AMERICAN FORK CITY PLANNING COMMISSION
SEPTEMBER 16, 2020
NOTICE OF ELECTRONIC MEETING
REGULAR SESSION- AMENDED AGENDA

Notice is hereby given that the American Fork City Planning Commission will meet in regular session on September 16, 2020, commencing at 7:00 pm. Pursuant to changes in the Utah Open and Public Meetings Act and Covid-19 Guidelines, this meeting will be conducted electronically. Citizens may submit comments via email at *zoompubliccomment@afcity.net* prior to 5:00 pm the day of the meeting and access a YouTube live stream of the meeting at afcity.org.
The agenda shall be as follows:

1. Hearing, review and action on the preliminary plan and final plat for Rockwell Ranch Block 3 Phase 1, consisting of 23 lots, and located at approximately 1060 West 480 South in the TOD zone

2. Hearing, review and action on the preliminary plan and final plat for Rockwell Ranch Block 5 Phase 1, consisting of 39 lots, located at approximately 1060 West 560 South in the TOD zone

3. Hearing, review and action on the preliminary plan and final plat for Roderick Catalyst Subdivision Phase 2, located in the area of 1600 South 450 East in the PI-1 Planned Industrial zone

4. Hearing, review and action on a commercial site plan for Bishop Storage, located at 16 West 1500 South in the PI-1 Planned Industrial zone

5. Hearing, review and action on amendments to Section 17.4.401 of the American Fork City Development Code entitled CC-1 Central Commercial zone

6. Other Business

7. Site Plan Committee Report

8. Review and action on the minutes of the September 2, 2020 Planning Commission Regular Session

9. Adjournment

John H. Woffinden, P.G.
Planning Commission Chairman

The order of agenda items may change to accommodate the needs of the commission, city staff and the public

AMERICAN FORK CITY
PLANNING COMMISSION

MEETING DATE: September 16, 2020
STAFF PRESENTATION: Adam Olsen

AGENDA TOPIC: Hearing, review and action on the preliminary plan and final plat for Rockwell Ranch Block 3 Phase I, consisting of 45 lots and 10 multi-family units, located at approximately 480 South 1060 West, in the TOD (Transit Oriented Development) zone.

ACTIONS REQUESTED: Approval of the preliminary plan and recommendation of approval of the final plat.

BACKGROUND INFORMATION					
Location:		480 South 1060 West			
Applicants:		Ensign Engineering			
Existing Land Use:		Agriculture			
Proposed Land Use:		Residential			
Surrounding Land Use:	North	Residential/Agriculture			
	South	Agriculture			
	East	Residential/Agriculture			
	West	Residential/Agriculture			
Existing Zoning:		TOD (Transit Oriented Development)			
Proposed Zoning:		N/A			
Surrounding Zoning:	North	RA-5			
	South	TOD			
	East	TOD & Residential Agriculture 5 (Utah County)			
	West	RA-5, Residential Agriculture 5 (Utah County)			
Land Use Plan Designation:		TOD (Transit Oriented Development)			
Zoning compliant with Land Use Plan Designation?		x	Yes		No

Background

The area of Rockwell Ranch was annexed in 2015. It received approval of a district framework plan in 2019 (Olive Tree District Framework Plan), followed by block plan approval (staff level review). As part of the lot plan submittal and review, subdivision plats are necessary. Further lot plan review (staff level review) will ensure placement of structures, setbacks, height, landscaping, number of multi-family units, parking, etc. be compliant with the TOD Code. The subdivision plat acts as a formal instrument in proceeding toward development of the site.

This plat anticipates a 45-lot townhome and 10-unit multi-family development.

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:

1. The final plat is consistent with the Land Use Plan designation of “Transit Oriented Development”.

2. The final plat meets the criteria as found in Section 17.7.211 of the Development Code.

3. Water rights conveyance shall be satisfied prior to plat recordation.

POTENTIAL MOTIONS

APPROVAL

Mr. Chairman, I move that we approve the preliminary plan and recommend approval of the final plat of Rockwell Ranch Block 3 Phase I, with the findings and condition 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 plat of Rockwell Ranch Block 3 Phase I.

TABLE

Mr. Chairman, I move that we table action on the preliminary plan and final plat of Rockwell Ranch Block 3 Phase I.

AMERICAN FORK CITY ENGINEERING DIVISION
STAFF REPORT

Planning Commission Meeting Date: 9/16/2020

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: Rockwell Ranch Block 3 Phase 1

Project Address: 480 South 1060 West

Developer / Applicant's Name: White Horse Developers

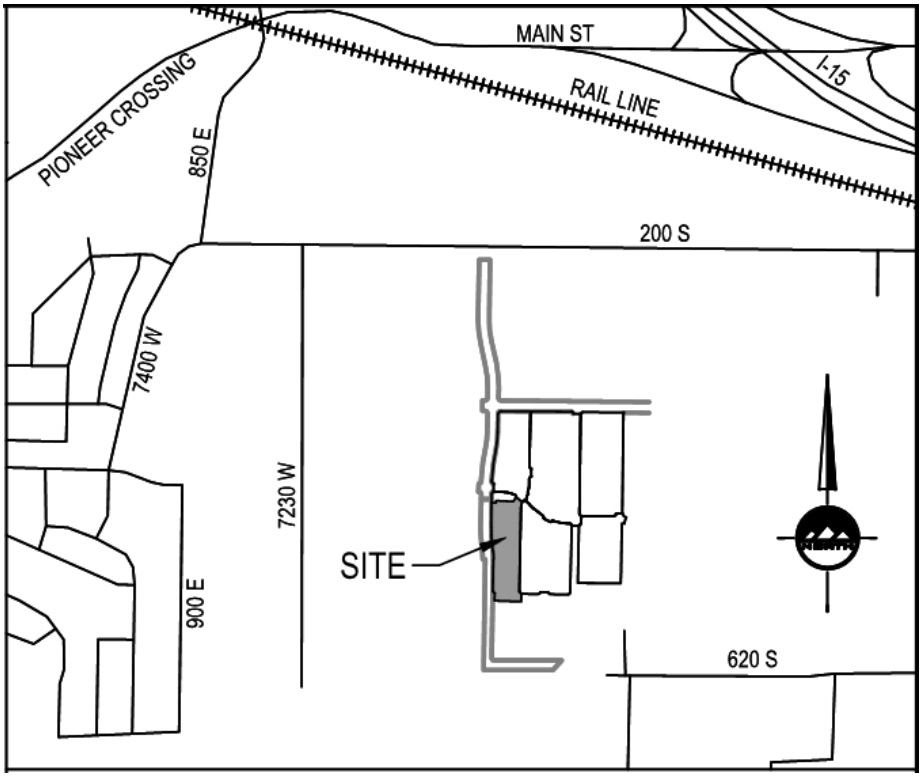
Type of Application:

- ☒ 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 9/16/2020 Engineering Division Staff Report for the City Land Use Authority shall be addressed on all final project documents.

Project Map:



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).

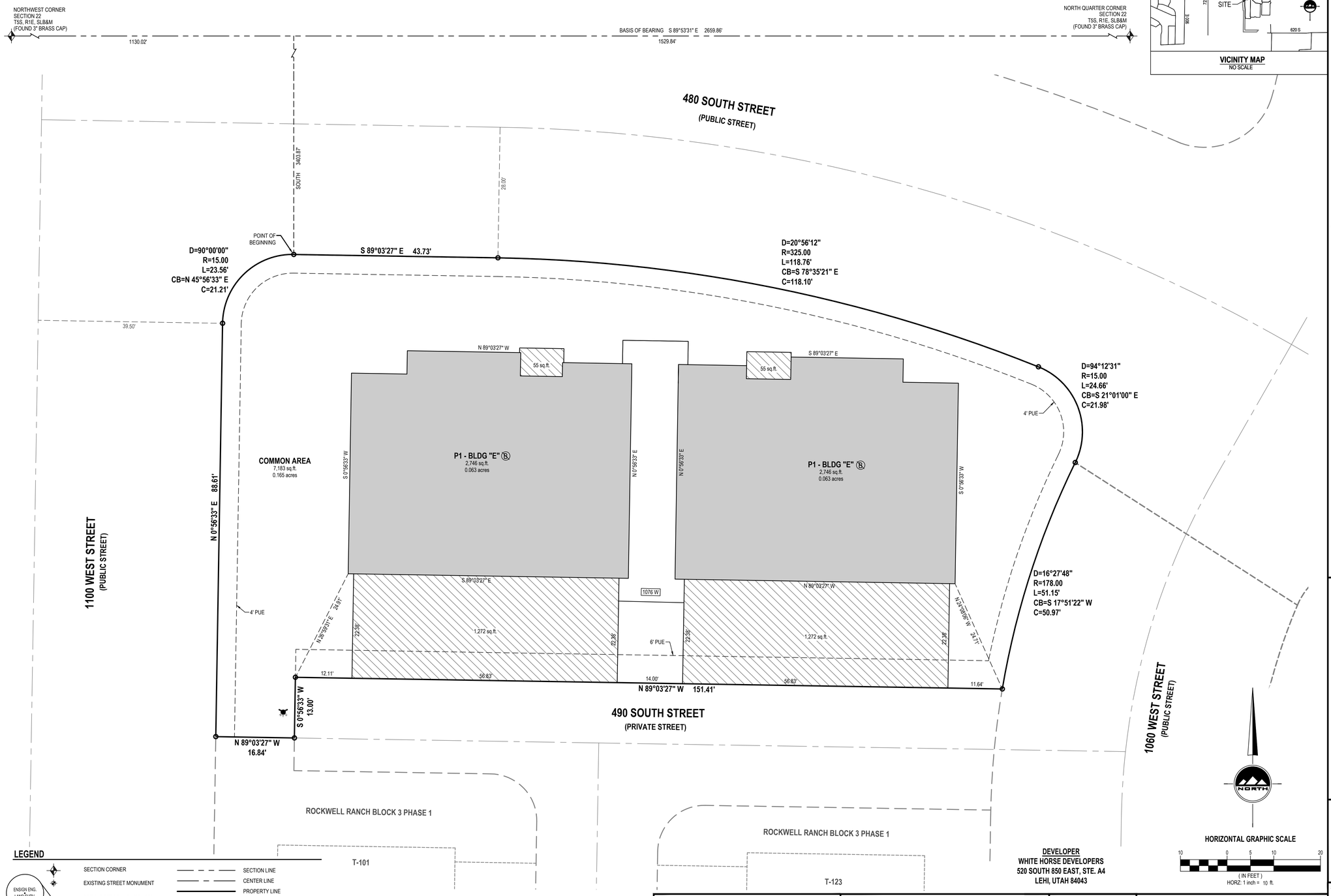
Plan Modifications Required:

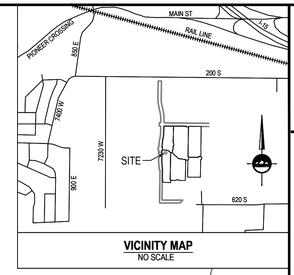
1.

ROCKWELL RANCH BLOCK 3 PHASE 1 PLAT "E" CONDOMINIUM

**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
ZONING TOD**

NOTES
1. OFFSET PINS TO BE PLACED AT THE TOP BACK OF CURB AT EACH PROJECTED PROPERTY LINE AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL REAR LOT CORNERS PRIOR TO OCCUPANCY.
2. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.
3. 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 MARSHALL AND CHARGED WITH CULINARY WATER.





VICINITY MAP
NO SCALE

SURVEYOR'S CERTIFICATE

I, PATRICK M. HARRIS, 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 NUMBER 286882 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, UPON WHICH HAS BEEN OR WILL BE CONSTRUCTED, HEREAFTER TO BE KNOWN AS ROCKWELL RANCH BLOCK 3 PHASE 1 PLAT "E" CONDOMINIUM, A UTAH CONDOMINIUM PROJECT. IN ACCORDANCE WITH THE UTAH CONDOMINIUM OWNERSHIP ACT, I FURTHER CERTIFY THAT THE CONDOMINIUM PLAT FOR SAID PROJECT IS ACCURATE AND COMPLIES WITH THE PROVISION OF SECTION 57-8-13 (1) OF THE UTAH CONDOMINIUM OWNERSHIP ACT. REFERENCE MARKERS AS SHOWN ON THIS PLAT ARE LOCATED AS SHOWN AND ARE SUFFICIENT TO READILY RETRACE OR RE-ESTABLISH THIS SURVEY.

BOUNDARY DESCRIPTION

Beginning at a point being South 89°53'31" East 1,130.02 feet along section line and South 3,403.87 feet from the Northwest Corner of Section 22, Township 5 South, Range 1 East, Salt Lake Base and Meridian; and running

thence South 89°03'27" East 43.73 feet;
thence Southeasterly 118.76 feet along the arc of a 325.00 feet radius curve to the right (center bears South 00°56'33" West and the chord bears South 78°35'21" East 118.10 feet with a central angle of 20°56'12");
thence Southeasterly 24.66 feet along the arc of a 15.00 feet radius curve to the right (center bears South 21°52'45" West and the chord bears South 21°01'00" East 21.98 feet with a central angle of 94°12'31");
thence Southwesterly 51.15 feet along the arc of a 178.00 feet radius curve to the left (center bears South 63°54'44" East and the chord bears South 17°51'22" West 50.97 feet with a central angle of 16°27'48");
thence North 89°03'27" West 151.41 feet;
thence South 00°56'33" West 13.00 feet;
thence North 89°03'27" West 16.84 feet;
thence North 00°56'33" East 88.61 feet;
thence Northeasterly 23.56 feet along the arc of a 15.00 feet radius curve to the right (center bears South 89°03'27" East and the chord bears North 45°56'33" East 21.21 feet with a central angle of 90°00'00") to the point of beginning.

Contains 15,329 Square Feet or 0.352 Acres

DATE

PATRICK M. HARRIS
LICENSE NO. 286882

OWNER'S CERTIFICATION AND CONSENT TO RECORD

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED OWNER(S) OF SAID TRACT OF LAND DESCRIBED HEREON DO HEREBY CERTIFY THAT WE CONSENT TO THE RECORDATION OF THIS CONDOMINIUM PLAT IN ACCORDANCE WITH UTAH CODE ANNOTATED 57-8-13, SUBDIVIDING THE LAND INTO CONDOMINIUM OWNERSHIP, AND CREATING UNITS, COMMON AREAS, LIMITED COMMON AREAS AND EASEMENTS ALL AS SET FORTH HEREIN TO HEREAFTER BE KNOWN AS

**ROCKWELL RANCH BLOCK 3 PHASE 1
PLAT "E" CONDOMINIUM**

UTILITY DEDICATION

BY EXECUTION OF THIS PLAT, THE OWNER(S) SHOWN BELOW DOES HEREBY GRANT AND CONVEY TO THE CITY AND OTHER PUBLIC UTILITY COMPANIES, A PERMANENT EASEMENT AND RIGHT OF WAY IN AND TO THOSE AREAS REFLECTED ON THE MAP AND DEFINED IN THE DECLARATION OF CONDOMINIUM APPLICABLE TO THIS PROJECT AS "COMMON AREA" (INCLUDING PRIVATE STREETS AND PRIVATE DRIVEWAYS) FOR CONSTRUCTION AND MAINTENANCE OF APPROVED PUBLIC UTILITIES AND APPURTENANCES TOGETHER WITH RIGHT OF ACCESS THERETO.

RESERVATION OF COMMON AREAS

BY EXECUTION OF THIS PLAT, THE OWNER(S) SHOWN BELOW DOES HEREBY RESERVE ALL AREAS SHOWN ON THIS PLAT OR DESCRIBED IN THE DECLARATION OF CONDOMINIUM AS "COMMON AREA" FOR THE COMMON ENJOYMENT OF ALL OWNERS AND SUCH OWNERS GUESTS AND INVITEES AS SPECIFICALLY DESCRIBED IN THE DECLARATION OF CONDOMINIUM APPLICABLE TO THE PROJECT.

IN WITNESS HEREOF, THE OWNER(S) HAVE HEREUNTO SET OUR HANDS THIS ____ DAY OF_____, A.D. 20___.

By:
Its:

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF_____ } S.S.

ON THE _____ DAY OF _____, A.D. 20 ___, _____ PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR SAID COUNTY OF_____ IN SAID STATE OF UTAH, WHO AFTER BEING DULY SWORN, ACKNOWLEDGED TO ME THAT HE/SHE IS THE _____ OF _____, A LIMITED LIABILITY COMPANY AND THAT HE/SHE SIGNED THE OWNER'S DEDICATION FREELY AND VOLUNTARILY FOR AND IN BEHALF OF SAID LIMITED LIABILITY COMPANY FOR THE PURPOSES THEREIN MENTIONED AND ACKNOWLEDGED TO ME THAT SAID LIMITED LIABILITY COMPANY EXECUTED THE SAME.

MY COMMISSION EXPIRES: _____
NAME: _____
NO: _____
A NOTARY PUBLIC COMMISSION IN UTAH

NOTARY PUBLIC
RESIDING IN _____ COUNTY

APPROVAL BY LEGISLATIVE BODY

THE _____ OF _____ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL THE STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY OF _____, A.D. 20____

MAYOR
CITY COUNCIL MEMBER
CITY COUNCIL MEMBER
CITY COUNCIL MEMBER
CITY COUNCIL MEMBER
CITY COUNCIL MEMBER
CITY ENGINEER
ATTEST: CLERK - RECORDER (SEE SEAL BELOW)

PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____ A.D. 20_____ BY THE AMERICAN FORK CITY PLANNING COMMISSION.

PLANNER
PLANNING COMMISSION CHAIRMAN

HORIZONTAL GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
HORZ: 1 inch = 10 ft.

DEVELOPER
WHITE HORSE DEVELOPERS
520 SOUTH 850 EAST, STE. A4
LEHI, UTAH 84043

LEGEND

- SECTION CORNER
- EXISTING STREET MONUMENT
- SET 5/8" REBAR WITH YELLOW PLASTIC CAP, OR NAIL STAMPED "ENSIGN ENG. & LAND SURV." (ENSIGN ENG. LAND SURV.)
- LIMITED COMMON AREAS
- PRIVATE AREA
- COMMON AREAS
- SECTION LINE
- CENTER LINE
- PROPERTY LINE
- EASEMENT LINE
- ADJACENT PROPERTY LINE
- ADJACENT RIGHT OF WAY LINE
- FIRE HYDRANT
- NO BASEMENT

LAND USE TABLE				
BUILDING AREA	=	5,492 SF	0.13 AC	36%
LIMITED COMMON AREA	=	2,654 SF	0.06 AC	17%
COMMON AREA	=	7,183 SF	0.16 AC	47%
TOTAL AREA	=	15,329 SF	0.35 AC	100%
TOTAL NUMBER OF BUILDINGS = 1				
TOTAL NUMBER UNITS IN PHASE = 10				

WATER AND SEWER AUTHORITY APPROVAL

APPROVED THIS _____ DAY OF _____, 20_____,
BY THE WATER AND SEWER AUTORITY.

PUBLIC WORKS DEPARTMENT DIRECTOR

ENSIGN

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT. 84070
Phone: 801.255.0529
Fax: 801.255.4449
WWW.ENSIGNENG.COM

LAYTON
Phone:801.547.1100
TOOELE
Phone: 435.843.3590
CEDAR CITY
Phone: 435.865.1453
RICHFIELD
Phone: 435.896.2983

SHEET 1 OF 2

PROJECT NUMBER : 8799F.4
MANAGER : JKF
DRAWN BY : KFW
CHECKED BY : PMH
DATE : 8/27/20

BASIS OF BEARING

THE BASIS OF BEARING IS BETWEEN THE NORTHWEST CORNER AND THE NORTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, WITH A BEARING OF SOUTH 89°53'31" EAST.

FLOOD ZONE DESIGNATION

SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE _X_ AS DELINEATED BY F.E.M.A. FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP 49551701208 EFFECTIVE JULY 17, 2002 .

**ROCKWELL RANCH BLOCK 3
PHASE 1 PLAT "E" CONDOMINIUM**

**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**

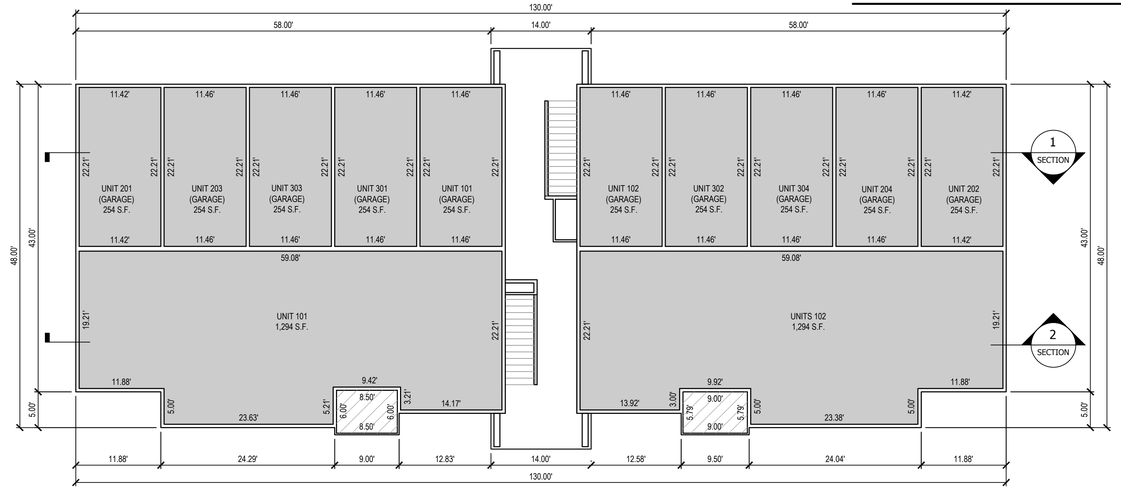
SURVEYORS SEAL
PROFESSIONAL LAND SURVEYOR
No. 286882
PATRICK M. HARRIS
STATE OF UTAH

NOTARY PUBLIC SEAL

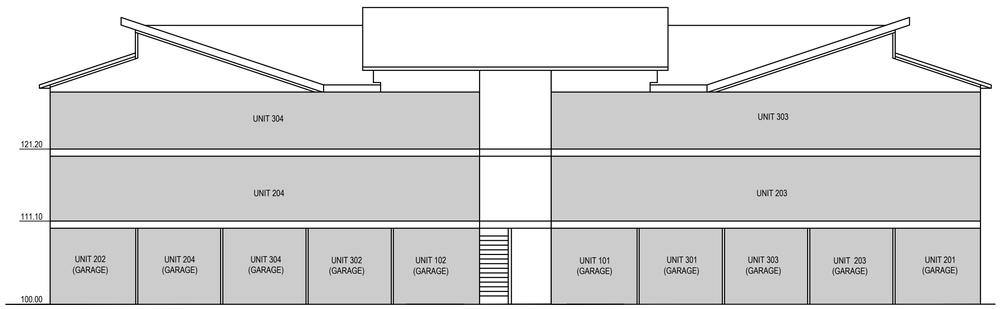
CLERK-RECORDER SEAL

ROCKWELL RANCHBLOCK 3 PHASE 1 PLAT "E" CONDOMINIUM

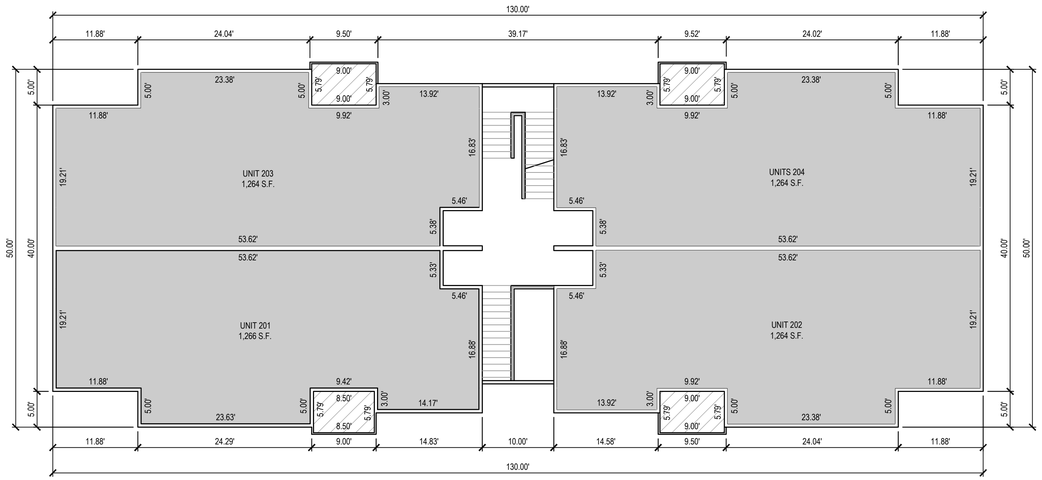
**LOCATED IN THE SOUTHWEST QUARTER OF SECTION 22,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN,
AMERICAN FORK CITY, UTAH COUNTY, UTAH
ZONING TOD**



1ST FLOOR



SECTION 1
REAR ELEVATION



2ND FLOOR

SECTION 2
FRONT ELEVATION

3RD FLOOR

FLOOR ELEVATIONS		
FLOOR & UNITS	FINISH FLOOR ELEVATION	CEILING ELEVATION
1ST FLOOR	4509.75	4518.67
2ND FLOOR	4520.85	4529.73
3RD FLOOR	4530.95	4539.83

LEGEND

- LIMITED COMMON AREAS
- PRIVATE PROPERTY
- COMMON AREA

OWNER
WHITE HORSE DEVELOPERS
520 SOUTH 850 EAST, STE. A4
LEHI, UTAH 84043

ENSIGN
SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT. 84070
Phone: 801.255.0529
Fax: 801.255.4449
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LAYTON Phone:801.547.1100
TOOELE Phone: 435.843.3590
CEDAR CITY Phone: 435.865.1453
RICHFIELD Phone: 435.896.2983

