,000 |
| 36" Water line (Street Widening) | - | - | - | - | 973,732 |
| Developer Reimbursement | 41,759 | 157,880 | 2,011,488 | 910,714 | - |
| **TOTAL EXPENDITURES** | **$ 61,108** | **$ 516,181** | **$ 2,344,781** | **$ 1,568,073** | **$ 1,895,732** |
| Road Impact Fee Fund Net Revenue | 1,931,192 | 1,609,817 | 395,587 | 511,927 | (375,732) |
| Beginning Fund Balance | 1,578,478 | 3,509,670 | 5,119,487 | 5,119,487 | 5,515,074 |
| **Ending Fund Balance** | **$ 3,509,670** | **$ 5,119,487** | **$ 5,515,074** | **$ 5,631,414** | **$ 5,139,342** |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fire Impact Fees Fund

## FUND SUMMARY

The Fire Impact Fee Fund accounts for impact fees charged to new development to recover all or a portion of the costs of providing fire services to new development. Impact fees collected provide funding for essential public safety infrastructure needed by the City to handle the increase in calls that new growth will generate.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Impact Fees | $ 279,658 | $ 257,694 | $ 440,928 | $ 300,000 | $ 210,000 |
| Interest Earnings | 12,282 | 27,623 | 29,795 | 13,000 | 20,000 |
| **TOTAL REVENUES** | **$ 291,940** | **$ 285,317** | **$ 470,723** | **$ 313,000** | **$ 230,000** |
| **EXPENDITURES** | | | | | |
| Impact Fee/Master Plan Update | 5,434 | - | 7,500 | 7,500 | - |
| Station 52 Engineering & Design | 540 | - | - | - | - |
| Station 52 Land | - | | - | 500,000 | - |
| Developer Reimbursement | - | - | 3,077 | - | - |
| **TOTAL EXPENDITURES** | **$ 5,974** | **$ -** | **$ 10,577** | **$ 507,500** | **$ -** |
| Fire Impact Fee Fund Net Revenue | 285,966 | 285,317 | 460,146 | (194,500) | 230,000 |
| Beginning Fund Balance | 567,378 | 853,344 | 1,138,661 | 1,138,661 | 1,598,807 |
| **Ending Fund Balance** | **$ 853,344** | **$ 1,138,661** | **$ 1,598,807** | **$ 944,161** | **$ 1,828,807** |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Police Impact Fees Fund

## FUND SUMMARY

The Police Impact Fee Fund accounts for impact fees charged to new development to recover all or a portion of the costs of providing police services to new development. Impact fees collected provide funding for essential public safety infrastructure needed by the City to handle the increase in calls that new growth will generate.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Impact Fees | $ 257,308 | $ 211,922 | $ 303,175 | $ 280,000 | $ 196,000 |
| Interest Earnings | 15,247 | 32,702 | 33,212 | 16,000 | 20,000 |
| **TOTAL REVENUES** | **$ 272,555** | **$ 244,624** | **$ 336,387** | **$ 296,000** | **$ 216,000** |
| **EXPENDITURES** | | | | | |
| Impact Fee/Master Plan Update | 5,434 | - | 7,500 | 7,500 | - |
| Developer Reimbursement | - | - | 10,221 | - | - |
| **Total Expenditures** | **5,434** | **-** | **17,721** | **7,500** | **-** |
| **TRANSFERS OUT** | | | | | |
| Transfer to Capital Projects Fund | - | 1,500 | - | - | - |
| **Total Transfers Out** | **-** | **1,500** | **-** | **-** | **-** |
| **TOTAL EXPENDITURES** | **$ 5,434** | **$ 1,500** | **$ 17,721** | **$ 7,500** | **$ -** |
| Police Impact Fee Fund Net Revenue | 267,121 | 243,124 | 318,666 | 288,500 | 216,000 |
| Beginning Fund Balance | 813,134 | 1,080,255 | 1,323,379 | 1,323,379 | 1,642,045 |
| **Ending Fund Balance** | **$ 1,080,255** | **$ 1,323,379** | **$ 1,642,045** | **$ 1,611,879** | **$ 1,858,045** |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending




# Permanent Fund

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Perpetual Care Trust Fund

## FUND SUMMARY

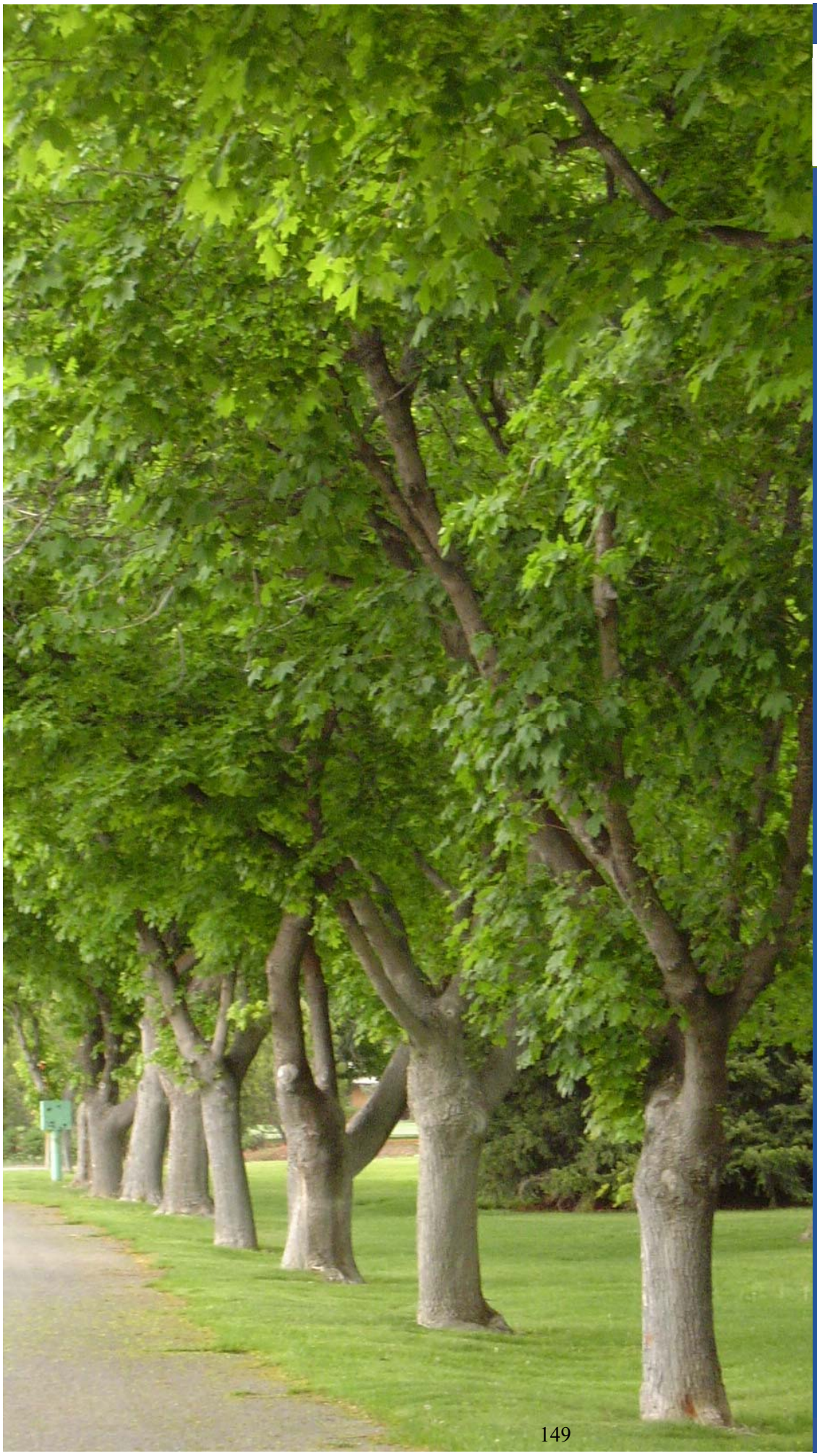
The Perpetual Care Trust Fund is a permanent fund used to hold and manage funds for the purpose of maintenance and upkeep of the City's cemetery. Revenues come from sales of graves and interest earnings. Interest earned on idle funds is transferred to the general fund to offset upkeep of the cemetery.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Perpetual Care | $ 19,800 | $ 25,400 | $ 20,400 | $ 22,000 | $ 26,000 |
| Interest Earnings | 1,753 | 8,055 | 11,229 | 9,000 | 9,000 |
| Loan Payment-Lot Sales | 23,250 | 27,500 | 24,375 | 27,500 | 32,500 |
| **TOTAL REVENUES** | **$ 44,803** | **$ 60,955** | **$ 56,004** | **$ 58,500** | **$ 67,500** |
| **TRANSFERS OUT** | | | | | |
| Transfer to General Fund | 1,753 | 7,254 | 11,229 | 9,000 | 9,000 |
| **TOTAL EXPENDITURES** | **$ 1,753** | **$ 7,254** | **$ 11,229** | **$ 9,000** | **$ 9,000** |
| Perpetual Care Trust Net Revenue | 43,050 | 53,701 | 44,775 | 49,500 | 58,500 |
| Beginning Fund Balance | 686,809 | 729,859 | 783,560 | 783,560 | 828,335 |
| **Ending Fund Balance** | **$ 729,859** | **$ 783,560** | **$ 828,335** | **$ 833,060** | **$ 886,835** |




Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending



# Proprietary Funds

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works – Culinary & Secondary Irrigation

## FUND SUMMARY

The Culinary and Secondary Irrigation water divisions provide the citizens of American Fork with clean water (for culinary purposes) and secondary irrigation water for outside water needs.

## DEPARTMENT ACCOMPLISHMENTS

- CDBG Phase 6 waterline replacement (300 East—300 North to State St).
- CDBG Phase 7 waterline replacement (300 East—200 South to 400 South; 400 South-200 East to Orchard Ave).
- New Chlorination system and building.
- Installed 16" HDPE pipeline at intersection of State Road 92 and Canyon Rd.
- Managed water resources with limited amount of water available.

## DEPARTMENT GOALS

- Repair cracks on Upper East Tank wall.
- Waterline project—State St—From 400 East to 1100 East.
- Waterline project—State St—From 300 West to 470 West.
- CDBG Phase 8 waterline project (Elm St/400 East).
- Replacement of 36" waterline.
- Replace spring line with 16" HDPE.
- Repair Country Club Well.
- Golf course flush line installation.
- SCADA system upgrades.

## DEPARTMENT OPERATING INDICATORS

| Culinary and Secondary Water | 2019 | 2020 |
|---|---|---|
| Waterline repairs | 83 | 73 |
| Work orders | 2,950 | 2,742 |
| Blue staking | 5,845 | 5,817 |
| Routine Sampling | 400 (100% pass rate) | 408 |
| Culinary water usage (yearly) | 5,202 acre feet | 5,541 acre feet |
| Pressurized irrigation water usage (yearly) | 7,372 acre feet | 10,315 acre feet |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Culinary Water Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Water Sales | $ 3,661,289 | $ 3,881,995 | $ 4,260,379 | $ 4,057,943 | $ 4,260,261 |
| CUP Water Fee | 738,553 | 818,015 | 867,619 | 804,000 | 828,120 |
| Connection Fee | 289,123 | 184,017 | 201,549 | 190,000 | 195,700 |
| Late Fee | 159,534 | 166,397 | 159,589 | 150,000 | 150,000 |
| Intergovernmental | 302,381 | 2,840,724 | 150,000 | 150,000 | - |
| Miscellaneous | 68,214 | 52,908 | 30,684 | 40,000 | 40,000 |
| Note Receivable | 32,378 | 33,751 | 19,100 | 35,000 | - |
| Interest Earnings | 67,882 | 203,038 | 269,460 | 60,000 | 100,000 |
| Developer Contributions | 4,480,830 | 3,708,628 | - | - | - |
| Loan Proceeds | - | - | - | - | 23,721,767 |
| **Total Revenues** | **9,800,184** | **11,889,473** | **5,958,380** | **5,486,943** | **29,295,848** |
| **TRANSFERS IN** | | | | | |
| Transfer From General Fund | 22,727 | - | - | - | - |
| **Total Transfers In** | **22,727** | **-** | **-** | **-** | **-** |
| **TOTAL REVENUES** | **$ 9,822,911** | **$ 11,889,473** | **$ 5,958,380** | **$ 5,486,943** | **$ 29,295,848** |
| **EXPENSES** | | | | | |
| **Operating** | | | | | |
| Salaries & Wages | 286,251 | 349,567 | 346,208 | 392,365 | 516,655 |
| Subscriptions & Memberships | 1,475 | 1,720 | 1,566 | 1,600 | 1,600 |
| Education & Travel | 4,089 | 3,023 | 4,150 | 4,150 | 4,150 |
| Postage | 11,549 | 13,606 | 10,738 | 16,000 | 16,000 |
| Equipment Supplies/Maintenance | 13,428 | 8,365 | 19,971 | 15,000 | 15,000 |
| Insurance | 40,182 | 46,925 | 50,140 | 53,000 | 53,000 |
| Utilities | 120,398 | 189,920 | 172,621 | 200,000 | 200,000 |
| Telephone | 12,134 | 9,071 | 9,024 | 8,520 | 9,000 |
| Professional & Technical | 100,627 | 79,413 | 123,077 | 70,000 | 60,000 |
| Clothing Allowance | 1,600 | 1,950 | 1,200 | 1,400 | 1,400 |
| Debris Hauling | 2,297 | 4,020 | 4,141 | 5,000 | 5,000 |
| Department Expense and Supplies | 72,759 | 56,916 | 82,941 | 111,400 | 90,000 |
| Blue Stakes | 10,568 | 9,165 | - | - | - |
| CUP-Water Assessment and Fees | 1,275,414 | 620,843 | 551,621 | 805,000 | 805,000 |
| Credit Card/Bank Processing Fees | 25,347 | 30,401 | 45,884 | 32,000 | 32,000 |
| No Fault Liability Claims | 31,105 | 4,500 | - | 50,000 | 50,000 |
| Backhoe Lease | - | 17,500 | 19,500 | 19,500 | - |
| Land Lease | 7,430 | 7,483 | 7,440 | 7,500 | 7,500 |
| Meter Replacement | 196,812 | 246,144 | 145,383 | 150,000 | 100,000 |
| Bad Debt Expense | 13,595 | - | - | - | - |
| Depreciation | 874,671 | 942,783 | 950,000 | - | - |
| Admin Charge-General Fund | 409,000 | 402,265 | 426,480 | 426,475 | 473,721 |
| Admin Charge-Broadband | - | 831 | 2,616 | 2,610 | 2,627 |
| Internal Charges-Fleet Operations | 24,337 | 20,000 | 21,996 | 22,000 | 22,000 |
| Internal Charges-Technology | - | - | 17,280 | 17,280 | 15,575 |
| **Total Operating Expenses** | **3,535,068** | **3,066,411** | **3,013,977** | **2,410,800** | **2,480,228** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Culinary Water Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **EXPENSES** | | | | | |
| **Capital Projects** | | | | | |
| Equipment | 6,500 | - | - | - | 160,000 |
| Water Line Projects | 46,846 | 28,479 | 121,050 | 371,521 | 100,000 |
| Water Line Replacement | - | - | 200,000 | 200,000 | 100,000 |
| Water Line Replacement-CDBG | - | 14 | 545,452 | 557,023 | - |
| Large Meter Replacement | - | - | - | 50,000 | 25,000 |
| Meters-City Facilities | - | - | - | 50,000 | 25,000 |
| Well Repairs | - | - | 99,580 | 99,580 | 250,000 |
| Fire Hydrants | - | - | 42,473 | 50,000 | 40,000 |
| Chlorinator Replacement | - | - | - | 3,918 | - |
| Spring Line Replacement | - | - | 753,192 | 850,151 | 600,000 |
| 36" Water Line Replacement | - | - | 276,475 | 1,510,389 | 24,279,384 |
| 500 E-1100 E Utility Betterments | - | - | - | 241,290 | - |
| 300 W Main Utility Betterments | - | - | 754,738 | 754,738 | - |
| 100 E Water Improvements | - | - | - | - | 500,000 |
| Upper Tank Rehabilitation | - | - | 715,793 | 1,099,657 | - |
| TOD Well | - | - | - | 98,363 | - |
| Internal Charges-Fleet Capital | 88,114 | - | - | - | - |
| **Total Capital Projects** | **141,460** | **28,493** | **3,508,753** | **5,936,630** | **26,079,384** |
| **Debt Service** | | | | | |
| Waterline Loan | - | - | - | - | 161,000 |
| 2012 Water Revenue Bonds | 16,552 | 15,594 | 52,221 | 52,221 | 51,252 |
| Cost of Issuance | - | - | - | - | 237,218 |
| **Total Debt Service** | **16,552** | **15,594** | **52,221** | **52,221** | **449,470** |
| **Total Expenses** | **$ 3,693,080** | **$ 3,110,498** | **$ 6,574,951** | **$ 8,399,651** | **29,009,082** |
| **TRANSFERS OUT** | | | | | |
| Transfer to Debt Service Fund | 46,500 | - | - | - | |
| Transfer to Fleet Capital Fund | 55,011 | - | - | - | - |
| **Total Transfers Out** | **101,511** | **-** | **-** | **-** | **-** |
| **TOTAL EXPENSES** | **$ 3,794,591** | **$ 3,110,498** | **$ 6,574,951** | **$ 8,399,651** | **29,009,082** |
| Culinary Water Fund Net Revenue | 6,028,320 | 8,778,975 | (616,571) | (2,912,708) | 286,766 |
| Beginning Available Fund Balance | (818,321) | 5,209,999 | 13,988,974 | 13,988,974 | 13,372,403 |
| **Ending Available Fund Balance** | **$ 5,209,999** | **$ 13,988,974** | **$ 13,372,403** | **$ 11,076,266** | **13,659,169** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Culinary Water Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Water Superintendent | - | 0.50 | 0.50 | 0.70 | 0.20 |
| Water System Lead Operator | 1.00 | 0.50 | 0.50 | 0.70 | 0.20 |
| Water System Technicians | 1.00 | 1.50 | 2.00 | 2.80 | 0.80 |
| Water System Specialist | - | 0.50 | 0.50 | 0.70 | 0.20 |
| Project Manager | 1.00 | - | - | | - |
| Public Infrastructure Manager | - | 0.25 | 0.25 | 0.25 | - |
| Water Meter Specialist | 2.00 | 2.00 | 1.00 | 1.00 | - |
| **Total Culinary Water Positions** | **5.00** | **5.25** | **4.75** | **6.15** | **1.40** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Culinary Water Impact Fees Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Impact Fees | $ 769,321 | $ 1,085,965 | $ 1,070,810 | $ 1,000,000 | $ 700,000 |
| Interest Earnings | - | 13,341 | 40,327 | 6,000 | 15,000 |
| **TOTAL REVENUES** | **$ 769,321** | **$ 1,099,306** | **$ 1,111,137** | **$ 1,006,000** | **$ 715,000** |
| **EXPENSES** | | | | | |
| **Operating** | | | | | |
| Impact Fee Analysis | 5,434 | - | 7,500 | 7,500 | - |
| Master Plan Update | - | 1,567 | 1,090 | 1,090 | - |
| **Total Operating Expenses** | **5,434** | **1,567** | **8,590** | **8,590** | **-** |
| **Capital Projects** | | | | | |
| 36" Water Line | - | - | - | 6,029,750 | 3,628,578 |
| 200 S Design and Engineering | - | - | 63,690 | - | - |
| TOD Well | - | - | - | 200,000 | - |
| Developer Reimbursement | - | 43,394 | 1,021,816 | 621,875 | 500,000 |
| **Total Capital Projects** | **-** | **43,394** | **1,085,506** | **6,851,625** | **4,128,578** |
| **Debt Service** | | | | | |
| Loan Debt Service | - | - | - | - | 644,000 |
| **Total Debt Service** | **-** | **-** | **-** | **-** | **644,000** |
| **TOTAL EXPENSES** | **$ 5,434** | **$ 44,961** | **$ 1,094,096** | **$ 6,860,215** | **4,772,578** |
| Culinary Water Impact Net Revenue | 763,887 | 1,054,345 | 17,041 | (5,854,215) | (4,057,578) |
| Beginning Fund Balance | (822,503) | (58,616) | 995,729 | 995,729 | 1,012,770 |
| **Ending Fund Balance** | **$ (58,616)** | **$ 995,729** | **$ 1,012,770** | **$ (4,858,486)** | **(3,044,808)** |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Secondary Water Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Water Sales | $ 2,553,601 | $ 2,667,593 | $ 2,755,129 | $ 2,668,750 | $ 2,748,813 |
| Connection Fee | 59,794 | 95,275 | 97,329 | 75,000 | 77,250 |
| Miscellaneous | 3,756 | - | - | - | - |
| Interest Earnings | 3,457 | 4,564 | 2,218 | 1,000 | 1,500 |
| Grant Revenue | - | - | - | - | 1,500,000 |
| Developer Contributions | 297,367 | 1,122,366 | - | - | - |
| **TOTAL REVENUES** | **$ 2,917,975** | **$ 3,889,798** | **$ 2,854,676** | **$ 2,744,750** | **$ 4,327,563** |
| **EXPENSES** | | | | | |
| **Operating** | | | | | |
| Salaries & Wages | 191,001 | 385,989 | 340,129 | 327,887 | 258,669 |
| Education & Travel | 2,673 | - | - | - | - |
| Postage | 9,201 | 10,470 | 10,385 | 14,000 | 14,000 |
| Equipment Supplies/Maintenance | 6,910 | 1,259 | 5,612 | 30,000 | 50,000 |
| Insurance | 19,609 | 18,294 | 19,948 | 21,200 | 21,200 |
| Professional & Technical | 2,517 | 17,532 | 5,525 | 20,000 | 50,000 |
| Clothing | 800 | 550 | 600 | - | 600 |
| Department Expense and Supplies | 22,431 | 15,399 | 8,872 | 40,000 | 10,000 |
| Credit Card/Bank Processing Fees | 14,115 | 16,325 | 14,306 | 17,000 | 17,000 |
| Depreciation | 1,214,823 | 1,223,728 | - | - | - |
| Admin Charge-General Fund | - | 251,214 | 254,016 | 254,015 | 271,561 |
| Internal Charges-Fleet Operations | - | 4,500 | 4,500 | 4,500 | 4,500 |
| Internal Charges-Technology | - | - | 9,876 | 9,876 | 10,425 |
| **Total Operating Expenses** | **1,484,080** | **1,945,260** | **673,769** | **738,478** | **707,955** |
| **Capital Projects** | | | | | |
| PI Meters-City-wide | - | - | - | - | 3,000,000 |
| Equipment | - | - | - | - | 120,000 |
| **Total Capital Projects** | **-** | **-** | **-** | **-** | **3,120,000** |
| **Debt Service** | | | | | |
| 2008 General Obligation Bonds | 47,917 | - | - | - | - |
| 2016 General Obligation Bonds | 1,191,494 | 1,181,327 | 2,467,250 | 2,467,250 | 2,473,250 |
| 2015 General Obligation Bonds | 236,094 | 227,161 | 510,038 | 510,038 | 513,038 |
| Trustee Fees | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 |
| **Total Debt Service** | **1,476,505** | **1,409,488** | **2,978,288** | **2,978,288** | **2,987,288** |
| **Total Expenditures** | **2,960,585** | **3,354,748** | **3,652,057** | **3,716,766** | **6,815,243** |
| **TRANSFERS OUT** | | | | | |
| Transfer to Fleet Capital Fund | 4,664 | - | - | - | - |
| **Total Transfers Out** | **4,664** | **-** | **-** | **-** | **-** |
| **TOTAL EXPENSES** | **$ 2,965,249** | **$ 3,354,748** | **$ 3,652,057** | **$ 3,716,766** | **$ 6,815,243** |
| Secondary Water Fund Net Revenue | (47,274) | 535,050 | (797,381) | (972,016) | (2,487,680) |
| Beginning Available Fund Balance | 11,295,707 | 11,248,433 | 11,783,483 | 11,783,483 | 10,986,102 |
| **Ending Available Fund Balance** | **$ 11,248,433** | **$ 11,783,483** | **$ 10,986,102** | **$ 10,811,467** | **8,498,422** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Secondary Water Fund

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Water Superintendent | 1.00 | 0.50 | 0.50 | 0.30 | (0.20) |
| Water System Lead Operator | - | 0.50 | 0.50 | 0.30 | (0.20) |
| Water System Technicians | - | 1.50 | 2.00 | 1.20 | (0.80) |
| Water System Specialist | 1.00 | 0.50 | 0.50 | 0.30 | (0.20) |
| Public Infrastructure Manager | - | 0.25 | 0.25 | 0.25 | - |
| **Total Secondary Water Positions** | **2.00** | **3.25** | **3.75** | **2.35** | **(1.40)** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Secondary Water Impact Fees Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Impact Fees | $ 861,467 | $ 839,691 | $ 831,605 | $ 900,000 | $ 630,000 |
| Interest Earnings | - | - | - | - | - |
| **TOTAL REVENUES** | **$ 861,467** | **$ 839,691** | **$ 831,605** | **$ 900,000** | **$ 630,000** |
| **EXPENSES** | | | | | |
| **Operating** | | | | | |
| Impact Fee Analysis | - | - | 7,500 | 7,500 | - |
| Master Plan Update | - | 2,094 | 1,921 | 1,921 | - |
| **Total Operating Expenses** | **-** | **2,094** | **9,421** | **9,421** | **-** |
| **Capital Projects** | | | | | |
| Water Reclamation Facility | - | - | - | - | 2,000,000 |
| Devloper Reimbursement | 4,078 | 21,101 | 238,433 | 126,201 | 200,000 |
| **Total Capital Projects** | **4,078** | **21,101** | **238,433** | **126,201** | **2,200,000** |
| **TOTAL EXPENSES** | **$ 4,078** | **$ 23,195** | **$ 247,854** | **$ 135,622** | **2,200,000** |
| Secondary Water Impact Net Revenue | 857,389 | 816,496 | 583,751 | 764,378 | (1,570,000) |
| Beginning Fund Balance | (17,066,405) | (16,209,016) | (15,392,520) | (15,392,520) | (14,808,769) |
| **Ending Fund Balance** | **$ (16,209,016)** | **$ (15,392,520)** | **$ (14,808,769)** | **$ (14,628,142)** | **$ (16,378,769)** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works – Sewer & Storm Drain

## FUND DESCRIPTION

The Sewer and Storm Drain divisions are responsible for the conveyance of sewage, and operation and maintenance of the storm sewer system.

## DEPARTMENT ACCOMPLISHMENTS

- Filled in holes underneath State Street with concrete.
- Completed river restoration plan.
- Trimmed and removed trees from boat harbor to 1500 South on the river.
- Completed 1,840’ sliplining projects.

## DEPARTMENT GOALS

- Continue pipe bursting from Pacific Dr to 400 N/400 E.
- Continue yearly sliplining projects.
- Get proper measurements and GIS all manholes to help with elevation on sewer master plan.
- Implement a portion of the rehabilitation program on concrete in the river.
- Clean 20 percent of American Fork outfalls (boxes that flow directly into the river).
- Add boxes and sumps to areas that have excessive pooling.

## DEPARTMENT OPERATING INDICATORS

| Sewer and Storm Drain | 2018 | 2019 |
|---|---|---|
| Sewer line cleaning | 101,920 times | 207,330 feet |
| Sewer line camera | 29,850 feet | 19,100 feet |
| Inspections on residential sewer laterals | 257 | 253 |
| Sewer main backups | 0 | 1 (not city negligence) |
| Oversaw TSSD line cleaning | 404,550 feet | 401,800 feet |
| TSSD line camera | 53,701 | 67,493 |
| SWPPP inspections | 779 | 809 |
| Parking lot inspections | 245 | 128 |
| City-owned building inspections/cleanings | 24 | 24 |
| Boxes and sumps cleaning | 43 | 42 |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Sewer Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Sewer Sales | $ 4,891,557 | $ 5,388,739 | $ 5,686,525 | $ 5,190,110 | $ 5,345,813 |
| Connection Fee | 76,304 | 87,086 | 91,695 | 78,000 | 80,340 |
| Miscellaneous | 366 | 108 | - | - | - |
| Interest Earnings | 50,891 | 143,636 | 211,210 | 100 | 103 |
| Developer Contributions | 395,243 | 565,117 | - | 100,000 | 106,072 |
| **TOTAL REVENUES** | **$ 5,414,361** | **$ 6,184,686** | **$ 5,989,430** | **$ 5,368,210** | **$ 5,532,328** |
| **EXPENSES** | | | | | |
| **Operating** | | | | | |
| Salaries & Wages | 357,725 | 201,545 | 261,473 | 287,944 | 280,575 |
| Education & Travel | 1,919 | 4,877 | 2,444 | 4,500 | 4,500 |
| Postage | 9,990 | 11,524 | 10,761 | 12,000 | 12,000 |
| Tools & Equipment | 3,041 | 954 | 1,943 | 5,000 | 15,000 |
| Insurance | 39,219 | 36,589 | 39,895 | 42,400 | 42,400 |
| Telephone | 3,181 | 4,567 | 4,674 | 4,200 | 4,200 |
| Professional & Technical | 1,667 | 5,759 | 14,949 | 10,000 | 25,000 |
| Clothing | 1,600 | 1,550 | 1,000 | 1,000 | 1,000 |
| Debris Hauling | 2,297 | 2,283 | 1,775 | 2,500 | 2,500 |
| Department Expense and Supplies | 22,614 | 14,962 | 23,065 | 21,000 | 2,500 |
| Timpanogos Special Service District | 2,372,158 | 2,629,659 | 3,156,654 | 2,900,000 | 3,100,000 |
| Credit Card/Bank Processing Fees | 26,755 | 30,680 | 33,230 | 32,000 | 32,000 |
| No Fault Insurance Claims | - | 214 | - | 15,000 | 15,000 |
| Operations & Maintenance | - | - | 21,900 | 50,000 | 30,000 |
| Bad Debt Expense | 2,611 | 12,391 | - | - | - |
| Depreciation | 350,288 | 360,924 | - | - | - |
| Trackhoe Lease | - | 11,500 | 11,500 | 11,500 | 11,500 |
| Admin Charge-General Fund | 409,000 | 302,286 | 415,356 | 415,352 | 487,826 |
| Internal Charges-Fleet Operations | 33,000 | 20,400 | 30,000 | 30,000 | 30,000 |
| Internal Charges-Technology | - | - | 11,364 | 11,358 | 10,125 |
| **Total Operating Expenses** | **3,637,065** | **3,652,664** | **4,041,983** | **3,855,754** | **4,106,126** |
| **Capital Projects** | | | | | |
| Sewer Lining | - | 79 | 341,733 | 599,921 | 300,000 |
| Sewer Bursting | - | - | 150,000 | 700,000 | - |
| 450 W Upsizing | - | - | 150,000 | 285,174 | - |
| 36" Water Line (Sewer Portion) | - | - | - | 250,000 | 250,000 |
| Internal Charges-Fleet Capital | - | - | 82,148 | 80,000 | - |
| **Total Capital Projects** | **-** | **79** | **723,881** | **1,915,095** | **550,000** |
| **Total Expenditures** | **3,637,065** | **3,652,743** | **4,765,864** | **5,770,849** | **4,656,126** |

(continued on next page)

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Sewer Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **TRANSFERS OUT** | | | | | |
| Transfer to Debt Service Fund | 46,500 | - | - | - | - |
| Transfer to Fleet Capital Fund | 576,243 | - | - | - | - |
| **Total Transfers Out** | **622,743** | **-** | **-** | **-** | **-** |
| **TOTAL EXPENSES** | **$ 4,259,808** | **$ 3,652,743** | **$ 4,765,864** | **$ 5,770,849** | **$ 4,656,126** |
| Sewer Fund Net Revenue | 1,154,553 | 2,531,943 | 1,223,566 | (402,639) | 876,202 |
| Beginning Available Fund Balance | 2,827,126 | 3,981,679 | 6,513,622 | 6,513,622 | 7,737,188 |
| **Ending Available Fund Balance** | **$ 3,981,679** | **$ 6,513,622** | **$ 7,737,188** | **$ 6,110,983** | **$ 8,613,390** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Wastewater Superintendent | - | 0.50 | 0.50 | 0.50 | - |
| Wastewater Operator | - | 1.00 | 0.50 | 0.50 | - |
| Wastewater Maintenance Specialist | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Technician | 2.00 | - | 0.75 | 0.75 | - |
| Public Infrastructure Manager | - | 0.25 | 0.25 | 0.25 | - |
| **Total Sewer Positions** | **3.00** | **2.75** | **3.00** | **3.00** | **-** |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Sewer Impact Fees Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Impact Fees | $ 326,343 | $ 363,669 | $ 400,913 | $ 400,000 | $ 280,000 |
| Interest Earnings | 14,345 | 28,756 | 42,909 | 20,000 | 21,774 |
| **TOTAL REVENUES** | **$ 340,688** | **$ 392,425** | **$ 443,822** | **$ 420,000** | **$ 301,774** |
| **EXPENSES** | | | | | |
| **Operating** | | | | | |
| Impact Fee Analysis | - | - | 2,862 | 7,500 | - |
| Master Plan Update | - | 2,260 | 1,406 | 2,220 | - |
| **Total Operating Expenses** | **-** | **2,260** | **4,268** | **9,720** | **-** |
| **Capital Projects** | | | | | |
| 450 W Upsizing | - | - | - | 172,129 | - |
| Devloper Reimbursement | 40,622 | 36,434 | 9,605 | 9,605 | 150,000 |
| **Total Capital Projects** | **40,622** | **36,434** | **9,605** | **181,734** | **150,000** |
| **Debt Service** | | | | | |
| Loan Debt Service | - | - | - | - | - |
| **Total Debt Service** | **-** | **-** | **-** | **-** | **-** |
| **TOTAL EXPENSES** | **$ 40,622** | **$ 38,694** | **$ 13,873** | **$ 191,454** | **150,000** |
| Sewer Impact Fee Fund Net Revenue | 300,066 | 353,731 | 429,949 | 228,546 | 151,774 |
| Beginning Fund Balance | 589,668 | 889,734 | 1,243,465 | 1,243,465 | 1,673,414 |
| **Ending Fund Balance** | **$ 889,734** | **$ 1,243,465** | **$ 1,673,414** | **$ 1,472,011** | **1,825,188** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Storm Drain Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Storm Drain Fee | 1,222,772 | 1,332,886 | 1,369,006 | 1,260,720 | 1,260,720 |
| Development Fee | 224 | - | - | - | - |
| SWPPP Inspections | - | 6,421 | 9,280 | - | - |
| SWPPP Citations | 4,500 | - | - | - | - |
| Miscellaneous | - | 132,802 | - | - | - |
| Interest Earnings | 10,308 | 45,586 | 70,284 | 30,000 | 34,500 |
| Developer Contributions | 341,503 | 1,265,807 | - | - | - |
| **TOTAL REVENUES** | **$ 1,579,307** | **$ 2,783,502** | **$ 1,448,570** | **$ 1,290,720** | **$ 1,295,220** |
| **EXPENSES** | | | | | |
| **Operating** | | | | | |
| Salaries & Wages | 218,289 | 265,345 | 257,110 | 255,811 | 266,371 |
| Education & Travel | 1,460 | - | - | - | - |
| Postage | 8,863 | 9,881 | 11,870 | 12,000 | 12,000 |
| Equipment Supplies/Maintenance | 1,444 | 157 | 1,000 | 5,000 | 5,000 |
| Insurance | 44,206 | 41,162 | 44,882 | 47,700 | 47,700 |
| Professional & Technical | 8,728 | 7,931 | 10,945 | 5,000 | 30,000 |
| Clothing | 1,200 | 350 | - | - | - |
| Debris Basin | 3,500 | - | 7,500 | 7,500 | 5,000 |
| Debris Hauling | 1,291 | 500 | 1,000 | 1,000 | 1,000 |
| Department Expense and Supplies | 14,778 | 8,357 | 9,949 | 20,000 | 15,000 |
| Credit Card/Bank Processing Fees | 6,806 | 7,698 | 11,555 | 9,000 | 9,000 |
| No Fault Insurance Claims | - | - | - | 15,000 | - |
| Depreciation | 226,901 | 250,562 | 263,090 | - | - |
| Backhoe Lease | - | 11,000 | - | - | - |
| Admin Charge-General Fund | 250,000 | 246,082 | 266,172 | 266,169 | 290,124 |
| Internal Charges-Fleet Operations | - | 2,500 | 1,500 | 1,500 | 1,500 |
| Internal Charges-Technology | - | - | 10,096 | 7,577 | 10,125 |
| **Total Operating Expenses** | **787,466** | **851,525** | **896,669** | **653,257** | **692,820** |
| **Capital Projects** | | | | | |
| Equipment | - | 2,010 | - | - | 120,000 |
| AF River Rehabilitation | - | - | 643,040 | 643,040 | - |
| Curb and Gutter Replacements | - | - | 30,000 | 30,000 | 685,000 |
| 36" Water Line (SD Portion) | - | - | 14,200 | 14,200 | 266,788 |
| 400 S at Orchard to 400 E | - | - | - | - | 100,000 |
| Storm Drain Projects | 4,338 | 27,108 | 53,399 | 57,000 | - |
| **Total Capital Projects** | **4,338** | **29,118** | **740,639** | **744,240** | **1,171,788** |
| **Total Expenses** | **791,804** | **880,643** | **1,637,308** | **1,397,497** | **1,864,608** |

(continued on next page)

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Public Works - Storm Drain Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **TRANSFERS OUT** | | | | | |
| Transfer to Fleet Capital Fund | 127,786 | - | - | - | - |
| **Total Transfers Out** | **127,786** | **-** | **-** | **-** | **-** |
| **TOTAL EXPENSES** | **$ 919,590** | **$ 880,643** | **$ 1,637,308** | **$ 1,397,497** | **$ 1,864,608** |
| Storm Drain Fund Net Revenue | 659,717 | 1,902,859 | (188,738) | (106,777) | (569,388) |
| Beginning Available Fund Balance | (405,379) | 254,338 | 2,157,197 | 2,157,197 | 1,968,459 |
| **Ending Available Fund Balance** | **$ 254,338** | **$ 2,157,197** | **$ 1,968,459** | **$ 2,050,420** | **1,399,071** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Wastewater Superintendent | - | 0.50 | 0.50 | 0.50 | - |
| Wastewater Operator | 2.00 | - | 0.50 | 0.50 | - |
| Stormwater Maintenance Specialist | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Technician | - | 1.00 | 0.25 | 0.25 | - |
| Public Infrastructure Manager | - | 0.25 | 0.25 | 0.25 | - |
| **Total Storm Drain Positions** | **3.00** | **2.75** | **2.50** | **2.50** | **-** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Storm Drain Impact Fees Fund

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Impact Fees | $ 346,800 | $ 314,330 | $ 557,915 | $ 400,000 | $ 280,000 |
| Interest Earnings | 16,185 | 35,156 | 45,778 | 25,200 | 25,218 |
| **TOTAL REVENUES** | **$ 362,985** | **$ 349,486** | **$ 603,693** | **$ 425,200** | **$ 305,218** |
| **EXPENSES** | | | | | |
| **Operating** | | | | | |
| Impact Fee Analysis | - | - | 7,500 | 7,500 | - |
| Master Plan Update | - | - | - | - | - |
| **Total Operating Expenses** | **-** | **-** | **7,500** | **7,500** | **-** |
| **Capital Projects** | | | | | |
| 200 S Design and Engineering | - | - | 72,033 | - | - |
| Devloper Reimbursement | - | 163,407 | 2,500 | 107,940 | 100,000 |
| **Total Capital Projects** | **-** | **163,407** | **74,533** | **107,940** | **100,000** |
| **TOTAL EXPENSES** | **$ -** | **$ 163,407** | **$ 82,033** | **$ 115,440** | **100,000** |
| Storm Drain Impact Net Revenue | 362,985 | 186,079 | 521,660 | 309,760 | 205,218 |
| Beginning Fund Balance | 789,900 | 1,152,885 | 1,338,964 | 1,338,964 | 1,860,624 |
| **Ending Fund Balance** | **$ 1,152,885** | **$ 1,338,964** | **$ 1,860,624** | **$ 1,648,724** | **2,065,842** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Sanitation & Recycling

## FUND SUMMARY

The Sanitation and Recycling fund is used to account for sanitation and recycling services provided to City res-idents. These services are provided by an outside contractor. However, the fund is charged for expenses re-lated to billing customers for services provided, and administrative support of the fund.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Refuse Collection Fees | $ 1,070,035 | $ 1,106,141 | $ 1,151,731 | $ 1,140,242 | $ 1,140,242 |
| Recycling Fees | 266,003 | 279,039 | 320,859 | 318,453 | 318,453 |
| Miscellaneous | - | 300 | 435 | 200 | 300 |
| Interest Earnings | 3,412 | 7,293 | 11,663 | 6,000 | 6,750 |
| **Total Revenues** | **1,339,450** | **1,392,773** | **1,484,688** | **1,464,895** | **1,465,745** |
| **TRANSFERS IN** | | | | | |
| Transfer From General Fund | 112,459 | - | - | - | - |
| **Total Transfers In** | **112,459** | **-** | **-** | **-** | **-** |
| **TOTAL REVENUES** | **$ 1,451,909** | **$ 1,392,773** | **$ 1,484,688** | **$ 1,464,895** | **$ 1,465,745** |
| **EXPENSES** | | | | | |
| Recycling Fees | 264,311 | 256,127 | 298,305 | 299,500 | 308,485 |
| Waste Disposal/Garbage Pickup | 556,148 | 572,700 | - | | - |
| Waste Disposal-First Can | - | - | 513,334 | 518,452 | 534,006 |
| Waste Disposal-Additional Can | - | - | 84,802 | 82,394 | 84,866 |
| City Dumpsters | 11,869 | - | - | - | - |
| Interdepartmental Expenses | - | - | - | - | - |
| Solid Waste/Tipping Fees | 390,294 | 407,265 | 415,557 | 421,461 | 434,105 |
| Professional and Technical | - | 423 | 888 | 1,000 | 1,000 |
| Credit Card/Bank Processing Fees | 5,085 | 8,717 | 13,323 | 9,105 | 9,105 |
| Postage | 3,955 | 9,869 | 11,083 | 11,630 | 11,630 |
| Miscellaneous | 1,792 | 1,227 | 2,000 | 4,200 | 4,200 |
| Bad Debt Expense | - | 1,770 | - | - | - |
| Admin Charge-General Fund | - | 26,003 | 96,480 | 96,485 | 102,757 |
| Internal Charges-Technology | - | - | 3,824 | 2,872 | 6,532 |
| **TOTAL EXPENSES** | **$ 1,233,454** | **$ 1,284,101** | **$ 1,439,596** | **$ 1,447,099** | **1,496,686** |
| Sanitation/Recycling Net Revenue | 218,455 | 108,672 | 45,092 | 17,796 | (30,941) |
| Beginning Fund Balance | - | 218,455 | 327,127 | 327,127 | 372,219 |
| **Ending Fund Balance** | **$ 218,455** | **$ 327,127** | **$ 372,219** | **$ 344,923** | **341,278** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Broadband Fund

## FUND DESCRIPTION

The Broadband department is responsible for maintaining the remaining broadband system owned by the City. The Broadband fund operated in a deficit for a number of years, with the General Fund now subsidizing operations. The original broadband system was comprised of a residential network system that covered a large portion of the City. Over the past few years, the City has sold off major portions of the broadband system, including the residential internet section. The City is currently undertaking a feasibility study to determine future opportunities with the existing broadband infrastructure. The City has contractual obligations under lease agreements to maintain the system.

## DEPARTMENT ACCOMPLISHMENTS

- Completed first phase of the Broadband feasibility study with Design 9.
- Created the domain Lighthubfiber.com
- Created Lighthubfiber, an Interlocal Cooperative Agency.
- Completed an audit of our fiber-optic network to each city building to determine fiber counts, fiber performance, and additional needs in the future.
- Implemented a Right-of-Way Licensing Agreement to replace outdated Franchise Agreements that are no longer valid in the State of Utah. Since creation, we have used the new Licensing Agreement with several service providers to provide Telecommunication services in the city.

## DEPARTMENT GOALS

- Continue looking for ways to bring enhanced broadband connectivity to the residents and business of American Fork.
- Develop the Zoom platform for Videoconferencing meetings and create policies and procedures for how we will utilize Zoom for public and committee meetings.
- Change to a new fiber-optic route for the Fitness Center and Cemetery to replace the current route which is insufficient for their needs.
- Look into Grant opportunities for Broadband and Information Technology projects.
- Find other options to increase revenues.






Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Broadband

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Leasing Fiber Lines | $ 162,640 | $ 117,407 | $ 72,955 | $ 100,000 | $ 100,000 |
| Sale of Capital Assets | 36,000 | - | - | - | - |
| Interest Revenue | - | 47,014 | - | - | - |
| Administrative Charges | 44,100 | 68,882 | 93,300 | 93,282 | 92,640 |
| **Total Revenues** | **242,740** | **233,303** | **166,255** | **193,282** | **192,640** |
| **TRANSFERS IN** | | | | | |
| Transfer From General Fund | - | 251,723 | 346,985 | 275,810 | 296,376 |
| **Total Transfers In** | **-** | **251,723** | **346,985** | **275,810** | **296,376** |
| **TOTAL REVENUES** | **$ 242,740** | **$ 485,026** | **$ 513,240** | **$ 469,092** | **$ 489,016** |
| **EXPENSES** | | | | | |
| **Operating** | | | | | |
| Wages & Salaries | 242,717 | 259,422 | 245,991 | 258,104 | 265,544 |
| Utilities | 391 | 449 | 391 | 500 | 500 |
| Equipment Maintenance Agreement | 382 | - | - | 1,500 | - |
| Insurance | 19,609 | 18,294 | 18,819 | 20,000 | 18,780 |
| Telephone | 1,575 | 2,790 | 1,680 | 1,680 | 1,680 |
| Professional & Technical | 1,841 | 48 | 134 | 4,000 | - |
| Pole Fees | 54 | 23 | 23 | 50 | 50 |
| Blue Stakes | 5,764 | 8,185 | 7,510 | 7,000 | 7,000 |
| Bandwith for Connection | 8,399 | 7,699 | 5,999 | 8,500 | 8,500 |
| Uniform | 200 | 400 | 200 | 200 | 200 |
| Department Expense and Supplies | 322 | 197 | 533 | - | 500 |
| Depreciation | 48,553 | 48,433 | - | - | - |
| Broadband System | 53 | 58 | 7,348 | 15,000 | 10,000 |
| Admin Charge-General Fund | - | - | 40,212 | 40,215 | 33,483 |
| Internal Charges-Fleet Operations | 2,800 | 2,100 | 2,496 | 2,500 | 1,800 |
| Internal Charges-Technology | - | - | 5,472 | 5,468 | 5,915 |
| **Total Operating Expenses** | **332,660** | **348,098** | **336,808** | **364,717** | **353,952** |
| **Capital Projects** | | | | | |
| Feasibility Study | - | 130,067 | 176,432 | 84,375 | 135,064 |
| OTDR Fiber Tester | - | - | - | 20,000 | - |
| **Total Capital Projects** | **-** | **130,067** | **176,432** | **104,375** | **135,064** |
| **TOTAL EXPENSES** | **332,660** | **478,165** | **513,240** | **469,092** | **489,016** |
| Broadband Fund Net Revenue | (89,920) | 6,861 | - | - | - |
| Beginning Fund Balance | (1,966,551) | (2,056,471) | (2,049,610) | (2,049,610) | (2,049,610) |
| **Ending Fund Balance** | **$ (2,056,471)** | **$ (2,049,610)** | **$ (2,049,610)** | **$ (2,049,610)** | **(2,049,610)** |

## DEPARTMENT STAFFING

| Full-time Equivalent Positions | FTE 2017-18 | FTE 2018-19 | FTE 2019-20 | Proposed 2020-21 | Increase (Decrease) |
|---|---|---|---|---|---|
| Broadband/Technology Director | 1.00 | 1.00 | 1.00 | 1.00 | - |
| Fiber Optic Network Manager | 1.00 | 1.00 | 1.00 | 1.00 | - |
| **Total Broadband Positions** | **2.00** | **2.00** | **2.00** | **2.00** | **-** |



Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fleet Operations & Maintenance Fund

## FUND SUMMARY

The Fleet Operations and Maintenance fund accounts for maintenance and repair of the City's vehicles. The fund includes expenditures for vehicle maintenance, repair, and fuel. Revenue for the fund comes from charges to the departments that receive services from the fund.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Charges From General Fund | $ 443,616 | $ 398,536 | $ 442,284 | $ 442,284 | $ 409,242 |
| Charges From Fitness Center Fund | 1,000 | 1,000 | 996 | 1,000 | 1,000 |
| Charges From Culinary Water | 24,337 | 20,000 | 21,996 | 22,000 | 22,000 |
| Charges From Secondary Water | - | 4,500 | 4,500 | 4,500 | 4,500 |
| Charges From Sewer Fund | 33,000 | 20,400 | 30,000 | 30,000 | 30,000 |
| Charges From Storm Drain Fund | - | 2,500 | 1,500 | 1,500 | 1,500 |
| Charges From Broadband Fund | 2,800 | 2,100 | 2,496 | 2,500 | 1,800 |
| Interest Earnings | 1,187 | 2,126 | 3,103 | - | 3,000 |
| Miscellaneous | - | 6,611 | 3,808 | - | - |
| **TOTAL REVENUES** | **$ 505,940** | **$ 457,773** | **$ 510,683** | **$ 503,784** | **$ 473,042** |
| **EXPENSES** | | | | | |
| Vehicle Maintenance | 298,019 | 310,473 | 324,158 | 368,784 | 340,242 |
| Vehicle Repair | 142,237 | 107,412 | 167,648 | 135,000 | 132,800 |
| **TOTAL EXPENSES** | **$ 440,256** | **$ 417,885** | **$ 491,806** | **$ 503,784** | **$ 473,042** |
| Fleet Operations Fund Net Revenue | 65,684 | 39,888 | 18,877 | - | - |
| Beginning Fund Balance | - | 65,684 | 105,572 | 105,572 | 124,449 |
| **Ending Fund Balance** | **$ 65,684** | **$ 105,572** | **$ 124,449** | **$ 105,572** | **124,449** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Fleet Capital Fund

## FUND SUMMARY

The Fleet Capital fund accounts for the purchase and disposal of City vehicles. The fund includes not only the purchase of vehicles, but any associated lease payments on fleet vehicles.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Charges From General Fund | $ 582,932 | $ 190,095 | $ 744,028 | $ 829,154 | $ 750,863 |
| Charges From Culinary Water | 88,114 | - | - | - | - |
| Charges From Sewer Fund | - | - | - | 80,000 | - |
| Capital Lease Proceeds | - | - | 2,109,195 | 2,109,195 | - |
| Grants | - | 4,400 | - | - | - |
| Sale of Capital Assets | (472) | 20,085 | 11,000 | - | - |
| Capital Contribution | - | 31,500 | 123,855 | - | 212,322 |
| Interest Earnings | 747 | (785) | 634 | - | - |
| Miscellaneous | - | 53,994 | - | - | - |
| **Total Revenues** | **671,321** | **299,289** | **2,988,712** | **3,018,349** | **963,185** |
| **TRANSFERS IN** | | | | | |
| Transfer From General Fund | 163,951 | 288,865 | - | - | - |
| **Total Transfers In** | **163,951** | **288,865** | **-** | **-** | **-** |
| **TOTAL REVENUES** | **$ 835,272** | **$ 588,154** | **$ 2,988,712** | **$ 3,018,349** | **$ 963,185** |
| **EXPENSES** | | | | | |
| Police Vehicles and Upfitting | 24,478 | 3,388 | 355,680 | 363,581 | 334,171 |
| Fire Vehicles and Upfitting | - | 19,437 | 2,109,195 | 2,142,260 | 45,000 |
| Cemetery Vehicles | - | - | 40,000 | - | - |
| Streets Vehicles | - | 777 | 39,862 | 40,000 | - |
| Engineering Vehicles | - | - | - | - | - |
| Sewer Vehicles | - | - | 82,148 | 80,000 | - |
| Depreciation | 760,916 | 894,007 | 577,723 | - | - |
| Capital Lease-Principal | - | - | 369,402 | 387,674 | 537,334 |
| Capital Lease-Interest | - | - | 40,054 | 37,899 | 54,680 |
| **TOTAL EXPENSES** | **$ 785,394** | **$ 917,609** | **$ 3,614,064** | **$ 3,051,414** | **$ 971,185** |
| Fleet Capital Fund Net Revenue | 49,878 | (329,455) | (625,352) | (33,065) | (8,000) |
| Beginning Fund Balance | 2,783,804 | 2,833,682 | 2,504,227 | 2,504,227 | 1,878,875 |
| **Ending Fund Balance** | **$ 2,833,682** | **$ 2,504,227** | **$ 1,878,875** | **$ 2,471,162** | **1,870,875** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Information Technology Fund

## FUND SUMMARY

The Information technology department oversees and is responsible for all technology-related aspects of the City. The City's information technology contractor works with all departments of the City to provide IT services including networking services, computer needs, peripheral devices, telephones, network security, servers, troubleshooting and support, and software support. The information technology department is outsourced, but is overseen by the Broadband (Information Technology) department. This was a department of the general fund prior to FY2020.

## DEPARTMENT BUDGET

| Description | Actual 2017-18 | Actual 2018-19 | Estimated 2019-20 | Approved 2019-20 | Proposed 2020-21 |
|---|---|---|---|---|---|
| **REVENUES** | | | | | |
| Charges From General Fund | $ - | $ - | $ 439,740 | $ 469,734 | $ 386,272 |
| Charges From Fitness Center Fund | - | - | 23,868 | 23,873 | 16,819 |
| Charges From Culinary Water | - | - | 17,280 | 17,280 | 15,575 |
| Charges From Secondary Water | - | - | 9,876 | 9,876 | 10,425 |
| Charges From Sewer Fund | - | - | 11,364 | 11,358 | 10,125 |
| Charges From Storm Drain Fund | - | - | 7,572 | 7,577 | 10,125 |
| Charges From Sanitation Fund | - | - | 2,868 | 2,872 | 6,532 |
| Charges From Broadband Fund | - | - | 5,472 | 5,468 | 6,515 |
| **TOTAL REVENUES** | **$ -** | **$ -** | **$ 518,040** | **$ 548,038** | **$ 462,388** |
| **EXPENSES** | | | | | |
| Contracted IT Support | - | - | 50,599 | 65,000 | 65,000 |
| Software Maintenance | - | - | 106,138 | 112,193 | 112,186 |
| Software Renewals | - | - | 76,633 | 102,667 | 170,392 |
| Telephone System | - | - | 47,129 | 51,788 | 48,000 |
| Admin Charge-Broadband | - | - | 44,100 | 44,100 | 44,100 |
| Hardware Purchases | - | - | 94,145 | 98,000 | 22,719 |
| Software Purchases | - | - | 25,978 | 74,290 | 43,309 |
| **TOTAL EXPENSES** | **$ -** | **$ -** | **$ 444,722** | **$ 548,038** | **$ 505,706** |
| Information Technology Net Revenue | - | - | 73,318 | - | (43,318) |
| Beginning Fund Balance | - | - | - | - | 73,318 |
| **Ending Fund Balance** | **$ -** | **$ -** | **$ 73,318** | **$ -** | **30,000** |

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending




AMERICAN FORK
1853

# Appendix

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Glossary

Accrual Basis of Accounting—A method of accounting in which revenues and expenditures are recognized at the time they are incurred, as opposed to when cash is received or spent.

Ad Valoem Tax—Taxes levied on both real and personal property according to the property's valuation and the tax rate. Also known as property tax.

Administrative Fees—Fees allocated to special revenue and proprietary funds to cover support costs incurred by general fund divisions.

Adopted Budget—The annual budget approved by the City Council that establishes the legal authority for the expenditure of funds in the fiscal year.

Allocation—The assignment of one or more items of cost or revenue to one or more segments of an organization according to benefits received, responsibilities, or other logical measures of use.

Appropriation—Legal authorization granted by the City Council to make expenditures and incur obligations for specific purposes.

Assessed Valuation—A valuation set upon real estate or other property by the Utah County Assessor as a basis for levying property taxes.

Audit—A review performed by an independent certified public accountant to form an opinion regarding the legitimacy of transactions and internal controls.

Balanced Budget—A budget in which current revenues equal current expenditures. The state or local government may set the legal requirements for a balanced budget.

Basis of Budgeting—The City's budget is based on the modified accrual basis of accounting for its governmental and proprietary funds. (See modified accrual basis of accounting.)

Bond—A written promise to pay a specified sum of money, called the face value of principal, at a specified date or dates in the future, called maturity dates, together with periodic interest at a specified rate.

Bond Proceeds—Funds received from the sale or issuance of bonds.

Bond Rating—A methodology used to measure the fiscal health of the City. Generally, analyst firms such as Standard and Poor's, Moody's Investor Service, and Fitch Ratings provide bond ratings to municipalities. Bonds rated AAA/Aaa are judged to be the best quality and carry the smallest degree of risk and, together with AA/Aa bonds, comprise high grade bonds. Ratings including "++" or "1" designate the strongest bonds in the rating category. Generally, highly rated bonds result in lower interest rates.

Bond Refinancing—The payoff and re-issuance of bonds to obtain better interest rates and/or bond conditions.

Bond Refunding—The redemption of a bond with proceeds received from issuing lower-cost debt obligations.

Budget—A financial plan consisting of an estimate of proposed expenditures and their purposes for a given period and the proposed means of financing them.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Glossary

Budgetary Control—The control of management of a governmental unit or enterprise in accordance with an approved budget for the purpose of keeping expenditures within the limitations of authorized appropriations and available revenues.

Building Authority Bonds—Bonds secured by specified asset(s).

CAFR—See Comprehensive Annual Financial Report.

Call Date—Date on which a bond can be redeemed before maturity. Earliest date on which bonds can either be paid off or refinanced.

Capital Assets—Assets of significant value and having a useful life of several years.

Capital Carryovers—Any unspent appropriation for capital projects that are authorized by the City Council to be reappropriated in the following year.

Capital Equipment—Equipment with an expected life of more than one year, such as automobiles, computers, and furniture.

Capital Improvement Program—An annual, updated plan of capital expenditures for public facilities and infrastructure (buildings, streets, etc.), with estimated costs, sources of funding, and timing of work over a period of time.

Capital Outlay—Expenditures which result in the acquisition of capital assets.

Capital Project—Projects involving the purchase or construction of capital assets.

CDBG—See Community Development Block Grant.

Certified Tax Rate—The tax rate that would generate the same amount of revenue as the previous year plus any new growth.

CIP—See Capital Improvement Program.

Community Development Block Grant (CDBG)—The Housing and Community Development act of 1974 provides funds to cities and counties to develop urban communities and expand economic opportunities principally for low- and moderate-income persons.

Comprehensive Annual Financial Report (CAFR)—The audited annual report of the City's financial condition at the conclusion of the fiscal year.

Consolidated Budget—City budget that includes all funds—Governmental and proprietary.

Consumer Price Index (CPI)—A statistical description of price levels provided by the United States Department of Labor. The change in this index from year to year is used to measure the cost of living and economic inflation.

Contingency—An appropriation of funds to cover unforeseen expenditures which may occur during the budget year.

CPI—See Consumer Price Index.

Debt Service—The payment of principal, interest, and service charges (trustee fees) related to long-term debt.

Debt Service Fund—A fund established to account for the accumulation of resources for, and the payment of, general long-term debt principal and interest.

Deficit—An excess of expenditures or expenses over revenues.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Glossary

Department—A major administrative division of the City that indicates overall management responsibility for an operation or group or related operations within a functional area.

Depreciation—Expiration in the service life of fixed assets, attributable to wear and tear, deterioration, action of the physical elements, inadequacy, and obsolescence.

Designated Fund Balance—The portion of a fund balance that has been set aside for a specific purpose by the City Council.

Division—A subsection within a department that provides specific services.

Encumbrances—Obligations or commitments in the form of purchase orders or contracts, the expenditure/expense of which has not yet occurred.

Enterprise Fund—A fund established to account for operations that are financed and operated in a manner similar to private business enterprises—the services are predominantly self-supported by user charges. Examples are water and sanitation.

Expenditure—The actual spending of governmental funds set aside by appropriation.

Expense—The actual spending of proprietary funds set aside by an appropriation.

Fiscal Year—The twelve-month period of time to which a budget applies. American Fork City's fiscal year is July 1 through June 30.

Franchise Tax—A tax levied at the state level against businesses and partnerships chartered within the state. American Fork charges a 6% franchise tax for electrical and natural gas utilities.

FTE—See Full Time Equivalent.

Full-Time Equivalent—The hourly equivalent of a full-time employee. An FTE can be made up either one full-time employee or two or more part-time employees whose total hours equal 2,080 per year (2,766 for firefighters).

Fund—A fiscal or accounting entity with a self-balancing set of accounts established for the purpose of carrying out specific activities in accordance with clearly defined restrictions and/or limitations.

Fund Balance—The difference between a fund's assets and its liabilities.

Funding Source—Source of money pledged to pay principal and interest.

GAAP—See Generally Accepted Accounting Principles.

GASB—See Governmental Accounting Standards Board.

General Fund—The primary fund of the City used to account for all financial resources except those identified for special purposes or required to be accounted for in another fund.

Generally Accepted Accounting Principles (GAAP)—Uniform minimum standards for financial accounting and reporting.

Governmental Accounting Standards Board (GASB)—The group that develops standardized reporting for governmental entities.

General Obligation bonds—Bonds used for various purposes and repaid by the regular revenue raising powers of the City.

Grant—Contributions, gifts, or assets from another government entity to be used or expended for a specific purpose, activity, or facility.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Glossary

Haircut Provision—Utah code related to redevelopment areas that allows portions of tax increment to be allocated and spent toward recreational purposes.

Impact Fees—Fees used to offset the additional burden on City infrastructure caused by new development within the City. The fees are collected and accounted for separately to be used for projects relating to the impact of the additional development.

Infrastructure—Facilities or assets on which the continuance and growth of a community depend, such as streets, waterlines, etc.

Interfund Transfers—Monies transferred from one fund to another to either finance the operations of another fund or to reimburse the fund for certain expenditures/expenses.

Intergovernmental Revenue—Money collected by one level of government and distributed to another level of government.

Long-Term Debt—Debt with a maturity of more than one year after the date of issuance.

Maturity—The date on which the principal or stated values of investments or debt obligations are due and may be reclaimed.

Merit/Wage Compression Increase—Typically government employers recognize performance and increased experience with annual merit increases. Unlike most other government employers, however, American Fork has an open range rather than a step plan. In a step plan, the annual percentage is preset. In an open range it is not. During an economic downturn, employees may not receive merit wage increases, leading to issues with where employees are in their range relative to years of experience and other employees doing the same job function. Compression increases are sometimes needed to adjust individual employees within their range.

Modified Accrual Basis of Accounting—A method of accounting in which revenues are recognized in the period in which they become available and measurable and expenditures are recognized at a time a liability is incurred.

Motor Vehicle Fee—Fee imposed on passenger cars, light trucks, sport utility vehicles, vans, motorcycles, and recreational vehicles and due at time of registration.