SHEET 2 OF 2

PROJECT NUMBER : 8799F.4
MANAGER : JKF
DRAWN BY : JWJ
CHECKED BY : KFW
DATE : 8/27/20

ROCKWELL RANCHBLOCK 3 PHASE 1 PLAT "E" CONDOMINIUM

**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**

SURVEYORS SEAL

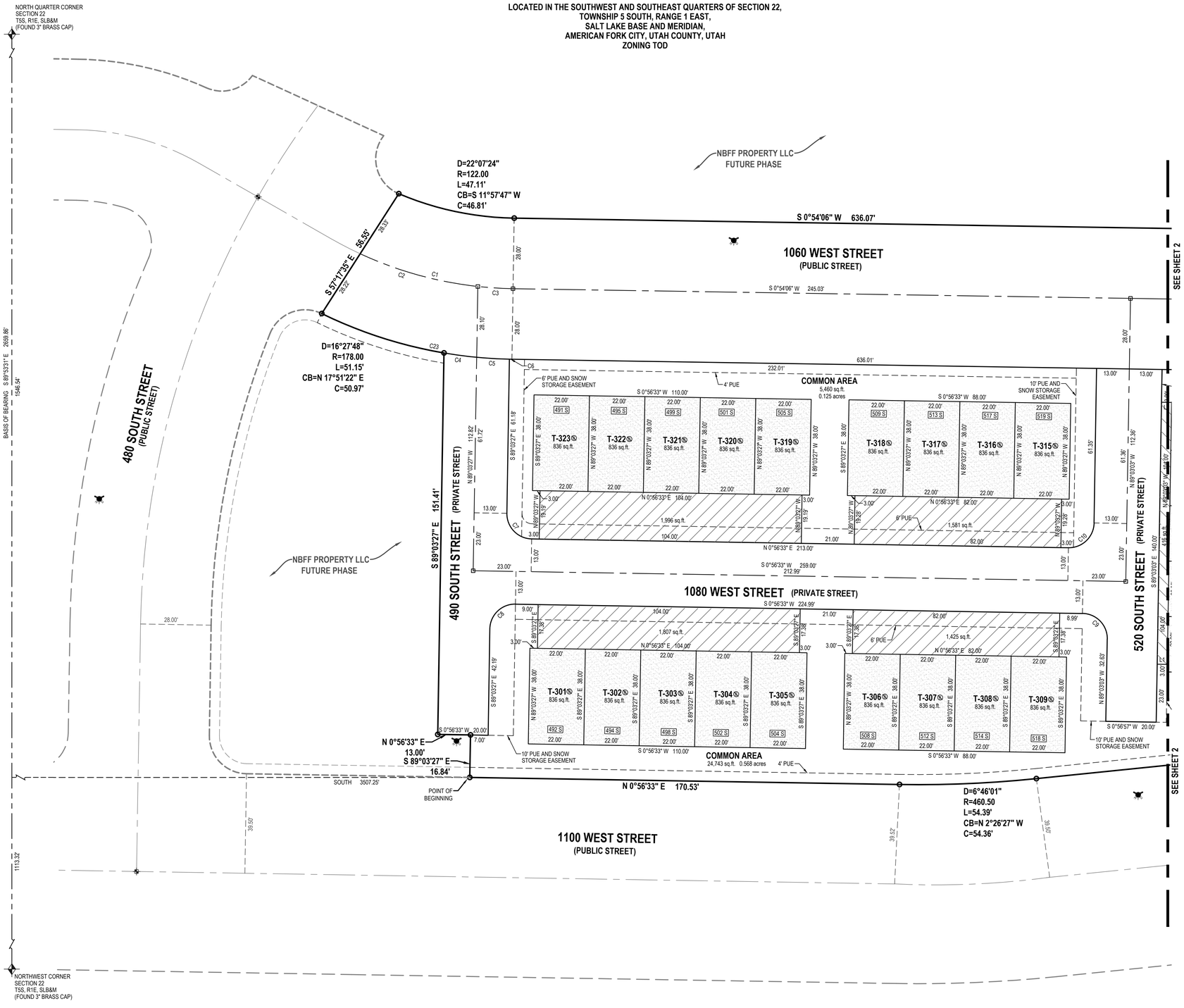
PROFESSIONAL LAND SURVEYOR
No. 286882
PATRICK M. HARRIS
STATE OF UTAH

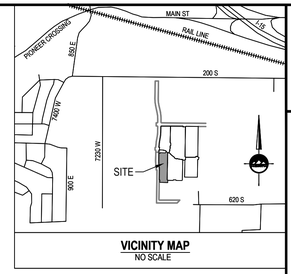
NOTARY PUBLIC SEAL

CLERK-RECORDER SEAL

ROCKWELL RANCH BLOCK 3 PHASE 1 PLAT

**LOCATED IN THE SOUTHWEST AND SOUTHEAST QUARTERS OF SECTION 22,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN,
AMERICAN FORK CITY, UTAH COUNTY, UTAH
ZONING TOD**





VICINITY MAP
NO SCALE

LEGEND

- SECTION CORNER
- EXISTING STREET MONUMENT
- PROPOSED STREET MONUMENT
- SET 5/8" REBAR WITH YELLOW PLASTIC CAP, OR NAIL STAMPED "ENSIGN ENG. & LAND SURV."
- SECTION LINE
- CENTER LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- ADJACENT RIGHT OF WAY LINE
- PRIVATE AREA
- LIMITED COMMON AREA
- COMMON AREA
- FIRE HYDRANT
- NO BASEMENT

ENSIGN ENG. LAND SURV.

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40
(IN FEET)
HORZ: 1 inch = 20 ft.

SURVEYOR'S CERTIFICATE

I, PATRICK M. HARRIS, 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 NUMBER 286882 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 DESCRIBED 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.

BOUNDARY DESCRIPTION

Beginning at a point being South 89°53'31" East 1,113.32 feet along section line and South 3,507.25 feet from the Northwest Corner of Section 22, Township 5 South, Range 1 East, Salt Lake Base and Meridian; and running

thence South 89°03'27" East 16.84 feet;
thence North 00°56'33" East 13.00 feet;
thence South 89°03'27" East 151.41 feet;
thence Northeasterly 51.15 feet along the arc of a 178.00 foot radius curve to the right (center bears North 80°22'32" East and the chord bears North 17°51'22" East 50.97 feet with a central angle of 16°27'48");
thence South 57°17'35" East 56.55 feet;
thence Southwesterly 47.11 feet along the arc of a 122.00 foot radius curve to the left (center bears South 66°58'31" East and the chord bears South 11°57'47" West 46.81 feet with a central angle of 22°07'24");
thence South 00°54'06" West 636.07 feet;
thence Southeasterly 23.55 feet along the arc of a 15.00 foot radius curve to the left (center bears South 89°05'54" East and the chord bears North 44°04'41" East 21.21 feet with a central angle of 89°57'32");
thence South 89°03'27" East 127.33 feet;
thence South 00°56'33" West 56.00 feet;
thence North 89°03'27" West 328.27 feet;
thence Southwesterly 23.57 feet along the arc of a 15.00 foot radius curve to the left (center bears South 00°56'33" West and the chord bears South 45°55'19" West 21.22 feet with a central angle of 90°02'28");
thence North 00°54'06" East 325.56 feet;
thence Northwesterly 63.33 feet along the arc of a 539.50 foot radius curve to the left (center bears North 89°05'54" West and the chord bears North 02°27'41" West 63.30 feet with a central angle of 06°43'33");
thence North 05°49'28" West 123.34 feet;
thence Northwesterly 54.39 feet along the arc of a 460.50 foot radius curve to the right (center bears North 84°10'32" East and the chord bears North 02°26'27" West 54.36 feet with a central angle of 06°46'01");
thence North 00°56'33" East 170.53 feet to the point of beginning.

Contains 163,821 Square Feet or 3.761 Acres and 45 Units

OWNER'S DEDICATION

KNOWN ALL MEN BY THESE PRESENT THAT WE, ALL OF THE UNDERSIGNED OWNERS OF ALL OF THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREIN AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO STREETS AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.
PURSUANT TO CODE 10-9A-604D THE OWNER HEREBY CONVEYS THE COMMON AREA AND PRIVATE STREETS AS INDICATED HEREON TO THE ROCKWELL RANCH MASTER OWNERS ASSOCIATION, INC., 520 SOUTH 850 EAST, SUITE A300, LEHI, UTAH 84043.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____ DAY OF _____, A.D. 20____.

NAME
COMPANY

NAME
COMPANY

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF _____ } S.S.

ON THE _____ DAY OF _____ A.D. 20 ___ _____ PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR SAID COUNTY OF _____ IN SAID STATE OF UTAH, WHO AFTER BEING DULY SWORN, ACKNOWLEDGED TO ME THAT HE/SHE IS THE _____ OF _____, A LIMITED LIABILITY COMPANY AND THAT HE/SHE SIGNED THE OWNER'S DEDICATION FREELY AND VOLUNTARILY FOR AND IN BEHALF OF SAID LIMITED LIABILITY COMPANY FOR THE PURPOSES THEREIN MENTIONED AND ACKNOWLEDGED TO ME THAT SAID LIMITED LIABILITY COMPANY EXECUTED THE SAME.

MY COMMISSION EXPIRES: _____
NAME: _____
NO: _____
A NOTARY PUBLIC COMMISSION IN UTAH

NOTARY PUBLIC
RESIDING IN _____ COUNTY

APPROVAL BY LEGISLATIVE BODY

THE _____ OF _____ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL THE STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY OF _____, A.D. 20____

MAYOR

CITY COUNCIL MEMBER

CITY COUNCIL MEMBER

CITY COUNCIL MEMBER

CITY COUNCIL MEMBER

CITY COUNCIL MEMBER

CITY ENGINEER

ATTEST: _____
CLERK - RECORDER
(SEE SEAL BELOW)

PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____ A.D. 20_____ BY THE AMERICAN FORK CITY PLANNING COMMISSION.

PLANNER

PLANNING COMMISSION CHAIRMAN

ROCKWELL RANCH BLOCK 1 PHASE 1 PLAT

**LOCATED IN THE SOUTHWEST AND SOUTHEAST QUARTERS OF SECTION 22,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN,
AMERICAN FORK CITY, UTAH COUNTY, UTAH**

NOTES
1. OFFSET PINS TO BE PLACED AT THE TOP BACK OF CURB AT EACH PROJECTED PROPERTY LINE AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL REAR LOT CORNERS PRIOR TO OCCUPANCY.
2. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.
3. 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 MARSHALL AND CHARGED WITH CULINARY WATER.
4. COMMON SPACE AREAS AND PRIVATE STREETS TO BE MAINTAINED BY THE HOME OWNERS ASSOCIATION.

DEVELOPER
WHITE HORSE DEVELOPERS
520 SOUTH 850 EAST, STE. A4
LEHI, UTAH 84043

WATER AND SEWER AUTHORITY APPROVAL

APPROVED THIS _____ DAY OF _____, 20_____,
BY THE WATER AND SEWER AUTORITY.

PUBLIC WORKS DEPARTMENT DIRECTOR

ENSIGN

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT. 84070
Phone: 801.255.0529
Fax: 801.255.4449
WWW.ENSIGNENG.COM

LAYTON
Phone:801.547.1100
TOOELE
Phone: 435.843.3590
CEDAR CITY
Phone: 435.865.1453
RICHFIELD
Phone: 435.896.2983

SHEET 1 OF 2

PROJECT NUMBER : 8799F.4
MANAGER : JKF
DRAWN BY : JWJ
CHECKED BY : KFW
DATE : 8/27/20

BASIS OF BEARING

THE BASIS OF BEARING IS BETWEEN THE NORTHWEST CORNER AND THE NORTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, WITH A BEARING OF SOUTH 89°53'31" EAST.

FLOOD ZONE DESIGNATION

SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE _X_ AS DELINEATED BY F.E.M.A. FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP 49551701208 EFFECTIVE JULY 17, 2002 .

SURVEYORS SEAL

PROFESSIONAL LAND SURVEYOR
No. 286882
PATRICK M. HARRIS
STATE OF UTAH

NOTARY PUBLIC SEAL

CLERK-RECORDER SEAL

ROCKWELL RANCH BLOCK 3 PHASE 1 PLAT

LOCATED IN THE SOUTHWEST AND SOUTHEAST QUARTERS OF SECTION 22,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN,
AMERICAN FORK CITY, UTAH COUNTY, UTAH
ZONING TOD

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	BEARING	CHORD
C1	150.00'	62.68'	23°56'36"	S12°52'24"W	62.23'
C2	150.00'	48.69'	18°35'50"	S15°32'46"W	48.47'
C3	150.00'	14.00'	5°20'46"	S3°34'28"W	13.99'
C4	178.00'	13.09'	4°12'47"	S7°31'04"W	13.09'
C5	178.00'	13.01'	4°11'21"	S3°19'00"W	13.01'
C6	178.00'	1.00'	0°19'14"	S1°03'43"W	1.00'
C7	10.00'	15.71'	90°00'00"	S45°56'33"W	14.14'
C8	10.00'	15.71'	90°00'00"	N44°03'27"W	14.14'
C9	10.00'	15.71'	90°00'24"	N45°56'45"E	14.14'
C10	10.00'	15.71'	89°59'36"	S44°03'15"E	14.14'
C11	10.00'	15.71'	89°59'36"	S45°56'21"W	14.14'
C12	10.00'	15.71'	90°00'24"	N44°03'39"W	14.14'
C13	10.00'	15.71'	90°00'00"	N45°56'33"E	14.14'
C14	10.00'	15.71'	90°00'00"	S44°03'27"E	14.14'
C15	15.00'	23.57'	90°02'28"	N45°55'19"E	21.22'
C16	15.00'	23.55'	89°57'32"	S44°04'41"E	21.21'
C23	178.00'	78.25'	25°11'10"	S13°29'41"W	77.62'

LINE TABLE		
LINE	BEARING	LENGTH
L1	N0°56'57"E	4.00'
L2	N0°56'57"E	4.00'
L3	S0°56'09"W	4.00'
L4	S0°56'09"W	4.00'
L5	N0°56'33"E	7.00'
L6	N0°56'33"E	7.00'
L7	N89°03'27"W	6.00'
L8	N89°03'27"W	6.00'

SEE SHEET 1

S 0°54'06" W 636.07'

1060 WEST STREET
(PUBLIC STREET)

NBFF PROPERTY LLC
FUTURE PHASE

S 0°56'33" W 56.00'

S 89°03'27" E 127.33'

D=89°57'32"
R=15.00
L=23.55'
CB=S 44°04'41" E
C=21.21'

560 SOUTH STREET
(PUBLIC STREET)

N 89°03'27" W 328.27'

NBFF PROPERTY LLC
FUTURE PHASE

520 SOUTH STREET (PRIVATE STREET)

530 SOUTH STREET (PRIVATE STREET)

550 SOUTH STREET (PRIVATE STREET)

1080 WEST STREET (PRIVATE STREET)

COMMON AREA
24,743 sq.ft.
0.568 acres

COMMON AREA
2,400 sq.ft.

COMMON AREA
2,131 sq.ft.

T-310Ⓢ 836 sq.ft. (1085 W)
T-311Ⓢ 836 sq.ft. (1083 W)
T-312Ⓢ 836 sq.ft. (1077 W)
T-313Ⓢ 836 sq.ft. (1071 W)
T-314Ⓢ 836 sq.ft. (1065 W)
T-324Ⓢ 836 sq.ft. (1064 W)
T-325Ⓢ 836 sq.ft. (1072 W)
T-326Ⓢ 836 sq.ft. (1078 W)
T-327Ⓢ 836 sq.ft. (1086 W)
T-328Ⓢ 836 sq.ft. (1094 W)
T-329Ⓢ 836 sq.ft. (532 S)
T-330Ⓢ 836 sq.ft. (536 S)
T-331Ⓢ 836 sq.ft. (538 S)
T-332Ⓢ 836 sq.ft. (544 S)
T-333Ⓢ 836 sq.ft. (546 S)
T-334Ⓢ 836 sq.ft. (548 S)
T-335Ⓢ 836 sq.ft. (1095 W)
T-336Ⓢ 836 sq.ft. (1087 W)
T-337Ⓢ 836 sq.ft. (1079 W)
T-338Ⓢ 836 sq.ft. (1071 W)
T-339Ⓢ 836 sq.ft. (1063 W)
T-340Ⓢ 836 sq.ft. (531 S)
T-341Ⓢ 836 sq.ft. (535 S)
T-342Ⓢ 836 sq.ft. (539 S)
T-343Ⓢ 836 sq.ft. (543 S)
T-344Ⓢ 836 sq.ft. (545 S)
T-345Ⓢ 836 sq.ft. (549 S)

10' PUE AND SNOW STORAGE EASEMENT

4' PUE

6' PUE

SEE SHEET 1

N 5°49'28" W 123.34'

D=6°43'33"
R=539.50
L=63.33'
CB=N 2°27'41" W
C=63.30'

N 0°54'06" E 325.56'

D=90°02'28"
R=15.00
L=23.57'
CB=S 45°55'19" W
C=21.22'

1100 WEST STREET
(PUBLIC STREET)

LEGEND

- SECTION CORNER
- EXISTING STREET MONUMENT
- PROPOSED STREET MONUMENT
- SET 5/8" REBAR WITH YELLOW PLASTIC CAP, OR NAIL STAMPED "ENSIGN ENG. & LAND SURV."
- SECTION LINE
- CENTER LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- ADJACENT RIGHT OF WAY LINE
- PRIVATE AREA
- LIMITED COMMON AREA
- COMMON AREA
- FIRE HYDRANT
- NO BASEMENT

NORTH

HORIZONTAL GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
HORZ: 1 inch = 20 ft.

ROCKWELL RANCH BLOCK 3 PHASE 1 PLAT

LOCATED IN THE SOUTHWEST AND SOUTHEAST QUARTERS OF SECTION 22,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN,
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SURVEYORS SEAL

PROFESSIONAL LAND SURVEYOR
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PATRICK M. HARRIS
STATE OF UTAH

NOTARY PUBLIC SEAL

CLERK-RECORDER SEAL

DEVELOPER
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ENSIGN

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Sandy, UT. 84070
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LAYTON
Phone:801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

SHEET 2 OF 2

PROJECT NUMBER : 8799F.4
MANAGER : JKF
DRAWN BY : KFW
CHECKED BY : PMH
DATE : 8/27/20

AMERICAN FORK CITY
PLANNING COMMISSION

MEETING DATE: September 16, 2020
STAFF PRESENTATION: Adam Olsen

AGENDA TOPIC: Hearing, review and action on the preliminary plan and final plat for Rockwell Ranch Block 5, consisting of 48 lots, located at approximately 560 South 1060 West, in the TOD (Transit Oriented Development) zone.

ACTIONS REQUESTED: Approval of the preliminary plan and recommendation of approval of the final plat.

BACKGROUND INFORMATION					
Location:		560 South 1060 West			
Applicants:		Ensign Engineering			
Existing Land Use:		Agriculture			
Proposed Land Use:		Residential			
Surrounding Land Use:	North	Residential/Agriculture			
	South	Agriculture			
	East	Residential/Agriculture			
	West	Residential/Agriculture			
Existing Zoning:		TOD (Transit Oriented Development)			
Proposed Zoning:		N/A			
Surrounding Zoning:	North	RA-5			
	South	TOD			
	East	TOD & Residential Agriculture 5 (Utah County)			
	West	RA-5, Residential Agriculture 5 (Utah County)			
Land Use Plan Designation:		TOD (Transit Oriented Development)			
Zoning compliant with Land Use Plan Designation?		x	Yes		No

Background

The area of Rockwell Ranch was annexed in 2015. It received approval of a district framework plan in 2019 (Olive Tree District Framework Plan), followed by block plan approval (staff level review). As part of the lot plan submittal and review, subdivision plats are necessary. Further lot plan review (staff level review) will ensure placement of structures, setbacks, height, landscaping, number of multi-family units, parking, etc. be compliant with the TOD Code. The subdivision plat acts as a formal instrument in proceeding toward development of the site.

This plat anticipates a 48-lot townhome development.

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:

1. The final plat is consistent with the Land Use Plan designation of “Transit Oriented Development”.

2. The final plat meets the criteria as found in Section 17.7.211 of the Development Code.

3. Water rights conveyance shall be satisfied prior to plat recordation.

POTENTIAL MOTIONS

APPROVAL

Mr. Chairman, I move that we approve the preliminary plan and recommend approval of the final plat of Rockwell Ranch Block 5, with the findings and condition 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 plat of Rockwell Ranch Block 5.

TABLE

Mr. Chairman, I move that we table action on the preliminary plan and final plat of Rockwell Ranch Block 5.

AMERICAN FORK CITY ENGINEERING DIVISION
STAFF REPORT

Planning Commission Meeting Date: 9/16/2020

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: Rockwell Ranch Block 5 Phase 1

Project Address: 560 South 1060 West

Developer / Applicant's Name: White Horse Developers

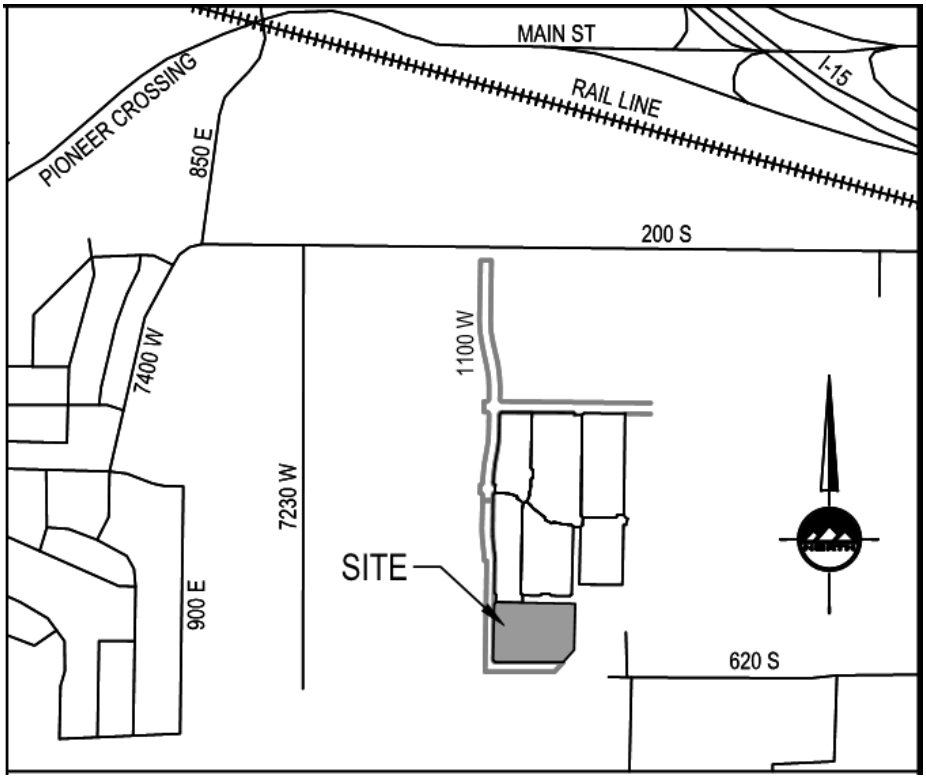
Type of Application:

- ☒ 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 9/16/2020 Engineering Division Staff Report for the City Land Use Authority shall be addressed on all final project documents.

Project Map:



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.

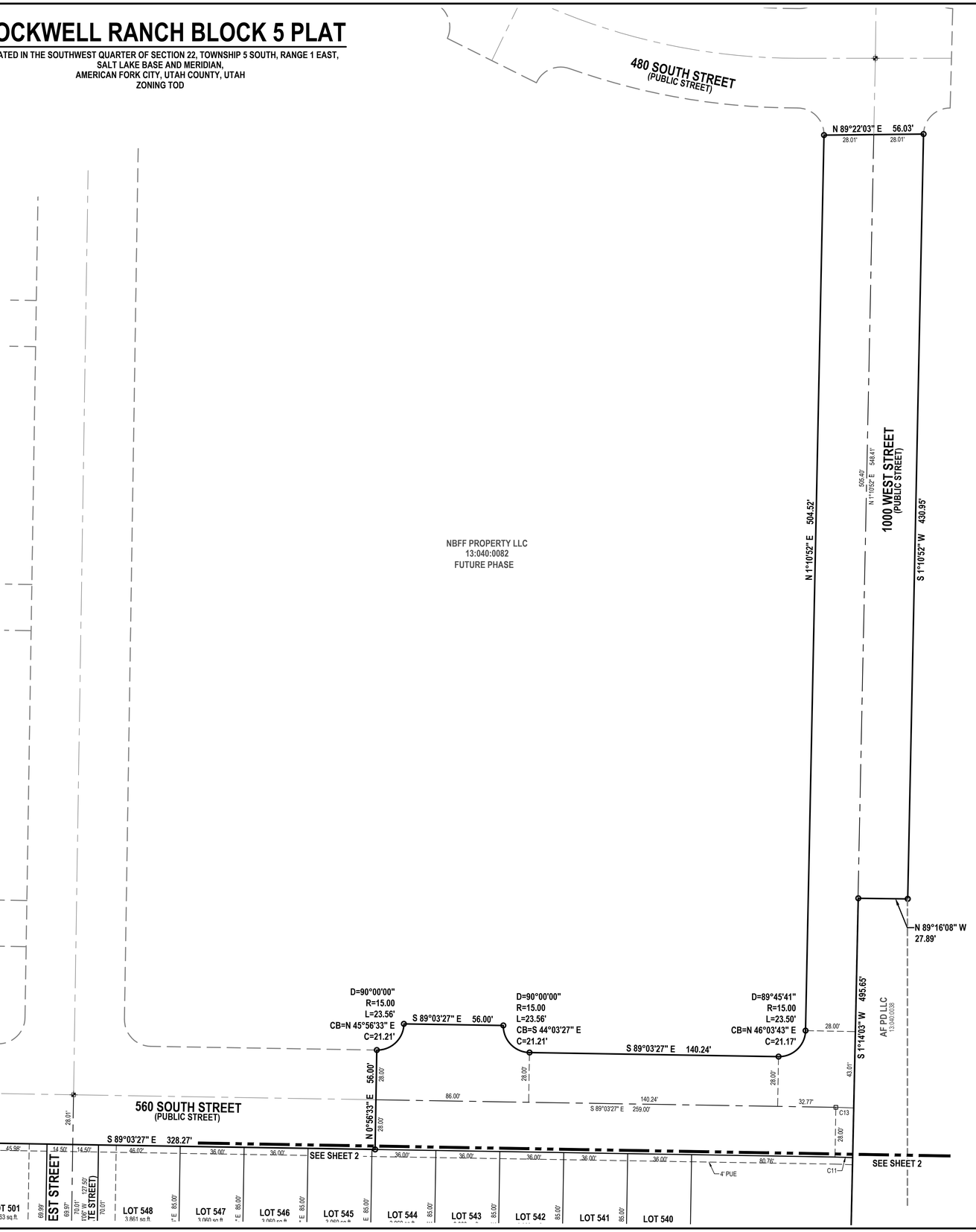
1. **Title Report:** Submit an updated Title Report not older than 30 days or other type of appropriate verification that shows all dedications to the City are free and clear of encumbrances, taxes, or other assessments.
2. **Property Taxes and Liens:** Submit evidence that all the property taxes, for 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).