Operating Expenditures—The cost for materials and equipment required for a department to perform its functions.

Operating Revenues—Funds received by the City as income to pay for ongoing operations.

Ordinance—A formal legislative enactment by the City Council. It has the full force and effect of law within City boundaries unless preempted by a higher form of law. An ordinance has a higher legal standing than a resolution.

Property Tax—An ad valorem (according to value) tax based on the fair market value of real property (land and buildings) and personal property (business equipment). Fair market value is determined by Utah County as of January 1 of each year.

RDA—See Redevelopment Agency.

Redevelopment Agency—A separate entity established to revitalize blighted and economically depressed areas of a community and to promote economic growth.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

# Glossary

Reserve—A portion of a fund balance which has been legally segregated for a specific use and is, therefore, not available for further appropriation or expenditure.

Resolution—A special order of the City Council that requires less legal formality and has a lower legal standing than an ordinance.

Revenues—Sources of income such as taxes used to finance the operation of government.

Revenue Bonds—Payable from specified revenues such as sales tax or user fees.

Sales Tax—Tax imposed on taxable sales on all final goods. American Fork receives part of the 6.85% sales tax charged in American Fork City.

Special Assessment—A tax on property owners who receive a benefit not received by all other taxpayers.

Special Improvement District—An area of the City where the property owners come together and vote on incurring the costs of making special improvements to the area (such as putting in custom streetlights). A special improvement district is created and a bond is issued to pay for the project. Then the property owners within the district pay a special assessment in addition to their taxes in order to repay the bond.

Special Revenue Fund—Fund used to account for specific revenue sources that are legally restricted to be spent for specified purposes. Examples are fitness center and redevelopment agencies.

Tax Base—The total taxable value of property within the local government's legal boundaries.

Tax Increment—Property tax that is collected as a result of increased valuation within an RDA area.

Tax Rate—The amount of tax levied for each $100 of assessed valuation.

Taxable Value—The assessed value of property less exemptions.

Taxes—Compulsory charges levied by a government for the purpose of financing services for the common benefit of the people.

Transfers—Legally authorized intra-city transfers of appropriations from one City fund to another City fund. Revenues and expenditures are accounted for in both funds.

Truth in Taxation—Legal requirement for Utah cities to hold public hearings in the event the City chooses to adopt a tax rate higher than the certified tax rate.

Undesignated Fund Balance—A portion of a fund balance that has not been designated or reserved for any specific use.

User Fees—The payment of a fee for direct receipt of a public service by the party benefitting from the service.

Attachment: FY2021 Budget-Final 6.30.20 (Review and action on a resolution adopting the American Fork City budget for fiscal year ending

**RESOLUTION NO. _____**

**A RESOLUTION ADOPTING THE AMERICAN FORK CITY 2020-2021 BUDGETS.**

WHEREAS, American Fork City is required by Utah State Law to adopt a balanced budget prior to June 30, 2020; and,

WHEREAS, said budget must include the General Fund, Fitness Center Fund, Downtown Redevelopment Fund, PARC Tax Fund, Celebration Fund, Debt Service Fund, General Capital Projects Fund, Bond Capital Projects Fund, Capital Equipment Fund, Park Impact Fee Fund, Road Impact Fee Fund, Fire Impact Fee Fund, Police Impact Fee Fund, Permanent Fund, Culinary Water Fund, Culinary Water Impact Fee Fund, Pressurized Irrigation Fund, Pressurized Irrigation Impact Fee Fund, Sewer Fund, Sewer Impact Fee Fund, Storm Drain Fund, Storm Drain Impact Fee Fund, Broadband Fund, Sanitation and Recycling Fund, Fleet Operations and Maintenance Fund, Fleet Capital Fund, and Information Technology Fund;

and,

WHEREAS, American Fork City has complied with all legal requirements,

NOW THEREFORE, be it resolved that the attached budgets are adopted for fiscal year 2020-2021.

PASSED AND SIGNED THIS 30 DAY OF JUNE, 2020.

APPROVED:

_____

Bradley J. Frost, Mayor

ATTEST:

_____

Terilyn Lurker, City Recorder

Attachment: 06-30-2020 - FYE 2021 budget resolution (Review and action on a resolution adopting the American Fork City budget for fiscal year

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Finance **Director Approval** *Anna Montoya*

**AGENDA ITEM** Review and action on a resolution approving the 2020-2021 General Fee Schedule.

**SUMMARY RECOMMENDATION**
Staff would recommend approval of the proposed fee schedule.

**BACKGROUND**
On an annual basis staff reviews the fee schedule and proposes suggested changes to the fee schedule. Each department was asked to look closing at the existing fees and charges to ensure they are appropriate and fair. The fees are based on actual costs, anticipated expenditures, and appropriate schedules within the industry. Many of the adjustments are due to increased costs, inflationary pressures or further evaluation.

The proposed fee schedule was reviewed during the work session on June 2, 2020. All recommended changes are incorporated herein.

**BUDGET IMPACT**
See attached fee schedule.

**SUGGESTED MOTION**
I move to approve the resolution establishing the Fiscal Year 2020-2021 General Fee Schedule.

**SUPPORTING DOCUMENTS**

06-30-20 - Resolution Fee Schedule adoption (PDF)
2020 FEE SCHEDULE - Proposed Changes 6.30.20(PDF)

RESOLUTION NO. _____

**A RESOLUTION OF THE CITY OF AMERICAN FORK FOR THE PURPOSE OF ESTABLISHING A GENERAL SCHEDULE OF THE FEES CHARGED BY THE CITY FOR WATER, SEWER, GARBAGE, STORM DRAIN, CEMETERY FEES, RECREATION USE FEES, BUILDING FEES, AND OTHER FEES**

WHEREAS, the Mayor and City Council of American Fork finds and declares that it is desirable and in the public interest to pass a single Resolution for the purposes of establishing and setting forth a general schedule of the most common fees charged by the City of American Fork;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AMERICAN FORK, UTAH, RESOLVES AS FOLLOWS:

Section 1. The following Resolution is hereby enacted, entitled "General Fee Schedule:"

GENERAL FEE SCHEDULE

**1.** General Fee Schedule Established**.** The following is an enactment listing the specific fees for the City as they shall be established as of the effective date of this Resolution (Exhibit A):

Section 2. All fees and charges not listed in this Resolution which are contained in or promulgated pursuant to any current resolutions shall remain in full force and effect, unless and until duly modified.

Section 3. All fees and charges contained in any current resolutions inconsistent herewith, are hereby repealed to the extent of the inconsistency, but in all other respects such resolutions shall remain in full force and effect.

Section 4. This Resolution is to be construed to be consistent with any all State, County, and Federal laws and regulations concerning the subject matter hereof. If any section, sentence, clause or phrase of this Resolution is held invalid by any court of competent jurisdiction, then said ruling shall not affect the validity of the remaining portions.

**BE IF FURTHER ENACTED AND RESOLVED THAT THIS RESOLUTION SHALL TAKE EFFECT UPON ITS PASSAGE THIS 30 DAY OF JUNE, 2020.**

ATTEST:

_____
Bradley J. Frost, Mayor

_____
Terilyn Lurker, City Recorder

Attachment: 06-30-20 - Resolution Fee Schedule adoption (Review and action on a resolution approving the 2020-2021 General Fee Schedule.)

Attachment: 06-30-20 - Resolution Fee Schedule adoption (Review and action on a resolution approving the 2020-2021 General Fee Schedule.)

# AMERICAN FORK CITY
# General Fee Schedule

## Exhibit A

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution approving the 2020-2021 General Fee

# AMERICAN FORK CITY
# General Fee Schedule

## Exhibit A

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| TAXES | | Proposed | Justification |
|---|---|---|---|
| Certified Tax Rate | Set by Resolution | | |
| Telecommunications Tax | 3.5% | | |
| Franchise Tax | 5.0% | | |
| Energy Sales/Use Taxes | 6.0% | | |

**LICENSES, PERMITS, AND FEES**

| Administration | | Proposed | Justification |
|---|---|---|---|
| Advertising Costs | Actual Cost | | |
| Chicken Permit | $ 15.00 | | |
| Violation as assessed by Enforcement Officer | $ 75.00 | | |
| Dog Licenses (North Utah Valley Animal Services Special Service District) | As per NUVASSD | | |
| GRAMA Requests (Non-Police or Non-Fire related) | | | |
| As per UCA 63G-2-202, the cost of staff time after first 15 minutes for compiling, formatting, manipulating, packaging, summarizing, tailoring a record or other direct administrative costs as determined by the City Administrator. | | | |
| Note: The city will not copy onto personal thumb drives | | | |
| Copies | | | |
| 8.5" x 11" - Black and White | $ 0.25 | | |
| 8.5" x 11" - Color | $ 0.50 | | |
| 11" x 17" - Black and White | $ 0.50 | | |
| 11" x 17" - Color | $ 1.00 | | |
| Agendas, Blank Forms | No Charge | | |
| History Books | | | |
| Early History of American Fork | $ 8.00 | | |
| The Growing Years | $ 39.95 | | |
| Recording Fees | Actual Costs | | |
| Stop Payment on Checks Fee | | $ 25.00 | Actual bank charge to stop payment on checks. |
| NSF (Not Sufficient Funds) Fee | $15.00 | $ 25.00 | bank fees |
| Special Event Permit Base Fee | $ 25.00 | | |
| Refundable Deposit | $ 500.00 | | |
| Late Fee | $ 25.00 | | |
| Parks Service (per hour) | $ 25.00 | | |
| Public Works Service (per hour) | $ 25.00 | | |
| Street Sweeper (per hour) | $ 125.00 | | |
| Police Services per officer (per hour, 2 officer minimum) | $ 50.00 | | |
| Fire & EMS per firefighter (per hour, 2 firefighter minimum) | $ 50.00 | | |
| Ambulance or brush truck (per event, per hour) | $ 100.00 | | |
| Fire Engine or Tower (per event, per hour) | $ 200.00 | | |

| Senior Citizen Fees | | Proposed | Justification |
|---|---|---|---|
| Membership - per year | $ 5.00 | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Business Licenses | | | Proposed | | Justification |
|---|---|---|---|---|---|
| Annual Home Occupant Business License Processing Fee (~~commercial,~~ home occupations with impacts) | $ | 40.00 | | | |
| New Home Occupation Application Fee - No impacts, No certificate of license | $ | - | | | |
| New Home Occupation Application Fee - No impacts, certificate of license needed | $ | 10.00 | | | |
| New Home Occupation Application Fee - with impact and certificate of license | $ | 40.00 | | | |
| New Commercial Application Business License Fee | $ | 160.00 | $ | 100.00 | Split license fee $100.00, $60.00 for fire inspection below |
| New Commercial Business License Fire Inspection Fee (Initial Inspection) | | | $ | 60.00 | Split license fee, $60.00 for initial fire inspection. |
| Penalty Fee (assessed if business is open prior to obtaining license) | $ | 100.00 | | | |
| Annual Commercial Business License Processing Fee | $ | 40.00 | $ | 40.00 | Not previously listed on the fee schedule. |
| Late fee for late renewals | $ | 25.00 | $ | 50.00 | Multiple renewal reminders are sent out by email, phone, and one by mail. $25.00 is a very low fee compared to other cities. |
| Change of Location Fee (plus annual processing fee) | $ | 125.00 | | | |
| Name Change Fee | $ | 10.00 | | | |
| Alcohol/Beer License Fee | $ | 300.00 | | | |
| Amusement Device Fee (per machine, maximum of $200) | $ | 25.00 | | | |
| Short-Term Rental Annual Business License | $ | - | $ | 80.00 | Approved by City Council 2/11/20 |
| Temporary Business License (Up to 10 consecutive days) | $ | 200.00 | | | |
| Seasonal Business License (up to 4 months) | $ | 300.00 | | | |
| Solicitor Fees (individual) | $ | 15.00 | | | |
| Mobile Vendor (excluding food trucks) | $ | 325.00 | | | |
| Fingerprinting for Mobile Vendor | $ | 25.00 | | | |
| Food Truck Vendors Annual Processing Fee (If already licensed in another city with current fire inspection) | $ | 40.00 | | | |
| Food Truck Vendors - per company (if a business license is needed) (Plus Processing Fee) | $ | 160.00 | $ | 100.00 | Split license fee, $100.00 for the commercial application fee. |
| Food Truck Vendors - per company (if a business license is needed) Fire Inspection Fee | | | $ | 60.00 | Split license fee, $60.00 for initial fire inspection. |
| ~~Re-printing of Business License~~ | $ | 10.00 | $ | - | No longer needed. Businesses can print their own. |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Cemetery | | | Proposed | Justification |
|---|---|---|---|---|
| Sale of Single Lot | | | | |
| Lot purchase (not including perpetual care fee) | $ | 1,100.00 | | |
| Veteran's lots (not including perpetual care fee) | $ | 600.00 | | |
| Perpetual Care - per lot | $ | 200.00 | | |
| Opening and Closing costs | | | | |
| Adult | | | | |
| Week day | $ | 600.00 | | |
| Saturday/Holiday | $ | 850.00 | | |
| Double Deep (lower) Week day | $ | 850.00 | | |
| Double Deep (lower) Saturday/Holiday | $ | 1,450.00 | | |
| Double Deep (Upper) Week day | $ | 600.00 | | |
| Double Deep (Upper) Saturday/Holiday | $ | 850.00 | | |
| Child (less than 4 ft) | | | | |
| Week day | $ | 250.00 | | |
| Saturday/Holiday | $ | 450.00 | | |
| Cremation | | | | |
| Week day | $ | 200.00 | | |
| Saturday/Holiday | $ | 400.00 | | |
| Disinterment | | | | |
| Under 4 feet in length | $ | 1,000.00 | | |
| Over 4 feet in length | $ | 1,500.00 | | |
| Court Ordered Double Deep | $ | 3,000.00 | | |
| Burial Lot Transfers of Ownership | | | | |
| Title and recording fee (per lot) | $ | 50.00 | | |
| Headstone removal fee | | | | |
| Flat or Wedge | $ | 150.00 | | |
| Upright | $ | 250.00 | | |
| Large Headstones may require removal through contracting company | | Actual Cost | | |
| After hours fee (4:00 p.m.) | $ | 250.00 | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Fire Department Fees | | | Proposed | Justification |
|---|---|---|---|---|
| **At the discretion of the Fire Marshal, any or all fire protection system plans may be sent to an independent 3rd party fire protection engineering consultant of the Marshal's choosing for review and/or consultation. An administrative fee will be assessed on all fire protection systems. Any 3rd party review will incur additional expenses and must be paid before any inspections will occur or occupancy of premises will be allowed. | | | | |
| Site Plan Review | | | $50/hr with 1hr minimum | The fire department has been doing site plan reviews for free. These plans take time and consideration as they are completed. The cost is to cover time spent without being excessive. |
| Administrative Fee | $ | 100.00 | | |
| Automatic Fire Protection System** | | | | |
| In house plan review | | | | |
| <100 heads | $ | 75.00 | | |
| 101-199 heads | $ | 100.00 | | |
| 200-299 heads | $ | 150.00 | | |
| >300 heads - base fee plus $.50 per head | $ | 200.00 | | |
| Acceptance Testing | | | | |
| Underground flush | $ | 50.00 | | |
| Hydrostatic (2) | $ | 50.00 | | |
| Acceptance (2) | $ | 50.00 | | |
| Any Acceptance (2) | $ | 50.00 | | |
| Fire Alarm Systems** (Fees are for In-house Plan reviews only) | | | | |
| Plan Review | | | | |
| New System | $ | 100.00 | | |
| Remodel | $ | 50.00 | | |
| Additional Floors | $ | 50.00 | | |
| Commercial Hood System** | | | | |
| Plan Review each hood | $ | 100.00 | | |
| Fire Hydrant Installation and Testing** | | | | |
| Refer to Public Works Fee Schedule | | | | |
| Clean Up | | | | |
| Reimbursed for material replacement, plus $50 per hour per firefighter | | | | |
| LPG Site Plan Review | $ | 150.00 | | |
| **Inspections/Enforcement** | | | | |
| Annual Burn Permit | $ | 20.00 | | |
| GRAMA Requests (Fire related) | | | | |
| As per UCA 63G-2-202, the cost of staff time after first 15 minutes for compiling, formatting, manipulating, packaging, summarizing, tailoring a record or other direct administrative costs as determined by the City Administrator. | | | | |
| Note: The city will not copy onto personal thumb drives | | | | |
| Standard Reports | | | | |
| 1st 10 pages | $ | 20.00 | | |
| Each additional page | $ | 0.25 | | |
| Stop Work Removal | $ | 500.00 | | |
| Installation without a permit | $ | 500.00 | | |
| Third inspection due to non-compliance | $ | 500.00 | | |
| Additionally Double Fees, Stop Work, Removal | | | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Fire Department Fees (continued) | | | Proposed | Justification |
|---|---|---|---|---|
| Inspection on businesses operating without a license | $ | - | $ 100.00 | *NEW FEE* This is punitive. Once businesses are in operation, there is more to consider as inspections are conducted. It will only be assessed after notification has been delivered and deadlines have elapsed. Each day afterwards could be considered a new infraction. Licenses will not be approved until fee is paid. The other option is to have them cited and appear in court. |
| Fire Inspections associated with Business Licenses (unless specifically identified below) | | | | |
| Day Care/Residential Non-Ambulatory Care Facility Fire Inspection | $ | 100.00 | | |
| Annual and New Business Fire Inspections | | | | |
| Initial Business Inspection (non specified) ~~no charge with new/renewal business license~~ | | | $ 60.00 | Split from business license fee. |
| 2nd Business Inspection - no charge ~~with new/renewal business license~~ | | | | |
| 3rd and subsequent fire inspections per inspection | $ | 250.00 | $ 300.00 | Per inspection. |
| Specific Assessments for Fire Inspections | | | | |
| Assembly Inspections - A-1 and A-2 | $ | 100.00 | | |
| Commercial Day Care/Pre-school | $ | 100.00 | | |
| Residential Day Care/Pre-school | $ | 100.00 | | |
| Nursing Homes/Assisted Living | $ | 100.00 | | |
| Firework Sales - per location | $ | 60.00 | | |
| Special Amusement Building | $ | 100.00 | | |
| Hospitals | $ | 200.00 | | |
| Lumber Yards and Woodworking Plant | $ | 75.00 | | |
| Fire Alarm Panel Inspection - submitted to 3rd party | $ | 25.00 | | |
| Fire Riser Inspection - submitted to 3rd party | $ | 25.00 | | |
| Single Use Permit | | | | |
| Fireworks Display | $ | 135.00 | | |
| Pyrotechnics (other) | $ | 100.00 | | |
| Carnivals < 10 attractions | $ | 60.00 | | |
| Carnivals > 10 attractions | $ | 100.00 | | |
| Temporary Membrane Structure in excess of 400 sq. ft | $ | 50.00 | | |
| Hazardous Material and LPG Tanks - Permits and Fees (all are annual) | $ | 500.00 | | |
| Minimum Storage/Use Site (solids 500 lbs or less; liquids 55 gal or less) | $ | 175.00 | | |
| Battery Site | $ | 125.00 | | |
| Backup Generator (all fuel types) | $ | 100.00 | | |
| Body Shop/Garage | $ | 175.00 | | |
| HM Storage Site (solids - 500 lbs or more; liquids 55 gal or more) | $ | 220.00 | | |
| HM Dispensing/Use Site | $ | 370.00 | | |
| HM Production/Processing - conducted on a ~~bi-~~annual basis | $ | 475.00 | $ 500.00 | Change from bi-annual to annual. Fee is only paid once a year. |
| (solids - 1000 lbs; liquids - 100 gal; compressed gas as defined by code) | | | | |
| 100+ Gallons of Hazardous Materials - conducted on a ~~bi-~~annual basis | $ | 475.00 | $ 500.00 | Change from bi-annual to annual. Fee is only paid once a year. |
| Oil/Hydrocarbon Refinery - conducted on a ~~bi-~~annual basis | $ | 475.00 | $ 500.00 | Change from bi-annual to annual. Fee is only paid once a year. |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Operations | | | | |
|---|---|---|---|---|
| Equipment Damaged | | Actual Cost | | |
| Material utilized in mitigation | | Actual Cost | | |
| Man hours for clean up - per hour, per firefighter | $ | 50.00 | | |
| Special Events/Fire Watch/EMS Standby-per hour, per firefighter (2 firefighter minimum) | $ | 50.00 | | |
| Hot Work permit fee | $ | 50.00 | | |
| False Fire Alarm Responds (per calendar year) | | | | |
| First two (2) false alarms | $ | - | | |
| Third through fifth false alarms (per call) | $ | 200.00 | | |
| Sixth and each succeeding false alarm (per call) | $ | 500.00 | | |

| Ambulance | Proposed | Justification |
|---|---|---|
| Ambulance fees will comply with the fees set forth by the State of Utah Bureau of EMS and may vary annually. | | |

| Library Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Overdue fines per day - maximum of $5.00 for each item | $ | 0.15 | | |
| Media Items overdue fines per day - maximum of $5.00 for each item | $ | 0.50 | | |
| Lost Items Processing Fee | $ | 5.00 | | |
| Lost Items | | Replacement Cost | | |
| Out of Town Library Cards | | | | |
| Quarterly | $ | 25.00 | | |
| Semi-Annual | $ | 45.00 | | |
| Annual | $ | 80.00 | | |
| Northern Utah County Library Cooperative partial member yearly card fees | $ | 40.00 | | |
| Library Card replacement | $ | 2.00 | | |
| Copies - black and white - per page | $ | 0.10 | | |
| Copies - color - per page | $ | 0.25 | | |
| Faxes | | | | |
| First page - local | $ | 1.00 | | |
| Additional pages - per page | $ | 0.75 | | |
| Long distance - per page | $ | 2.00 | | |
| Inter-library Loan Postage | $ | 3.00 | | |
| Room Rental | | | | |
| Medium (per hour) | $ | 30.00 | | |
| Large (per hour) | $ | 50.00 | | |
| Laminating - per foot | $ | 0.75 | | |
| Book Sales | | | | |
| Paperback books | $ | 0.50 | | |
| Hardback books | $ | 1.00 | | |
| Internet Use (per session, up to 2 hours) for non-American Fork City Library Card holders | $ | 1.00 | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Police Department Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Accident Reports and/or Incident Reports | | | | |
| Residents | $ | 5.00 | | |
| Non Residents | $ | 20.00 | | |
| GRAMA Requests (Police related) | | | | |
| As per UCA 63G-2-202, the cost of staff time after first 15 minutes for compiling, formatting, manipulating, packaging, summarizing, tailoring a record or other direct administrative costs as determined by the City Administrator. | | | | |
| Note: The city will not copy onto personal thumb drives | | | | |
| Standard Reports | | | | |
| 1st 10 pages | $ | 20.00 | | |
| each additional page | $ | 0.25 | | |
| CD Media Files - photograph, audio, visual | $ | 25.00 | | |
| Fingerprints - Wednesday and Thursday, 8 a.m. to 11 a.m. | | | | |
| Residents | | No Charge | | |
| Non Residents | $ | 25.00 | | |
| Alarm License | $ | 25.00 | | |
| False Alarm Penalty (per calendar year) | | | | |
| First two (2) false alarms | $ | - | | |
| Third through fifth false alarms (per call) | $ | 200.00 | | |
| Sixth and each succeeding false alarm (per call) | $ | 500.00 | | |
| Reinstatement of suspended alarm permit | $ | 50.00 | | |
| Late fees (base fee plus 12% APR until paid in full) | $ | 15.00 | | |
| Civil Penalty - uses, maintains, operates without a permit | $ | 200.00 | | |
| Civil Penalty - all other violations (per day of violation) | $ | 100.00 | | |
| Landlord Permit Fee | $ | 50.00 | | |
| Landlord Permit Fee - Renewal | $ | 25.00 | | |
| Animal Traps Usage (refundable deposit) | $ | 75.00 | $ 75.00 | Currently - refundable $75.00 deposit to use a trap. |
| Weekly Charge (after first week) | $ | - | $ 10.00 | $10.00 per week charge after the first week. Some have held on to the traps for extended periods. |
| Special Events/Standby - per hour, per officer (2 officer minimum) | $ | 50.00 | | |

**Public Works**

| Public Works Administration Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Printed maps and copies | | | | |
| 8.5" x 11" - Black and White | $ | 0.25 | | |
| 8.5" x 11" - Color | $ | 0.50 | | |
| 11" x 17" - Black and White | $ | 0.50 | | |
| 11" x 17" - Color | $ | 1.00 | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Residential Building Division Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Carport | $ | 25.00 | Use IBC Eval Table | |
| Garage | $ | 30.00 | Use IBC Eval Table | |
| Unfinished Basement | $ | 20.00 | Use IBC Eval Table | |
| Finished Basement | $ | 40.00 | Use IBC Eval Table | |
| Main Level | $ | 110.00 | Use IBC Eval Table | |
| 2nd Level | $ | 110.00 | Use IBC Eval Table | |
| Plan Review | $ | 400.00 | $ 500.00 | staff time/cost recovery |
| Once plan review has been initiated, the plan review fee is non-refundable. | | | | |
| Cardstock Plan Review Fee (for identical house plans, after the initial plan) | $ | 200.00 | | |
| Remarking Fee | $ | 40.00 | $ 50.00 | Same as commercial. |
| Reinspection Fee | $ | 50.00 | | |
| Electrical Meter Change Out | $ | 45.00 | $ 50.00 | staff time/cost recovery |
| Temporary Power | $ | 35.00 | $ 50.00 | staff time/cost recovery |
| Occupancy Fee | $ | 50.00 | | |
| Construction Water | $ | 50.00 | | |

| Commercial Building Division Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Reinspection Fee | $ | 50.00 | | |
| Remarking Fee | $ | 50.00 | | |
| Electrical Meter Change out | $ | 45.00 | $ 50.00 | staff time/cost recovery |
| Temporary Power | $ | 35.00 | $ 50.00 | staff time/cost recovery |
| Up Front Partial Plan Review Fee - New Commercial | $ | 500.00 | | |
| The complete plan review fee are 65% of the building permit fee. | | | | |
| Up Front Partial Plan Review Fee - Tenant Improvement/Remodel | $ | 200.00 | | |
| The complete plan review fee are 65% of the building permit fee. | | | | |
| Occupancy Fee | $ | 125.00 | | |
| Construction Water | $ | 100.00 | | |
| Racking Permit Fee Plan Review | $ | 50.00 | Use IBC Eval Table | |
| Sign Permit Review | $ | 50.00 | Use IBC Eval Table | |
| Miscellaneous Fee per hour charge | $ | 50.00 | | |

| Other Building Division Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Basement Plan Review Fee - per hour | $ | 30.00 | $ 50.00 | staff time/cost recovery |
| Miscellaneous Administrative Fee per hour charge | $ | 30.00 | $ 50.00 | staff time/cost recovery |
| Building Inspection Fee and 1% State Tax | | Varies | | |
| Based on home valuation as determined by the Plans Examiner | | | | |
| Occupancy Violation - $100 plus $30 per day | | | | |
| Commercial Plan Review | | 65% of Building Permit Fee | | |
| Inspections outside of normal working hours (2 hour max) | $ | 200.00 | | |
| Each additional hour | | | $ 100.00 | staff time/cost recovery |
| Address change request | | | $ 25.00 | staff time/cost recovery |
| | | | | |
| ***Fees listed under Building Inspection Fees are not inclusive. Other fees may apply or be required.*** | | | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Impact Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Culinary Water Impact Fee - based on water meter size | | | | |
| 3/4" meter | $ | 2,502.45 | pending study | |
| 1" meter | $ | 4,179.09 | pending study | |
| 1.5" meter | $ | 8,333.16 | pending study | |
| 2" meter | $ | 13,338.06 | pending study | |
| 3" meter | $ | 26,701.15 | pending study | |
| 4" meter | $ | 41,715.85 | pending study | |
| 6" meter | $ | 83,406.67 | pending study | |
| 8" meter | $ | 133,455.68 | pending study | |
| Fire Impact Fees | | | | |
| Single Family Residential - per unit | $ | 429.30 | pending study | |
| Multiple Family Residential - per unit | $ | 392.08 | pending study | |
| Non-Residential - per 1,000 square feet | $ | 187.39 | pending study | |
| Non-Residential Apparatus Fee - per 1,000 square feet | $ | 54.59 | pending study | |
| Parks and Recreation Impact Fees | | | | |
| Single Family Residential - per unit | $ | 3,855.99 | pending study | |
| Multiple Family Residential - per unit | $ | 3,064.51 | pending study | |
| Police Impact Fee | | | | |
| Single Family Residential - per unit | $ | 326.45 | pending study | |
| Multiple Family Residential - per unit | $ | 216.55 | pending study | |
| Non-Residential - per 1,000 square feet | $ | 196.28 | pending study | |
| Pressurized Irrigation Impact Fee | | | | |
| Single Family Residential - per irrigated square feet | $ | 0.42 | pending study | |
| Multiple Family Residential - per irrigated square feet | $ | 0.42 | pending study | |
| Non-Residential - per irrigated square feet | $ | 0.42 | pending study | |
| Roads Impact Fees | | | | |
| Single Family Residential (non-TOD) - per unit | $ | 3,548.30 | pending study | |
| Multiple Family Residential (Non-TOD) - per unit | $ | 2,003.07 | pending study | |
| Single Family Residential (TOD) - per unit | $ | 3,016.05 | pending study | |
| Multiple Family Residential (TOD) - per unit | $ | 1,702.61 | pending study | |
| Non-TOD Mixed Use<br>ITE Trips Peak PM Trips X % Entering X % Primary Trip X Final ITE PM Peak Hr Adjusted Trips X Cost per Trip ($5,723.06) = Base Non-Residential Impact Fee X Internal-Internal Trips (85%) = Final Non-Residential Mixed Use Impact Fee Outside of the TOD Areas | | | pending study | |
| Non-TOD Other Non-Residential<br>ITE Trips Peak PM Trips X % Entering X % Primary Trip X Final ITE PM Peak Hr Adjusted Trips X Cost per Trip ($5,723.06) = Base Non-Residential Impact Fee | | | pending study | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Impact Fees (continued) | | | Proposed | Justification |
|---|---|---|---|---|
| TOD (All Non-Residential) | | | pending study | |
| ITE Trips Peak PM Trips X % Entering X % Primary Trip X Final ITE PM Peak Hr Adjusted Trips X Cost per Trip ($5,723.06) = Base Non-Residential Impact Fee X TOD Trip Reduction (84%) X Internal-Internal Trips (85%) = Final Non-Residential Impact Fee in the TOD Area | | | | |
| Sanitary Sewer Impact Fees - based on water meter size | | | | |
| 3/4" meter | $ | 840.08 | pending study | |
| 1" meter | $ | 1,402.93 | pending study | |
| 1.5" meter | $ | 2,797.46 | pending study | |
| 2" meter | $ | 4,477.61 | pending study | |
| 3" meter | $ | 8,963.63 | pending study | |
| 4" meter | $ | 14,004.10 | pending study | |
| 6" meter | $ | 27,999.79 | pending study | |
| 8" meter | $ | 44,801.34 | pending study | |
| Storm Drain Impact Fee | | | | |
| Single Family Residential - per gross square feet | $ | 0.1536 | pending study | |
| Multiple Family Residential - per gross square feet | $ | 0.1536 | pending study | |
| Non-Residential - per gross square feet | $ | 0.1536 | pending study | |
| TSSD Impact Fee - per ERU (this is included on the building permit but paid to TSSD) | $ | 1,708.00 | pending study | |
| Multiple Family | $ | 1,110.00 | pending study | |

| Hook Up Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Water - residential and non-residential - based on water meter size | | | | |
| 0.750 inch | $ | 475.00 | | |
| 1.000 inch | $ | 525.00 | | |
| 1.500 inch | $ | 706.00 | | |
| 2.000 inch | $ | 856.00 | | |
| 3.000 inch | $ | 1,965.00 | | |
| 4.000 inch | $ | 3,065.00 | | |
| 6.000 inch | $ | 4,950.00 | | |
| Sewer - residential and non-residential | $ | 235.00 | | |
| Pressurized Irrigation - residential and non-residential - based on water meter size | | | | |
| 0.750 inch | $ | 475.00 | | |
| 1.000 inch | $ | 525.00 | | |
| 1.500 inch | $ | 706.00 | | |
| 2.000 inch | $ | 856.00 | | |
| 3.000 inch | $ | 1,965.00 | | |
| 4.000 inch | $ | 3,065.00 | | |
| 6.000 inch | $ | 4,950.00 | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Development Fees | | | Proposed | Justification |
|---|---|---|---|---|
| *General* | | | | |
| Performance Guarantee Administrative Fee - per year | $ | 50.00 | | |
| Right-of-Way or Utility Excavation Permit (base fee) | $ | 150.00 | | |
| Asphalt cut (per cut - first 100 square feet) | $ | 200.00 | | |
| Asphalt cut (per each additional 100 square feet of the same cut) | $ | 40.00 | | |
| Traffic Control fees | | | | |
| Base fee (includes first day of barricading for one lane) | $ | 50.00 | | |
| Barricading roads base fee plus (per square foot per day of barricaded area) | $ | 0.01 | | |
| Local road sidewalk closures (per day) | $ | 10.00 | | |
| Arterial or collector sidewalk closures (per day) | $ | 25.00 | | |
| Arterial or collector shoulder/bike lane closures (per day) | $ | 25.00 | | |
| Bike path closure (per day) | $ | 10.00 | | |
| Construction Water (base fee plus $3.50 per 1,000 gallons) | $ | 100.00 | $ 250.00 | |
| Usage rate per 1,000 gallons | $ | 3.50 | | |
| Construction Water (hydrant use) deposit | $ | 1,500.00 | | |
| Water share conveyance | | | $ 500.00 | staff time |
| *Engineering Division Review Fees* | | | | |
| Development Review and Inspection Fees - per hour | | | | |
| Public Infrastructure Manager | $ | 75.00 | $ 85.00 | staff time/cost recovery |
| Other Inspector | $ | 60.00 | $ 65.00 | staff time/cost recovery |
| Engineer In Training (EIT) | $ | 85.00 | $ 90.00 | staff time/cost recovery |
| Professional Engineer (PE) | $ | 100.00 | $ 100.00 | staff time/cost recovery |
| City Engineer | $ | 150.00 | $ 150.00 | staff time/cost recovery |
| GIS Supervisor | $ | 80.00 | $ 90.00 | staff time/cost recovery |
| Contracted Engineering Review | Actual Consultant Costs | | | |
| Contracted Inspection Work | Actual Consultant Costs | | | |
| Independent Soils Review | Actual Consultant Costs | | | |
| Hydraulic model analysis and/or certification | Actual Consultant Costs | | | |
| Water Rights Review | Actual Consultant Costs | | | |
| Geotechnical Peer Review | Actual Consultant Costs | | | |

| Planning and Zoning Division Review Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Subdivisions | | | | |
| Preliminary Plans (Does not include Engineering Fees) | $ | 500.00 | | |
| Final Plat (Does not include Engineering Fees) | $ | 250.00 | | |
| Historic Preservation Conversion Project | $ | 500.00 | | |
| Residential Accessory Structure (Does not include Engineering Fees) | $ | 300.00 | | |
| Commercial Site Plans (Does not include Engineering Fees) | $ | 500.00 | | |
| Zone Map or Development Code text change | $ | 250.00 | | |
| General Plan Amendment | $ | 250.00 | | |
| Annexation | | | | |
| Under 1 acre | $ | 350.00 | | |
| Between 1 and 5 acres | $ | 750.00 | | |
| Over 5 acres | $ | 1,250.00 | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Utilities | | | Proposed | Justification |
|---|---|---|---|---|
| Utility Deposits (refunded after two years if bills are kept current) | | | | |
| Per Residential Unit | $ | 150.00 | | |
| Per Commercial Unit | $ | 200.00 | | |
| Garbage Accounts only | $ | 20.00 | | |
| Tenant/Landlord copy of utility bill - per mailing | $ | 0.40 | | |
| **Utility Bills** | | | | |
| CUP/Water Assessment Fee | $ | 6.50 | | |
| Drain Fees | | | | |
| Residential Customers (including duplexes) - 1 ESU of impervious surface | $ | 6.00 | | |
| Undeveloped Parcel | | No Charge | | |
| Commercial Customers - per ESU (ESU's = impervious surface/3.400) | $ | 6.00 | | |
| Garbage Fees | | | | |
| 1st Container | $ | 10.00 | $ 10.10 | Republic Service rate increase letter 6/1/20 |
| Additional containers - each | $ | 6.65 | $ 6.72 | Republic Service rate increase letter 6/1/20 |
| Recycling | $ | 6.00 | $ 6.28 | Republic Service rate increase letter 6/1/20 |
| Recycling cancellation fee | $ | 10.00 | | |
| Sewer Fees | | | | |
| Residential Customers - base | $ | 35.55 | | |
| Residential Customers - Usage rate per 1,000 gallons | $ | 1.40 | | |
| Commercial Customers - base | $ | 35.55 | | |
| Commercial Customers - Usage rate per 1,000 gallons | $ | 1.40 | | |
| Industrial Customers - base | $ | 35.55 | | |
| Industrial Customers - Usage rate per 1,000 gallons | $ | 1.40 | | |
| Pressurized Irrigation | | | | |
| Unmetered | | | | |
| Base Rate (per month, 9,000 square foot lot) | $ | 21.68 | | |
| Overage (per month, per square foot over 9,000) | $ | 0.00271 | | |
| Metered | | | | |
| Base rate - 0 to 8,000 gallons per month usage | $ | 21.68 | | |
| Block 2 rate - 8,000 to 16,000 gallons per month usage | $ | 1.93 | | |
| Block 3 rate - over 16,000 gallons per month usage | $ | 5.12 | | |
| Pressurized Irrigation - Shareholder rates | | | | |
| Unmetered | | | | |
| Base Rate (per month, 9,000 square foot lot) | $ | 10.84 | | |
| Overage (per month, per square foot over 9,000) | $ | 0.001355 | | |
| Pressurized Irrigation - Additional discount for shares owned in excess of required minimum | | | | |
| Possible Additional discount | $ | 43.36 | | |
| Large Residential Property Lot Owners | | | | |
| Metered | | | | |
| Base rate - 0 to 8,000 gallons per month usage | $ | 21.68 | | |
| Block 2 rate - 8,000 to 16,000 gallons per month usage | $ | 1.93 | | |
| Block 3 rate - over 16,000 gallons per month usage | $ | 5.12 | | |
| Pressurized Irrigation - Ratio of permeable area for commercial users | | | | |
| Ratio of permeable areas for commercial | | 15% | | |
| Ratio of permeable areas for schools | | 50% | | |
| Ration of permeable areas for churches | | 30% | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Utilities (continued) | | | Proposed | Justification |
|---|---|---|---|---|
| Culinary Water Rates - **Rate adjustments effective July 1, 2018** | | | | |
| Single Family Rates | | | | |
| ***Monthly Base Rate ($/meter/month)*** | | | | |
| 3/4" and smaller | $ | 16.17 | $ 16.49 | As per Resolution No. 2018-05-16R |
| 1" | $ | 17.77 | $ 18.13 | As per Resolution No. 2018-05-16R |
| 1.5" | $ | 19.38 | $ 19.76 | As per Resolution No. 2018-05-16R |
| 2" | $ | 23.80 | $ 24.27 | As per Resolution No. 2018-05-16R |
| ***Volume Rates ($/thousand gallons)*** | | | | |
| *Base Allowance* | | | | |
| 0 to 3,000 gallons/month | $ | - | | |
| *Block 2 Rate* | | | | |
| 3,000 to 6,000 gallons/month | $ | 3.52 | $ 3.59 | As per Resolution No. 2018-05-16R |
| *Block 3 Rate* | | | | |
| 6,000 to 9,000 gallons/month | $ | 4.24 | $ 4.32 | As per Resolution No. 2018-05-16R |
| *Block 4 Rate* | | | | |
| Above 9,000 gallons/month | $ | 4.96 | $ 5.06 | As per Resolution No. 20108-05-16R |
| Multi-Family Rates | | | | |
| ***Monthly Base Rate ($/unit/month)*** | | | | |
| First Unit | $ | 16.17 | $ 16.49 | As per Resolution No. 20108-05-16R |
| Each Additional Unit | $ | 11.66 | $ 11.89 | As per Resolution No. 20108-05-16R |
| ***Volume Rates ($/thousand gallons)*** | | | | |
| *Base Allowance* | | | | |
| 0 to 3,000 gallons/month/unit | $ | - | | |
| *Block 2 Rate* | | | | |
| 3,000 to 6,000 gallons/month/unit | $ | 3.52 | $ 3.59 | As per Resolution No. 20108-05-16R |
| *Block 3 Rate* | | | | |
| 6,000 to 9,000 gallons/month/unit | $ | 4.24 | $ 4.32 | As per Resolution No. 20108-05-16R |
| *Block 4 Rate* | | | | |
| Above 9,000 gallons/month/unit | $ | 4.96 | $ 5.06 | As per Resolution No. 20108-05-16R |
| Commercial, Industrial, and Institutional | | | | |
| ***Monthly Base Rate ($/meter/month)*** | | | | |
| 3/4" and smaller | $ | 17.78 | $ 18.14 | As per Resolution No. 20108-05-16R |
| 1" | $ | 19.39 | $ 19.77 | As per Resolution No. 20108-05-16R |
| 1.5" | $ | 20.99 | $ 21.41 | As per Resolution No. 20108-05-16R |
| 2" | $ | 25.41 | $ 25.92 | As per Resolution No. 20108-05-16R |
| 3" | $ | 57.96 | $ 59.12 | As per Resolution No. 20108-05-16R |
| 4" | $ | 70.00 | $ 71.40 | As per Resolution No. 20108-05-16R |
| 6" | $ | 98.13 | $ 100.09 | As per Resolution No. 20108-05-16R |
| 8" | $ | 130.27 | $ 132.87 | As per Resolution No. 20108-05-16R |
| 10" | $ | 174.46 | $ 177.95 | As per Resolution No. 20108-05-16R |
| ***Volume Rates ($/thousand gallons)*** | | | | |
| *Base Allowance* | | | | |
| 0 to 3,000 gallons/month | $ | - | | |
| *Block 2 Rate* | | | | |
| Above 3,000 gallons/month | $ | 3.09 | $ 3.15 | As per Resolution No. 20108-05-16R |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Utilities (continued) | | | Proposed | Justification |
|---|---|---|---|---|
| Hardship Exception Rates - for seniors who qualify under Utah County Circuit Breaker Abatement | | | | |
| Pressurized Irrigation | | | | |
| Base Rate (per month up to 8,000 gallons) | | As Adopted | | |
| Each additional 1,000 gallons | $ | 1.25 | | |
| The city will pay entire cost to purchase and install meter for those seniors who qualify. | | | | |
| Culinary Water | | | | |
| 10% of the base rate of the adopted culinary rates | | | | |
| Hardship Exception Rates - for other cases, heard by City Council after filing a relief petition with City Recorder | | | | |
| Reconnection Fee - *normal business hours* | $ | 50.00 | | |
| Reconnection - after hours | $ | 150.00 | | |
| Tampering Fee | $ | 80.00 | | |
| Mapping Fee | $ | 200.00 | | |
| Pressurized Irrigation Connection fee | $ | 250.00 | | |
| Account Suspension Fee | | $50.00 | | |
| NSF (Not Sufficient Funds) Fee | | $15.00 | $ 25.00 | bank fees |
| Military Discount Active Military (With Deployment Papers) (While Deployed) | | | | |
| Garbage Fees | | As Adopted | | |
| Recycling Fees | | As Adopted | | |
| Water Fees | | Waived | | |
| Sewer Fees | | Waived | | |
| Storm Drain Fees | | Waived | | |
| Properties outside of American Fork City Limits will have double the rate of American Fork City residents for all utility services. | | | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

**Parks and Recreation Fees**

| Fitness Center Fees | | | Proposed | Justification |
|---|---|---|---|---|
| 12 Month Contract | | | | |
| Resident Rate | | | | |
| Annual Family | $ | 465.00 | | |
| per Month | $ | 47.00 | | |
| Annual Couple | $ | 385.00 | | |
| per Month | $ | 39.00 | | |
| Annual Individual | $ | 265.00 | | |
| per Month | $ | 27.00 | | |
| Annual Senior Couple | $ | 265.00 | | |
| per Month | $ | 27.00 | | |
| Annual Senior Individual | $ | 155.00 | | |
| per Month | $ | 16.00 | | |
| Non-Resident Rate | | | | |
| Annual Family | $ | 520.00 | | |
| per Month | $ | 52.00 | | |
| Annual Couple | $ | 440.00 | | |
| per Month | $ | 44.00 | | |
| Annual Individual | $ | 310.00 | | |
| per Month | $ | 31.00 | | |
| Annual Senior Couple | $ | 310.00 | | |
| per Month | $ | 31.00 | | |
| Annual Senior Individual | $ | 185.00 | | |
| per Month | $ | 19.00 | | |
| 6 Month Rate | | | | |
| Resident Rate | | | | |
| Semi-Annual Family | $ | 280.00 | | |
| Semi-Annual Couple | $ | 230.00 | | |
| Semi-Annual Individual | $ | 160.00 | | |
| Semi-Annual Senior Couple | $ | 160.00 | | |
| Semi-Annual Senior Individual | $ | 110.00 | | |
| Non-Resident Rate | | | | |
| Semi-Annual Family | $ | 310.00 | | |
| Semi-Annual Couple | $ | 260.00 | | |
| Semi-Annual Individual | $ | 185.00 | | |
| Semi-Annual Senior Couple | $ | 185.00 | | |
| Semi-Annual Senior Individual | $ | 115.00 | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Fitness Center Fees (continued) | | | Proposed | Justification |
|---|---|---|---|---|
| 3 Month Rate | | | | |
| Resident Rate | | | | |
| Quarterly Family | $ | 205.00 | | |
| Quarterly Couple | $ | 165.00 | | |
| Quarterly Individual | $ | 115.00 | | |
| Quarterly Senior Couple | $ | 115.00 | | |
| Quarterly Senior Individual | $ | 75.00 | | |
| Non-Resident Rate | | | | |
| Quarterly Family | $ | 225.00 | | |
| Quarterly Couple | $ | 190.00 | | |
| Quarterly Individual | $ | 135.00 | | |
| Quarterly Senior Couple | $ | 135.00 | | |
| Quarterly Senior Individual | $ | 85.00 | | |
| Summer Family Pass (May 15 to Sept 15) | | | | |
| Resident Rate | | | | |
| Quarterly Family | $ | 225.00 | | |
| Quarterly Couple | $ | 185.00 | | |
| Quarterly Individual | $ | 125.00 | | |
| Quarterly Senior Couple | $ | 125.00 | | |
| Quarterly Senior Individual | $ | 85.00 | | |
| Non-Resident Rate | | | | |
| Quarterly Family | $ | 250.00 | | |
| Quarterly Couple | $ | 210.00 | | |
| Quarterly Individual | $ | 150.00 | | |
| Quarterly Senior Couple | $ | 150.00 | | |
| Quarterly Senior Individual | $ | 95.00 | | |
| Daily Admission Fees and Punch Card Rates | | | | |
| Daily Adult (18 years and older) | $ | 5.00 | | |
| Daily Youth (4 years to 17 years) | $ | 4.00 | | |
| Daily Toddler (up to 3 years) | | Free | | |
| Daily Senior (60 years and older) | $ | 3.00 | | |
| Daily "Track Only" | $ | 2.00 | | |
| Daily Senior "Track Only" | $ | 1.00 | | |
| Daily family | $ | 20.00 | | |
| Monday Night (family night) | $ | 15.00 | | |
| Adult 20 Punch Card | $ | 80.00 | | |
| Youth 20 Punch Card | $ | 70.00 | | |
| Senior Citizen 20 Punch Card | $ | 50.00 | | |
| "Track Only" 20 Punch Card | $ | 25.00 | | |
| Senior Citizen "Track Only" 20 Punch Card | $ | 15.00 | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Fitness Center Fees (continued) | | Proposed | Justification |
|---|---|---|---|
| Day Care Pricing - Monthly Pass (2 hour max per day) | | | |
| One child | $ 28.00 | | |
| Two children | $ 38.00 | | |
| Three or more children | $ 48.00 | | |
| Day Care - Hourly Rates (2 hour max per day) | | | |
| Half Hour | $ 1.00 | | |
| Hour | $ 2.00 | | |
| 20 Time Punch Card | $ 35.00 | | |
| Business Rates | | | |
| Resident Rate 15% (1-20 employees) | | | |
| Annual Family | $ 387.00 | | |
| Annual Couple | $ 319.00 | | |
| Annual Individual | $ 221.00 | | |
| Non-Resident Rate 15% | | | |
| Annual Family | $ 434.00 | | |
| Annual Couple | $ 366.00 | | |
| Annual Individual | $ 255.00 | | |
| Resident Rate 20% (21-59 employees) | | | |
| Annual Family | $ 364.00 | | |
| Annual Couple | $ 300.00 | | |
| Annual Individual | $ 208.00 | | |
| Non-Resident Rate 20% | | | |
| Annual Family | $ 408.00 | | |
| Annual Couple | $ 344.00 | | |
| Annual Individual | $ 240.00 | | |
| Resident Rate 25% (60+ employees) | | | |
| Annual Family | $ 341.00 | | |
| Annual Couple | $ 281.00 | | |
| Annual Individual | $ 195.00 | | |
| Non-Resident Rate 25% | | | |
| Annual Family | $ 383.00 | | |
| Annual Couple | $ 323.00 | | |
| Annual Individual | $ 225.00 | | |
| Gymnastics | Member/Non Member | | |
| Parent Tot | $ 29.00/$32.00 | | |
| Gym Stars, Breeze, Thunder | $ 32.00/$36.00 | | |
| Kinder | $ 34.00/$38.00 | | |
| Blizzards | $ 60.00/$65.00 | | |
| Tumbling | $ 30.00/$34.00 | | |
| Levels 3-7 | $70.00-$155.00 | | |
| Itty Bitty Sports | $ 30.00 | | |
| Dance Classes | $ 25.00-$60.00 | | |
| Karate | $ 35.00-$80.00 | | |
| Merit Badge Classes | $ 8.00-$26.00 | | |
| Preschool | $ 65.00-$85.00 | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Boat Harbor Fees | | | Proposed | Justification |
|---|---|---|---|---|
| Day Use | $ | 8.00 | | |
| Walk-in | $ | 2.00 | | |
| Fishing | $ | 5.00 | | |
| Senior Fishing and Launch - Drive in, per person, per day | $ | 5.00 | | |
| Senior Fishing and Launch - Drive in, per person, per season | $ | 40.00 | | |
| Annual Launch Pass | $ | 80.00 | | |

| Park and Field Rentals | | | Proposed | Justification |
|---|---|---|---|---|
| Amphitheater Rental | | | | |
| Full Day Rental | $ | 600.00 | | |
| Half Day Rental | $ | 300.00 | | |
| Refundable Deposit | $ | 100.00 | | |
| Skate Park - 200 East 500 South | | | | |
| Day | $ | 200.00 | | |
| Pavilions - Rotary, Quail Cove, Evergreen | | | | |
| Large Pavilion - Resident/Non-resident | | $ 40.00/$60.00 | | |
| Small Pavilion - Resident/Non-resident | | $ 30.00/$50.00 | | |
| Baseball Field Rentals - Rotary, Pony, Art Dye, Beehive, Greenwood, and JC Parks | | | | |
| Hourly | $ | 25.00 | | |
| Half Day | $ | 75.00 | | |
| Full Day | $ | 150.00 | | |
| Field Prep | $ | 45.00 | | |
| Field Lights - per hour | $ | 25.00 | | |
| Playing Field Rentals - Evergreen, Hindley, Art Dye East or South Fields, Legacy, Bamberger, Easton, and Kimberly Parks | | | | |
| Hourly | $ | 25.00 | | |
| Half Day | $ | 75.00 | | |
| Full Day | $ | 150.00 | | |
| Field Prep | $ | 45.00 | | |
| Field Lights - per hour | $ | 25.00 | | |
| Art Dye - Full Rental - East Field, OR South Field, OR Baseball Field | | | | |
| Half Day | $ | 350.00 | | |
| Full Day | $ | 500.00 | | |
| Entire Complex | $ | 1,500.00 | | |
| **Other Arrangements can be made on a case by case basis. | | | | |
| **Playground Equipment for all parks is on a first-come, first-served basis at no charge | | | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# AMERICAN FORK CITY

## FEE SCHEDULE - PROPOSED CHANGES FISCAL YEAR 2020-2021

| Recreation Fees | | | Proposed | Justification |
|---|---|---|---|---|
| T-ball, Coach Pitch | $ | 40.00 | | |
| Machine Pitch I | $ | 45.00 | | |
| Machine Pitch II | $ | 50.00 | | |
| Pony and Colt | $ | 95.00 | | |
| Softball | | | | |
| Machine Pitch 1 | $ | 45.00 | | |
| Machine Pitch 2 | $ | 50.00 | | |
| 5th-6th | $ | 50.00 | | |
| 7th-12th | $ | 65.00 | | |
| Tennis Lessons | $ | 50.00 | | |
| Tennis Team | $ | 95.00 | | |
| Soccer | | | | |
| 3 years old through 2nd grade | $ | 40.00 | | |
| 3rd-4th grade | $ | 45.00 | | |
| 5th-9th grade | $ | 55.00 | | |
| Flag Football | | | | |
| 1st-4th grade | $ | 40.00 | | |
| 5th-6th grade | $ | 50.00 | | |
| 7th-12th grade | $ | 50.00 | | |
| Youth Basketball (no longer Jr. Jazz) | | | | |
| 1st-2nd grade | $ | 40.00 | | |
| 3rd-4th grade | $ | 50.00 | | |
| 5th-6th grade | $ | 60.00 | | |
| 7th-12th grade | $ | 85.00 | | |
| Volleyball | $ | 50.00 | | |
| Ski School | | | | |
| Bus, Lessons, Pass | $ | 230.00 | | |
| Skate Camp | $ | 65.00 | | |
| Bowling lessons | $ | 55.00 | | |
| Golf lessons | | $ 35.00-$80.00 | | |
| Adult Softball | | | | |
| 123456 | $ | 620.00 | | |
| Coed | $ | 435.00 | | |
| Ultimate Frisbee - Grades 10th to 12th | $ | 32.00 | | |
| Reusable Sports Jersey - utilized in some programs | $ | 9.00 | | |
| All Recreation Programs require a $20 non-resident fee | | | | |
| $5 multi-family discount for registering multiple family members at same time for same program | | | | |
| All Recreation Programs require a $5 late fee for registering after the deadline | | | | |

Attachment: 2020 FEE SCHEDULE - Proposed Changes 6.30.20 (Review and action on a resolution

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Recorder **Director Approval** *Terilyn Lurker*

**AGENDA ITEM** Review and action on a Class B Beer License for EATT Holdings, LLC (DBA Burgers and Barley) located at 529 South 500 East, Unit A.

**SUMMARY RECOMMENDATION**
Staff recommends approval.

**BACKGROUND**
Burgers and Barley is applying for a Class B beer license. This is a new license application.

**BUDGET IMPACT**
$300 application fee (renewal).

**SUGGESTED MOTION**
I move to approve a Class B beer license for EATT Holdings, LLC. (DBA Burgers and Barley).

**SUPPORTING DOCUMENTS**

Burgers and Barley Class B Beer License application (PDF)

American Fork

Printed: 06/08/2020

# EATT HOLDINGS, LLC

06/08/2020 - 12/30/2020

opening July 15th - 30th

## Beer/Alcoholic Beverage Business License

General

Permit/License #
6202207

Reference Number
74e036f0-a9d9-11ea-8cf8-9b7a49fa0acb

Status
Active

Application Status
New

## Application Review Status

Final-Review Reviewing

Date Submitted
06/08/2020

Date Approved/Denied
06/08/2020

## Fees

| | |
|---|---|
| New Beer/Alcoholic Beverage Application Fee | $300.00 |
| **Total Fees** | **$300.00** |
| **Amount Paid** | **$300.00** |

## Payments

| | | |
|---|---|---|
| 06/08/2020 | Online | $300.00 |
| **Total Paid** | | **$300.00** |

## Application Form Data

(Empty fields are not included)

Applicant First Name
MICHAEL TODD

Applicant Last Name
DAVIS

Phone Number

Email Address

Date of Birth

Age

Attachment: Burgers and Barley Class B Beer License application (Class B Beer License Application for Burgers and Barley)

Are you a US Citizen?
Yes

Social Security #
Reveal

Home Address (Street)

City

State

Zip

Name of Business to be Licensed
EATT HOLDINGS, LLC

DBA
BURGERS AND BARLEY

Business Address
529 S 500 E UNIT A

City
AMERICAN FORK

State
UT

Zip
84003

Business Phone
(801) 898-0009

Type of American Fork City License
Class B Beer

Type of DABC License Applying for
LIMITED USE BEER ONLY LICENSE

Upload Local Consent Form
Restaurant-Beer-Only-local-consent.pdf

Attachment: Burgers and Barley Class B Beer License application (Class B Beer License Application for Burgers and Barley)

# Signature

I hereby certify that I have complied with the requirements and possess the qualifications specified in the Alcoholic Beverage Control Act, and that all the information I have provided in this application is true. I hereby certify that I have never been convicted of a felony, or any misdemeanor involving moral turpitude, or of any violation of any law or ordinance relating to alcoholic beverages, including DUI offenses. I agree that if a license is issued, it shall be subject to suspension or revocation as provided in Chapter 5.08 of the American Fork City Code. I further agree to post any bonds required by the City pursuant to the terms of Chapter 5.08 of the City Code. No business license shall be transferred from one person to another, nor from one location to another.

Electronically Signed

MICHAEL TODD DAVIS - 06/08/2020 4:43 pm

Attachment: Burgers and Barley Class B Beer License application (Class B Beer License Application for Burgers and Barley)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Public Works **Director Approval** *Scott Sensanbaugher*

**AGENDA ITEM** Review and action of an Amended Reimbursement Agreement for Red Pine Construction.

**SUMMARY RECOMMENDATION** Red Pine Construction proposes amendments to a Reimbursement Agreement for system improvements along 200 South, 900 West and 350 South of the recently approved Willow Glen Phase 2 development.

**BACKGROUND** The City Council approved the Willow Glen Phase 1 development at the December 17, 2019 regular session meeting. Red Pine Construction has been working closely with the City's Public Works Department on a plan for the upsizing of the underground utilities along 900 West and 350 South in compliance with the approved Master Plans.

A Reimbursement Agreement was drafted by the developer and reviewed by the City Attorney's office. The agreement outlines the parameters for the construction cost of the culinary water, pressurized irrigation, sewer, storm water, and roadway improvements along 900 West and 350 South.

The system improvement impact fees credit add up to $377,263.02 for culinary water, $25,000.00 for pressurized irrigation, $5,530.00 for sewer, $1,950.00 for storm water, and $692,149.68 for roadway improvements. The total cost for the system improvements adds up to $1,101,892.70.

**BUDGET IMPACT** An amount no greater than $1,101,892.70 for the upsizing of the public improvements along 900 West and 350 South which will be applied as culinary water, pressurized irrigation, sewer, storm water, and road impact fee credits.

**SUGGESTED MOTION** Move to approve the Reimbursement Agreement for Red Pine Construction.

**SUPPORTING DOCUMENTS**

Reimbursement Agreement 900 W 1.1 - Red Pine (PDF)

# REIMBURSEMENT AGREEMENT

This Reimbursement Agreement ("*Agreement*") is entered into as of this 30 day of June, 2020, by and between Red Pine Construction with its principal offices located at 520 S. 850 E. Ste A4 Lehi, UT. 84043 ("*Developer*") and American Fork City, a municipal corporation and political subdivision of the State of Utah with its principal offices located at 51 East Main Street, American Fork, Utah 84003 ("*City*").

## RECITALS

WHEREAS, the parties have learned that there are certain mutually beneficial, cooperative and cost-cutting ways their respective properties can assist in the development of the other;

WHEREAS, pursuant to Section 13.80.030 of the American Fork Code of Ordinances and in compliance with Section 11-36a-402 of the Utah Code Annotated, the parties desire to provide for certain "system improvements," as that term defined in Section 11-36a-102 of the Utah Code Annotated, in conjunction with the development of the Property by Developer;

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and Developer hereby agree as follows:

## AGREEMENT

**1. Sanitary Sewer Line.** Developer is proposing to install sanitary sewer lines through its project at the required minimum size as required by City codes and standards. The City seeks to have the pipe within development upsized to a 12" inch pipe to accommodate additional off-site uses. Each upsized pipe is a system improvement. The lengths of pipe, associated materials and costs are set forth, and agreed to as shown, in the attached Exhibit B.

**2. Storm Sewer Line.** Developer is proposing to install storm sewer lines through its project at the required minimum size as required by City codes and standards. The City seeks to have the pipe within development upsized to an 18" inch pipe to accommodate additional off-site uses. Each upsized pipe is a system improvement. The lengths of pipe, associated materials and costs are set forth, and agreed to as shown, in the attached Exhibit B.

**3. Culinary Water Line.** Developer is proposing to install culinary water lines through its project at the required minimum size as required by City codes and standards. The City seeks to have the pipe within development upsized to a 30" inch pipe to accommodate additional off-site uses. Each upsized pipe is a system improvement. The lengths of pipe, associated materials and costs are set forth, and agreed to as shown, in the attached Exhibit B.

Attachment: Reimbursement Agreement 900 W 1.1 - Red Pine (Amended Reimbursement Agreement for Red Pine Construction)

**4. Pressurized Irrigation Line.** Developer is proposing to install pressurized irrigation lines through its project at the required minimum size as required in City codes and standards. The City seeks to have the pipe within development upsized to an 8" inch pipe to accommodate additional off-site uses. Each upsized pipe is a system improvement. The lengths of pipe, associated materials and costs are set forth, and agreed to as shown, in the attached Exhibit B.

**5. Sidewalk/Trail.** Developer is proposing to construct a sidewalk at the required minimum size as required in City codes and standards. The City seeks to have some or all of the sidewalk within the development upsized to a 5' cycle track, 7' verge and 6' sidewalk to accommodate additional off-site uses. Each upsized sidewalk is a system improvement. The additional work, associated materials and costs are set forth, and agreed to as shown, in the attached Exhibit B.

**6. Road.** Developer is proposing to construct asphalt roads necessary for its development. The City seeks to have some of the asphalt roads 900 West and 350 South. constructed wider than is necessary for the development to accommodate additional off-site uses. Each upsized asphalt road is a system improvement. The construction of the road beyond that necessary for the development is reimbursable to the Developer. The additional square footage, associated materials and costs are set forth, and agreed to as shown, in the attached Exhibit B.

**7. System Improvements Reimbursement.** The public improvements described above are each a System Improvement and collectively the "System Improvements." The City agrees to reimburse Developer for the System Improvements in an amount equal to the actual costs of the System Improvements, not to exceed the amounts set forth in Exhibit B.

**8. Time of Reimbursement.** The City shall provide to Developer a single reimbursement payment within thirty days of completion of all system improvements for the Project. Completion shall mean completion of construction, inspection and acceptance by the City Council.