Plan Modifications Required:

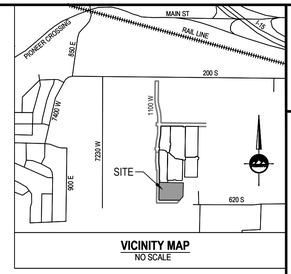
1. Plat will need to be modified for additional right-of-way at 1100 West 620 South.

ROCKWELL RANCH BLOCK 5 PLAT

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
ZONING TOD



NBFF PROPERTY LLC
13:040:0082
FUTURE PHASE



VICINITY MAP
NO SCALE

LEGEND

- SECTION CORNER
- EXISTING STREET MONUMENT
- PROPOSED STREET MONUMENT
- SET 5/8" REBAR WITH YELLOW PLASTIC CAP, OR NAIL STAMPED "ENSIGN ENG. & LAND SURV."
- SECTION LINE
- CENTER LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- ADJACENT RIGHT OF WAY LINE

NOTES
1. OFFSET PINS TO BE PLACED AT THE TOP BACK OF CURB AT EACH PROJECTED PROPERTY LINE AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL REAR LOT CORNERS PRIOR TO OCCUPANCY.
2. LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.
3. 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 MARSHALL AND CHARGED WITH CULINARY WATER.
4. COMMON SPACE AREAS AND PRIVATE STREETS TO BE MAINTAINED BY THE HOME OWNERS ASSOCIATION.

SURVEYOR'S CERTIFICATE

I, PATRICK M. HARRIS, 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 NUMBER 286882 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 DESCRIBED 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.

BOUNDARY DESCRIPTION

Beginning at a point being South 89°53'31" East 1,138.19 feet along section line and South 4,228.72 feet from the Northwest Corner of Section 22, Township 5 South, Range 1 East, Salt Lake Base and Meridian; and running

thence South 89°03'27" East 328.27 feet;
thence North 00°56'33" East 56.00 feet;
thence Northeasterly 23.56 feet along the arc of a 15.00 foot radius curve to the left (center bears North 00°56'33" East and the chord bears North 45°56'33" East 21.21 feet with a central angle of 90°00'00");
thence South 89°03'27" East 56.00 feet;
thence Southeasterly 23.56 feet along the arc of a 15.00 foot radius curve to the left (center bears South 89°03'27" East and the chord bears South 44°03'27" East 21.21 feet with a central angle of 90°00'00");
thence South 89°03'27" East 140.24 feet;
thence Northeasterly 23.50 feet along the arc of a 15.00 foot radius curve to the left (center bears North 00°56'33" East and the chord bears North 46°03'43" East 21.17 feet with a central angle of 89°45'41");
thence North 01°10'52" East 504.52 feet;
thence North 89°22'03" East 56.03 feet;
thence South 01°10'52" West 430.95 feet;
thence North 89°16'08" West 27.89 feet;
thence South 01°14'03" West 495.65 feet;
thence South 43°05'03" West 122.28 feet;
thence Northwesterly 8.42 feet along the arc of a 1,000.00 foot radius curve to the left (center bears South 00°28'58" West and the chord bears North 89°45'31" West 8.42 feet with a central angle of 00°28'58");
thence West 504.46 feet;
thence Northwesterly 23.80 feet along the arc of a 15.00 foot radius curve to the right (center bears North and the chord bears North 44°32'57" West 21.38 feet with a central angle of 90°54'06");
thence North 00°54'06" East 418.77 feet;
thence Northeasterly 23.57 feet along the arc of a 15.00 foot radius curve to the right (center bears South 89°05'54" East and the chord bears North 45°55'19" East 21.22 feet with a central angle of 90°02'28") to the point of beginning.

Contains 310,177 Square Feet or 7.121 Acres and 54 Lots

UTILITY DEDICATION

By execution of this plat, the owner(s) shown below does hereby grant and convey to the city and other public utility companies, a permanent easement and right of way in and to those areas reflected on the map as "COMMON AREA" (including private streets) for construction and maintenance of approved public utilities and appurtenances together with right of access thereto. Only culinary water lines will be maintained by the city, all other utilities onsite will be privately owned and maintained.

RESERVATION OF COMMON AREAS

By execution of this plat, the owner(s) shown below does hereby reserve all areas shown on this plat as "COMMON AREA" for the common enjoyment of all owners and such owners guests and invitees to the project.

OWNER'S DEDICATION

Known all men by these present that we, all of the undersigned owners of all of the property described in the surveyor's certificate herein and shown on this map, have caused the same to be subdivided into streets and easements and do hereby dedicate the streets and other public areas as indicated hereon for perpetual use of the public.
Pursuant to Code 10-9a-604d the owner hereby conveys the Common Area and Private Streets as indicated hereon to the Rockwell Ranch Master Owners Association, Inc., 520 South 850 East, Suite A300, Lehi, Utah 84043.

In witness hereof we have hereunto set our hands this _____ day of _____, A.D. 20____.

NAME
COMPANY

NAME
COMPANY

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF _____ } S.S.

ON THE _____ DAY OF _____, A.D. 20 ____, _____ PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR SAID COUNTY OF _____, IN SAID STATE OF UTAH, WHO AFTER BEING DULY SWORN, ACKNOWLEDGED TO ME THAT HE/SHE IS THE _____ OF _____, A LIMITED LIABILITY COMPANY AND THAT HE/SHE SIGNED THE OWNER'S DEDICATION FREELY AND VOLUNTARILY FOR AND IN BEHALF OF SAID LIMITED LIABILITY COMPANY FOR THE PURPOSES THEREIN MENTIONED AND ACKNOWLEDGED TO ME THAT SAID LIMITED LIABILITY COMPANY EXECUTED THE SAME.

MY COMMISSION EXPIRES: _____
NAME: _____
NO. _____
A NOTARY PUBLIC COMMISSION IN UTAH

NOTARY PUBLIC
RESIDING IN _____ COUNTY

APPROVAL BY LEGISLATIVE BODY

THE _____ OF _____ COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL THE STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY OF _____, A.D. 20____

MAYOR

CITY COUNCIL MEMBER

CITY COUNCIL MEMBER

CITY COUNCIL MEMBER

CITY COUNCIL MEMBER

CITY COUNCIL MEMBER

CITY ENGINEER

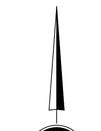
ATTEST: _____
CLERK - RECORDER
(SEE SEAL BELOW)

PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____ A.D. 20____. BY THE AMERICAN FORK CITY PLANNING COMMISSION.

PLANNER

PLANNING COMMISSION CHAIRMAN



HORIZONTAL GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
HORZ: 1 inch = 30 ft.

DEVELOPER
WHITE HORSE DEVELOPERS
520 SOUTH 850 EAST, STE. A4
LEHI, UTAH 84043

ENSIGN
SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT. 84070
Phone: 801.255.0529
Fax: 801.255.4449
WWW.ENSIGNENG.COM

LAYTON
Phone:801.547.1100
TOOELE
Phone: 435.843.3590
CEDAR CITY
Phone: 435.865.1453
RICHFIELD
Phone: 435.896.2983

SHEET 1 OF 2

PROJECT NUMBER : 8799F.7
MANAGER : JKF
DRAWN BY : KFW
CHECKED BY : PMH
DATE : 9/8/20

WATER AND SEWER AUTHORITY APPROVAL

APPROVED THIS _____ DAY OF _____, 20_____.
BY THE WATER AND SEWER AUTORITY.

PUBLIC WORKS DEPARTMENT DIRECTOR

BASIS OF BEARING

THE BASIS OF BEARING IS BETWEEN THE NORTHWEST CORNER AND THE NORTH QUARTER CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, WITH A BEARING OF SOUTH 89°53'31" EAST.

FLOOD ZONE DESIGNATION

SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE X, AS DELINEATED BY F.E.M.A. FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP 49551701 20B EFFECTIVE JULY 17, 2002 .

ROCKWELL RANCH BLOCK 5 PLAT

LOCATED IN THE WEST HALF OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN, AMERICAN FORK CITY, UTAH COUNTY, UTAH

SURVEYORS SEAL

PROFESSIONAL LAND SURVEYOR
No. 286882
PATRICK M. HARRIS
STATE OF UTAH

NOTARY PUBLIC SEAL

CLERK-RECORDER SEAL

ROCKWELL RANCH BLOCK 5 PLAT

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
ZONING TOD

NORTHWEST CORNER SECTION 22 T5S, R1E, SLB&M (FOUND 3" BRASS CAP)

NORTH QUARTER CORNER SECTION 22 T5S, R1E, SLB&M (FOUND 3" BRASS CAP)

BASIS OF BEARING S 89°53'31" E 2659.86' 1521.67'

1138.19'

428.72'

SOUTH

POINT OF BEGINNING

D=90°02'28"
R=15.00
L=23.57'
CB=N 45°55'19" E
C=21.22'

39.50'

25.51'

84.48'

560 SOUTH STREET
(PUBLIC STREET)

S 89°03'27" E 328.27'

SEE SHEET 1

N 0°56'33" E 56.00'

28.00'

86.00'

140.24'

S 89°03'27" E 259.00'

32.77'

C13

43.0

SEE SHEET 1

4' PUE

80.76'

C11

39.50'

1100 WEST STREET
(PUBLIC STREET)

1080 WEST STREET
(PRIVATE STREET)

1020 WEST STREET
(PRIVATE STREET)

LOT 504
3,458 sq.ft.
0.079 acres

LOT 503
3,060 sq.ft.
0.070 acres

LOT 502
3,060 sq.ft.
0.070 acres

LOT 501
3,863 sq.ft.
0.089 acres

LOT 548
3,861 sq.ft.
0.089 acres

LOT 547
3,060 sq.ft.
0.070 acres

LOT 546
3,060 sq.ft.
0.070 acres

LOT 545
3,060 sq.ft.
0.070 acres

LOT 544
3,060 sq.ft.
0.070 acres

LOT 543
3,060 sq.ft.
0.070 acres

LOT 542
3,060 sq.ft.
0.070 acres

LOT 541
3,060 sq.ft.
0.070 acres

LOT 540
3,060 sq.ft.
0.070 acres

1098 W | 1092 W | 1084 W | 1072 W | 1058 W | 1052 W | 1044 W | 1038 W | 1036 W | 1032 W | 1024 W | 1018 W | 1012 W

10' PUE

COMMON AREA
28,770 sq.ft.
0.660 acres

N 89°03'27" W 4.45'

S 89°03'27" E 96.01'

66.51'

S 89°03'27" E 72.54'

S 89°03'27" E 273.73'

244.23'

244.25'

318.97'

10' PUE AND SNOW STORAGE EASEMENT

S 89°03'27" E 74.72'

45.22'

24.78'

570 SOUTH STREET (PRIVATE STREET)

287.27'

147.27'

50'x10' PUE AND SNOW STORAGE EASEMENT

10' PUE

50'x10' PUE AND SNOW STORAGE EASEMENT

LOT 505
3,200 sq.ft.
0.073 acres

LOT 506
3,093 sq.ft.
0.071 acres

LOT 507
3,092 sq.ft.
0.071 acres

LOT 508
3,091 sq.ft.
0.071 acres

LOT 509
3,090 sq.ft.
0.071 acres

LOT 510
3,089 sq.ft.
0.071 acres

LOT 511
3,088 sq.ft.
0.071 acres

LOT 512
3,087 sq.ft.
0.071 acres

LOT 513
3,675 sq.ft.
0.084 acres

LOT 522
3,101 sq.ft.
0.071 acres

LOT 521
3,060 sq.ft.
0.070 acres

LOT 520
3,060 sq.ft.
0.070 acres

LOT 519
3,060 sq.ft.
0.070 acres

LOT 518
3,060 sq.ft.
0.070 acres

LOT 517
3,060 sq.ft.
0.070 acres

LOT 516
3,060 sq.ft.
0.070 acres

LOT 515
3,060 sq.ft.
0.070 acres

LOT 514
3,681 sq.ft.
0.085 acres

LOT 523
3,097 sq.ft.
0.071 acres

LOT 524
3,060 sq.ft.
0.070 acres

LOT 525
3,060 sq.ft.
0.070 acres

LOT 526
3,060 sq.ft.
0.070 acres

LOT 527
3,060 sq.ft.
0.070 acres

LOT 528
3,060 sq.ft.
0.070 acres

LOT 529
3,060 sq.ft.
0.070 acres

LOT 530
3,060 sq.ft.
0.070 acres

LOT 531
3,362 sq.ft.
0.077 acres

LOT 539
3,179 sq.ft.
0.073 acres

LOT 538
2,975 sq.ft.
0.068 acres

LOT 537
2,975 sq.ft.
0.068 acres

LOT 536
2,975 sq.ft.
0.068 acres

LOT 535
2,975 sq.ft.
0.068 acres

LOT 534
2,975 sq.ft.
0.068 acres

LOT 533
2,975 sq.ft.
0.068 acres

LOT 532
5,574 sq.ft.
0.128 acres

S 1°14'03" W 495.65'

AF PD LLC
13:040:0035

N 0°54'06" E 418.77'

308.18'

309.56'

383.88'

N 0°56'33" E 309.56'

308.18'

S 0°56'33" W 331.73'

COMMON AREA
48,675 sq.ft.
1.117 acres

S 0°56'33" W 329.31'

N 0°56'33" E 328.18'

303.86'

302.48'

S 0°56'33" W 276.74'

4' PUE

10' PUE

15.48'

15.24'

15.24'

53.70'

D=90°54'06"
R=15.00
L=23.80'
CB=N 44°32'57" W
C=21.38'

ROAD DEDICATION
DEDICATED TO
AMERICAN FORK CITY
150 sq.ft.

36.00'

55.31'

84.39'

346.31'

EAST 534.55'

WEST 504.46'

147.29'

83.16'

83.47'

37.87'

18.93'

S 43°05'03" W 122.26'

S 43°05'03" W 97.46'

D=0°28'58"
R=1000.00
L=8.42'
CB=N 89°45'31" W
C=8.42'

48.54'

620 SOUTH STREET
(PUBLIC STREET)

NBFF PROPERTY LLC
13:040:0082

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	BEARING	CHORD
C1	15.00'	23.57'	90°02'28"	N45°55'19"E	21.22'
C2	15.00'	23.55'	89°57'32"	S44°04'41"E	21.21'
C3	15.00'	23.56'	90°00'00"	N44°03'27"W	21.21'
C4	15.00'	23.56'	90°00'00"	S45°56'33"W	21.21'
C5	15.00'	23.56'	90°00'00"	N44°03'27"W	21.21'
C6	15.00'	23.56'	90°00'00"	S45°56'33"W	21.21'
C7	27.50'	9.25'	19°16'01"	N10°34'34"E	9.20'
C8	27.50'	10.15'	21°09'08"	S9°38'01"E	10.09'
C9	27.50'	9.25'	19°16'01"	N10°34'34"E	9.20'
C10	27.50'	10.15'	21°09'08"	S9°38'01"E	10.09'
C11	244.00'	9.91'	2°19'41"	S87°53'36"E	9.91'
C12	30.00'	47.60'	90°54'06"	S44°32'57"E	42.76'
C13	272.00'	10.05'	2°07'05"	N87°59'54"W	10.05'

LEGEND

- SECTION CORNER
- EXISTING STREET MONUMENT
- PROPOSED STREET MONUMENT
- SET 5/8" REBAR WITH YELLOW PLASTIC CAP, OR NAIL STAMPED "ENSIGN ENG. & LAND SURV."
- SECTION LINE
- CENTER LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- ADJACENT RIGHT OF WAY LINE

ENSIGN ENG. LAND SURV.

NORTH

HORIZONTAL GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
HORZ: 1 inch = 30 ft.

ROCKWELL RANCH BLOCK 5 PLAT

LOCATED IN THE WEST HALF OF SECTION 22,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN,
AMERICAN FORK CITY, UTAH COUNTY, UTAH

SURVEYORS SEAL

PROFESSIONAL LAND SURVEYOR
No. 286882
PATRICK M. HARRIS
STATE OF UTAH

NOTARY PUBLIC SEAL

CLERK-RECORDER SEAL

DEVELOPER
WHITE HORSE DEVELOPERS
520 SOUTH 850 EAST, STE. A4
LEHI, UTAH 84043

ENSIGN

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT. 84070
Phone: 801.255.0529
Fax: 801.255.4449
WWW.ENSIGNENG.COM

LAYTON
Phone:801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

SHEET 2 OF 2

PROJECT NUMBER : 8799F.7

MANAGER : JKF

DRAWN BY : KFW

CHECKED BY : PMH

DATE : 8/18/20

AMERICAN FORK CITY
PLANNING COMMISSION

MEETING DATE: September 16, 2019
STAFF PRESENTATION: Adam Olsen

AGENDA TOPIC: Hearing, review and action on the preliminary plan and final plat for Roderick Catalyst Phase II Subdivision, located in the area of 1600 South 450 East, in the PI-1 Planned Industrial zone.

ACTION REQUESTED: Recommendation of approval of the final plat.

BACKGROUND INFORMATION					
Location:		Approximately 1600 South 450 East			
Applicants:		Roderick Enterprises			
Existing Land Use:		Agriculture			
Proposed Land Use:		Commercial			
Surrounding Land Use:	North	Commercial			
	South	Agriculture			
	East	Industrial			
	West	Agriculture			
Existing Zoning:		PI-1 (Planned Industrial)			
Proposed Zoning:		N/A			
Surrounding Zoning:	North	PI-1			
	South	Residential Agriculture 5 (Utah County)			
	East	I-1			
	West	PI-1			
Land Use Plan Designation:		Design Industrial			
Zoning within Growth Plan?		x	Yes		No

Background

This final plat represents the second phase of a multi-phase subdivision and development. Phase II consists of 3 lots, totaling 24.5 acres. “Parcel A” represents future development and further subdivision. Parcel A consists of approximately 33 acres.

Lots 3-5 are bordered by: 1600 South to the north and 1700 South to the south. Lot 3 is also bordered by 500 East to the east.

Section 17.8.211 of the Development Code

The Planning Commission may act to recommend approval of the final plat upon a finding that:

a. The final plat and supporting materials conform with the terms of the preliminary approval.

   The final plat and preliminary plan are being processed concurrently. Any requirements of a preliminary plan have been addressed with the final plat.

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 concerns, if any, in their report.

d. The estimates of cost of constructing the required improvements are realistic.

   At the time that a performance guarantee is issued, costs are analyzed and adjusted, if needed, by Engineering.

e. The water rights conveyance documents have been provided.

   Water rights conveyance, if needed, will be provided prior to plat recordation.

Consistency with the Land Use Plan

The Land Use Plan designates this area as “Design Industrial”. The proposed subdivision is consistent with this designation.

FINDING OF FACT/CONDITION OF APPROVAL

After reviewing the application for final plat approval, the following finding of fact and condition of approval are offered for consideration:

1. The proposed subdivision meets the criteria as found in Section 17.8.211 of the Development Code.

2. The water rights conveyance, if needed, shall be satisfied prior to final plat recordation.

POTENTIAL MOTIONS

APPROVAL

Mr. Chairman, I move that we approve the preliminary plan and recommend approval of the final plat of Roderick Catalyst Subdivision Phase II, with the finding and condition 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 plat of the Roderick Catalyst Subdivision Phase II.

TABLE

Mr. Chairman, I move that we table action on the Roderick Catalyst Subdivision Phase II.

AMERICAN FORK CITY ENGINEERING DIVISION
STAFF REPORT

Planning Commission Meeting Date: 9/16/2020

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: Roderick Catalyst Phase 2

Project Address: 1600 South 450 East

Developer / Applicant's Name: Roderick Enterprises

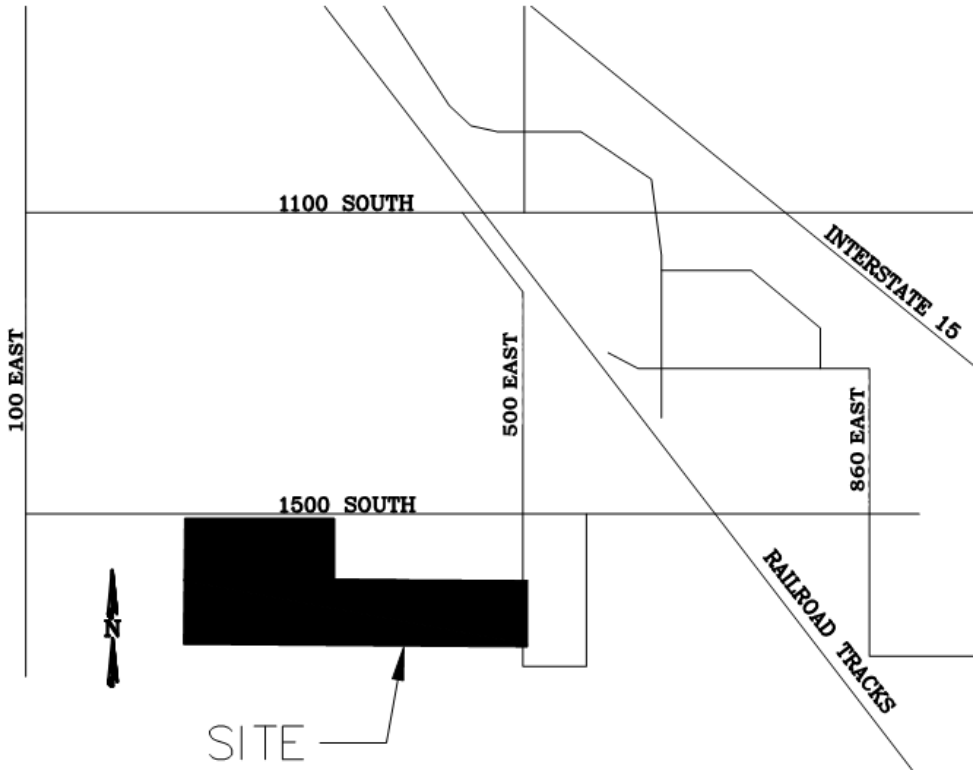
Type of Application:

- ☒ 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 9/16/2020 Engineering Division Staff Report for the City Land Use Authority shall be addressed on all final project documents.

Project Map:



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).

Plan Modifications Required:

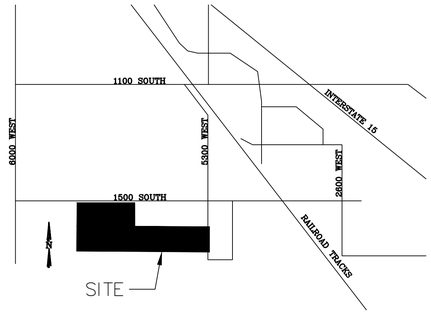
1.

REVIEW COPY

RODERICK CATALYST - PHASE 2

AMENDING A PORTION OF PARCEL "A" OF RODERICK CATALYST- PHASE 1

A SUBDIVISION IN AMERICAN FORK CITY LOCATED IN THE NORTHEAST QUARTER OF SECTION 35 AND THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 5 SOUTH, RANGE 1 EAST SALT LAKE BASE & MERIDIAN AMERICAN FORK CITY, UTAH COUNTY, UTAH



LEGEND

- SET PROPERTY CORNER REBAR/CAP "CIR ENGINEERING PLS 5183760"
- FOUND REBAR AND CAP (AS NOTED)
- FOUND REFERENCE MONUMENT
- PROPOSED/EXISTING FIRE HYDRANTS
- PROPOSED LIGHT POLE
- BOUNDARY LINE
- TITLE LINES
- EXISTING EASEMENTS
- ROAD DEDICATION IN FAVOR OF AMERICAN FORK CITY
- ROAD VACATION IN FAVOR OF SUBDVISION

SUBDIVISION NOTES:

1. 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 Marshall and charged with culinary water.

2. Off-set pins to be placed in the back of curb and ⅜" by 24" rebar with numbered survey cap to be placed at all lot rear corners prior to occupancy.

3. Lowest floor slab elevation must be a minimum of 3 feet above water level measured during Spring Season or supportive geotechnical information indicating otherwise.

SURVEYOR'S CERTIFICATE:

I, GARY G. CHRISTENSEN, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD LICENSE NO. 5152617 IN ACCORDANCE WITH THE UTAH STATE CODE, TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS LICENSING ACT. I FURTHER CERTIFY THAT BY THE AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT IN ACCORDANCE WITH SECTION 17-23-17 AND VERIFIED ALL MEASUREMENTS, AND PLACED ALL MONUMENTS AS REPRESENTED ON THE PLAT DESCRIBED BELOW AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS AND STREETS, HEREAFTER TO BE KNOWN AS THE RODERICK CATALYST – PHASE 2 SUBDIVISION, AND THAT THE SAME HAS BEEN CORRECTLY SURVEYED AND STAKED ON THE GROUND AS SHOWN ON THIS PLAT.