**9. Choice of Law.** This Agreement shall be governed by, and construed in accordance with, the laws of the State of Utah.

**10. Entire Agreement.** This Agreement constitutes the entire agreement between the parties regarding the subject matter hereof and supersedes all prior understandings, written or oral, regarding the subject matter hereof.

**11. Modification.** This Agreement may only be modified or altered by a writing signed by both parties.

**12. Attorney Fees.** In the event either party seeks to enforce the terms hereof in a lawsuit or other proceeding, the prevailing party shall be entitled to an award of the costs incurred, including reasonable attorney fees.

Attachment: Reimbursement Agreement 900 W 1.1 - Red Pine (Amended Reimbursement Agreement for Red Pine Construction)

**13. Execution.** This Agreement may be executed in multiple original counterparts, each of which shall be deemed to be an original and all of which, taken together, shall constitute one and the same Agreement.

**14. Severability.** The provisions of this Agreement shall be deemed to be severable, and if any provision of this Agreement is determined to be invalid or unenforceable by any court of competent jurisdiction, such invalidity or unenforceability shall not affect or limit the validity or unenforceability of the remaining provisions hereof.

**15. Third-Party Beneficiary Interests.** Nothing contained in this Agreement is intended to benefit any person or entity other than the parties to this Agreement and/or their respective successors and assigns; and no representation or warranty is intended for the benefit of, or to be relied upon by, any person or entity which is not a party to this Agreement and/or their respective successors and assigns.

**16. Binding Effect.** This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective heirs, representatives, officers, agents, employees, members, successors and assigns.

WHEREFORE, the parties have executed the foregoing to be effective on the date appearing above.

RED PINE CONSTRUCTION, LLC

_____

By: Michael B. Horan
Its: Manager

AMERICAN FORK CITY

_____

Bradley J. Frost
Mayor, American Fork City

ATTEST:

_____

City Recorder

Approved as to content:

_____

City Engineer

Attachment: Reimbursement Agreement 900 W 1.1 - Red Pine (Amended Reimbursement Agreement for Red Pine Construction)

EXHIBIT A
Parcel Legal Description

COM N 0 DEG 10' 41" E 1030.82 FT & E 2318.21 FT FR W 1/4 COR. SEC. 22, T5S, R1E, SLB&M.; S 89 DEG 8' 40" E 144 FT; ALONG A CURVE TO L (CHORD BEARS: S 45 DEG 48' 43" W 42.46 FT, RADIUS = 30 FT); S 0 DEG 46' 5" W 1031.88 FT; ALONG A CURVE TO L (CHORD BEARS: S 44 DEG 18' 43" E 28.32 FT, RADIUS = 20 FT); S 89 DEG 23' 31" E 139.42 FT; ALONG A CURVE TO L (CHORD BEARS: N 87 DEG 6' 34" E 54.56 FT, RADIUS = 447 FT); N 83 DEG 36' 38" E 33.48 FT; ALONG A CURVE TO R (CHORD BEARS: N 87 DEG 3' 53" E 60.61 FT, RADIUS = 503 FT); S 89 DEG 28' 52" E 71.34 FT; S 2 DEG 24' 6" W 56.03 FT; S 89 DEG 45' 50" W .89 FT; N 89 DEG 32' 52" W 144.39 FT; N 89 DEG 22' 15" W 529.47 FT; N 1 DEG 17' 45" E 44.98 FT; S 89 DEG 23' 31" E 193.03 FT; ALONG A CURVE TO L (CHORD BEARS: N 45 DEG 41' 17" E 28.24 FT, RADIUS = 20 FT); N 0 DEG 46' 5" E 1032.42 FT; ALONG A CURVE TO L (CHORD BEARS: N 44 DEG 11' 17" W 42.39 FT, RADIUS = 30 FT) TO BEG. AREA 2.833 AC.

Attachment: Reimbursement Agreement 900 W 1.1 - Red Pine (Amended Reimbursement Agreement for Red Pine Construction)

Exhibit B

| 900 W 1.1 CONTRACT | | | | | Minimum Standard | | | | Reimbursement | Pioneering |
|---|---|---|---|---|---|---|---|---|---|---|
| Description | QTY | UM | Unit Price | Total Price | Description | QTY | UM | Unit Price | | |
| **SITE AND SWPP** | | | | | **SITE AND SWPP** | | | | | |
| General Conditions | 1 | EACH | $20,000.00 | $20,000.00 | General Conditions | 1 | EACH | $20,000.00 | $20,000.00 | $0.00 | $20,000.00 |
| Clear And Grub 1' Of Site - Haul To South Property | 4,970 | CY | $2.50 | $12,425.00 | Clear And Grub 1' Of Site - Haul To South Property | 4,970 | CY | $2.50 | $12,425.00 | $0.00 | $12,425.00 |
| Site Fill To Subgrade - A1a Imported Fill | 6,470 | CY | $20.00 | $129,400.00 | Site Fill To Subgrade - A1a Imported Fil | 3,033 | CY | $20.00 | $60,660.00 | $68,740.00 | $60,660.00 |
| Subgrade Prep Site | 134,200 | SF | $0.08 | $10,736.00 | Subgrade Prep Site | 134,200 | SF | $0.08 | $10,736.00 | $0.00 | $10,736.00 |
| SWPPP | 1 | LS | $12,500.00 | $12,500.00 | SWPPP | 1 | LS | $12,500.00 | $12,500.00 | $0.00 | $12,500.00 |
| Haul Off Of Trench Spoils | 3,895 | CY | $8.50 | $33,107.50 | Haul Off Of Trench Spoils | 3,895 | CY | $8.50 | $33,107.50 | $0.00 | $33,107.50 |
| Surveying | 1 | LS | $17,000.00 | $17,000.00 | Surveying | 1 | LS | $17,000.00 | $17,000.00 | $0.00 | $17,000.00 |
| Cap Well | 1 | LS | $5,500.00 | $5,500.00 | Cap Well | 1 | LS | $5,500.00 | $5,500.00 | $0.00 | $5,500.00 |
| Bond | 1 | LS | $21,800.00 | $21,800.00 | Bond | 1 | LS | $21,800.00 | $21,800.00 | $0.00 | $21,800.00 |
| | | | **TOTAL** | **$262,468.50** | | | | **TOTAL** | **$193,728.50** | **$68,740.00** | **$193,728.50** |
| **SEWER** | | | | | **SEWER** | | | | | |
| Connect To Existing Sewer With 5' Manhole | 1 | EACH | $6,000.00 | $6,000.00 | Connect To Existing Sewer With 5' Manhole | 1 | EACH | $6,000.00 | $6,000.00 | $0.00 | $6,000.00 |
| Core, Connect, Collar And Risers For Existing SSMH For Stub | 1 | LS | $4,500.00 | $4,500.00 | Core, Connect, Collar And Risers For Existing SSMH For Stub | 1 | LS | $4,500.00 | $4,500.00 | $0.00 | $4,500.00 |
| 12" SDR 35 Sewer Main | 400 | LF | $40.00 | $16,000.00 | 8" SDR 35 Sewer Main | 400 | LF | $30.00 | $12,000.00 | $4,000.00 | $12,000.00 |
| 8" SDR 35 Sewer Main | 135 | LF | $30.00 | $4,050.00 | 8" SDR 35 Sewer Main | 135 | LF | $30.00 | $4,050.00 | $0.00 | $4,050.00 |
| 5' SSMH Installed | 1 | EACH | $4,500.00 | $4,500.00 | 5' SSMH Installed | 1 | EACH | $4,500.00 | $4,500.00 | $0.00 | $4,500.00 |
| Dewatering | 1 | LS | $1,450.00 | $1,450.00 | Dewatering | 1 | LS | $1,450.00 | $1,450.00 | $0.00 | $1,450.00 |
| Sewer Testing | 1 | LS | $1,000.00 | $1,000.00 | Sewer Testing | 1 | LS | $1,000.00 | $1,000.00 | $0.00 | $1,000.00 |
| Sewer Trench Import | 665 | CY | $18.00 | $11,970.00 | Sewer Trench Import | 580 | CY | $18.00 | $10,440.00 | $1,530.00 | $10,440.00 |
| | | | **TOTAL** | **$49,470.00** | | | | **TOTAL** | **$43,940.00** | **$5,530.00** | **$43,940.00** |
| **STORM** | | | | | **STORM** | | | | | |
| 15" RCP Storm Drain Installed | 870 | LF | $40.00 | $34,800.00 | 15" RCP Storm Drain Installed | 870 | LF | $40.00 | $34,800.00 | $0.00 | $34,800.00 |
| 18" RCP Storm Drain Installed | 390 | LF | $45.00 | $17,550.00 | 15" RCP Storm Drain Installed | 390 | LF | $40.00 | $15,600.00 | $1,950.00 | $15,600.00 |
| SDMH 5' | 7 | EACH | $4,000.00 | $28,000.00 | SDMH 5' | 7 | EACH | $4,000.00 | $28,000.00 | $0.00 | $28,000.00 |
| Curb Inlet Box Installed | 4 | EACH | $2,200.00 | $8,800.00 | Curb Inlet Box Installed | 4 | EACH | $2,200.00 | $8,800.00 | $0.00 | $8,800.00 |
| Double Curb Inlet Box Installed | 4 | EACH | $3,500.00 | $14,000.00 | Double Curb Inlet Box Installed | 4 | EACH | $3,500.00 | $14,000.00 | $0.00 | $14,000.00 |
| Dewatering | 1 | LS | $400.00 | $400.00 | Dewatering | 1 | LS | $400.00 | $400.00 | $0.00 | $400.00 |
| Storm Drain Testing | 1 | LS | $1,950.00 | $1,950.00 | Storm Drain Testing | 1 | LS | $1,950.00 | $1,950.00 | $0.00 | $1,950.00 |
| Storm Drain Trench Import | 235 | CY | $18.00 | $4,230.00 | Storm Drain Trench Import | 235 | CY | $18.00 | $4,230.00 | $0.00 | $4,230.00 |
| | | | **TOTAL** | **$109,730.00** | | | | **TOTAL** | **$107,780.00** | **$1,950.00** | **$107,780.00** |
| **WATER** | | | | | **WATER** | | | | | |
| Connect To Existing 30" | 1 | LS | $6,500.00 | $6,500.00 | Connect To Existing 8" | 1 | LS | $2,000.00 | $2,000.00 | $4,500.00 | $2,000.00 |
| 30" DI Water Main Installed | 1,190 | LF | $220.00 | $261,800.00 | 8" DI Water Main Installed | 1,190 | LF | $28.00 | $33,320.00 | $228,480.00 | $33,320.00 |
| 12" Water Main Installed | 675 | LF | $45.00 | $30,375.00 | 8" Water Main Installed | 675 | LF | $28.00 | $18,900.00 | $11,475.00 | $18,900.00 |
| 8" Water Main Installed | 170 | LF | $28.00 | $4,760.00 | 8" Water Main Installed | 170 | LF | $28.00 | $4,760.00 | $0.00 | $4,760.00 |
| 6" Water Main Installed | 130 | LF | $18.00 | $2,340.00 | 6" Water Main Installed | 130 | LF | $18.00 | $2,340.00 | $0.00 | $2,340.00 |
| 30" Water Valves | 3 | EACH | $15,750.00 | $47,250.00 | 8" Water Valves | 3 | LS | $2,500.00 | $7,500.00 | $39,750.00 | $7,500.00 |
| 12" Water Valves | 3 | EACH | $4,166.00 | $12,498.00 | 8" Water Valves | 3 | LS | $2,500.00 | $7,500.00 | $4,998.00 | $7,500.00 |
| 8" Water Valves | 3 | EACH | $2,500.00 | $7,500.00 | 8" Water Valves | 3 | LS | $2,500.00 | $7,500.00 | $0.00 | $7,500.00 |
| 30" Water Fittings | 4 | EACH | $7,750.00 | $31,000.00 | 8" Water Fittings | 4 | LS | $650.00 | $2,600.00 | $28,400.00 | $2,600.00 |
| 12" Water Fittings | 6 | EACH | $1,166.67 | $7,000.02 | 8" Water Fittings | 6 | LS | $650.00 | $3,900.00 | $3,100.02 | $3,900.00 |
| 8" Water Fittings | 1 | EACH | $650.00 | $650.00 | 8" Water Fittings | 1 | LS | $650.00 | $650.00 | $0.00 | $650.00 |
| Blow Offs | 6 | EACH | $1,600.00 | $9,600.00 | Blow Offs | 6 | EACH | $1,600.00 | $9,600.00 | $0.00 | $9,600.00 |
| Fire Hydrant With Valve And Fittings | 6 | EACH | $9,500.00 | $57,000.00 | Fire Hydrant With Valve And Fittings | 6 | EACH | $5,600.00 | $33,600.00 | $23,400.00 | $33,600.00 |
| Dewatering | 1 | LS | $900.00 | $900.00 | Dewatering | 1 | LS | $900.00 | $900.00 | $0.00 | $900.00 |
| Water Testing | 1 | LS | $3,500.00 | $3,500.00 | Water Testing | 1 | LS | $3,500.00 | $3,500.00 | $0.00 | $3,500.00 |
| Water Trench Import | 725 | CY | $18.00 | $13,050.00 | Water Trench Import | 380 | CY | $18.00 | $6,840.00 | $6,210.00 | $6,840.00 |
| Cathodic Protection | 1 | LS | $26,950.00 | $26,950.00 | Cathodic Protection | 0 | LS | $26,950.00 | $0.00 | $26,950.00 | $0.00 |
| | | | **TOTAL** | **$522,673.02** | | | | **TOTAL** | **$145,410.00** | **$377,263.02** | **$145,410.00** |
| **SECONDARY** | | | | | **SECONDARY** | | | | | |
| Connect To Existing | 1 | LS | $3,000.00 | $3,000.00 | Connect To Existing | 1 | LS | $3,000.00 | $3,000.00 | $0.00 | $3,000.00 |
| 8" PI Main Installed | 2,100 | LF | $24.00 | $50,400.00 | 6" PI Main Installed | 2,100 | LF | $20.00 | $42,000.00 | $8,400.00 | $42,000.00 |
| 8" PI Valves | 1 | LS | $26,000.00 | $26,000.00 | 6" PI Valves | 10 | EACH | $1,500.00 | $15,000.00 | $11,000.00 | $15,000.00 |
| 8" PI Fittings | 1 | LS | $8,000.00 | $8,000.00 | 6" PI Fittings | 4 | EACH | $600.00 | $2,400.00 | $5,600.00 | $2,400.00 |
| Blow Offs | 7 | EACH | $1,400.00 | $9,800.00 | Blow Offs | 7 | EACH | $1,400.00 | $9,800.00 | $0.00 | $9,800.00 |
| Water Testing | 1 | LS | $1,700.00 | $1,700.00 | Water Testing | 1 | LS | $1,700.00 | $1,700.00 | $0.00 | $1,700.00 |
| | | | **TOTAL** | **$98,900.00** | | | | **TOTAL** | **$73,900.00** | **$25,000.00** | **$73,900.00** |

Attachment: Reimbursement Agreement 900 W 1.1 - Red Pine (Amended Reimbursement Agreement for

| 900 W 1.1 CONTRACT | | | | | Minimum Standard | | | | | Reimbursement | Pioneering |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Description | QTY | UM | Unit Price | Total Price | Description | QTY | UM | Unit Price | | | |
| **HARDSCAPES** | | | | | **HARDSCAPES** | | | | | | |
| 24" Curb And Gutter | 3,080 | LF | $20.00 | $61,600.00 | 24" Curb And Gutter | 3,080 | LF | $20.00 | $61,600.00 | $0.00 | $61,600.00 |
| 15" Mountable Curb | 270 | LF | $25.00 | $6,750.00 | 15" Mountable Curb | 270 | LF | $25.00 | $6,750.00 | $0.00 | $6,750.00 |
| 6" Curb Walls | 150 | LF | $20.00 | $3,000.00 | 6" Curb Walls | 150 | LF | $20.00 | $3,000.00 | $0.00 | $3,000.00 |
| Plowable End Sections | 2 | EACH | $700.00 | $1,400.00 | Plowable End Sections | 2 | EACH | $700.00 | $1,400.00 | $0.00 | $1,400.00 |
| ADA Ramp | 3 | EACH | $2,500.00 | $7,500.00 | ADA Ramp | 3 | EACH | $2,500.00 | $7,500.00 | $0.00 | $7,500.00 |
| Concrete Sidewalk 6' AF Utah (Castlewood) | 6,960 | SF | $6.00 | $41,760.00 | Concrete Sidewalk 5' AF Utah (Castlewood) | 4,703 | SF | $6.00 | $28,217.23 | $13,542.77 | $28,217.23 |
| Concrete Sidewalk 6' AF Utah (Willow Glen Townhome | 610 | SF | $6.00 | $3,660.00 | Concrete Sidewalk 5' AF Utah (Willow Glen Townhome | 412 | SF | $6.00 | $2,473.06 | $1,186.94 | $2,473.06 |
| Concrete Sidewalk 6' AF Utah (AF 21) | 1,650 | SF | $6.00 | $9,900.00 | Concrete Sidewalk 5' AF Utah (AF 21) | 1,115 | SF | $6.00 | $6,689.43 | $3,210.57 | $6,689.43 |
| Verge | 7,625 | SF | $7.00 | $53,375.00 | Verge | 0 | SF | $7.00 | $0.00 | $53,375.00 | $0.00 |
| Green Cycle Track | 12,325 | SF | $9.50 | $117,087.50 | Green Cycle Track | 0 | SF | $9.50 | $0.00 | $117,087.50 | $0.00 |
| Catch Basin Tie In | 12 | EACH | $400.00 | $4,800.00 | Catch Basin Tie In | 12 | EACH | $400.00 | $4,800.00 | $0.00 | $4,800.00 |
| 4.5" Asphalt, 12" Roadbase And 30" Granular Borrow (900 W) | 46,410 | SF | $2.40 | $111,384.00 | 3" Asphalt, 8" Roadbase And 12" Granular Borrow (900 W) | 41,174 | SF | $2.40 | $98,817.60 | $12,566.40 | $98,817.60 |
| 4.5" Asphalt, 12" Roadbase And 30" Granular Borrow (350 S) | 11,770 | SF | $2.85 | $33,544.50 | 3" Asphalt, 8" Roadbase And 12" Granular Borrow (350 S) | 11,770 | SF | $2.85 | $33,544.50 | $0.00 | $33,544.50 |
| Striping | 1 | LS | $3,000.00 | $3,000.00 | Striping | 1 | LS | $3,000.00 | $3,000.00 | $0.00 | $3,000.00 |
| Signage | 1 | LS | $3,500.00 | $3,500.00 | Signage | 1 | LS | $3,500.00 | $3,500.00 | $0.00 | $3,500.00 |
| Tree Grates And Concrete Colored Border | 15 | EACH | $2,900.00 | $43,500.00 | Tree Grates And Concrete Colored Border | 0 | EACH | $2,900.00 | $0.00 | $43,500.00 | $0.00 |
| | | | **TOTAL** | **$505,761.00** | | | | **TOTAL** | **$261,291.82** | **$244,469.18** | **$261,291.82** |
| **DRY UTILITIES** | | | | | **DRY UTILITIES** | | | | | | |
| Trenching With Sand | 2,100 | LF | $10.50 | $22,050.00 | Trenching With Sand | 2,100 | LF | $10.50 | $22,050.00 | $0.00 | $22,050.00 |
| Future Path 7-Way Materials (4500 LF Reel) | 1 | LS | $13,380.00 | $13,380.00 | Future Path 7-Way Materials (4500 LF Reel) | 0 | LS | $13,380.00 | $0.00 | $13,380.00 | $0.00 |
| Future Path 7-Way Install | 3,500 | LF | $1.80 | $6,300.00 | Future Path 7-Way Install | 0 | LF | $1.80 | $0.00 | $6,300.00 | $0.00 |
| Handholes | 6 | EACH | $2,000.00 | $12,000.00 | Handholes | 0 | EACH | $2,000.00 | $0.00 | $12,000.00 | $0.00 |
| 8" Conduit | 950 | LF | $11.75 | $11,162.50 | 8" Conduit For Future Path | 0 | LF | $11.75 | $0.00 | $11,162.50 | $0.00 |
| 6" Conduit | 370 | LF | $8.00 | $2,960.00 | 6" Conduit | 370 | LF | $8.00 | $2,960.00 | $0.00 | $2,960.00 |
| 4" Conduit | 870 | LF | $5.80 | $5,046.00 | 4" Conduit | 870 | LF | $5.80 | $5,046.00 | $0.00 | $5,046.00 |
| 3" Conduit | 220 | LF | $5.25 | $1,155.00 | 3" Conduit | 220 | LF | $5.25 | $1,155.00 | $0.00 | $1,155.00 |
| Power To Trees | 15 | EACH | $2,000.00 | $30,000.00 | Power To Trees | 0 | EACH | $2,000.00 | $0.00 | $30,000.00 | $0.00 |
| | | | **TOTAL** | **$104,053.50** | | | | **TOTAL** | **$31,211.00** | **$72,842.50** | **$31,211.00** |
| **LANDSCAPING (CASTLEWOOD)** | | | | | **LANDSCAPING** | | | | | | |
| Decorative Landscape Cobble And Weed Barrier | 1 | LS | $10,200.00 | $10,200.00 | Decorative Landscape Cobble And Weed Barrier | 1 | LS | $10,200.00 | $10,200.00 | $0.00 | $10,200.00 |
| Top Soil | 1 | LS | $3,500.00 | $3,500.00 | Top Soil | 1 | LS | $3,500.00 | $3,500.00 | $0.00 | $3,500.00 |
| Irrigation System | 1 | LS | $8,400.00 | $8,400.00 | Irrigation System | 1 | LS | $8,400.00 | $8,400.00 | $0.00 | $8,400.00 |
| Trees And Plants Installation | 1 | LS | $12,900.00 | $12,900.00 | Trees And Plants Installation | 1 | LS | $12,900.00 | $12,900.00 | $0.00 | $12,900.00 |
| | | | **TOTAL** | **$35,000.00** | | | | **TOTAL** | **$35,000.00** | **$0.00** | **$35,000.00** |
| CHANGE ORDER TOTAL | 1 | LS | $479,802.30 | **$479,802.30** | CHANGE ORDER TOTAL | 1 | LS | $173,704.30 | **$173,704.30** | **$306,098.00** | **$173,704.30** |
| **GRAND TOTAL** | | | | **$2,167,858.32** | **GRAND TOTAL** | | | | **$1,065,965.62** | **$1,101,892.70** | **$1,065,965.62** |
| | | | | | | | | | | **GRAND TOTAL (EXCLUDE HIGHLIGHTED LINE ITEMS)** | **$993,585.90** |
| | | | | | | | | | | **PIONEERING COST PER LF OF FRONTAGE** | **$327.92** |

| **PIONEERING AGREEMENT BREAKDOWN** | | | | | |
|---|---|---|---|---|---|
| **PROPERTY OWNER** | **QTY** | **LF** | **COST/LF** | | |
| AF Utah, LLC 13:041:0088 (Castlewood) | 1455 | LF | $327.92 | $540,335.21 | |
| AF Utah, LLC 13:041:0087 | 1140 | LF | $327.92 | $373,824.40 | |
| AF 21, LLC 13:040:0061 | 255 | LF | $327.92 | $90,308.05 | |
| AF 21, LLC 13:040:0060 | 35 | LF | $327.92 | $11,477.06 | |
| Willow Glen Townhomes 55:886:0213 | 145 | LF | $327.92 | $50,020.90 | PAID |
| Total Frontage | 3030 | LF | | | |
| | | | | **$1,065,965.62** | |

**THE PIONEERING NUMBERS CONTAINED HERE ARE A BREAKDOWN OF THE ABOVE SPREADSHEET. THE LANDSCAPING AND SIDEWALK WERE INSTALLED ON THE EAST SIDE OF 900 W FOR THE AF UTAH, LLC PARCEL 13:041:0088, AND ON 350 S. ON THE SOUTH SIDE OF THE ROAD FOR AF21, LLC (13:040:0061) AND WILLOW GLEN TOWNHOMES (55:886:0213) . THEREFORE THOSE COSTS HAVE BEEN ALLOCATED TO THOSE SPECIFIC PARCELS ONLY AND NOT SPREAD ACROSS ALL PARCELS.**

| | |
|---|---|
| **TOTAL REIMBURSEMENT AMOUNT** | **$1,101,892.70** |
| **REIMBURSEMENT 1** | **$951,978.40** |
| **REIMBURSEMENT 2** | **$149,914.30** |

Attachment: Reimbursement Agreement 900 W 1.1 - Red Pine (Amended Reimbursement Agreement for

| Contract Description | Quantity | Unit | Unit Price | Costs |
|---|---|---|---|---|
| **CO ROAD PROFILE CHANGE** | | | | |
| Cut Out Additional Material For Increased | 3,748 | CY | $8.50 | $31,858.00 |
| Site Fill To Subgrade - A1a Imported Fill | -2,305 | CY | $20.00 | ($46,100.00) |
| 3" Asphalt, 6" Roadbase And 7" Granular I | -46,410 | SF | $2.40 | ($111,384.00) |
| 3.5" Asphalt, 6" Roadbase And 10" Granul | -11,770 | SF | $2.85 | ($33,544.50) |
| Supply And Place 4.5" Asphalt, 12" Roadb | 58,180 | SF | $6.40 | $372,352.00 |
| Storm Drain Trench Import | -235 | CY | $18.00 | ($4,230.00) |
| Additional Dewatering | 1 | LS | $5,225.00 | $5,225.00 |
| Additional Bonding | 1 | LS | $2,321.00 | $2,321.00 |
| | | | **TOTAL** | **$216,497.50** |
| **CO STABILIZATION SOFT SPOT** | | | | |
| Soft Spot 350 S - Place Fabric And Cobble | 6,585 | CY | $47.00 | $309,495.00 |
| Grid Placement - Secugrid 30/30 | 14 | ROLL | $790.00 | $11,060.00 |
| Credit For Subbase Section Not Used | 1 | LS | ($160,238.00) | ($160,238.00) |
| | | | **TOTAL** | **$160,317.00** |
| **CO PROOF ROLL REPAIR** | | | | |
| Remove And Replace Areas That Did Not | 325 | CY | $67.00 | $21,775.00 |
| | | | **TOTAL** | **$21,775.00** |
| **CO 350 S CURB DESIGN CHANGE** | | | | |
| Demo Previously Installed C&G | 539 | LF | $8.00 | $4,312.00 |
| 4' Cross Gutter | 142 | SF | $16.00 | $2,272.00 |
| 24" Curb And Gutter | 500 | LF | $20.00 | $10,000.00 |
| 15" Mountable Curb | -270 | LF | $25.00 | ($6,750.00) |
| Plowable End Sections | -2 | EACH | $700.00 | ($1,400.00) |
| Concrete Sidewalk | -535 | SF | $6.00 | ($3,210.00) |
| Verge | -405 | SF | $7.00 | ($2,835.00) |
| Green Cycle Track | -1,510 | SF | $9.50 | ($14,345.00) |
| Cut Out Additional Material For Increased | 626 | CY | $8.50 | $5,321.00 |
| Supply And Place 4.5" Asphalt, 12" Roadb | 4,365 | SF | $6.40 | $27,936.00 |
| Additional Striping | 1 | LS | $450.00 | $450.00 |
| Additional Bonding And Surveying | 1 | LS | $850.00 | $850.00 |
| Soft Spot 350 S - Place Fabric And Cobble | 485 | CY | $47.00 | $22,795.00 |
| Grid Placement - Secugrid 30/30 | 1 | ROLL | $790.00 | $790.00 |
| Credit For Subbase Section Not Used | 1 | LS | ($7,637.00) | ($7,637.00) |
| | | | **TOTAL** | **$38,549.00** |
| **CO Move Hydrant** | | | | |
| Move Hydrant | 1 | LS | $4,300.00 | $4,300.00 |
| | | | **TOTAL** | **$4,300.00** |
| **CO CYCLEGRIP MMAX VS COLORED CONCRETE** | | | | |
| CycleGrop MMAX | 8,718 | SF | $4.50 | $39,231.00 |
| Colored Concrete | -10,815 | SF | $3.50 | ($37,852.50) |
| Sawcut and Seal Bike Lane | 10,815 | SF | $0.70 | $7,570.50 |
| | | | **TOTAL** | **$8,949.00** |
| **CO PED ACCESS AND SECONDARY POC** | | | | |
| Clearing for PED Access | 1 | LS | $450.00 | $450.00 |
| Install Temp Trail | 1 | LS | $6,000.00 | $6,000.00 |
| Secondary POC | 1 | Each | $2,300.00 | $2,300.00 |
| | | | **TOTAL** | **$8,750.00** |
| **CO LIGHTS, LANDSCAPE AND CURB CUTS** | | | | |
| Curb cuts | 1 | LS | $1,200.00 | $1,200.00 |
| Street Lights | 4 | EACH | $5,335.00 | $21,340.00 |
| Decorative Landscape Cobble And Weed E | -1 | LS | $10,200.00 | ($10,200.00) |
| | | | **TOTAL** | **$12,340.00** |
| **CO CITY INVOICES** | | | | |
| City Invoices | 1 | LS | $8,324.80 | **$8,324.80** |
| | | | | $479,802.30 |

| Minimum Standard Description | Quantity | Unit | Unit Price | Costs | | Reimbursement Difference |
|---|---|---|---|---|---|---|
| **CO ROAD PROFILE CHANGE** | | | | | | |
| Cut Out Additional Material For Increased | 3,748 | CY | $8.50 | $31,858.00 | | $0.00 |
| Site Fill To Subgrade - A1a Imported Fill | -2,305 | CY | $20.00 | ($46,100.00) | | $0.00 |
| 3" Asphalt, 6" Roadbase And 7" Granular I | -46,410 | SF | $2.40 | ($111,384.00) | | $0.00 |
| 3.5" Asphalt, 6" Roadbase And 10" Granul | -11,770 | SF | $2.85 | ($33,544.50) | | $0.00 |
| 3" Asphalt, 6" Roadbase And 7" Granular I | 58,180 | SF | $2.40 | $139,632.00 | | $232,720.00 |
| Storm Drain Trench Import | -235 | CY | $18.00 | ($4,230.00) | | $0.00 |
| Additional Dewatering | 1 | LS | $5,225.00 | $5,225.00 | | $0.00 |
| Additional Bonding | 1 | LS | $2,321.00 | $2,321.00 | | $0.00 |
| | | | **TOTAL** | **($16,222.50)** | | |
| **CO STABILIZATION SOFT SPOT** | | | | | | |
| Soft Spot 350 S - Place Fabric And Cobble | 6,585 | CY | $47.00 | $309,495.00 | | $0.00 |
| Grid Placement - Secugrid 30/30 | 14 | ROLL | $790.00 | $11,060.00 | | $0.00 |
| Credit For Subbase Section Not Used | 1 | LS | ($160,238.00) | ($160,238.00) | | $0.00 |
| | | | **TOTAL** | **$160,317.00** | | |
| **CO PROOF ROLL REPAIR** | | | | | | |
| Remove And Replace Areas That Did Not | 325 | CY | $67.00 | $21,775.00 | | $0.00 |
| | | | **TOTAL** | **$21,775.00** | | |
| **CO 350 S CURB DESIGN CHANGE** | | | | | | |
| Demo Previously Installed C&G | 0 | LF | $8.00 | $0.00 | | $4,312.00 |
| 4' Cross Gutter | 0 | SF | $16.00 | $0.00 | | $2,272.00 |
| 24" Curb And Gutter | 0 | LF | $20.00 | $0.00 | | $10,000.00 |
| 15" Mountable Curb | -270 | LF | $25.00 | ($6,750.00) | | $0.00 |
| Plowable End Sections | -2 | EACH | $700.00 | ($1,400.00) | | $0.00 |
| Concrete Sidewalk | -535 | SF | $6.00 | ($3,210.00) | | $0.00 |
| Verge | -405 | SF | $7.00 | ($2,835.00) | | $0.00 |
| Green Cycle Track | -1,510 | SF | $9.50 | ($14,345.00) | | $0.00 |
| Cut Out Additional Material For Increased | 626 | CY | $8.50 | $5,321.00 | | $0.00 |
| Supply And Place 4.5" Asphalt, 12" Roadb | 4,365 | SF | $2.40 | $10,476.00 | | $17,460.00 |
| Additional Striping | 0 | LS | $450.00 | $0.00 | | $450.00 |
| Additional Bonding And Surveying | 0 | LS | $850.00 | $0.00 | | $850.00 |
| Soft Spot 350 S - Place Fabric And Cobble | 0 | CY | $47.00 | $0.00 | | $22,795.00 |
| Grid Placement - Secugrid 30/30 | 0 | ROLL | $790.00 | $0.00 | | $790.00 |
| Credit For Subbase Section Not Used | 1 | LS | ($7,637.00) | ($7,637.00) | | $0.00 |
| | | | **TOTAL** | **($20,380.00)** | | |
| **CO Move Hydrant** | | | | | | |
| Move Hydrant | 0 | LS | $4,300.00 | $0.00 | | $4,300.00 |
| | | | **TOTAL** | **$0.00** | | |
| **CO CYCLEGRIP MMAX VS COLORED CONCRETE** | | | | | | |
| CycleGrop MMAX | 0 | SF | $4.50 | $0.00 | | $39,231.00 |
| Colored Concrete | 0 | SF | $3.50 | $0.00 | | ($37,852.50) |
| Sawcut and Seal Bike Lane | 0 | SF | $0.70 | $0.00 | | $7,570.50 |
| | | | **TOTAL** | **$0.00** | | |
| **CO PED ACCESS AND SECONDARY POC** | | | | | | |
| Clearing for PED Access | 1 | LS | $450.00 | $450.00 | | $0.00 |
| Install Temp Trail | 1 | LS | $6,000.00 | $6,000.00 | | $0.00 |
| Secondary POC | 1 | Each | $2,300.00 | $2,300.00 | | $0.00 |
| | | | **TOTAL** | **$8,750.00** | | |
| **CO LIGHTS, LANDSCAPE AND CURB CUTS** | | | | | | |
| Curb cuts | 0 | LS | $1,200.00 | $0.00 | | $1,200.00 |
| Street Ligths | 4 | EACH | $5,335.00 | $21,340.00 | | $0.00 |
| Decorative Landscape Cobble And Weed E | -1 | LS | $10,200.00 | ($10,200.00) | | $0.00 |
| | | | **TOTAL** | **$11,140.00** | | |
| **CO CITY INVOICES** | | | | | | |
| City Invoices | 1 | LS | $8,324.80 | **$8,324.80** | | $0.00 |
| | | | | | $173,704.30 | $306,098.00 |

Attachment: Reimbursement Agreement 900 W 1.1 - Red Pine (Amended Reimbursement Agreement for

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Public Works **Director Approval** *Scott Sensanbaugher*

**AGENDA ITEM** Review and action of a Connector's Agreement (a/k/a Pioneering Agreement) for Ardero

**SUMMARY RECOMMENDATION** Ardero proposes a Connector's Agreement for system improvements along 900 West of the recently approved Willow Glen development.

**BACKGROUND** The City Council approved the Willow Glen Phase 2 amended final plat at the December 17, 2019 meeting. Red Pine Construction has been working closely with the City's Public Works Department on a plan for the underground utilities along 900 West in compliance with the approved Master Plans.

A Connector's Agreement was drafted by appropriate City personnel. The agreement outlines the parameters for the construction costs of the underground utilities and roadway improvements along 900 West and 350 South and allocates pro-rated construction costs to the adjacent properties based on their frontage along 900 West and 350 South.

The total cost for the system improvements adds up to $1,065,965.62.

**BUDGET IMPACT** No budget impact as all costs will be allocated to the property owners.

**SUGGESTED MOTION** Move to approve the Connector's Agreement for Ardero.

**SUPPORTING DOCUMENTS**

Connectors agreement 900 w 1.1 - Ardero (PDF)

**CONNECTOR'S AGREEMENT**
**a/k/a Pioneering Agreement**

This Connector's Agreement (hereinafter referred to as "Agreement") is entered into as of this 30 day of June, 2020, by and between Ardero, a LLC with its principal offices located at 520 S. 850 E. Ste A1 Lehi, UT. 84043 (hereinafter referred to as "Developer") and American Fork City, a municipal corporation and political subdivision of the State of Utah with its principal offices located at 51 East Main Street, American Fork, Utah 84003 (hereinafter referred to as the "City").

**RECITALS**

WHEREAS, Developer owns or controls certain parcels of property located in American Fork, Utah County, Utah, specifically 13:040:0061; 13:040:0060; 13:040:0058; 13:040:0059; consisting of 16 acres and further described in Exhibit A attached hereto (hereinafter referred to as the "Property");

WHEREAS, Developer has obtained approvals from the City to develop the Property into a multi family subdivision. However, development of the Property is subject to the installation of offsite utility and roadway improvements (the "Project Improvements") identified on Exhibit B attached hereto. The project improvements are referenced as 900 W 1.1.

WHEREAS, the Project Improvements will provide direct benefit to other developers and owners of surrounding properties (the "Benefited Properties") when they develop their properties. The Benefited Properties are identified by tax parcel number and owner in Exhibit C attached hereto.

WHEREAS, Developer desires to be reimbursed for a proportionate share of the costs associated with the design, construction and installation of the Project Improvements as the Benefitted Properties connect and/or utilize the improvements;

WHEREAS, City is willing to administer reimbursement payments from the owners of the Benefitted Properties in accordance with the terms and provisions of this Agreement; and

WHEREAS, this Agreement is entered into to ensure the orderly development of real property within City limits, while maintaining and enhancing property values.

NOW THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto contract, covenant, and agree as follows:

**AGREEMENT**

1. Necessity of Improvements. Developer expressly acknowledges that the Project Improvements are necessary for development of AF 21, and are lawful conditions precedent for the approval and development of AF 21.

2. Developer's Obligation. Developer shall install the Project Improvements at Developer's cost and expense including all costs and expenses associated with engineering, planning, surveying, design, materials, labor, easements, property, construction costs, and bonding relating to the Project Improvements, in accordance with the construction plans approved by the City for the development of AF 21 and/or required by City ordinances and regulations (the "Pioneering Costs"). Pioneering Costs shall bear no interest from the date hereof to date of payment.

3. Approval, Inspection, and Acceptance. Developer and its assigns shall install the Project Improvements and post applicable bonds and improvement completion assurances in accordance

Attachment: Connectors agreement 900 w 1.1 - Ardero (Connector's Agreement for Ardero - 900 West Phase 1.1)

with City ordinances to guarantee the installation of the Project Improvements according to City ordinances, regulations, and standards. The Project Improvements shall be approved by the City and inspections shall be conducted by the City to ensure that the Project Improvements are constructed per City standards. Upon completion, Developer shall deliver to City a set of as-built plans of the Project Improvements (in both paper and electronic format) with the verified actual amount of the Pioneering Costs of the Project Improvements. Upon successful completion of the Project Improvements and acceptance in writing by the City, Developer shall also provide an Improvement Warranty in accordance with City ordinances to ensure that the Project Improvements remain in good condition and free from defects for a period of one (1) year. Upon successful completion, approval by the City, and posting of an Improvement Warranty by Developer, the City shall accept, own, operate, and maintain the Project Improvements. Developer shall dedicate to the City ownership of all facilities, easements, and property necessary to properly operate and maintain the Project Improvements and shall not retain any ownership interest therein, unless City ordinances, agreements, or regulations provide otherwise.

4. Collection of Pioneering Costs. The City will require owners of the Benefitted Properties that develop their land or apply for building permits to pay to the City their proportionate share of the Pioneering Costs of the Project Improvements prior to granting development or subdivision approval or issuing building permits. The proportionate share shall be determined by the City based upon consideration of the street frontage, parcel size, and other relevant factors of each respective Benefitted Property. In no event shall City be liable for failure to make collection; it being understood and agreed that City will use its best efforts to make such collection.

5. Distribution of Pioneering Costs Received. The funds collected shall be paid by the City to the Developer within 60 days of collection, unless the payment is made under protest by the owner of the Benefitted Property or the payment is the subject of a lawsuit (filed or threatened), complaint, advisory opinion, or appeal. In such a case, the City will retain the funds until such time as the matter is resolved. When the matter is resolved, the City shall disburse the funds to Developer within 60 days. Nothing in this Agreement shall preclude Developer from arranging for up-front financial contributions for the Project Improvements from the owners of the Benefitted Properties.

6. Duration of Pioneering Costs for all improvements. If a development application is made after 10 years from the date hereof, there shall be no required payment of Pioneering Costs related to streets as a pre-condition of development approval or issuance of a building permit.

7. Full Compensation. The Developer hereby agrees it shall not be entitled to any reimbursement, compensation, incentive, or other payment from the City related to the Project Improvements. Nothing in this Agreement, however, shall preclude Developer from obtaining reimbursements or impact fee credits for "system improvements" or oversized public improvements requested or required by the City in relation to the Project. If the City requires Developer to upsize or extend any of the Project Improvements, the parties may negotiate a separate reimbursement agreement to be submitted to City Council for approval. Such upsizing costs, however, are not part of this Agreement.

8. Choice of law. This Agreement shall be interpreted and enforced under the laws of the State of Utah. Venue for any legal action brought on this Agreement shall lie with the Fourth Judicial District Court for Utah County, Utah.

Attachment: Connectors agreement 900 w 1.1 - Ardero (Connector's Agreement for Ardero - 900 West Phase 1.1)

9. Authority. Each individual executing this Agreement hereby represents and warrants that he or she has been duly authorized to sign this Agreement in the capacity and for the entities identified.

10. Recitals and Exhibits Incorporated. Each recital set forth above, and each exhibit attached to and referred to in this Agreement, is hereby incorporated by reference.

11. Counterparts and Severability. In the event that any provision of this Agreement shall be held invalid and unenforceable, such provision shall be severable from, and such invalidity and unenforceability shall not be construed to have any effect on, the remaining provisions of this Agreement. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.

12. Entire Agreement. This Agreement constitutes and comprises the entire understanding of the parties hereto, and supersedes any previous written or oral communication or representation related to the subject matter hereof

13. Amendment. This Agreement may only be amended by written instrument signed by both parties hereto.

Attachment: Connectors agreement 900 w 1.1 - Ardero (Connector's Agreement for Ardero - 900 West Phase 1.1)

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

AMERICAN FORK CITY

_____
Bradley J. Frost, Mayor

Attest:

_____
Terilyn Lurker, Recorder

DATED this ____ day of _____, 2020.

Ardero, LLC

By: _____
Name (Print):
Its:

State of Utah

County of _____

On the _____ day of _____, 2020, personally appeared before me _____, of _____, whose identity has been proven on the basis of satisfactory evidence, and after being duly sworn acknowledges that he had authority to execute the foregoing Pioneering Agreement, for the purposes stated therein, and did so of his own voluntary act.

_____
Notary

Attachment: Connectors agreement 900 w 1.1 - Ardero (Connector's Agreement for Ardero - 900 West Phase 1.1)

Exhibit A

Parcel: 13:040:0061
COM S 107.69 FT & W 2657.46 FT FR E 1/4 COR. SEC. 22, T5S, R1E, SLB&M.; S 1 DEG 0' 42" W 448.95 FT; S 1 DEG 30' 56" W 369.58 FT; W 223.4 FT; N 0 DEG 46' 5" E 763.81 FT; ALONG A CURVE TO R (CHORD BEARS: N 44 DEG 21' 37" E 27.58 FT, RADIUS = 20 FT); ALONG A CURVE TO L (CHORD BEARS: N 83 DEG 25' 35" E 79.39 FT, RADIUS = 503 FT); N 78 DEG 54' 2" E 120.2 FT; ALONG A CURVE TO R (CHORD BEARS: N 79 DEG 51' 45" E 15 FT, RADIUS = 447 FT) TO BEG. AREA 4.162 AC.

Parcel: 13:040:0060
COM S 926.02 FT & W 2987.57 FT FR E 1/4 COR. SEC. 22, T5S, R1E, SLB&M.; W 213.83 FT; N 1 DEG 3' 27" E 349.48 FT; N 0 DEG 53' 51" E 436.94 FT; S 89 DEG 23' 31" E 191.01 FT; ALONG A CURVE TO R (CHORD BEARS: S 44 DEG 18' 43" E 28.32 FT, RADIUS = 20 FT); S 0 DEG 46' 5" W 764.09 FT TO BEG. AREA 3.821 AC.

Parcel: 13:040:0059
COM S 926.02 FT & W 2675.29 FT FR E 1/4 COR. SEC. 22, T5S, R1E, SLB&M.; S 0 DEG 50' 20" W 802.25 FT; N 89 DEG 11' 40" W 239.99 FT; S 89 DEG 58' 34" W 288.31 FT; N 0 DEG 49' 10" E 159.25 FT; ALONG A CURVE TO R (CHORD BEARS: N 55 DEG 31' 42" E 27.94 FT, RADIUS = 330.5 FT); N 57 DEG 57' 4" E 108.16 FT; ALONG A CURVE TO L (CHORD BEARS: N 29 DEG 21' 35" E 401.51 FT, RADIUS = 419.5 FT); N 0 DEG 46' 5" E 216.56 FT; E 223.28 FT TO BEG. AREA 6.083 AC.

Parcel: 13:040:0058
COM S 926.02 FT & W 3201.52 FT FR E 1/4 COR. SEC. 22, T5S, R1E, SLB&M.; E 213.95 FT; S 0 DEG 46' 5" W 215.35 FT; ALONG A CURVE TO R (CHORD BEARS: S 29 DEG 21' 35" W 316.33 FT, RADIUS = 330.5 FT); S 57 DEG 57' 4" W 77.81 FT; N 0 DEG 49' 11" E 33.15 FT; N 2 DEG 32' 0" E 104.92 FT; N 0 DEG 42' 25" E 394.38 FT TO BEG. AREA 2.161 AC.

Attachment: Connectors agreement 900 w 1.1 - Ardero (Connector's Agreement for Ardero - 900 West Phase 1.1)

Exhibit B

| 900 W 1.1 CONTRACT | | | | | Minimum Standard | | | | Reimbursement | Pioneering |
|---|---|---|---|---|---|---|---|---|---|---|
| Description | QTY | UM | Unit Price | Total Price | Description | QTY | UM | Unit Price | | | |
| **SITE AND SWPP** | | | | | **SITE AND SWPP** | | | | | | |
| General Conditions | 1 | EACH | $20,000.00 | $20,000.00 | General Conditions | 1 | EACH | $20,000.00 | $20,000.00 | $0.00 | $20,000.00 |
| Clear And Grub 1' Of Site - Haul To South Property | 4,970 | CY | $2.50 | $12,425.00 | Clear And Grub 1' Of Site - Haul To South Property | 4,970 | CY | $2.50 | $12,425.00 | $0.00 | $12,425.00 |
| Site Fill To Subgrade - A1a Imported Fill | 6,470 | CY | $20.00 | $129,400.00 | Site Fill To Subgrade - A1a Imported Fil | 3,033 | CY | $20.00 | $60,660.00 | $68,740.00 | $60,660.00 |
| Subgrade Prep Site | 134,200 | SF | $0.08 | $10,736.00 | Subgrade Prep Site | 134,200 | SF | $0.08 | $10,736.00 | $0.00 | $10,736.00 |
| SWPPP | 1 | LS | $12,500.00 | $12,500.00 | SWPPP | 1 | LS | $12,500.00 | $12,500.00 | $0.00 | $12,500.00 |
| Haul Off Of Trench Spoils | 3,895 | CY | $8.50 | $33,107.50 | Haul Off Of Trench Spoils | 3,895 | CY | $8.50 | $33,107.50 | $0.00 | $33,107.50 |
| Surveying | 1 | LS | $17,000.00 | $17,000.00 | Surveying | 1 | LS | $17,000.00 | $17,000.00 | $0.00 | $17,000.00 |
| Cap Well | 1 | LS | $5,500.00 | $5,500.00 | Cap Well | 1 | LS | $5,500.00 | $5,500.00 | $0.00 | $5,500.00 |
| Bond | 1 | LS | $21,800.00 | $21,800.00 | Bond | 1 | LS | $21,800.00 | $21,800.00 | $0.00 | $21,800.00 |
| | | | **TOTAL** | **$262,468.50** | | | | **TOTAL** | **$193,728.50** | **$68,740.00** | **$193,728.50** |
| **SEWER** | | | | | **SEWER** | | | | | | |
| Connect To Existing Sewer With 5' Manhole | 1 | EACH | $6,000.00 | $6,000.00 | Connect To Existing Sewer With 5' Manhole | 1 | EACH | $6,000.00 | $6,000.00 | $0.00 | $6,000.00 |
| Core, Connect, Collar And Risers For Existing SSMH For Stub | 1 | LS | $4,500.00 | $4,500.00 | Core, Connect, Collar And Risers For Existing SSMH For Stub | 1 | LS | $4,500.00 | $4,500.00 | $0.00 | $4,500.00 |
| 12" SDR 35 Sewer Main | 400 | LF | $40.00 | $16,000.00 | 8" SDR 35 Sewer Main | 400 | LF | $30.00 | $12,000.00 | $4,000.00 | $12,000.00 |
| 8" SDR 35 Sewer Main | 135 | LF | $30.00 | $4,050.00 | 8" SDR 35 Sewer Main | 135 | LF | $30.00 | $4,050.00 | $0.00 | $4,050.00 |
| 5' SSMH Installed | 1 | EACH | $4,500.00 | $4,500.00 | 5' SSMH Installed | 1 | EACH | $4,500.00 | $4,500.00 | $0.00 | $4,500.00 |
| Dewatering | 1 | LS | $1,450.00 | $1,450.00 | Dewatering | 1 | LS | $1,450.00 | $1,450.00 | $0.00 | $1,450.00 |
| Sewer Testing | 1 | LS | $1,000.00 | $1,000.00 | Sewer Testing | 1 | LS | $1,000.00 | $1,000.00 | $0.00 | $1,000.00 |
| Sewer Trench Import | 665 | CY | $18.00 | $11,970.00 | Sewer Trench Import | 580 | CY | $18.00 | $10,440.00 | $1,530.00 | $10,440.00 |
| | | | **TOTAL** | **$49,470.00** | | | | **TOTAL** | **$43,940.00** | **$5,530.00** | **$43,940.00** |
| **STORM** | | | | | **STORM** | | | | | | |
| 15" RCP Storm Drain Installed | 870 | LF | $40.00 | $34,800.00 | 15" RCP Storm Drain Installed | 870 | LF | $40.00 | $34,800.00 | $0.00 | $34,800.00 |
| 18" RCP Storm Drain Installed | 390 | LF | $45.00 | $17,550.00 | 15" RCP Storm Drain Installed | 390 | LF | $40.00 | $15,600.00 | $1,950.00 | $15,600.00 |
| SDMH 5' | 7 | EACH | $4,000.00 | $28,000.00 | SDMH 5' | 7 | EACH | $4,000.00 | $28,000.00 | $0.00 | $28,000.00 |
| Curb Inlet Box Installed | 4 | EACH | $2,200.00 | $8,800.00 | Curb Inlet Box Installed | 4 | EACH | $2,200.00 | $8,800.00 | $0.00 | $8,800.00 |
| Double Curb Inlet Box Installed | 4 | EACH | $3,500.00 | $14,000.00 | Double Curb Inlet Box Installed | 4 | EACH | $3,500.00 | $14,000.00 | $0.00 | $14,000.00 |
| Dewatering | 1 | LS | $400.00 | $400.00 | Dewatering | 1 | LS | $400.00 | $400.00 | $0.00 | $400.00 |
| Storm Drain Testing | 1 | LS | $1,950.00 | $1,950.00 | Storm Drain Testing | 1 | LS | $1,950.00 | $1,950.00 | $0.00 | $1,950.00 |
| Storm Drain Trench Import | 235 | CY | $18.00 | $4,230.00 | Storm Drain Trench Import | 235 | CY | $18.00 | $4,230.00 | $0.00 | $4,230.00 |
| | | | **TOTAL** | **$109,730.00** | | | | **TOTAL** | **$107,780.00** | **$1,950.00** | **$107,780.00** |
| **WATER** | | | | | **WATER** | | | | | | |
| Connect To Existing 30" | 1 | LS | $6,500.00 | $6,500.00 | Connect To Existing 8" | 1 | LS | $2,000.00 | $2,000.00 | $4,500.00 | $2,000.00 |
| 30" DI Water Main Installed | 1,190 | LF | $220.00 | $261,800.00 | 8" DI Water Main Installed | 1,190 | LF | $28.00 | $33,320.00 | $228,480.00 | $33,320.00 |
| 12" Water Main Installed | 675 | LF | $45.00 | $30,375.00 | 8" Water Main Installed | 675 | LF | $28.00 | $18,900.00 | $11,475.00 | $18,900.00 |
| 8" Water Main Installed | 170 | LF | $28.00 | $4,760.00 | 8" Water Main Installed | 170 | LF | $28.00 | $4,760.00 | $0.00 | $4,760.00 |
| 6" Water Main Installed | 130 | LF | $18.00 | $2,340.00 | 6" Water Main Installed | 130 | LF | $18.00 | $2,340.00 | $0.00 | $2,340.00 |
| 30" Water Valves | 3 | EACH | $15,750.00 | $47,250.00 | 8" Water Valves | 3 | LS | $2,500.00 | $7,500.00 | $39,750.00 | $7,500.00 |
| 12" Water Valves | 3 | EACH | $4,166.00 | $12,498.00 | 8" Water Valves | 3 | LS | $2,500.00 | $7,500.00 | $4,998.00 | $7,500.00 |
| 8" Water Valves | 3 | EACH | $2,500.00 | $7,500.00 | 8" Water Valves | 3 | LS | $2,500.00 | $7,500.00 | $0.00 | $7,500.00 |
| 30" Water Fittings | 4 | EACH | $7,750.00 | $31,000.00 | 8" Water Fittings | 4 | LS | $650.00 | $2,600.00 | $28,400.00 | $2,600.00 |
| 12" Water Fittings | 6 | EACH | $1,166.67 | $7,000.02 | 8" Water Fittings | 6 | LS | $650.00 | $3,900.00 | $3,100.02 | $3,900.00 |
| 8" Water Fittings | 1 | EACH | $650.00 | $650.00 | 8" Water Fittings | 1 | LS | $650.00 | $650.00 | $0.00 | $650.00 |
| Blow Offs | 6 | EACH | $1,600.00 | $9,600.00 | Blow Offs | 6 | EACH | $1,600.00 | $9,600.00 | $0.00 | $9,600.00 |
| Fire Hydrant With Valve And Fittings | 6 | EACH | $9,500.00 | $57,000.00 | Fire Hydrant With Valve And Fittings | 6 | EACH | $5,600.00 | $33,600.00 | $23,400.00 | $33,600.00 |
| Dewatering | 1 | LS | $900.00 | $900.00 | Dewatering | 1 | LS | $900.00 | $900.00 | $0.00 | $900.00 |
| Water Testing | 1 | LS | $3,500.00 | $3,500.00 | Water Testing | 1 | LS | $3,500.00 | $3,500.00 | $0.00 | $3,500.00 |
| Water Trench Import | 725 | CY | $18.00 | $13,050.00 | Water Trench Import | 380 | CY | $18.00 | $6,840.00 | $6,210.00 | $6,840.00 |
| Cathodic Protection | 1 | LS | $26,950.00 | $26,950.00 | Cathodic Protection | 0 | LS | $26,950.00 | $0.00 | $26,950.00 | $0.00 |
| | | | **TOTAL** | **$522,673.02** | | | | **TOTAL** | **$145,410.00** | **$377,263.02** | **$145,410.00** |
| **SECONDARY** | | | | | **SECONDARY** | | | | | | |
| Connect To Existing | 1 | LS | $3,000.00 | $3,000.00 | Connect To Existing | 1 | LS | $3,000.00 | $3,000.00 | $0.00 | $3,000.00 |
| 8" PI Main Installed | 2,100 | LF | $24.00 | $50,400.00 | 6" PI Main Installed | 2,100 | LF | $20.00 | $42,000.00 | $8,400.00 | $42,000.00 |
| 8" PI Valves | 1 | LS | $26,000.00 | $26,000.00 | 6" PI Valves | 10 | EACH | $1,500.00 | $15,000.00 | $11,000.00 | $15,000.00 |
| 8" PI Fittings | 1 | LS | $8,000.00 | $8,000.00 | 6" PI Fittings | 4 | EACH | $600.00 | $2,400.00 | $5,600.00 | $2,400.00 |
| Blow Offs | 7 | EACH | $1,400.00 | $9,800.00 | Blow Offs | 7 | EACH | $1,400.00 | $9,800.00 | $0.00 | $9,800.00 |
| Water Testing | 1 | LS | $1,700.00 | $1,700.00 | Water Testing | 1 | LS | $1,700.00 | $1,700.00 | $0.00 | $1,700.00 |
| | | | **TOTAL** | **$98,900.00** | | | | **TOTAL** | **$73,900.00** | **$25,000.00** | **$73,900.00** |

Attachment: Connectors agreement 900 w 1.1 - Ardero (Connector's Agreement for Ardero - 900 West

| 900 W 1.1 CONTRACT | | | | | Minimum Standard | | | | | Reimbursement | Pioneering |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Description | QTY | UM | Unit Price | Total Price | Description | QTY | UM | Unit Price | | | |
| **HARDSCAPES** | | | | | **HARDSCAPES** | | | | | | |
| 24" Curb And Gutter | 3,080 | LF | $20.00 | $61,600.00 | 24" Curb And Gutter | 3,080 | LF | $20.00 | $61,600.00 | $0.00 | $61,600.00 |
| 15" Mountable Curb | 270 | LF | $25.00 | $6,750.00 | 15" Mountable Curb | 270 | LF | $25.00 | $6,750.00 | $0.00 | $6,750.00 |
| 6" Curb Walls | 150 | LF | $20.00 | $3,000.00 | 6" Curb Walls | 150 | LF | $20.00 | $3,000.00 | $0.00 | $3,000.00 |
| Plowable End Sections | 2 | EACH | $700.00 | $1,400.00 | Plowable End Sections | 2 | EACH | $700.00 | $1,400.00 | $0.00 | $1,400.00 |
| ADA Ramp | 3 | EACH | $2,500.00 | $7,500.00 | ADA Ramp | 3 | EACH | $2,500.00 | $7,500.00 | $0.00 | $7,500.00 |
| Concrete Sidewalk 6' AF Utah (Castlewood) | 6,960 | SF | $6.00 | $41,760.00 | Concrete Sidewalk 5' AF Utah (Castlewood) | 4,703 | SF | $6.00 | $28,217.23 | $13,542.77 | $28,217.23 |
| Concrete Sidewalk 6' AF Utah (Willow Glen Townhome | 610 | SF | $6.00 | $3,660.00 | Concrete Sidewalk 5' AF Utah (Willow Glen Townhome | 412 | SF | $6.00 | $2,473.06 | $1,186.94 | $2,473.06 |
| Concrete Sidewalk 6' AF Utah (AF 21) | 1,650 | SF | $6.00 | $9,900.00 | Concrete Sidewalk 5' AF Utah (AF 21) | 1,115 | SF | $6.00 | $6,689.43 | $3,210.57 | $6,689.43 |
| Verge | 7,625 | SF | $7.00 | $53,375.00 | Verge | 0 | SF | $7.00 | $0.00 | $53,375.00 | $0.00 |
| Green Cycle Track | 12,325 | SF | $9.50 | $117,087.50 | Green Cycle Track | 0 | SF | $9.50 | $0.00 | $117,087.50 | $0.00 |
| Catch Basin Tie In | 12 | EACH | $400.00 | $4,800.00 | Catch Basin Tie In | 12 | EACH | $400.00 | $4,800.00 | $0.00 | $4,800.00 |
| 4.5" Asphalt, 12" Roadbase And 30" Granular Borrow (900 W) | 46,410 | SF | $2.40 | $111,384.00 | 3" Asphalt, 8" Roadbase And 12" Granular Borrow (900 W) | 41,174 | SF | $2.40 | $98,817.60 | $12,566.40 | $98,817.60 |
| 4.5" Asphalt, 12" Roadbase And 30" Granular Borrow (350 S) | 11,770 | SF | $2.85 | $33,544.50 | 3" Asphalt, 8" Roadbase And 12" Granular Borrow (350 S) | 11,770 | SF | $2.85 | $33,544.50 | $0.00 | $33,544.50 |
| Striping | 1 | LS | $3,000.00 | $3,000.00 | Striping | 1 | LS | $3,000.00 | $3,000.00 | $0.00 | $3,000.00 |
| Signage | 1 | LS | $3,500.00 | $3,500.00 | Signage | 1 | LS | $3,500.00 | $3,500.00 | $0.00 | $3,500.00 |
| Tree Grates And Concrete Colored Border | 15 | EACH | $2,900.00 | $43,500.00 | Tree Grates And Concrete Colored Border | 0 | EACH | $2,900.00 | $0.00 | $43,500.00 | $0.00 |
| | | | **TOTAL** | **$505,761.00** | | | | **TOTAL** | **$261,291.82** | **$244,469.18** | **$261,291.82** |
| **DRY UTILITIES** | | | | | **DRY UTILITIES** | | | | | | |
| Trenching With Sand | 2,100 | LF | $10.50 | $22,050.00 | Trenching With Sand | 2,100 | LF | $10.50 | $22,050.00 | $0.00 | $22,050.00 |
| Future Path 7-Way Materials (4500 LF Reel) | 1 | LS | $13,380.00 | $13,380.00 | Future Path 7-Way Materials (4500 LF Reel) | 0 | LS | $13,380.00 | $0.00 | $13,380.00 | $0.00 |
| Future Path 7-Way Install | 3,500 | LF | $1.80 | $6,300.00 | Future Path 7-Way Install | 0 | LF | $1.80 | $0.00 | $6,300.00 | $0.00 |
| Handholes | 6 | EACH | $2,000.00 | $12,000.00 | Handholes | 0 | EACH | $2,000.00 | $0.00 | $12,000.00 | $0.00 |
| 8" Conduit | 950 | LF | $11.75 | $11,162.50 | 8" Conduit For Future Path | 0 | LF | $11.75 | $0.00 | $11,162.50 | $0.00 |
| 6" Conduit | 370 | LF | $8.00 | $2,960.00 | 6" Conduit | 370 | LF | $8.00 | $2,960.00 | $0.00 | $2,960.00 |
| 4" Conduit | 870 | LF | $5.80 | $5,046.00 | 4" Conduit | 870 | LF | $5.80 | $5,046.00 | $0.00 | $5,046.00 |
| 3" Conduit | 220 | LF | $5.25 | $1,155.00 | 3" Conduit | 220 | LF | $5.25 | $1,155.00 | $0.00 | $1,155.00 |
| Power To Trees | 15 | EACH | $2,000.00 | $30,000.00 | Power To Trees | 0 | EACH | $2,000.00 | $0.00 | $30,000.00 | $0.00 |
| | | | **TOTAL** | **$104,053.50** | | | | **TOTAL** | **$31,211.00** | **$72,842.50** | **$31,211.00** |
| **LANDSCAPING (CASTLEWOOD)** | | | | | **LANDSCAPING** | | | | | | |
| Decorative Landscape Cobble And Weed Barrier | 1 | LS | $10,200.00 | $10,200.00 | Decorative Landscape Cobble And Weed Barrier | 1 | LS | $10,200.00 | $10,200.00 | $0.00 | $10,200.00 |
| Top Soil | 1 | LS | $3,500.00 | $3,500.00 | Top Soil | 1 | LS | $3,500.00 | $3,500.00 | $0.00 | $3,500.00 |
| Irrigation System | 1 | LS | $8,400.00 | $8,400.00 | Irrigation System | 1 | LS | $8,400.00 | $8,400.00 | $0.00 | $8,400.00 |
| Trees And Plants Installation | 1 | LS | $12,900.00 | $12,900.00 | Trees And Plants Installation | 1 | LS | $12,900.00 | $12,900.00 | $0.00 | $12,900.00 |
| | | | **TOTAL** | **$35,000.00** | | | | **TOTAL** | **$35,000.00** | **$0.00** | **$35,000.00** |
| CHANGE ORDER TOTAL | 1 | LS | $479,802.30 | **$479,802.30** | CHANGE ORDER TOTAL | 1 | LS | $173,704.30 | **$173,704.30** | **$306,098.00** | **$173,704.30** |
| **GRAND TOTAL** | | | | **$2,167,858.32** | **GRAND TOTAL** | | | | **$1,065,965.62** | **$1,101,892.70** | **$1,065,965.62** |
| | | | | | | | | | | **GRAND TOTAL (EXCLUDE HIGHLIGHTED LINE ITEMS)** | **$993,585.90** |
| | | | | | | | | | | **PIONEERING COST PER LF OF FRONTAGE** | **$327.92** |

| PIONEERING AGREEMENT BREAKDOWN | | | | | |
|---|---|---|---|---|---|
| **PROPERTY OWNER** | **QTY** | **LF** | **COST/LF** | | |
| AF Utah, LLC 13:041:0088 (Castlewood) | 1455 | LF | $327.92 | $540,335.21 | |
| AF Utah, LLC 13:041:0087 | 1140 | LF | $327.92 | $373,824.40 | |
| AF 21, LLC 13:040:0061 | 255 | LF | $327.92 | $90,308.05 | |
| AF 21, LLC 13:040:0060 | 35 | LF | $327.92 | $11,477.06 | |
| Willow Glen Townhomes 55:886:0213 | 145 | LF | $327.92 | $50,020.90 | PAID |
| Total Frontage | 3030 | LF | | | |
| | | | | **$1,065,965.62** | |

**THE PIONEERING NUMBERS CONTAINED HERE ARE A BREAKDOWN OF THE ABOVE SPREADSHEET. THE LANDSCAPING AND SIDEWALK WERE INSTALLED ON THE EAST SIDE OF 900 W FOR THE AF UTAH, LLC PARCEL 13:041:0088, AND ON 350 S. ON THE SOUTH SIDE OF THE ROAD FOR AF21, LLC (13:040:0061) AND WILLOW GLEN TOWNHOMES (55:886:0213) . THEREFORE THOSE COSTS HAVE BEEN ALLOCATED TO THOSE SPECIFIC PARCELS ONLY AND NOT SPREAD ACROSS ALL PARCELS.**

| | |
|---|---|
| **TOTAL REIMBURSEMENT AMOUNT** | **$1,101,892.70** |
| **REIMBURSEMENT 1** | **$951,978.40** |
| **REIMBURSEMENT 2** | **$149,914.30** |

Attachment: Connectors agreement 900 w 1.1 - Ardero (Connector's Agreement for Ardero - 900 West

| Contract Description | Quantity | Unit | Unit Price | Costs |
|---|---|---|---|---|
| **CO ROAD PROFILE CHANGE** | | | | |
| Cut Out Additional Material For Increased | 3,748 | CY | $8.50 | $31,858.00 |
| Site Fill To Subgrade - A1a Imported Fill | -2,305 | CY | $20.00 | ($46,100.00) |
| 3" Asphalt, 6" Roadbase And 7" Granular I | -46,410 | SF | $2.40 | ($111,384.00) |
| 3.5" Asphalt, 6" Roadbase And 10" Granul | -11,770 | SF | $2.85 | ($33,544.50) |
| Supply And Place 4.5" Asphalt, 12" Roadb | 58,180 | SF | $6.40 | $372,352.00 |
| Storm Drain Trench Import | -235 | CY | $18.00 | ($4,230.00) |
| Additional Dewatering | 1 | LS | $5,225.00 | $5,225.00 |
| Additional Bonding | 1 | LS | $2,321.00 | $2,321.00 |
| | | | **TOTAL** | **$216,497.50** |
| **CO STABILIZATION SOFT SPOT** | | | | |
| Soft Spot 350 S - Place Fabric And Cobble | 6,585 | CY | $47.00 | $309,495.00 |
| Grid Placement - Secugrid 30/30 | 14 | ROLL | $790.00 | $11,060.00 |
| Credit For Subbase Section Not Used | 1 | LS | ($160,238.00) | ($160,238.00) |
| | | | **TOTAL** | **$160,317.00** |
| **CO PROOF ROLL REPAIR** | | | | |
| Remove And Replace Areas That Did Not | 325 | CY | $67.00 | $21,775.00 |
| | | | **TOTAL** | **$21,775.00** |
| **CO 350 S CURB DESIGN CHANGE** | | | | |
| Demo Previously Installed C&G | 539 | LF | $8.00 | $4,312.00 |
| 4' Cross Gutter | 142 | SF | $16.00 | $2,272.00 |
| 24" Curb And Gutter | 500 | LF | $20.00 | $10,000.00 |
| 15" Mountable Curb | -270 | LF | $25.00 | ($6,750.00) |
| Plowable End Sections | -2 | EACH | $700.00 | ($1,400.00) |
| Concrete Sidewalk | -535 | SF | $6.00 | ($3,210.00) |
| Verge | -405 | SF | $7.00 | ($2,835.00) |
| Green Cycle Track | -1,510 | SF | $9.50 | ($14,345.00) |
| Cut Out Additional Material For Increased | 626 | CY | $8.50 | $5,321.00 |
| Supply And Place 4.5" Asphalt, 12" Roadb | 4,365 | SF | $6.40 | $27,936.00 |
| Additional Striping | 1 | LS | $450.00 | $450.00 |
| Additional Bonding And Surveying | 1 | LS | $850.00 | $850.00 |
| Soft Spot 350 S - Place Fabric And Cobble | 485 | CY | $47.00 | $22,795.00 |
| Grid Placement - Secugrid 30/30 | 1 | ROLL | $790.00 | $790.00 |
| Credit For Subbase Section Not Used | 1 | LS | ($7,637.00) | ($7,637.00) |
| | | | **TOTAL** | **$38,549.00** |
| **CO Move Hydrant** | | | | |
| Move Hydrant | 1 | LS | $4,300.00 | $4,300.00 |
| | | | **TOTAL** | **$4,300.00** |
| **CO CYCLEGRIP MMAX VS COLORED CONCRETE** | | | | |
| CycleGrop MMAX | 8,718 | SF | $4.50 | $39,231.00 |
| Colored Concrete | -10,815 | SF | $3.50 | ($37,852.50) |
| Sawcut and Seal Bike Lane | 10,815 | SF | $0.70 | $7,570.50 |
| | | | **TOTAL** | **$8,949.00** |
| **CO PED ACCESS AND SECONDARY POC** | | | | |
| Clearing for PED Access | 1 | LS | $450.00 | $450.00 |
| Install Temp Trail | 1 | LS | $6,000.00 | $6,000.00 |
| Secondary POC | 1 | Each | $2,300.00 | $2,300.00 |
| | | | **TOTAL** | **$8,750.00** |
| **CO LIGHTS, LANDSCAPE AND CURB CUTS** | | | | |
| Curb cuts | 1 | LS | $1,200.00 | $1,200.00 |
| Street Lights | 4 | EACH | $5,335.00 | $21,340.00 |
| Decorative Landscape Cobble And Weed E | -1 | LS | $10,200.00 | ($10,200.00) |
| | | | **TOTAL** | **$12,340.00** |
| **CO CITY INVOICES** | | | | |
| City Invoices | 1 | LS | $8,324.80 | **$8,324.80** |
| | | | | $479,802.30 |

| Minimum Standard Description | Quantity | Unit | Unit Price | Costs | | Reimbursement Difference |
|---|---|---|---|---|---|---|
| **CO ROAD PROFILE CHANGE** | | | | | | |
| Cut Out Additional Material For Increased | 3,748 | CY | $8.50 | $31,858.00 | | $0.00 |
| Site Fill To Subgrade - A1a Imported Fill | -2,305 | CY | $20.00 | ($46,100.00) | | $0.00 |
| 3" Asphalt, 6" Roadbase And 7" Granular I | -46,410 | SF | $2.40 | ($111,384.00) | | $0.00 |
| 3.5" Asphalt, 6" Roadbase And 10" Granul | -11,770 | SF | $2.85 | ($33,544.50) | | $0.00 |
| 3" Asphalt, 6" Roadbase And 7" Granular I | 58,180 | SF | $2.40 | $139,632.00 | | $232,720.00 |
| Storm Drain Trench Import | -235 | CY | $18.00 | ($4,230.00) | | $0.00 |
| Additional Dewatering | 1 | LS | $5,225.00 | $5,225.00 | | $0.00 |
| Additional Bonding | 1 | LS | $2,321.00 | $2,321.00 | | $0.00 |
| | | | **TOTAL** | **($16,222.50)** | | |
| **CO STABILIZATION SOFT SPOT** | | | | | | |
| Soft Spot 350 S - Place Fabric And Cobble | 6,585 | CY | $47.00 | $309,495.00 | | $0.00 |
| Grid Placement - Secugrid 30/30 | 14 | ROLL | $790.00 | $11,060.00 | | $0.00 |
| Credit For Subbase Section Not Used | 1 | LS | ($160,238.00) | ($160,238.00) | | $0.00 |
| | | | **TOTAL** | **$160,317.00** | | |
| **CO PROOF ROLL REPAIR** | | | | | | |
| Remove And Replace Areas That Did Not | 325 | CY | $67.00 | $21,775.00 | | $0.00 |
| | | | **TOTAL** | **$21,775.00** | | |
| **CO 350 S CURB DESIGN CHANGE** | | | | | | |
| Demo Previously Installed C&G | 0 | LF | $8.00 | $0.00 | | $4,312.00 |
| 4' Cross Gutter | 0 | SF | $16.00 | $0.00 | | $2,272.00 |
| 24" Curb And Gutter | 0 | LF | $20.00 | $0.00 | | $10,000.00 |
| 15" Mountable Curb | -270 | LF | $25.00 | ($6,750.00) | | $0.00 |
| Plowable End Sections | -2 | EACH | $700.00 | ($1,400.00) | | $0.00 |
| Concrete Sidewalk | -535 | SF | $6.00 | ($3,210.00) | | $0.00 |
| Verge | -405 | SF | $7.00 | ($2,835.00) | | $0.00 |
| Green Cycle Track | -1,510 | SF | $9.50 | ($14,345.00) | | $0.00 |
| Cut Out Additional Material For Increased | 626 | CY | $8.50 | $5,321.00 | | $0.00 |
| Supply And Place 4.5" Asphalt, 12" Roadb | 4,365 | SF | $2.40 | $10,476.00 | | $17,460.00 |
| Additional Striping | 0 | LS | $450.00 | $0.00 | | $450.00 |
| Additional Bonding And Surveying | 0 | LS | $850.00 | $0.00 | | $850.00 |
| Soft Spot 350 S - Place Fabric And Cobble | 0 | CY | $47.00 | $0.00 | | $22,795.00 |
| Grid Placement - Secugrid 30/30 | 0 | ROLL | $790.00 | $0.00 | | $790.00 |
| Credit For Subbase Section Not Used | 1 | LS | ($7,637.00) | ($7,637.00) | | $0.00 |
| | | | **TOTAL** | **($20,380.00)** | | |
| **CO Move Hydrant** | | | | | | |
| Move Hydrant | 0 | LS | $4,300.00 | $0.00 | | $4,300.00 |
| | | | **TOTAL** | **$0.00** | | |
| **CO CYCLEGRIP MMAX VS COLORED CONCRETE** | | | | | | |
| CycleGrop MMAX | 0 | SF | $4.50 | $0.00 | | $39,231.00 |
| Colored Concrete | 0 | SF | $3.50 | $0.00 | | ($37,852.50) |
| Sawcut and Seal Bike Lane | 0 | SF | $0.70 | $0.00 | | $7,570.50 |
| | | | **TOTAL** | **$0.00** | | |
| **CO PED ACCESS AND SECONDARY POC** | | | | | | |
| Clearing for PED Access | 1 | LS | $450.00 | $450.00 | | $0.00 |
| Install Temp Trail | 1 | LS | $6,000.00 | $6,000.00 | | $0.00 |
| Secondary POC | 1 | Each | $2,300.00 | $2,300.00 | | $0.00 |
| | | | **TOTAL** | **$8,750.00** | | |
| **CO LIGHTS, LANDSCAPE AND CURB CUTS** | | | | | | |
| Curb cuts | 0 | LS | $1,200.00 | $0.00 | | $1,200.00 |
| Street Ligths | 4 | EACH | $5,335.00 | $21,340.00 | | $0.00 |
| Decorative Landscape Cobble And Weed E | -1 | LS | $10,200.00 | ($10,200.00) | | $0.00 |
| | | | **TOTAL** | **$11,140.00** | | |
| **CO CITY INVOICES** | | | | | | |
| City Invoices | 1 | LS | $8,324.80 | **$8,324.80** | | $0.00 |
| | | | | | $173,704.30 | $306,098.00 |

Attachment: Connectors agreement 900 w 1.1 - Ardero (Connector's Agreement for Ardero - 900 West

**EXHIBIT C**
BENIFITING PARTIES

**PIONEERING AGREEMENT BREAKDOWN**

| **PROPERTY OWNER** | **QTY** | **LF** | | |
|---|---|---|---|---|
| AF Utah, LLC 13:041:0088 (Castlewood)* | 1455 | LF | $327.92 | $540,335.21 |
| AF Utah, LLC 13:041:0087 | 1140 | LF | $327.92 | $373,824.40 |
| AF 21, LLC 13:040:0061* | 255 | LF | $327.92 | $90,308.05 |
| AF 21, LLC 13:040:0060 | 35 | LF | $327.92 | $11,477.06 |
| Willow Glen Townhomes 55:886:0213* | 145 | LF | $327.92 | $50,020.90 |

*Certain items in Exhibit B were allocated to specific parcels

Attachment: Connectors agreement 900 w 1.1 - Ardero (Connector's Agreement for Ardero - 900 West Phase 1.1)

# REQUEST FOR COUNCIL ACTION

## CITY OF AMERICAN FORK

## JUNE 30,2020

**Department** Public Works **Director Approval** Scott Sensanbaugher

**AGENDA ITEM** Agreement with Pleasant Grove City for Installation of a Water Line in 50 South

**SUMMARY RECOMMENDATION** Staff recommends approval of the agreement with Pleasant Grove City.

**BACKGROUND** This is a formal agreement with Pleasant Grove City for reimbursement of the work for Pleasant Grove City within the American Fork City FY 2020 Pavement Rehabilitation Project. P. G. City approached A. F. City and asked that we add in some utility work as part of our project. This work was designed by Pleasant Gove and bid as part of our project. Pleasant Grove has given A. F. City a purchase order for the original bid amount. This agreement formalizes the contract terms of this PO and requires P. G. City to reimburse A. F. City for all costs related to their utility work. This agreement has been reviewed by both A. F. City and P. G. City public works and legal teams.

**BUDGET IMPACT** This agreement will not cost the City any additional money.

**SUGGESTED MOTION** Mr. Mayor, I move that authorize the City to enter into the agreement with Pleasant Grove City as presented.

**SUPPORTING DOCUMENTS**

Reimbursement Agreement - AF and PG Water Line (DOCX)

# REIMBURSEMENT AGREEMENT

This Reimbursement Agreement ("Agreement") is entered into as of this ___day of _____, 2020, by and between American Fork City, a municipal corporation and political subdivision of the State of Utah with its principal offices located at 51 East Main Street, American Fork, Utah 84003 ("American Fork"), and Pleasant Grove City, a municipal corporation and political subdivision of the State of Utah with its principal offices located at 70 South 100 East, Pleasant Grove, Utah 84062 ("Pleasant Grove"). American Fork and Pleasant Grove may collectively be referred to as "the Parties."

## RECITALS

WHEREAS American Fork will cause the installation and reclamation of roadway along the American Fork and Pleasant Grove city boundaries as part of the American Fork City Pavement Rehabilitation Project.

WHEREAS Pleasant Grove desires a water line be installed along the American Fork and Pleasant Grove city boundaries at 50 South in American Fork and 1100 North in Pleasant Grove ("Water Line") as part of the American Fork City Pavement Rehabilitation Project.

WHEREAS the Water Line will be installed for Pleasant Grove by American Fork.

WHEREAS Pleasant Grove agrees to reimburse American Fork for installing the Water Line as provided herein.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

## AGREEMENT

1. **Water Line.** As part of the American Fork City Pavement Rehabilitation Project, American Fork agrees to install a water line in 50 South in American Fork (1100 North in Pleasant Grove). Specifications for the Water Line are detailed as Additive Alternate #2 in the Horrocks Engineers' project specifications and contract documents for the American Fork City FY 2020 Pavement Rehabilitation Project ("Horrocks Specification Report").

2. **Water Line Installation Reimbursement.** Pleasant Grove agrees to reimburse American Fork for the Water Line installation performed by or at the direction of American Fork and described in the Horrocks Specification Report as Additive Alternate #2, for the actual costs of installation, plus fifteen percent (15%) for construction management and inspections of the newly installed Water Line. The current bid amount is $62,419.00, plus fifteen percent, the total estimated amount for reimbursement to American Fork by Pleasant Grove is $71,781.85.



Attachment: Reimbursement Agreement - AF and PG Water Line (Agreement with Pleasant Grove City for Installation of a Water Line in 50

**3. Time of Reimbursement.** Pleasant Grove shall provide to American Fork reimbursements within thirty (30) calendar days of receiving a pay application for the applicable costs after completion of the Water Line installation per specifications. Completion shall mean completion of construction, installation, and inspection.

**4. No Delay in Other Approvals.** American Fork and Pleasant Grove further agree that as additional consideration for American Fork's management and construction of the Water Line, no other permit, approval, authorization, or the like to be issued by or on behalf of Pleasant Grove shall be conditioned, withheld or delayed with respect to American Fork's installation of the Water Line.

**5. Choice of Law.** This Agreement shall be governed by, and construed in accordance with, the laws of the State of Utah.

**6. Entire Agreement.** This Agreement constitutes the entire agreement between the parties regarding the subject matter hereof and supersedes all prior understandings, written or oral, regarding the subject matter hereof.

**7. Modification.** This Agreement may only be modified or altered by a writing signed by both parties.

**8. Attorney Fees.** In the event either party seeks to enforce the terms hereof in a lawsuit or other proceeding, the prevailing party shall be entitled to an award of the costs incurred, including reasonable attorney fees.

**9. Execution.** This Agreement may be executed in multiple original counterparts, each of which shall be deemed to be an original and all of which, taken together, shall constitute one and the same Agreement.

**10. Severability.** The provisions of this Agreement shall be deemed to be severable, and if any provision of this Agreement is determined to be invalid or unenforceable by any court of competent jurisdiction, such invalidity or unenforceability shall not affect or limit the validity or unenforceability of the remaining provisions hereof.

**11. Third-Party Beneficiary Interests.** Nothing contained in this Agreement is intended to benefit any person or entity other than the parties to this Agreement and/or their respective successors and assigns; and no representation or warranty is intended for the benefit of, or to be relied upon by, any person or entity which is not a party to this Agreement and/or their respective successors and assigns.

**12. Binding Effect.** This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective heirs, representatives, officers, agents, employees, members, successors and assigns.

Attachment: Reimbursement Agreement - AF and PG Water Line (Agreement with Pleasant Grove City for Installation of a Water Line in 50

WHEREFORE, the parties have executed the foregoing to be effective on the date appearing above.

AMERICAN FORK CITY

_____
Bradley J. Frost
Mayor, American Fork City

ATTEST:

_____
City Recorder

Approved as to form:

_____
City Attorney

PLEASANT GROVE CITY

_____
Guy L. Fugal
Mayor, Pleasant Grove City

ATTEST:

_____
City Recorder

Approved as to form:

_____
City Attorney

Attachment: Reimbursement Agreement - AF and PG Water Line (Agreement with Pleasant Grove City for Installation of a Water Line in 50

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Planning **Director Approval** *Adam Olsen*

**AGENDA ITEM** Review and action on the final plats of Lakeshore Landing A-J in the area of 900 West 350 South.

**SUMMARY RECOMMENDATION** The planning commission will render a recommendation on the final plats of Lakeshore Landing A-J during its 6/17/2020 regular session. This item was expedited at the developer's request, instead of minutes, which are unavailable at the time of this writing, a verbal report will be given during city council meeting regarding the planning commission discussion and action.

**BACKGROUND** The applicant proposes final plats for Lakeshore Landing A-J, which is a residential development in the Transit Oriented Development Zone that has gone through the District Framework and Block Plan processes and proposes a plat approval as part of the Final Block Plan and Lot Plan submittals. For further analysis, please refer to the attached final plats and staff reports.

**BUDGET IMPACT** No direct budgetary impact is anticipated as part of this final plat approval.

**SUGGESTED MOTION** I move to approve the final plats of Lakeshore Landing A-J in the area of 900 West 350 South and to authorize the mayor and city council to sign the plat and accept the dedications with instructions to the city recorder to withhold recording of the plat subject to:

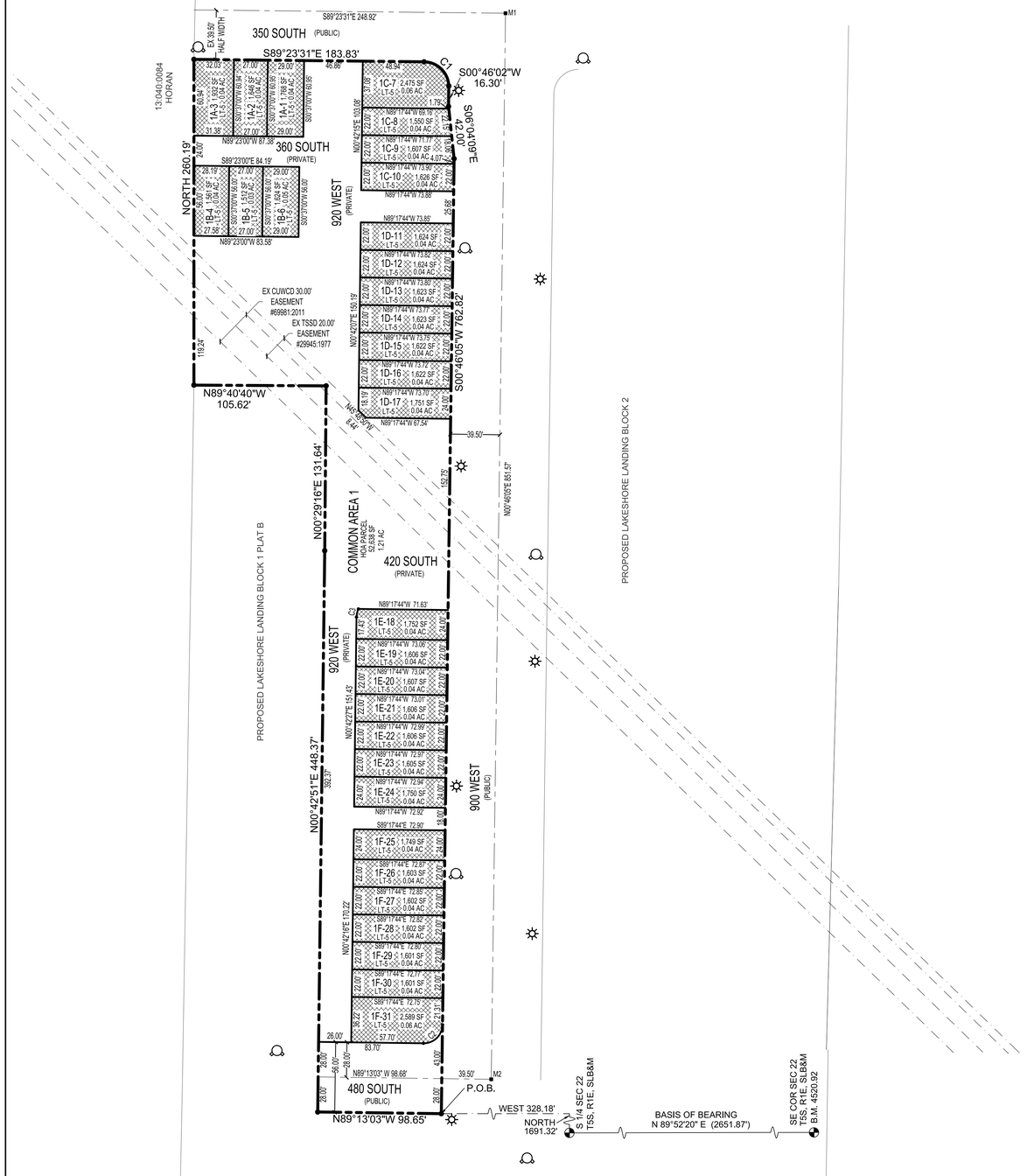
- All conditions identified in the public record associated with the June 17, 2020 planning commission meeting.

**SUPPORTING DOCUMENTS**

1. Plats (PDF)
2. Staff Report (PDF)
3. Public Comment (PDF)

# LAKESHORE LANDING BLOCK 1 PLAT A

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH




## ADDRESSES

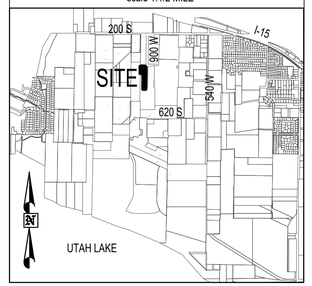
| | |
|---|---|
| LOT 1A-1 | 924 WEST 360 SOUTH |
| LOT 1A-2 | 932 WEST 360 SOUTH |
| LOT 1A-3 | 938 WEST 360 SOUTH |
| LOT 1B-4 | 937 WEST 360 SOUTH |
| LOT 1B-5 | 931 WEST 360 SOUTH |
| LOT 1B-6 | 925 WEST 360 SOUTH |
| LOT 1C-7 | 352 SOUTH 900 WEST |
| LOT 1C-8 | 356 SOUTH 900 WEST |
| LOT 1C-9 | 358 SOUTH 900 WEST |
| LOT 1C-10 | 362 SOUTH 900 WEST |
| LOT 1D-11 | 368 SOUTH 900 WEST |
| LOT 1D-12 | 372 SOUTH 900 WEST |
| LOT 1D-13 | 376 SOUTH 900 WEST |
| LOT 1D-14 | 382 SOUTH 900 WEST |
| LOT 1D-15 | 384 SOUTH 900 WEST |
| LOT 1D-16 | 388 SOUTH 900 WEST |
| LOT 1D-17 | 392 SOUTH 900 WEST |
| LOT 1E-18 | 424 SOUTH 900 WEST |
| LOT 1E-19 | 428 SOUTH 900 WEST |
| LOT 1E-20 | 432 SOUTH 900 WEST |
| LOT 1E-21 | 436 SOUTH 900 WEST |
| LOT 1E-22 | 442 SOUTH 900 WEST |
| LOT 1E-23 | 446 SOUTH 900 WEST |
| LOT 1E-24 | 448 SOUTH 900 WEST |
| LOT 1F-25 | 452 SOUTH 900 WEST |
| LOT 1F-26 | 456 SOUTH 900 WEST |
| LOT 1F-27 | 462 SOUTH 900 WEST |
| LOT 1F-28 | 464 SOUTH 900 WEST |
| LOT 1F-29 | 468 SOUTH 900 WEST |
| LOT 1F-30 | 472 SOUTH 900 WEST |
| LOT 1F-31 | 476 SOUTH 900 WEST |

## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT
- PRIVATE AREA
- COMMON AREA (AS SPECIFIED)

## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 2.55 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

## CURVE TABLE

| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 20.00 | 30.55 | 87°21'13" | 27.67 | S45°40'37"E |
| C2 | 15.00 | 23.57 | 90°00'52" | 21.22 | S45°46'31"W |
| C3 | 18.00 | 6.77 | 21°32'17" | 6.73 | N13°10'32"E |

## NOTES

1. IT IS HEREBY STATED, UNDERSTOOD, AND DEDICATED THAT ALL UNITS HAVE A CROSS-EASEMENT WITHIN THE EXTERIOR WALLS, ATTIC SPACE, ALL COMMONDIVISION WALLS, AND BELOW THE BOTTOM FLOOR FOR THE PLACEMENT OF NECESSARY UTILITIES TO SERVE ADJACENT UNITS WITHIN A GIVEN BUILDING SHELL. IF THE ABOVE EASEMENT IS NOT UTILIZED DURING THE INITIAL BUILDING CONSTRUCTION FOR THE FIRST OCCUPANCY, THE EASEMENT SHALL BE VACATED WHERE FURTHER USE WOULD CAUSE AN ADJACENT OWNER RECONSTRUCTION FOR PLACEMENT OF AN ADDITIONAL UTILITY NOT ALREADY CONTAINED WITHIN THE SHELL. THERE SHALL BE NO VACATION OF THIS COMMON AREA AND CROSS-EASEMENT IN THE CASE OF ANY NECESSARY STRUCTURAL REMEDIATION OR REPAIRS TO UTILITIES ALREADY IN PLACE WITHIN A GIVEN AREA DEFINED HEREIN.

2. NO SPECIFIC BUILDING PLAN IS INCLUDED WITH THE UNIT AREAS DEFINED ON THE PLAN. THESE PRIVATE UNIT AREAS CONTAIN NO OTHER ENCUMBRANCES THAN THOSE STATED WITHIN THE NOTES OR IN THE CC&R'S.

3. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

4. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

5. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

## RESERVATION OF COMMON AREAS

THE OWNER, IN RECORDING THIS PLAT ("THE DEVELOPMENT") HAS DESIGNATED CERTAIN AREAS OF THE DEVELOPMENT AS COMMON AREAS. INTENDED FOR THE OWNERS OF LAKESHORE LANDING FOR INGRESS, EGRESS, RECREATIONAL AND OTHER RELATED USES AS SET FORTH IN THE DECLARATION OF PROTECTIVE EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS ("THE DECLARATION") PERTAINING TO THE DEVELOPMENT. THE DESIGNATED AREAS ARE NOT INTENDED, NOR ARE THEY DEDICATED, FOR USE BY THE GENERAL PUBLIC, BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE OWNERS IN THE DEVELOPMENT, AS MORE FULLY PROVIDED IN THE DECLARATION RECORDED CONCURRENTLY WITH THE PLAT IN THE OFFICIAL RECORDS OF UTAH COUNTY, UTAH.

## PUBLIC UTILITY EASEMENTS

IN ADDITION TO THE PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT, ALL COMMON AND LIMITED COMMON AREAS ARE PUBLIC UTILITY EASEMENTS, INCLUDING FULL RIGHT-OF-WAY ACCESS THERETO, IN FAVOR OF AMERICAN FORK CITY.

50 0 50 100 150

SCALE 1"=50'

## REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____

SURVEYOR

ENSIGN
THE STANDARD IN ENGINEERING
**SALT LAKE CITY**
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER

berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS ____DAY OF _____A.D. 20___,
BY THE WATER AUTHORITY.

SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____, I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 1691.32 FEET AND WEST 328.18 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE NORTH 89°13'03" WEST 98.64 FEET; THENCE NORTH 00°42'16" EAST 448.37 FEET; THENCE NORTH 00°29'16" EAST 131.64 FEET; THENCE NORTH 89°40'40" WEST 105.62 FEET; THENCE NORTH 260.19 FEET; THENCE SOUTH 89°23'31" EAST 183.83 FEET; THENCE ALONG THE ARC OF A 20.00 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 30.55 FEET (CURVE HAVING A CENTRAL ANGLE OF 87°21'13" AND A LONG CHORD BEARING S45°40'37"E 27.67 FEET); THENCE SOUTH 00°46'02" WEST 16.30 FEET; THENCE SOUTH 08°04'09" EAST 42.00 FEET; THENCE SOUTH 00°46'05" WEST 762.82 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 110,895 SQUARE FEET IN AREA OR 2.55 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

| | |
|---|---|
| NUMBER OF LOTS | 31 |
| NUMBER OF PARCELS | 1 |

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREONFOR THE PERPETUAL USE OF THE PUBLIC. PURSUANT TO UTAH CODE 10-9A-604(1)(d) THE OWNER HEREBY CONVEYS THE COMMON AREA AS INDICATED HEREON, TO THE _____ HOME OWNER ASSOCIATION WITH A MAILING ADDRESS OF _____

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH }
COUNTY OF UTAH } S.S.

ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

_____
WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY OF _____, A.D. ___.

_____ MAYOR _____ CITY COUNCIL MEMBER

_____ CITY COUNCIL MEMBER _____ CITY COUNCIL MEMBER

_____ CITY COUNCIL MEMBER _____ CITY COUNCIL MEMBER

APPROVED _____ CITY ENGINEER ATTEST _____ CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

_____ PLANNER _____ CHAIRMAN, PLANNING COMMISSION

## LAKESHORE LANDING BLOCK 1 PLAT A

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SCALE: 1" = 50 FEET

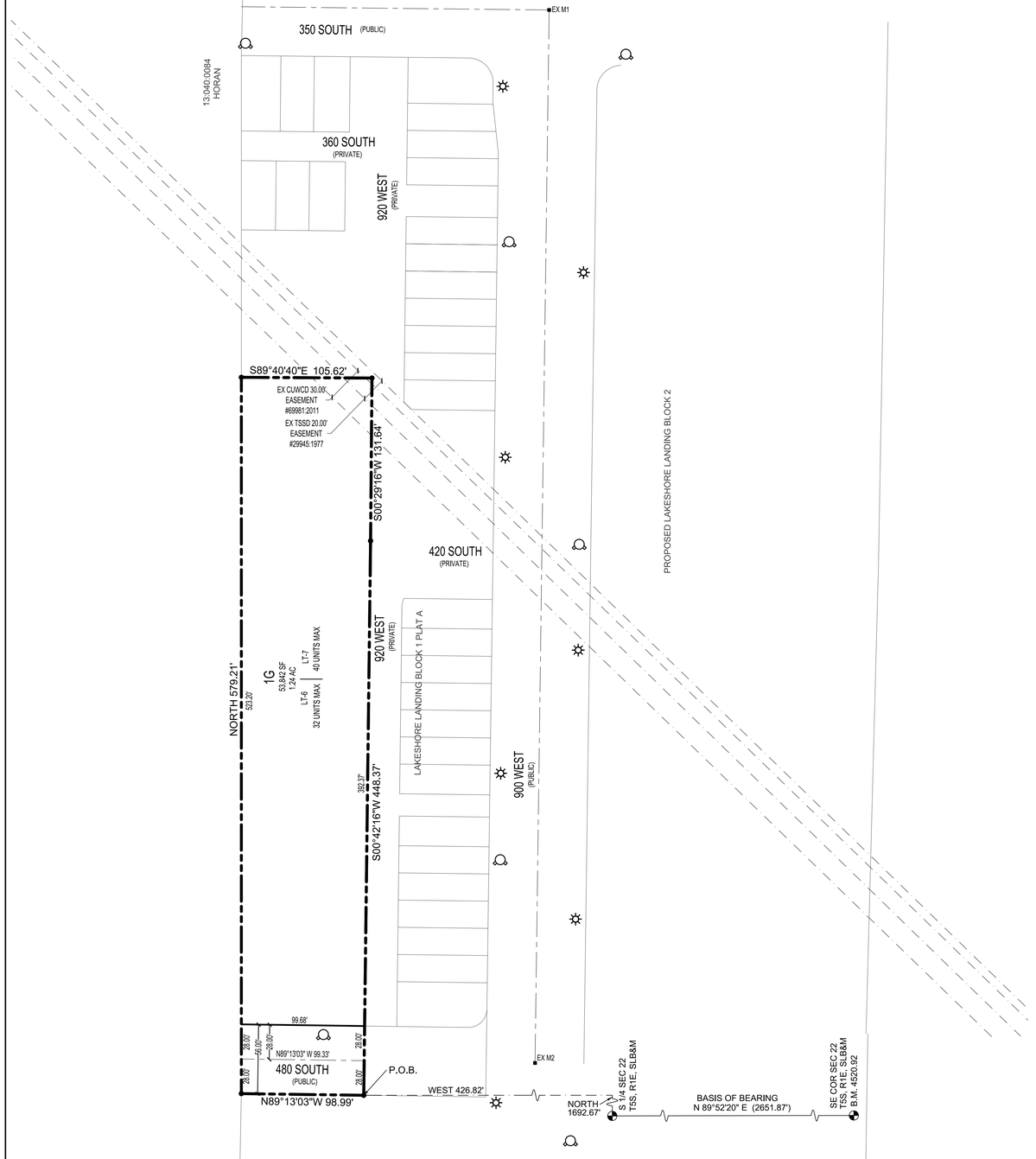
| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

I:\My Drive\Berg Civil\2019\ARDEROTO\BLOCK PLAN FINAL\BLOCK 1-2\AF21 B1 PLAT A.dwg 3/2/2020

# LAKESHORE LANDING BLOCK 1 PLAT B

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

| ADDRESSES | |
|---|---|
| LOT 1G | 454 SOUTH 920 WEST |

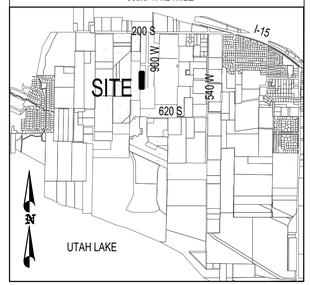



## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT

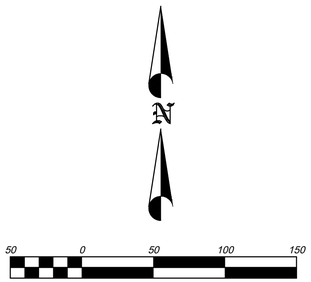
## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 1.36 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |




## REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____

## NOTES

1. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

2. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

3. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

SURVEYOR

ENSIGN
THE STANDARD IN ENGINEERING
SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER

berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS _____DAY OF _____A.D. 20____,
BY THE WATER AUTHORITY.

_____
SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 1892.67 FEET AND WEST 426.82 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE NORTH 89°13'03" WEST 98.99 FEET; THENCE NORTH 579.21 FEET; THENCE SOUTH 89°40'40" EAST 105.62 FEET; THENCE SOUTH 00°29'16" WEST 131.64 FEET; THENCE SOUTH 00°42'16" WEST 448.37 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 59,405 SQUARE FEET IN AREA OR 1.36 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

NUMBER OF LOTS 1

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREONFOR THE PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____
DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.
ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____
_____
WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION
IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE
WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS
_____ DAY OF _____, A.D. ___.

_____ MAYOR _____ CITY COUNCIL MEMBER

_____ CITY COUNCIL MEMBER _____ CITY COUNCIL MEMBER

_____ CITY COUNCIL MEMBER _____ CITY COUNCIL MEMBER

APPROVED _____ CITY ENGINEER ATTEST _____ CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE
AMERICAN FORK CITY PLANNING COMMISSION

_____ PLANNER _____ CHAIRMAN, PLANNING COMMISSION

## LAKESHORE LANDING BLOCK 1 PLAT B

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SCALE: 1" = 50 FEET

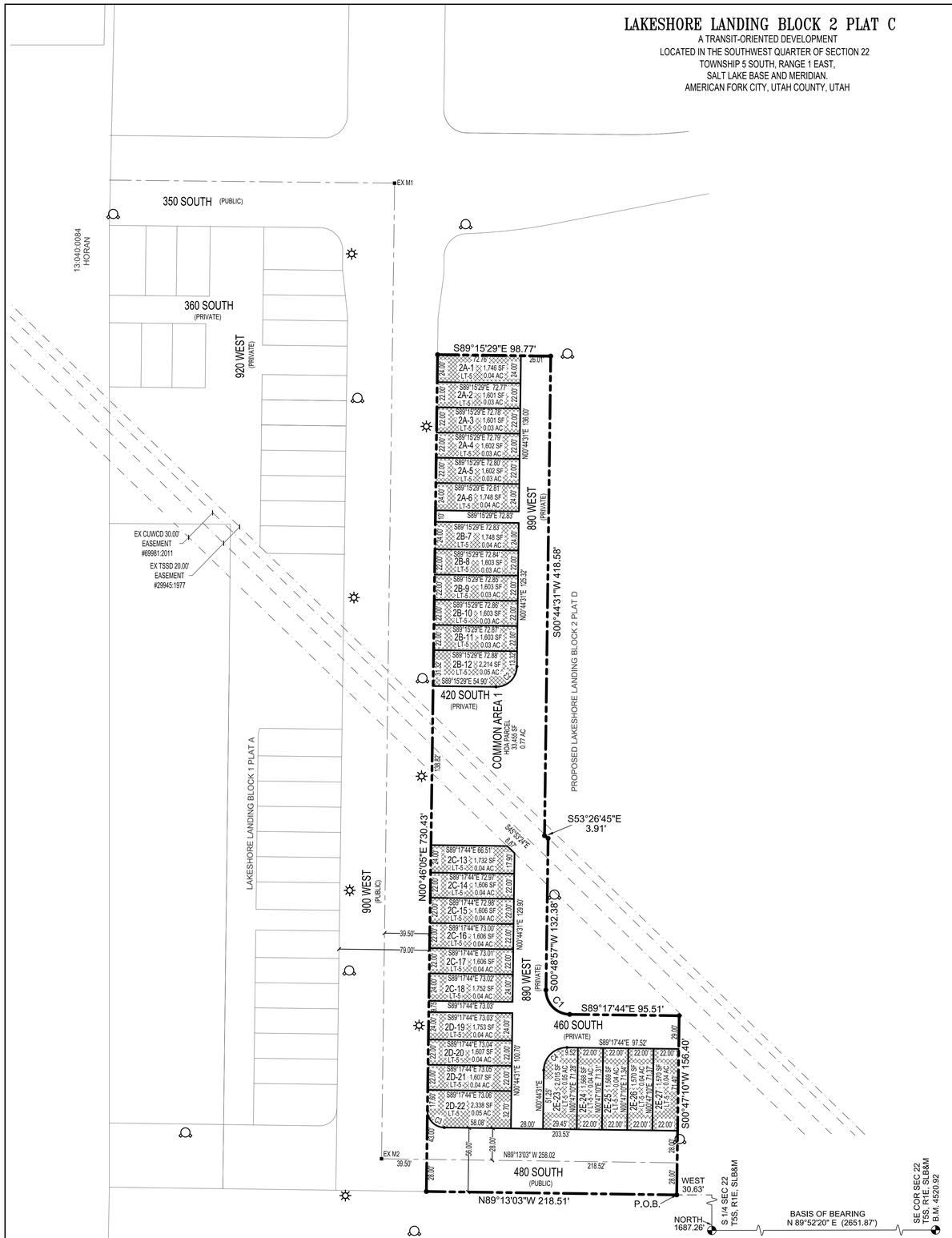
| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

3/20/20 I:\My Drive\Berg Civil\2019\ARDEROTOD BLOCK PLAN FINAL\BLOCK 1-24x72 B1 PLAT B.dwg

Attachment: 1. Plats (Lakeshore Landing Plats A-J)

# LAKESHORE LANDING BLOCK 2 PLAT C

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH




## ADDRESSES

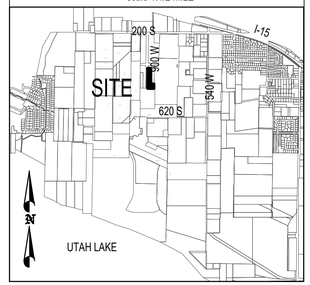
| | |
|---|---|
| LOT 2A-1 | 365 SOUTH 900 WEST |
| LOT 2A-2 | 369 SOUTH 900 WEST |
| LOT 2A-3 | 373 SOUTH 900 WEST |
| LOT 2A-4 | 377 SOUTH 900 WEST |
| LOT 2A-5 | 381 SOUTH 900 WEST |
| LOT 2A-6 | 385 SOUTH 900 WEST |
| LOT 2B-7 | 391 SOUTH 900 WEST |
| LOT 2B-8 | 395 SOUTH 900 WEST |
| LOT 2B-9 | 399 SOUTH 900 WEST |
| LOT 2B-10 | 405 SOUTH 900 WEST |
| LOT 2B-11 | 411 SOUTH 900 WEST |
| LOT 2B-12 | 417 SOUTH 900 WEST |
| LOT 2C-13 | 445 SOUTH 900 WEST |
| LOT 2C-14 | 449 SOUTH 900 WEST |
| LOT 2C-15 | 453 SOUTH 900 WEST |
| LOT 2C-16 | 457 SOUTH 900 WEST |
| LOT 2C-17 | 461 SOUTH 900 WEST |
| LOT 2C-18 | 465 SOUTH 900 WEST |
| LOT 2D-19 | 469 SOUTH 900 WEST |
| LOT 2D-20 | 471 SOUTH 900 WEST |
| LOT 2D-21 | 475 SOUTH 900 WEST |
| LOT 2D-22 | 479 SOUTH 900 WEST |
| LOT 2E-23 | 876 WEST 480 SOUTH |
| LOT 2E-24 | 868 WEST 480 SOUTH |
| LOT 2E-25 | 862 WEST 480 SOUTH |
| LOT 2E-26 | 854 WEST 480 SOUTH |
| LOT 2E-27 | 846 WEST 480 SOUTH |

## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT
- PRIVATE AREA
- COMMON — COMMON AREA (AS SPECIFIED)

## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 2.10 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

## CURVE TABLE

| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 21.00 | 33.00 | 90°02'15" | 29.71 | S44°16'37"E |
| C2 | 18.00 | 28.27 | 90°00'00" | 25.46 | S45°44'31"W |
| C3 | 15.00 | 23.56 | 89°59'08" | 21.21 | S44°13'29"E |
| C4 | 20.00 | 31.40 | 89°57'45" | 28.28 | N45°43'23"E |

## NOTES

1. IT IS HEREBY STATED, UNDERSTOOD, AND DEDICATED THAT ALL UNITS HAVE A CROSS-EASEMENT WITHIN THE EXTERIOR WALLS, ATTIC SPACE, ALL COMMON/DIVISION WALLS, AND BELOW THE BOTTOM FLOOR FOR THE PLACEMENT OF NECESSARY UTILITIES TO SERVE ADJACENT UNITS WITHIN A GIVEN BUILDING SHELL. IF THE ABOVE EASEMENT IS NOT UTILIZED DURING THE INITIAL BUILDING CONSTRUCTION FOR THE FIRST OCCUPANCY, THE EASEMENT SHALL BE VACATED WHERE FURTHER USE WOULD CAUSE AN ADJACENT OWNER RECONSTRUCTION FOR PLACEMENT OF AN ADDITIONAL UTILTIY NOT ALREADY CONTAINED WITHIN THE SHELL. THERE SHALL BE NO VACATION OF THIS COMMON AREA AND CROSS-EASEMENT IN THE CASE OF ANY NECESSARY STRUCTURAL REMEDIATION OR REPAIRS TO UTILITIES ALREADY IN PLACE WITHIN A GIVEN AREA DEFINED HEREIN.

2. NO SPECIFIC BUILDING PLAN IS INCLUDED WITH THE UNIT AREAS DEFINED ON THE PLAN. THESE PRIVATE UNIT AREAS CONTAIN NO OTHER ENCUMBRANCES THAN THOSE STATED WITHIN THE NOTES OR IN THE CC&R'S.

3. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

4. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

5. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

## RESERVATION OF COMMON AREAS

THE OWNER, IN RECORDING THIS PLAT ("THE DEVELOPMENT") HAS DESIGNATED CERTAIN AREAS OF THE DEVELOPMENT AS COMMON AREAS, INTENDED FOR THE OWNERS OF LAKESHORE LANDING FOR INGRESS, EGRESS, RECREATIONAL AND OTHER RELATED USES AS SET FORTH IN THE DECLARATION OF PROTECTIVE EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS ("THE DECLARATION") PERTAINING TO THE DEVELOPMENT. THE DESIGNATED AREAS ARE NOT INTENDED, NOR ARE THEY DEDICATED, FOR USE BY THE GENERAL PUBLIC, BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE OWNERS IN THE DEVELOPMENT, AS MORE FULLY PROVIDED IN THE DECLARATION RECORDED CONCURRENTLY WITH THE PLAT IN THE OFFICIAL RECORDS OF UTAH COUNTY, UTAH.

## PUBLIC UTILITY EASEMENTS

IN ADDITION TO THE PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT, ALL COMMON AND LIMITED COMMON AREAS ARE PUBLIC UTILITY EASEMENTS, INCLUDING FULL RIGHT-OF-WAY ACCESS THERETO, IN FAVOR OF AMERICAN FORK CITY.

N

50 0 50 100 150

SCALE 1"=50'

### REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____

SURVEYOR

ENSIGN
THE STANDARD IN ENGINEERING
**SALT LAKE CITY**
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER

berg
CIVIL ENGINEERING
11238 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS ____ DAY OF _____ A.D. 20___,
BY THE WATER AUTHORITY.

_____
SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 1687.26 FEET AND WEST 30.63 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE NORTH 89°13'03" WEST 218.51 FEET; THENCE NORTH 00°46'05" EAST 730.43 FEET; THENCE SOUTH 89°15'29" EAST 98.77 FEET; THENCE SOUTH 00°44'31" WEST 418.58 FEET; THENCE SOUTH 53°26'45" EAST 3.91 FEET; THENCE SOUTH 00°46'57" WEST 132.38 FEET; THENCE ALONG THE ARC OF A 21.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 33.00 FEET (CURVE HAVING A CENTRAL ANGLE 90°02'15" AND A LONG CHORD BEARS S44°16'37"E 29.71 FEET); THENCE SOUTH 89°17'44" EAST 95.51 FEET; THENCE SOUTH 00°47'10" WEST 156.40 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 91,513 SQUARE FEET IN AREA OR 2.10 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

NUMBER OF LOTS 27
NUMBER OF PARCELS 1

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREON FOR THE PERPETUAL USE OF THE PUBLIC. PURSUANT TO UTAH CODE 10-9A-604(1)(d) THE OWNER HEREBY CONVEYS THE COMMON AREA AS INDICATED HEREON, TO THE _____ HOME OWNER ASSOCIATION WITH A MAILING ADDRESS OF _____

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH )
COUNTY OF UTAH ) S.S.

ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

_____
WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS

_____ DAY OF _____, A.D. ____.

_____ MAYOR _____ CITY COUNCIL MEMBER

_____ CITY COUNCIL MEMBER _____ CITY COUNCIL MEMBER

_____ CITY COUNCIL MEMBER _____ CITY COUNCIL MEMBER

APPROVED _____ CITY ENGINEER ATTEST _____ CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

_____ PLANNER _____ CHAIRMAN, PLANNING COMMISSION

# LAKESHORE LANDING BLOCK 2 PLAT C

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SCALE: 1" = 50 FEET

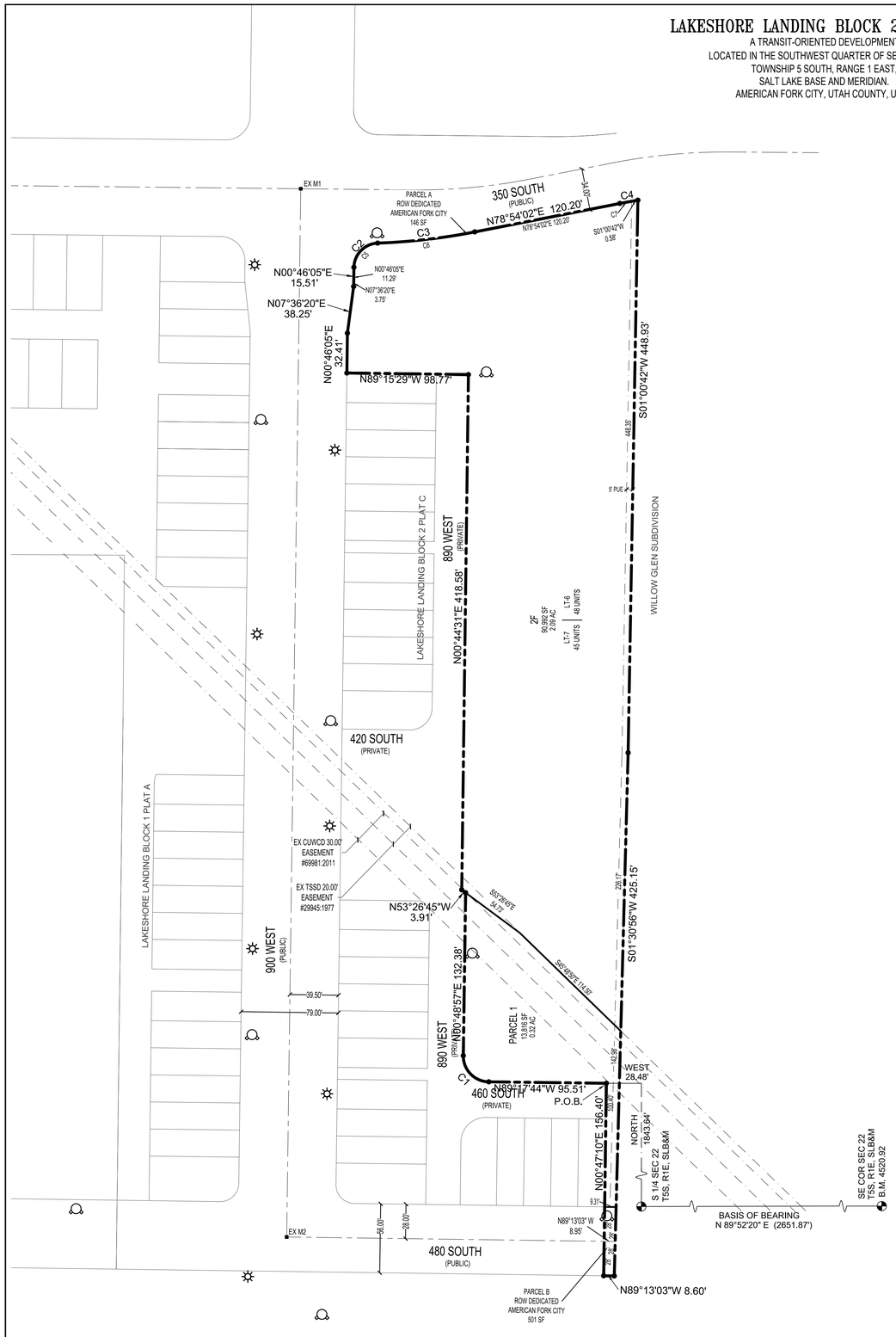
| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

U:\My Drive\Berg Civil\2019\AFBERG\TOD BLOCK PLAN FINAL\BLOCK 1-2\AF21 B2 PLAT C.dwg 3/2/2020

Attachment: 1. Plats (Lakeshore Landing Plats A-J)

# LAKESHORE LANDING BLOCK 2 PLAT D

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH




## ADDRESSES

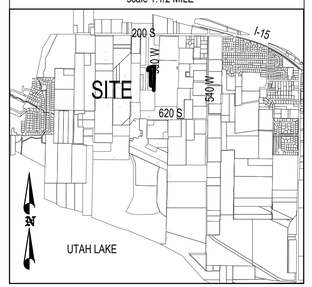
| | |
|---|---|
| LOT 2F | 359 SOUTH 890 WEST |

## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT

## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 2.88 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

## CURVE TABLE

| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 21.00 | 33.00 | 90°02'15" | 29.71 | N44°16'37"W |
| C2 | 20.00 | 30.43 | 87°10'52" | 27.58 | N44°21'37"E |
| C3 | 503.00 | 79.47 | 09°03'09" | 79.39 | N83°25'35"E |
| C4 | 447.00 | 14.89 | 01°54'30" | 14.89 | N79°51'16"E |
| C5 | 20.00 | 30.43 | 87°11'04" | 27.58 | N44°21'37"E |
| C6 | 503.00 | 79.47 | 09°03'08" | 79.39 | N83°25'35"E |
| C7 | 447.00 | 14.44 | 01°51'01" | 14.44 | N79°49'32"E |

## NOTES

1. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

2. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

3. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

N

50 0 50 100 150

SCALE 1"=50'

## REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____

SURVEYOR
ENSIGN
THE STANDARD IN ENGINEERING
SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER
berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS _____DAY OF _____A.D. 20____,
BY THE WATER AUTHORITY.

_____
SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 1843.64 FEET AND WEST 28.48 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE NORTH 89°17'44" WEST 95.51 FEET; THENCE ALONG THE ARC OF A 21.00 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 33.00 FEET (CURVE HAVING A CENTRAL ANGLE 90°02'15" AND A LONG CHORD BEARS N44°16'37"W 29.71 FEET); THENCE NORTH 00°48'57" EAST 132.38 FEET; THENCE NORTH 53°26'45" WEST 3.91 FEET; THENCE NORTH 00°44'31" EAST 271.25 FEET; THENCE NORTH 89°15'29" WEST 98.77 FEET; THENCE NORTH 00°46'05" EAST 32.41 FEET; THENCE NORTH 07°36'20" EAST 38.25 FEET; THENCE NORTH 00°46'05" EAST 15.51 FEET; THENCE ALONG THE ARC OF A 20.00 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 30.43 FEET (CURVE HAVING A CENTRAL ANGLE 87°10'52" AND A LONG CHORD BEARS N44°21'37"E 27.58 FEET); THENCE ALONG THE ARC OF A 503.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 79.47 FEET (CURVE HAVING A CENTRAL ANGLE 09°03'09" AND A LONG CHORD BEARS N83°25'35"E 79.39 FEET); THENCE NORTH 78°54'02" EAST 120.20 FEET; THENCE ALONG THE ARC OF A 447.00 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 14.89 FEET (CURVE HAVING A CENTRAL ANGLE 01°54'30" AND A LONG CHORD BEARS N79°51'16"E 14.89 FEET); THENCE SOUTH 01°00'42" WEST 448.93 FEET; THENCE SOUTH 01°30'56" WEST 425.15 FEET; THENCE NORTH 89°13'03" WEST 8.60 FEET; THENCE NORTH 00°47'10" EAST 156.40 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 125,535 SQUARE FEET IN AREA OR 2.88 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

| | |
|---|---|
| NUMBER OF LOTS | 1 |
| NUMBER OF PARCELS | 2 |

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREONFOR THE PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.
ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

_____
WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____ , IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY OF _____, A.D. ___.

_____ _____
MAYOR CITY COUNCIL MEMBER

_____ _____
CITY COUNCIL MEMBER CITY COUNCIL MEMBER

_____ _____
CITY COUNCIL MEMBER CITY COUNCIL MEMBER

APPROVED _____ ATTEST _____
CITY ENGINEER CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

_____ _____
PLANNER CHAIRMAN, PLANNING COMMISSION

## LAKESHORE LANDING BLOCK 2 PLAT D

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SCALE: 1" = 50 FEET

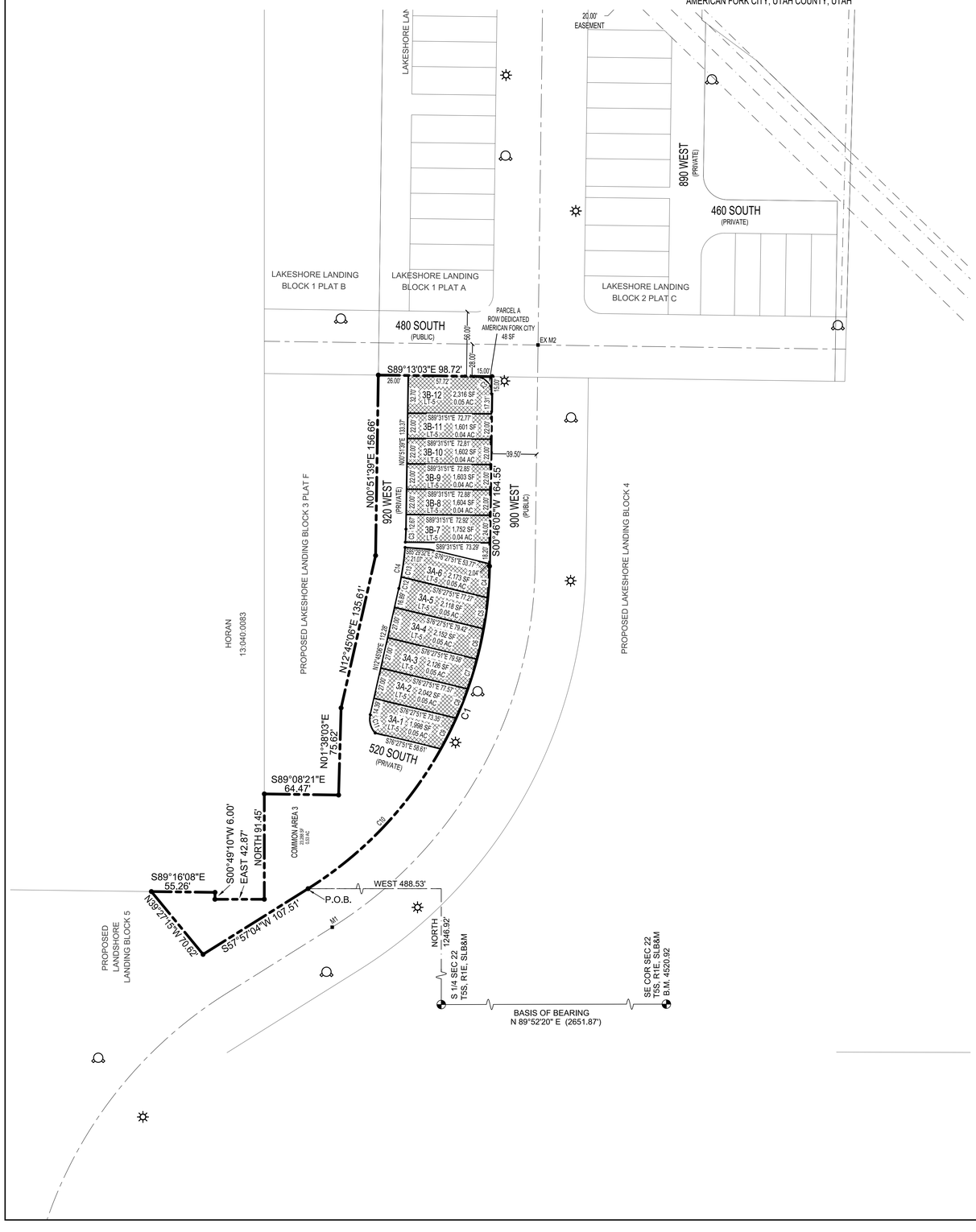
| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

3/20/20 I:\My Drive\Berg Civil\2019\ARBERCTOD BLOCK\PLAN FINAL\BLOCK 1-2\AP21 B2 PLAT D.dwg

Attachment: 1 Plats (Lakeshore Landing Plats A-J)

# LAKESHORE LANDING BLOCK 3 PLAT E

A TRANSIT-ORIENTED DEVELOPMENT
ALSO A PARTIAL VACATION OF LOT 1 OF THE B.K. PENROD PLAT A SUBDIVISION
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH




## ADDRESSES

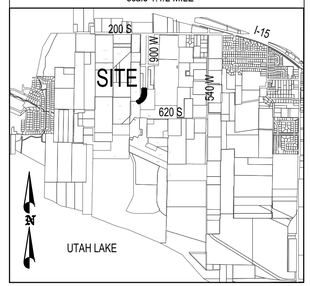
| | |
|---|---|
| LOT 3A-1 | 518 SOUTH 900 WEST |
| LOT 3A-2 | 516 SOUTH 900 WEST |
| LOT 3A-3 | 514 SOUTH 900 WEST |
| LOT 3A-4 | 512 SOUTH 900 WEST |
| LOT 3A-5 | 508 SOUTH 900 WEST |
| LOT 3A-6 | 506 SOUTH 900 WEST |
| LOT 3B-7 | 502 SOUTH 900 WEST |
| LOT 3B-8 | 498 SOUTH 900 WEST |
| LOT 3B-9 | 494 SOUTH 900 WEST |
| LOT 3B-10 | 492 SOUTH 900 WEST |
| LOT 3B-11 | 486 SOUTH 900 WEST |
| LOT 3B-12 | 482 SOUTH 900 WEST |

## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT
- PRIVATE AREA
- COMMON AREA (AS SPECIFIED) — COMMON

## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 1.07 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

## CURVE TABLE

| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 335.50 | 334.84 | 57°10'58" | 321.11 | S29°21'35"W |
| C2 | 15.00 | 23.56 | 89°59'08" | 21.21 | S44°13'29"E |
| C3 | 160.66 | 11.34 | 04°02'44" | 11.34 | N02°34'24"E |
| C4 | 335.50 | 27.47 | 04°41'31" | 27.47 | S03°06'51"W |
| C5 | 335.50 | 27.14 | 04°38'08" | 27.14 | S07°46'40"W |
| C6 | 335.50 | 27.01 | 04°36'47" | 27.01 | S12°24'08"W |
| C7 | 335.50 | 27.06 | 04°37'15" | 27.05 | S17°01'09"W |
| C8 | 335.50 | 27.28 | 04°39'32" | 27.27 | S21°39'33"W |
| C9 | 335.50 | 29.77 | 05°05'04" | 29.76 | S26°31'51"W |
| C10 | 335.50 | 169.10 | 28°52'41" | 167.31 | S43°30'43"W |
| C11 | 18.00 | 17.24 | 54°52'21" | 16.59 | S14°41'05"E |
| C12 | 250.00 | 10.12 | 02°19'10" | 10.12 | S11°35'31"W |
| C13 | 250.00 | 25.85 | 05°55'28" | 25.84 | S07°28'12"W |
| C14 | 250.00 | 35.97 | 08°14'38" | 35.94 | S08°37'47"W |

## NOTES

1. IT IS HEREBY STATED, UNDERSTOOD, AND DEDICATED THAT ALL UNITS HAVE A CROSS-EASEMENT WITHIN THE EXTERIOR WALLS, ATTIC SPACE, ALL COMMONDIVISON WALLS, AND BELOW THE BOTTOM FLOOR FOR THE PLACEMENT OF NECESSARY UTILITIES TO SERVE ADJACENT UNITS WITHIN A GIVEN BUILDING SHELL. IF THE ABOVE EASEMENT IS NOT UTILIZED DURING THE INITIAL BUILDING CONSTRUCTION FOR THE FIRST OCCUPANCY, THE EASEMENT SHALL BE VACATED WHERE FURTHER USE WOULD CAUSE AN ADJACENT OWNER RECONSTRUCTION FOR PLACEMENT OF AN ADDITIONAL UTILITY NOT ALREADY CONTAINED WITHIN THE SHELL. THERE SHALL BE NO VACATION OF THIS COMMON AREA AND CROSS-EASEMENT IN THE CASE OF ANY NECESSARY STRUCTURAL REMEDIATION OR REPAIRS TO UTILITIES ALREADY IN PLACE WITHIN A GIVEN AREA DEFINED HEREIN.