GARY G. CHRISTENSEN
PLS 5152617
(SEE SEAL BELOW)

BOUNDARY DESCRIPTION

COMMENCING AT THE NORTHEAST CORNER OF SECTION 35, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN AND RUNNING THENCE 238.41 FEET NORTH 89°48'53" WEST ALONG THE NORTH LINE OF SAID SECTION 35; THENCE 134.24 FEET SOUTH TO THE POINT OF BEGINNING;
THENCE ALONG A BOUNDARY LINE AGREEMENT LINE THE FOLLOWING TWO (2) COURSES 1) SOUTH 00°16'24" EAST 659.34 FEET; 2) THENCE SOUTH 89°19'28" EAST 639.26 FEET; THENCE SOUTH 00°31'34" WEST 81.50 FEET; THENCE SOUTH 89°19'23" EAST 1,322.23 FEET TO A POINT OF CURVATURE TO THE RIGHT, THENCE SOUTHEASTERLY 23.47 FEET ALONG THE ARC OF A 15.00 FEET RADIUS CURVE, HAVING A CENTRAL ANGLE OF 89°38'39" (CHORD BEARS SOUTH 44°30'03" EAST 21.15 FEET); THENCE SOUTH 89°39'20" EAST 0.72 FEET; THENCE SOUTH 00°20'40" WEST 513.83 FEET; THENCE SOUTHWESTERLY 4.11 FEET ALONG THE ARC OF A 23.00 FEET NON-TANGENT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 10°13'38", (CHORD BEARS SOUTH 33°07'51" WEST 4.10 FEET); THENCE NORTH 89°14'38" WEST 4.38 FEET; THENCE WESTERLY 9.65 FEET ALONG THE ARC OF A 15.00 FEET NON-TANGENT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 36°52'17", (CHORD BEARS SOUTH 72°19'13" WEST 9.49 FEET); THENCE NORTH 89°14'38" WEST 1610.32 FEET; THENCE WESTERLY 53.85 FEET ALONG THE ARC OF A 1464.00 FEET NON-TANGENT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 02°06'27", (CHORD BEARS NORTH 88°11'25" WEST 53.85 FEET); THENCE NORTH 87°08'11" WEST 770.37 FEET; THENCE WESTERLY 27.13 FEET ALONG THE ARC OF A 520.00 FEET NON-TANGENT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 03°06'33", (CHORD BEARS NORTH 85°34'55" WEST 27.13 FEET); THENCE NORTH 84°01'39" WEST 149.22 FEET TO A POINT OF CURVATURE TO THE LEFT, THENCE WESTERLY 57.77 FEET ALONG THE ARC OF A 572.00 FEET RADIUS CURVE, HAVING A CENTRAL ANGLE OF 05°47'14" (CHORD BEARS NORTH 86°55'16" WEST 57.75 FEET); THENCE NORTH 89°48'53" WEST 453.61 FEET; THENCE NORTH 00°56'07" EAST 432.47 FEET; THENCE SOUTH 75°49'03" EAST 0.80 FEET; THENCE NORTH 00°20'01" EAST 73.87 FEET; THENCE NORTH 00°56'07" EAST 9.67 FEET; THENCE SOUTH 89°59'02" EAST 3.93 FEET; THENCE NORTH 00°00'58" EAST 478.50 FEET; THENCE NORTH 89°59'02" WEST 11.48 FEET; THENCE NORTH 01°26'58" EAST 236.56 FEET; THENCE NORTH 58°26'13" EAST 15.91 FEET; THENCE SOUTH 00°56'07" WEST 1.38 FEET; THENCE SOUTH 88°59'22" EAST 43.05 FEET TO A POINT OF CURVATURE TO THE RIGHT, THENCE EASTERLY 65.82 FEET ALONG THE ARC OF A 2461.50 FEET RADIUS CURVE, HAVING A CENTRAL ANGLE OF 01°31'56" (CHORD BEARS SOUTH 88°13'24" EAST 65.82 FEET); THENCE SOUTH 87°27'26" EAST 149.59 FEET TO A POINT OF CURVATURE TO THE LEFT, THENCE EASTERLY 77.86 FEET ALONG THE ARC OF A 2538.50 FEET RADIUS CURVE, HAVING A CENTRAL ANGLE OF 01°45'27" (CHORD BEARS SOUTH 88°20'09" EAST 77.86 FEET); THENCE SOUTH 89°12'53" EAST 803.40 FEET TO THE POINT OF BEGINNING.

CONTAINING 2537128 SQUARE FEET OR 58.24 ACRES, MORE OR LESS. CONTAINS 3 LOTS AND 1 PARCEL

SURVEYOR (SEE SEAL BELOW) _____ DATE _____

OWNER'S DEDICATION

KNOWN ALL MEN BY THESE PRESENT THAT WE, ALL OF THE UNDERSIGNED OWNERS OF ALL OF THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREIN AND SHOWN ON THIS MAP,HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, BLOCKS, STREETS AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS _____ DAY OF _____, A.D. 20_____.

OWNER _____ OWNER _____

OWNER _____ OWNER _____

ACKNOWLEDGMENT

STATE OF UTAH

COUNTY OF UTAH

ON THE _____ DAY OF _____, A.D. 20_____ PERSONALLY APPEARED BEFORE ME, THE SIGNERS OF THE FOREGOING DEDICATION WHO DULY ACKNOWLEDGE TO ME THAT THEY DID EXECUTE THE SAME.

MY COMMISSION EXPIRES _____ _____
NOTARY PUBLIC
(SEE SEAL BELOW)

ACCEPTANCE BY LEGISLATIVE BODY

THE _____ OF _____
COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL THE STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY OF _____, A.D. 20_____

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. 20_____.
BY THE AMERICAN FORK CITY PLANNING COMMISSION.

PLANNER _____ PLANNING COMMISSION CHAIRMAN _____

BASIS OF BEARING

THE BASIS OF BEARINGS WAS ESTABLISHED AS SOUTH 89°30'39" EAST (NAD83 UTAH CENTRAL ZONE) BETWEEN THE NORTHWEST CORNER AND THE NORTH QUARTER CORNER OF SECTION 36, TOWNSHIP 5 SOUTH, RANGE 1 EAST SALT LAKE BASE & MERIDIAN

LAND USE AND ZONING DESIGNATION

SUBJECT PROPERTY INCLUDES THE FOLLOWING ZONING CLASSIFICATIONS:
- PLANNED INDUSTRIAL (PI-1)
- INDUSTRIAL (I-1)
- MARINA (M-1)

SUBJECT PROPERTY INCLUDES THE FOLLOWING LAND USE ZONES:
- DESIGN INDUSTRIAL
- RESIDENTIAL VERY LOW DENSITY
- SHORELINE PROTECTION

FLOOD ZONE DESIGNATION

SUBJECT PROPERTY FALLS WITHIN FLOOD ZONE X AND ZONE AE AS DELINEATED BY F.E.M.A. FLOOD INSURANCE RATE MAP 49551C0120B, EFFECTIVE JULY 17, 2002.

WATER AND SEWER AUTHORITY APPROVAL

APPROVED THIS _____ DAY OF _____ A.D. 20_____.
BY THE WATER AND SEWER AUTHORITY.

PUBLIC WORKS DEPARTMENT DIRECTOR _____

CIR
ENGINEERING, L.L.C.
3032 SOUTH 1030 WEST, SUITE 202
SLC, Utah 84119 – 801-949-6296

DATE: 2/26/20
SCALE: NONE
PAGE: 1 OF 4
PROJECT: R1014-02

RODERICK CATALYST - PHASE 2
AMENDING A PORTION OF PARCEL "A" RODERICK CATALYST-PHASE 1
A SUBDIVISION IN AMERICAN FORK CITY LOCATED IN THE NORTHEAST QUARTER OF SECTION 35 AND THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 5 SOUTH, RANGE 1 EAST SALT LAKE BASE & MERIDIAN AMERICAN FORK CITY, UTAH COUNTY, UTAH

SURVEYOR'S SEAL — NOTARY PUBLIC'S SEAL — CLERK–RECORDER SEAL

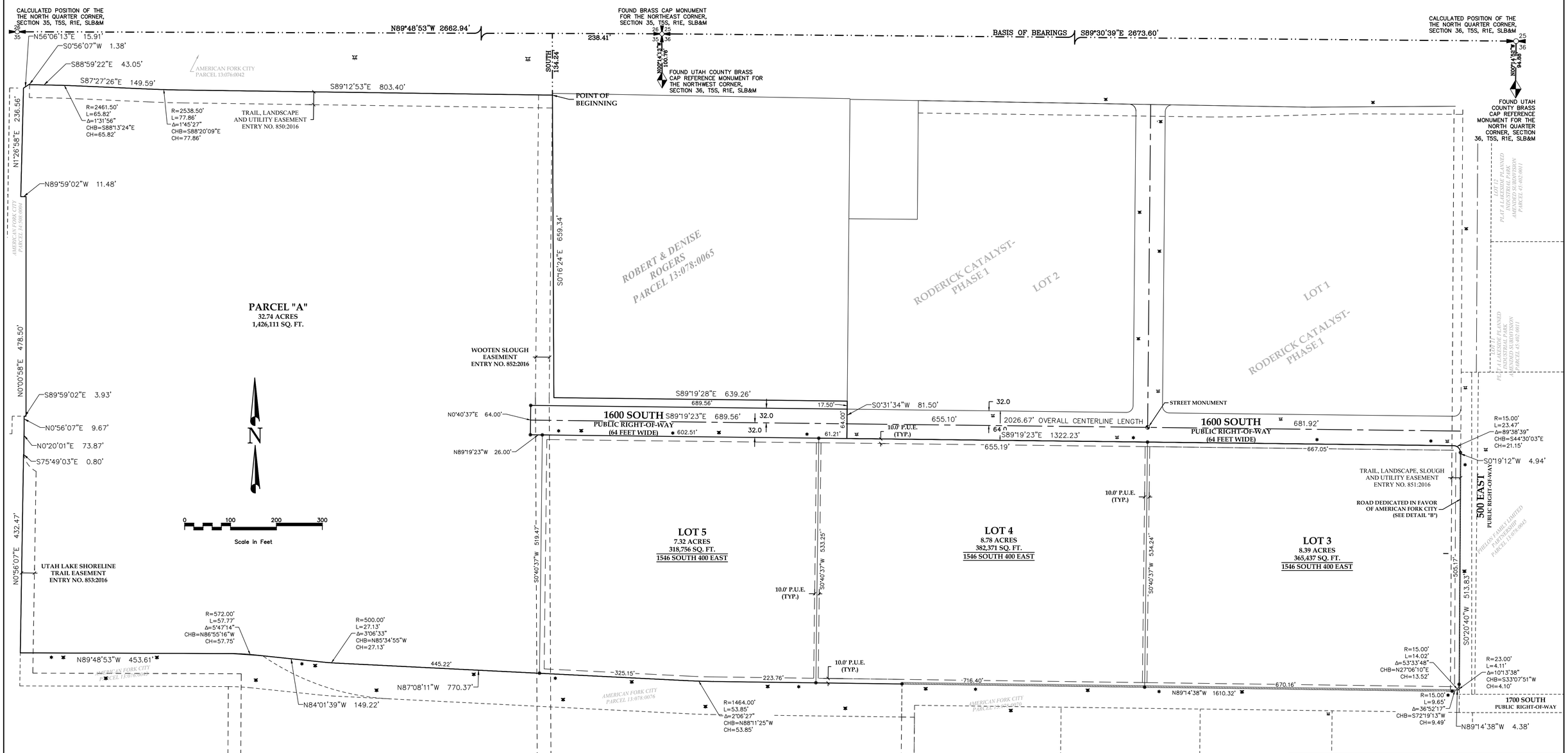
PROFESSIONAL LAND SURVEYOR
GARY G. CHRISTENSEN
No. 5152617
2/26/20
STATE OF UTAH

REVIEW COPY

RODERICK CATALYST - PHASE 2

AMENDING A PORTION OF PARCEL "A" OF RODERICK CATALYST- PHASE 1

A SUBDIVISION IN AMERICAN FORK CITY LOCATED IN THE NORTHEAST QUARTER OF SECTION 35 AND THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 5 SOUTH, RANGE 1 EAST SALT LAKE BASE & MERIDIAN AMERICAN FORK CITY, UTAH COUNTY, UTAH



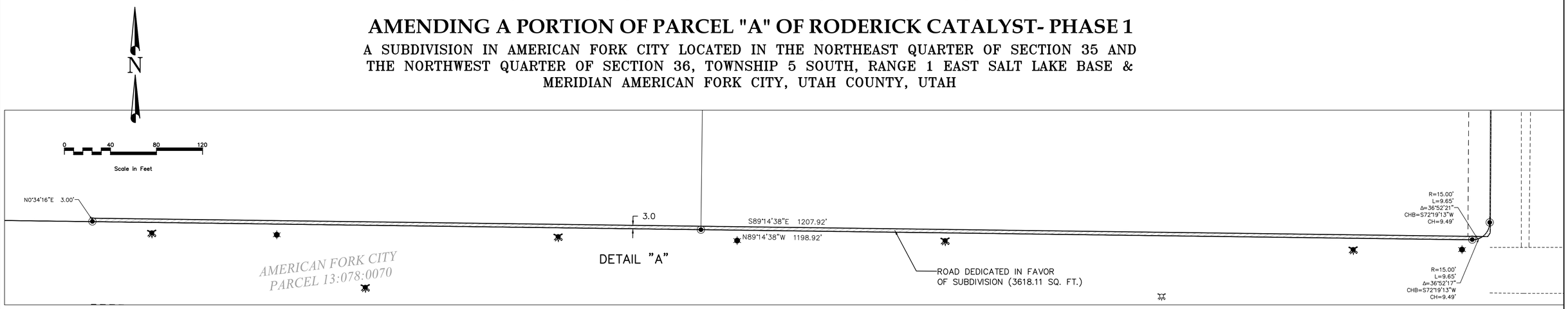
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3032 SOUTH 1030 WEST, SUITE 202
SLC, Utah 84119 - 801-949-6296

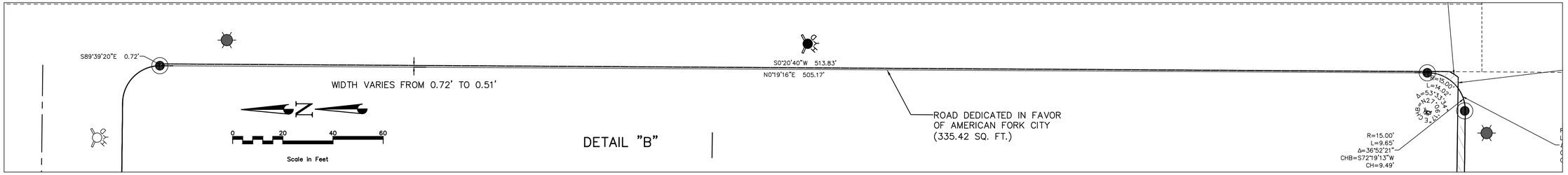
DATE:	2/26/2020
SCALE:	1" = 100'
PAGE:	2 OF 4
PROJECT:	R1014-02

RODERICK CATALYST - PHASE 2

AMENDING A PORTION OF PARCEL "A" OF RODERICK CATALYST- PHASE 1

A SUBDIVISION IN AMERICAN FORK CITY LOCATED IN THE NORTHEAST QUARTER OF SECTION 35 AND THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 5 SOUTH, RANGE 1 EAST SALT LAKE BASE & MERIDIAN AMERICAN FORK CITY, UTAH COUNTY, UTAH





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SLC, Utah 84119 – 801-949-6296

DATE:	2/26/20
SCALE:	NONE
PAGE:	3 OF 4
PROJECT:	R1014-02

REVIEW COPY

RODERICK CATALYST - PHASE 2
SIDEWALK EASEMENT EXHIBIT

A SUBDIVISION IN AMERICAN FORK CITY LOCATED IN THE NORTHEAST QUARTER OF SECTION 35 AND THE NORTHWEST QUARTER OF SECTION 36, TOWNSHIP 5 SOUTH, RANGE 1 EAST SALT LAKE BASE & MERIDIAN
AMERICAN FORK CITY, UTAH COUNTY, UTAH

Sidewalk Easement Line

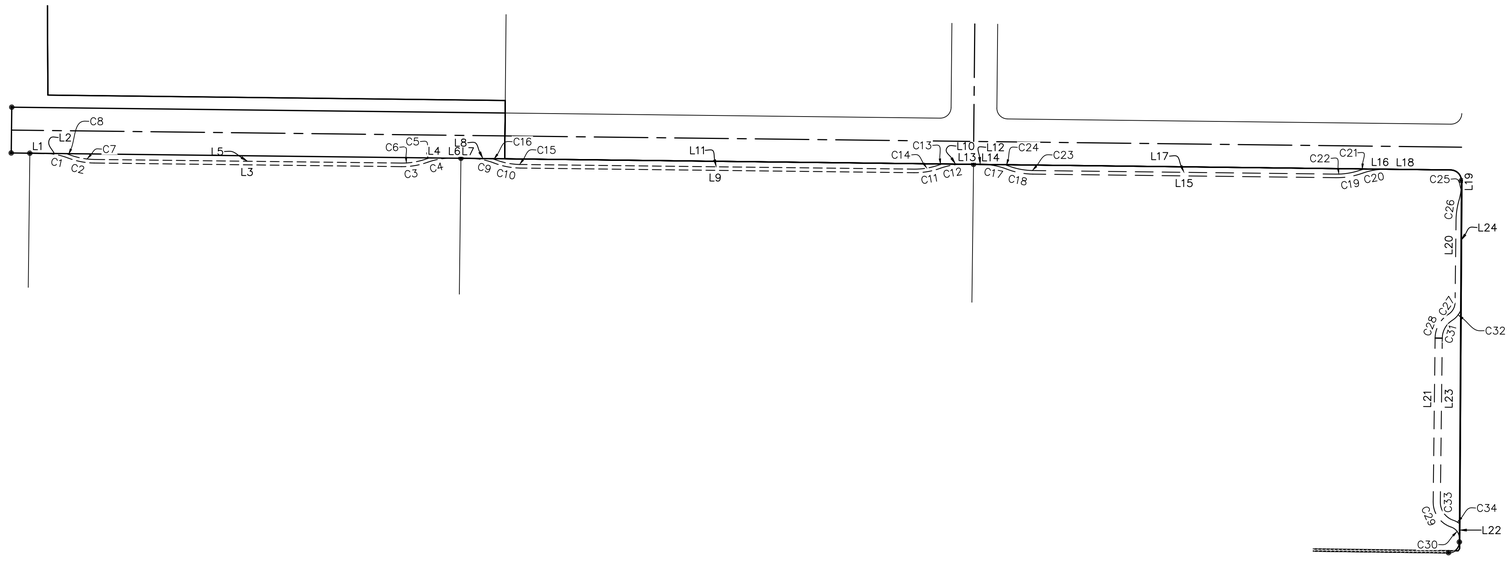
Line #	Length	Chord Bearing
L1	20.00	S89° 19' 23"E
L2	31.20	S89° 19' 23"E
L3	429.51	N89° 19' 23"W
L4	31.20	S89° 19' 23"E
L5	429.51	S89° 19' 23"E
L6	13.00	S89° 19' 22"E
L7	13.00	S89° 19' 24"E
L8	31.20	S89° 19' 23"E
L9	550.40	N89° 19' 23"W
L10	31.20	S89° 19' 23"E
L11	550.40	S89° 19' 23"E
L12	13.00	S89° 19' 22"E
L13	13.00	N89° 19' 23"W
L14	31.20	S89° 19' 23"E
L15	423.71	N89° 19' 23"W
L16	31.20	S89° 19' 23"E
L17	423.71	S89° 19' 23"E
L18	90.33	S89° 19' 23"E
L19	4.94	S00° 19' 16"W
L20	115.11	N00° 40' 37"E
L21	228.98	N00° 40' 37"E
L22	20.69	N00° 19' 16"E
L23	228.98	N00° 40' 37"E
L24	176.06	N00° 19' 16"E

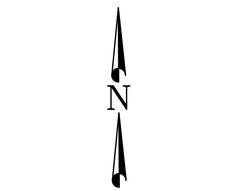
Sidewalk Easement Curve Table

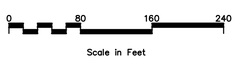
Curve #	Length	Radius	Delta	Chord Bearing	Chord Length
C1	33.97	94.83	20°31'28"	N79° 03' 39"W	33.79
C2	37.55	104.83	20°31'28"	N79° 03' 39"W	37.35
C3	37.55	104.83	20°31'28"	S80° 24' 53"W	37.35
C4	33.97	94.83	20°31'28"	S80° 24' 53"W	33.79
C5	4.03	99.83	2°18'49"	N71° 18' 33"E	4.03
C6	35.76	99.83	20°31'28"	N80° 24' 53"E	35.57
C7	35.76	99.83	20°31'28"	S79° 03' 39"E	35.57
C8	4.03	99.83	2°18'49"	S69° 57' 20"E	4.03
C9	33.97	94.83	20°31'28"	N79° 03' 39"W	33.79
C10	37.55	104.83	20°31'28"	N79° 03' 39"W	37.35
C11	37.55	104.83	20°31'28"	S80° 24' 53"W	37.35
C12	33.97	94.83	20°31'28"	S80° 24' 53"W	33.79
C13	4.03	99.83	2°18'49"	N71° 18' 33"E	4.03
C14	35.76	99.83	20°31'28"	N80° 24' 53"E	35.57
C15	35.76	99.83	20°31'28"	S79° 03' 39"E	35.57
C16	4.03	99.83	2°18'49"	S69° 57' 20"E	4.03
C17	33.97	94.83	20°31'28"	N79° 03' 39"W	33.79
C18	37.55	104.83	20°31'28"	N79° 03' 39"W	37.35
C19	37.55	104.83	20°31'28"	S80° 24' 53"W	37.35
C20	33.97	94.83	20°31'28"	S80° 24' 53"W	33.79
C21	4.03	99.83	2°18'49"	N71° 18' 33"E	4.03
C22	35.76	99.83	20°31'28"	N80° 24' 53"E	35.57
C23	35.76	99.83	20°31'28"	S79° 03' 39"E	35.57
C24	4.03	99.83	2°18'49"	S69° 57' 20"E	4.03

Sidewalk Easement Curve Table

Curve #	Length	Radius	Delta	Chord Bearing	Chord Length
C25	22.64	83.11	15°36'34"	N8° 28' 54"E	22.57
C26	28.09	103.11	15°36'34"	N8° 28' 54"E	28.00
C27	19.77	19.82	57°10'23"	N29° 15' 48"E	18.96
C28	39.73	39.82	57°10'23"	N29° 15' 48"E	38.10
C29	46.36	36.67	72°26'12"	N35° 32' 29"W	43.34
C30	20.84	16.67	71°37'52"	N35° 56' 39"W	19.51
C31	29.75	29.82	57°10'23"	N29° 15' 48"E	28.53
C32	18.66	29.82	35°51'33"	N39° 55' 14"E	18.36
C33	33.72	26.67	72°26'12"	N35° 32' 29"W	31.52
C34	9.67	26.67	20°46'02"	N61° 22' 34"W	9.61







CIR
ENGINEERING, L.L.C.
3032 SOUTH 1030 WEST, SUITE 202
SLC, Utah 84119 – 801-949-6296

DATE: 2/26/20
SCALE: 1"=80'
PAGE: 4 OF 4
PROJECT: R1014-02

AMERICAN FORK CITY
PLANNING COMMISSION

MEETING DATE: September 16, 2020
STAFF PRESENTATION: Adam Olsen

AGENDA TOPIC: Hearing, review and action on a commercial site plan for Bishop Storage, located at 16 West 1500 South, in the PI-1 Planned Industrial zone.

ACTION REQUESTED: Recommendation of approval to City Council.

BACKGROUND INFORMATION					
Location:		16 W. 1500 S.			
Applicants:		Matt Bishop			
Existing Land Use:		Agriculture			
Proposed Land Use:		Commercial			
Surrounding Land Use:	North	Agriculture			
	South	Vacant			
	East	Agriculture			
	West	Commercial			
Existing Zoning:		PI-1 (Planned Industrial)			
Proposed Zoning:		N/A			
Surrounding Zoning:	North	PI-1			
	South	M-1 (Marina)			
	East	Residential Agriculture 5 (Utah County)			
	West	M-1 (Marina)			
Land Use Plan Designation:		Design Industrial			
Zoning within density range?		x	Yes		No

Background

Bishop Storage is proposed at approximately 16 W. 1500 South. Access will be off of 1500 South. Included in the packet materials are renderings of the proposed units. Planning staff has requested complete landscape plans, which to date (9-10) have not been received. Should complete plans be received, staff will forward them to the Planning Commission. If they are not received by the meeting date, Planning staff recommends the item be tabled.

Consistency with the Land Use Plan:

The Land Use Plan designates this area as “Design Industrial”. The site plan is consistent with the Land Use Plan Designation.

FINDINGS OF FACT

After reviewing the application for site plan approval, the following findings of fact is offered for consideration:

1. The proposed site plan meets the criteria (provided the submission of complete landscape plans) as found in Section 17.7.701 (Planned Industrial Projects) of the Development Code.

POTENTIAL MOTIONS

APPROVAL

Mr. Chairman, I move that we recommend approval of the commercial site plan for Bishop Storage, with the finding and condition listed in the staff report and subject to any findings, conditions and modifications listed in the Engineering report. ****this motion is recommended upon submission of complete landscape plans****

DENIAL

Mr. Chairman, I move that we recommend denial of the commercial site plan for Bishop Storage.

TABLE

Mr. Chairman, I move that we table action on the commercial site plan for Bishop Storage pending submission of complete landscape plans.

AMERICAN FORK CITY ENGINEERING DIVISION
STAFF REPORT

Planning Commission Meeting Date: 9/16/2020

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: Matt Bishop Storage

Project Address: 16 West 1500 South

Developer / Applicant's Name: Matt Bishop

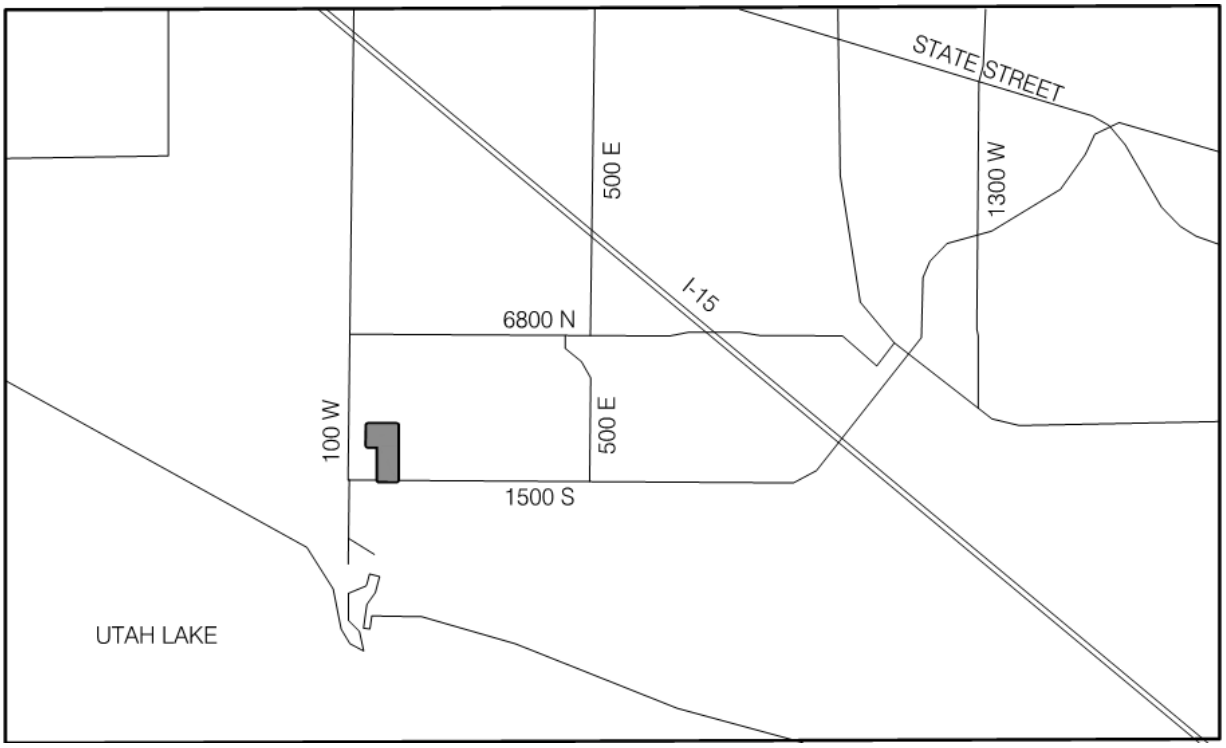
Type of Application:

- ☐ 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 9/16/2020 Engineering Division Staff Report for the City Land Use Authority shall be addressed on all final project documents.