2. NO SPECIFIC BUILDING PLAN IS INCLUDED WITH THE UNIT AREAS DEFINED ON THE PLAN. THESE PRIVATE UNIT AREAS CONTAIN NO OTHER ENCUMBRANCES THAN THOSE STATED WITHIN THE NOTES OR IN THE CC&R'S.

3. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

4. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

5. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

## RESERVATION OF COMMON AREAS

THE OWNER, IN RECORDING THIS PLAT ("THE DEVELOPMENT") HAS DESIGNATED CERTAIN AREAS OF THE DEVELOPMENT AS COMMON AREAS, INTENDED FOR THE OWNERS OF LAKESHORE LANDING FOR INGRESS, EGRESS, RECREATIONAL AND OTHER RELATED USES AS SET FORTH IN THE DECLARATION OF PROTECTIVE EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS ("THE DECLARATION") PERTAINING TO THE DEVELOPMENT. THE DESIGNATED AREAS ARE NOT INTENDED, NOR ARE THEY DEDICATED, FOR USE BY THE GENERAL PUBLIC, BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE OWNERS IN THE DEVELOPMENT, AS MORE FULLY PROVIDED IN THE DECLARATION RECORDED CONCURRENTLY WITH THE PLAT IN THE OFFICIAL RECORDS OF UTAH COUNTY, UTAH.

## PUBLIC UTILITY EASEMENTS

IN ADDITION TO THE PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT, ALL COMMON AND LIMITED COMMON AREAS ARE PUBLIC UTILITY EASEMENTS, INCLUDING FULL RIGHT-OF-WAY ACCESS THERETO, IN FAVOR OF AMERICAN FORK CITY.

50 0 50 100 150

SCALE 1"=50'

## REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____

SURVEYOR
ENSIGN
THE STANDARD IN ENGINEERING
SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER
berg
CIVIL ENGINEERING
11238 N Highland Blvd Suite 400
Highland Ut. 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS ____DAY OF _____A.D. 20___,
BY THE WATER AUTHORITY.

SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____, I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 1246.92 FEET AND WEST 488.53 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE SOUTH 57°57'04" WEST 107.51 FEET; THENCE NORTH 39°27'15" WEST 70.62 FEET; THENCE SOUTH 89°16'08" EAST 55.26 FEET; THENCE SOUTH 00°49'10" WEST 6.00 FEET; THENCE EAST 42.87 FEET; THENCE NORTH 91.45 FEET; THENCE SOUTH 89°08'21" EAST 64.47 FEET; THENCE NORTH 01°38'03" EAST 75.62 FEET; THENCE NORTH 12°45'06" EAST 135.61 FEET; THENCE NORTH 00°51'39" EAST 156.66 FEET; THENCE SOUTH 89°13'03" EAST 98.72 FEET; THENCE SOUTH 00°46'05" WEST 164.55 FEET; THENCE ALONG THE ARC OF A 335.50 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 334.84 FEET (CURVE HAVING A CENTRAL ANGLE OF 57°10'58" AND A LONG CHORD BEARING S29°21'35"W 321.11 FEET) TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 46,423 SQUARE FEET IN AREA OR 1.07 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

| | |
|---|---|
| NUMBER OF LOTS | 12 |
| NUMBER OF PARCELS | 1 |

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREONFOR THE PERPETUAL USE OF THE PUBLIC. PURSUANT TO UTAH CODE 10-9A-604(1)(d) THE OWNER HEREBY CONVEYS THE COMMON AREA AS INDICATED HEREON, TO THE _____ HOME OWNER ASSOCIATION WITH A MAILING ADDRESS OF _____

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.
ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS

_____DAY OF _____, A.D. ___.

MAYOR — CITY COUNCIL MEMBER

CITY COUNCIL MEMBER — CITY COUNCIL MEMBER

CITY COUNCIL MEMBER — CITY COUNCIL MEMBER

APPROVED _____ CITY ENGINEER ATTEST _____ CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

PLANNER — CHAIRMAN, PLANNING COMMISSION

## LAKESHORE LANDING BLOCK 3 PLAT E

A TRANSIT-ORIENTED DEVELOPMENT
ALSO A PARTIAL VACATION OF LOT 1 OF THE B.K. PENROD PLAT A SUBDIVISION
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH
SCALE: 1" = 50 FEET

| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

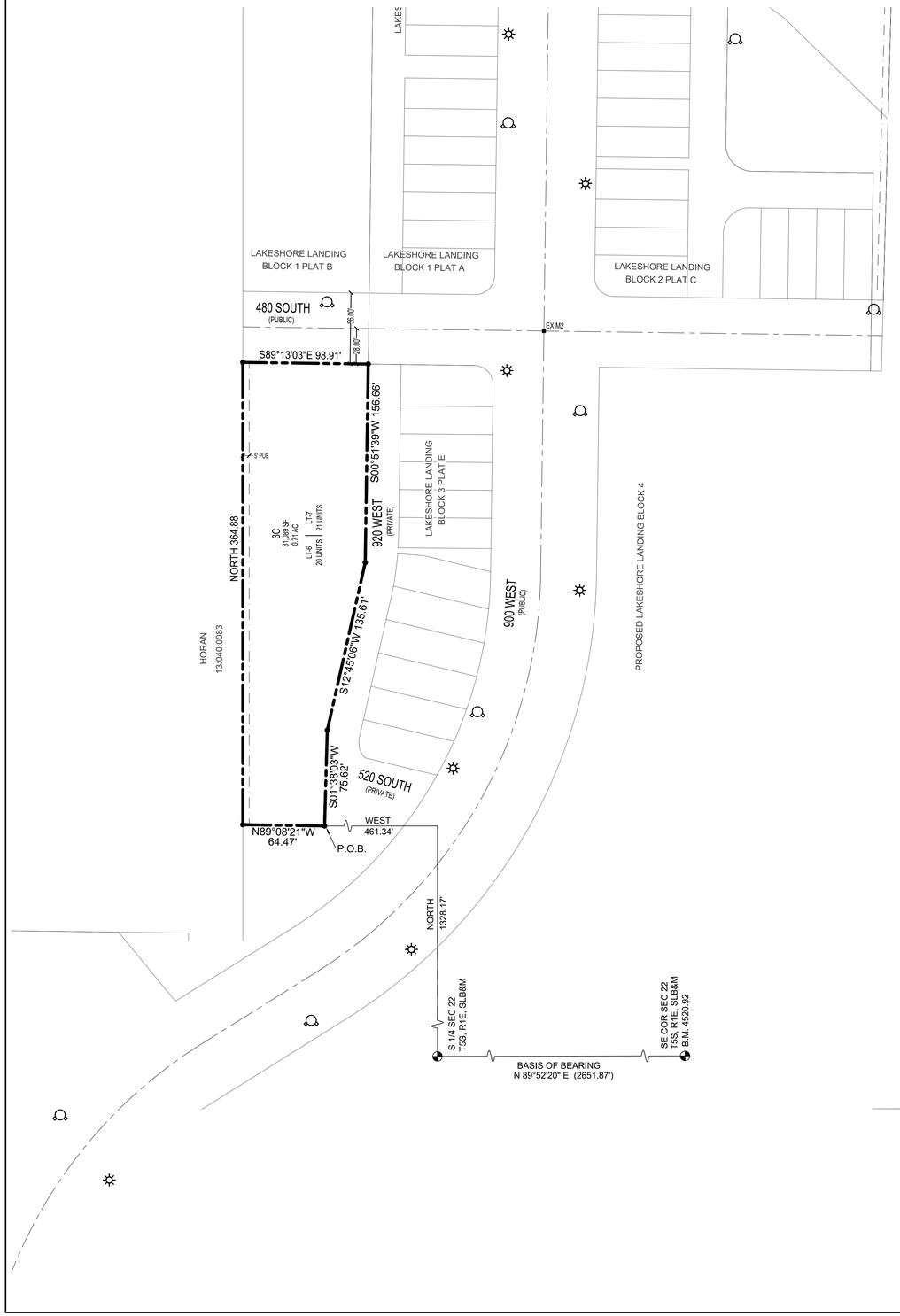
3/2/2020 I:\My Drive\Berg Civil\2019\ABERDOTOD BLOCK PLAN FINAL\BLOCK 3-4-5\P21 BLOCK 3 PLAT E.dwg

Attachment: 1. Plats (Lakeshore Landing Plats A-J)

# LAKESHORE LANDING BLOCK 3 PLAT F

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

| ADDRESSES | |
|---|---|
| LOT 3C | 502 SOUTH 920 WEST |

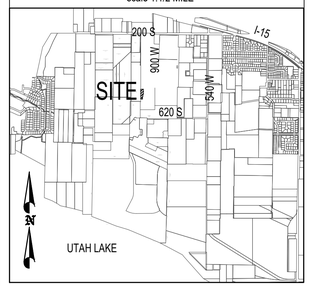



## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT

## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 0.71 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

N

50 0 50 100 150

SCALE 1"=50'

## REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____

## NOTES

1. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

2. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

3. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

SURVEYOR

ENSIGN
THE STANDARD IN ENGINEERING
**SALT LAKE CITY**
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER

berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS ____ DAY OF _____ A.D. 20___,
BY THE WATER AUTHORITY.

_____
SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 1328.17 FEET AND WEST 461.34 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE NORTH 89°08'21" WEST 64.47 FEET; THENCE NORTH 364.88 FEET; THENCE SOUTH 89°13'03" EAST 98.91 FEET; THENCE SOUTH 00°51'39" WEST 156.66 FEET; THENCE SOUTH 12°45'06" WEST 135.61 FEET; THENCE SOUTH 01°38'03" WEST 75.62 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 31,089 SQUARE FEET IN AREA OR 0.71 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

NUMBER OF LOTS 1

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREONFOR THE PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH }
COUNTY OF UTAH } S.S.

ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

_____

WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS

_____ DAY OF _____, A.D. ____.

_____ MAYOR
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER

APPROVED _____ CITY ENGINEER ATTEST _____ CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

_____ PLANNER
_____ CHAIRMAN, PLANNING COMMISSION

# LAKESHORE LANDING BLOCK 3 PLAT F

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SCALE: 1" = 50 FEET

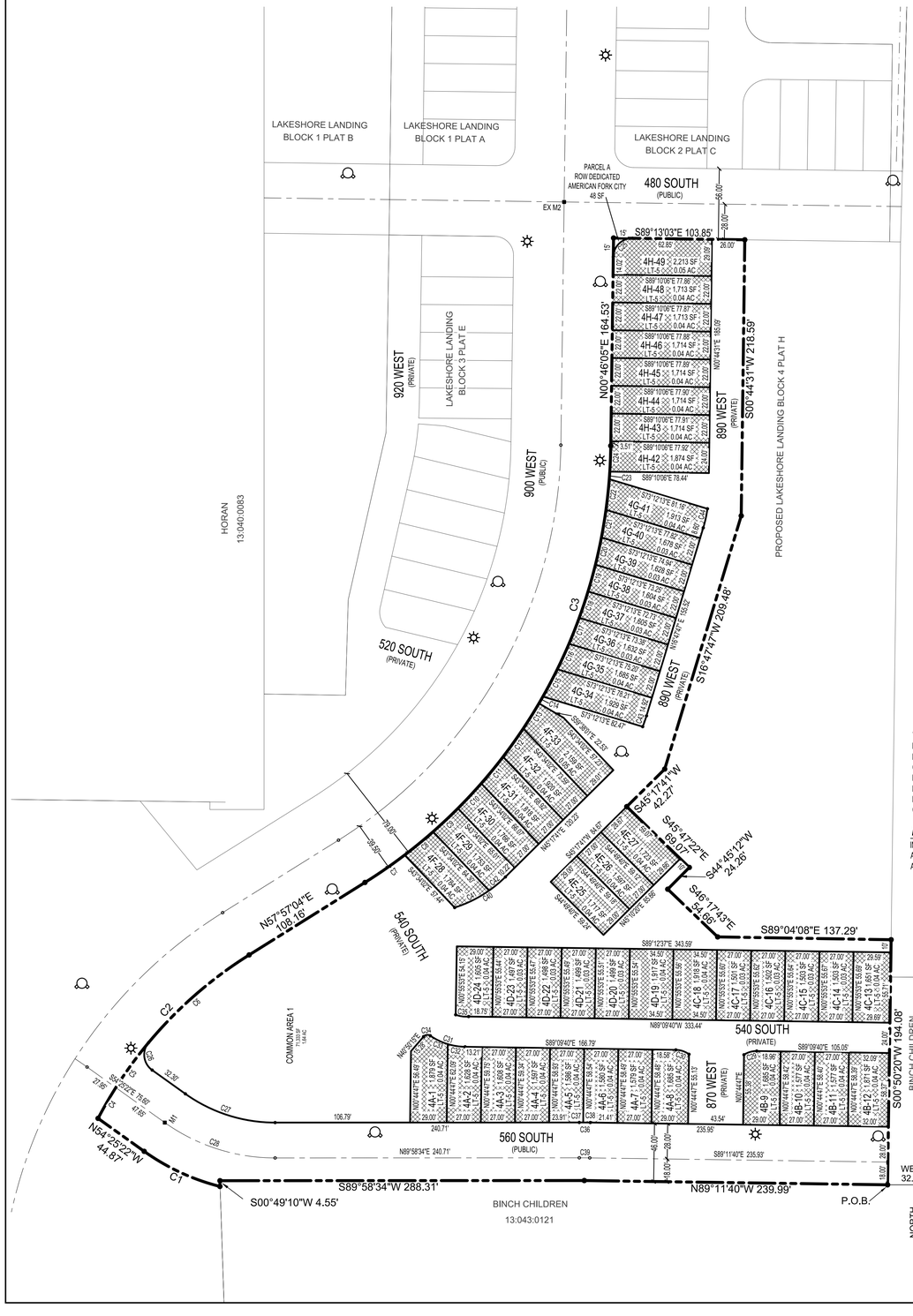
| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

3/20/20 I:\My Drive\Berg Civil\2019\PAPER\OTOS BLOCK PLAN FINAL\BLOCK 3-4\AP21 BLOCK 3 PLAT F.dwg

Attachment: 1. Plats (Lakeshore Landing Plats A-J)

# LAKESHORE LANDING BLOCK 4 PLAT G

A TRANSIT-ORIENTED DEVELOPMENT
ALSO A PARTIAL VACATION OF LOT 1 OF THE B.K. PENROD PLAT A SUBDIVISION
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH




## ADDRESSES

| | |
|---|---|
| LOT 4A-1 | 898 WEST 560 SOUTH |
| LOT 4A-2 | 896 WEST 560 SOUTH |
| LOT 4A-3 | 894 WEST 560 SOUTH |
| LOT 4A-4 | 892 WEST 560 SOUTH |
| LOT 4A-5 | 888 WEST 560 SOUTH |
| LOT 4A-6 | 882 WEST 560 SOUTH |
| LOT 4A-7 | 876 WEST 560 SOUTH |
| LOT 4A-8 | 872 WEST 560 SOUTH |
| LOT 4B-9 | 868 WEST 560 SOUTH |
| LOT 4B-10 | 866 WEST 560 SOUTH |
| LOT 4B-11 | 864 WEST 560 SOUTH |
| LOT 4B-12 | 862 WEST 560 SOUTH |
| LOT 4C-13 | 862 WEST 540 SOUTH |
| LOT 4C-14 | 864 WEST 540 SOUTH |
| LOT 4C-15 | 866 WEST 540 SOUTH |
| LOT 4C-16 | 868 WEST 540 SOUTH |
| LOT 4C-17 | 872 WEST 540 SOUTH |
| LOT 4C-18 | 874 WEST 540 SOUTH |
| LOT 4D-19 | 876 WEST 540 SOUTH |
| LOT 4D-20 | 878 WEST 540 SOUTH |
| LOT 4D-21 | 882 WEST 540 SOUTH |
| LOT 4D-22 | 884 WEST 540 SOUTH |
| LOT 4D-23 | 886 WEST 540 SOUTH |
| LOT 4D-24 | 888 WEST 540 SOUTH |
| LOT 4E-25 | 539 SOUTH 890 WEST |
| LOT 4E-26 | 531 SOUTH 890 WEST |
| LOT 4E-27 | 523 SOUTH 890 WEST |
| LOT 4F-28 | 535 SOUTH 900 WEST |
| LOT 4F-29 | 531 SOUTH 900 WEST |
| LOT 4F-30 | 529 SOUTH 900 WEST |
| LOT 4F-31 | 525 SOUTH 900 WEST |
| LOT 4F-32 | 523 SOUTH 900 WEST |
| LOT 4F-33 | 521 SOUTH 900 WEST |
| LOT 4G-34 | 517 SOUTH 900 WEST |
| LOT 4G-35 | 513 SOUTH 900 WEST |
| LOT 4G-36 | 509 SOUTH 900 WEST |
| LOT 4G-37 | 505 SOUTH 900 WEST |
| LOT 4G-38 | 503 SOUTH 900 WEST |
| LOT 4G-39 | 501 SOUTH 900 WEST |
| LOT 4G-40 | 499 SOUTH 900 WEST |
| LOT 4G-41 | 497 SOUTH 900 WEST |
| LOT 4H-42 | 495 SOUTH 900 WEST |
| LOT 4H-43 | 493 SOUTH 900 WEST |
| LOT 4H-44 | 491 SOUTH 900 WEST |
| LOT 4H-45 | 489 SOUTH 900 WEST |
| LOT 4H-46 | 487 SOUTH 900 WEST |
| LOT 4H-47 | 485 SOUTH 900 WEST |
| LOT 4H-48 | 483 SOUTH 900 WEST |
| LOT 4H-49 | 481 SOUTH 900 WEST |

## NOTES

1. IT IS HEREBY STATED, UNDERSTOOD, AND DEDICATED THAT ALL UNITS HAVE A CROSS-EASEMENT WITHIN THE EXTERIOR WALLS, ATTIC SPACE, ALL COMMON/DIVISION WALLS, AND BELOW THE BOTTOM FLOOR FOR THE PLACEMENT OF NECESSARY UTILITIES TO SERVE ADJACENT UNITS WITHIN A GIVEN BUILDING SHELL. IF THE ABOVE EASEMENT IS NOT UTILIZED DURING THE INITIAL BUILDING CONSTRUCTION FOR THE FIRST OCCUPANCY, THE EASEMENT SHALL BE VACATED WHERE FURTHER USE WOULD CAUSE AN ADJACENT OWNER RECONSTRUCTION FOR PLACEMENT OF AN ADDITIONAL UTILITY NOT ALREADY CONTAINED WITHIN THE SHELL. THERE SHALL BE NO VACATION OF THIS COMMON AREA AND CROSS-EASEMENT IN THE CASE OF ANY NECESSARY STRUCTURAL REMEDIATION OR REPAIRS TO UTILITIES ALREADY IN PLACE WITHIN A GIVEN AREA DEFINED HEREIN.

2. NO SPECIFIC BUILDING PLAN IS INCLUDED WITH THE UNIT AREAS DEFINED ON THE PLAN. THESE PRIVATE UNIT AREAS CONTAIN NO OTHER ENCUMBRANCES THAN THOSE STATED WITHIN THE NOTES OR IN THE CC&RS.

3. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

4. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

5. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

## RESERVATION OF COMMON AREAS

THE OWNER, IN RECORDING THIS PLAT ("THE DEVELOPMENT") HAS DESIGNATED CERTAIN AREAS OF THE DEVELOPMENT AS COMMON AREAS, INTENDED FOR THE OWNERS OF LAKESHORE LANDING FOR INGRESS, EGRESS, RECREATIONAL AND OTHER RELATED USES AS SET FORTH IN THE DECLARATION OF PROTECTIVE EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS ("THE DECLARATION") PERTAINING TO THE DEVELOPMENT. THE DESIGNATED AREAS ARE NOT INTENDED, NOR ARE THEY DEDICATED, FOR USE BY THE GENERAL PUBLIC, BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE OWNERS IN THE DEVELOPMENT, AS MORE FULLY PROVIDED IN THE DECLARATION RECORDED CONCURRENTLY WITH THE PLAT IN THE OFFICIAL RECORDS OF UTAH COUNTY, UTAH.

## PUBLIC UTILITY EASEMENTS

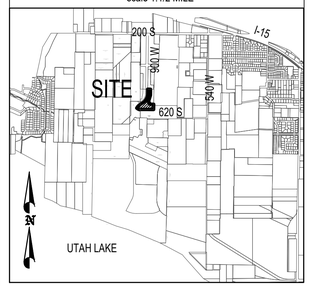
IN ADDITION TO THE PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT, ALL COMMON AND LIMITED COMMON AREAS ARE PUBLIC UTILITY EASEMENTS, INCLUDING FULL RIGHT-OF-WAY ACCESS THERETO, IN FAVOR OF AMERICAN FORK CITY.

## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT
- PRIVATE AREA
- COMMON AREA (AS SPECIFIED)

## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 4.24 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

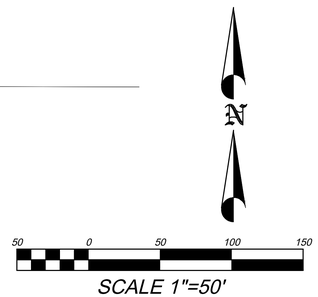
## CURVE TABLE

| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 178.00 | 66.43 | 21°23'01" | 66.05 | N65°06'52"W |
| C2 | 335.50 | 178.28 | 30°26'48" | 176.19 | N42°43'40"E |
| C3 | 414.50 | 413.68 | 57°10'58" | 396.73 | N29°21'35"E |
| C4 | 335.50 | 28.15 | 04°48'24" | 28.14 | N29°54'28"E |
| C5 | 335.50 | 44.15 | 07°32'24" | 44.12 | N36°04'52"E |
| C6 | 335.50 | 105.99 | 18°06'00" | 105.55 | N48°54'04"E |
| C7 | 414.50 | 38.19 | 05°16'42" | 38.17 | N55°18'43"E |
| C8 | 414.50 | 29.09 | 04°01'13" | 29.08 | N50°39'45"E |
| C9 | 414.50 | 27.01 | 03°43'58" | 27.00 | N46°47'09"E |
| C10 | 414.50 | 27.05 | 03°44'22" | 27.05 | N43°02'59"E |
| C11 | 414.50 | 27.22 | 03°45'43" | 27.21 | N39°17'56"E |
| C12 | 414.50 | 27.50 | 03°48'06" | 27.50 | N35°31'02"E |
| C13 | 414.50 | 23.51 | 03°15'00" | 23.51 | N31°59'29"E |
| C14 | 414.50 | 6.22 | 00°51'34" | 6.22 | N29°56'12"E |
| C15 | 414.50 | 24.45 | 03°22'49" | 24.45 | N27°49'01"E |
| C16 | 414.50 | 22.21 | 03°04'11" | 22.21 | N25°35'31"E |
| C17 | 414.50 | 22.08 | 03°03'06" | 22.08 | N21°31'52"E |
| C18 | 414.50 | 22.01 | 03°02'34" | 22.01 | N18°29'02"E |
| C19 | 414.50 | 22.01 | 03°02'32" | 22.01 | N15°26'29"E |
| C20 | 414.50 | 22.07 | 03°03'01" | 22.07 | N12°23'42"E |
| C21 | 414.50 | 22.19 | 03°04'02" | 22.19 | N09°20'10"E |
| C22 | 414.50 | 24.43 | 03°22'35" | 24.42 | N06°06'51"E |
| C23 | 414.50 | 5.96 | 00°49'27" | 5.96 | N04°00'50"E |
| C24 | 414.50 | 20.50 | 02°50'01" | 20.50 | N02°11'06"E |
| C25 | 15.00 | 23.57 | 90°00'52" | 21.22 | N45°46'31"E |
| C26 | 15.00 | 24.68 | 94°16'26" | 21.99 | S07°17'09"E |
| C27 | 122.00 | 75.81 | 35°36'04" | 74.59 | S72°13'24"E |
| C28 | 150.00 | 93.20 | 35°36'04" | 91.71 | S72°13'24"E |
| C29 | 18.00 | 10.64 | 33°52'45" | 10.49 | S73°53'57"W |
| C30 | 18.00 | 11.11 | 35°23'38" | 10.94 | N71°27'51"W |
| C31 | 50.00 | 29.34 | 33°37'09" | 28.92 | N72°21'05"W |
| C32 | 50.00 | 13.97 | 16°00'37" | 13.93 | N81°09'21"W |
| C33 | 50.00 | 15.37 | 17°36'32" | 15.31 | N64°20'47"W |
| C34 | 4.00 | 5.84 | 83°37'14" | 5.33 | S82°38'52"W |
| C35 | 23.36 | 10.41 | 25°32'02" | 10.32 | S82°06'41"E |
| C36 | 600.00 | 8.69 | 00°49'46" | 8.69 | S89°36'33"E |
| C37 | 600.00 | 3.10 | 00°17'44" | 3.10 | S89°52'34"E |
| C38 | 600.00 | 5.59 | 00°32'02" | 5.59 | S89°27'41"E |
| C39 | 572.00 | 8.28 | 00°49'46" | 8.28 | S89°36'33"E |
| C40 | 100.00 | 47.33 | 27°07'01" | 46.89 | N58°51'12"E |
| C41 | 100.00 | 30.48 | 17°27'56" | 30.37 | N63°40'45"E |
| C42 | 100.00 | 16.85 | 09°39'05" | 16.83 | N50°07'14"E |
| C43 | 100.00 | 9.09 | 05°12'32" | 9.09 | N19°24'03"E |
| C44 | 100.00 | 15.46 | 08°51'29" | 15.45 | N12°22'02"E |

## REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____




SURVEYOR

ENSIGN
THE STANDARD IN ENGINEERING
SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER

berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS ____DAY OF _____A.D. 20___,
BY THE WATER AUTHORITY.

SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 940.53 FEET AND WEST 32.38 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE NORTH 89°11'40" WEST 239.99 FEET; THENCE SOUTH 89°58'34" WEST 288.31 FEET; THENCE SOUTH 00°49'10" WEST 4.55 FEET; THENCE ALONG THE ARC OF A 178.00 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 66.43 FEET (CURVE HAVING A CENTRAL ANGLE 21°23'01" AND A LONG CHORD BEARS N65°06'52"W 66.05 FEET); THENCE NORTH 54°25'22" WEST 44.87 FEET; THENCE ALONG THE ARC OF A 335.50 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 178.28 FEET (CURVE HAVING A CENTRAL ANGLE 30°26'48" AND A LONG CHORD BEARS N42°43'40"E 176.19 FEET); THENCE NORTH 57°57'04" EAST 108.16 FEET; THENCE ALONG THE ARC OF A 414.50 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 413.68 FEET (CURVE HAVING A CENTRAL ANGLE 57°10'58" AND A LONG CHORD BEARS N29°21'35"E 396.73 FEET); THENCE NORTH 00°46'05" EAST 164.53 FEET; THENCE SOUTH 89°13'03" EAST 103.85 FEET; THENCE SOUTH 00°44'31" WEST 218.59 FEET; THENCE SOUTH 16°47'47" WEST 209.48 FEET; THENCE SOUTH 45°17'41" WEST 42.27 FEET; THENCE SOUTH 45°17'22" EAST 69.07 FEET; THENCE SOUTH 44°45'12" WEST 24.26 FEET; THENCE SOUTH 46°17'43" EAST 54.66 FEET; THENCE SOUTH 89°04'08" EAST 137.29 FEET; THENCE SOUTH 00°50'20" WEST 194.08 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 184,477 SQUARE FEET IN AREA OR 4.24 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

NUMBER OF LOTS 49
NUMBER OF PARCELS 1

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREON FOR THE PERPETUAL USE OF THE PUBLIC. PURSUANT TO UTAH CODE 10-9A-604(1)(d) THE OWNER HEREBY CONVEYS THE COMMON AREA AS INDICATED HEREON, TO THE _____ HOME OWNER ASSOCIATION WITH A MAILING ADDRESS OF _____

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH )
COUNTY OF UTAH ) S.S.

ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS

_____ DAY OF _____, A.D. ____.

_____ _____
MAYOR CITY COUNCIL MEMBER

_____ _____
CITY COUNCIL MEMBER CITY COUNCIL MEMBER

_____ _____
CITY COUNCIL MEMBER CITY COUNCIL MEMBER

APPROVED _____ ATTEST _____
CITY ENGINEER CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

_____ _____
PLANNER CHAIRMAN, PLANNING COMMISSION


## LAKESHORE LANDING BLOCK 4 PLAT G

A TRANSIT-ORIENTED DEVELOPMENT
ALSO A PARTIAL VACATION OF LOT 1 OF THE B.K. PENROD PLAT A SUBDIVISION
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SCALE: 1" = 50 FEET

| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

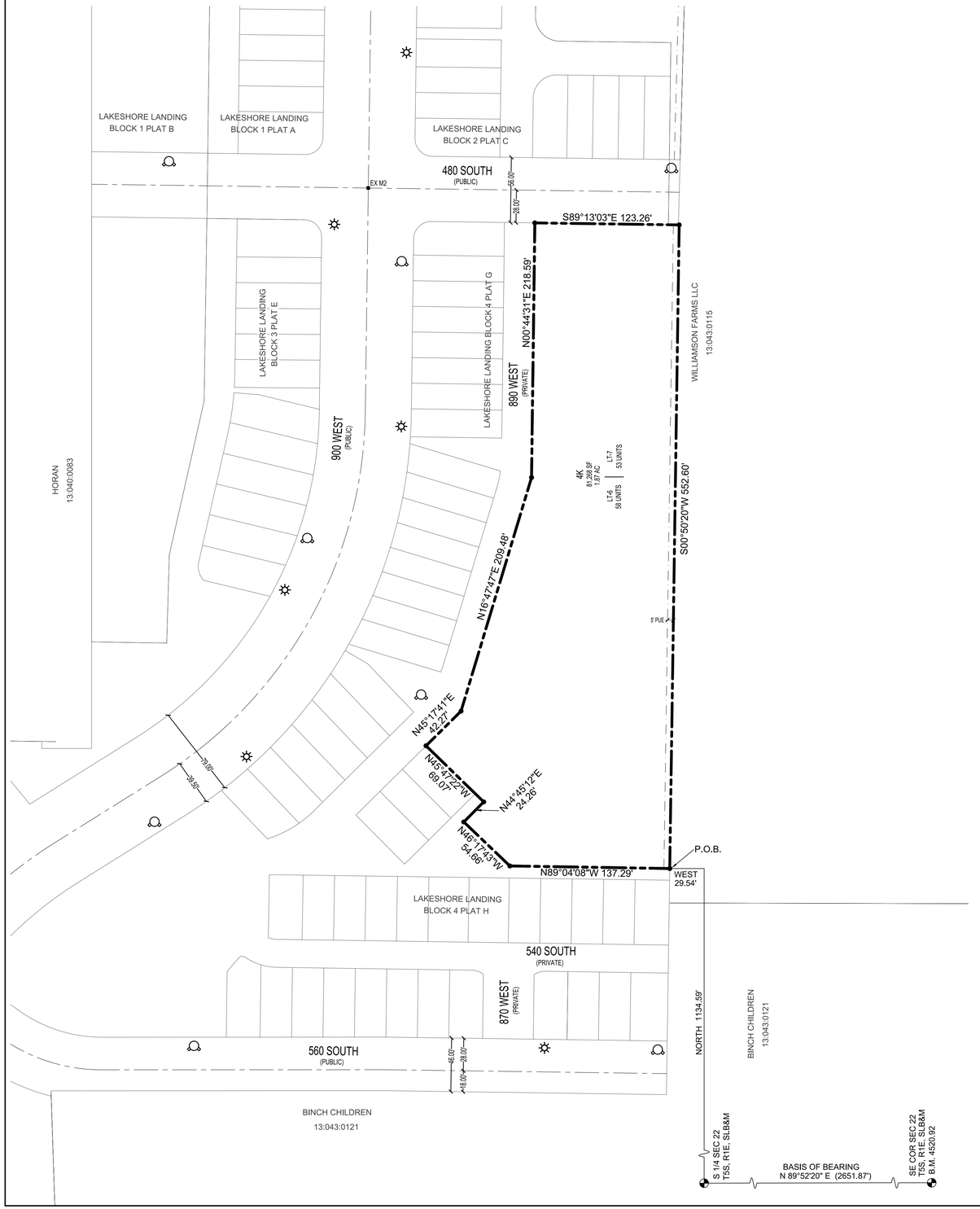
3/20/20 I:\My Drive\Berg Civil\2019\APERROTO\5 BLOCK PLAN FINAL\BLOCK 3-4\4P21 BLOCK 4 PLAT G.dwg

Attachment: 1. Plats (Lakeshore Landing Plats A-J)

# LAKESHORE LANDING BLOCK 4 PLAT H

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

| ADDRESSES | |
|---|---|
| LOT 4K | 511 SOUTH 890 WEST |

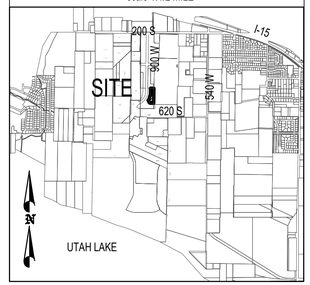



## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT

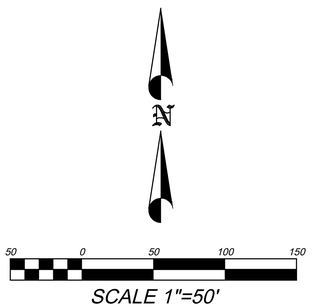
## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 1.87 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |




## REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____

## NOTES

1. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

2. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

3. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

SURVEYOR

ENSIGN
THE STANDARD IN ENGINEERING
**SALT LAKE CITY**
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER

berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS ____DAY OF _____A.D. 20____,
BY THE WATER AUTHORITY.

_____
SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 1134.59 FEET AND WEST 29.54 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE NORTH 89°04'08" WEST 137.29 FEET; THENCE NORTH 46°17'43" WEST 54.66 FEET; THENCE NORTH 44°45'12" EAST 24.26 FEET; THENCE NORTH 45°47'22" WEST 69.07 FEET; THENCE NORTH 45°17'41" EAST 42.27 FEET; THENCE NORTH 16°47'47" EAST 209.48 FEET; THENCE NORTH 00°44'31" EAST 218.59 FEET; THENCE SOUTH 89°13'03" EAST 123.26 FEET; THENCE SOUTH 00°46'15" WEST 552.60 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 81,268 SQUARE FEET IN AREA OR 1.87 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

NUMBER OF LOTS 1

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREONFOR THE PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH }
COUNTY OF UTAH } S.S.

ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

_____

WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS

_____ DAY OF _____, A.D. ____.

_____ MAYOR
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER

APPROVED _____ CITY ENGINEER ATTEST _____ CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

_____ PLANNER
_____ CHAIRMAN, PLANNING COMMISSION

# LAKESHORE LANDING BLOCK 4 PLAT H

A TRANSIT-ORIENTED DEVELOPMENT
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SCALE: 1" = 50 FEET

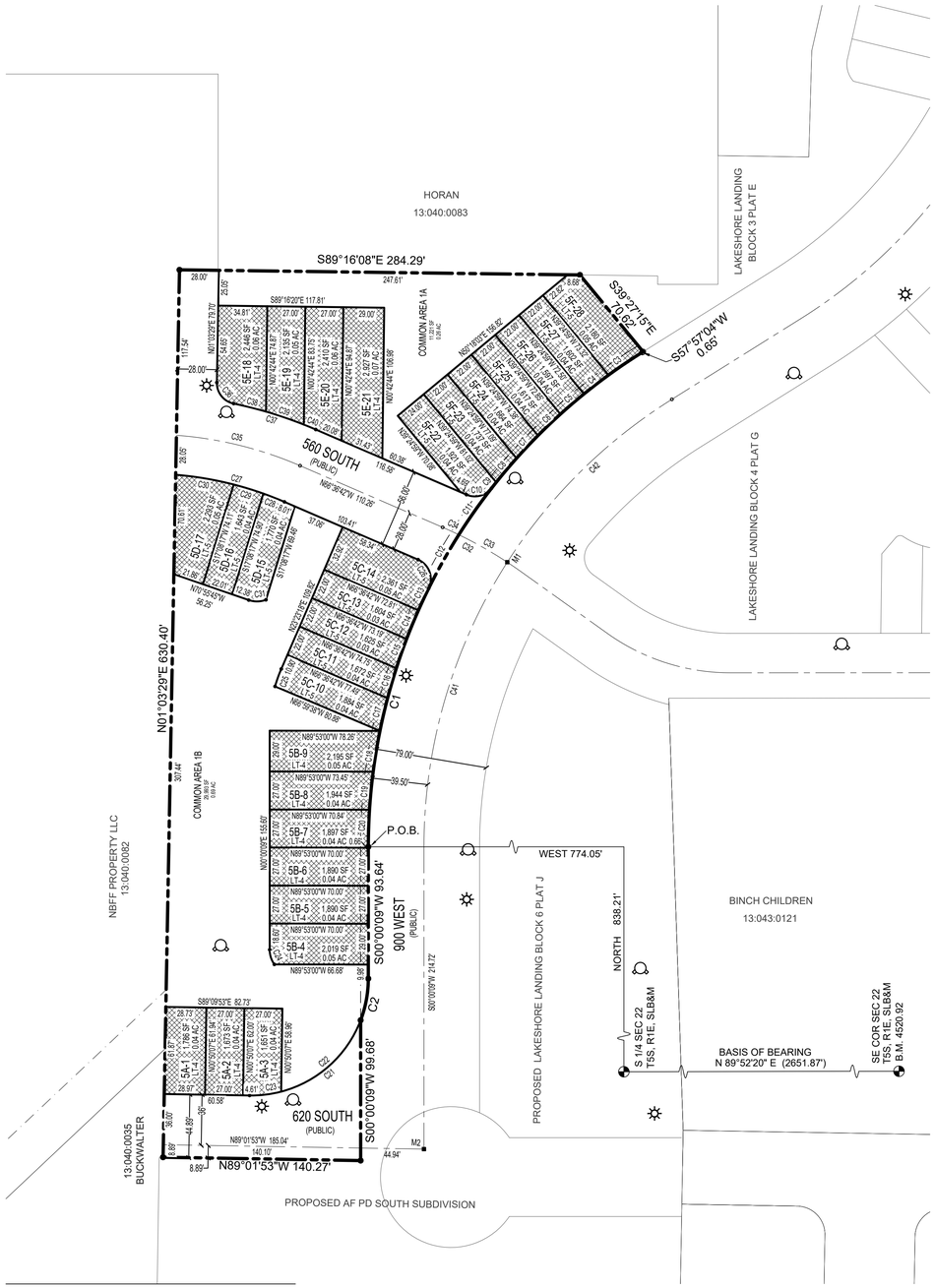
| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

3/20/20 I:\My Drive\Berg Civil\2019\ARDEROTOD BLOCK\PLAN FINAL\BLOCK 3-4\4F21 BLOCK 4 PLAT H.dwg

Attachment: 1. Plats (Lakeshore Landing Plats A-J)

# LAKESHORE LANDING BLOCK 5 PLAT I

A TRANSIT-ORIENTED DEVELOPMENT
ALSO A PARTIAL VACATION OF LOT 1 OF THE B.K. PENROD PLAT A SUBDIVISION
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH




## ADDRESSES

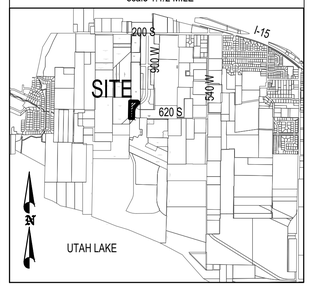
| | |
|---|---|
| LOT 5A-1 | 984 WEST 620 SOUTH |
| LOT 5A-2 | 946 WEST 620 SOUTH |
| LOT 5A-3 | 922 WEST 620 SOUTH |
| LOT 5B-4 | 618 SOUTH 900 WEST |
| LOT 5B-5 | 614 SOUTH 900 WEST |
| LOT 5B-6 | 612 SOUTH 900 WEST |
| LOT 5B-7 | 608 SOUTH 900 WEST |
| LOT 5B-8 | 602 SOUTH 900 WEST |
| LOT 5B-9 | 594 SOUTH 900 WEST |
| LOT 5C-10 | 588 SOUTH 900 WEST |
| LOT 5C-11 | 582 SOUTH 900 WEST |
| LOT 5C-12 | 574 SOUTH 900 WEST |
| LOT 5C-13 | 568 SOUTH 900 WEST |
| LOT 5C-14 | 562 SOUTH 900 WEST |
| LOT 5D-15 | 935 WEST 560 SOUTH |
| LOT 5D-16 | 959 WEST 560 SOUTH |
| LOT 5D-17 | 993 WEST 560 SOUTH |
| LOT 5E-18 | 988 WEST 560 SOUTH |
| LOT 5E-19 | 966 WEST 560 SOUTH |
| LOT 5E-20 | 944 WEST 560 SOUTH |
| LOT 5E-21 | 932 WEST 560 SOUTH |
| LOT 5F-22 | 558 SOUTH 900 WEST |
| LOT 5F-23 | 554 SOUTH 900 WEST |
| LOT 5F-24 | 548 SOUTH 900 WEST |
| LOT 5F-25 | 544 SOUTH 900 WEST |
| LOT 5F-26 | 538 SOUTH 900 WEST |
| LOT 5F-27 | 532 SOUTH 900 WEST |
| LOT 5F-28 | 526 SOUTH 900 WEST |

## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT
- PRIVATE AREA
- COMMON AREA (AS SPECIFIED) — COMMON

## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 2.69 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

## NOTES

1. IT IS HEREBY STATED, UNDERSTOOD, AND DEDICATED THAT ALL UNITS HAVE A CROSS-EASEMENT WITHIN THE EXTERIOR WALLS, ATTIC SPACE, ALL COMMON/DIVISION WALLS, AND BELOW THE BOTTOM FLOOR FOR THE PLACEMENT OF NECESSARY UTILITIES TO SERVE ADJACENT UNITS WITHIN A GIVEN BUILDING SHELL. IF THE ABOVE EASEMENT IS NOT UTILIZED DURING THE INITIAL BUILDING CONSTRUCTION FOR THE FIRST OCCUPANCY, THE EASEMENT SHALL BE VACATED WHERE FURTHER USE WOULD CAUSE AN ADJACENT OWNER RECONSTRUCTION FOR PLACEMENT OF AN ADDITIONAL UTILITY NOT ALREADY CONTAINED WITHIN THE SHELL. THERE SHALL BE NO VACATION OF THIS COMMON AREA AND CROSS-EASEMENT IN THE CASE OF ANY NECESSARY STRUCTURAL REMEDIATION OR REPAIRS TO UTILITIES ALREADY IN PLACE WITHIN A GIVEN AREA DEFINED HEREIN.

2. NO SPECIFIC BUILDING PLAN IS INCLUDED WITH THE UNIT AREAS DEFINED ON THE PLAN. THESE PRIVATE UNIT AREAS CONTAIN NO OTHER ENCUMBRANCES THAN THOSE STATED WITHIN THE NOTES OR IN THE CC&RS.

3. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

4. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

5. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

## RESERVATION OF COMMON AREAS

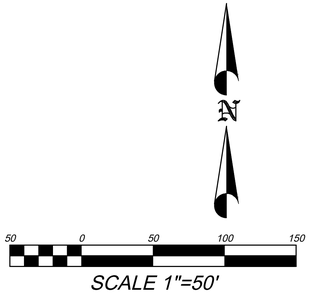
THE OWNER, IN RECORDING THIS PLAT ("THE DEVELOPMENT") HAS DESIGNATED CERTAIN AREAS OF THE DEVELOPMENT AS COMMON AREAS, INTENDED FOR THE OWNERS OF LAKESHORE LANDING FOR INGRESS, EGRESS, RECREATIONAL AND OTHER RELATED USES AS SET FORTH IN THE DECLARATION OF PROTECTIVE EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS ("THE DECLARATION") PERTAINING TO THE DEVELOPMENT. THE DESIGNATED AREAS ARE NOT INTENDED, NOR ARE THEY DEDICATED, FOR USE BY THE GENERAL PUBLIC, BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE OWNERS IN THE DEVELOPMENT, AS MORE FULLY PROVIDED IN THE DECLARATION RECORDED CONCURRENTLY WITH THE PLAT IN THE OFFICIAL RECORDS OF UTAH COUNTY, UTAH.

## PUBLIC UTILITY EASEMENTS

IN ADDITION TO THE PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT, ALL COMMON AND LIMITED COMMON AREAS ARE PUBLIC UTILITY EASEMENTS, INCLUDING FULL RIGHT-OF-WAY ACCESS THERETO, IN FAVOR OF AMERICAN FORK CITY.

## CURVE TABLE

| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 414.50 | 419.22 | 57°56'55" | 401.58 | S28°58'36"W |
| C2 | 83.00 | 30.20 | 20°50'59" | 30.04 | S10°25'38"W |
| C3 | 414.50 | 28.99 | 04°00'26" | 28.98 | S55°56'51"W |
| C4 | 414.50 | 22.01 | 03°02'35" | 22.01 | S52°25'21"W |
| C5 | 414.50 | 22.01 | 03°02'31" | 22.01 | S49°22'48"W |
| C6 | 414.50 | 22.06 | 03°02'59" | 22.06 | S46°20'02"W |
| C7 | 414.50 | 22.18 | 03°03'59" | 22.18 | S43°16'33"W |
| C8 | 414.50 | 22.37 | 03°05'31" | 22.37 | S40°11'48"W |
| C9 | 414.50 | 5.35 | 00°44'24" | 5.35 | S38°16'51"W |
| C10 | 15.00 | 19.76 | 75°28'40" | 18.36 | S75°38'58"W |
| C11 | 414.50 | 40.36 | 05°34'46" | 40.35 | S35°07'16"W |
| C12 | 414.50 | 43.75 | 06°02'49" | 43.73 | S29°18'28"W |
| C13 | 414.50 | 17.18 | 02°22'27" | 17.17 | S25°05'51"W |
| C14 | 414.50 | 22.01 | 03°02'31" | 22.00 | S22°23'22"W |
| C15 | 414.50 | 22.06 | 03°02'56" | 22.06 | S19°20'38"W |
| C16 | 414.50 | 22.17 | 03°03'54" | 22.17 | S16°17'13"W |
| C17 | 414.50 | 23.85 | 03°17'47" | 23.84 | S13°06'23"W |
| C18 | 414.50 | 29.39 | 04°03'47" | 29.39 | S09°25'37"W |
| C19 | 414.50 | 27.13 | 03°44'58" | 27.12 | S05°31'14"W |
| C20 | 414.50 | 26.36 | 03°38'36" | 26.35 | S01°49'27"W |
| C21 | 83.00 | 101.45 | 70°02'02" | 95.25 | S55°52'09"W |
| C22 | 83.00 | 78.79 | 54°23'11" | 75.86 | S48°02'44"W |
| C23 | 83.00 | 22.67 | 15°38'51" | 22.60 | S83°03'45"W |
| C24 | 18.00 | 11.10 | 35°20'08" | 10.93 | N17°39'55"W |
| C25 | 100.00 | 13.14 | 07°31'38" | 13.13 | N19°37'29"E |
| C26 | 15.00 | 24.32 | 92°53'46" | 21.74 | S20°09'49"E |
| C27 | 244.00 | 79.91 | 18°45'54" | 79.56 | N75°59'39"W |
| C28 | 244.00 | 16.09 | 03°46'39" | 16.08 | N68°30'01"W |
| C29 | 244.00 | 22.01 | 05°10'04" | 22.00 | N72°58'23"W |
| C30 | 244.00 | 41.82 | 09°49'12" | 41.77 | N80°28'00"W |
| C31 | 18.00 | 12.47 | 39°41'25" | 12.22 | N89°13'33"E |
| C32 | 300.00 | 52.22 | 09°58'25" | 52.16 | N61°37'29"W |
| C33 | 300.00 | 39.58 | 07°33'33" | 39.55 | N60°25'03"W |
| C34 | 300.00 | 12.64 | 02°24'52" | 12.64 | N65°24'16"W |
| C35 | 272.00 | 90.83 | 19°07'57" | 90.41 | N76°10'40"W |
| C36 | 15.00 | 20.78 | 79°21'28" | 19.16 | S38°37'15"E |
| C37 | 300.00 | 61.20 | 11°41'17" | 61.09 | S72°27'20"E |
| C38 | 300.00 | 23.64 | 04°30'53" | 23.63 | S76°02'32"E |
| C39 | 300.00 | 28.44 | 05°25'51" | 28.43 | S71°04'11"E |
| C40 | 300.00 | 9.13 | 01°44'34" | 9.12 | S67°28'59"E |
| C41 | 375.00 | 213.49 | 32°37'07" | 210.62 | N16°18'42"E |
| C42 | 375.00 | 165.79 | 25°19'48" | 164.44 | N45°17'09"E |




## REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____

SURVEYOR
ENSIGN
THE STANDARD IN ENGINEERING
SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER
berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS _____DAY OF _____A.D. 20___,
BY THE WATER AUTHORITY.

SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 838.21 FEET AND WEST 774.05 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE SOUTH 00°00'09" WEST 93.64 FEET; THENCE ALONG THE ARC OF A 83.00 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 30.20 FEET (CURVE HAVING A CENTRAL ANGLE 20°50'59" AND A LONG CHORD BEARS S10°25'38"W 30.04 FEET); THENCE SOUTH 00°00'09" WEST 99.68 FEET; THENCE NORTH 89°01'53" WEST 140.27 FEET; THENCE NORTH 01°03'29" EAST 630.40 FEET; THENCE SOUTH 89°16'08" EAST 284.29 FEET; THENCE SOUTH 39°27'15" EAST 70.62 FEET; THENCE SOUTH 57°57'04" WEST 0.65 FEET; THENCE ALONG THE ARC OF A 414.50 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 419.22 FEET (CURVE HAVING A CENTRAL ANGLE 57°56'55" AND A LONG CHORD BEARS S28°58'36"W 401.58 FEET) TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 117,356 SQUARE FEET IN AREA OR 2.69 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

| | |
|---|---|
| NUMBER OF LOTS | 28 |
| NUMBER OF PARCELS | 2 |

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREON FOR THE PERPETUAL USE OF THE PUBLIC. PURSUANT TO UTAH CODE 10-9A-604(1)(d) THE OWNER HEREBY CONVEYS THE COMMON AREA AS INDICATED HEREON, TO THE _____ HOME OWNER ASSOCIATION WITH A MAILING ADDRESS OF _____

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH )
COUNTY OF UTAH ) S.S.

ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS

_____ DAY OF _____, A.D. ____.

_____ _____
MAYOR CITY COUNCIL MEMBER

_____ _____
CITY COUNCIL MEMBER CITY COUNCIL MEMBER

_____ _____
CITY COUNCIL MEMBER CITY COUNCIL MEMBER

APPROVED _____ ATTEST _____
CITY ENGINEER CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

_____ _____
PLANNER CHAIRMAN, PLANNING COMMISSION

LAKESHORE LANDING BLOCK 5 PLAT I
A TRANSIT-ORIENTED DEVELOPMENT
ALSO A PARTIAL VACATION OF LOT 1 OF THE B.K. PENROD PLAT A SUBDIVISION
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH
SCALE: 1" = 50 FEET

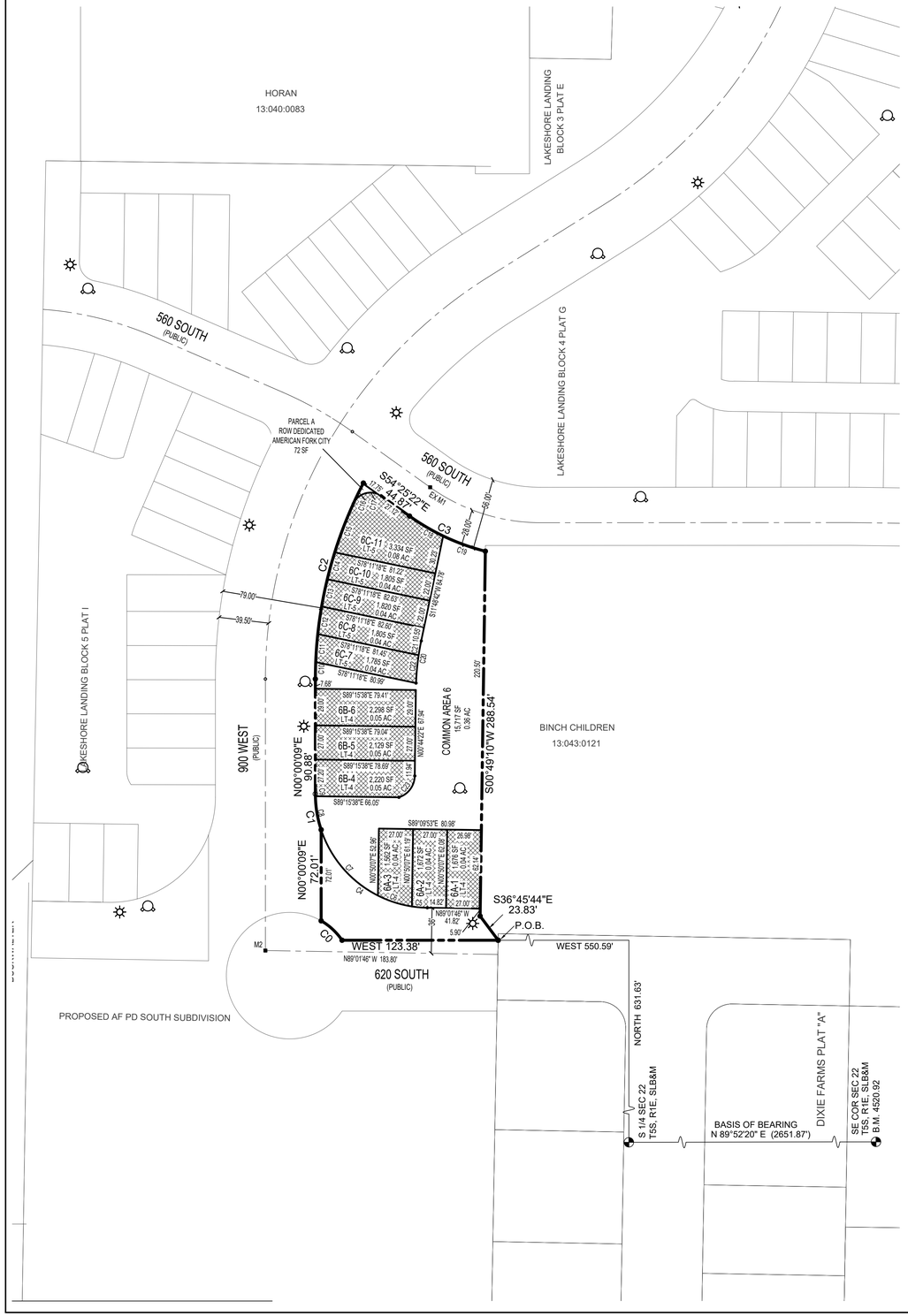
| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

3/20/20 I:\My Drive\Berg Civil\2019\ARBEROTO\5 BLOCK PLAN FINAL\BLOCK 5-PHP21 BLOCK 5 PLAT I.dwg

Attachment: 1. Plats (Lakeshore Landing Plats A-J)

# LAKESHORE LANDING BLOCK 6 PLAT J

A TRANSIT-ORIENTED DEVELOPMENT
ALSO A PARTIAL VACATION OF LOT 1 OF THE B.K. PENROD PLAT A SUBDIVISION
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH




## ADDRESSES

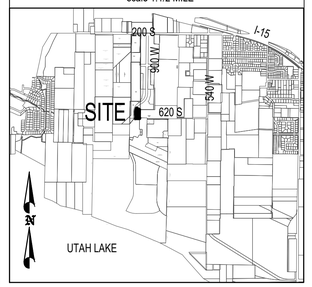
| | |
|---|---|
| LOT 6A-1 | 876 WEST 620 SOUTH |
| LOT 6A-2 | 884 WEST 620 SOUTH |
| LOT 6A-3 | 892 WEST 620 SOUTH |
| LOT 6B-4 | 613 SOUTH 900 WEST |
| LOT 6B-5 | 607 SOUTH 900 WEST |
| LOT 6B-6 | 601 SOUTH 900 WEST |
| LOT 6C-7 | 595 SOUTH 900 WEST |
| LOT 6C-8 | 589 SOUTH 900 WEST |
| LOT 6C-9 | 583 SOUTH 900 WEST |
| LOT 6C-10 | 577 SOUTH 900 WEST |
| LOT 6C-11 | 571 SOUTH 900 WEST |

## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT
- PRIVATE AREA
- COMMON AREA (AS SPECIFIED) — COMMON

## VICINITY SKETCH

scale 1:1/2 MILE




## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 1.04 AC |
| EXISTING ZONING | BLOCK TYPE 4 |
| LAND USE: | TOD |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

## NOTES

1. IT IS HEREBY STATED, UNDERSTOOD, AND DEDICATED THAT ALL UNITS HAVE A CROSS-EASEMENT WITHIN THE EXTERIOR WALLS, ATTIC SPACE, ALL COMMON/DIVISION WALLS, AND BELOW THE BOTTOM FLOOR FOR THE PLACEMENT OF NECESSARY UTILITIES TO SERVE ADJACENT UNITS WITHIN A GIVEN BUILDING SHELL. IF THE ABOVE EASEMENT IS NOT UTILIZED DURING THE INITIAL BUILDING CONSTRUCTION FOR THE FIRST OCCUPANCY, THE EASEMENT SHALL BE VACATED WHERE FURTHER USE WOULD CAUSE AN ADJACENT OWNER RECONSTRUCTION FOR PLACEMENT OF AN ADDITIONAL UTILITY NOT ALREADY CONTAINED WITHIN THE SHELL. THERE SHALL BE NO VACATION OF THIS COMMON AREA AND CROSS-EASEMENT IN THE CASE OF ANY NECESSARY STRUCTURAL REMEDIATION OR REPAIRS TO UTILITIES ALREADY IN PLACE WITHIN A GIVEN AREA DEFINED HEREIN.

2. NO SPECIFIC BUILDING PLAN IS INCLUDED WITH THE UNIT AREAS DEFINED ON THE PLAN. THESE PRIVATE UNIT AREAS CONTAIN NO OTHER ENCUMBRANCES THAN THOSE STATED WITHIN THE NOTES OR IN THE CC&R'S.

3. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

4. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

5. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

## RESERVATION OF COMMON AREAS

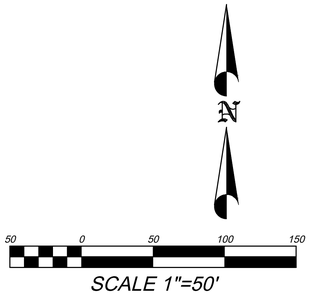
THE OWNER, IN RECORDING THIS PLAT ("THE DEVELOPMENT") HAS DESIGNATED CERTAIN AREAS OF THE DEVELOPMENT AS COMMON AREAS, INTENDED FOR THE OWNERS OF LAKESHORE LANDING FOR INGRESS, EGRESS, RECREATIONAL AND OTHER RELATED USES AS SET FORTH IN THE DECLARATION OF PROTECTIVE EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS ("THE DECLARATION") PERTAINING TO THE DEVELOPMENT. THE DESIGNATED AREAS ARE NOT INTENDED, NOR ARE THEY DEDICATED, FOR USE BY THE GENERAL PUBLIC, BUT ARE RESERVED FOR THE COMMON USE AND ENJOYMENT OF THE OWNERS IN THE DEVELOPMENT, AS MORE FULLY PROVIDED IN THE DECLARATION RECORDED CONCURRENTLY WITH THE PLAT IN THE OFFICIAL RECORDS OF UTAH COUNTY, UTAH.

## PUBLIC UTILITY EASEMENTS

IN ADDITION TO THE PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT, ALL COMMON AND LIMITED COMMON AREAS ARE PUBLIC UTILITY EASEMENTS, INCLUDING FULL RIGHT-OF-WAY ACCESS THERETO, IN FAVOR OF AMERICAN FORK CITY.

## CURVE TABLE

| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 90.00 | 28.81 | 18°20'34" | 28.69 | N09°10'08"W |
| C2 | 335.50 | 161.04 | 27°30'07" | 159.50 | N13°45'12"E |
| C3 | 178.00 | 66.43 | 21°23'01" | 66.05 | S65°06'52"E |
| C4 | 90.00 | 111.04 | 70°41'28" | 104.13 | N53°41'09"W |
| C5 | 90.00 | 12.22 | 07°46'50" | 12.21 | N85°08'28"W |
| C6 | 90.00 | 28.34 | 18°02'33" | 28.22 | N72°13'46"W |
| C7 | 90.00 | 70.48 | 44°52'05" | 68.69 | N40°46'27"W |
| C8 | 90.00 | 27.01 | 17°11'32" | 26.90 | N09°44'39"W |
| C9 | 90.00 | 1.81 | 01°09'00" | 1.81 | N00°34'22"W |
| C10 | 335.50 | 13.38 | 02°17'06" | 13.38 | N01°08'42"E |
| C11 | 335.50 | 22.20 | 03°47'29" | 22.20 | N04°11'00"E |
| C12 | 335.50 | 22.05 | 03°45'59" | 22.05 | N07°57'43"E |
| C13 | 335.50 | 22.00 | 03°45'28" | 22.00 | N11°43'27"E |
| C14 | 335.50 | 22.05 | 03°45'56" | 22.04 | N15°29'08"E |
| C15 | 335.50 | 41.19 | 07°02'02" | 41.16 | N20°53'07"E |
| C16 | 335.50 | 18.17 | 03°06'08" | 18.16 | N25°57'12"E |
| C17 | 15.00 | 26.49 | 101°10'30" | 23.18 | N74°59'23"E |
| C18 | 178.00 | 30.91 | 09°56'59" | 30.87 | S59°23'51"E |
| C19 | 178.00 | 35.52 | 11°26'02" | 35.46 | S70°05'22"E |
| C20 | 200.00 | 33.61 | 09°37'39" | 33.57 | S06°59'52"W |
| C21 | 200.00 | 11.46 | 03°16'54" | 11.45 | S10°10'15"W |
| C22 | 200.00 | 22.15 | 06°20'46" | 22.14 | S05°21'25"W |
| C23 | 18.00 | 22.42 | 71°22'30" | 21.00 | S36°25'37"W |




## REFERENCE DOCUMENTS:

NOTICE OF INTEREST, BUILDING REQUIREMENTS, AND ESTABLISHMENT OF RESTRICTIVE COVENANTS

RECORDED IN THE OFFICE OF THE UTAH COUNTY RECORDER AS ENTRY NO: _____

SURVEYOR

ENSIGN
THE STANDARD IN ENGINEERING
**SALT LAKE CITY**
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

ENGINEER

berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS ____DAY OF _____A.D. 20___,
BY THE WATER AUTHORITY.

SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT WHICH IS NORTH 631.63 FEET AND WEST 550.59 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST; AND RUNNING:

THENCE SOUTH 00°59'56" WEST 20.14 FEET; THENCE NORTH 89°01'53" WEST 139.57 FEET; THENCE NORTH 00°00'09" EAST 105.15 FEET; THENCE ALONG THE ARC OF A 90.00 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 28.81 FEET (CURVE HAVING A CENTRAL ANGLE 18°20'34" AND A LONG CHORD BEARS N09°10'08"W 28.69 FEET); THENCE NORTH 00°00'09" EAST 90.88 FEET; THENCE ALONG THE ARC OF A 335.50 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 161.04 FEET (CURVE HAVING A CENTRAL ANGLE 27°30'07" AND A LONG CHORD BEARS N13°45'12"E 159.50 FEET); THENCE SOUTH 54°25'22" EAST 44.87 FEET; THENCE ALONG THE ARC OF A 178.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 66.43 FEET (CURVE HAVING A CENTRAL ANGLE 21°23'01" AND A LONG CHORD BEARS S65°06'52"E 66.05 FEET); THENCE SOUTH 00°49'10" WEST 288.54 FEET; THENCE SOUTH 36°45'44" EAST 23.83 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 45,308 SQUARE FEET IN AREA OR 1.04 ACRES.

(NOTE: ALL BEARINGS IN THE ABOVE DESCRIPTION ARE BASED ON THE NAD 27 BEARING OF N 89°52'20" E ALONG THE SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST TO THE SOUTHEAST CORNER OF SAID SECTION 22.)

NUMBER OF LOTS 11
NUMBER OF PARCELS 1

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREON FOR THE PERPETUAL USE OF THE PUBLIC. PURSUANT TO UTAH CODE 10-9A-604(1)(d) THE OWNER HEREBY CONVEYS THE COMMON AREA AS INDICATED HEREON, TO THE _____ HOME OWNER ASSOCIATION WITH A MAILING ADDRESS OF _____

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH )
COUNTY OF UTAH ) S.S.

ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

_____
WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY OF _____, A.D. ___.

_____ MAYOR
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER
_____ CITY COUNCIL MEMBER

APPROVED _____ CITY ENGINEER
ATTEST _____ CLERK-RECORDER

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

_____ PLANNER
_____ CHAIRMAN, PLANNING COMMISSION

## LAKESHORE LANDING BLOCK 6 PLAT J

A TRANSIT-ORIENTED DEVELOPMENT
ALSO A PARTIAL VACATION OF LOT 1 OF THE B.K. PENROD PLAT A SUBDIVISION
LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH
SCALE: 1" = 50 FEET

| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

I:\My Drive\Berg Civil\2019\PENROD\TO BLOCK PLAN FINAL\BLOCK 5-6\AP21 BLOCK 6 PLAT J.dwg 3/2/2020

Attachment: 1. Plats (Lakeshore Landing Plats A-J)

AMERICAN FORK CITY
PLANNING COMMISSION

MEETING DATE: June 17, 2020
STAFF PRESENTATION: Adam Olsen

AGENDA TOPIC: Hearing, review and action on the preliminary and final plats for Lakeshore Landing Plats A-J, in the area of 350 South 900 West, in the TOD (Transit Oriented Development) zone.

ACTIONS REQUESTED: Approval of the preliminary plans and recommendation of approval of the final plats.

| BACKGROUND INFORMATION | | | | | |
|---|---|---|---|---|---|
| Location: | | 350 South 900 West | | | |
| Applicants: | | Berg Engineering | | | |
| Existing Land Use: | | Agriculture | | | |
| Proposed Land Use: | | Residential | | | |
| Surrounding Land Use: | North | Agriculture | | | |
| | South | Residential (platted, not yet built) | | | |
| | East | Residential | | | |
| | West | Agriculture | | | |
| Existing Zoning: | | TOD (Transit Oriented Development) | | | |
| Proposed Zoning: | | N/A | | | |
| Surrounding Zoning: | North | TOD (Transit Oriented Development) | | | |
| | South | PR-3.0 (Planned Residential) | | | |
| | East | TOD & Residential Agriculture 5 (Utah County) | | | |
| | West | TOD (Transit Oriented Development) | | | |
| Land Use Plan Designation: | | TOD (Transit Oriented Development) | | | |
| Zoning compliant with Land Use Plan Designation? | | x | Yes | | No |

Attachment: 2. Staff Report (Lakeshore Landing Plats A-J)

Background

The area of Lakeshore Landing was annexed in 2018. It received approval of a district framework plan in 2019 (ADG District Framework Plan), followed by block plan approval (staff level review). As part of the lot plan submittal and review (staff level review), subdivision plats were necessary. Further lot plan review will ensure placement of structures, setbacks, height, landscaping, number of multi-family units, parking, etc. be compliant with the TOD Code. The subdivision plats act as formal instruments in proceeding toward development of the site.

The plats anticipate both townhome and multi-family development. Planning staff recommends removal of the number of units currently labeled on lots intended for multi-family development. These numbers will ultimately be determined through future reviews; largely dependent on configuration of parking and open space elements as required by the TOD Code.

Consistency with the Land Use Plan:

The Land Use Plan designates this area as "TOD". The proposed subdivision is consistent with the Land Use Plan designation.

Section 17.7.211 of the Development Code

The Planning Commission may act to recommend approval of a final plat upon a finding that:

a. The final plat and supporting materials conform with the terms of the preliminary plan approval.

   The final plat conforms to the terms of a preliminary plan approval.

b. The final plat complies with all City requirements and standards relating to large scale developments.

   This criterion has been met.

c. The detailed engineering plans and materials comply with the City standards and policies.

   Engineering will address any concerns at the time of the Planning Commission meeting.

d. The estimates of cost of constructing the required improvements are realistic.

   Engineering will determine whether the cost estimates of constructing the required improvements are realistic.

e. The water rights conveyance documents have been provided.

   The water rights conveyance shall be satisfied prior to plat recordation.

FINDINGS OF FACT/CONDITION OF APPROVAL

After reviewing the applications for final plat approval, the following findings are offered for consideration:

Attachment: 2. Staff Report (Lakeshore Landing Plats A-J)

1. The final plats are consistent with the Land Use Plan designation of “Transit Oriented Development”.

2. The final plats meet the criteria as found in Section 17.7.211 of the Development Code.

3. Water rights conveyance shall be satisfied prior to plat recordation.

4. Labeling of number of units on lots intended for multi-family development shall be removed from the plats.

POTENTIAL MOTIONS

APPROVAL

Mr. Chairman, I move that we approve the preliminary plans and recommend approval of the final plats of Lakeshore Landing Plats A-J, with the findings and conditions listed in the staff report and subject to any findings, conditions, and modifications listed in the engineering report.

DENIAL

Mr. Chairman, I move that we recommend denial of the final plats of Lakeshore Landing Plats A-J.

TABLE

Mr. Chairman, I move that we table action on the preliminary plans and final plats of Lakeshore Landing Plats A-J.

Attachment: 2. Staff Report (Lakeshore Landing Plats A-J)

# AMERICAN FORK CITY ENGINEERING DIVISION
# STAFF REPORT

Planning Commission Meeting Date: 6/3/2020

This report is a summary of the American Fork City Engineering Division plan review comments regarding the subject plan as submitted by the applicant for American Fork City Land Use Authority approval:

Project Name: Lakeshore Landing Plats A-J

Project Address: 350 South 900 West

Developer / Applicant's Name: Ardero/Berg Civil Engineering

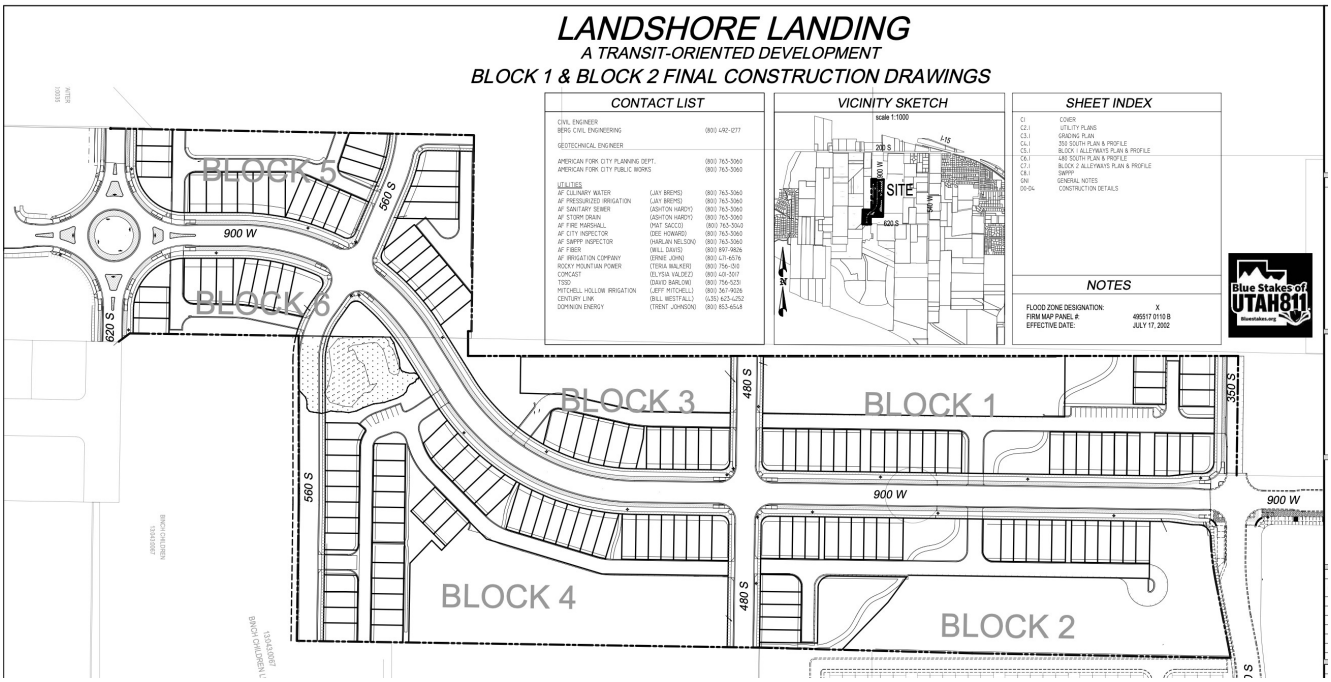
Type of Application:

- ☒ Subdivision Final Plat
- ☒ Subdivision Preliminary Plan
- ☐ Annexation
- ☐ Code Text Amendment
- ☐ General Plan Amendment
- ☐ Zone Change
- ☐ Commercial Site Plan
- ☐ Residential Accessory Structure Site Plan

**Engineering Division Recommendation:** The Engineering Division recommends APPROVAL of the proposed development subject to the following findings and conditions:

1. All Standard Conditions of Approval and items denoted as "Plan Modification(s) Required" in the 6/3/2020 Engineering Division Staff Report for the City Land Use Authority shall be addressed on all final project documents.

**Project Map:**








Attachment: 2. Staff Report (Lakeshore Landing Plats A-J)

## STANDARD CONDITIONS OF APPROVAL

**Standard Conditions of Approval:**

APPLICANT is responsible and shall submit/post/obtain all necessary documentation and evidence to comply with these Standard Conditions of Approval prior to any platting, permitting, or any other form of authorization by the City including plat recording or other property conveyance to the City and prior to scheduling a pre-construction meeting. All recording shall take place at the Utah County Recorder's Office.

1. **Title Report:** Submit an updated Title Report not older than 30 days or other type of appropriate verification that shows all dedications to the City are free and clear of encumbrances, taxes, or other assessments.
2. **Property Taxes and Liens:** Submit evidence that all the property taxes, for the current and/or previous years, liens, and agricultural land use roll over fees have been paid in full.
3. **Water Rights:** Submit evidence that all the required water rights have been conveyed to American Fork City.
4. **Performance Guarantee:** Post a performance guarantee for all required public and essential common improvements.
5. **Easements and Agreements:** Submit/record a long-term Storm Water Pollution Prevention Maintenance Agreement signed and dated by the property owner and any required easement documentation.
6. **Land Disturbance Permit:** Obtain a Land Disturbance Permit.
7. **Compliance with the Engineering Division Plan Review Comments:** All plans and documents shall comply with all the Technical Review Committee comments and the City Engineer's final review.
8. **Commercial Structure:** Record an Owner Acknowledgment and Utility Liability Indemnification if the proposed building is a multi-unit commercial structure served by a single utility service.
9. **Sensitive Lands:** Record all applicable documents required for compliance with the City's Sensitive Lands Ordinance.
10. **Utility Notification Form:** Submit a Subdivision Utility Notification Form.
11. **Professional Verification:** Submit final stamped construction documentation by all appropriate professionals.
12. **Fees:** Payment of all development, inspection, recording, street light, and other project related fees.
13. **Mylar:** Submit a Mylar. All plats will receive final verification of all formats, notes, conveyances, and other items contained on the plat by City staff (recorder, legal, engineer, GIS, planning).

**Modifications Required:**

1. Provide traffic impact study and updated drainage report
2. Plan modification as outlined in the TRC redline comments provide to the developer
3. Provide U.S. Army Corps of Engineer approved wetland mitigation plan when finalized

Attachment: 2. Staff Report (Lakeshore Landing Plats A-J)

**From:** **Wendelin Knobloch** wendelin@afcity.net
**Subject:** Public Comment
**Date:** June 17, 2020 at 10:07 AM
**To:** John Woffinden jwoffindenjr@gmail.com, Anderson Christine crbanderson@gmail.com, Chris Christiansen cchristiansen@clydeinc.com, Geoff Dupaix dupaixg@gmail.com, Harold Dudley hrdudley1@gmail.com, Rod Brocious rodb@horrocks.com, Ryan Hunter rhunter@sirq.com
**Cc:** Adam Olsen AOlsen@afcity.net, Ben Hunter bhunter@afcity.net, Tana Uyema TUyema@afcity.net, Lisa Halversen LHalversen@afcity.net, Scott Sensanbaugher SSensanbaugher@afcity.net
**Bcc:** Carolyn Lloyd clloyd@afcity.net

Dear Planning Commissioners:

Please find the attached public comment that has been received for tonight's planning commission meeting.

Wendelin.

_____
Wendelin Knobloch
American Fork City
Planner II

wendelin@afcity.net
planning.afcity.org
801.763.3060

***DUE TO THE INCREASED EXPOSURE RISKS AND TO COVID-19, OUR FRONT LOBBY WILL BE CLOSED. WE WILL BE ABLE TO CONDUCT BUSINESS VIA PHONE, EMAIL, ONLINE, AND IN PERSON BY APPOINTMENT ONLY. ***

> Begin forwarded message:
>
> **From:** Carolyn Lloyd <carolynlloyd73@gmail.com>
> **Subject:** **Lakeshore landing**
> **Date:** June 16, 2020 at 6:15:56 PM MDT
> **To:** zoompubliccomment@afcity.net
>
> I have a few concerns regarding the Lakeshore Landing development:
>
> - the infrastructure for the roads and water still have not been resolved. Plus there still isn't the funding for all of these improvements.
>
> - it would be nice if there was somewhat of a transition from the TOD to those of use that have 1 to 5 acres. Just because it meets code doesn't mean that it is the right thing to do for the residents that have been there for over 30 years.
>
> -the only way in and out of this area south of the freeway is 200 south which is in dyer need of attention.
>
> I appreciate the time and effort the planning commission takes to make sure these developments meet code and they coincide with the land use that is already there.
>
> Thanks for your time,
> Carolyn Lloyd
>
> Sent from my iPhone
> Begin forwarded message:
>
> **From:** Tyler Skidmore <tskidmore.we@gmail.com>
> **Subject:** **Land shore landing**
> **Date:** June 16, 2020 at 4:12:34 PM MDT
> **To:** zoompubliccomment@afcity.net
>
> How is the infrastructure going to handle this many more homes?
>
> Sent from my iPhone
> Begin forwarded message:
>
> **From:** Norman Chadwick <a1rockhauler@yahoo.com>
> **Subject:** **Landshore Landing**
> **Date:** June 16, 2020 at 5:04:40 PM MDT
> **To:** zoompubliccomment@afcity.net
>
> To the American Fork planning commission
> Regarding the high density housing proposal.

I as a property owner for Thirty years am highly opposed to the idea of Condominiums and or rentals being allowed this far south of the front runner station for reasons that follow.

1. Infrastructure ie Roads have Not been developed to handle the influx of traffic that will come with that many new households. 200 south has Not been Widened with only a “Wisp of talk”.
Front Runner has been in place and opperational going on FIVE YEARS without so much as a shovel of dirt being turned over.
2. We (Landowners) are of the understanding that a transition plan is in place to gradually increase the size of Lots and move into single family dwellings with yards the farther south you go.
What happened to that??
I would like to see Stable families moving in instead of transient individuals coming and going. We have had a lot on experience with this.
3. The value of my Land and Home will decrease substantially as this becomes the place Not to live in American Fork.
4. Water. I understand that American Fork does not have the Water to supply these dwellings or future increases. This needs to be addressed.
5. Ground Water. In the winter, the water table is One foot below the surface. Homesites need to be Elevated with structural fill before footings can be started. This includes Slab on Grade.

I Hope you see these as valid points and Vote a Denial to the proposal before you.
Sincerely
Norman Chadwick
7195 North 6720 West
American Fork, Utah

Sent from my iPhone
Begin forwarded message:

**From:** Tyler Skidmore <tskidmore.we@gmail.com>
**Subject:** **Land shore landing**
**Date:** June 16, 2020 at 4:14:05 PM MDT
**To:** zoompubliccomment@afcity.net

Should there be a better transition from high density to people who have acreage?

Sent from my iPhone
Begin forwarded message:

**From:** Tresa Chadwick <tresachadwick@yahoo.com>
**Subject:** **Landshore**
**Date:** June 16, 2020 at 4:50:13 PM MDT
**To:** zoompubliccomment@afcity.net

To the planning commission
My name is Tresa Chadwick. I am currently a home owner in the area of the purposed development.
I have lived in this area for many years and have enjoyed living here. I realize that things change and development will happen, but I do not believe the proposed changes/development will benefit American Fork City in the long run. With the high condensed housing and no transitional areas, there is no balance in those who will just be living there short term and more permanent homes with property. Looking down the road I believe ,with the plan so heavy with high condensed , we will be looking at a “other side of the tracks” result. After years of people moving in and then quickly moving on I believe we will see a community that will not be a desirable place to live.
The apartments and condominiums that are new built have tenets that come down to walk, ride bike and just enjoy the open area that you will be designating as more condensed housing. When the open area is filled up with more condominiums the balance will be gone. The future is in your hands.

Sent from my iPhone

**From:** mikenze@gmail.com
**Subject:** Landshore Landing
**Date:** June 18, 2020 at 9:31 AM
**To:** zoompubliccomment@afcity.net

As current homeowners in the area, we strongly oppose any new development until infrastructure can be addressed. The road that runs in front of the rail station CAN NOT support any more traffic until it is improved and appropriate lighting and sidewalks are installed. The road that goes under the freeway is the access to schools for our community and adding more traffic there is a logistical nightmare.
Our home is on well water and we have noticed a significant lose of water pressure since the new townhomes have been built and adding more dwellings without addressing where the water to support these homes will come from is irresponsible.
Please do not make current homeowners suffer in support of future growth without addressing underlying infrastructure issues.
Thank you -
Mikenze Souphom

Sent from my iPhone

Attachment: 3. Public Comment (Lakeshore Landing Plats A-J)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Planning **Director Approval** *Adam Olsen*

**AGENDA ITEM** Review and action on the final plat of Mitchell Farms Plat C, located in the area of 780 West 800 North, in the R-1-12,000 Residential zone.

**SUMMARY RECOMMENDATION** The planning commission recommended approval of the final plat of Mitchell Farms Plat C as stated in the attached minutes of the June 3, 2020 planning commission meeting.

**BACKGROUND** The applicant proposes a 21-lot expansion of Mitchell Farms Plat C which complies with the approved preliminary plan. For further analysis, please refer to the attached final plat, staff report and planning commission minutes.

**BUDGET IMPACT** No direct budgetary impact is anticipated as part of this final plat approval.

**SUGGESTED MOTION** I move to approve the final plat of Mitchell Farms Plat C, located in the area of 780 West 800 North, in the R-1-12,000 Residential zone and to authorize the mayor and city council to sign the plat and accept the dedications with instructions to the city recorder to withhold recording of the plat subject to:

- All conditions identified in the public record associated with the June 3, 2020 planning commission meeting.

**SUPPORTING DOCUMENTS**

1. Plat (PDF)
2. Staff Report (PDF)
3. Minutes (PDF)

## NOTES

1. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

2. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

3. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

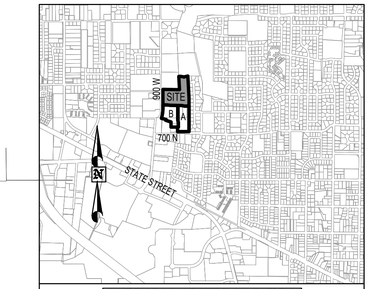
# MITCHELL FARMS
# PLAT "C"

LOCATED IN SOUTHEAST QUARTER SECTION 10
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH




## CURVE TABLE

| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 275.00 | 113.22 | 23°35'20" | 112.42 | N11°48'10"W |
| C2 | 275.00 | 98.54 | 20°31'50" | 98.01 | N13°19'55"W |
| C3 | 275.00 | 47.50 | 09°53'48" | 47.44 | N85°02'51"E |
| C4 | 307.00 | 126.39 | 23°35'20" | 125.50 | N11°48'10"W |
| C5 | 307.00 | 8.76 | 01°38'03" | 8.76 | N00°49'32"W |
| C6 | 307.00 | 100.41 | 18°44'26" | 99.97 | N11°00'48"W |
| C7 | 307.00 | 17.22 | 03°12'48" | 17.22 | N21°59'26"W |
| C8 | 243.00 | 87.07 | 20°31'50" | 86.61 | N13°19'55"W |
| C9 | 243.00 | 63.47 | 14°57'56" | 63.29 | N16°06'53"W |
| C10 | 243.00 | 23.60 | 05°33'55" | 23.59 | N05°50'57"W |
| C11 | 15.00 | 21.77 | 83°09'56" | 19.91 | N38°30'58"E |
| C12 | 243.00 | 41.97 | 09°53'48" | 41.92 | N85°02'51"E |
| C13 | 307.00 | 53.03 | 09°53'48" | 52.96 | S85°02'51"W |
| C14 | 15.00 | 25.35 | 96°50'04" | 22.44 | N51°29'02"W |
| C15 | 156.00 | 33.63 | 12°21'00" | 33.56 | N03°06'30"E |
| C16 | 188.00 | 33.54 | 10°13'22" | 33.50 | S02°02'41"W |
| C17 | 15.00 | 23.22 | 88°42'09" | 20.97 | N44°21'35"W |
| C18 | 15.00 | 23.91 | 91°19'13" | 21.46 | S45°37'44"W |
| C19 | 15.00 | 23.22 | 88°40'47" | 20.97 | N44°22'16"W |
| C20 | 20.00 | 31.88 | 91°19'13" | 28.61 | S45°37'44"W |
| C21 | 15.00 | 23.22 | 88°40'47" | 20.97 | S44°22'16"E |
| C22 | 15.00 | 24.54 | 93°43'32" | 21.89 | N44°25'35"E |
| C23 | 243.00 | 89.75 | 21°09'39" | 89.24 | N13°01'01"W |
| C24 | 307.00 | 50.11 | 09°21'09" | 50.06 | N18°55'16"W |




## VICINITY SKETCH

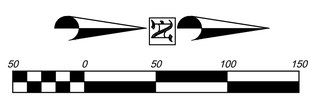
SCALE 1"=1/4 MILE

## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 9.08 AC |
| EXISTING ZONING | R-1-12000 |
| LAND USE: | RESIDENTIAL LOW DENSITY |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- STREET MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT




SCALE 1"=50'

SURVEYOR
AZTEC ENGINEERING
491 NORTH 450 WEST
OREM, UT 84057
(801) 224-7308

ENGINEER
berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS ____ DAY OF _____ A.D. 20___ ,
BY THE WATER AUTHORITY.

SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

_____ _____
DATE (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT LOCATED NORTH 352.15 FEET AND EAST 42.70 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 10, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN;

THENCE NORTH 00°01'52" WEST 424.39 FEET; THENCE SOUTH 88°43'09" EAST 184.05 FEET; THENCE SOUTH 88°43'09" EAST 268.53 FEET; THENCE NORTH 03°04'00" WEST 364.65 FEET; THENCE NORTH 86°56'00" EAST 45.61 FEET; THENCE SOUTH 79°22'00" EAST 97.30 FEET; THENCE NORTH 75°59'48" EAST 108.47 FEET TO A POINT ALONG THE WEST BOUNDARY OF MITCHELL SPRINGS SUBDIVISION; THENCE ALONG SAID BOUNDARY THE FOLLOWING TWO (2) COURSES: 1) SOUTH 03°13'00" EAST 587.57 FEET AND 2) SOUTH 233.37 FEET TO A POINT ALONG THE NORTH BOUNDARY OF MITCHELL FARMS PLAT A SUBDIVISION; THENCE ALONG SAID BOUNDARY THE FOLLOWING THREE (3) COURSES: 1) WEST 127.60 FEET, 2) NORTH 77°40'20" WEST 65.51 FEET AND 3) NORTH 88°31'16" WEST 112.34 FEET TO A POINT ALONG THE NORTH BOUNDARY OF MITCHELL FARMS PLAT B SUBDIVISION; THENCE ALONG SAID BOUNDARY THE FOLLOWING FOUR (4) COURSES: 1) NORTH 88°49'39" WEST 111.90 FEET, 2) NORTH 88°29'26" WEST 112.36 FEET, 3) NORTH 82°10'10" WEST 64.61 FEET AND 4) SOUTH 89°58'08" WEST 120.00 FEET TO THE POINT OF BEGINNING.

AREA = 9.08 ACRES

BASIS OF BEARING IS NORTH 89°58'38" EAST (2676.06') ALONG SECTION LINE FROM THE SOUTH QUARTER CORNER OF SECTION 10, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE AND MERIDIAN, TO THE SOUTHEAST CORNER OF SAID SECTION 10. (NAD 27)

NUMBER OF LOTS 21

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREONFOR THE PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

_____

_____

## ACKNOWLEDGMENT

STATE OF UTAH )
COUNTY OF UTAH ) S.S.

ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

_____
WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS

_____ DAY OF _____, A.D. ____.

_____ _____
MAYOR CITY COUNCIL MEMBER

_____ _____
CITY COUNCIL MEMBER CITY COUNCIL MEMBER

_____ _____
CITY COUNCIL MEMBER CITY COUNCIL MEMBER

APPROVED _____ ATTEST _____
CITY ENGINEER CLERK-RECORDER
(SEE SEAL BELOW)

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

_____ _____
PLANNER CHAIRMAN, PLANNING COMMISSION

# MITCHELL FARMS
# PLAT "C"

LOCATED IN SOUTHEAST QUARTER SECTION 10
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SCALE: 1" = 50 FEET

| SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL |
|---|---|---|
| | | |

01/29/2020 I:\My Drive\Berg Civil\2017\PAT - Mitchell\Plat C\MF-C_Final_PLAT C.dwg

Attachment: 1. Plat (Mitchell Farms Plat C)

AMERICAN FORK CITY
PLANNING COMMISSION

MEETING DATE: June 3, 2020
STAFF PRESENTATION: Adam Olsen

AGENDA TOPIC: Hearing, review and action on the preliminary plan and final plat for Mitchell Farms Plat C, located at approximately 780 W. 800 N., in the R1-12,000 Residential zone.

ACTION REQUESTED: Approval of the preliminary plan and recommendation of approval of the final plat.

| BACKGROUND INFORMATION | | | | | |
|---|---|---|---|---|---|
| Location: | | 780 West 800 North | | | |
| Applicant: | | Patterson Homes/Berg Engineering | | | |
| Existing Land Use: | | Vacant | | | |
| Proposed Land Use: | | Residential | | | |
| Surrounding Land Use: | North | Residential | | | |
| | South | Residential | | | |
| | East | Residential | | | |
| | West | Residential | | | |
| Existing Zoning: | | R1-12,000 | | | |
| Proposed Zoning: | | N/A | | | |
| Surrounding Zoning: | North | R1-12,000 | | | |
| | South | R1-12,000 | | | |
| | East | R1-12,000 | | | |
| | West | R1-12,000 | | | |
| Land Use Plan Designation: | | Residential Low Density (3 du/ac) | | | |
| Zoning within density range? | | x | Yes | | No |

Background

Mitchell Farms preliminary was approved in 2017. Plat C conforms with the original preliminary plan; however, the original preliminary plan has expired. Plat C is being processed as a new preliminary and final.

Plat C consists of 21 lots, ranging from 12,000 sq. ft. to 18,996 sq. ft. creating a density of 2.3 du/ac. Access is provided from the east, on 880 North, and from the south at both 780 West and 860 West. A future access will be built on 900 West as the neighboring property to the north develops.

All lots meet or exceed the requirements of the R1-12,000 zone.



Attachment: 2. Staff Report (Mitchell Farms Plat C)

Section 17.8.211 of the Development Code

The Planning Commission may act to recommend approval of a final plat upon a finding that:

a. The final plat conforms with the terms of the preliminary plan approval.

   The preliminary plan and final plat are being processed concurrently. Plat C conforms to the original preliminary plan, approved in 2017.

b. The final plat complies with all City requirements and standards relating to Subdivisions.

   This criterion has been met.

c. The detailed engineering plans and materials comply with the City standards and policies.

   Engineering will address any concerns at the time of the Planning Commission Meeting.

d. The estimates of cost of constructing the required improvements are realistic.

   Required improvements for this plat have been constructed.

e. The water rights conveyance documents have been provided.

   Water rights conveyance shall be satisfied prior to plat recordation.

FINDINGS OF FACT:

After reviewing the preliminary and final plat for Mitchell Farms Plat C, the following findings of fact are offered for consideration:

1. The preliminary plan and final plat are consistent with the Land Use Plan.

2. The final plat meets Section 17.8.101 (Intent) of Chapter 17.8 (Subdivisions).

3. The final plat meets the criteria as found in Section 17.8.211 of the Development Code.

POTENTIAL MOTIONS

**APPROVAL**

Attachment: 2. Staff Report (Mitchell Farms Plat C)

PRELIMINARY PLAN

Mr. Chairman, I move that we approve the preliminary plan subject to any findings, conditions and modifications found in the engineering report.

FINAL PLAT

Mr. Chairman, I move that we recommend approval of the final plat with the findings listed in the staff report, and subject to any findings, conditions and modifications found in the engineering report.

**DENIAL**

PRELIMINARY PLAN

Mr. Chairman, I move that we deny the preliminary plan.

FINAL PLAT

*If the preliminary plan is denied, there can be no recommendation on the final plat.*

**TABLE**

PRELIMINARY PLAN

Mr. Chairman, I move that we table action on the preliminary plan.

FINAL PLAT

Mr. Chairman, I move that we table action on the final plat.

Attachment: 2. Staff Report (Mitchell Farms Plat C)

# AMERICAN FORK CITY ENGINEERING DIVISION
# STAFF REPORT

Planning Commission Meeting Date: 6/3/2020

This report is a summary of the American Fork City Engineering Division plan review comments regarding the subject plan as submitted by the applicant for American Fork City Land Use Authority approval:

Project Name: Mitchell Farms Plat C

Project Address: 780 West 800 North

Developer / Applicant's Name: Patterson Homes/Berg Civil Engineering

Type of Application:

- ☒ Subdivision Final Plat
- ☒ Subdivision Preliminary Plan
- ☐ Annexation
- ☐ Code Text Amendment
- ☐ General Plan Amendment
- ☐ Zone Change
- ☐ Commercial Site Plan
- ☐ Residential Accessory Structure Site Plan

**Engineering Division Recommendation:** The Engineering Division recommends APPROVAL of the proposed development subject to the following findings and conditions:

1. All Standard Conditions of Approval and items denoted as "Plan Modification(s) Required" in the 6/3/2020 Engineering Division Staff Report for the City Land Use Authority shall be addressed on all final project documents.

**Project Map:**






Attachment: 2. Staff Report (Mitchell Farms Plat C)

## STANDARD CONDITIONS OF APPROVAL

**Standard Conditions of Approval:**

APPLICANT is responsible and shall submit/post/obtain all necessary documentation and evidence to comply with these Standard Conditions of Approval prior to any platting, permitting, or any other form of authorization by the City including plat recording or other property conveyance to the City and prior to scheduling a pre-construction meeting. All recording shall take place at the Utah County Recorder's Office.

1. **Title Report:** Submit an updated Title Report not older than 30 days or other type of appropriate verification that shows all dedications to the City are free and clear of encumbrances, taxes, or other assessments.
2. **Property Taxes and Liens:** Submit evidence that all the property taxes, for the current and/or previous years, liens, and agricultural land use roll over fees have been paid in full.
3. **Water Rights:** Submit evidence that all the required water rights have been conveyed to American Fork City.
4. **Performance Guarantee:** Post a performance guarantee for all required public and essential common improvements.
5. **Easements and Agreements:** Submit/record a long-term Storm Water Pollution Prevention Maintenance Agreement signed and dated by the property owner and any required easement documentation.
6. **Land Disturbance Permit:** Obtain a Land Disturbance Permit.
7. **Compliance with the Engineering Division Plan Review Comments:** All plans and documents shall comply with all the Technical Review Committee comments and the City Engineer's final review.
8. **Commercial Structure:** Record an Owner Acknowledgment and Utility Liability Indemnification if the proposed building is a multi-unit commercial structure served by a single utility service.
9. **Sensitive Lands:** Record all applicable documents required for compliance with the City's Sensitive Lands Ordinance.
10. **Utility Notification Form:** Submit a Subdivision Utility Notification Form.
11. **Professional Verification:** Submit final stamped construction documentation by all appropriate professionals.
12. **Fees:** Payment of all development, inspection, recording, street light, and other project related fees.
13. **Mylar:** Submit a Mylar. All plats will receive final verification of all formats, notes, conveyances, and other items contained on the plat by City staff (recorder, legal, engineer, GIS, planning).

Attachment: 2. Staff Report (Mitchell Farms Plat C)

# UNAPPROVED MINUTES

AMERICAN FORK CITY
PLANNING COMMISSION MINUTES
JUNE 3, 2020

The American Fork City Planning Commission met in a regular session on June 3, 2020 in an electronic meeting on the Zoom platform, viewable on the City's YouTube link, commencing at 7:00 p.m.

| | |
|---|---|
| Present: | John Woffinden |
| | Chris Christiansen |
| | Harold Dudley |
| | Ryan Hunter |
| | Christine Anderson |
| | Rod Brocious |
| Absent: | Geoff Dupaix |
| Staff Present: | Adam Olsen, City Planner |
| | Wendelin Knobloch, Planner |
| | Ben Hunter, Engineer |
| | Scott Sensanbaugher, Public Works Director |

Public Comments Received: None received

1. Hearing, review and action on the preliminary plan and final plat for Mitchell Farms Plat C, located in the area of 780 West 800 North, in the R1-12,000 Residential zone

Mr. Olson stated that Mitchell Farms preliminary was approved in 2017. Plat C conforms with the original preliminary plan; however, the original preliminary plan has expired. Plat C is being processed as a new preliminary and final.

Plat C consists of 21 lots, ranging from 12,000 sq. ft. to 18,996 sq. ft. creating a density of 2.3 du/ac. Access is provided from the east, on 880 North, and from the south at both 780 West and 860 West. A future access will be built on 900 West as the neighboring property to the north develops.

Chairman Woffinden asked how many more plats would be coming from this subdivision.

Mr. Olson said that he thinks we have seen about half of them.

Mr. Ben Hunter says that this development is straightforward and meets the requirements and standards. Engineering Division recommends approval.



Attachment: 3. Minutes (Mitchell Farms Plat C)

**Public Hearing Opened**

**Public Hearing Closed**

**Mr. Ryan Hunter moved to approve the preliminary plan subject to any findings, conditions and modifications found in the engineering report.**

**Mr. Christiansen seconded the motion. Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Aye** |
| **Chris Christiansen** | **Aye** |
| **Christine Anderson** | **Aye** |
| **Harold Dudley** | **Aye** |
| **Ryan Hunter** | **Aye** |
| **Rod Brocious** | **Aye** |

**The motion passed.**

**Mr. Chris Christiansen moved to approve the final plat subject to any findings, conditions and modifications found in the engineering report.**

**Mr. Ryan Hunter seconded the motion. Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Aye** |
| **Chris Christiansen** | **Aye** |
| **Christine Anderson** | **Aye** |
| **Harold Dudley** | **Aye** |
| **Ryan Hunter** | **Aye** |
| **Rod Brocious** | **Aye** |

**The motion passed.**

Attachment: 3. Minutes (Mitchell Farms Plat C)

2. Hearing, review and action on the preliminary plan and final plat for Peak Meadows Plat A, located in the area of 1200 East 300 North, in the R1-9,000 Residential zone

Mr. Olson stated that this property received a zone change to R1-9,000 in November 2019, in anticipation of future development. Peak Meadows is a 9-lot subdivision with access off a future cul-de-sac, 1200 East. One existing home will remain and retain its current access off 300 North. Lots in Peak Meadows range from 9,564 sq. ft. to 13,487 sq. ft. creating a density of 3 du/ac. All lots meet or exceed the requirements of the R1-9,000 zone.

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Planning **Director Approval** *Adam Olsen*

**AGENDA ITEM** Review and action on the final plat for Peak Meadows Plat A, located in the area of 1200 East 300 North, in the R-1-9,000 Residential zone.

**SUMMARY RECOMMENDATION** The planning commission recommended approval of the final plat for Peak Meadows Plat A as stated in the attached minutes of the June 3, 2020 planning commission meeting.

**BACKGROUND** The applicant proposes a nine-lot subdivision that will be accessed from a cul-de-sac that connects to 300 North. For further analysis, please refer to the attached final plat, staff report and planning commission minutes.

**BUDGET IMPACT** No direct budgetary impact is anticipated as part of this final plat approval.

**SUGGESTED MOTION** I move to approve the final plat for Peak Meadows Plat A, located in the area of 1200 East 300 North, in the R-1-9,000 Residential zone and to authorize the mayor and city council to sign the plat and accept the dedications with instructions to the city recorder to withhold recording of the plat subject to:

- All conditions identified in the public record associated with the June 3, 2020 planning commission meeting.

**SUPPORTING DOCUMENTS**

1. Plat (PDF)
2. Staff Report (PDF)
3. Minutes (PDF)

## NOTES

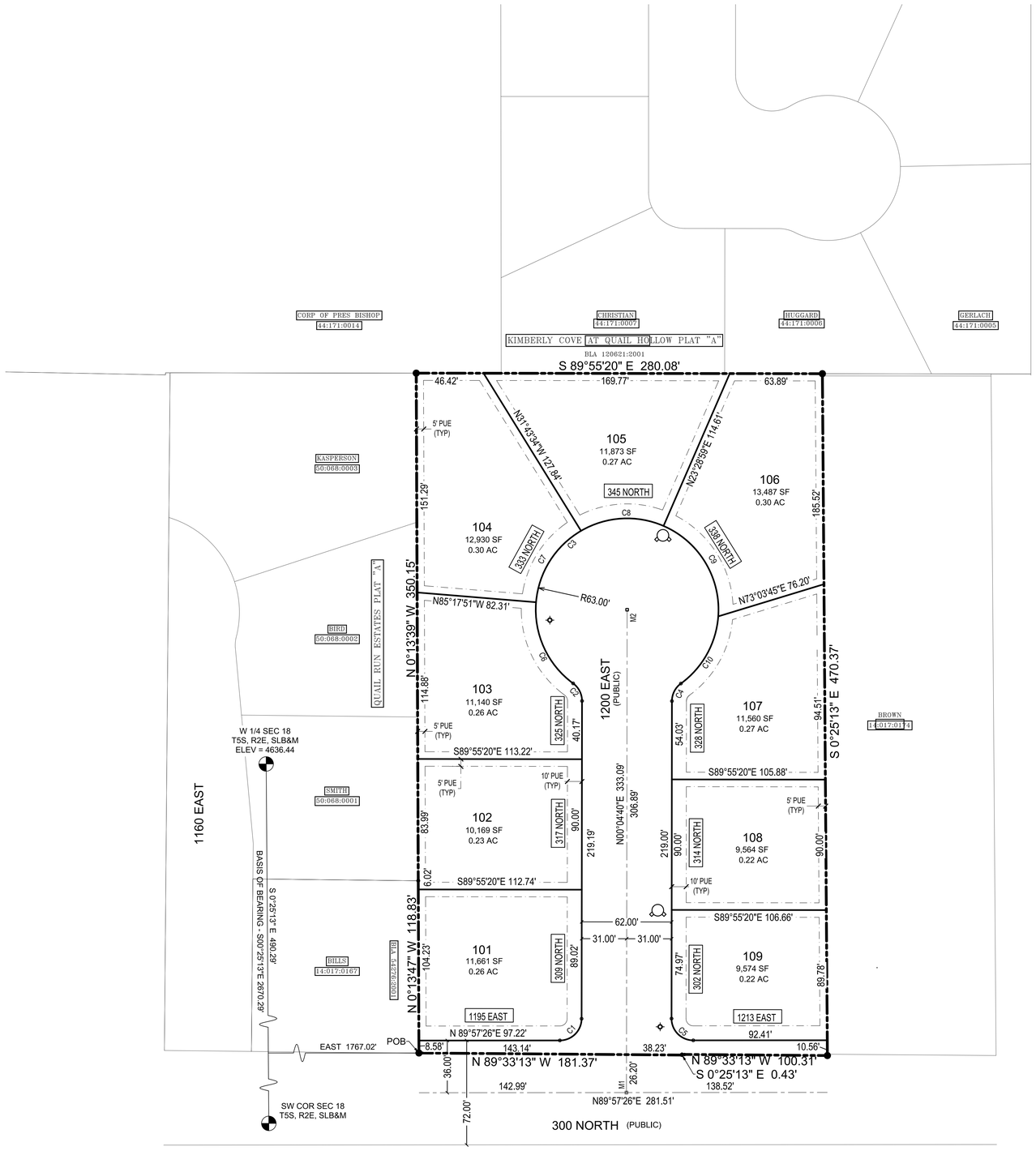
1. OFFSET-PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

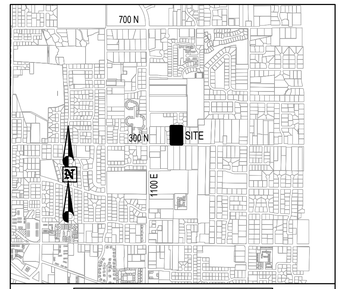
2. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL 1) ASPHALT PAVING IS INSTALLED AND 2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHAL AND CHARGED WITH CULINARY WATER.

3. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

# PEAK MEADOWS
# PLAT "A"

LOCATED IN SOUTHWEST QUARTER SECTION 18
TOWNSHIP 5 SOUTH, RANGE 2 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH




## VICINITY SKETCH

SCALE 1"=1/4 MILE

## TABULATIONS

| | |
|---|---|
| DEVELOPMENT AREA | 3.029 AC |
| LAND USE | SINGLE FAMILY |
| EXISTING ZONING | R-1-9000 |
| FLOOD ZONE DESIGNATION: | X |
| FIRM MAP PANEL #: | 495517 0110 B |
| EFFECTIVE DATE: | JULY 17, 2002 |

N

## LEGEND

- SECTION CORNER
- PROPERTY CORNER
- SUBDIVISION MONUMENT
- BOUNDARY LINE
- CENTER LINE
- EASEMENT LINE
- FIRE HYDRANT
- STREET LIGHT

40 0 40 80 120

SCALE 1"=40'

## CURVE TABLE

| CURVE | RADIUS | LENGTH | DELTA | CHORD | BEARING |
|---|---|---|---|---|---|
| C1 | 15.00 | 23.53 | 89°52'45" | 21.19 | N45°01'03"E |
| C2 | 15.00 | 14.10 | 53°51'40" | 13.59 | N26°51'10"W |
| C3 | 63.00 | 316.37 | 287°43'21" | 74.31 | S89°55'20"E |
| C4 | 15.00 | 14.10 | 53°51'40" | 13.59 | S27°00'30"W |
| C5 | 15.00 | 23.59 | 90°07'15" | 21.24 | S44°58'57"E |
| C6 | 63.00 | 64.31 | 58°29'09" | 61.55 | N24°32'26"W |
| C7 | 63.00 | 60.49 | 55°00'34" | 58.19 | N32°12'26"E |
| C8 | 63.00 | 59.12 | 53°46'17" | 56.98 | N86°35'51"E |
| C9 | 63.00 | 77.73 | 70°41'41" | 72.90 | S31°10'10"E |
| C10 | 63.00 | 54.72 | 49°45'40" | 53.01 | S29°03'31"W |

## SEWER & WATER AUTHORITY APPROVAL

APPROVED THIS _____ DAY OF _____ A.D. 20____,
BY THE WATER AUTHORITY.

SEWER & WATER AUTHORITY

## SURVEYOR'S CERTIFICATE

I, _____, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. _____. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRBED ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED, 1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

DATE _____ (SEE SEAL BELOW)

## BOUNDARY DESCRIPTION

BEGINNING AT A POINT LOCATED SOUTH 0°25'13" EAST ALONG SECTION LINE 490.29 FEET AND EAST 1767.02 FEET FROM THE WEST QUARTER CORNER OF SECTION 18, TOWNSHIP 5 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE NORTH 0°13'47" WEST ALONG A BOUNDARY LINE AGREEMENT (ENTRY 54276:2001) A DISTANCE OF 118.83 FEET; THENCE NORTH 0°13'39" WEST ALONG THE EASTERLY BOUNDARY OF QUAIL RUN ESTATES PAT "A" A DISTANCE OF 350.15 FEET; THENCE SOUTH 89°55'20" EAST ALONG THE SOUTHERLY BOUNDARY OF KIMBERLY COVE AT QUAIL HOLLOW PLAT "A" A DISTANCE OF 280.08 FEET; THENCE SOUTH 0°25'13" EAST ALONG A FENCE LINE A DISTANCE OF 470.37 FEET; THENCE NORTH 89°33'13" WEST 100.31 FEET; THENCE SOUTH 0°25'13" EAST 0.43 FEET; THENCE NORTH 89°33'13" WEST 181.37 FEET TO THE POINT OF BEGINNING.

AREA = 3.029 ACRES

THE BASIS OF BEARING FOR THIS SURVEY IS SOUTH 0°25'13" EAST ALONG SECTION LINE FROM THE WEST QUARTER CORNER OF SECTION 18, TOWNSHIP 5 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN TO THE SOUTHWEST CORNER OF SAID SECTION 18. BOTH MONUMENTS WERE LOCATED AS SHOWN ON COUNTY TIE SHEETS.

## OWNER'S DEDICATION

THE UNDERSIGNED OWNERS OF THE PROPERTY DESCRIBED ABOVE AND SHOWN ON THIS PLAT, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS SHOWN THEREONFOR THE PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____

DAY OF _____, A.D. _____

## ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF UTAH } S.S.

ON THE ___ DAY OF _____, A.D. _____ PERSONALLY APPEARED BEFORE ME _____

_____
WHICH PERSON ACKNOWLEDGED TO ME THAT HE EXECUTED THE FOREGOING DEDICATION IN HIS RESPECTIVE CAPACITIES ON BEHALF OF _____, IN ACCORDANCE WITH THE GOVERNING DOCUMENTS OF SUCH COMPANY.

MY COMMISSION EXPIRES _____ _____ NOTARY PUBLIC

## ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF AMERICAN FORK CITY COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS AND EASEMENTS FOR THE PERPETUAL USE OF THE PUBLIC THIS

_____ DAY OF _____, A.D. ___.

MAYOR _____ CITY COUNCIL MEMBER

CITY COUNCIL MEMBER _____ CITY COUNCIL MEMBER

CITY COUNCIL MEMBER _____ CITY COUNCIL MEMBER

CITY COUNCIL MEMBER _____ CITY COUNCIL MEMBER

APPROVED _____ CITY ENGINEER ATTEST _____ CLERK-RECORDER (SEE SEAL BELOW)

## PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. _____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

PLANNER _____ CHAIRMAN, PLANNING COMMISSION

SURVEYOR
AZTEC ENGINEERING
491 NORTH 450 WEST
OREM, UT 84057
(801) 224-7308

ENGINEER
berg CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

# PEAK MEADOWS
# PLAT "A"

LOCATED IN SOUTHWEST QUARTER SECTION 18
TOWNSHIP 5 SOUTH, RANGE 2 EAST,
SALT LAKE BASE AND MERIDIAN.
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SCALE: 1" = 50 FEET

SURVEYOR'S SEAL | NOTARY PUBLIC SEAL | CLERK-RECORDER SEAL

04/06/2020 I:\My Drive\Berg Civil\2019\PAT 300\dr\PM_Final_PLAT A.dwg

Attachment: 1. Plat (Peak Meadows Plat A)

AMERICAN FORK CITY
PLANNING COMMISSION

MEETING DATE: June 3, 2020
STAFF PRESENTATION: Adam Olsen

AGENDA TOPIC: Hearing, review and action on the preliminary plan and final plat for Peak Meadows Plat A, located at approximately 1200 E. 300 N., in the R1-9,000 Residential zone.

ACTION REQUESTED: Approval of the preliminary plan and recommendation of approval of the final plat.

| BACKGROUND INFORMATION | | | | | |
|---|---|---|---|---|---|
| Location: | | 1200 E. 300 N. | | | |
| Applicant: | | Patterson Homes/Berg Engineering | | | |
| Existing Land Use: | | Residential | | | |
| Proposed Land Use: | | Residential | | | |
| Surrounding Land Use: | North | Residential | | | |
| | South | Residential | | | |
| | East | Residential | | | |
| | West | Residential | | | |
| Existing Zoning: | | R1-9,000 | | | |
| Proposed Zoning: | | N/A | | | |
| Surrounding Zoning: | North | R1-9,000 | | | |
| | South | R1-15,000 | | | |
| | East | RA-1 | | | |
| | West | R1-9,000 | | | |
| Land Use Plan Designation: | | Residential Low Density (3 du/ac) | | | |
| Zoning within density range? | | x | Yes | | No |

Attachment: 2. Staff Report (Peak Meadows Plat A)

Background

This property received a zone change to R1-9,000 in November 2019, in anticipation of future development. Peak Meadows is a 9-lot subdivision with access off a future cul-de-sac, 1200 East. One existing home will remain and retain its current access off 300 North. Lots in Peak Meadows range from 9,564 sq. ft. to 13,487 sq. ft. creating a density of 3 du/ac.

All lots meet or exceed the requirements of the R1-9,000 zone.

Section 17.8.211 of the Development Code

The Planning Commission may act to recommend approval of a final plat upon a finding that:

a. The final plat conforms with the terms of the preliminary plan approval.

   The preliminary plan and final plat are being processed concurrently.

b. The final plat complies with all City requirements and standards relating to Subdivisions.

   This criterion has been met.

c. The detailed engineering plans and materials comply with the City standards and policies.

   Engineering will address any concerns at the time of the Planning Commission Meeting.

d. The estimates of cost of constructing the required improvements are realistic.

   Required improvements for this plat have been constructed.

e. The water rights conveyance documents have been provided.

   Water rights conveyance shall be satisfied prior to plat recordation.

FINDINGS OF FACT:

After reviewing the preliminary and final plat for Mitchell Farms Plat C, the following findings of fact are offered for consideration:

1. The preliminary plan and final plat are consistent with the Land Use Plan.

2. The final plat meets Section 17.8.101 (Intent) of Chapter 17.8 (Subdivisions).

3. The final plat meets the criteria as found in Section 17.8.211 of the Development Code.

POTENTIAL MOTIONS

**APPROVAL**

PRELIMINARY PLAN

Mr. Chairman, I move that we approve the preliminary plan subject to any findings, conditions and modifications found in the engineering report.

Attachment: 2. Staff Report (Peak Meadows Plat A)

FINAL PLAT

Mr. Chairman, I move that we recommend approval of the final plat with the findings listed in the staff report, and subject to any findings, conditions and modifications found in the engineering report.

**DENIAL**

PRELIMINARY PLAN

Mr. Chairman, I move that we deny the preliminary plan.

FINAL PLAT

*If the preliminary plan is denied, there can be no recommendation on the final plat.*

**TABLE**

PRELIMINARY PLAN

Mr. Chairman, I move that we table action on the preliminary plan.

FINAL PLAT

Mr. Chairman, I move that we table action on the final plat.

Attachment: 2. Staff Report (Peak Meadows Plat A)

# AMERICAN FORK CITY ENGINEERING DIVISION
# STAFF REPORT

Planning Commission Meeting Date: 6/3/2020

This report is a summary of the American Fork City Engineering Division plan review comments regarding the subject plan as submitted by the applicant for American Fork City Land Use Authority approval:

Project Name: Peak Meadows Plat A

Project Address: 1200 East 300 North

Developer / Applicant's Name: Patterson Homes/Berg Civil Engineering

Type of Application:

- ☒ Subdivision Final Plat
- ☒ Subdivision Preliminary Plan
- ☐ Annexation
- ☐ Code Text Amendment
- ☐ General Plan Amendment
- ☐ Zone Change
- ☐ Commercial Site Plan
- ☐ Residential Accessory Structure Site Plan

**Engineering Division Recommendation:** The Engineering Division recommends APPROVAL of the proposed development subject to the following findings and conditions:

1. All Standard Conditions of Approval and items denoted as "Plan Modification(s) Required" in the 6/3/2020 Engineering Division Staff Report for the City Land Use Authority shall be addressed on all final project documents.

**Project Map:**






Attachment: 2. Staff Report (Peak Meadows Plat A)

## STANDARD CONDITIONS OF APPROVAL

**Standard Conditions of Approval:**

APPLICANT is responsible and shall submit/post/obtain all necessary documentation and evidence to comply with these Standard Conditions of Approval prior to any platting, permitting, or any other form of authorization by the City including plat recording or other property conveyance to the City and prior to scheduling a pre-construction meeting. All recording shall take place at the Utah County Recorder's Office.

1. **Title Report:** Submit an updated Title Report not older than 30 days or other type of appropriate verification that shows all dedications to the City are free and clear of encumbrances, taxes, or other assessments.
2. **Property Taxes and Liens:** Submit evidence that all the property taxes, for the current and/or previous years, liens, and agricultural land use roll over fees have been paid in full.
3. **Water Rights:** Submit evidence that all the required water rights have been conveyed to American Fork City.
4. **Performance Guarantee:** Post a performance guarantee for all required public and essential common improvements.
5. **Easements and Agreements:** Submit/record a long-term Storm Water Pollution Prevention Maintenance Agreement signed and dated by the property owner and any required easement documentation.
6. **Land Disturbance Permit:** Obtain a Land Disturbance Permit.
7. **Compliance with the Engineering Division Plan Review Comments:** All plans and documents shall comply with all the Technical Review Committee comments and the City Engineer's final review.
8. **Commercial Structure:** Record an Owner Acknowledgment and Utility Liability Indemnification if the proposed building is a multi-unit commercial structure served by a single utility service.
9. **Sensitive Lands:** Record all applicable documents required for compliance with the City's Sensitive Lands Ordinance.
10. **Utility Notification Form:** Submit a Subdivision Utility Notification Form.
11. **Professional Verification:** Submit final stamped construction documentation by all appropriate professionals.
12. **Fees:** Payment of all development, inspection, recording, street light, and other project related fees.
13. **Mylar:** Submit a Mylar. All plats will receive final verification of all formats, notes, conveyances, and other items contained on the plat by City staff (recorder, legal, engineer, GIS, planning).

Attachment: 2. Staff Report (Peak Meadows Plat A)

**Public Hearing Opened**

**Public Hearing Closed**

**Mr. Ryan Hunter moved to approve the preliminary plan subject to any findings, conditions and modifications found in the engineering report.**

**Mr. Christiansen seconded the motion. Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Aye** |
| **Chris Christiansen** | **Aye** |
| **Christine Anderson** | **Aye** |
| **Harold Dudley** | **Aye** |
| **Ryan Hunter** | **Aye** |
| **Rod Brocious** | **Aye** |

**The motion passed.**

**Mr. Chris Christiansen moved to approve the final plat subject to any findings, conditions and modifications found in the engineering report.**

**Mr. Ryan Hunter seconded the motion. Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Aye** |
| **Chris Christiansen** | **Aye** |
| **Christine Anderson** | **Aye** |
| **Harold Dudley** | **Aye** |
| **Ryan Hunter** | **Aye** |
| **Rod Brocious** | **Aye** |

**The motion passed.**

2. Hearing, review and action on the preliminary plan and final plat for Peak Meadows Plat A, located in the area of 1200 East 300 North, in the R1-9,000 Residential zone

Mr. Olson stated that this property received a zone change to R1-9,000 in November 2019, in anticipation of future development. Peak Meadows is a 9-lot subdivision with access off a future cul-de-sac, 1200 East. One existing home will remain and retain its current access off 300 North. Lots in Peak Meadows range from 9,564 sq. ft. to 13,487 sq. ft. creating a density of 3 du/ac. All lots meet or exceed the requirements of the R1-9,000 zone.



Attachment: 3. Minutes (Peak Meadows Plat A)

Mr. Ben Hunter indicated that this is a local road with a cul-de-sac, a straightforward plan, and he recommends approval.

**Public Hearing Opened**

**Public Hearing Closed**

**Mr. Brocious moved to approve the preliminary plan subject to any findings, conditions and modifications found in the engineering report.**

**Mr. Christiansen seconded the motion. Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Aye** |
| **Chris Christiansen** | **Aye** |
| **Christine Anderson** | **Aye** |
| **Harold Dudley** | **Aye** |
| **Ryan Hunter** | **Aye** |
| **Rod Brocious** | **Aye** |

**The motion passed.**

**Mr. Brocious moved to approve the final plat subject to any findings, conditions and modifications found in the engineering report.**

**Mr. Ryan Hunter seconded the motion. Voting was as follows:**

| | |
|---|---|
| **Chairman Woffinden** | **Aye** |
| **Chris Christiansen** | **Aye** |
| **Christine Anderson** | **Aye** |
| **Harold Dudley** | **Aye** |
| **Ryan Hunter** | **Aye** |
| **Rod Brocious** | **Aye** |

**The motion passed.**

Attachment: 3. Minutes (Peak Meadows Plat A)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Public Works **Director Approval** *Scott Sensanbaugher*

**AGENDA ITEM** Agreement with UDOT for an Access Control Plan including Intersection Spacing along 100 East (SR-74)

**SUMMARY RECOMMENDATION**
Staff recommends approval of the agreement.

**BACKGROUND**
City staff have been working with UDOT for some time to improve the functionality of the 100 East Corridor. For example, City staff has worked with developers to re-align the 9600 North/200 East connection to 100 East. UDOT and Highland City are working to complete the Canal Blvd. project north of the golf course. Also, UDOT has committed to installing a signal at 740 North, once the City connects 100 East to 200 East on the north edge of the cemetery. This agreement formalizes the mutual goals American Fork City, UDOT, and Highland City have discussed for this corridor.

**BUDGET IMPACT**
None.

**SUGGESTED MOTION**
I move to approve the agreement with UDOT and Highland City, and authorize the city to sign said agreement.