Project Map:



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).

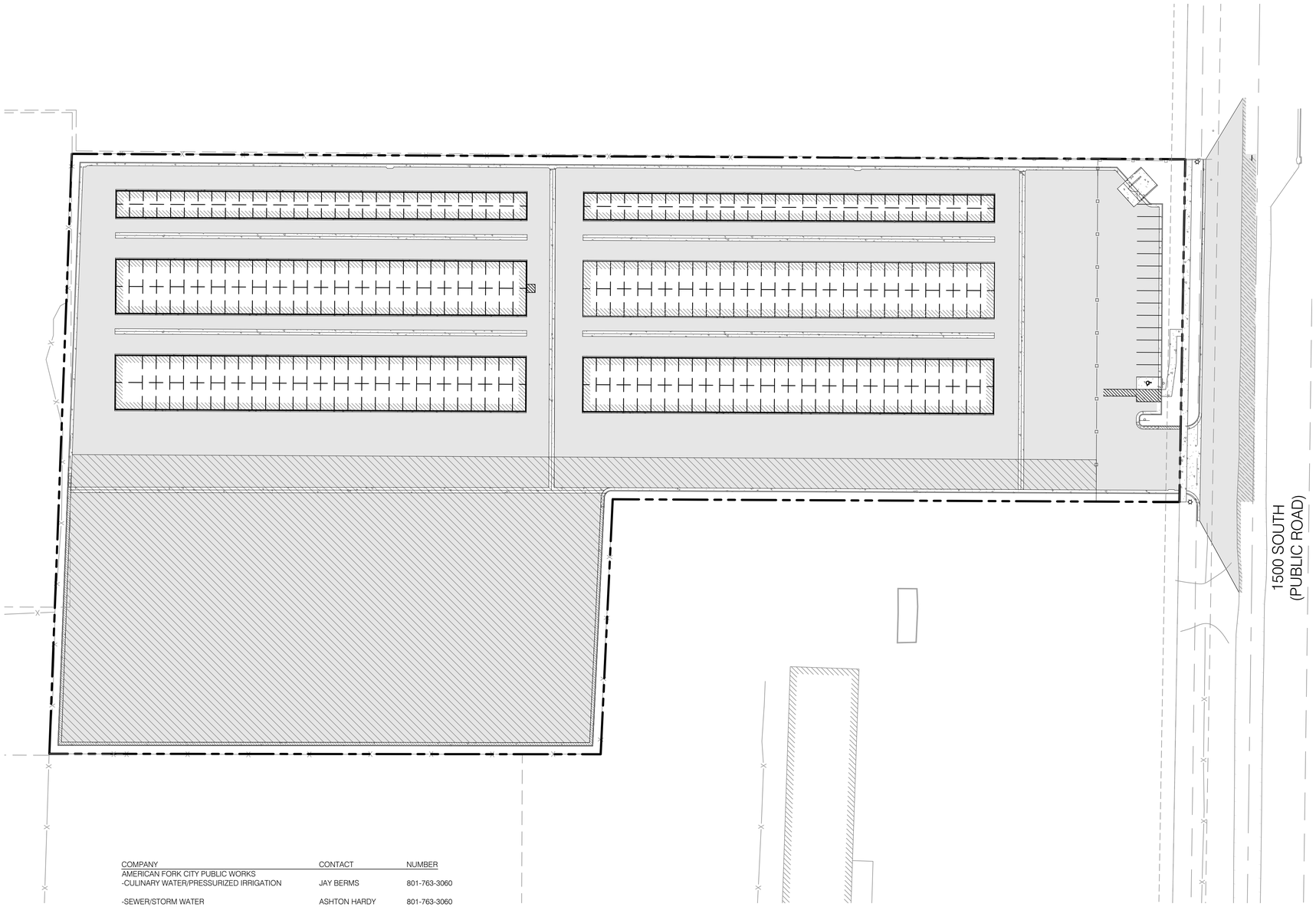
Plan Modifications Required:

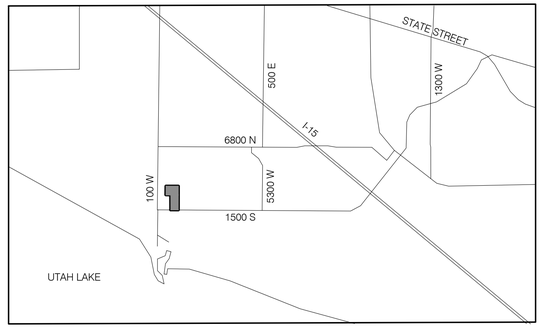
1.

MATT BISHOP STORAGE

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 26 &
THE NORTHEAST QUARTER OF SECTION 35,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN
AMERICAN FORK CITY, UTAH COUNTY, UTAH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40ft.
NORTH





VICINITY MAP
N.T.S

OWNER/DEVELOPER: MATT BISHOP
(801) 830-7745
snaptrucking@gmail.com
16 WEST 1500 SOUTH

DRAWING INDEX

COVER	COVER SHEET
CGN.01	GENERAL NOTES, LEGEND & ABBREVIATION
CSP.01	SITE PLAN
CSP.02	SITE FIRE ACCESS PLAN
CUP.01	UTILITY PLAN
CGD.01	GRADING & DRAINAGE PLAN
CPP.01	PLAN AND PROFILE
CEP.01	EROSION CONTROL PLAN
CEP.02	EROSION CONTROL DETAILS
CDT.01	DETAILS & NOTES
CDT.02	DETAILS & NOTES
CDT.03	DETAILS & NOTES
CDT.04	DETAILS & NOTES

CIVIL CONSTRUCTION PLANS

COMPANY	CONTACT	NUMBER
AMERICAN FORK CITY PUBLIC WORKS		
-CULINARY WATER/PRESSURIZED IRRIGATION	JAY BERMS	801-763-3060
-SEWER/STORM WATER	ASHTON HARDY	801-763-3060
-CITY INSPECTOR	DEE HOWARD	801-763-3060
-SWPPP INSPECTOR	HARLAN NIELSON	801-763-3060
AMERICAN FORK CITY FIRE MARSHAL	MATT SACCO	801-763-3045
AF FIBER	WILL DAVIS	801-897-9826
AMERICAN FORK IRRIGATION COMPANY	ERNIE JOHN	801-471-6576
CENTURY LINK	BILL WESTFALL	432-623-4252
COMCAST	ELYSIA VALDEZ	801-401-3017
DOMINION ENERGY	TRENT JOHNSON	801-853-6548
ROCKY MOUNTAIN POWER	TERIA WALKER	801-756-1310
TIMPANOGOS SPECIAL SERVICE DISTRICT	DAVID BARLOW	801-756-5231

BENCHMARK CIVIL

PROFESSIONAL ENGINEER
9/8/20
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE # 100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

MATT BISHOP STORAGE
5950 W 6400 N
AMERICAN FORK, UTAH

DRAFT: MNJ	DESIGN: AGA	CHECK: AGA
DATE: 01/27/2020	DATE: 01/28/2020	DATE: 03/27/2020

PROJECT NO: 1907191

COVER

1 OF 13

No.	DATE	DESCRIPTION
1	06/19/20	REVISIONS PER CITY REDLINES
2	08/21/20	REVISIONS PER CITY REDLINES
3	09/08/20	REVISIONS PER CITY REDLINES

BENCHMARK ENGINEERING CONTACT: ALLISON G. ALBERT, PE

LINETYPES:

NEW | EXISTING

- SECTION LINE
- PROPERTY LINE
- ADJACENT PL or LOT LINES
- RIGHT-OF-WAY LINE
- CENTERLINE of ROAD
- EASEMENT LINE
- CURB & GUTTER
- EDGE OF ASPHALT
- FENCE / WALL, STONE
- FENCE, BLOCK
- FENCE, BRICK
- FENCE, CHAIN
- FENCE, IRON
- FENCE, VINYL
- FENCE, WIRE (X)
- FENCE, WOOD
- INDEX CONTOUR LINE (4475)
- INTERMEDIATE CONTOUR LINE
- SPOT ELEVATION (XX.XX TOC)
- SANITARY SEWER LINE (SS)
- STORM DRAIN LINE (SD)
- WATER LINE (W)
- IRRIGATION LINE (IRR)
- OVERHEAD POWER LINE (OHP)
- UNDERGROUND POWER LINE (UG)
- GAS LINE (GAS)
- TELEPHONE LINE (T)
- CABLE TELEVISION LINE (CATV)
- DRAINAGE / DITCH CENTERLINE
- TREE LINE EDGE
- FIBER OPTIC LINE (FO)
- PROPOSED ASPHALT
- PROPOSED CONCRETE

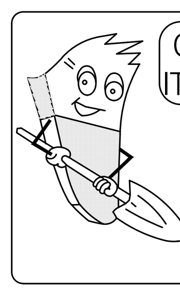
SYMBOLS:

NEW | EXISTING

- SECTION CORNER (FOUND)
- SECTION CORNER (NOT FOUND)
- STREET MONUMENT (FOUND)
- STREET MONUMENT (NOT FOUND)
- BRASS CAP MONUMENT
- POWER POLE & OVERHEAD POWER
- LIGHT POLE
- GUY WIRE
- TELEPHONE MANHOLE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- DIRECTION OF DRAINAGE
- WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- IRRIGATION VALVE
- GAS MANHOLE
- TREE

ABBREVIATIONS

BC	BAR & CAP	PUE	PUBLIC UTILITY EASEMENT
BOW	BOTTOM OF VISIBLE WALL	R	RADIUS OF CURVE
COR.	SECTION CORNER	RR	RAILROAD
CB	CATCH BASIN	ROW	RIGHT-OF-WAY
CF	CUBIC FEET	R/W	RIGHT-OF-WAY
D	DELTA ANGLE	SMH	SEWER MANHOLE
EG	EXISTING GROUND	SD	STORM DRAIN
EOA	EDGE OF ASPHALT	SF	SQUARE FEET
EOC	EDGE OF CONCRETE	TBC	TOP BACK OF CURB
EX	EXISTING	TMH	TELEPHONE MANHOLE
FFE	FINISH FLOOR ELEVATION	TOA	TOP OF ASPHALT
FG	FINISHED GRADE	TOC	TOP OF CONCRETE
FH	FIRE HYDRANT	TOF	TOP OF FOOTING
FL	FLOW LINE	TOE	TOE OF SLOPE
GB	GRADE BREAK	TOG	TOP OF GRATE
GW	GUY WIRE	TOP	TOP OF SLOPE
HW	HEAD WALL	TOW	TOP OF WALL
I.E.	INVERT ELEVATION	TR	TELEPHONE RISER
LIP	LENGTH OF CURVE	UGP	UNDERGROUND POWER
L	LIP OF CURB	VPC	VERTICAL POINT OF CURVATURE
LF	LINEAR FEET	VPI	VERTICAL POINT INTERSECTION
LP	LOW POINT	VPT	VERTICAL POINT OF TANGENCY
M-M	MONUMENT TO MONUMENT	WM	WATER METER
MH	MANHOLE	WV	WATER VALVE
MON.	SURVEY MONUMENT		
OHP	OVERHEAD POWER		
PC	POINT OF CURVATURE		
PI	POINT OF INTERSECTION		
PP	POWER POLE		
PT	POINT OF TANGENCY		



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BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER

1-800-662-4111
www.bluestakes.org

811

NOTE:

IN THE EVENT THAT THE CONSTRUCTION NOTES CONFLICT WITH RESPONSIBLE DISTRICT OR AGENCY STANDARDS NOTES AND SPECIFICATIONS, THE DISTRICT OR AGENCY STANDARD NOTES AND SPECIFICATIONS GOVERN.

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AN HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

CONSTRUCTION NOTES

RESPONSIBLE DISTRICTS OR AGENCIES AND APPLICABLE STANDARDS
CITY OR COUNTY- AMERICAN FORK CITY PUBLIC WORKS
WATER UTILITY COMPANY- AMERICAN FORK CITY PUBLIC WORKS
SEWER- AMERICAN FORK CITY PUBLIC WORKS
STORM DRAIN/GROUNDWATER- AMERICAN FORK CITY PUBLIC WORKS
ELECTRICAL- ROCKY MOUNTAIN POWER
TELEPHONE- CENTURY LINK
NATURAL GAS- DOMINION ENERGY

APPLICABLE STANDARDS: APWA 2017 STANDARDS

GENERAL

1. ALL MATERIALS AND CONSTRUCTION IN THE PUBLIC RIGHT OF WAY SHALL BE IN ACCORDANCE WITH RESPONSIBLE DISTRICT OR AGENCY.

2. CONTRACTOR AND APPLICABLE SUBCONTRACTORS SHALL ATTEND ALL PRE-CONSTRUCTION CONFERENCES AND PERIODIC PROGRESS MEETINGS. PRIOR TO ANY WORK BEING PERFORMED, THE CONTRACTOR SHALL CONTACT RESPONSIBLE DISTRICT OR AGENCY FOR A PRE-CONSTRUCTION CONFERENCE. CONTRACTOR SHALL ALSO NOTIFY THE APPROPRIATE PROJECT CONTACTS (48) HOURS IN ADVANCE OF SAID MEETING.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC SAFETY AND OSHA STANDARDS.

4. THE CONTRACTOR SHALL FAMILIARIZE HIM/HER SELF WITH THE PLANS, THE GEOLOGY REPORTS AND THE SITE CONDITIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL INSPECT THE SITE OF WORK PRIOR TO BIDDING TO SATISFY THEMSELVES BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS THEY MAY PREFER, OF THE LOCATION OF THE PROPOSED WORK, AND OF THE ACTUAL CONDITIONS OF AND AT THE SITE OF WORK.

CONDITIONS WHICH APPEAR TO THEM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PROJECT PLANS AND SPECIFICATIONS, THEY SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING THEIR BID.

SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, THEY HAVE RELIED AND ARE RELYING ON THEIR OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON THEIR OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.

THE INFORMATION PROVIDED BY THE OWNER OR THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT THEY HAVE NOT RELIED SOLELY UPON OWNER OR ENGINEER FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING THEIR BID.

5. ALL WORK SHALL COMPLY WITH THE AMERICAN PUBLIC WORKS ASSOCIATION UTAH CHAPTER (APWA) MANUAL OF STANDARD SPECIFICATIONS 2017 EDITION AND THE MANUAL OF STANDARD PLANS 2017 EDITION. SAID STANDARD SPECIFICATIONS AND PLANS SHALL BE SUBSIDIARY TO MORE STRINGENT REQUIREMENTS BY APPLICABLE LOCAL JURISDICTION.

6. THE CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR, IT SHALL BE EXPECTED THAT THE PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE.

THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS ON THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN REGULAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR PECULIAR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT, AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS AND CONDITIONS OF ALL PERMITS AND APPROVALS APPLICABLE TO THIS PROJECT. THE CONTRACTOR SHALL ENSURE THAT THE NECESSARY RIGHT-OF-WAY, EASEMENTS, AND/OR PERMITS ARE SECURED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL OBTAIN APPROPRIATE PERMITS WHERE APPLICABLE FOR ANY WORK DONE WITHIN RIGHT-OF-WAY OR EASEMENTS FROM THE CITY AND/OR UDOT. CONTRACTOR SHALL NOTIFY CITY, COUNTY, AND/OR STATE, 24 HOURS IN ADVANCE OF COMMUNICATING THE WORK, OR AS REQUIRED BY SAID PERMITS.

8. CONSTRUCTION STAKING FOR GRADING, CURB, GUTTER, SIDEWALK, SANITARY SEWER, STORM DRAIN, WATER, AND ELECTROLIERS SHALL BE DONE BY THE OWNER'S SURVEYOR. THE CONTRACTOR SHALL NOTIFY THE SURVEYOR FORTY-EIGHT (48) HOURS IN ADVANCE OF THE NEED FOR STAKING. ANY STAKING REQUESTED BY THE CONTRACTOR OR THEIR SUBCONTRACTORS THAT IS ABOVE AND BEYOND STANDARD STAKING NEEDS, WILL BE SUBJECT TO AN EXTRA WORK BACK CHARGE TO THE CONTRACTOR. THE CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.

9. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS. THE ENGINEER'S INTERPRETATION THEREOF SHALL BE CONCLUSIVE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER AND/OR ENGINEER.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER; ALL RE-TESTING AND/OR REINSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.

11. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT OF EXISTING IMPROVEMENTS AND ANYTHING THAT HAS ALREADY BEEN CONSTRUCTED. THERE WILL BE NO EXTRA COST DUE THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, AFTER PROPER BACKFILLING AND/OR CONSTRUCTION, WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.

12. THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL MECHANICAL; ELECTRICAL AND INSTRUMENTATION EQUIPMENT; PIPING AND CONDUITS; STRUCTURES AND OTHER FACILITIES. THE AS-BUILTS OF THE ELECTRICAL SYSTEM SHALL INCLUDE THE STREET LIGHT LAYOUT PLAN SHOWING LOCATION OF LIGHTS, CONDUITS, CONDUCTORS, POINTS OF CONNECTIONS TO SERVICES, PULLBOXES, AND WIRE SIZES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR.

13. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO ENGINEER. ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATION REDLINES AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.

UTILITIES

14. CONTRACTOR TO SPACE UTILITIES TO PROVIDE MINIMUM DISTANCES AS REQUIRED BY LOCAL, COUNTY, STATE, AND INDIVIDUAL UTILITY CODES.

15. ALL UTILITES INSTALLED IN ACCORDANCE WITH THE RESPONSIBLE DISTRICTS OR AGENCIES STANDARDS AND SPECIFICATIONS.

16. COORDINATE ALL SERVICE LATERAL AND BUILDING CONNECTIONS WITH CORRESPONDING ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWING FOR LOCATION AND ELEVATION. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE ENCOUNTERED.

17. ALL STORM DRAIN MANHOLES AND CATCH BASINS ARE TO BE PRECAST CONCRETE FROM APPROVED LOCAL MANUFACTURER UNLESS OTHERWISE NOTED. AND COMPLY WITH CITY/COUNTY STANDARD

18. ALL STORM WATER CONVEYANCE PIPING TO BE RCP - CLASS 3 OR ADS HDPE PIPE OR EQUAL UNLESS OTHERWISE NOTED.

19. ALL ELECTRICAL CONDUITS/LINES TO BE PVC SCH 40 OR BETTER.

20. ALL GAS LINES TO BE HDPE WITH COPPER TRACER WIRE AND DETECTA TAPE. TERMINATE TRACER WIRE AT APPROVED LOCATIONS.

21. ALL GAS LINE TAPS, VALVES AND CAPS TO BE FUSED USING ELECTRO - FUSION TECHNOLOGY.

22. ALL PHONE AND TV CONDUITS TO BE PVC SCH 40 OR BETTER.

23. NO GROUNDWATER OR DEBRIS TO BE ALLOWED TO ENTER THE NEW PIPE DURING CONSTRUCTION. THE OPEN END OF ALL PIPES IS TO BE COVERED AND EFFECTIVELY SEALED AT THE END OF EACH DAYS WORK.

24. THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4' OR MORE AND SHALL COMPLY WITH INDUSTRIAL COMMISSION OF UTAH SAFETY ORDERS SECTION 68 - EXCAVATIONS, AND SECTION 69 - TRENCHES, ALONG WITH ANY LOCAL CODES OR ORDINANCES.

25. PRIOR TO OPENING AN EXCAVATION, EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E. SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH AN INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.

26. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL PIPE OF ADEQUATE CLASSIFICATION WITH SUFFICIENT BEDDING TO MEET ALL REQUIREMENTS AND RECOMMENDATIONS FOR H-20 LOAD REQUIREMENTS.

27. ACTUAL CONNECTIONS TO EXISTING WATER LINES WILL NOT BE PERMITTED PRIOR TO THE COMPLETION OF STERILIZATION AND TESTING OF NEW WATER MAINS. ALL EXISTING WATER VALVES TO BE OPERATED UNDER THE DIRECTION OF THE CITY/COUNTY PUBLIC WORKS DEPARTMENT PERSONNEL ONLY.

28. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE INSPECTED, TESTED, AND APPROVED BY AUTHORITIES HAVING JURISDICTION PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK, AND STREET PAVING.

SEWER

29. ALL SEWER LINE TO BE FLUSHED, PRESSURE TESTED TO 5 PSI VIDEO INSPECTED AND OTHERWISE TESTED IN ACCORDANCE WITH DISTRICT STANDARDS PRIOR TO PLACING IN SERVICE.

30. ALL SEWER PIPES ARE TO BE SDR-35 PVC PIPE.

31. SEWER MANHOLES, LATERALS AND CLEANOUTS TO BE INSTALLED PER RESPONSIBLE DISTRICT OR AGENCY STANDARDS. THE UNIT COST OF THE SEWER LATERAL INCLUDES CONNECTION TO THE SEWER MAIN. THE CLEANOUT RISER FOR EACH SERVICE SHALL BE INSTALLED BY THE CONTRACTOR.

32. DURING CONSTRUCTION OF THE SEWER LINE, ALL LATERAL CONNECTIONS SHALL BE AN INSERTA-TEE WITH A WYE ORIENTED AT 10 O'CLOCK POSITIONING TO THE CENTER OF THE MAIN LINE. (SEE RESPONSIBLE DISTRICT OR AGENCY STANDARDS)

WATER

33. WATERLINES TO BE PVC C-900. WATER LINES SHALL BE A MINIMUM OF 10' HORIZONTALLY FROM SEWER MAINS. CROSSINGS SHALL MEET STATE HEALTH STANDARDS. (MECHANICAL JOINTS REQUIRED WHEN LESS THAN 18" VERTICAL OR TEN FEET HORIZONTAL SEPARATION FROM SEWERLINE)

34. ALL WATERLINES SHALL BE 8" MINIMUM SIZE AND SERVICE LATERALS SHALL BE 1-1/2" MINIMUM UNLESS OTHERWISE NOTED.

35. WATER SERVICE LATERALS TO INCLUDE ALL BRASS SADDLE; CORP. STOP LATERAL, DOUBLE CHECK VALVE AND BACKFLOW PREVENTION DEVICE, AND SHUTOFF VALVE IN BOX NEAR BUILDING EDGE.

36. ALL WATERLINES SHALL BE 48" BELOW FINISH GROUND TO TOP OF PIPE. ALL VALVE BOXES AND MANHOLES SHALL BE RAISED OR LOWERED TO FINISH GRADE AND SHALL INCLUDE A CONCRETE COLLAR IN PAVED AREAS. ALL WATER LINES SHALL BE LOOPED AROUND GRAVITY LINES OR ROPED PER RESPONSIBLE DISTRICT OR AGENCY INSPECTOR.

37. CONTRACTOR TO NOTIFY RESPONSIBLE DISTRICT OR AGENCY FOR CHLORINE TEST PRIOR TO FLUSHING LINES, CHLORINE LEFT IN PIPE 24 HRS. MINIMUM WITH 25 PPM RESIDUAL. ALL TURNING OF MAINLINE VALVES, CHLORINATION, FLUSHING, PRESSURE TESTING, BACTERIA TESTING, ETC. TO BE COORDINATED WITH RESPONSIBLE DISTRICT OR AGENCY. ALL TESTS TO BE IN ACCORDANCE WITH RESPONSIBLE DISTRICT OR AGENCY.

38. BOTTOM FLANGE OF FIRE HYDRANTS TO BE SET TO APPROXIMATELY 4 INCHES ABOVE BACK OF CURB ELEVATION. HYDRANTS TO INCLUDE TEE, 6" LINE VALVE, AND HYDRANT COMPLETE TO MEET RESPONSIBLE DISTRICT OR AGENCY STANDARDS, UNLESS OTHERWISE NOTED ON PLANS.

EXISTING UTILITIES

39. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES SHOWN OR NOT SHOWN. THE INFORMATION SHOWN ON THE PLANS WITH REGARDS TO THE EXISTING UTILITIES AND/OR IMPROVEMENTS WAS DERIVED FROM FIELD INVESTIGATION AND/OR RECORD INFORMATION. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE FACILITIES SHOWN AND ANY OTHER FACILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. PRIOR TO CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY ALL EXISTING IMPROVEMENTS AND TO EXPOSE ALL EXISTING UNDERGROUND UTILITIES RELATED TO THE PROJECT, INCLUDING BUT NOT LIMITED TO, SEWER, STORM DRAIN, WATER IRRIGATION, GAS, ELECTRICAL, ETC. AND SHALL NOTIFY THE ENGINEER IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE OF EXPOSING THE UTILITIES SO, THAT THE EXACT LOCATION AND ELEVATION CAN BE VERIFIED AND DOCUMENTED. THE COST ASSOCIATED TO PERFORM THIS WORK SHALL BE INCLUDED IN EITHER THE LUMP SUMP CLEARING COST OR IN THE VARIOUS ITEMS OF WORK. IF LOCATION AND/OR ELEVATION DIFFERS FROM THAT SHOWN ON THE DESIGN PLANS, PROVISIONS TO ACCOMMODATE NEW LOCATION BE MADE PRIOR TO CONSTRUCTION.

40. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTORS SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.

41. ALL MANHOLE RIMS, LAMPHOLES, VALVE BOX COVERS, MONUMENT BOXES AND CATCH BASIN GRATES ARE TO BE ADJUSTED TO FIT THE FINISHED GRADE AFTER PAVING, UNLESS OTHERWISE NOTED. COST FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR SAID FACILITIES.

42. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT ALL PIPES, WALLS, ETC. ARE ADEQUATELY BRACED DURING CONSTRUCTION.

CLEARING AND GRADING

43. CONTRACTOR SHALL PERFORM EARTHWORK IN ACCORDANCE WITH APWA 2017 STANDARD DRAWINGS AND STANDARD SPECIFICATIONS AND THE RECOMMENDED EARTHWORK SPECIFICATION FOUND IN THE PROFESSIONALLY PREPARED REPORT OF GEOTECHNICAL INVESTIGATION.

44. THE CONTRACTOR SHALL REMOVE ALL VEGETATION AND DELETERIOUS MATERIALS FROM THE SITE UNLESS NOTED OTHERWISE; ALL EXISTING WELLS AND SEPTIC TANKS SHALL BE REMOVED AND/OR ABANDONED PER THE REQUIREMENTS OF ALL LOCAL, STATE AND FEDERAL REGULATIONS. THE COST TO PERFORM THIS WORK SHALL BE INCLUDED IN THE LUMP SUM CLEARING COST.

45. SUBSOIL INVESTIGATIONS MUST BE CONDUCTED BY A LICENSED GEOTECHNICAL ENGINEER AT THE SITE OF THE WORK. BEFORE FOOTING, FOUNDATION OR STRUCTURAL WALL CONSTRUCTION CAN COMMENCE.

46. SOIL INVESTIGATIONS MUST BE CONDUCTED BY A LICENSED GEOTECHNICAL ENGINEER FOR DESIGN PURPOSES. THE DATA SHOWN IN THE REPORT WILL BE FOR SUBSURFACE CONDITIONS FOUND AT THE TIME OF THE INVESTIGATION. THE OWNER AND ENGINEER DISCLAIM RESPONSIBILITY FOR THE INTERPRETATION BY THE CONTRACTOR OF DATA, SUCH PROJECTION OR EXTRAPOLATION, FROM THE TEST HOLES TO OTHER LOCATIONS ON THE SITE OF THE WORK, SOIL BEARING VALUES AND PROFILES, SOIL STABILITY AND THE PRESENCE, LEVEL AND EXTENT OF UNDERGROUND WATER FOR SUBSURFACE CONDITIONS DURING CONSTRUCTION OPERATIONS.

47. ALL PROPOSED ELEVATIONS SHOWN ON THE GRADING PLAN ARE TO FINISHED SURFACE, THE CONTRACTOR IS RESPONSIBLE TO DEDUCT THE THICKNESS OF THE PAVEMENT STRUCTURAL SECTION FOR TOP OF SUB GRADE ELEVATIONS.

48. IF AT ANY TIME DURING CONSTRUCTION ANY UNFAVORABLE GEOLOGICAL CONDITIONS ARE ENCOUNTERED, WORK IN THAT AREA WILL STOP UNTIL APPROVED CORRECTIVE MEASURES ARE OBTAINED FROM THE ENGINEER.

49. UNSUITABLE MATERIAL, SUCH AS TOP SOIL, WEATHERED BED ROCK, ETC., SHALL BE REMOVED AS REQUIRED BY THE SOILS ENGINEER (AND/OR ENGINEERING GEOLOGIST, WHERE EMPLOYED) FROM ALL AREAS TO RECEIVE COMPACTED FILL OR DRAINAGE STRUCTURES.

50. NO TREES SHALL BE REMOVED OR DAMAGED WITHOUT SPECIFIC WRITTEN AUTHORIZATION FROM PROPERTY OWNER.

THE EXISTING TOPOGRAPHY ON THESE PLANS IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY BENCHMARK ENGINEERING AND LAND SURVEYING ON 8/28/2019 AND MAY HAVE BEEN MODIFIED SINCE THIS SURVEY WAS PERFORMED.

FILLS IN EXCESS OF 4 FEET IN THICKNESS AND BENEATH ALL FOUNDATIONS OR PAVEMENT SECTIONS SHALL BE COMPACTED TO 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 COMPACTION CRITERIA. ALL OTHER STRUCTURAL FILL LESS THAN 4 FEET IN THICKNESS SHOULD BE COMPACTED TO AT LEAST 90 PERCENT OF THE ABOVE CRITERIA. REFERENCE GEOTECHNICAL REPORT.

51. COMPACTION TESTING WILL BE ACCOMPLISHED BY THE CONTRACTOR, OR THE CONTRACTOR WILL HAVE SUCH TESTING ACCOMPLISHED BY A SEPARATE CONTRACTOR. TEST RESULTS WILL BE SUBMITTED FOR REVIEW WITHIN 24 HOURS AFTER TEST.

52. CONTRACTOR TO SUBMIT PROCTOR AND/OR MARSHALL TEST DATA 24 HOURS PRIOR TO COMPACTION TESTS.

53. STRAIGHT GRADE SHALL BE MAINTAINED BETWEEN CONTOUR LINES AND SPOT ELEVATIONS UNLESS OTHERWISE SHOWN ON PLANS.

54. ALL SLOPES IN ADJOINING STREETS, DRAINAGE CHANNELS, OR OTHER FACILITIES SHALL BE GRADED NO STEEPER THAN 2 TO 1 FOR CUT AND FILL.

55. GRADES WITHIN ASPHALT PARKING AREAS SHALL BE CONSTRUCTED TO WITHIN 0.10 FEET OF THE DESIGN GRADE. HOWEVER, THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IN ALL PAVEMENT AREAS AND ALONG ALL CURBS. ALL CURBS SHALL BE BUILT IN ACCORDANCE TO THE PLAN. CURBS AND PAVEMENT AREAS WHICH ARE NOT INSTALLED PER PLAN MUST BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

56. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS OWN ESTIMATE OF EARTHWORK QUANTITIES.

57. WHERE NEW CURB AND GUTTER IS BEING CONSTRUCTED ADJACENT TO EXISTING ASPHALT OR CONCRETE PAVEMENT, THE FOLLOWING SHALL APPLY; PRIOR TO PLACEMENT OF ANY CONCRETE THE CONTRACTOR SHALL HAVE A LICENSE SURVEYOR VERIFY THE GRADE AND CROSS SLOPE OF THE CURB AND GUTTER FORMS, THE CONTRACTOR SHALL SUBMIT THE SLOPE AND GRADES TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF CONCRETE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY SECTION WHICH DOES NOT CONFORM TO THE DESIGN OR TYPICAL CROSS SECTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CURB AND GUTTER POURS WITHOUT THE APPROVAL OF THE ENGINEER.

58. SITE WORK SHALL MEET OR EXCEED OWNER'S SITE SPECIFICATIONS.

59. ALL SITE CONCRETE OR CONCRETE ELEMENT NOT SPECIFICALLY SHOWN AND DETAILED ON STRUCTURAL DRAWINGS TO HAVE A MINIMUM OF 28 DAY COMPRESSION STRENGTH OF 4000 PSI.

60. CUT SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL

61. FILL SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL

62. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING THE GRADING PROJECT.

DEWATERING

63. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE AND MAINTAIN ALL MACHINERY, APPLIANCES AND EQUIPMENT TO MAINTAIN ALL EXCAVATIONS FREE FROM WATER DURING CONSTRUCTION. THE CONTRACTOR SHALL DISPOSE OF THE WATER SO AS NOT TO CAUSE DAMAGE TO PUBLIC OR PRIVATE PROPERTY, OR TO CAUSE A NUISANCE OR MENACE TO THE PUBLIC OR VIOLATE THE LAW. THE DEWATERING SYSTEM SHALL BE INSTALLED AND OPERATED SO THAT THE GROUND LEVEL OUTSIDE THE EXCAVATION IS NOT REDUCED TO THE EXTENT WHICH WOULD CAUSE DAMAGE OR ENDANGER ADJACENT STRUCTURES OR PROPERTY. ALL COST FOR DEWATERING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL PIPE CONSTRUCTION. THE STATIC WATER LEVEL SHALL BE DRAWN DOWN A MINIMUM OF 1 FOOT BELOW THE BOTTOM OF EXCAVATIONS TO MAINTAIN THE UNDISTURBED STATE OF NATURAL SOILS AND ALLOW THE PLACEMENT OF ANY FILL TO THE SPECIFIED DENSITY. THE CONTRACTOR SHALL HAVE ON HAND, PUMPING EQUIPMENT AND MACHINERY IN GOOD CONDITION FOR EMERGENCIES AND SHALL HAVE WORKMEN AVAILABLE FOR ITS OPERATION: DEWATERING SYSTEM SHALL OPERATE CONTINUOUSLY UNTIL BACKFILL HAS BEEN COMPLETED TO 1 FOOT ABOVE THE NORMAL STATIC GROUNDWATER LEVEL.

64. THE CONTRACTOR SHALL CONTROL SURFACE WATER TO PREVENT ENTRY INTO EXCAVATIONS. AT EACH EXCAVATION, A SUFFICIENT NUMBER OF TEMPORARY OBSERVATION WELLS TO CONTINUOUSLY CHECK THE GROUNDWATER LEVEL SHALL BE PROVIDED.

65. SUMPS SHALL BE NO DEEPER THAN 5 FEET AND SHALL BE AT THE LOW POINT OF EXCAVATION. EXCAVATION SHALL BE GRADED TO DRAIN TO THE SUMPS.

66. THE CONTROL OF GROUNDWATER SHALL BE SUCH THAT SOFTENING OF THE BOTTOM OF EXCAVATIONS, OR FORMATION OF "QUICK" CONDITIONS OR "BOILS", DOES NOT OCCUR. DEWATERING SYSTEMS SHALL BE DESIGNED AND OPERATED SO AS TO PREVENT REMOVAL OF NATURAL SOILS. THE RELEASE OF GROUNDWATER AT ITS STATIC LEVEL SHALL BE PERFORMED IN SUCH A MANNER AS TO MAINTAIN THE UNDISTURBED STATE OF NATURAL FOUNDATION SOILS, PREVENT DISTURBANCE OF COMPACTED BACKFILL, AND PREVENT FLOTATION OR MOVEMENT OF STRUCTURES, PIPELINES AND SEWERS. IF A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR DISPOSAL OF WATER FROM CONSTRUCTION DEWATERING ACTIVITIES, IT SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO ANY DEWATERING ACTIVITIES.

67. ONE HUNDRED PERCENT STANDBY PUMPING CAPACITY SHALL BE AVAILABLE ON SITE AT ALL TIMES AND SHALL BE CONNECTED TO THE DEWATERING SYSTEM PIPING AS TO PERMIT IMMEDIATE USE. IN ADDITION STANDBY EQUIPMENT AND APPLIANCES FOR ALL ORDINARY EMERGENCIES, AND COMPETENT WORKMEN FOR OPERATION AND MAINTENANCE OF ALL DEWATERING EQUIPMENT SHALL BE ON SITE AT ALL TIMES. STANDBY EQUIPMENT SHALL INCLUDE EMERGENCY POWER GENERATION AND AUTOMATIC SWITCH OVER TO THE EMERGENCY GENERATOR WHEN NORMAL POWER FAILS. DEWATERING SYSTEMS SHALL NOT BE SHUT DOWN BETWEEN SHIFTS, ON HOLIDAYS, ON WEEKENDS, OR DURING WORK STOPPAGES.

SITE SAFETY AND MAINTENANCE

68. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.

69. THE CONTRACTOR AGREES THAT:

A. THEY SHALL BE RESPONSIBLE TO CLEAN THE JOB SITE AT THE END OF EACH PHASE OF WORK.

B. THEY SHALL BE RESPONSIBLE TO REMOVE AND DISPOSE OF ALL TRASH, SCRAP AND UNUSED MATERIAL AT THEIR OWN EXPENSE IN A TIMELY MANNER.

C. THEY SHALL BE RESPONSIBLE TO MAINTAIN THE SITE IN A NEAT, SAFE AND ORDERLY MANNER AT ALL TIMES.

D. THEY SHALL BE RESPONSIBLE TO KEEP MATERIALS, EQUIPMENT, AND TRASH OUT OF THE WAY OF OTHER CONTRACTORS SO AS NOT TO DELAY THE JOB. FAILURE TO DO SO WILL RESULT IN A DEDUCTION FOR THE COST OF CLEAN UP FROM THE FINAL PAYMENT.

E. THEY SHALL BE RESPONSIBLE FOR THEIR OWN SAFETY, TRAFFIC CONTROL, PERMITS, RETESTING AND REINSPECTIONS AT THEIR OWN EXPENSE.

F. UNLESS OTHERWISE NOTED ALL EXCESS SOILS AND MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LAWFULLY DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.

G. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, BARRICADES, SIGNS, FLAGMEN OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.

H. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTORS USE DURING CONSTRUCTION.

I. ALL DEBRIS AND FOREIGN MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT APPROVED DISPOSAL SITES. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS FOR THE TRANSPORTATION OF MATERIAL TO AND FROM THE SITE.

72. FOR ALL WORK WITHIN PUBLIC RIGHTS-OF-WAY OR EASEMENTS, THE CONTRACTOR SHALL PRESERVE THE INTEGRITY AND LOCATION OF ANY AND ALL PUBLIC UTILITIES AND PROVIDE THE NECESSARY CONSTRUCTION TRAFFIC CONTROL. CONTRACTOR SHALL, THROUGH THE ENCROACHMENT PERMIT PROCESS, VERIFY WITH THE NECESSARY REGULATORY AGENCIES, THE NEED FOR ANY TRAFFIC ROUTING PLAN. IF PLAN IS REQUIRED, CONTRACTOR SHALL PROVIDE PLAN AND RECEIVED PROPER APPROVALS PRIOR TO BEGINNING CONSTRUCTION. WORK IN EASEMENT AND/OR RIGHTS-OF-WAY IS SUBJECT TO THE APPROVAL AND ACCEPTANCE OF THE REGULATORY AGENCY RESPONSIBLE FOR OPERATION AND/OR MAINTENANCE OF SAID AND/OR RIGHT-OF-WAY. ALL CONSTRUCTION WORK IN UDOT RIGHT- OF -WAY SHALL BE SUBJECT TO INSPECTION BY THE STATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT INSPECTIONS TAKE PLACE WHERE AND WHEN REQUIRED AND TO INSURE THAT ALL WORK IS COMPLETED TO UDOT STANDARDS.

SURFACE IMPROVEMENTS:

73. SUBGRADE PREPARATION: SUBGRADE SHALL BE COMPACTED TO A 95% RELATIVE C0MPACTION TO A MINIMUM DEPTH OF 6" FOR ALL ON-SITE DEVELOPMENT. ALL OFF-SITE IMPROVEMENTS ARE TO BE DONE PER APWA STANDARDS.

74. AGGREGATE SUB-BASE: AGGREGATE SUB-BASE SHALL BE GRANULAR BACKFILL BORROW. AGGREGATE SUB-BASE MATERIAL SHALL BE CLEAN AND FREE FROM VEGETABLE MATTER AND OTHER DELETERIOUS SUBSTANCE. AGGREGATE SHALL COMPLY WITH THE GUIDELINE REQUIREMENTS FOR PAVEMENTS FOUND IN THE PROFESSIONALLY PREPARED OF THE SOILS INVESTIGATIONS COMPLETED ON THIS SITE.

75. AGGREGATE BASE: AGGREGATE BASE SHALL BE GRADE 3/4 UNTREATED BASE COURSE, AND COMPLY PREPARED REPORT OF THE SOILS INVESTIGATION PREPARED ON THIS SITE.

76. ALL SIDEWALKS AND CROSSINGS TO MEET CURRENT ADA STANDARDS/ APWA STANDARDS.

77. PAYMENT FOR PAVEMENT WILL BE MADE ONLY FOR AREAS SHOWN ON PLANS. REPLACEMENT OF PAVEMENT WHICH IS BROKEN OR CUT DURING THE INSTALLATION OF THE WORK COVERED BY THESE GENERAL NOTES, AND WHICH LIES OUTSIDE OF SAID AREAS, SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR PAVEMENT, AND NO ADDITIONAL PAYMENT SHALL BE MADE FOR SUCH WORK.

78. INSTALLATION OF STREET LIGHTS SHALL BE IN ACCORDANCE WITH CITY STANDARDS.

79. PRIOR TO FINAL ACCEPTANCE OF THE IMPROVEMENTS BUILT BY THESE PLANS AND SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE OWNER, CITY, AND POWER COMPANY TO HAVE THE ELECTRICAL SYSTEM AND ALL STREET LIGHTS ENERGIZED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL STRIPING AND/OR PAVEMENT MARKINGS NECESSARY TO THE EXISTING STRIPING INTO FUTURE STRIPING. METHOD OF REMOVAL SHALL BE BY GRINDING OR SANDBLASTING.

80. STRIPING AND PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH MUTCD & APWA 32 17 23.

81. DURING THE BIDDING PROCESS, CONTRACTOR TO REVIEW DESIGN SLOPES SHOWN FOR PAVEMENT AND WARRANTY THE PAVEMENT TO THE OWNER BASED UPON THE DESIGN SLOPES SHOWN HEREON. CONCERNS WITH SLOPES MUST BE BROUGHT DURING THE BIDDING PROCESS.

82. IT IS THE INTENT ON THESE PLANS THAT ALL PAVEMENT SLOPE TO A CATCH BASIN, INLET BOX OR OUT INTO A STREET.CONTRACTOR TO VERIFY FINISH SPOT ELEVATIONS AND NOTIFY ENGINEER IF THERE ARE DISCREPANCIES THAT WOULD CAUSE PUDDLING ON THE SITE.

No.	DATE	DESCRIPTION
1	06/19/20	REVISIONS PER CITY REDLINES
2	08/21/20	REVISIONS PER CITY REDLINES
3	09/08/20	REVISIONS PER CITY REDLINES

DRAWN BY	MNJ
CHECKED BY	AGA
FIELD CREW	KD
DATE	03/27/20
DWG. FILE	1907191_SITE

0 0.5 1

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

PROFESSIONAL ENGINEER
9/8/20
No. 10360773
M. CHRIS
POULSEN
STATE OF UTAH

BENCHMARK
ENGINEERING &
LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

BISHOP STORAGE - PHASE 1

5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

GEN. NOTES
LEGEND &
ABBREV.

CONSTRUCTION KEY NOTE REFERENCE		
NO.	DESCRIPITON	DETAIL
1	ASPHALT PAVEMENT WITH GRANULAR BASE	2/CDT.02
2	CONCRETE PAVEMENT WITH GRANULAR BASE	2/CDT.01
3	DRIVE APPROACH PER AMERICAN FORK STDS.	
4	TYPE 'A' CURB AND GUTTER PER APWA #205	
5	SAWCUT PER APWA #225	
6	6' BLACK VINYL COATED CHAINLINK FENCE WITH BARBED WIRE ARM	
7	CONCRETE APRON	
8	INTEGRAL SIDEWALK	4/CDT.02
9	4' WATERWAY PER APWA #211	
10	RELEASE CURB AND GUTTER	3/CDT.02
11	TRANSITION CURB AND GUTTER	
12	ADA RAMP	4/CDT.01
13	ADA SIGN	4/CDT.01
14	ASPHALT MILLING	

CONSTRUCTION KEY NOTE REFERENCE CONTINUED		
NO.	DESCRIPITON	DETAIL
15	6' WROGHT IRON FENCING	
16	ASPHALT PAVEMENT PER AMERICAN FORK STDS.	2/CDT.04
17	SIDEWALK PER AMERICAN FORK STDS.	
18	CURB AND GUTTER PER AMERICAN FORK STDS.	3/CDT.04
19	6' CHAINLINK FENCE	
20	DUMPSTER PER AMF STD. 17.5.121	2/CDT.03
21	"NO FIRE ACCESS BEYOND THIS POINT" SIGN	
22	BOLLARD	6/CDT.02

ZONING: PLANNED INDUSTRIAL ZONE ONE (PI-1)

FEMA FLOOD HAZARD ZONE: FLOOD ZONE A
FEEM FLOOD HAZARD COMMUNITY PANEL NUMBER: 49049C0306F
FEMA FLOOD HAZARD EFFECTIVE DATE: 06/19/2020

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.

NORTH

AREA TABLE		
PARTICULARS	S.F.	%
BUILDING	62,030	22.2
HARDSCAPE	200,326	71.8
LANDSCAPE	16,537	5.9
TOTAL	278,893	100

PARKING COUNT		
PARTICULARS	PROVIDED	
	STANDARD	ADA
PARKING STALLS	17	1
TOTAL	18	

N 00°14'13" W 100.75' (TIE SHEET)
N 00°25'37" W 100.77' (MEASURED)
WITNESS CORNER FOR THE SOUTHEAST CORNER SECTION 26, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN (FOUND BRASS CAP)
SOUTHEAST CORNER SECTION 26, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN (FOUND BRASS CAP, 12" BELOW GROUND)
EDGE OF ASPHALT (30° MAX. TAPER
EX. FENCING (REPLACE WITH 6)
EX. FENCING (REMOVE)
EX. CURB & GUTTER
NEW DUMPSTER PER AMF STD 20
52.9'ROW HALF-WIDTH
1500 SOUTH (PUBLIC ROAD)
N 89°01'36" W 250.01'
STUB ADA ACCESS FOR PHASE 2
SIDEWALK TO BE 6" THICK AT THE DRIVE APPROUCH
ELECTRIC WROUGHT IRON GATE (DESIGNED BY OTHERS)
EDGE OF ASPHALT (30° MAX. TAPER
EX. EDGE OF ASPHALT
EX. DIRT DRIVE ACCESS
N 89°59'15" E 2662.94' (CALCULATED)
S 89°11'57" E 2747.05' (MEASURED)
WITNESS CORNER FOR THE SOUTH QUARTER CORNER SECTION 26, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN (FOUND BRASS CAP, IN CONCRETE BLOCK)
SOUTH QUARTER CORNER SECTION 26, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN (NOT FOUND)
N 53°21'45" E 103.55' (TIE SHEET)
S 00°16'28" W 812.00'
756.0'
EX. FENCING (REPLACE WITH 6)
NEW BUILDING 10'X10' UNITS (TYP.) 6,000 S.F.
NEW BUILDING 10'X20' UNITS (TYP.) 12,000 S.F.
S 87°50'52" E 437.78'
424.7'
N 87°17'52" W 186.16'
180.9'
OPEN STORAGE FOR VEHICLES, RV AND BOATS (TYP.)
N 00°16'28" E 413.31'
414.3'
N 00°03'08" E 402.10'
389.2'
EX. FENCING (REPLACE WITH 6)

BENCHMARK:
THE WITNESS CORNER FOR THE SOUTH QUARTER CORNER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN. ELEVATION = 4502.79 (NAVD 29)

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2	08/21/20	REVISIONS PER CITY REDLINES
3	09/08/20	REVISIONS PER CITY REDLINES

DRAWN BY: MNJ
CHECKED BY: AGA
FIELD CREW: KD
DATE: 03/27/20
DWG FILE: 1907191_SITE

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS
1 0.5 0

PROFESSIONAL ENGINEER
9/9/20
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
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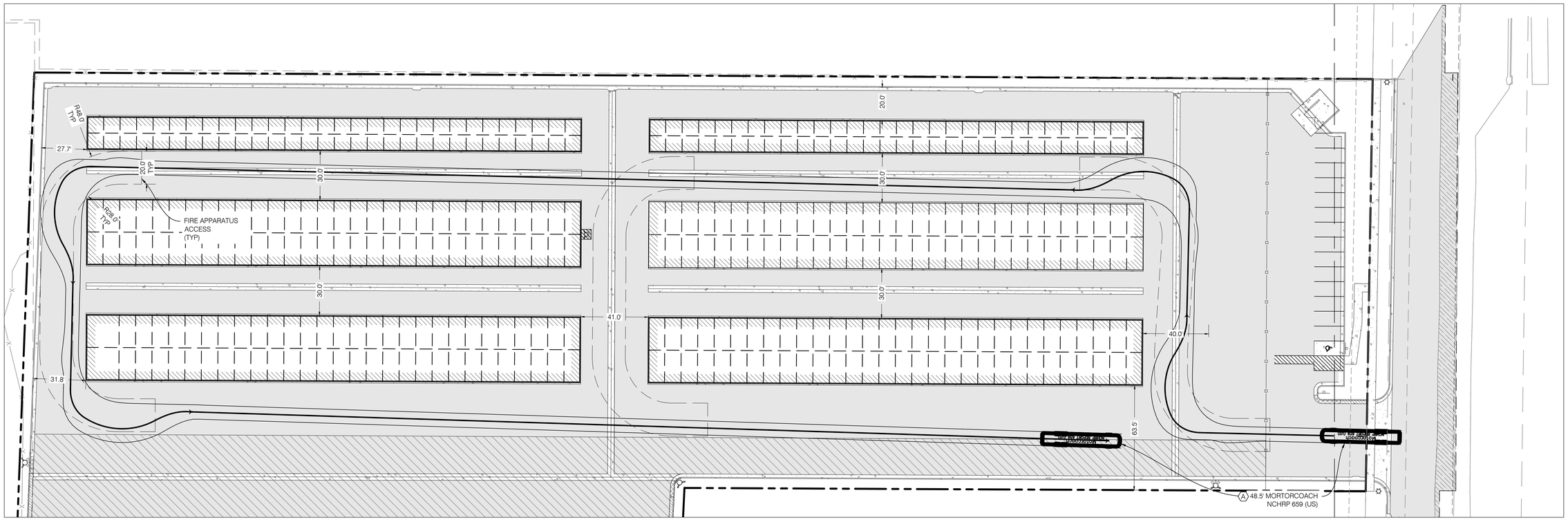
BISHOP STORAGE - PHASE 1

5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

SITE PLAN

CSP.01
3 OF 13



48.5' VEHICLE TURNING MODEL (A)
SCALE: 1:30

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BISHOP STORAGE - PHASE 1
5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

SITE FIRE ACCESS PLAN

CSP.02
4 OF 13

CONSTRUCTION KEY NOTE REFERENCE		
NO.	DESCRIPITON	DETAIL
1	NEW STREET LIGHT (DESIGNED BY OTHERS)	
2	1" WATER METER & VAULT PER AMERICAN FORK STD. 15.5	2/CDT.01
3	1" POLY WATER SERVICE LINE	
4	4" PVC SDR-35 SEWER LATERAL PER APWA #431	
5	SEWER CLEAN OUT @ 75' PER AMERICAN FORK STDS.	1/CDT.01
6	2" FIRE LINE (MUST BE VERIFIED BY MECHANICAL ENGINEER)	
7	1" POLY PRESSURIZED IRRIGATION LINE	3/CDT.01
8	1" PI METER & VAULT	3/CDT.01
9	GATE VALVE PER AMERICAN FORK STD.	
10	THRUST BLOCK PER AMERICAN FORK STD 15.6	1/CDT.04
11	8" C-900 FIRE MAIN PER AMERICAN FORK STD.	
12	FIRE HYDRANT PER AMERICAN FORK STD 15.6	4/CDT.04
13	12" PVC C-900 PI PER AMERICAN FORK STD.	
14	GROUNDWATER MONITORING STATION	5/CDT.02
15	6" C-900 FIRE LINE LATERAL PER AMERICAN FORK STD.	