**SUPPORTING DOCUMENTS**

SR-74 or 100 East American Fork CA 5-19-2020 (PDF)

**CORRIDOR PRESERVATION**
**SR-74 from US-89 to End of Route**
**AMERICAN FORK CITY**
**Federal ID No. 876000209**
**HIGHLAND CITY**
**Federal ID No. 870344281**

# COOPERATIVE AGREEMENT

**THIS COOPERATIVE AGREEMENT**, made and entered into this 19th day of May, 2020, by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as "**UDOT**," **AMERICAN FORK CITY**, a municipal corporation in the State of Utah, hereinafter referred to as "**AMERICAN FORK,**" and **HIGHLAND CITY**, a municipal corporation in the State of Utah, hereinafter referred to as "**HIGHLAND**."

## WITNESSETH:

**WHEREAS, UDOT** and **AMERICAN FORK** and **HIGHLAND** desire to preserve a corridor and establish a traffic signal and access control plan along SR-74 from US-89 in **AMERICAN FORK** to the north city limit of **HIGHLAND**, to be in accordance with both city's current transportation master plans, and to be in accordance with **UDOT's** current Access Management standards and practices; and

**WHEREAS**, this Agreement is now written to define current and future traffic signal locations and define access management conditions within **AMERICAN FORK** and **HIGHLAND** city limits; and

**WHEREAS**, all of SR-74 has been designated as a Regular Right-of-Way facility; and

**WHEREAS, AMERICAN FORK** is planning to construct a road to connect the east end of 740 North at SR-74 to the west end of 700 North at 200 East in the near future; and

**WHEREAS**, this Agreement is made to set out the terms and conditions whereby future traffic signals may be installed; and

**NOW THEREFORE,** it is agreed by and between the parties as follows:

1. The following are identified as existing or proposed traffic signal installations along SR-74 within **AMERICAN FORK** and **HIGHLAND**:

| | |
|---|---|
| • US-89 (Main Street American Fork) | (Existing) |
| • 100 North (American Fork) | (Existing) |
| • 300 North (American Fork) | (Existing) |
| • 740 North (American Fork) | (Proposed) |
| • 1120 North (American Fork) | (Existing) |
| • Canal Boulevard (Highland) | (Planned for construction) |
| • 10400 North (Highland) | (Existing) |
| • SR-92/Timpanogos Highway (Highland) | (Existing) |



Attachment: SR-74 or 100 East American Fork CA 5-19-2020 (Agreement with UDOT for 100 East Access Control Plan)

2. Traffic signals at any of the proposed intersections listed above will not be installed until warranted and approved by **UDOT**. Additional signals along this corridor are not anticipated at this time, but intersections other than those listed in #1 above may be considered for signalization when studied by **UDOT**. Any intersections of this nature are not guaranteed to be signalized. The decision to signalize such locations is at the sole discretion of **UDOT** after consultation with the affected city. It is understood it may be necessary to restrict certain types of traffic movements at any intersection or access in order to maintain proper traffic flow and improve safety throughout the corridor as agreed upon by the parties hereto.

3. The current Access Management category is "8" from US-89 to approximately 600 feet north of 1340 North Street in **AMERICAN FORK**, and "6" from approximately 600 feet north of 1340 North Street to the end of the route. Category 8 includes minimum traffic signal spacing of 1,320 feet, minimum street spacing of 300 feet, and minimum access spacing of 150 feet. Category 6 includes minimum traffic signal spacing of 1,320 feet, minimum street spacing of 350 feet, and minimum access spacing of 200 feet. However, it is obvious there are existing examples where signal, street, and access spacing is less than the minimum distances describe above. These locations are "grandfathered in" based on previous review and approval by **AMERICAN FORK**, **HIGHLAND**, and **UDOT**. Future requests for street or access connections shall be reviewed by the respective City and **UDOT**, and no new connections will be allowed unless approved by both agencies.

4. The parties hereto shall consider the concepts contained herein during the development of any master plans in this area and work towards the common goal of this Agreement.

5. In the event there are changes in the concepts or provisions covered by this corridor agreement, a modification to this agreement approved in writing by all parties hereto is required to place them into effect.

Attachment: SR-74 or 100 East American Fork CA 5-19-2020 (Agreement with UDOT for 100 East Access Control Plan)

**CORRIDOR PRESERVATION**
**SR-74 from US-89 to End of Route**
**AMERICAN FORK CITY**
**Federal ID No. 876000209**
**HIGHLAND CITY**
**Federal ID No. 870344281**

**IN WITNESS WHEREOF**, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

**ATTEST:**

By: _____

Title: _____

Date: _____

**AMERICAN FORK CITY,** a municipal corporation in the State of Utah

By: _____

Title: _____

Date: _____

(IMPRESS SEAL)

**IN WITNESS WHEREOF**, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

**ATTEST:**

By: _____

Title: Recorder

Date: 5/19/2020

**HIGHLAND CITY,** a municipal corporation in the State of Utah

By: _____

Title: Mayor

Date: 5/19/2020

(IMPRESS SEAL)

CORPORATE SEAL
HIGHLAND CITY
STATE OF UTAH



Attachment: SR-74 or 100 East American Fork CA 5-19-2020 (Agreement with UDOT for 100 East Access Control Plan)

**CORRIDOR PRESERVATION**
**SR-74 from US-89 to End of Route**
**AMERICAN FORK CITY**
**Federal ID No. 876000209**
**HIGHLAND CITY**
**Federal ID No. 870344281**

**********

**RECOMMENDED FOR APPROVAL: UTAH DEPARTMENT OF TRANSPORTATION**

By:_____
Region Three Traffic Operations Engineer

Date: _____

By: _____
Region Three Director

Date: _____

**APPROVED AS TO FORM:**

This Form Agreement has been previously approved as to form by the office of Legal Counsel for the Utah Department of Transportation.

**COMPTROLLER OFFICE**

By: _____
Contract Administrator

Date: _____

Attachment: SR-74 or 100 East American Fork CA 5-19-2020 (Agreement with UDOT for 100 East Access Control Plan)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Public Works **Director Approval** *Scott Sensanbaugher*

**AGENDA ITEM** Review and action on an ordinance amending Section 17.5.131 to the American Fork City Municipal Code, a relating to culinary water, pressurized irrigation and sewer connection.

**SUMMARY RECOMMENDATION**
Staff recommends approval of the amendments to Section 17.5.131 of the American Fork City Municipal Code relating to the culinary water, pressurized irrigation, and sewer connection.

**BACKGROUND**
Residential, commercial, industrial, institutional, and mixed uses shall be served by the City's culinary water, pressurized irrigation, and sewer system. The amendments to this section regulates the required service lateral connections as applicable to the various land uses.

**BUDGET IMPACT**
None.

**SUGGESTED MOTION**
I move to adopt the ordinance amending Section 17.5.131 of the American Fork City Municipal Code relating to the culinary water, pressurized irrigation, and sewer connection.

**SUPPORTING DOCUMENTS**

Code Amendment Ordinance (17.5.131) (DOCX)
Sec 17.5.131 Water and Sewer Connection Standards - Mark ups 2020-06-03 (DOCX)

**ORDINANCE NO. 2020-06-_____**

AN ORDINANCE AMENDING SECTION 17.5.131 OF THE MUNICIPAL CODE OF AMERICAN FORK CITY, UTAH, RELATED TO CULINARY WATER, PRESSURIZED IRRIGATION, AND SEWER CONNECTION STANDARDS.

WHEREAS, Chapter 17.5.131 of the American Fork Municipal Code relates to culinary water, pressurized irrigation, and sewer connection standards;

WHEREAS, City Council desires to amend the connection standards for water, pressurized irrigation, and sewer;

WHEREAS, it is in the best interest and general welfare of residents of American Fork to amend the Code relating to connection standards to require each individually owned unit to be served by a separate connection; and

NOW THEREFORE, be it ordained by the City Council of American Fork, Utah, that:

**PART I**

**TEXT OF ORDINANCE**

SECTION 1. Section 17.5.131 of the Municipal Code of American Fork City, relating to Culinary Water, Pressurized Irrigation, and Sewer Connection Standards is hereby amended to read as follows:

Section 17.5.131. – Culinary Water, Pressurized Irrigation, and Sewer Connection Standards.

A. Residential uses.
   1. Culinary water and pressurized irrigation. Each dwelling unit shall be served by the city's culinary water and pressurized irrigation system. Each dwelling unit shall be served by an individual service lateral and meter with the following exceptions:
      a. In the instance of multi-story multi-unit structures on a single lot, the city, at their sole discretion, may authorize the use of oversize connections and a master meter.
      b. In the instance of a multi-story multi-unit building where the property boundaries of each unit are confined to the extents of the structures and there are no exterior landscaping areas located within the unit’s property boundaries, an individual pressurized irrigation service lateral is not required.
   2. Sewer. Each dwelling unit shall be served by the city's sewer collection system. Each dwelling unit shall be connected to the sewer collection system by an individual lateral, except that in the instance of multi-story multi-unit structures on a single lot, the city, at their sole discretion, may authorize the use of a common lateral.

Attachment: Code Amendment Ordinance (17.5.131) (Amendment to Section 17.5.131)

B. Commercial, industrial, mixed uses, and institutional uses. Minimum standards for culinary water, pressurized irrigation and sewer connections for commercial, industrial, mixed uses, and institutional uses are as follows:
    1. Buildings. At a minimum, each building shall be served by a separate water and sewer connection which is connected directly to a city water and sewer laterals having sufficient capacity to accommodate the anticipated demand from the proposed use.
    2. Lots. Each lot shall be served by an individual service lateral and meter connected to the city's pressurized irrigation system.
    3. Multi-tenant. Each multi-tenant building shall conform to the following standards, as applicable:
        a. In the instance of a single story building where the units in the building are designed to be divided into separate units and intended to be owned by separate owners, each unit shall be served by individual water and sewer service laterals connected directly to a city water and sewer line having sufficient capacity to accommodate the anticipated demand from the proposed use.
        b. In the instance of a single story building where all of the units within the building are to remain in single ownership, the city may authorize the use of a single water and/or sewer connection for the entire building subject to: (1) the providing of adequate assurances of continued unified ownership, (2) submittal of a document, acceptable to the city, indemnifying the city against damages that may occur to tenants within the building as a result of a malfunction of the common utility system and agreeing to retro-fit the utility system to provide individual water and sewer laterals to each unit in the event of a sale of any of the units within the building to a separate owner.
        c. In the instance of a multi-story, multi-unit building intended to be divided into separately owned units (condominium project), each unit shall be served by an individual water service lateral and meter which are connected directly to a city water line and each unit shall be served by an individual sewer service lateral which is connected to a city or private sewer line having sufficient capacity to accommodate the anticipated demand from the proposed use.
        d. In the instance of a multi-story, multi-unit, mixed use building where all units within the structure are to remain in single ownership, the city may authorize the use of a single water and/or sewer connection for each land use type within the structure subject to: (1) the providing of adequate assurances of continued unified ownership, (2) submittal of a document, acceptable to the city, indemnifying the city against damages that may occur to tenants within the building as a result of a malfunction of the common utility system and agreeing to retro-fit the utility system to provide individual water and sewer laterals to each unit in the event of a sale of any of the units within the building to a separate owner.

Attachment: Code Amendment Ordinance (17.5.131) (Amendment to Section 17.5.131)

## PART II

## CONFLICTING ORDINANCES, SEVERABILITY, AND ADOPTION

**SECTION 1. Conflicting Provisions.** Whenever the provisions of this Ordinance conflict with the provisions of any other ordinance, resolution, or part thereof, the more stringent shall prevail.

**SECTION 2. Provisions Severable.** This Ordinance and the various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause, or phrase is adjudged to be unconstitutional or invalid, it is hereby declared that the remainder of the ordinance shall not be affected thereby.

EFFECTIVE DATE
This amended ordinance shall take effect immediately upon its passage and publication as prescribed by law.

Passed by the American Fork City Council this 30 day of June, 2020.

_____
Bradley J. Frost
American Fork City Mayor

ATTEST:

_____
Terilyn Lurker
City Recorder

Attachment: Code Amendment Ordinance (17.5.131) (Amendment to Section 17.5.131)

**Sec 17.5.131 Culinary Water, Pressurized Irrigation, And Sewer Connection Standards**

A. Residential uses.
   1. Culinary water and pressurized irrigation. Each dwelling unit shall be served by the city's culinary water and pressurized irrigation system. Each dwelling unit shall be served by an individual service lateral and meter with the following exceptions:
      a. In the instance of multi-story multi-unit structures on a single lot, the city, at their sole discretion, may authorize the use of oversize connections and a master meter.
      b. In the instance of a multi-story multi-unit building where the property boundaries of each unit are confined to the extents of the structures and there are no exterior landscaping areas located within the unit's property boundaries, an individual pressurized irrigation service lateral is not required.
   2. Sewer. Each dwelling unit shall be served by the city's sewer collection system. Each dwelling unit shall be connected to the sewer collection system by an individual lateral, except that in the instance of multi-story multi-unit structures on a single lot, the city, at their sole discretion, may authorize the use of a common lateral.

B. Commercial, industrial, mixed uses, and institutional uses. Minimum standards for culinary water, pressurized irrigation and sewer connections for commercial, industrial, mixed uses, and institutional uses are as follows:
   1. Buildings. At a minimum, each building shall be served by a separate water and sewer connection which is connected directly to a city water and sewer laterals having sufficient capacity to accommodate the anticipated demand from the proposed use.
   2. Lots. Each lot shall be served by an individual service lateral and meter connected to the city's pressurized irrigation system.
   3. Multi-tenant. Each multi-tenant building shall conform to the following standards, as applicable:
      a. In the instance of a single story building where the units in the building are designed to be divided into separate units and intended to be owned by separate owners, each unit shall be served by individual water and sewer service laterals connected directly to a city water and sewer line having sufficient capacity to accommodate the anticipated demand from the proposed use.
      b. In the instance of a single story building where all of the units within the building are to remain in single ownership, the city may authorize the use of a single water and/or sewer connection for the entire building subject to: (1) the providing of adequate assurances of continued unified ownership, (2) submittal of a document, acceptable to the city, indemnifying the city against damages that may occur to tenants within the building as a result of a malfunction of the common utility system and agreeing to retro-fit the utility system to provide individual water and sewer laterals to each unit in the event of a sale of any of the units within the building to a separate owner.
      c. In the instance of a multi-story, multi-unit building intended to be divided into separately owned units (condominium project), each unit shall be served by an individual water service lateral and meter which are connected directly to a city water line and each unit shall be served by an individual sewer service lateral which is connected to a city or private sewer line having sufficient capacity to accommodate the anticipated demand from the proposed use.
      d. In the instance of a multi-story, multi-unit, mixed use building where all units within the structure are to remain in single ownership, the city may authorize the use of a single water and/or sewer connection for each land use type within the structure subject to: (1) the providing of adequate assurances of continued unified ownership, (2) submittal of a document, acceptable to the city, indemnifying the

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Attachment: Sec 17.5.131 Water and Sewer Connection Standards - Mark ups 2020-06-03 (Amendment to Section 17.5.131)

city against damages that may occur to tenants within the building as a result of a malfunction of the common utility system and agreeing to retro-fit the utility system to provide individual water and sewer laterals to each unit in the event of a sale of any of the units within the building to a separate owner.

(Ord. No. 08-05-26)

Attachment: Sec 17.5.131 Water and Sewer Connection Standards - Mark ups 2020-06-03 (Amendment to Section 17.5.131)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Recorder **Director Approval** *Terilyn Lurker*

**AGENDA ITEM** Review and action on a resolution declaring items to be surplus and disposed of.

**SUMMARY RECOMMENDATION**
Staff would recommend approval.

**BACKGROUND**
The Fire Department has requested that a 1998 E350 Ambulance be declared surplus and disposed of. A public hearing notice was published in the June 19, 2020, Deseret News as required by our ordinance and a public hearing has been scheduled prior to action being taken on this resolution.

**BUDGET IMPACT**
Unknown at this time.

**SUGGESTED MOTION**
I move to approve the resolution declaring the 1998 E350 Ambulance to be surplus and disposed of.

**SUPPORTING DOCUMENTS**

06-30-20 - 1998 E350 Ambulance surplus (DOC)

**RESOLUTION NO. _____**

**A RESOLUTION DECLARING PROPERTY TO BE SURPLUS**

**WHEREAS**, American Fork City provided published notice of a public hearing in the *Deseret News* on the 19 day of June 2020; and

**WHEREAS**, a public hearing was held on the 30 day of June 2020, regarding the proposed surplus of property, where public comment was entertained;

**THEREFORE, BE IT RESOLVED** by the City Council of American Fork, Utah as follows:

The following is hereby found to be surplus and to be disposed of.

| Description | | |
|---|---|---|
| 1998 Ford E-350 Ambulance | VIN 1FDWE30F7WHB37461 | 54,272 miles |

This Resolution shall become effective upon its passage.

PASSED by the American Fork City Council this 30 day of June, 2020.

Bradley J. Frost, Mayor

ATTEST:

Terilyn Lurker, Recorder

Attachment: 06-30-20 - 1998 E350 Ambulance surplus (Surplus Property -1998 E350 Ambulance)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Public Works **Director Approval** *Scott Sensanbaugher*

**AGENDA ITEM** Review and action on the renewal of a Janitorial Contract for city buildings

**SUMMARY RECOMMENDATION** The City Engineer recommends renewing the janitorial contract awarded in 2019 to Absolute Janitorial Services, based on the agreed amount of $169,989.12, annually.

**BACKGROUND**

Absolute Janitorial Services has been providing janitorial services for the City for the past year. Overall, we are pleased with their service and wish to renew our contract with them for three additional years.

**BUDGET IMPACT** Funding for this project has been allocated in Building Maintenance 10-4160-800.

**SUGGESTED MOTION** Mr. Mayor, I move that we renew the contract with Absolute Janitorial Services for an additional three years in the amount of $169,989.12 each year, and approve the contract as presented.

**SUPPORTING DOCUMENTS**

Proposed Contract CC for 2020 through 2023 (PDF)

# AGREEMENT FOR JANITORIAL SERVICES

## Janitorial Services

This Agreement (hereinafter referred to as "Agreement") is entered into this ____ day of _____, 2020 (**Effective date**) by and between Absolute Janitorial Services, with its principal place of business at 1296 West 635 South, Orem, Utah 84058 (hereinafter referred to as "ABS"), and American Fork City, a municipal corporation with its principal place of business at 51 East Main Street, American Fork, Utah 84003 (hereinafter referred to as "City") (collectively referred to herein as the "Parties").

## RECITALS

WHEREAS, ABS is engaged in the business and profession of janitorial services;

WHEREAS, City desires to contract with ABS for certain professional janitorial services.

WHEREAS, ABS has the necessary expertise and experience to perform the said janitorial services for City and ABS and is properly qualified and licensed in the State of Utah;

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

## AGREEMENT

1. Term; Termination.

a. The term of this Agreement shall be three (3) years from the Effective date of this Agreement.

b. Notwithstanding anything contrary contained herein, City may terminate this Agreement at any time by giving ABS written notice in accordance with the notice provisions set forth herein. Upon receipt of such notice, ABS shall cease all work undertaken hereunder. In the event City terminates this Agreement without cause prior to the conclusion of the term, City shall pay ABS a sum of $169,989.12.

c. ABS may terminate this Agreement at any time within thirty (30) day written notice to City in accordance with the notice provisions set forth herein. Upon City's receipt of notice of termination from ABS, City may request the stop of services prior to the conclusion of the thirty (30) day period without penalty.

d. Upon termination of this Agreement by either party, ABS shall provide a final invoice to City, showing all costs incurred but unpaid, and the City shall pay such costs. Payment of final invoice shall be made consistent with Section 4 herein.

2. Scope of Services. The scope of services pursuant to this Agreement shall be limited to janitorial services. Specific Services shall be as set forth in Attachment A.

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

3. Compensation. In consideration of the services provided to City by ABS, City shall pay ABS in accordance with the Service and Fee Schedule set forth in Attachment B.

4. Invoice; Payment.

a. For services rendered hereunder, ABS shall invoice monthly for services provided in accordance with the approved Service and Fee Schedule. ABS shall submit monthly invoices to City showing the work completed and the amount of compensation due. ABS shall submit invoices for work done in a timely manner. City shall not be required to pay for work that is invoiced more than 60 days after it was performed.

b. Payment of undisputed amounts shall be due and payable thirty (30) days after the City's receipt of the invoice.

c. In the event amounts are not paid in full within thirty (30) days of City's receipt of the invoice, City agrees to pay interest at the rate of one and one-half percent (1.5%) per month on any and all unpaid balance of services, costs, and expenses.

d. City consents to ABS's immediate withdrawal and termination of this Agreement should the account become more than thirty (30) days delinquent. Further, in the event of default, ABS may pursue any and all remedies available at law or in equity.

e. In the event an amount is disputed, City shall notify ABS in writing of its dispute within thirty (30) days. The parties shall make a good faith effort to resolve the disputed amount. If correspondence does not resolve the dispute, the parties or their respective representatives shall meet in person on at least one occasion and attempt to resolve the matter prior to pursuing litigation.

5. Relationship of Parties.

ABS, its agents, and employees shall be an independent contractor performing janitorial services for the City. Nothing contained in this Agreement shall be construed to create a relationship of employer and employee, principal and agent, or partners or co-venture between City and ABS. As independent contractors, ABS, its agents, and employees shall not qualify for or receive any employee benefits from the City, including but not limited to, leave, retirement, insurance, bonding, use of City vehicles, or any other benefits afforded to City employees.

6. Employees and Subcontractors.

ABS shall be solely responsible for the payment of wages, salary or benefits to any and all employees or contractors retained by ABS in the performance of the services under this Agreement. ABS agrees to abide by all applicable employment laws and regulations and to indemnify, defend and hold harmless City from any and all claims that may arise from ABS's relationship to its employees and subcontractors.

7. Indemnification.

ABS shall indemnify the City and hold it harmless against any and all claims, liabilities, or causes of action relating to or arising out of ABS's failure to perform the services

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

described herein, or the intentional or negligent acts of its employees, in the course of performing under this contract.

8. Standard of Performance; Licenses.

ABS agrees and represents that it has the personnel, experience, and knowledge necessary to qualify it for the particular duties to be performed under this Agreement. ABS shall maintain all required licenses throughout the term of this Agreement. ABS shall require and ensure that all of ABS's employees and subcontractors maintain all required licenses.

9. Insurance.

ABS shall maintain liability insurance, at its own expense, to protect City from any negligent acts, errors, or omissions on the part of ABS. Notwithstanding the existence of professional liability insurance, the total aggregate of ABS's liability to all parties related to this Agreement shall not exceed one million dollars ($1,000,000.00).

10. Time is of the Essence; Liquidated Damages.

City and ABS agree that time is of the essence with regard to this agreement as to each covenant, term, condition, representation, warranty and provision hereof.

11. Notice.

All notices under this Agreement will be in writing and will be deemed to have been duly given if delivered personally or by a nationally recognized courier service or mailed by registered or certified national mail service, return receipt requested, postage prepaid, to the Parties at the addresses set forth below. All notices under this Agreement that are addressed as provided in this Section. If delivered personally or by nationally recognized courier service, notice will be deemed given upon delivery. If delivered by mail in the manner described above, notice will be deemed given on the date received by the recipient as reflected in the return receipt. All notices shall be directed to the Parties hereto as follows:

CITY:

American Fork City
Attn: David Bunker
51 East Main Street
American Fork, Utah 84003
Phone: (801) 763-3000
Email: dbunker@afcity.net

With a copy to (which shall not constitute notice):

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

American Fork City Public Works
Attn: Scott Sensanbaugher
275 East 200 North
American Fork, Utah 84003
Phone: (801) 763-3060
ssensanbaugher@afcity.net

COMPANY:

Absolute Janitorial Services
1296 West 635 South
Orem, Utah 84058

12. Waiver.

Unless otherwise indicated herein, failure by any party to insist upon the strict performance of any covenant, duty, agreement, or condition of this Agreement, or to exercise any right or remedy consequent upon a breach thereof, shall not constitute a waiver of any such breach of any other covenant, agreement, term, or condition. Any party, by notice delivered in the manner provided in this Agreement, may, but shall be under no obligation to waive any of its rights and any conditions to its obligation hereunder, or any duty, obligation, or covenant of any other party. No waiver shall affect or alter the remainder of this Agreement, but each and every covenant, agreement, term, and condition shall continue in full force with respect to any other then existing or subsequently occurring breach. To be effective a waiver must be signed by both parties hereto.

13. Compliance with Laws and Policies.

In the performance of their obligations hereunder, the parties shall obey and abide by all applicable laws, rules and regulations, and with all applicable ordinances, policies and procedures. Both parties shall abide by all applicable federal and state laws, rules, regulations, and executive orders pertaining to equal employment opportunity; pursuant thereto, shall assure that no person shall, on the grounds of race, color, national origin, sex, age, or disability, be excluded from employment with, participation in, be denied the benefits of or be otherwise subjected to discrimination under, any program or activity performed under this Agreement; and to promptly take appropriate steps to correct any deficiency that may be found to occur in compliance with such laws and rules.

14. Rights and Remedies.

The rights and remedies of any of the parties hereto shall not be exclusive. In general, the respective rights and obligations hereunder shall be enforceable by specific performance, injunction, or other equitable remedy, but nothing herein contained is intended to or shall limit or affect any rights at law or by statute or otherwise of any party aggrieved as against

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

the other party for a breach or threatened breach of any provisions hereof, it being the intention of this Paragraph to make clear the agreement of the parties that the respective rights and obligations of the parties hereunder shall be enforceable in equity as well as to law or otherwise.

15. Entire Agreement.

This Agreement and the exhibits attached hereto constitute the entire agreement between the Parties on the Subject matter covered herein and this Agreement supersedes any and all prior agreements between the Parties related to the services. The Parties represent and acknowledge that they have not relied on any statements or promises of any kind other than those specifically set forth in this Agreement.

16. Amendments.

This Agreement may only be amended in writing signed by each of the Parties hereto. If, as the result of legislative action or rule-making, any of the provisions of this Agreement becomes inconsistent with Utah law, the Parties will promptly meet to negotiate in good faith such amendments as may be necessary to comply with Utah law.

17. Force Majeure.

Neither City nor ABS shall be liable for any delay in the performance of this Agreement, nor for any other breach, nor for any loss or damage arising from uncontrollable forces such as fire, theft, storm, war, or any other force majeure that could not have been reasonably avoided by exercise of due diligence.

18. Section Headings.

The headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement.

19. Severability.

In any provision of this Agreement shall be held or deemed to be, or shall in fact be, invalid, inoperative or unenforceable to any extent, the remainder of this Agreement shall not be impaired and shall be enforced to the fullest extent permitted by law.

20. Counterparts.

This Agreement may be executed in one or more counterparts, each of which when so executed shall be deemed an original, but all of which together shall constitute one instrument.

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

21. Choice of Law.

The interpretation of this Agreement and any claim or controversy arising out of or related to this Agreement shall be governed by the laws of the State of Utah. Jurisdiction and venue for the enforcement of this Agreement shall be found exclusively in the courts of Utah County, State of Utah. Each of the parties irrevocably submits to the exclusive jurisdiction of such courts in any proceeding, waives any objection it may now or hereafter have to venue or to convenience of forum, agrees that all claims in respect of any proceeding shall be heard and determined only in any such court and agrees not to bring any proceeding arising out of or relating to this Agreement in any other court

22. Confidentiality.

Any confidential information provided to or developed by the Consultant in the performance of this Agreement shall be kept confidential and shall not be revealed or made available to any person by the Consultant without the prior written approval of the City. This provision shall survive any termination of this Agreement.

23. Assignment.

This Agreement may not be assigned by either party without the written consent of the other party. If consent to an assignment is obtained, this Agreement is binding on the successors and assigns of the Parties to this Agreement.

24. Attorney Fees; Costs.

In the event either party seeks to enforce the terms hereof in a lawsuit or other proceeding, the prevailing party shall be entitled to an award of the costs incurred, including reasonable attorney fees.

25. Authority.

The individual(s) executing this Agreement on behalf of, or as a representative for a corporation or other person, firm, partnership or government entity, represents and warrants that he or she is duly authorized to execute and deliver this Agreement on behalf of the corporation, person, firm, partnership or government entity and that this Agreement is binding upon the entity in accordance with its terms.

***Signature Page Follows***

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

IN WITNESS WHEREOF, the Parties have duly executed this Agreement as of the Effective Date.

AMERICAN FORK CITY

_____
David Bunker
City Administrator

Date:_____

ABSOLUTE JANITORIAL SERVICES

_____
Leesa Bell
VP Operations

Date: _____

Attest:

_____
Recorder

Approved as to content:

_____
City Engineer

Approved as to form:

_____
City Attorney

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

Attachment A
Scope of Services

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## SCHEDULES AND MANHOURS

**American Fork Library and Literacy Center – Total Weekly Manhours: 36**

| Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|
| **Night Crew 8 pm – 11 pm** | **Night Crew 8 pm – 11 pm** | **Night Crew 8 pm – 11 pm** | **Night Crew 8 pm – 11 pm** | **Night Crew 8 pm – 11 pm** | **Night Crew 6 pm – 9 pm** |
| **Night Crew 8 pm – 11 pm** | **Night Crew 8 pm – 11 pm** | **Night Crew 8 pm – 11 pm** | **Night Crew 8 pm – 11 pm** | **Night Crew 8 pm – 11 pm** | **Night Crew 6 pm – 9 pm** |
| Total daily manhours: **6** | Total daily manhours: **6** | Total daily manhours: **6** | Total daily manhours: **6** | Total daily manhours: **6** | Total daily manhours: **6** |

**American Fork Administrative Offices – Total Weekly Manhours: 6**

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|
| **Staff 6 am-8am** | | **Staff 6 am-8am** | | **Staff 6 am-8am** |
| Total daily manhours: **2** | | Total daily manhours: **2** | | Total daily manhours: **2** |

**American Fork City Hall – Total Weekly Manhours: 4**

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|
| **Staff 8 am-9am** | | **Staff 8 am-10am** | | **Staff 8 am-9am** |
| Total daily manhours: **1** | | Total daily manhours: **2** | | Total daily manhours: **1** |

**American Fork City Cemetery Office – Total Weekly Manhours: 1 AJS will clean the Cemetery Office once a week.**

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

**American Fork Police & Courts – Total Weekly Manhours: 40**

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|---|---|---|---|
| **Staff 5 pm – 9 pm** | **Staff 5 pm – 9 pm** | **Staff 5 pm – 9 pm** | **Staff 5 pm – 9 pm** | **Staff 5 pm – 9 pm** |
| **Staff 5 pm – 9 pm** | **Staff 5 pm – 9 pm** | **Staff 5 pm – 9 pm** | **Staff 5 pm – 9 pm** | **Staff 5 pm – 9 pm** |
| Total daily manhours: **8** | Total daily manhours: **8** | Total daily manhours: **8** | Total daily manhours: **8** | Total daily manhours: **8** |

**American Fork Public Works Shops and Engineering Office - Total Weekly Manhours: 12**

| Monday | Tuesday | Wednesday | Thursday |
|---|---|---|---|
| **Staff 6 pm – 8 pm** | **Staff 6 pm – 8 pm** | **Staff 6 pm – 8 pm** | **Staff 6 pm – 8 pm** |
| Total daily manhours: **3** | Total daily manhours: **3** | Total daily manhours: **3** | Total daily manhours: **3** |

**American Fork Fitness Center – Total Weekly Manhours: 108**

| Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|
| **Porter 12pm-2pm** | **Porter 12pm-2pm** | **Porter 12pm-2pm** | **Porter 12pm-2pm** | **Porter 12pm-2pm** | **Porter 12pm-2pm** |
| **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** |
| **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** |
| **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** |
| **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** | **Staff 9 pm- 1 am** |
| Total daily manhours: **18** | Total daily manhours: **18** | Total daily manhours: **18** | Total daily manhours: **18** | Total daily manhours: **18** | Total daily manhours: **18** |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## Library and Literacy Center Day Porter Services

| CLEANING TASKS | ✓ COMPLETE |
|---|---|
| | |
| **Restrooms – To be performed each cleaning service (M - F)** | |
| Fully clean all restrooms, as per AbsoluteWay training | |
| - Clean and sanitize toilet bowls and urinals, toilet seats (tops and undersides), toilet handles | |
| - Polish mirrors and stainless steel surfaces | |
| - Polish porcelain toilets (under seats, bases, and under urinals) | |
| - Wipe partitions, walls in stalls (behind toilets), dispensers | |
| - Clean and sanitize sinks, countertops, wall switches, changing tables, door knobs, and faucets | |
| - Remove hardwater stains as needed | |
| - Sanitize and clean shower walls, floors and fixtures. | |
| - Refill Paper dispensers (Toilet paper/Paper Towels), soap, and wax bags | |
| Remove waste from feminine disposal containers and trash cans | |
| Sweep and mop restrooms floors with sanitizing neutral cleaner | |
| Clean and polish drinking fountains | |
| | |
| **Trash Removal** | |
| Empty trash cans that need attention | |
| Replace unfit liners/ Clean and sanitize receptacles as needed | |
| Remove trash to dumpster | |
| | |
| **Vestibules** | |
| Clean entry door glass to be free from prints, grime, etc | |
| | |
| **CHECK OUT** | |
| Return equipment to janitor closet | |
| Place used rags in the appropriate bin | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## Library and Literacy Center Shift 1 Job Card

| DAILY CLEANING TASKS | ✓ COMPLETE |
|---|---|
| | |
| **Trash Removal – All tasks performed daily (M-F)** | |
| Empty all trash cans throughout building including those found in conference rooms, offices, break areas, etc. | |
| Replace unfit liners/ Clean and sanitize receptacles as needed | |
| Remove trash to dumpster | |
| | |
| **Breakroom – To be performed each cleaning service (M-F)** | |
| Sanitize break room counters, faucets, sink, exterior of fridge, & cupboards | |
| Clean and sanitize interior and exterior of microwave. | |
| Chairs and tables are wiped down with sanitizing spray and reset. | |
| Paper towels, hand soap, hand sanitizers are checked and restocked daily. | |
| Sweep and mop breakroom floor with sanitizing neutral cleaner | |
| | |
| **Offices/Entry – To be performed each cleaning service (M-F)** | |
| Empty trash cans, replace liners as needed | |
| Clean all entry door glass and handles daily. | |
| Wipe down elevator doors and inside walls of elevators throughout building | |
| | |
| **WEEKLY SERVICES** | |
| **Mondays** – Dust behind computers in the technology room, picture frames | |
| **Tuesdays –** Vacuum Between Stacks | |
| **Wednesday –** Sweep concrete floor in basement hallway | |
| **Thursdays** – Clean glass and doors on mezzanine and glass around entry doors. | |
| **Fridays** – Wipe tile walls in restrooms | |
| **Saturdays –** Dust black file cabinets | |
| | |
| **MONTHLY SERVICES TO BE PERFORMED ON SPECIFIED DAYS BELOW** | |
| **1st Monday –** Clear cobwebs and dust ceilings, lights, walls, corners, etc | |
| **1st Wednesday –** Dust tops of cupboards, shelves, empty tables, desks, etc | |
| **2nd Monday** – Dust cubicle tops and bases, ceiling vents, handrailings, top of book stacks | |
| **2nd Wednesday –** Dust walls, baseboards, wall hanging frames, sanitize handrailings | |
| **3rd Monday** – Dust all chairs (including bases, backs, and arms) | |
| **3rd Wednesday –** Clean and polish wooden furniture, Wipe plastic and leather furniture | |
| **4th Monday –** Dust blinds and window sills | |
| **4th Wednesday** – Clean interior windows | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## Library and Literacy Center Shift 2 Job Card

| CLEANING TASKS | ✓ COMPLETE |
|---|---|
| | |
| **Restrooms – To be performed each cleaning service (M - F)** | |
| Fully clean all restrooms, as per AbsoluteWay training | |
| - Clean and sanitize toilet bowls and urinals, toilet seats (tops and undersides), toilet handles | |
| - Polish mirrors and stainless steel surfaces | |
| - Polish porcelain toilets (under seats, bases, and under urinals) | |
| - Wipe partitions, walls in stalls (behind toilets), dispensers | |
| - Clean and sanitize sinks, countertops, wall switches, changing tables, door knobs, and faucets | |
| - Remove hardwater stains as needed | |
| - Sanitize and clean shower walls, floors and fixtures. | |
| - Refill Paper dispensers (Toilet paper/Paper Towels), soap, and wax bags | |
| Remove waste from feminine disposal containers and trash cans | |
| Sweep and mop restrooms floors with sanitizing neutral cleaner | |
| Clean and polish drinking fountains | |
| | |
| **Hard Floors – All tasks performed daily (M-F)** | |
| Dust mop and scrub all tile flooring in main entryway | |
| Remove all floor debris (scrape sticky substances as needed) | |
| Mondays – mop edges and corners of entryways on both floors | |
| Scrub stairs Tuesdays and Fridays | |
| Spot mop stairs Monday-Thursday | |
| | |
| **Carpeting – All tasks performed daily (M-F)** | |
| Monday, Wednesday, Friday – Vacuum 1st floor | |
| Tuesday, Thursday – Vacuum 2nd floor | |
| | |
| **Literacy Center – Specific Tasks performed Wednesday and Saturday** | |
| Vacuum carpeted areas in the literacy center and the hallway outside. | |
| Clean Table tops | |
| Clean study carrels – top shelf, desk tops, and behind computers | |
| Put paper in recycling | |
| Clean elevator doors | |
| Spot clean carpet stains | |
| | |
| **CHECK OUT** | |
| Return equipment to janitor closet | |
| Place used rags in the appropriate bin | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## Rec Center Night Shift 1 Job Card

| DAILY CLEANING TASKS | ✓ COMPLETE |
|---|---|
| | |
| **Trash Removal – All tasks performed daily (M-S)** | |
| Empty all trash cans throughout building including those found in conference rooms, offices, break areas, etc. | |
| Replace unfit liners/ Clean and sanitize receptacles as needed | |
| Remove trash to dumpster | |
| | |
| **Breakrooms/work rooms – All tasks performed daily (M-S)** | |
| Wipe down all counterspace with sanitizing spray daily. | |
| Wipe exterior of microwave, fridge, and cupboard doors daily. | |
| Chairs and tables are wiped down with sanitizing spray and reset daily. | |
| Check and restock paper towels, hand soap, hand sanitizers. | |
| Any glass partitions, mirrors, and Stainless steel is cleaned daily. | |
| | |
| **Entries, Vestibules, Glass – All tasks performed daily (M-S)** | |
| Clean all entry door glass daily | |
| Clean push bars, door handles, touch points with sanitizing spray daily. | |
| Vacuum mats with upright vacuum daily | |
| Clean all interior glass as needed daily | |
| | |
| **Vacuuming – All tasks performed daily (M-S)** | |
| Vacuum all carpeted areas nightly including offices, child care room, etc | |
| Vacuum under exercise equipment | |
| | |
| **Windows and Glass – All tasks performed as noted below** | |
| Monday – Clean interior glass (as needed) on South half of first floor; spot clean all other glass in facility | |
| Tuesday – Clean interior glass (as needed) on North half of first floor; spot clean all other glass in facility | |
| Wednesday – Clean interior glass (as needed) on South half of Second floor; spot clean all other glass in facility | |
| Thursday – Clean interior glass (as needed) on North half of Second floor; spot clean all other glass in facility | |
| Friday – Clean interior glass (as needed) on South half of first floor; spot clean all other glass in facility | |
| Saturday - Clean interior glass (as needed) on North half of first floor; spot clean all other glass in facility | |
| | |
| **CHECK OUT** | |
| Return equipment to janitor closet | |
| Place used rags in the appropriate bin | |
| Turn off all lights, Lock doors | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## Rec Center Shift 2 Job Card – Restrooms and Floors

| CLEANING TASKS | ✓ COMPLETE |
|---|---|
| | |
| **Restrooms – All tasks performed daily (M-S)** | |
| Fully clean all restrooms, as per AbsoluteWay training | |
| - Clean and sanitize toilet bowls and urinals | |
| - Polish mirrors and stainless steel surfaces | |
| - Polish porcelain toilets (under seats, bases, and under urinals) | |
| - Wipe partitions, walls in stalls (behind toilets), dispensers | |
| - Clean and sanitize sinks, countertops | |
| - Remove hardwater stains as needed | |
| - Dust all walls with duster | |
| - Dust ceiling vents, tops of lights, below sink pipes | |
| Refill Paper dispensers (Toilet paper/Paper Towels), soap, and wax bags | |
| Clean and polish drinking fountains (remove all hardwater stains) | |
| Sweep/vacuum and mop all restroom floors | |
| Saturdays – Pour mop water down restroom drains | |
| | |
| **Hard Floors – All tasks performed daily (M-S)** | |
| Dust mop and scrub all tile flooring in main entryway | |
| Remove all floor debris (scrape sticky substances as needed) | |
| Mondays (as needed other days) – mop edges and corners of entryways on both floors | |
| Scrub stairs with specific equipment | |
| Scrub Spin Room floor Tuesdays and Fridays (Springville employees will move equipment. Work around it.) | |
| Vacuum and Mop Spin Room Daily | |
| Scrub basketball courts nightly | |
| Scrub hallways with appropriate equipment | |
| Mop racquetball courts weekly | |
| | |
| CHECK OUT | |
| Return equipment to janitor closet | |
| Place used rags in the appropriate bin | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

Rec Center Day Porter

| Clock In | ✓ COMPLETE |
|---|---|
| CLEANING TASKS | |
| **Entrance** | |
| Mats and carpet shall be free of spots, stains, gum, dirt, and debris without causing damage. | |
| Glass and metal surfaces shall appear streak and film free | |
| Dust and clean sills, ledges, and heat registers | |
| Walls and fixtures shall be free of dust and cobwebs | |
| Walls behind the waste/trash cans need to be cleaned as needed | |
| Empty exterior garbages and replace liners as needed. | |
| Wipe down exterior garbages as needed | |
| Pick up/sweep/blow any garbage or debris that is outside entrance (Only 10 ft out) | |
| | |
| **Restrooms- 2 times per shift. Check dispensers hourly to make sure they never run out** | |
| Fully clean all restrooms, as per AbsoluteWay training | |
| - Clean and sanitize toilet bowls and urinals | |
| - Polish mirrors and stainless steel surfaces | |
| - Polish porcelain toilets (under seats, bases, and under urinals) | |
| - Wipe partitions, walls in stalls (behind toilets), dispensers | |
| - Clean and sanitize sinks, countertops | |
| - Remove hard water stains as needed | |
| - Refill Paper dispensers (Toilet paper/Paper Towels), soap, and wax bags | |
| Clean and polish drinking fountains | |
| Showers shall be wiped down and sanitized daily and drains should be free of hair and debris. | |
| Air vents and light fixtures need to be dust and cobweb free | |
| Shower curtains TBD | |
| Shine chrome in the bathrooms | |
| Keep hand dryers free of soil and debris | |
| Empty garbages as needed and replace liners | |
| Sweep/mop floors as needed throughout shift | |
| | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

| | |
|---|---|
| **Corridors** | |
| Sweep/Mop floors and make sure cove bases are free of dust, cobwebs, dried-soil, gum, spots, stains, and all debris. There shall be no standing water, lint, dust streaks, cleaner residue or film. Cove bases shall have no wax build up on them. | |
| All glass and metal surfaces shall appear streak and film free | |
| Walls and fixtures shall be free of dust, cobwebs, dried-soil, and soil without causing damage | |
| Drinking fountains shall be free of dust, soil, scale, and water spots without causing damage. Disinfect and polish as needed throughout shift | |
| | |
| **Outside of bathrooms/Locker Rooms** | |
| Lockers wiped inside and out and on tops as needed | |
| Windows should be spot free | |
| Garbages emptied and liners replaced as needed | |
| Make sure all chrome is clean and shiny | |
| Sweep/mop floor as needed throughout shift | |
| | |
| **Pool Decks** | |
| Interior glass and metal surfaces need to be streak and film free | |
| Dust and soil removed from decks, sills, ledges, and heat registers (needs to be free of dust, cobwebs, soil, stains, gum, and debris) | |
| Check garbages, empty, and replace liners, and wipe down as needed | |
| Fire extinguisher in deck area needs to be wiped down to prevent rusting | |
| | |
| **Office Area** | |
| Empty garbages and replace liners as needed, Clean outside/inside of garbage cans as needed | |
| Clean glass and chrome on doors | |
| Dust all surfaces once a week | |
| | |
| **Concession Area** | |
| Clean glass on door and polish chrome only | |
| Make sure tables and sitting area stay clean throughout shift | |
| | |
| **Fitness Areas** | |
| Glass and metal need to be streak and film free | |
| Dust equipment as needed | |
| Empty garbages and replace liners as needed, clean outside of garbage containers as needed | |
| Sweep and mop around treadmills during low peak times as needed | |
| | |
| **Racquetball Courts** | |
| Sweep courts daily with dust mop | |
| | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

| | |
|---|---|
| **Elevators** | |
| Tracks shall be free of dust and debris | |
| Walls and doors shall be free of dust, cobwebs, soil spots, and stains without causing damage | |
| Bright metal surfaces shall be polished to a high shine. There shall be no residue or film | |
| Floors, carpet, and cove bases shall be free of dust, cobwebs, dried-soil, soil, gum, spots, stains and other debris. | |
| Cove bases shall have no wax build up and floors shall be clean of any standing water, lint, cleaner residue, embedded soil, and foreign objects | |
| | |
| **Stairs/Stairwells** | |
| Rails and walls shall be free of dust, cobwebs, dried soil, and soil without causing damage | |
| Steps and landings shall be free of dust, cobwebs , dried soil, gum, stains and debris. Including risers and cove bases | |
| | |
| **Track** | |
| Keep track free from debris, dust, etc | |
| | |
| **CHECK OUT** | |
| Return equipment to janitor closet | |
| Place used rags in the appropriate bin | |
| Clock out | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## Police and Courts Shift 1 Job Card

| DAILY CLEANING TASKS | ✓ COMPLETE |
|---|---|
| | |
| **Trash Removal – All tasks performed daily (M-F)** | |
| Empty all trash cans throughout building including those found in conference rooms, offices, break areas, etc. | |
| Replace unfit liners/ Clean and sanitize receptacles as needed | |
| Remove trash to dumpster | |
| | |
| **Breakroom – To be performed each cleaning service (M-F)** | |
| Sanitize break room counters, faucets, sink, exterior of fridge, & cupboards | |
| Clean and sanitize interior and exterior of microwave. | |
| Chairs and tables are wiped down with sanitizing spray and reset. | |
| Paper towels, hand soap, hand sanitizers are checked and restocked daily. | |
| Sweep and mop breakroom floor with sanitizing neutral cleaner | |
| | |
| **Offices/Entry – To be performed each cleaning service (M-F)** | |
| Empty trash cans, replace liners as needed | |
| Clean all entry door glass and handles daily. | |
| Wipe down elevator doors and inside walls of elevators throughout building | |
| | |
| **WEEKLY SERVICES** | |
| **Tuesdays and Fridays** – Wipe stainless booking area | |
| **Thursdays** – Spot clean carpets | |
| **Fridays** – Clean benches and toilet/sink in all holding cells | |
| | |
| **MONTHLY SERVICES TO BE PERFORMED ON SPECIFIED DAYS BELOW** | |
| **1st Monday** – Clear cobwebs and dust ceilings, lights, walls, corners, etc | |
| **1st Wednesday** – Dust tops of cupboards, shelves, empty tables, desks, etc | |
| **2nd Monday** – Dust cubicle tops and bases, ceiling vents, handrailings | |
| **2nd Wednesday** – Dust walls, baseboards, wall hanging frames, sanitize handrailings | |
| **3rd Monday** – Dust all chairs (including bases, backs, and arms) | |
| **3rd Wednesday** – Clean and polish wooden furniture, Wipe plastic and leather furniture | |
| **4th Monday** – Dust blinds and window sills | |
| **4th Wednesday** – Clean interior windows | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## Police and Courts Shift 2 Job Card

| CLEANING TASKS | ✓ COMPLETE |
|---|---|
| | |
| **Restrooms – To be performed each cleaning service (M - F)** | |
| Fully clean all restrooms, as per AbsoluteWay training | |
| - Clean and sanitize toilet bowls and urinals, toilet seats (tops and undersides), toilet handles | |
| - Polish mirrors and stainless steel surfaces | |
| - Polish porcelain toilets (under seats, bases, and under urinals) | |
| - Wipe partitions, walls in stalls (behind toilets), dispensers | |
| - Clean and sanitize sinks, countertops, wall switches, changing tables, door knobs, and faucets | |
| - Remove hardwater stains as needed | |
| - Sanitize and clean shower walls, floors and fixtures. | |
| - Refill Paper dispensers (Toilet paper/Paper Towels), soap, and wax bags | |
| Remove waste from feminine disposal containers and trash cans | |
| Sweep and mop restrooms floors with sanitizing neutral cleaner | |
| Clean and polish drinking fountains | |
| | |
| **Hard Floors – All tasks performed daily (M-F)** | |
| Dust mop and scrub all tile flooring in main entryway | |
| Remove all floor debris (scrape sticky substances as needed) | |
| Mondays – mop edges and corners of entryways on both floors | |
| Scrub stairs Tuesdays and Fridays | |
| Spot mop stairs Monday, Wednesday, Thursday | |
| | |
| **Carpeting – All tasks performed daily (M-F)** | |
| Monday, Wednesday, Friday – Vacuum 1st floor | |
| Tuesday, Thursday – Vacuum 2nd floor | |
| | |
| **CHECK OUT** | |
| Return equipment to janitor closet | |
| Place used rags in the appropriate bin | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

# AF Public Works Shops and Engineering Office Job Card

| Clock in | ✓ COMPLETE |
|---|---|
| **Restrooms – To be performed each cleaning service (M - TH)** | |
| Fully clean all restrooms, as per AbsoluteWay training | |
| - Clean and sanitize toilet bowls and urinals, toilet seats (tops and undersides), toilet handles | |
| - Polish mirrors and stainless steel surfaces | |
| - Polish porcelain toilets (under seats, bases, and under urinals) | |
| - Wipe partitions, walls in stalls (behind toilets), dispensers | |
| - Clean and sanitize sinks, countertops, wall switches, changing tables, door knobs, and faucets | |
| - Remove hardwater stains as needed | |
| - Sanitize and clean shower walls, floors and fixtures. | |
| Refill Paper dispensers (Toilet paper/Paper Towels), soap, and wax bags | |
| Remove waste from feminine disposal containers and trash cans | |
| Sweep and mop restrooms floors with sanitizing neutral cleaner | |
| Clean and polish drinking fountains | |
| | |
| **Offices/Entry – To be performed each cleaning service (M-TH)** | |
| Empty trash cans, replace liners as needed | |
| Vacuum all rugs, carpets, and hard floors to be free from dirt, debris, etc | |
| Clean all entry door glass and handles daily. | |
| | |
| **Engineering Office Breakroom – To be performed Tuesdays and Thursdays** | |
| Sanitize break room counters, faucets, sink, exterior of fridge, & cupboards | |
| Clean and sanitize interior and exterior of microwave. | |
| Chairs and tables are wiped down with sanitizing spray and reset. | |
| Paper towels, hand soap, hand sanitizers are checked and restocked daily. | |
| Sweep and mop breakroom floor with sanitizing neutral cleaner | |
| | |
| **Trash Removal – To be performed Tuesdays and Thursdays** | |
| Empty trash cans, replace liners as needed | |
| Empty garbage can behind red door | |
| Empty garbage can next to fuel dispensers | |
| Remove trash to dumpster | |
| | |
| **MONTHLY SERVICES TO BE PERFORMED ON SPECIFIED DAYS BELOW** | |
| **1st and 3rd Mondays** – Dust cubicle tops and bases, walls, baseboards, ceiling vents, blinds, window sills | |
| **1st and 3rd Wednesdays** – Dust all office chairs (including bases, backs, and arms), tops of cupboards, shelves, empty desks, etc | |
| **2nd and 4th Mondays** – Clean and polish wooden furniture, Wipe plastic and leather furniture | |
| **2nd and 4th Wednesdays** – Clean interior windows | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## AF Administrative Offices Job Card

| Clock in | ✓ COMPLETE |
|---|---|
| | |
| **Restrooms – To be performed each cleaning service (M - F)** | |
| Fully clean all restrooms, as per AbsoluteWay training | |
| - Clean and sanitize toilet bowls and urinals, toilet seats (tops and undersides), toilet handles | |
| - Polish mirrors and stainless steel surfaces | |
| - Polish porcelain toilets (under seats, bases, and under urinals) | |
| - Wipe partitions, walls in stalls (behind toilets), dispensers | |
| - Clean and sanitize sinks, countertops, wall switches, changing tables, door knobs, and faucets | |
| - Remove hardwater stains as needed | |
| - Sanitize and clean shower walls, floors and fixtures. | |
| Refill Paper dispensers (Toilet paper/Paper Towels), soap, and wax bags | |
| Remove waste from feminine disposal containers and trash cans | |
| Sweep and mop restrooms floors with sanitizing neutral cleaner | |
| Clean and polish drinking fountains | |
| | |
| **Offices/Entry – To be performed each cleaning service (M-F)** | |
| Empty trash cans, replace liners as needed | |
| Spot vacuum all rugs, carpets, and hard floors to be free from dirt, debris | |
| Clean all entry door glass and handles daily. | |
| Vacuum entry vestibule | |
| Wipe down elevator doors and inside walls of elevators throughout building | |
| Spot Vacuum and spot mop stairway | |
| | |
| **Breakroom – To be performed each cleaning service (M-F)** | |
| Sanitize break room counters, faucets, sink, exterior of fridge, & cupboards | |
| Clean and sanitize interior and exterior of microwave. | |
| Chairs and tables are wiped down with sanitizing spray and reset. | |
| Paper towels, hand soap, hand sanitizers are checked and restocked daily. | |
| Sweep breakroom floor; spot mop breakroom floor | |
| | |
| **To be performed once per week** | |
| Wall to wall vacuum of all floor surfaces | |
| Mop breakroom floor with sanitizing neutral cleaner | |
| | |
| **MONTHLY SERVICES TO BE PERFORMED ON SPECIFIED DAYS BELOW** | |
| **1st Monday** – Clear cobwebs and dust ceilings, lights, walls, corners, etc | |
| **1st Wednesday** – Dust tops of cupboards, shelves, empty tables, desks, etc | |
| **2nd Monday** – Dust cubicle tops and bases, ceiling vents, handrailings | |
| **2nd Wednesday** – Dust walls, baseboards, wall hanging frames, sanitize handrailings | |
| **3rd Monday** – Dust all chairs (including bases, backs, and arms) | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

| | |
|---|---|
| **3rd Wednesday** – Clean and polish wooden furniture, Wipe plastic and leather furniture | |
| **4th Monday** – Dust blinds and window sills | |
| **4th Wednesday** – Clean interior windows | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## Historic Old City Hall Job Card

| Clock in | ✓ COMPLETE |
|---|---|
| | |
| **Restrooms – To be performed each cleaning service (M - F)** | |
| Fully clean all restrooms, as per AbsoluteWay training | |
| - Clean and sanitize toilet bowls and urinals, toilet seats (tops and undersides), toilet handles | |
| - Polish mirrors and stainless steel surfaces | |
| - Polish porcelain toilets (under seats, bases, and under urinals) | |
| - Wipe partitions, walls in stalls (behind toilets), dispensers | |
| - Clean and sanitize sinks, countertops, wall switches, changing tables, door knobs, and faucets | |
| - Remove hardwater stains as needed | |
| - Sanitize and clean shower walls, floors and fixtures. | |
| Refill Paper dispensers (Toilet paper/Paper Towels), soap, and wax bags | |
| Remove waste from feminine disposal containers and trash cans | |
| Sweep and mop restrooms floors with sanitizing neutral cleaner | |
| Clean and polish drinking fountains | |
| | |
| **Offices/Entry – To be performed each cleaning service (M-F)** | |
| Empty trash cans, replace liners as needed | |
| Spot vacuum all rugs, carpets, and hard floors to be free from dirt, debris | |
| Clean all entry door glass and handles daily. | |
| Vacuum entry vestibule | |
| Wipe down elevator doors and inside walls of elevators throughout building | |
| Spot Vacuum stairway | |
| | |
| **Breakroom – To be performed each cleaning service (M-F)** | |
| Sanitize break room counters, faucets, sink, exterior of fridge, & cupboards | |
| Clean and sanitize interior and exterior of microwave. | |
| Chairs and tables are wiped down with sanitizing spray and reset. | |
| Paper towels, hand soap, hand sanitizers are checked and restocked daily. | |
| Sweep breakroom floor; spot mop breakroom floor | |
| | |
| **To be performed once per week** | |
| Wall to wall vacuum of all floor surfaces | |
| Mop breakroom floor with sanitizing neutral cleaner | |
| | |
| **MONTHLY SERVICES TO BE PERFORMED ON SPECIFIED DAYS BELOW** | |
| **1st Tuesday** – Clear cobwebs and dust ceilings, lights, walls, corners, etc | |
| **1st Thursday** – Dust tops of cupboards, shelves, empty tables, desks, etc | |
| **2nd Tuesday** – Dust cubicle tops and bases, ceiling vents, handrailings | |
| **2nd Thursday** – Dust walls, baseboards, wall hanging frames, sanitize handrailings | |
| **3rd Tuesday** – Dust all chairs (including bases, backs, and arms) | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

| | |
|---|---|
| 3rd **Thursday** – Clean and polish wooden furniture, Wipe plastic and leather furniture | |
| 4th **Tuesday** – Dust blinds and window sills | |
| 4th **Thursday** – Clean interior windows | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

## AF Cemetery Office Job Card

| Clock in | ✓ COMPLETE |
|---|---|
| **Restrooms – To be performed each cleaning service (1 day per week)** | |
| Fully clean all restrooms, as per AbsoluteWay training | |
| - Clean and sanitize toilet bowls and urinals, toilet seats (tops and undersides), toilet handles | |
| - Polish mirrors and stainless steel surfaces | |
| - Polish porcelain toilets (under seats, bases, and under urinals) | |
| - Wipe partitions, walls in stalls (behind toilets), dispensers | |
| - Clean and sanitize sinks, countertops, wall switches, changing tables, door knobs, and faucets | |
| - Remove hardwater stains as needed | |
| - Sanitize and clean shower walls, floors and fixtures. | |
| Refill Paper dispensers (Toilet paper/Paper Towels), soap, and wax bags | |
| Remove waste from feminine disposal containers and trash cans | |
| Sweep and mop restrooms floors with sanitizing neutral cleaner | |
| Clean and polish drinking fountains | |
| | |
| **Offices/Entry – To be performed each cleaning service (1 day per week)** | |
| Empty trash cans, replace liners as needed | |
| Vacuum all rugs, carpets, and hard floors to be free from dirt, debris, etc | |
| Clean all entry door glass and handles daily. | |
| Sweep slate tile office floor. | |
| DO NOT DAMP MOP SLATE TILE OFFICE FLOOR DAILY. | |
| | |
| **Breakroom – To be performed each cleaning service (1 day per week)** | |
| Sanitize break room counters, faucets, sink, exterior of fridge, & cupboards | |
| Clean and sanitize interior and exterior of microwave. | |
| Chairs and tables are wiped down with sanitizing spray and reset. | |
| Paper towels, hand soap, hand sanitizers are checked and restocked daily. | |
| Sweep and mop breakroom floor with sanitizing neutral cleaner | |
| | |
| **MONTHLY SERVICES TO BE PERFORMED ON SPECIFIED WEEKLY SERVICE DAY BELOW** | |
| **Week 1 –** Clear cobwebs and dust ceilings, lights, walls, corners, etc | |
| - Clean and polish wooden furniture, Wipe plastic and leather furniture | |
| - Damp mop slate tile office floor | |
| **Week 2 –** Dust tops of cupboards, shelves, empty tables, desks, etc | |
| - Dust cubicle tops and bases, ceiling vents | |
| **Week 3 –** Dust walls, baseboards, wall hanging frames | |
| - Dust all chairs (including bases, backs, and arms) | |
| **Week 4 –** Dust blinds and window sills | |
| - Clean interior windows | |

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

Attachment B
Service and Fee Schedule

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

# Exhibit "B"
## Cost Proposal

Company: Absolute Janitorial Services

Address: 1296 West 635 South Orem, UT 84058

Phone No. (801) 822-2041

Date: 05/15/2019

The Proposer shall furnish all labor, equipment, tools, and transportation to complete the work in accordance with the specifications, requirements, and terms of the contract. The undersigned, after having personally and carefully examined the RFP and other documents detailing the scope and purpose of janitorial services, declare that the undersigned is recognized as being qualified and competent to perform the work and hereby submits a proposal of:

**Proposal for: American Fork City Administrative Offices and City Hall**
51 East Main Street and 31 North Church Street
Contact person: Laurel
Total square footage: 13,500

Monthly proposal: $ 1,096.16

Hours per month: 52

**Proposal for: American Fork Library and Literacy Center**
64 South 100 East
Contact person: Casandria
Total square footage: 34,000

Monthly proposal: $ 2,866.88

Hours per month: 136

**Proposal for: American Fork Police and Courts**
75 East 80 North
Contact person: Bev
Total square footage: 33,972

Monthly proposal: $ 2,529.60

Hours per month: 120



Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

**Proposal for: American Fork Public Works and Shops**
275 East 200 North
Contact person: Carolyn
Total square footage: 7,121

Monthly proposal: $ 505.92

Hours per month: 24

**Proposal for: American Fork City Cemetery Office**
26 West 600 North
Contact person: Janet
Total square footage: 1,200

Monthly proposal: $ 84.32

Hours per month: 4

**Proposal for: American Fork Senior Center**
54 East Main Street
Contact person: Grant
Total square footage: 11,000

Monthly proposal: $

Hours per month: According to Addendum 2, this building is no longer included in the proposal

**Proposal for: American Fork Veterans Memorial Hall**
53 North Center Street
Contact person: Matt
Total square footage: 1,800

Monthly proposal: $

Hours per month: Removed from scope of work per our conversation on 3/4

**Proposal for: American Fork Fitness Center**
454 North Center Street
Contact person:
Total square footage: 44,200

Monthly proposal: $ 7,082.88

Hours per month: 336



Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

**PROPOSED ANNUAL COST:** $169,989.12

**PROPOSED ANNUAL HOURS:** 8,064

As the professional fee for completing all work related and covered herein.

It is understood that American Fork City has the right to reject this proposal, negotiate a price for the proposed services, or to accept the proposal at the above price.

Signature of preparer: Leesa Bell

Print Name and Title: Leesa Bell VP Operations

Date: 5/20/19

Attachment: Proposed Contract CC for 2020 through 2023 (Janitorial Contract)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Recorder **Director Approval** *Terilyn Lurker*

**AGENDA ITEM** Review and action on an ordinance amending Section 17.1.400 of the city code relating to water rights conveyance.

**SUMMARY RECOMMENDATION**
Staff would recommend approval.

**BACKGROUND**
In the process of updating the ordinance in October 2019, the table that had previously been adopted was not included. This proposed ordinance incorporates the changes that had been made by council on January 22, 2019, and October 22, 2019 and consolidates those into one ordinance.

**BUDGET IMPACT**
NA

**SUGGESTED MOTION**
I move to adopt the ordinance amending Section 17.1.400 of the city code relating to water rights conveyance.

**SUPPORTING DOCUMENTS**

06-30-2020 - Water Conveyance (DOCX)

**ORDINANCE NO. _____**

AN ORDINANCE AMENDING SECTION 17.1.400 OF THE AMERICAN FORK CITY CODE RELATING TO THE CONVEYANCE OF WATER IN AMERICAN FORK.

**WHEREAS**, the City is authorized to enact ordinances as are necessary and proper to promote the health, safety, morals, convenience, order, prosperity, and general welfare of American Fork; and

**WHEREAS**, the City is authorized by law to enact ordinances establishing regulations for development within the city; and

**WHEREAS**, it is in the best interest and general welfare of residents of American Fork to amend the city code relating to the conveyance of water for development.

**NOW THEREFORE**, be it ordained by the City Council of American Fork, Utah that;

**PART I**

**TEXT OF ORDINANCE**

1. Section 17.1.400 be amended to read as follows:

Amount of water right required. The amount (number of acre-feet) of water required to be conveyed to the city as part of a request for approval of an annexation, subdivision, large scale development, site plan, or building permit shall be the amount considered sufficient to meet the water use requirements of the proposed use, to be determined in accordance with the following:

1. Residential uses.

    a. Indoor uses. Indoor residential requirements shall be based on an Equivalent Residential Connection (ERC) basis as shown in the table in c. below. Each ERC shall be required to convey 0.45 acre-feet of water right for indoor use.

    b. Outdoor uses. Outdoor residential requirements shall be based on acreage as shown in the table in c. below. For single-family units and two-family units, requirements shall be based on total gross lot acreage. For multi-family units, requirements shall be based on irrigated acreage.

Attachment: 06-30-2020 - Water Conveyance (Water Rights Conveyance - 06-30-2020)

c. Water rights requirements are set forth in the following table:

| Residential Development | | Indoor Uses | | Outdoor Uses |
|---|---|---|---|---|
| | | Equivalent Residential Connections (ERC) Per Dwelling Unit | Acre-Feet Required (ERC x 0.45) | Acre-Feet Required |
| One dwelling unit per lot | | 1.00 | 0.45 | At the discretion of the developer, 1. 80 acre- feet per acre of lot OR 3.6 acre feet per irrigated acre |
| More than one dwelling unit per lot: Number of bedrooms per unit | One | 0.42 | # Units x 0.19 | At the discretion of the developer, 1.80 acre- feet per acre of lot OR 3.6 acre feet per irrigated acre |
| | Two | 0.83 | ~~# Units x 0.31~~ # Units x 0.37 | |
| | Three or more | ~~1.11~~ 1.00 | ~~# Units x 0.45~~ # Units x 0.50 | |
| Common area with no dwelling unit | | N/A | N/A | 3.6 acre feet per irrigated acre |
| All other metered culinary uses | | An amount sufficient to meet the projected needs of the proposed development based on an evaluation of demand characteristics for similar uses as determined by the city. | | |

## PART II

## PENALTY AND ADOPTION

**SECTION 1 – Conflicting Provisions.** Whenever the provisions of this Ordinance conflict with the provisions of any other ordinance, resolution or part thereof, the more stringent shall prevail.

**SECTION 2 – Provisions Severable.** This Ordinance and the various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid it is hereby declared that the remainder of the ordinance shall not be affected thereby.

**SECTION 3 – Effective Date.** This Ordinance shall take effect upon its passage and publication as required by law.

Attachment: 06-30-2020 - Water Conveyance (Water Rights Conveyance - 06-30-2020)

**PASSED AND ORDERED PUBLISHED BY THE CITY COUNCIL OF AMERICAN FORK CITY, UTAH, THIS ____ DAY OF JUNE, 2020.**

_____

Bradley J. Frost, Mayor

ATTEST:

_____

Terilyn Lurker, City Recorder

Attachment: 06-30-2020 - Water Conveyance (Water Rights Conveyance - 06-30-2020)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Recorder **Director Approval** *Terilyn Lurker*

**AGENDA ITEM** Review and action on a resolution executing an interlocal agreement between American Fork City and Utah County for disbursement from the Coronovirus Relief fund.

**SUMMARY RECOMMENDATION**
Staff would recommend approval.

**BACKGROUND**
The Federal Government provided $1.25 billion to Utah state and local governments through the Coronavirus Relief Fund ("CRF") included in section 5001 of the CARES Act. Based on the distribution formula in the CARES Act, $934.8 million was paid to the State of Utah ("State"), $203.6 million was paid directly to Salt Lake County, and $111.6 million was paid directly to Utah County (the "County Allocation"). State and local governments can only use the CRF payments to respond to the COVID-19 pandemic. The County Commission have elected to share a portion with local entities within Utah County.

The CARES Act provides that payments from CRF may only be used to cover costs that: (1) are necessary expenditures incurred due to the public health emergency with respect to COVID-19, (2) were not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the State or local government; and (3) were incurred during the period that begins on March 1, 2020, and ends on December 30, 2020.

The attached agreement sets for the amount and terms of the reimbursement from Utah County to American Fork City for the Coronavirus Relief Fund.

**BUDGET IMPACT**
All monies are for reimbursement of Coronavirus related expenses as set forth in the CARES act up to the allocated $2,354,666.30.

**SUGGESTED MOTION**
I move to approve the resolution authorizing the execution of an interlocal agreement between American Fork City and Utah County for disbursement from the coronavirus relief fund.

**SUPPORTING DOCUMENTS**

06-30-2020 - Resolution for the Interlocal Agreement with Utah County (DOCX)
Coronovirus Relief Fund interlocal agreement (PDF)

**RESOLUTION NO.**

**A RESOLUTION APPROVING AND AUTHORIZING THE EXECUTION OF AN INTERLOCAL AGREEMENT BETWEEN AMERICAN FORK CITY AND UTAH COUNTY FOR DISBURSEMENT FROM THE CORONAVIRUS RELIEF FUND; AND PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS**, pursuant to the provisions of the Interlocal Cooperation Act ("Interlocal Act"), Title 11, Chapter 13, Utah Code Annotated 1953, as amended, public agencies, including political subdivisions of the State of Utah, are authorized to enter into written agreements with one another for joint or cooperative actions; and

**WHEREAS**, the American Fork City (the "City") and Utah County (the "County") are public agencies as defined in the Interlocal Act; and

**WHEREAS**, after careful analysis and consideration of relevant information, the City desires to enter into an Interlocal Agreement with the County for disbursement from the coronavirus relief fund;

**WHEREAS**, Section 11-13-202.5 of the Interlocal Cooperation Act requires that certain interlocal agreements be approved by resolution of the legislative body of a public agency.

**NOW THEREFORE**, BE IT RESOLVED BY THE CITY COUNCIL OF AMERICAN FORK CITY, THAT THE FOLLOWING RESOLUTION BE ADOPTED AS FOLLOWS:

1. The Interlocal Agreement between the City and the County attached hereto as Exhibit A, is approved and shall be executed for and on behalf of the City.

2. Pursuant to Section 11-13-202.5 of the Interlocal Cooperation Act, the Interlocal Agreement has been submitted to legal counsel of the City for review and approval as to form and legality.

3. The Interlocal Agreement shall be effective immediately upon approval and execution by both the City and the County.

4. This Resolution shall take effect upon adoption.

SO RESOLVED AND ADOPTED THIS _____ DAY OF _____, 2020.

AMERICAN FORK CITY

_____
Bradley J. Frost
Mayor

ATTEST:

_____
Terilyn Lurker, City Recorder

Attachment: 06-30-2020 - Resolution for the Interlocal Agreement with Utah County (Interlocal Agreement - Disbursement of Coronavirus funds)

Agreement No. 2020-_____

**INTERLOCAL COOPERATION AGREEMENT BETWEEN UTAH COUNTY AND LOCAL ENTITY FOR DISBURSEMENT FROM THE CORONAVIRUS RELIEF FUND**

THIS IS AN INTERLOCAL COOPERATION AGREEMENT ("Agreement") effective the 15th day of June, 2020 by and between Utah County, a political subdivision of the State of Utah ("County") and American Fork City, a political subdivision of the State of Utah ("Recipient") (collectively "parties").

**WITNESSETH:**

**WHEREAS**, pursuant to the provisions of the Interlocal Cooperation Act ("Interlocal Act"), Title 11, Chapter 13, Utah Code Annotated, 1953 as amended, public agencies, including political subdivisions of the State of Utah as therein defined, are authorized to enter into written agreements with one another for joint or cooperative action; and

**WHEREAS**, pursuant to the Interlocal Act, the parties desire to work together through joint and cooperative action that will benefit the residents of Recipient and County; and

**WHEREAS,** the parties to this Agreement are public agencies as defined in the Interlocal Act; and

**WHEREAS**, earlier this year the United States of America began battling a public health emergency known as Coronavirus Disease 2019 ("COVID-19"). On March 27, 2020 and in response to COVID-19, President Trump signed the Coronavirus Aid, Relief and Economic Security Act ("CARES Act"); and



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

**WHEREAS**, the Federal Government provided $1.25 billion to Utah state and local governments through the Coronavirus Relief Fund ("CRF") included in section 5001 of the CARES Act. Based on the distribution formula in the CARES Act, $934.8 million was paid to the State of Utah ("State"), $203.6 million was paid directly to Salt Lake County, and $111.6 million was paid directly to Utah County (the "County Allocation"). State and local governments can only use the CRF payments to respond to the COVID-19 pandemic. While the County is not required to distribute a portion of its $111.6 million payment to local entities, the County Commission have elected to share a portion with local entities within Utah County; and

**WHEREAS**, the CARES Act provides that payments from CRF may only be used to cover costs that: (1) are necessary expenditures incurred due to the public health emergency with respect to COVID–19, (2) were not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the State or local government; and (3) were incurred during the period that begins on March 1, 2020, and ends on December 30, 2020; and

**NOW, THEREFORE**, the parties do mutually agree, pursuant to the terms and provisions of the Interlocal Act, as follows:

**Section 1. EFFECTIVE DATE; DURATION**

This Agreement shall become effective and shall enter into force, within the meaning of the Interlocal Act, upon the submission of this Agreement to, and the approval and execution thereof by Resolution of the governing bodies of each of the parties to this



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

Agreement. The term of this Agreement shall be from the effective date hereof through December 31, 2020.

This Agreement shall not become effective until it has been reviewed and approved as to form and compatibility with the laws of the State of Utah by the Utah County Attorney's Office and the attorney for Recipient. Prior to becoming effective, this Agreement shall be filed with the person who keeps the records of each of the parties hereto.

**Section 2. ADMINISTRATION OF AGREEMENT**

The parties to this Agreement do not contemplate nor intend to establish a separate legal entity under the terms of this Agreement. The parties hereto agree that, pursuant to Section 11-13-207, Utah Code Annotated, 1953 as amended, County, shall act as the administrator responsible for the administration of this Agreement. The parties further agree that this Agreement does not anticipate nor provide for any organizational changes in the parties. The administrator agrees to keep all books and records in such form and manner as the Utah County Clerk/Auditor shall specify and further agrees that said books shall be open for examination by the parties hereto at all reasonable times.

**Section 3. PURPOSE**

This Agreement has been established and entered into between the County and Recipient to provide CRF funds to the Recipient from the County Allocation to respond to the COVID-19 pandemic.



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

**Section 4. CRF FUNDING AMOUNTS**

1. From the County Allocation, $20 million will be set aside for economic support, to be overseen and recommended by a seven-member committee chosen by the Council of Governments ("COG") within Utah County and then allocated by the County in accordance with the recommendation. This $20 million shall be known as "Part 1" of the County Allocation and shall only be expended as authorized by the CARES Act including the costs incurred by County to administer this Part 1. This seven-member committee shall comply with the Utah Open and Public Meetings Act, Utah Code, Title 52, Chapter 4.

2. From the County Allocation, $45,815,170.95 will be set aside for eligible recipients who may receive an allocation up to the maximum amount listed in the Available Funds for Cities and Unincorporated County document attached hereto as Exhibit "A" and incorporated herein by this reference. This $45,815,170.95 shall be known as "Part 2" of the County Allocation. This amount may be subject to revision by the County due to federal mandate or by an order of a court of law. If Recipient places any CRF funds in an interest-bearing account, Recipient must expend the interest earned on CRF funds in accordance with the requirements of the CARES Act or return the interest earned to County. If Recipient received funds to reimburse or otherwise cover the costs of permissible expenditures, as described in Section 5, from any other sources other than the County Allocation, then Recipient shall provide an accounting to County of all such funds from the other sources and repay to County such funds up to an amount equal to the Recipient's portion of the County's Allocation. Recipient acknowledges



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

that it shall receive no funds from the County outside of those CRF funds in the County Allocation.

3. From the County Allocation, $45,815,170.95 will be set aside for the County. This $45,815,170.95 shall be known as "Part 3" of the County Allocation.

**Section 5. PERMISSIBLE USE OF CRF FUNDING**

The CARES Act and additional guidance issues by the United States Treasury Department provides that CRF funds may only be used to cover costs that meet the following conditions:

1. are necessary expenditures incurred due to the public health emergency with respect to the Coronavirus Disease 2019 (COVID–19);
    a. The requirement that expenditures be incurred "due to" the public health emergency means that expenditures must be used for actions taken to respond to the public health emergency.
    b. CRF Funds may NOT be used to fill shortfalls in government revenue to cover expenditures that would not otherwise qualify under the statute.
    c. The expenditure is reasonably necessary for its intended use in the reasonable judgment of the government officials responsible for spending the CRF funds.
2. were not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the Recipient; and
    a. A cost meets this requirement if either (a) the cost cannot lawfully be funded using a line item, allotment, or allocation within that budget or (b) the cost is for a substantially



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

different use from any expected use of CRF funds in such a line item, allotment, or allocation.

b. The "most recently approved" budget refers to the enacted budget for the relevant fiscal period for the Recipient, without taking into account subsequent supplemental appropriations enacted or other budgetary adjustments made by the Recipient in response to the COVID-19 public health emergency.

c. A cost is not considered to have been accounted for in a budget merely because it could be met using a budgetary stabilization fund, rainy day fund, or similar reserve account.

3. were incurred during the period that begins on March 1, 2020, and ends on December 30, 2020.

a. A cost is "incurred" when the Recipient has expended funds to cover the cost.

These provisions and guidance are current as of May 26, 2020. The Recipients accepting funds must agree to adhere to any additional current or future Federal or State legislative guidance regarding spending, reporting, or any other matter related to CRF funds. Further, the Recipients shall require that any subgrantee to which it awards CRF funds adhere to the CARES Act and any current or future guidance related to the CRF funds. Federal guidance has been updated regularly and can be found at https://home.treasury.gov/policy-issues/cares/state-and-local-governments.

**Section 6. TIME PERIOD**

The Recipient has until November 2, 2020 to expend the CRF funds and provide the necessary documentation of the expenditure of the CRF funds to County. CRF funds provided by the County that are not expended on eligible expenditures on or before November 2, 2020, must be returned to the County on or before 5:00 P.M. MST, November 9, 2020, so that the County will have time to reallocate and expend the funds before they expire on December 30, 2020. The Recipient



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

may petition the County to retain allocated, but unspent CRF funds, after the November 2, 2020 date, with approval from the County. Any requests for exceptions shall be emailed to Peter Brown, Finance Manager COVID Project, in the Utah County Clerk/Auditor's Office, peterb@utahcounty.gov, before 5:00 P.M. MST, November 2, 2020.

**Section 7. REPORTING ON USE OF CRF FUNDS**

The Recipient shall retain documentation related to any uses of the CRF funds, including but not limited to invoices and/or sales receipts. All payroll expenditures must illustrate compliance with CARES Act by detailed, daily documentation. Any subgrants made by the Recipient shall similarly require, as a term of the grant, that the subgrantee shall retain documentation and shall produce such documentation to the Recipient and the County upon request.

Consistent with County's responsibilities for the management of CARES funds distributed to it and in accordance with being subject to the Federal Single Audit Act, Recipient shall be prepared to submit receipts and HR records if requested in connection with an audit. All receipts should be individually accompanied (either physically or by PO number) by an explanation form that will be provided by the County that will need to explain how the expenses respond to the "reasonably necessary" justification of the CARES Act Coronavirus Relief Fund (CFR). The Recipient is required to report CRF expenditures at the detailed transaction level on a quarterly basis or data uploaded to Transparent Utah if available for use by County and Recipient. CRF Funds will be identified using function codes specified for these CRF funds in the Uniform Chart of Accounts for Local Government of Utah (revised June 2020) and related resources provided by the Office of the State Auditor. The Recipient is also required to provide summary and detailed documentation supporting



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

the use of CRF Funds upon request of County, state, federal, or independent auditors. The County may request additional reporting if necessary.

**Section 8. ACCOUNTABILITY FOR THE USE OF CRF FUNDS**

If County, state, or federal audit findings determine that any CRF funds were expended by the Recipient in violation of the requirements of the CARES Act and request repayment of those CRF funds, the Recipient shall provide funds to the County for repayment to the Federal Government as required by the CARES Act. If the County is forced to repay the funds because the Recipient is unwilling or unable to repay the funds, the amount paid by the County will become a past due obligation of the Recipient to the County and may be collected as such.

**Section 9. AVAILABILITY OF CRF FUNDS**

It is expressly understood and agreed that the obligation of the County to proceed under this Agreement is conditioned upon the availability of CRF funds remaining in the County Allocation. If the CRF funds anticipated for the continuing fulfillment of the Agreement from the County Allocation are, at any time, not forthcoming or insufficient, either through the failure of the Federal government to provide or if CRF funds are not otherwise available to the County, the County shall have the right upon ten (10) working days written notice to the Recipient, to terminate this Agreement without damage, penalty, cost, or expense to the Recipient of any kind whatsoever. The effective date of termination shall be as specified in the notice of termination.

It is also expressly understood and agreed that any disbursement of CRF funds to



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

Recipient shall be considered an advance payment from County to Recipient subject to repayment of those CRF funds. Recipient shall either submit to County the appropriate justification documents of funds under the CARES Act or repay the CRF funds to the County. If the Recipient is unwilling or unable to repay any portion of the CRF funds which are not expended as required herein, that amount of the CRF funds will become a past due obligation of the Recipient to the County and may be collected as such.

**Section 10. METHOD OF TERMINATION**

This Agreement will automatically terminate at the end of its term herein, pursuant to the provisions of paragraph one (1) of this Agreement. Prior to the automatic termination at the end of the term of this Agreement, any party to this Agreement may terminate the Agreement sixty (60) days after providing written notice of termination to the other party. The Parties of this Agreement agree to bring current, prior to termination, any financial obligation incurred in the exercise of its rights and obligations set forth herein.

**Section 11. INDEMNIFICATION**

To the fullest extent permitted by law, Recipient shall indemnify and hold harmless County, its officers, employees, and agents, from and against any and all claims, demands, causes of action, audits, orders, decrees, judgements, losses, risks of loss, damages, expenses, and liabilities arising out of or related to the Agreement. Recipient shall also pay any litigation and appeal expenses that County incurs, including attorney's fees, penalties, and interest arising out of or related to the Agreement. Recipient shall assume sole liability for any injuries or damages caused to a third party as a result of fulfillment of the Agreement. Recipient is not responsible for



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

other Recipient's or County's misuse of Parts 2 and 3 of the County Allocation. County reserves the right to conduct, control, and direct its own defense for any claims, demands, causes of action, audits, orders, decrees, judgements, losses, damages, expenses, and liabilities arising out of or related to the Agreement. Both Recipient and County agree that the terms of this Agreement are subject to, and not a waiver of, the protections, immunities and liability limits of the Governmental Immunity Act, U.C.A. 63G-1-101, et. seq. Recipient's obligations under this provision shall survive the expiration or other termination of this Agreement.

**Section 12. FILING OF INTERLOCAL COOPERATION AGREEMENT**

Executed copies of this Agreement shall be placed on file in the office of the County Clerk/Auditor of County and with the official keeper of records of Recipient and shall remain on file for public inspection during the term of this Agreement.

**Section 13. ADOPTION REQUIREMENTS**

This Agreement shall be (a) approved by Resolution of the governing body of each of the parties, (b) executed by a duly authorized official of each of the parties (c) submitted to and approved by an Authorized Attorney of each of the parties, as required by Section 11-13-202.5, Utah Code Annotated, 1953 as amended, and (d) filed in the official records of each party.

**Section 14. AMENDMENTS**

This Agreement may not be amended, changed, modified or altered except by an instrument in writing which shall be (a) approved by Resolution of the governing body of each of the parties, (b) executed by a duly authorized official of each of the parties, (c) submitted to and



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

approved by an Authorized Attorney of each of the parties, as required by Section 11-13-205.5, Utah Code Annotated, 1953 as amended, and (d) filed in the official records of each party.

**Section 15. SEVERABILITY**

If any term or provision of the Agreement or the application thereof shall to any extent be invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and shall be enforced to the extent permitted by law. To the extent permitted by applicable law, the parties hereby waive any provision of law which would render any of the terms of this Agreement unenforceable.

**Section 16. NO PRESUMPTION**

Should any provision of this Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against the party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being acknowledged that each of the parties have participated in the preparation hereof.

**Section 17. HEADINGS**

Headings herein are for convenience of reference only and shall not be considered any interpretation of the Agreement.

**Section 18. BINDING AGREEMENT**



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

This Agreement shall be binding upon the heirs, successors, administrators, and assigns of each of the parties hereto.

**Section 19. NOTICES**

All notices, demands and other communications required or permitted to be given hereunder shall be in writing and shall be deemed to have been properly given if delivered by hand or by certified mail, return receipt requested, postage paid, to the parties at their addresses first above written, or at such other addresses as may be designated by notice given hereunder.

**Section 20. ASSIGNMENT**

The parties to this Agreement shall not assign this Agreement, or any part hereof, without the prior written consent of all other parties to this Agreement. No assignment shall relieve the original parties from any liability hereunder.

**Section 21. GOVERNING LAW**

All questions with respect to the construction of this Agreement, and the rights and liability of the parties hereto, shall be governed by the laws of the State of Utah.

**Section 22. COUNTERPARTS AND FACSIMILE SIGNATURES**

The Agreement may be executed in counterparts, each of which when executed and delivered shall be deemed to be an original, binding between the executing parties, and all of which together constitute one and the same instrument. Original, facsimile, emailed, texted, electronic, or power of attorney signatures shall be binding upon the executing party.



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

**Section 23. SUB-RECIPIENT REQUIREMENTS**

By virtue of terms and conditions of the Single Audit Act (31 U.S.C. §§ 7501-7507) and the related provisions of the Uniform Guidance, 2 C.F.R. § 200.303 regarding internal controls, §§ 200.330 through 200.332 regarding subrecipient monitoring and management, and subpart F regarding audit requirements. CRF funds received through this Agreement make Recipient a sub-recipient of the federal grant.

As Recipient is a Sub-recipient of the grant monies, and as such, shall have no authorization, express or implied, to bind County to any agreements, settlements, liability, or understanding whatsoever, and agrees not to perform any acts as agent for the County, except as herein expressly set forth. Recipient as Sub-recipient shall be responsible for the payment of all income tax and social security amounts due as a result of CRF funds received from the County for these necessary COVID-19 related purchases. Persons employed by the County and acting under the direction of the County shall not be deemed to be employees or agents of Recipient.

a) All Recipient's records with respect to any matters covered by this Agreement shall be made available to the County, State of Utah, and the Comptroller General of the United States or any of their authorized representatives.

b) Failure of Recipient to comply with the above requirements will constitute a violation of this Agreement and may result in the withholding of future payments.

c) Local governments or non-profit organizations that expend $750,000 or more in total federal financial assistance (from all sources) in the Recipient's fiscal year shall have a Single Audit completed.



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

d) All Sub-recipient's, regardless of Single Audit eligibility, will make all pertinent financial records available for review, monitoring or audit, in a timely manner to appropriate officials of the federal granting agency, State of Utah, County and/or the General Accounting Office.

e) To comply with 2 C.F.R. § 200.331 the County as the pass-through entity is providing the following required information:

| | |
|---|---|
| Subrecipient Name | American Fork City |
| Subrecipient DUNS number | [City DUNS] |
| Federal Award Identification Number | Not Available |
| Federal Award Date | March 27, 2020 |
| Subaward Period of Performance Start & End Date | March 1, 2020 – December 30, 2020 |
| Amount of Federal Funds Obligated by this action by the County to the Subrecipient | $2,354,666.30 |
| Total Amount of Federal Funds Obligated to the Subrecipient by the County including the current obligation | $2,354,666.30 |
| Total Amount of the Federal Award committed to the Subrecipient by the County | $2,354,666.30 |
| Federal award project description | Project description: Through this subaward, Utah County will provide Covid-19 relief funding for direct support for cities in Utah County, direct support relating to expenditures "reasonably necessary" to help combat the spread of Covid-19. |
| Name of Federal awarding agency | United States Department of the Treasury |
| Name of pass-through entity | Utah County Government |
| Contact information for awarding official of the pass-through entity | Utah County Auditor's Office<br>Attn: Peter Brown, CARES Act Finance Manager<br>100 East Center Street, Suite 3600<br>Provo, UT 84606<br>Phone: 801.851.8222<br>Email: PeterB@UtahCounty.gov |
| CFDA Number and Name | 21.019 |
| Is the award for Research and Development? | No |
| Indirect cost rate for the Federal award | None |



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

Nothing contained in this Agreement is intended to, nor shall be construed in any manner, as creating or establishing the relationship of employer/employee between the parties. Recipient as Sub-recipient shall at all times remain an "independent contractor" with respect to the services to be performed under this Agreement. County shall be exempt from payment of all Unemployment Compensation, FICA, retirement, life and/or medical insurance and Workers' Compensation Insurance, as the Sub-recipient is an independent contractor.

**UTAH COUNTY**

Authorized by Resolution No. 2020-___, authorized and passed on the_____day of _____, 2020.

BOARD OF COUNTY COMMISSIONERS
UTAH COUNTY, UTAH

By:_____
NATHAN IVIE, Vice-Chair

ATTEST: AMELIA POWERS GARDNER
Utah County Clerk/Auditor

By:_____
Deputy

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH:
DAVID O. LEAVITT

Utah County Attorney

By:_____
Deputy County Attorney



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

**RECIPIENT**

Authorized by Resolution No._____, authorized and passed on the_____day of

_____, 2020.

By:_____
MAYOR

ATTEST: _____
City/Town Recorder

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH:

_____
City/Town Attorney



Attachment: Coronovirus Relief Fund interlocal agreement (Interlocal Agreement - Disbursement of Coronavirus funds)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Recorder **Director Approval** *Terilyn Lurker*

**AGENDA ITEM** Consideration for adoption of a resolution of the City Council of American Fork City, Utah, authorizing the issuance and sale of not more than $29,500,000 aggregate principal amount of water revenue and refunding bonds, Series 2020; and related matters.

**SUMMARY RECOMMENDATION**
Council action is required to adopt a Super Parameters Resolution in order to proceed with financing for the following project - (a) financing all or a portion of the costs of construction of improvements to its water system (collectively, the "Project") and (b) paying costs of issuance of the Bonds.

**BACKGROUND**
This project will replace old and undersized main line pipes with larger system main line pipe along the network backbone of the culinary water system. New pipe sizes will range from 18" to 36" in diameter, depending on location. The project will be completed in four segments, but all four segments are needed for the project to be able to deliver the needed water to areas of high growth and affordability. Work includes installing new culinary service connections and fire hydrants within the project area and replacing dilapidated main lines which routinely suffer from system outages due to breaks and leaks. The design for the first segment is complete. The design for the other three segments is underway. The project also includes drilling and equipping a new well and connecting the well to the city's culinary water system. The city has commissioned extensive water modeling which has determined that all segments and the well are critical.

**SUMMARY OF PARAMETERS IN ATTACHED RESOLUTION**
- Maximum Par Amount of Bonds: $29,500,000
- Maximum Length to Final Maturity: 31 Years from the date of issuance
- Maximum Coupon: 5.00%
- Designated Officers: Any two of the following - Mayor or Mayor Pro Tem and City Administrator
- Set Date for Public Hearing related to this matter: July 28, 2020

**BUDGET IMPACT**
The Bonds are special limited obligations of the Issuer payable from all or any portion of the net revenues of the water system. Although current rates are adequate to cover debt service payments, water rates may be increased over the life of the loan in order to pay for the project.

**SUGGESTED MOTION**

I move to adopt Super Parameters Resolution which, among other things, sets forth the maximum amount of the bonds, the maximum maturity date, the maximum interest rate and appoints designated officers to finalize the transaction within the parameters set forth.

**SUPPORTING DOCUMENTS**

Super Parameters Resolution -American Fork Water Revenue 2020(PDF)
Request for public comment letter (PDF)

American Fork City, Utah

June 30, 2020

The City Council (the "Council") of American Fork City, Utah (the "Issuer") met in regular session on Tuesday, June 30, 2020, at its regular meeting place in American Fork City, Utah, at 7:00 p.m. with the following members of the Council present:

| | |
|---|---|
| Brad Frost | Mayor |
| Kevin Barnes | Councilmember |
| Staci Carroll | Councilmember |
| Barbara Christiansen | Councilmember |
| Robert Shelton | Councilmember |
| Clark Taylor | Councilmember |

Also present:

| | |
|---|---|
| David Bunker | City Administrator |
| Terilyn Lurker | City Recorder |

Absent:

After the meeting had been duly called to order and after other matters not pertinent to this resolution had been discussed, the City Recorder presented to the Council a Certificate of Compliance with Open Meeting Law with respect to this June 30, 2020, meeting, a copy of which is attached hereto as Exhibit A.

The following resolution was then introduced in written form, was fully discussed, and pursuant to motion duly made by Councilmember _____ and seconded by Councilmember _____, was adopted by the following vote:

AYE:

NAY:

The resolution is as follows:

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF AMERICAN FORK CITY, UTAH (THE "ISSUER"), AUTHORIZING THE ISSUANCE AND SALE OF NOT MORE THAN $29,500,000 AGGREGATE PRINCIPAL AMOUNT OF WATER REVENUE BONDS, SERIES 2020 (TO BE ISSUED IN ONE OR MORE SERIES AND WITH SUCH OTHER SERIES OR TITLE AS MAY BE DETERMINED BY THE ISSUER) (THE "BONDS"); FIXING THE MAXIMUM AGGREGATE PRINCIPAL AMOUNT OF THE BONDS, THE MAXIMUM NUMBER OF YEARS OVER WHICH THE BONDS MAY MATURE, THE MAXIMUM INTEREST RATE WHICH THE BONDS MAY BEAR, AND THE MAXIMUM DISCOUNT FROM PAR AT WHICH THE BONDS MAY BE SOLD; DELEGATING TO CERTAIN OFFICERS OF THE ISSUER THE AUTHORITY TO APPROVE THE FINAL TERMS AND PROVISIONS OF THE BONDS WITHIN THE PARAMETERS SET FORTH HEREIN; PROVIDING FOR THE PUBLICATION OF A NOTICE OF PUBLIC HEARING AND A NOTICE OF BONDS TO BE ISSUED; PROVIDING FOR THE RUNNING OF A CONTEST PERIOD AND SETTING OF A PUBLIC HEARING DATE; AUTHORIZING AND APPROVING THE EXECUTION OF A GENERAL INDENTURE, SUPPLEMENTAL INDENTURE, BOND PURCHASE AGREEMENT AND OTHER DOCUMENTS REQUIRED IN CONNECTION THEREWITH; AUTHORIZING THE TAKING OF ALL OTHER ACTIONS NECESSARY TO THE CONSUMMATION OF THE TRANSACTIONS CONTEMPLATED BY THIS RESOLUTION; AND RELATED MATTERS.

WHEREAS, the City Council (the "Council") of American Fork City, Utah (the "Issuer") desires to (a) finance all or a portion of the costs of construction of improvements to its water system (the "System and all related improvements (collectively, the "Project") and (b) pay costs of issuance with respect to the Bonds herein described; and

WHEREAS, to accomplish the purposes set forth in the preceding recital, and subject to the limitations set forth herein, the Issuer desires to issue its Water Revenue Bonds, Series 2020 (to be issued from time to time as one or more series and with such other series or title designation(s) as may be determined by the Issuer) (collectively, the "Bonds"), pursuant to (a) the Local Government Bonding Act, Title 11, Chapter 14, Utah Code Annotated 1953, as amended (the "Act"), (b) this Resolution, and (c) a General Indenture of Trust (the "General Indenture"), and a Supplemental Indenture (the "Supplemental Indenture" and together with the General Indenture, the "Indenture"), in substantially the form presented to the meeting at which this Resolution was adopted and which is attached hereto as Exhibit B; and

WHEREAS, there has been presented to the Board at this meeting a form of a bond purchase agreement (the "Bond Purchase Agreement"), in substantially the form attached hereto as Exhibit C to be entered into between the Issuer and the underwriter or the







Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

purchaser (the "Underwriter/Purchaser") selected by the Issuer for any portion of the Series 2020 Bonds; and

WHEREAS, the Act provides that prior to issuing bonds, an issuing entity must (a) give notice of its intent to issue such bonds and (b) hold a public hearing to receive input from the public with respect to (i) the issuance of the bonds and (ii) the potential economic impact that the improvement, facility or property for which the bonds pay all or part of the cost will have on the private sector; and

WHEREAS, the Issuer desires to call a public hearing for this purpose and to publish a notice of such hearing with respect to the Bonds, including a notice of bonds to be issued, in compliance with the Act; and

WHEREAS, in order to allow the Issuer flexibility in setting the pricing date of the Bonds to optimize debt service costs to the Issuer, the Council desires to grant to either the Mayor or Mayor Pro Tem (collectively, the "Mayor") and the City Administrator (together, the "Designated Officers"), the authority to (a) determine whether all or a portion of the Series 2020 Bonds should be sold pursuant to a private placement or a public offering (b) approve the principal amounts, interest rates, terms, maturities, redemption features, and purchase price at which the Bonds shall be sold and (c) make any changes with respect thereto from those terms which were before the Council at the time of adoption of this Resolution, provided such terms do not exceed the parameters set forth for such terms in this Resolution (the "Parameters");

NOW, THEREFORE, it is hereby resolved by the Council of American Fork City, Utah, as follows:

Section 1. For the purpose of (a) financing the Project and (b) paying costs of issuance of the Bonds, the Issuer hereby authorizes the issuance of the Bonds which shall be designated "American Fork City, Utah Water Revenue Bonds, Series 2020" (to be issued from time to time as one or more series and with such other series or title designation(s) as may be determined by the Issuer) in the aggregate principal amount of not to exceed $29,500,000. The Bonds shall mature in not more than thirty-one (31) years from their date or dates, shall be sold at a price not less than ninety-eight percent (98%) of the total principal amount thereof, shall bear interest at a rate or rates of not to exceed five percent (5.00%) per annum, as shall be approved by the Designated Officers, all within the Parameters set forth herein.

Section 2. The Designated Officers are hereby authorized to specify and agree as to the method of sale, the final principal amounts, terms, discounts, maturities, interest rates, redemption features, and purchase price with respect to the Series 2020 Bonds for and on behalf of the Issuer, provided that such terms are within the Parameters set by this Resolution. The selection of the method of sale, the selection of the Underwriter/Purchaser and the determination of the final terms and redemption provisions for the Series 2020 Bonds shall be determined by the Designated Officers and may be evidenced by the execution of the Bond Purchase Agreement if the Series 2020 Bonds are sold at a private or negotiated underwriting sale in substantially the form attached hereto as Exhibit C. The form of the Bond Purchase Agreement is hereby authorized, approved and confirmed.



Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

Section 3. The Indenture and the Bond Purchase Agreement in substantially the forms presented to this meeting and attached hereto as Exhibit B and Exhibit C are hereby authorized, approved, and confirmed. The Mayor and City Recorder are hereby authorized to execute and deliver the Indenture and the Designated Officers are hereby authorized to execute and deliver the Bond Purchase Agreement in substantially the forms and with substantially the content as the forms presented at this meeting for and on behalf of the Issuer, with final terms as may be established by the Designated Officers within the Parameters set forth herein, and with such alterations, changes or additions as may be necessary or as may be authorized by Section 5 hereof. The Designated Officers are hereby authorized to select the Underwriter/Purchaser.

Section 4. The Designated Officers or other appropriate officials of the Issuer are authorized to make any alterations, changes or additions to the Indenture, the Bond Purchase Agreement, the Bonds or any other document herein authorized and approved which may be necessary to conform the same to the final terms of the Bonds (within the Parameters set by this Resolution), to correct errors or omissions therein, to complete the same, to remove ambiguities therefrom, or to conform the same to other provisions of said instruments, to the provisions of this Resolution or any resolution adopted by the Council or the provisions of the laws of the State of Utah or the United States.

Section 5. The form, terms, and provisions of the Bonds and the provisions for the signatures, authentication, payment, registration, transfer, exchange, redemption, and number shall be as set forth in the Indenture. The Mayor and the City Recorder are hereby authorized and directed to execute and seal the Bonds. The signatures of the Mayor and the City Recorder may be by facsimile or manual execution.

Section 6. The Designated Officers or other appropriate officials of the Issuer are hereby authorized and directed to authenticate and deliver the Bonds in accordance with the provisions of the Indenture.

Section 7. Upon their issuance, the Bonds will constitute special limited obligations of the Issuer payable solely from and to the extent of the sources set forth in the Bonds and the Indenture. No provision of this Resolution, the Indenture, the Bonds, or any other instrument, shall be construed as creating a general obligation of the Issuer, or of creating a general obligation of the State of Utah or any political subdivision thereof, or as incurring or creating a charge upon the general credit of the Issuer or its taxing powers.

Section 8. The Designated Officers and other appropriate officials of the Issuer, and each of them, are hereby authorized and directed to execute and deliver for and on behalf of the Issuer any or all additional certificates, documents and other papers (including, without limitation, tax or surety compliance procedures) and to perform all other acts they may deem necessary or appropriate in order to implement and carry out the matters authorized in this Resolution and the documents authorized and approved herein.

Section 9. After the Bonds are delivered to the Purchaser and upon receipt of payment therefor, this Resolution shall be and remain irrepealable until the principal of, premium, if any, and interest on the Bonds are deemed to have been duly discharged in accordance with the terms and provisions of the Indenture.







Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

Section 10. The Issuer shall hold a public hearing on July 28, 2020, to receive input from the public with respect to (a) the issuance of the Series 2019 Bonds, and (b) the potential economic impact that the improvements to be financed with the proceeds of the Series 2019 Bonds will have on the private sector, which hearing date shall not be less than fourteen (14) days after notice of the public hearing is first published (i) once a week for two consecutive weeks in the Daily Herald,, a newspaper of general circulation in the Issuer, (ii) on the Utah Public Notice Website created under Section 63F-1-701, Utah Code Annotated 1953, as amended, and (iii) on the Utah Legal Notices website (www.utahlegals.com) created under Section 45-1-101, Utah Code Annotated 1953, as amended, no less than fourteen (14) days before the public hearing date. The City Recorder shall cause a copy of this Resolution (together with all exhibits hereto) to be kept on file in Issuer's offices, for public examination during the regular business hours of the Issuer until at least thirty (30) days from and after the date of publication thereof. The Issuer directs its officers and staff to publish a "Notice of Public Hearing" and Bonds to be Issued" in substantially the following form:

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

NOTICE OF PUBLIC HEARING AND BONDS TO BE ISSUED

NOTICE IS HEREBY GIVEN pursuant to the provisions of the Local Government Bonding Act, Title 11, Chapter 14, Utah Code Annotated 1953, as amended, (the "Act"), that on June 30, 2020, the City Council (the "Council") of American Fork City, Utah (the "Issuer"), adopted a resolution (the "Resolution") in which it authorized the issuance of the Issuer's Water Revenue Bonds, Series 2020 (to be issued in one or more series and with such other series or title designation(s) as may be determined by the Issuer) (collectively, the "Bonds") and called a public hearing to receive input from the public with respect to (a) the issuance of the Bonds and (b) any potential economic impact that the Project described herein to be financed with the proceeds of the Bonds may have on the private sector.

TIME, PLACE AND LOCATION OF PUBLIC HEARING

The Issuer shall hold a public hearing on July 28, 2020, at the hour of 7:00 p.m. at 51 East Main Street, American Fork, Utah. The purpose of the hearing is to receive input from the public with respect to (a) the issuance of that portion of the Bonds issued under the Act and (b) any potential economic impact that the Project to be financed with the proceeds of that portion of the Bonds issued under the Act may have on the private sector. All members of the public are invited to attend and participate.

PURPOSE FOR ISSUING THE BONDS

The Bonds will be issued for the purpose of (a) financing all or a portion of the costs of construction of improvements to its water system (collectively, the "Project") and (b) paying costs of issuance of the Bonds.

PARAMETERS OF THE BONDS

The Issuer intends to issue the Bonds in the aggregate principal amount of not more than Twenty-nine Million Five Hundred Thousand Dollars ($29,500,000), to mature in not more than thirty-one (31) years from their date or dates, to be sold at a price not less than ninety-eight percent (98%) of the total principal amount thereof, and bearing interest at a rate or rates not to exceed five percent (5.00%) per annum. The Bonds are to be issued and sold by the Issuer pursuant to the Resolution, including as part of said Resolution, a General Indenture of Trust and a Supplemental Indenture of Trust (together, "Indenture") which was before the Council in substantially final form at the time of the adoption of the Resolution and said Indenture is to be executed by the Issuer in such form and with such changes thereto as shall be approved by the Issuer; provided that the principal amount, interest rate or rates, maturity, and discount of the Bonds will not exceed the maximums set forth above. The Issuer reserves the right to not issue the Bonds for any reason and at any time up to the issuance of the Bonds.

REVENUES PROPOSED TO BE PLEDGED

The Bonds are special limited obligations of the Issuer payable from all or any portion of the net revenues of the System.







Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

OUTSTANDING BONDS SECURED BY REVENUES

The Issuer currently has $___ of bonds outstanding secured by the Revenues.

OTHER OUTSTANDING BONDS OF THE ISSUER

Additional information regarding the Issuer's outstanding bonds may be found in the Issuer's financial report (the "Financial Report") at: https://reporting.auditor.utah.gov/searchreport. For additional information, including any information more recent than as of the date of the Financial Report, please contact Anna Montoya, Finance (801) 763-3000.

TOTAL ESTIMATED COST OF BONDS

Based on the Issuer's current plan of finance and a current estimate of interest rates, the total principal and interest cost of the Bonds to be issued under the Act to finance the Project, if held until maturity, is $_____.

A copy of the Resolution and the Indenture are on file in the office of City Recorder, 51 East Main, American Fork City, Utah where they may be examined during regular business hours of the City Recorder from 7:00 a.m. to 6:00 p.m. Monday through Thursday, for a period of at least thirty (30) days from and after the date of publication of this notice.

NOTICE IS FURTHER GIVEN that a period of thirty (30) days from and after the date of the publication of this notice is provided by law during which any person in interest shall have the right to contest the legality of the Resolution, the Indenture or the Bonds, or any provision made for the security and payment of the Bonds, and that after such time, no one shall have any cause of action to contest the regularity, formality, or legality thereof for any cause whatsoever.

DATED this June 30, 2020.

/s/ Terilyn Lurker
City Recorder

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

Section 11. The Issuer hereby reserves the right to opt not to issue the Bonds for any reason, including without limitation, consideration of the opinions expressed at the public hearing.

Section 12. All resolutions or parts thereof in conflict herewith are, to the extent of such conflict, hereby repealed and this Resolution shall be in full force and effect immediately upon its approval and adoption.

Section 13. The Issuer hereby declares its intention and reasonable expectation to use proceeds of tax-exempt bonds to reimburse itself for initial expenditures for costs of the Project. The Bonds are to be issued, and the reimbursements made, by the later of 18-months after the payment of the costs or after the Project is placed in service, but in any event, no later than three years after the date the original expenditure was paid. The maximum principal amount of the Bonds which will be issued to finance the reimbursed costs of the Project is not expected to exceed $29,500,000.

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

APPROVED AND ADOPTED this June 30, 2020.

(SEAL)

By:_____
Mayor

ATTEST:

By:_____
City Recorder

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

(Other business not pertinent to the foregoing appears in the minutes of the meeting.)

Upon the conclusion of all business on the Agenda, the meeting was adjourned.

(SEAL)

By:_____
Mayor

ATTEST:

By:_____
City Recorder

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

STATE OF UTAH )
: ss.
COUNTY OF UTAH )

I, Terilyn Lurker, the duly appointed and qualified City Recorder of American Fork City, Utah (the "City"), do hereby certify according to the records of the City Council (the "Council") in my official possession that the foregoing constitutes a true and correct excerpt of the minutes of the meeting of the Council held on June 30, 2020, including a resolution (the "Resolution") adopted at said meeting as said minutes and Resolution are officially of record in my possession.

All members of the City Council were duly notified of said meeting, pursuant to law.

I further certify that the Resolution, with all exhibits attached, was deposited in my office on June 30, 2020, and pursuant to the Resolution, there will be published (a)(i) a Notice of Public Hearing and Bonds to Be Issued no less than fourteen (14) days before the public hearing date: once a week for two consecutive weeks in the Daily Herald, a newspaper having general circulation within the City, the affidavit of which publication will be attached upon availability, (b) on the Utah Public Notice Website created under Section 63F-1-701, Utah Code Annotated 1953, as amended and (c) on the Utah Legal Notices website (www.utahlegals.com) created under Section 45-1-101, Utah Code Annotated 1953, as amended.

IN WITNESS WHEREOF, I have hereunto subscribed my signature and impressed hereon the official seal of said City this June 30, 2020.

(SEAL)

By:_____
City Recorder

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

EXHIBIT A

CERTIFICATE OF COMPLIANCE WITH
OPEN MEETING LAW

I, Terilyn Lurker ,the undersigned City Recorder of American Fork City, Utah (the "City"), do hereby certify, according to the records of the City in my official possession, and upon my own knowledge and belief, that in accordance with the requirements of Section 52-4-202, Utah Code Annotated, 1953, as amended, I gave not less than twenty-four (24) hours public notice of the agenda, date, time and place of the June 30, 2020, public meeting held by the City Council of the City(the "Council") as follows:

(a) By causing a Notice, in the form attached hereto as Schedule 1, to be posted at the principal offices of the City on June 25, 2020, at least twenty-four (24) hours prior to the convening of the meeting, said Notice having continuously remained so posted and available for public inspection until the completion of the meeting;

(b) By causing a copy of such Notice, in the form attached hereto as Schedule 1, to be delivered to the Daily Herald on June 25, 2020, at least twenty-four (24) hours prior to the convening of the meeting; and

(c) By causing a copy of such Notice, in the form attached hereto as Schedule 1, to be posted on the Utah Public Notice Website (http://pmn.utah.gov) at least twenty-four (24) hours prior to the convening of the meeting.

In addition, the Notice of 2020 Annual Meeting Schedule for the Council (attached hereto as Schedule 2) was given specifying the date, time, and place of the regular meetings of the Council to be held during the year, by causing said Notice to be (a) posted on December 30, 2019 at the principal office of the Council, (b) provided to at least one newspaper of general circulation within the City on December 31, 2019 and (c) published on the Utah Public Notice Website (http://pmn.utah.gov) during the current calendar year.

IN WITNESS WHEREOF, I have hereunto subscribed my official signature this June 30, 2020.

(SEAL)

By:_____
City Recorder

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

SCHEDULE 1

NOTICE OF MEETING

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

SCHEDULE 2

ANNUAL MEETING SCHEDULE

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

(attach Proof of Publication of
Notice of Public Hearing and Bonds to be Issued)

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

EXHIBIT B

FORM OF INDENTURE

(See Transcript Document Nos. __ and __)

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

EXHIBIT C

FORM OF BOND PURCHASE AGREEMENT

(See Transcript Document No. __)

Attachment: Super Parameters Resolution -American Fork Water Revenue 2020 (Super Parameters Resolution - financing water project)

REQUEST FOR PUBLIC
COMMENT ON LOAN APPLICATION
TO THE BOARD OF WATER RESOURCES

June 30, 2020

Dear Water User:

American Fork City has applied to the Utah Board of Water Resources for a loan to be used in water system improvements that are necessary to provide adequate fire protection and culinary water services to high-growth areas. This project will also replace old and undersized main line pipes with larger system main line pipe along the network backbone of the culinary water system. Several segments will replace dilapidated main lines which routinely suffer from system outages due to breaks and leaks. Also, additional supply is needed from a proposed new city well.

Security for the loan would be provided through the sale of a council approved revenue bond to the Board of Water Resources. The bonds will be issued for a total not to exceed $29,500,000 which amount will be repaid to the Board of Water Resources over a period of no more than 31 years at interest not to exceed 5.0%. Payments shall be made from the net revenues of the water system. Although current rates are adequate to cover debt service payments, water rates may be adjusted over the term of the loan in order to pay for the project.

It is the policy of the Utah Board of Water Resources to provide a 15-day period for public comment prior to the purchase of any non-voted revenue bonds. In this regard, the City wishes to solicit the comments of the water users (either for or against the project). Interested individuals are encouraged to respond in writing before July 27, 2020. All written comments received prior to that date will be reviewed by the Board of Water Resources prior to the final decision on whether to proceed with the bond purchase. Comments should be addressed American Fork City:

American Fork City
Attn: Terilyn Lurker, City Recorder
51 East Main Street
American Fork, UT 84003

Thank you for your consideration in this matter.

Sincerely,

Mayor Brad Frost

Attachment: Request for public comment letter (Super Parameters Resolution - financing water project)

# REQUEST FOR COUNCIL ACTION
# CITY OF AMERICAN FORK
# JUNE 30, 2020

**Department** Recorder **Director Approval** *Terilyn Lurker*

**AGENDA ITEM** Review and action on the termination of the right-of-way access agreement with UTOPIA.

**SUMMARY RECOMMENDATION**
Recommendation to terminate the Interlocal Cooperation Right Of Way Agreement between American Fork City and UTOPIA.

**BACKGROUND**
American Fork City and UTOPIA entered into an interlocal cooperation right of way licensing agreement in 2018. The agreement states that the parties agree that either party may terminate the agreement upon 90 days written notice or at any other time mutually agreed to by the parties. The City desires to give written notice to terminate the current agreement.

**BUDGET IMPACT**
N/A

**SUGGESTED MOTION**
I move to terminate the Interlocal Cooperation Right Of Way Agreement between American Fork City and UTOPIA and to provide all parties the required notice per the agreement.

**SUPPORTING DOCUMENTS**

2018-011 - UTOPIA Right of Way Licensing Agreement (PDF)

2018-011

# INTERLOCAL COOPERATION
# RIGHT OF WAY LICENSING AGREEMENT
# BETWEEN AMERICAN FORK CITY AND UTOPIA

**THIS AGREEMENT**, made and entered into this 24 day of April, 2018, by and between **AMERICAN FORK CITY**, a municipality and political subdivision of the State of Utah, hereinafter called "City," and UTAH TELECOMMUNICATIONS OPEN INFRASTRUCTURE AGENCY (UTOPIA), an interlocal entity of the State of Utah created pursuant to the Interlocal Cooperation Act, Utah Code Ann. Section 11-13-101 et seq., hereinafter called "UTOPIA." City and UTOPIA are collectively referred to herein as the "Parties."

**WITNESSETH**:

**WHEREAS**, UTOPIA desires to obtain from City, a license to lay, maintain, operate, repair, inspect, protect, install, remove, and replace fiber optic cable, and other transmission and distribution structures and facilities (the "Facilities"), within the public highways, streets, roads, and rights-of-way which are within the jurisdiction and responsibility of City, together with the right of ingress and egress for UTOPIA, its officers, employees, agents, and contractors to enter upon said public rights-of-way with such equipment as is necessary to install, maintain, operate, repair, inspect, protect, remove and replace said Facilities; and

**WHEREAS,** City is willing to grant said license under the terms and conditions set forth in this Agreement; and

**WHEREAS,** the Parties are authorized to enter into an Interlocal Cooperation Agreement pursuant to the Interlocal Cooperation Act, Utah Code Ann. Section 11-13-101 et seq. and wish to enter into an Interlocal Cooperation Agreement reflecting the terms of this agreement.

**NOW, THEREFORE**, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereby agree as follows:

1. Grant of License. The City hereby grants, conveys, sells and sets over unto UTOPIA, a non-exclusive license to lay, maintain, operate, repair, inspect, protect, install, remove and replace the Facilities over and through the public highways, streets, roads, and public rights-of-way (collectively, the "Streets"), which are within the jurisdiction and responsibility of City, together with the right of ingress and egress for UTOPIA, its officers, employees, agents, contractors and assigns to enter upon said Streets with such equipment as is necessary to install, maintain, operate, repair, inspect, protect, remove and replace the Facilities. This non-exclusive license will expire upon termination of this agreement (the "Agreement.")

2. Term. The Parties agree that either Party may terminate this Agreement upon 90 days prior written notice, or at any other time mutually agreed to by the Parties. Unless terminated pursuant to the provisions of this paragraph, the initial term of this Agreement will expire ten years from its effective date.



Attachment: 2018-011 - UTOPIA Right of Way Licensing Agreement (UTOPIA ROW Agreement Termination)

3. Administrative Expenses. To the extent City incurs any administrative or other fees associated with this Agreement, UTOPIA shall pay such fees to City directly within 30 calendar days of receipt of an invoice itemizing such fees. This includes a one-time administrative fee of $500 to compensate City for direct costs City incurs in preparing, considering, approving, executing, and implementing this Agreement.

4. Construction and Location. UTOPIA may install Facilities at those locations within the Streets as shall be determined in accordance with plans, specifications and maps prepared, or caused to be prepared, by UTOPIA. Prior to performing any work in the Streets for initial Facilities installation or otherwise, UTOPIA shall apply for an encroachment/excavation permit, or other applicable City permit. City shall review and may improve the submitted plan prior to permit issuance. Upon compliance with this Agreement and all applicable permit requirements, including but not limited to a traffic management plan, surface and landscaping restoration plan, and work schedule, City shall issue a permit to UTOPIA's contractor, allowing said contractor to proceed with the work in accordance with the terms of this Agreement and the permit. As-built drawings shall be submitted to the City within thirty days of the completion of construction. All applicable regulations and permits of City shall be fully complied with by UTOPIA and its contractor(s).

5. Underground Installation. UTOPIA expressly agrees to install and maintain all of its Facilities in accordance with City ordinances regarding the undergrounding of utility lines in effect at the time of this Agreement is executed and as subsequently amended during the term of this Agreement. All Facilities shall be located underground, except that the city may permit the installation of Facilities above-ground, subject to a prior finding by the city engineer that underground installation is not reasonably feasible.

6. Protection of Traffic During Construction. UTOPIA shall require its contractor to conduct its construction operation so that there shall be a minimum of interference or interruption to City with respect to the handling of traffic and traffic operations. UTOPIA's contractor shall at all times require such watchmen, barricades, lights or other reasonable measures for the protection of traffic as may be reasonably required to warn and safeguard the public against injury or damage during construction, maintenance, repair or replacement of the Facilities. Said traffic requirements shall be approved by City in writing prior to construction operation, and shall hold City harmless from any and all liabilities arising from said construction commenced under the terms of this easement.

7. Compaction of Backfill. The backfilling of any trench within the paved portion of the street, the shoulders thereof, within park strips, under sidewalk or curb and gutter, or the portion under or intersecting the street, shall be thoroughly compacted in accordance with all applicable standards and regulations, including City's construction standards. The method of compaction shall be subject to review by City at the time the permit application is reviewed. UTOPIA shall require its contractors to comply with City's construction standards and permit requirements.

8. Restoration of Existing Pavement. UTOPIA shall require its contractor to remove and replace any hard surface removed, disturbed or damaged as a result of construction, maintenance or work performed on said Facilities including all surfaces within the travel lane of said removed, disturbed or damaged surface with the same type and depth of hard surface as that which is adjoining, including the gravel base material. All removed, disturbed, or damaged

Attachment: 2018-011 - UTOPIA Right of Way Licensing Agreement (UTOPIA ROW Agreement Termination)

surfaces shall be restored to the standards established by City. In the event weather conditions do not permit immediate replacement of permanent hard surface, a temporary surface shall be placed until such time as weather conditions are favorable, at which time the temporary surface shall be removed and replaced with a permanent road surface. If the gravel surface, gravel shoulder, or gravel surface approach to City roads become contaminated with clay or other unsuitable material, such surfacing shall be removed and replaced with new gravel surfacing material. The repairs to hard surface shall include hard surfaces which are damaged by construction equipment used in constructing, maintaining, or repairing the Facilities. In all cases UTOPIA hereby agrees to cause its contractor to restore those portions of the street through which the work actually traverses, to as near its original condition as is reasonably possible.

9. Disposal of Surface Material in Cleaning Up Street. Upon completion of the work, Utopia shall assure that all surplus material shall be removed from within the limits of the Streets and properly disposed of by the contractor. The disturbed surface shall be carefully graded to the lines and grades established. Utopia shall immediately notify the City in the event that any Street facility such as signs and culverts are disturbed or damaged during the process of the work and shall promptly restore or replace the same to as near their original condition as is reasonably possible. No material shall be left on private property adjacent to the Streets.

10. Maintenance of Facilities by UTOPIA. The Facilities and their attached appurtenances shall at all times be maintained, repaired and operated by and at the expense of UTOPIA.

11. Reconstruction of Street. In the event that any Street, or portion thereof is so reconstructed at any future date as to location, grade or width, so as to require the adjustments or relocation of manholes or other Facilities, UTOPIA shall assume and pay all costs incident to the adjustment or relocation of such manholes or other Facilities in accordance with paragraph 14.

12. Crossing of Facilities and Expansion of Street System. Subject to the terms of this Agreement, it is expressly understood and agreed by the Parties that as part of the consideration for this Agreement, that City shall have the right to cross said Facilities at any point deemed necessary in the future construction and expansion of City's street system or utility infrastructure, provided that City shall use due care and diligence in the protection of the Facilities in making such crossings. UTOPIA will mark and identify its Facilities in or adjacent to the zone of the City's work as identified on Bluestakes of Utah locate tickets.

13. Bond Requirements. UTOPIA shall provide a performance bond and a labor and material payment bond, each in the amount of the estimated cost to install the project, which bonds shall be furnished no less than 15 calendar days before UTOPIA commences work within any Rights-of-Way.

14. Licenses. UTOPIA acknowledges that it has obtained the necessary approvals, licenses or permits required by federal, state, and local law to provide services consistent with the provisions of this Agreement.

15. Indemnification. Both parties are governmental entities under the Utah Governmental Immunity Act of Utah, Title 63G, Chapter 7, Utah Code Ann., 1953, as amended.

Attachment: 2018-011 - UTOPIA Right of Way Licensing Agreement (UTOPIA ROW Agreement Termination)

Consistent with the terms of this Act, it is mutually agreed that each party is responsible and liable for its own negligent acts which it commits or which are committed by its agents, officials, or employees. Utopia agrees to defend and indemnify City against any and all claims of third-parties against City, which arise from UTOPIA's exercise of any of its rights under this Agreement, except in the case of City's sole negligence. Neither party waives any defenses otherwise available under the Governmental Immunity Act. This Agreement shall in no manner constitute an admission of any liability as to any third party or give any third party any greater or further right or cause of action. It is hereby expressly understood and agreed that neither City nor UTOPIA is hereby acknowledging any liability for any act of negligence, whether of omission or commission, of their respective agents, servants, contractors or employees. UTOPIA shall procure and maintain in force at its sole expense during the term of this Agreement property damage and public liability insurance providing liability coverage for UTOPIA's actions in relation to this interlocal agreement and shall provide certificates of insurance to City upon request, which certificates shall name the City as an additional insured. Such insurance shall provide for such coverages, protections, insurable amounts, etc., as deemed advisable by the Parties and available through Utah Local Governments Trust, or any other insurance provider utilized by City or UTOPIA, and which would be standard and reasonable for the uses contemplated hereunder.

16. Agreement Not to be Assigned. Neither party shall assign this Agreement nor any interest hereunder without the prior written consent of the other party first obtained.

17. Successors and Assigns. All covenants and agreements herein contained shall be binding upon the parties hereto, and their respective successors in interest and assigns.

18. Subject To Relocation. This license is subject to the right of City at all times as City deems necessary to construct roads, sidewalks, infrastructure or to carry out any other City purpose over the areas covered by this license, and when UTOPIA's Facilities and appurtenances materially interfere with any City purpose, UTOPIA will remove, adjust and/or relocate such Facilities and appurtenances within a reasonable time after written notice to do so by City and at the expense of UTOPIA.

19. Notices. Any notice required or desired to be given pursuant to this Agreement shall be in writing and shall be delivered personally or mailed, return receipt requested postage prepaid, to the parties as follows:

To UTOPIA: General Counsel
5858 South 900 East
Murray, UT 84121

To City: City Administrator
51 East Main Street
American Fork, UT 84003

Copy to:



Attachment: 2018-011 - UTOPIA Right of Way Licensing Agreement (UTOPIA ROW Agreement Termination)

The City and UTOPIA may change their addresses by providing written notice, as required under this provision.

20. Contract Integration. This Agreement embodies the entire agreement between the Parties and shall not be altered, enlarged or modified except in writing signed by both Parties. The benefits and protection provided by this Agreement shall not inure to the benefit of third-parties.

21. Governing Law. This Agreement shall be governed by the laws of the State of Utah, both as to interpretation and performance.

22. Venue. Venue for any dispute related to this Agreement shall lie exclusively in the Fourth Judicial District, Utah County, State of Utah.

23. No Separate Legal Entity Created; Interpretative Joint Board. No Separate legal entity is created by this Agreement; however, to the extent that any administration of this Agreement becomes necessary, then the City Mayor and the UTOPIA Executive Director, or their designees, shall constitute a Joint Board for such purpose. Each of the Parties shall bear its own costs associated with the Joint Board.

24. Manner of Acquiring, Holding and Disposing of Property. No real property will be acquired pursuant to the terms of this Agreement. Unless otherwise agreed by the Parties in writing, upon termination of this Agreement all personal property installed within the City shall be dedicated to and become the property of the City.

25. Review by Legal Counsel. Each of the Parties hereby certifies that, pursuant to the requirements of Section 11-13-202.5, Utah Code Annotated (1953 as amended), it has submitted this agreement to an attorney authorized to represent it for review as to proper form and compliance with applicable law.

26. Filing of Interlocal Agreement. Executed copies of this Interlocal Cooperation Agreement shall be placed on file with the official keeper of records of each of the Parties following its execution and shall remain on file for public inspection during the term of this Interlocal Cooperation Agreement.

Attachment: 2018-011 - UTOPIA Right of Way Licensing Agreement (UTOPIA ROW Agreement Termination)

**IN WITNESS WHEREOF**, the parties hereto have caused this agreement to be executed by their respective, duly authorized representatives as of the day and year first hereinabove written.

**CITY**

By: _____
Bradley J. Frost, Mayor

ATTEST:

_____
City Recorder

AMERICAN FORK CITY CORPORATE SEAL UTAH COUNTY STATE OF UTAH

**UTOPIA**

_____
Roger Timmerman, Executive Director

Attachment: 2018-011 - UTOPIA Right of Way Licensing Agreement (UTOPIA ROW Agreement Termination)