NOTE:
PRIOR TO FABRICATION OR CONSTRUCTION, BEGIN AT THE LOW END OF ALL GRAVITY UTILITY LINES AND VERIFY THE INVERT ELEVATION OF THE POINT OF CONNECTION AND NOTIFY ENGINEER IF THIS POINT IS HIGHER THAN SHOWN ON THE PLANS FOR A REDESIGN.

NOTE:
POTHOLE TO IDENTIFY ANY CONFLICTS BEFORE ANY PIPE INSTALLATION. CONTACT ENGINEER IF ANY CONFLICTS ARE IDENTIFIED.

NOTE A:
12" OF VERTICAL SEPARATION REQUIRED BETWEEN STORM AND WATER LINES. LOOP WATER MAIN IF IN CONFLICT.

NOTE:
ALL EXISTING OVERHEAD UTILITIES SHALL BE BURIED

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30ft.

SSMH
RIM=4502.09
IE(60")=4492.04

EX. 12" PRESSURIZED IRRIGATION MAIN

CONNECT TO PI MAIN PER AMERICAN FORK STDS.

EX. OVERHEAD POWER LINE (COORDINATE WITH ROCKY MOUNTAIN POWER TO RELOCATE AND BURRY POWER LINES)

1500 SOUTH (PUBLIC ROAD)

STUB FOR PHASE 2

SEE NOTE A (TYP)

CONNECT TO WATER MAIN PER AMERICAN FORK SPECS. (TYP.)

CONNECT TO WATER MAIN PER AMERICAN FORK SPECS. (TYP.)

NEW PI DRAIN

EX. 16" D.I. WATER MAIN

EX. SSMH
RIM=4500.97
IE(60")=4492.32

EX. 60" SANITARY SEWER MAIN

EX. OVERHEAD POWER LINE

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SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

1 0.5 0

PROFESSIONAL ENGINEER
9/3/20
No. 10360773
M. CHRIS POULSEN
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BISHOP STORAGE - PHASE 1

5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

UTILITY PLAN

CUP.01
5 OF 13

GRADING AND DRAINAGE KEY NOTE REFERENCE

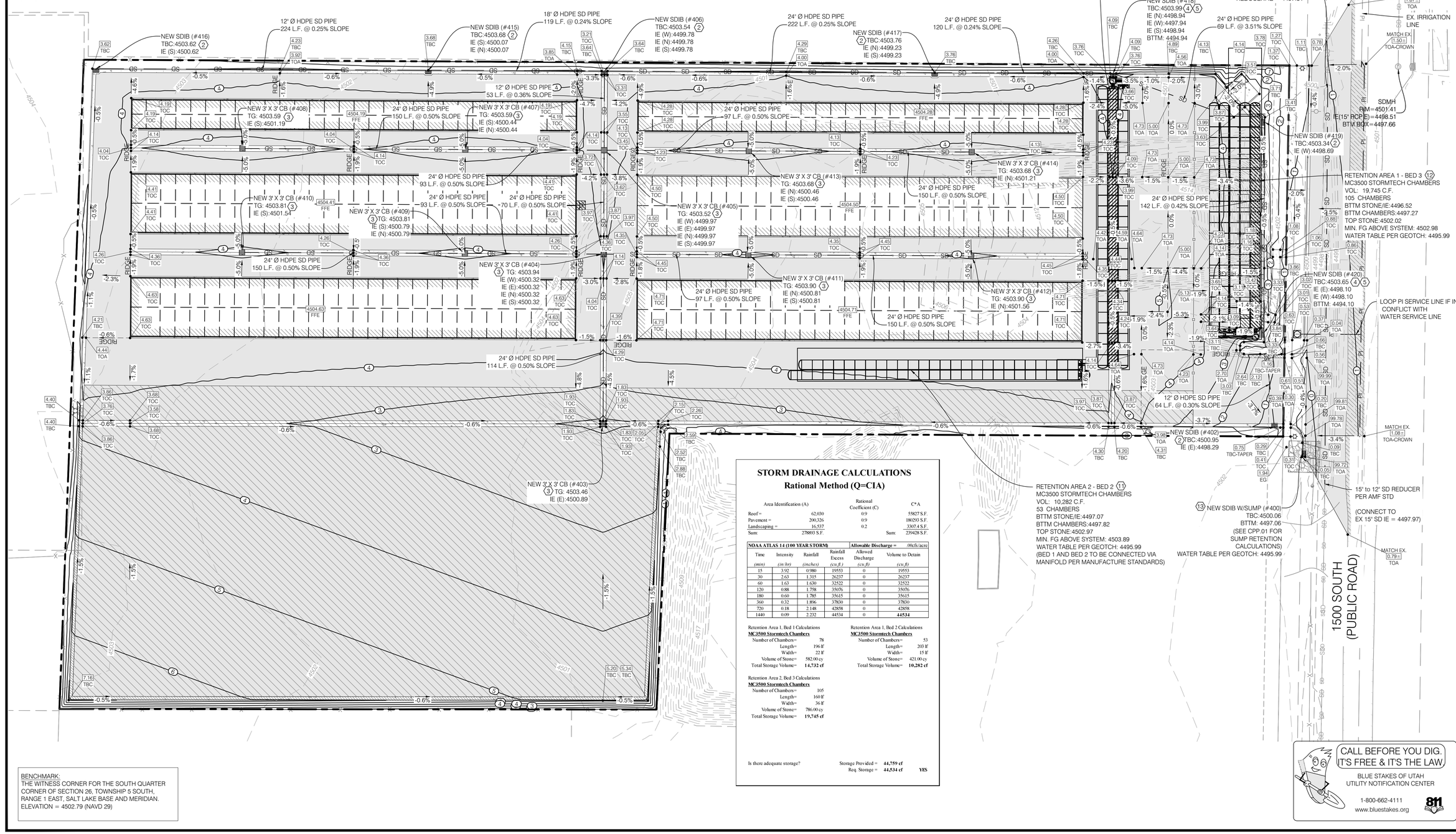
NO.	DESCRIPITON	DETAIL
1	GRADE SITE TO ELEVATIONS SHOWN ON PLAN	
2	STORM DRAIN INLET BOX PER APWA #315	
3	3'X3' CATCH BASIN	
4	STORM DRAIN INLET BOX WITH SUMP PER APWA #315	
5	SNOUT	2/CDT.03
6	12" HDPE SD PIPE	
7	18" HDPE SD PIPE	
8	15" RCP SD PIPE	
9	24" HDPE SD PIPE	
10	AREA 1, BED 1 MC3500 STORMTECH CHAMBERS	1/CDT.02
11	AREA 1, BED 2 MC3500 STORMTECH CHAMBERS	1/CDT.03
12	AREA 2, BED 3 MC3500 STORMTECH CHAMBERS	1/CDT.04
13	SDIB WITH SUMP PER AMERICAN FORK STD	5/CDT.01

SURVEY CONTROL NOTE:
THE CONTRACTOR OR SURVEYOR PERFORMING THE CONSTRUCTION SURVEYING SHALL BE RESPONSIBLE TO PROVIDE CONSTRUCTION LAYOUT PER THE APPROVED PLANS ONLY. THE SURVEYOR SHALL ALSO BE RESPONSIBLE FOR VERIFYING HORIZONTAL CONTROL FROM THE SURVEY MONUMENTS AND FOR VERIFYING ANY ADDITIONAL CONTROL POINTS SHOWN ON THE SURVEY OR IMPROVEMENTS PLANS OR ON ELECTRONIC DATA PROVIDED BY BENCHMARK ENGINEERING AND LAND SURVEYING. THE SURVEYOR SHALL ALSO USE THE BENCHMARKS AS SHOWN ON THE PLAN, AND VERIFY THEM AGAINST NO LESS THAN THREE EXISTING HARD IMPROVEMENT ELEVATIONS INCLUDED ON THESE PLANS OR ON ELECTRONIC DATA PROVIDED BY BENCHMARK ENGINEERING AND LAND SURVEYING. IF ANY DISCREPANCIES ARE ENCOUNTERED, THE SURVEYOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND RESOLVE THE DISCREPANCIES BEFORE PROCEEDING WITH ANY CONSTRUCTION SURVEYING. IT IS ALSO THE RESPONSIBILITY OF THE SURVEYOR TO VERIFY ANY ELECTRONIC DATA WITH THE APPROVED STAMPED AND SIGNED PLANS AND NOTIFY THE ENGINEER WITH ANY DISCREPANCIES.

NOTE:
SAWCUT WIDTH, LOCATIONS AND TIE-IN ELEVATIONS IN EXISTING HARDSCAPE ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION AND EXTENT OF SAWCUTTING PRIOR TO CONSTRUCTION. NOTIFY CIVIL ENGINEER IF REVISIONS ARE REQUIRED. SEE NOTE 58 ON CGN.01 FOR FURTHER DETAIL.

NOTE:
POTHOLE TO IDENTIFY ANY CONFLICTS BEFORE ANY PIPE INSTALLATION. CONTACT ENGINEER IF ANY CONFLICTS ARE IDENTIFIED.

NOTE:
PRIOR TO FABRICATION OR CONSTRUCTION, BEGIN AT THE LOW END OF ALL GRAVITY UTILITY LINES AND VERIFY THE INVERT ELEVATION OF THE POINT OF CONNECTION AND NOTIFY ENGINEER IF THIS POINT IS HIGHER THAN SHOWN ON THE PLANS FOR A REDESIGN.



STORM DRAINAGE CALCULATIONS
Rational Method (Q=CIA)

Area Identification (A)		Rational Coefficient (C)	C*A
Roof =	62,030	0.9	55827 S.F.
Pavement =	200,326	0.9	180293 S.F.
Landscaping =	16,537	0.2	3307.4 S.F.
Sum:	278893 S.F.	Sum:	239428 S.F.

NOAA ATLAS 14 (100 YEAR STORM) — **Allowable Discharge =** 0(cfs/acre)

Time (min)	Intensity (in/hr)	Rainfall (inches)	Rainfall Excess (cu.ft.)	Allowed Discharge (cu.ft)	Volume to Detain (cu.ft)
15	3.92	0.980	19553	0	19553
30	2.63	1.315	26237	0	26237
60	1.63	1.630	32522	0	32522
120	0.88	1.758	35076	0	35076
180	0.60	1.785	35615	0	35615
360	0.32	1.896	37830	0	37830
720	0.18	2.148	42858	0	42858
1440	0.09	2.232	44534	0	**44534**

Retention Area 1, Bed 1 Calculations
MC3500 Stormtech Chambers
Number of Chambers= 78
Length= 196 lf
Width= 22 lf
Volume of Stone= 582.00 cy
Total Storage Volume= **14,732 cf**

Retention Area 1, Bed 2 Calculations
MC3500 Stormtech Chambers
Number of Chambers= 53
Length= 203 lf
Width= 15 lf
Volume of Stone= 421.00 cy
Total Storage Volume= **10,282 cf**

Retention Area 2, Bed 3 Calculations
MC3500 Stormtech Chambers
Number of Chambers= 105
Length= 160 lf
Width= 36 lf
Volume of Stone= 786.00 cy
Total Storage Volume= **19,745 cf**

Is there adequate storage? Storage Provided = **44,759 cf** Req. Storage = **44,534 cf** **YES**

BENCHMARK:
THE WITNESS CORNER FOR THE SOUTH QUARTER CORNER OF SECTION 26, TOWNSHIP 5 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN.
ELEVATION = 4502.79 (NAVD 29)

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DRAWN BY MNJ | CHECKED BY AGA | REQ.CREW KD | DATE 03/27/20 | DRG. NUM 1907191_C3.01

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS
1 0.5 0

PROFESSIONAL ENGINEER
9/3/20
No. 10360773
M. CHRIS POULSEN
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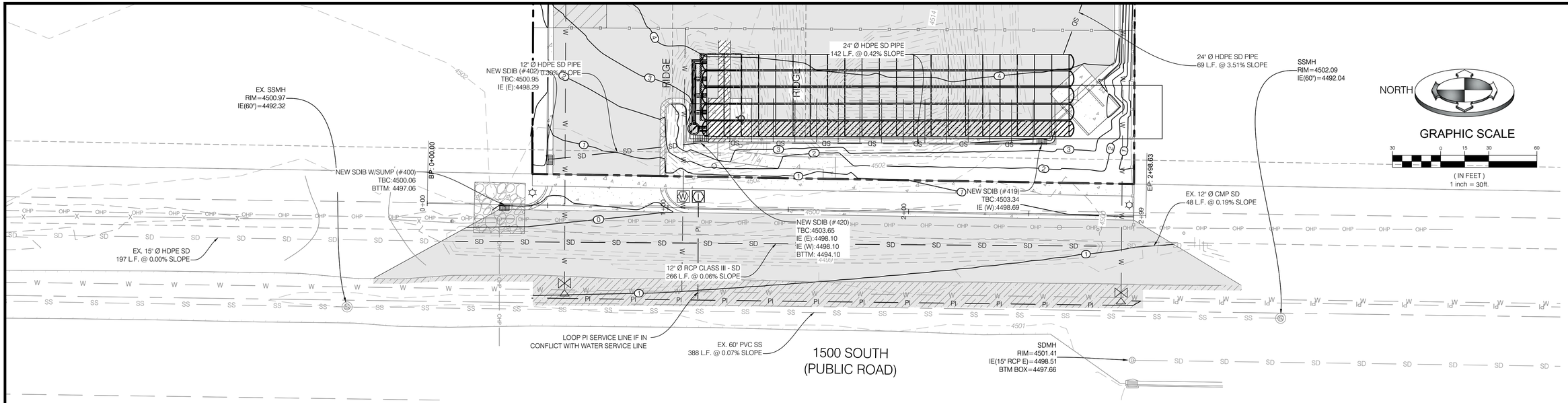
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BISHOP STORAGE - PHASE 1
5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

GRADING & DRAINAGE PLAN

CGD.01
6 OF 13



STORM DRAINAGE CALCULATIONS
Rational Method (Q=CIA)

Area Identification (A)		Rational Coefficient (C)		C* A
Roof =	0	0.9		0 S.F.
Pavement =	8,500	0.9		7650 S.F.
Landscaping =	0	0.2		0 S.F.
Sum:	8500 S.F.		Sum:	7650 S.F.

NOAA ATLAS 14 (25-YEAR STORM)				Allowable Discharge =	0.01 cfs
Time (min)	Intensity (in/hr)	Rainfall (inches)	Rainfall Excess (cu.ft.)	Allowed Discharge (cu.ft)	Volume to Detain (cu.ft)
15	2.64	0.660	421	13	408
30	1.78	0.890	567	26	542
60	1.10	1.100	701	52	650
120	0.61	1.216	775	103	**672**
180	0.43	1.278	815	155	660
360	0.24	1.452	926	309	617
720	0.14	1.716	1094	618	476
1440	0.08	1.848	1178	1236	0

CALCULATED DISCHARGE INTO GROUND: $Q = \frac{S(sf)}{P(sec/ft)}$

Percolation surface area $S = 2(WH + LH) + WL$

Rectangular concrete sump with gravel wrap

Sump inner width (w)	3.00 ft
Sump inner length (l)	2.50 ft
Sump inner depth (h)	2.50 ft
Sump wall thickness	0.50 ft
Width of gravel wrap	18.00 ft
Length of gravel wrap	3.50 ft
Depth of gravel wrap	1.00 ft
Effective sump width (W)	40.00 ft
Effective sump length (L)	10.50 ft
Effective sump depth (H)	4.00 ft
Percolation surface area per sump (S)	824.00 sf
Sumps provided	1
Total percolation surface area	824.00 sf

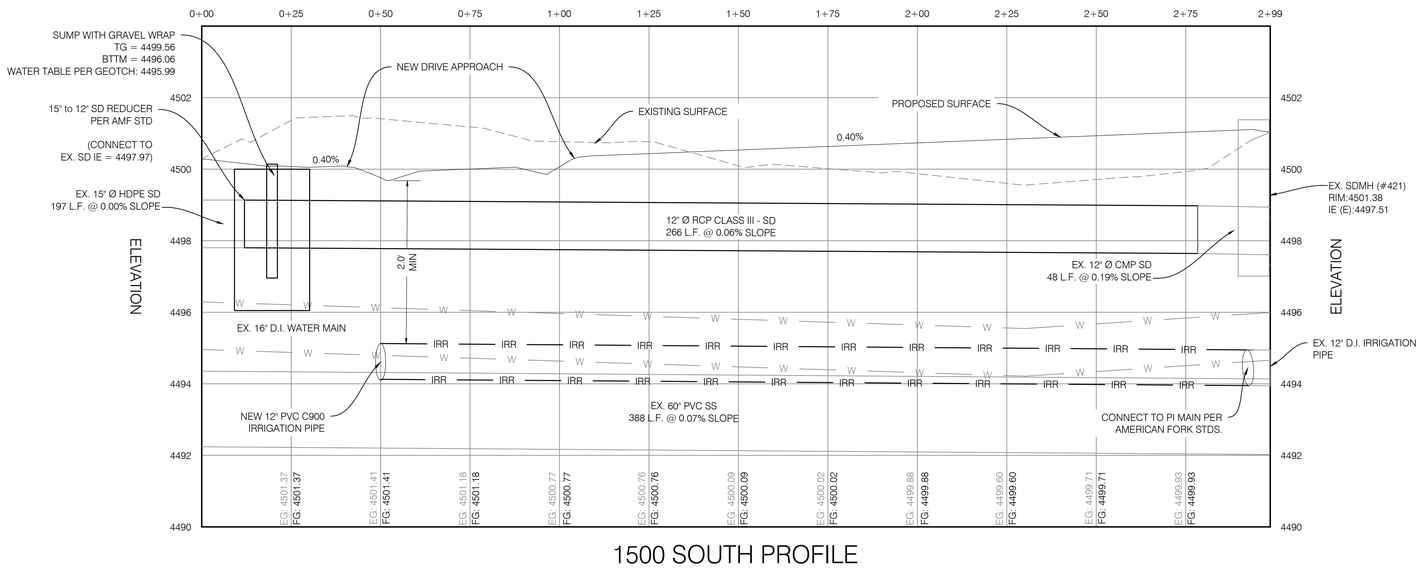
Discharge

Percolation rate (P)	80.00 min/in
Percolation surface area (S)	824.00 sf
Allowed Discharge (Q)	**0.01 cfs**

Sump retention volume $V = (WLH - (w+t)(h+t)(l+t))e + wlh$

Sump inner depth (h)	2.50 ft
Sump inner width (w)	3.00 ft
Sump inner length (l)	2.50 ft
Sump volume	18.75 cf
Sump wall thickness (t)	0.50 ft
Wrap width (W)	40.00 ft
Wrap length (L)	10.50 ft
Wrap depth (H)	4.00 ft
Void area (e)	40%
Wrap gravel volume	659.40 cf
Total volume per sump (V)	678.15 cf
Sumps provided	1
Total sump volume	**678 cf**

Is there adequate storage? Storage Provided = **678 cf**; Req. Storage = **672 cf** **YES**



1500 SOUTH PROFILE

No.	DATE	DESCRIPTION
1	06/19/20	REVISIONS PER CITY REDLINES
2	08/12/20	REVISIONS PER CITY REDLINES
3	09/08/20	REVISIONS PER CITY REDLINES

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: MNJ
CHECKED BY: AGA
FIELD CREW: KD
DATE: 03/27/20
DRW. FILE: 1907191_C3.DWG

PROFESSIONAL ENGINEER
9/3/20
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

BENCHMARK CIVIL

BISHOP STORAGE - PHASE 1
5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

PLAN AND PROFILE

CPP.01
7 OF 13

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SWPPP KEY NOTES REFERENCE

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED AND THE DETAILS NOTED AND AS SHOWN ON THE CONSTRUCTION DRAWINGS.

NO.	DESCRIPTION	DETAIL
1	CONCRETE WASTE MANAGEMENT	1/CEP.02
2	INLET PROTECTION WATTLE	2/CEP.02
3	MATERIALS STORAGE	3/CEP.02
4	PORTABLE TOILETS	4/CEP.02
5	SILT FENCE	6/CEP.02
6	TEMPORARY CONSTRUCTION ENTRANCE	7/CEP.02
7	SWPPP INFORMATION SIGN	8/CEP.02

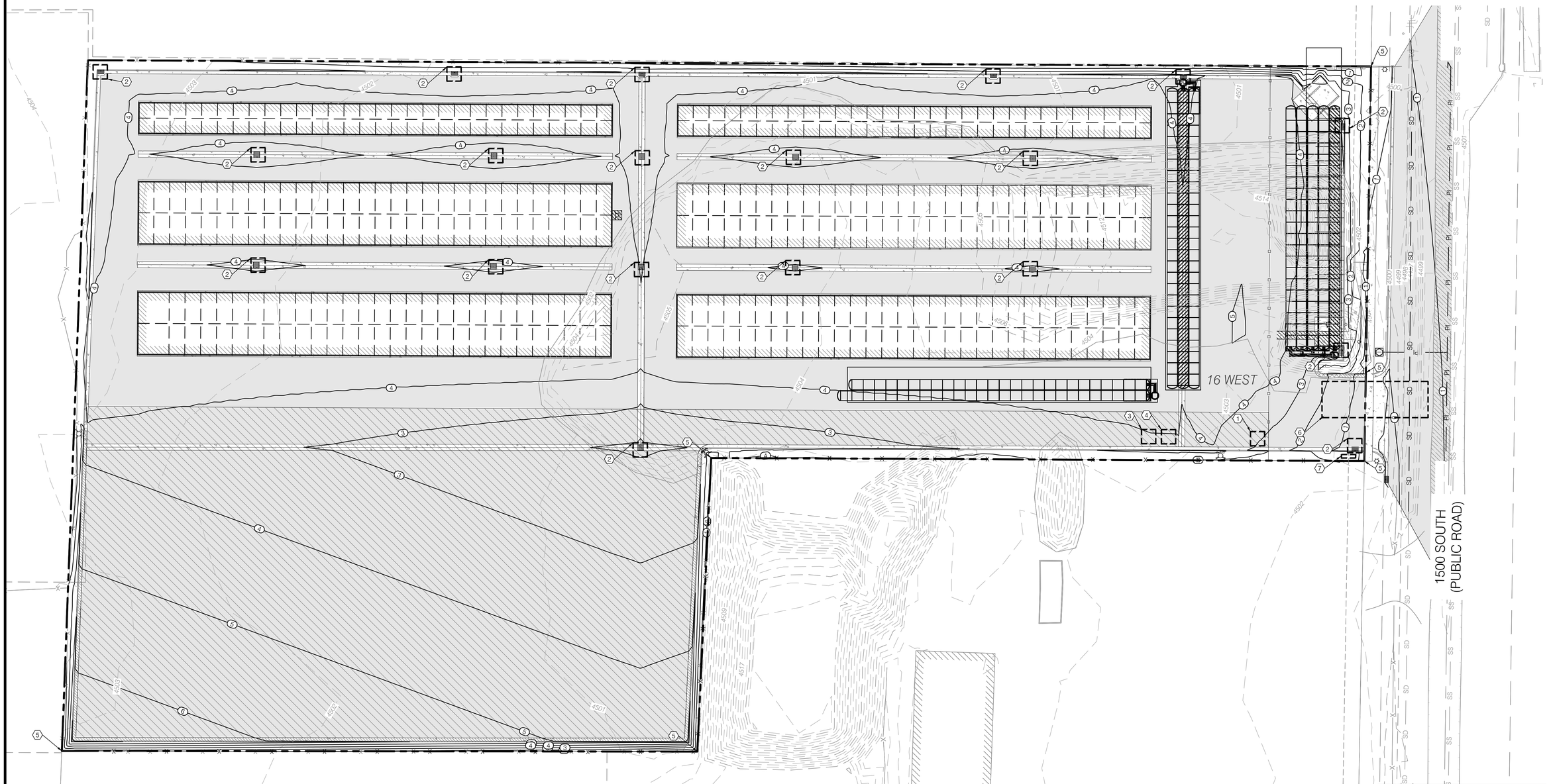
NOTE: CONTRACTOR SHALL INSTALL EROSION CONTROLS (SILT FENCES, STRAW BALES, ETC) AS REQUIRED BY REGULATORY AGENCIES. SAID CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH AGENCY STANDARDS AND FOLLOWING BEST MANAGEMENT PRACTICES FOR ACTUAL PLACEMENT ON SITE. STRAW BALES SHOWN ON THESE DRAWINGS ARE INTENDED AS A MINIMUM REQUIREMENT. ADDITIONAL CONTROLS REQUESTED BY AGENCY INSPECTORS SHALL BE REQUIRED. DUST CONTROL SHALL BE PROVIDED AT ALL TIMES, AT THE CONTRACTOR'S EXPENSE, TO MINIMIZE ANY DUST NUISANCE AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY.

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30ft.



No.	DATE	DESCRIPTION
1	06/19/20	REVISIONS PER CITY REDLINES
2	08/21/20	REVISIONS PER CITY REDLINES
3	09/08/20	REVISIONS PER CITY REDLINES

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

0 0.5 1"

DRAWN BY MNJ
CHECKED BY AGA
FIELD CREW KD
DATE 03/27/20
DWG. FILE 1907191_CEP.dwg

PROFESSIONAL ENGINEER
9/8/20
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH

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BENCHMARK CIVIL

BISHOP STORAGE - PHASE 1

5950 W 6400 N
AMERICAN FORK, UTAH

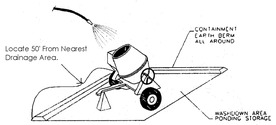
PROJECT NO. 1907191

EROSION CONTROL PLAN

CEP.01
8 OF 13

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BMP: Concrete Waste Management



DESCRIPTION:
Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

APPLICATIONS:
This technique is applicable to all types of sites.

INSTALLATION/APPLICATION CRITERIA:
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete or cement on-site.
- Perform washout of concrete trucks off-site or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (See Earth Berm Barrier information sheet.)
- Train employees and subcontractors in proper concrete waste management.

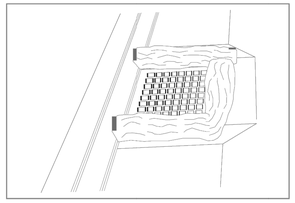
LIMITATIONS:
- Off-site washout of concrete wastes may not always be possible.

MAINTENANCE:
- Inspect subcontractors to ensure that concrete wastes are being properly managed.
- If using a temporary pit, dispose hardened concrete on a regular basis.

CONCRETE WASTE MANAGEMENT 1
SCALE: NTS

BMP: Inlet Protection – Wattle

IP-W
CONSTRUCTION



DESCRIPTION:
Sediment barrier erected around storm drain inlet.

APPLICATION:
Construct at storm drainage inlets located down-gradient of areas to be disturbed by construction.

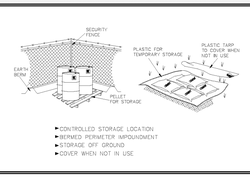
INSTALLATION/APPLICATION CRITERIA:
- Provide up-gradient sediment controls, such as silt fence during construction of inlet
- When construction of curb and gutter and roadways is complete, install gravel filled wattles around perimeter of inlet

LIMITATIONS:
- Recommended maximum contributing drainage area of one acre
- Requires shallow slopes adjacent to inlet

MAINTENANCE:
- Inspect inlet protection following storm event and at a minimum of once every 14 days.
- Remove accumulated sediment when it reaches 4 inches in depth.
- Look for bypassing or undercutting and repair or realign as needed.

INLET PROTECTION WATTLE 2
SCALE: NTS

BMP: Materials Storage



DESCRIPTION:
Controlled storage of on-site materials.

APPLICATION:
- Storage of hazardous, toxic, and all chemical substances.
- Any construction site with outside storage of materials.

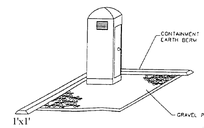
INSTALLATION/APPLICATION CRITERIA:
- Designate a secured area with limited access as the storage location. Ensure no waterways or drainage paths are nearby.
- Construct compacted earthen berm (See Earth Berm Barrier Information Sheet), or similar perimeter containment around storage location for impoundment in the case of spills.
- Ensure all on-site personnel utilize designated storage area. Do not store excessive amounts of material that will not be utilized on site.
- For active use of materials away from the storage area ensure materials are not set directly on the ground and are covered when not in use. Protect storm drainage during use.

LIMITATIONS:
- Does not prevent contamination due to mishandling of products.
- Spill Prevention and Response Plan still required.
- Only effective if materials are actively stored in controlled location.

MAINTENANCE:
- Inspect daily and repair any damage to perimeter impoundment or security fencing.
- Check materials are being correctly stored (i.e. standing upright, in labeled containers, tightly capped) and that no materials are being stored away from the designated location.

MATERIALS STORAGE 3
SCALE: NTS

BMP: Portable Toilets



DESCRIPTION:
Temporary on-site sanitary facilities for construction personnel.

APPLICATION:
All sites with no permanent sanitary facilities or where permanent facility is too far from activities.

INSTALLATION/APPLICATION CRITERIA:
- Locate portable toilets in convenient locations throughout the site.
- Prepare level, gravel surface and provide clear access to the toilets for servicing and for on-site personnel.
- Construct earth berm perimeter (See Earth Berm Barrier Information Sheet), control for spill/protection leak.

LIMITATIONS:
No limitations.

MAINTENANCE:
- Portable toilets should be maintained in good working order by licensed service with daily observation for leak detection.
- Regular waste collection should be arranged with licensed service.
- All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval.

PORTABLE TOILETS 4
SCALE: NTS

BMP: Spill Clean-Up



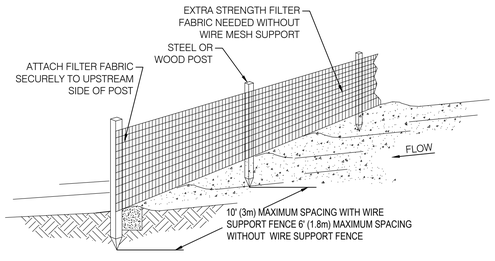
DESCRIPTION:
Practices to clean-up leakage/spillage of on-site materials that may be harmful to receiving waters.

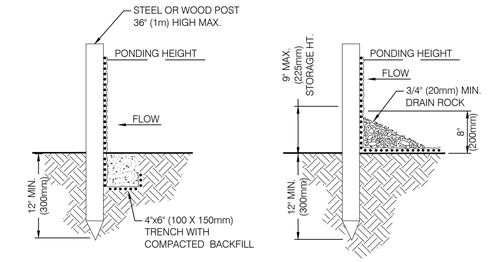
APPLICATION:
All sites

GENERAL:
- Store controlled materials within a storage area.
- Educate personnel on prevention and clean-up techniques.
- Designate an Emergency Coordinator responsible for employing preventative practices and for providing spill response.
- Maintain a supply of clean-up equipment on-site and post a list of local response agencies with phone numbers.

METHODS:
- Clean-up spills/leaks immediately and remediate cause.
- Use as little water as possible. NEVER HOSE DOWN OR BURY SPILL CONTAMINATED MATERIAL.
- Use rags or absorbent material for clean-up. Excavate contaminated soils. Dispose of clean-up material and soil as hazardous waste.
- Document all spills with date, location, substance, volume, actions taken and other pertinent data.
- Contact local Fire Department and State Division of Environmental Response and Remediation (Phone #536-4100) for any spill of reportable quantity.

SPILL CLEAN UP 5
SCALE: NTS





TRENCH DETAIL

INSTALLATION WITHOUT TRENCHING

NOT TO SCALE

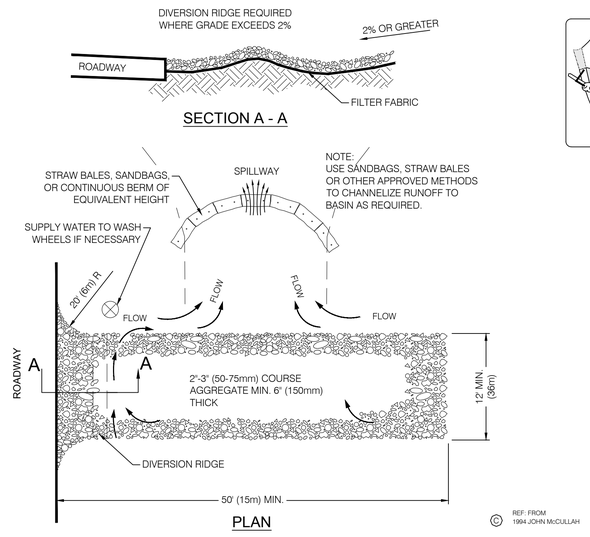
NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.

3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

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SILT FENCE 6
SCALE: NTS



SECTION A - A

PLAN

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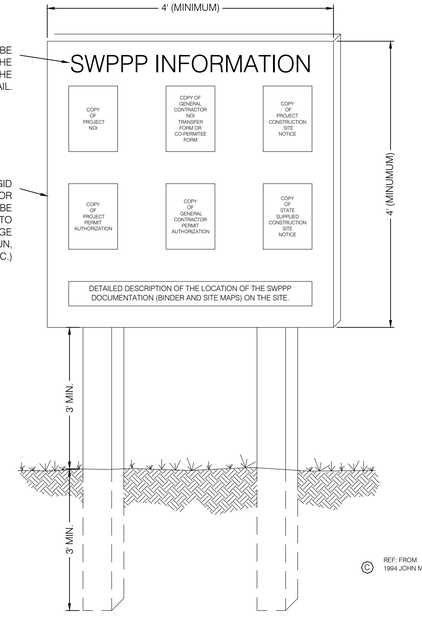
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT 7
SCALE: NTS

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NOTES:
1) THE SWPPP INFORMATION SIGN MUST BE LOCATED NEAR THE CONSTRUCTION EXIT OF THE SITE, SUCH THAT IT IS ACCESSIBLE AND VIEWABLE BY THE GENERAL PUBLIC, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A SAFETY HAZARD.

2) ALL POSTED DOCUMENTS MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE-TO TERMINATION (NOT) IS FILED FOR THE PERMIT.

3) CONTRACTOR SHALL POST OTHER STORM WATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCY.

4) SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.

5) CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY IF THE SWPPP INFORMATION SIGN.

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SWPPP INFORMATION SIGN 8
SCALE: NTS

No.	DATE	DESCRIPTION
1	06/19/20	REVISIONS PER CITY REDLINES
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3	09/09/20	REVISIONS PER CITY REDLINES

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS
0 0.5 1"

DRAWN BY: MNJ
CHECKED BY: AGA
FIELD CREW: KD
DATE: 03/27/20
SURV. FILE: 1907191 SITE

PROFESSIONAL ENGINEER
9/9/20
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070. (801) 542-7192
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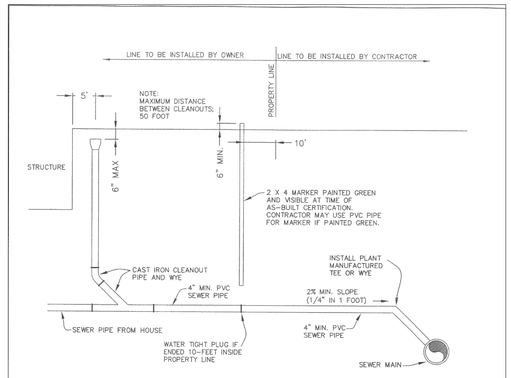
BENCHMARK CIVIL

BISHOP STORAGE - PHASE 1
5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

EROSION CONTROL DETAILS

CEP.02
9 OF 13



SEWER LATERAL DETAIL
-NTS-

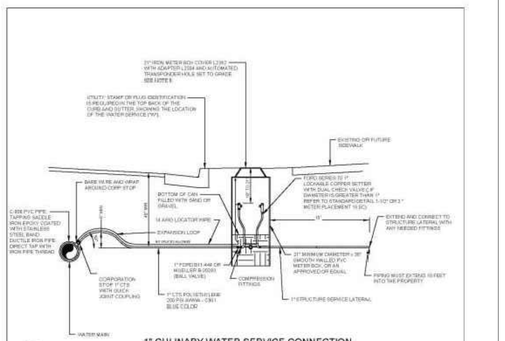


SEWER SERVICE LATERAL SADDLE
-NTS-

NOTE:
1) LATERAL SHALL NOT ENTER MANHOLE, UNLESS OTHERWISE APPROVED BY CITY ENGINEER.
2) FOR CONCRETE PIPE ADD CONCRETE COLLAR AROUND INSERT-A-TEE.
3) ALSO SEE DRAWING NO. 15.19

DRAWN: JRP REVISED: DATE: JULY 2002 SCALE: VARIES	Northern ENGINEERING LAND PLANNING CONSTRUCTION MANAGEMENT 1040 E. 800 N. OREM, UTAH 84057 (801) 802-8992	AMERICAN FORK CITY	STANDARD DETAIL FOR: SANITARY SEWER LATERAL AND CLEAN OUT	DRAWING NO. 15.23

SEWER LATERAL AND CLEANOUT (1)
SCALE: NTS

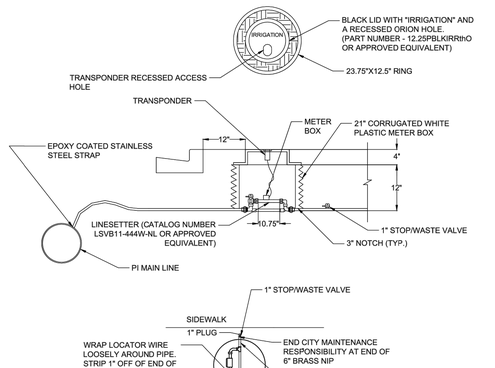


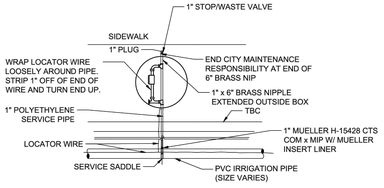
1" CULINARY WATER SERVICE CONNECTION

NOTES:
1. METER BOX, COVER, CORP METER, CORPORATION STOP, AND 1" SERVICE LINE TO BE INSTALLED BY CONTRACTOR. METER IS REQUIRED AND MUST BE PURCHASED BY THE PROPERTY OWNER FROM THE CITY. METER IS PROVIDED AND INSTALLED BY THE CITY.
2. STAINLESS STEEL STIFFENERS ARE REQUIRED ON ALL POLYETHYLENE CONNECTIONS
3. CULINARY WATER LATERALS THAT ARE LAID PARALLEL TO A SEWER MUST BE LAID AT LEAST 10' (EDGE TO EDGE) FROM ANY EXISTING OR PROPOSED SEWER LATERAL (PER UTAH CODE R309-550-7)
4. WHERE WATER AND SEWER LATERALS MUST CROSS, THE WATER LATERAL SHALL BE LAID AT LEAST 18" ABOVE THE SEWER LATERAL, AS MEASURED EDGE TO EDGE (PER UTAH CODE R309-550-7)
5. TEFLON TAPE OR APPROVED EQUAL IS REQUIRED ON ALL THREADED CONNECTIONS
6. THE METER BOX SHALL BE CONCRETE SHALL BE EQUAL TO CARSON MODEL B-1022-12 WITH LOCATE A RECESSED TRANSPONDER HOLE SET TO GRADE.
7. ALL FITTINGS SHALL BE CTS
8. SPLICING (REPAIR OF EXISTING) POLY PIPE SHALL BE DONE WITH COMPRESSION FITTINGS INTERNAL STIFFENERS ARE REQUIRED MUST BE APPROVED BY AMERICAN FORK CITY.
9. LATERALS SHALL BE OF ONE CONTINUOUS LENGTH OF PIPE FROM MAIN TO SETTER AND FROM SETTER TO STRUCTURE AND SHALL BE BURIED AT A MINIMUM OF 48" UNLESS APPROVED BY THE CITY ENGINEER.
10. METER CAN SHALL BE INSTALLED AT THE CENTER OF THE PARK STRIP BETWEEN FRONT OF SIDEWALK AND BACK OF CURB

DRAWN BY: NLP REVISED: ABM DATE: 9/19/2016 SCALE: VARIES	AMERICAN FORK CITY PUBLIC WORKS 275 EAST 200 NORTH (801)763-9030	1" CULINARY WATER SERVICE CONNECTION	DRAWING NO. 15.5

CULINARY WATER SERVICE CONNECTION (2)
SCALE: NTS

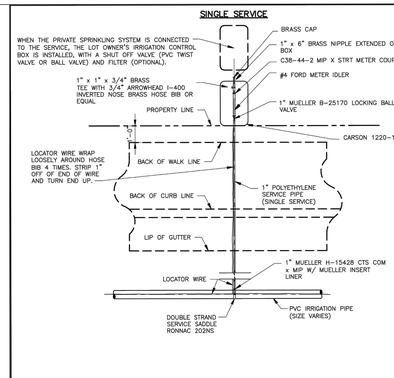




1" PLAN VIEW
NTS

NOTES:
1. CITY MAINTENANCE RESPONSIBILITY ENDS AT THE END OF THE 6" BRASS NIPPLE.
2. STOP/WASTE VALVE IS THE PROPERTY OWNER'S VALVE TO ISOLATE SPRINKLER SYSTEM.
3. REFER TO SECTION 7.6 OF AMERICAN FORK STANDARDS FOR SECONDARY WATER SERVICE LATERAL CONNECTION.

SINGLE SERVICE



IRRIGATION CONNECTION NOTES:

1" SINGLE SERVICE CONNECTION TO MAIN.

GENERAL:

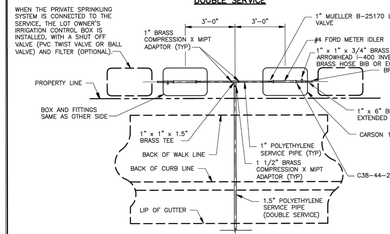
ALL FITTINGS SHALL BE COMPATIBLE WITH SERVICE SIZE.

SERVICE LINE INSTALLATION AT AN EXISTING CURB GUTTER & SIDEWALK WITH A CURB BOX STRIP SHALL HAVE THE UTILITY BOX LOCATED 1'-0" BEHIND THE SIDEWALK.

SERVICE LINE INSTALLATION AT EXISTING OR NEW MONOLITHIC CURB, GUTTER & SIDEWALK SHALL HAVE THE UTILITY BOX LOCATED 1'-0" BEHIND THE SIDEWALK.

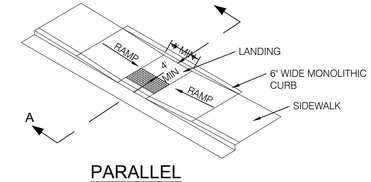
SERVICE LINE INSTALLATION AT A LOCATION WITH NO CURB, GUTTER & SIDEWALK SHALL HAVE THE UTILITY BOX LOCATED 1'-0" BEHIND THE FUTURE SIDEWALK.

DOUBLE SERVICE

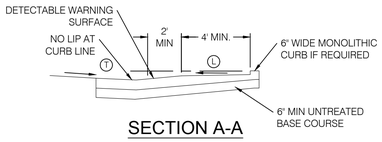


DRAWN: MVU REVISED: DATE: MAY 2019 SCALE: VARIES	AMERICAN FORK CITY PUBLIC WORKS 275 EAST 200 NORTH (801) 763-9030	STANDARD DETAIL FOR: 1" PI METER PLACEMENT	DRAWING NO. 15.5D	
DRAWN: REVISED: 11/2010 DATE: SCALE:	HORROCKS ENGINEERS ONE WEST MAIN P.O. BOX 377 AMERICAN FORK (801) 763-5100	AMERICAN FORK CITY	STANDARD DETAIL FOR: SINGLE/DOUBLE SERVICE CONNECTION FOR SECONDARY WATER	DRAWING NO. 15.5A

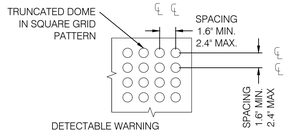
PI METER AND CONNECTION (3)
SCALE: NTS



PARALLEL
PEDESTRIAN RAMP

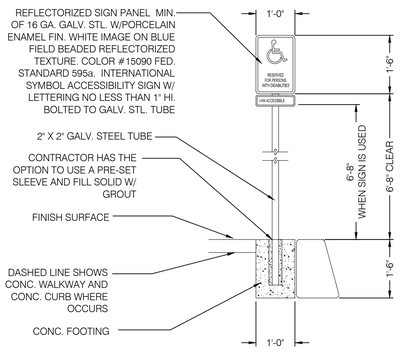


SECTION A-A



THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD

STANDARD ACCESS RAMP (4)
SCALE: NTS



ADA SIGN POST DETAIL



TRANSITION DETAIL



DIRECTION OF TRAVEL OR APPROACH

THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD



INTERNATIONAL SYMBOL OF ACCESSIBILITY

THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD

STRIPING SYMBOLS
SCALE: N.T.S.

SLOPE TABLE			
	ITEM	RUNNING SLOPE*	CROSS SLOPE
(L)	LANDING	1.5-2% (1V:48H) (b)	1.5-2% (1V:48H) (b)
(R)	RAMP	8.33% (1V:12H) (c)	1.5-2% (1V:48H) (d)
(T)	TRANSITION	5% (1V:20H) (a)	1.5-2% (1V:48H) (d)
	SIDEWALK	--	1.5-2% (1V:48H)
	FLARE	10% (1V:10H)	--

* RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL, WHILE CROSS SLOPE IS PERPENDICULAR TO PEDESTRIAN TRAVEL.

(a) TRANSITION RUNNING SLOPE NEEDS TO BE CONSTANT ACROSS ENTIRE CURB CUT. WARP GUTTER PAN TO MEET REQUIRED TRANSITION SLOPE AT CURB CUT (0.10' MAX. ABOVE FLOWLINE.)

EXCEPTION:

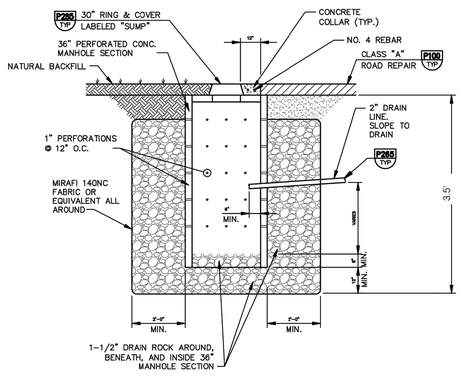
(b) IF SLOPE REQUIREMENTS CAN'T BE ACHIEVED ON MID-BLOCK RAMPS CONTACT THE ENGINEER.

(c) PARALLEL RAMPS ARE NOT REQUIRED TO EXCEED 15-FEET IN LENGTH.

(d) CROSS SLOPE REQUIREMENT DOES NOT APPLY AT PERPENDICULAR RAMP MID-BLOCK CROSSING.

NOTES:

1. CONFIGURATION OF RAMPS AND LANDINGS MAY BE CHANGED BUT MUST MEET PEDESTRIAN RAMP DIMENSIONS AND SLOPE REQUIREMENTS. SPECIFIC SITE CONDITIONS WILL VARY. THE USE OF FLARES, CURBWALLS, ETC. ARE AT THE DISCRETION OF THE ENGINEER.
2. PERPENDICULAR AND PARALLEL PEDESTRIAN RAMPS SHOWN ON THIS DRAWING ARE ACCEPTABLE FOR USE AT MID BLOCK OR CORNER INSTALLATIONS.
3. PROVIDE DETECTABLE WARNING SURFACE FOR FULL WIDTH OF RAMP, LANDING OR CURB CUT. SEE DETAIL A FOR DETECTABLE WARNING SURFACE DIMENSIONS.
4. LOCATE DETECTABLE WARNING SURFACE SO THAT THE EDGE NEAREST THE STREET IS 4 TO 6 INCHES FROM THE TOP BACK OF CURB.
5. PROVIDE DETECTABLE WARNING SURFACE. COLOR SHALL BE YELLOW.
6. USE CLASS AA (AE) CONCRETE.
7. USE 6" MIN. DEPTH OR UNTREATED BASE COURSE UNDER ALL CONCRETE FLATWORK COMPACTED TO 96% MAXIMUM DRY DENSITY.



P321 TYP LARGE SUMP N.T.S.

DRAWN: REVISED: 11/2010 DATE: SCALE:	HORROCKS ENGINEERS ONE WEST MAIN P.O. BOX 377 AMERICAN FORK (801) 763-5100	AMERICAN FORK CITY	STANDARD DETAIL FOR: SUMP DETAILS	DRAWING NO. 15.34

LARGE SUMP (5)
SCALE: NTS

No.	DATE	DESCRIPTION
1	06/19/20	REVISIONS PER CITY REDLINES
2	08/21/20	REVISIONS PER CITY REDLINES
3	09/08/20	REVISIONS PER CITY REDLINES

DRAWN BY: MNJ
CHECKED BY: AGA
FIELD CREW: KD
DATE: 03/27/20
DWG FILE: 1907191 SITE

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

0 0.5 1"

PROFESSIONAL ENGINEER
9/8/20
No. 10360773
M. CHRIS POULSEN
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

BENCHMARK CIVIL

BISHOP STORAGE - PHASE 1
5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

DETAIL SHEET

CDT.01
10OF 13

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

ADVANCED DRAINAGE SYSTEMS, INC.

BISHOP HOLDINGS - BED #1 14732

AM FORK, UT

SiteASSIST — FOR STORMTECH INSTALLATION. DOWNLOAD THE INSTALLATION APP

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (+1 MIN.) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PAVED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 8.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERY OF CHAMBERS TO THE PROJECT SITE. THE EVALUATION SHALL:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SYSTEM SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONE/AGGREGATE LOCATED OFF THE CHAMBER BED.
   - BACKFILL FROM A SIDE DUMP TRUCK TRAVELING ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

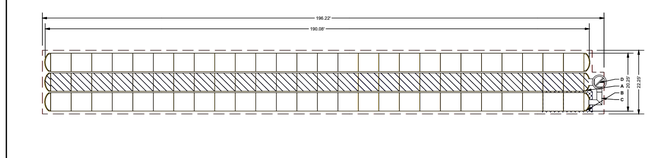
1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO RUBBER TIRED EXCAVATORS OVER CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBER DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT		CONCEPTUAL ELEVATIONS	
78	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)	13.00
6	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)	12.00
13	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)	11.50
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	11.00
85	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	10.50
14734	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)	TOP OF STONE	13.00
	EXCAVATION VOLUME (CF) (EXCAVATION STONE INCLUDED)	TOP OF MC-3500 CHAMBER	12.50
		BASE STONE INCLUDED)	11.00
4334	SYSTEM AREA (SF)	BOTTOM OF MC-3500 CHAMBER	10.50
438.9	SYSTEM PERIMETER (ft)	BOTTOM OF STONE	10.00

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT	MAX FLOW
END CAP	A	24" BOTTOM CORED END CAP/TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR ROW	3.06'	
PREFABRICATED END CAP	B	12" BOTTOM CORED END CAP/TYP OF ALL 12" BOTTOM CONNECTIONS	1.78'	
MANIFOLD	C	18" X 18" BOTTOM MANIFOLD, ADS N-12	1.73'	
CONCRETE STRUCTURE	D	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.5 CFS IN
SKIMMER				



ISOLATOR ROW (SEE DETAIL)

BED LIMITS

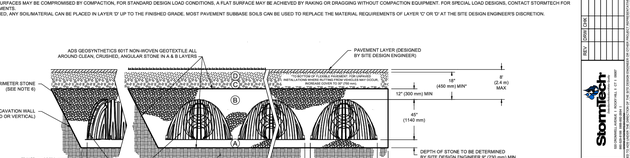
NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD STUBS AT THE FACTORY.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE IN-SITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS KNOWN.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

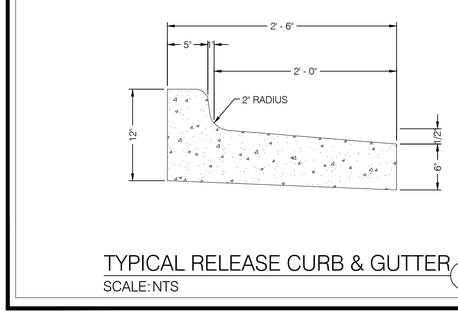
	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS [1]	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY REQUIRE SPECIFIC MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. OR MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[2] A-1, A-2-4, A-3 OR AASHTO M43[3] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[3] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[3] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. THE USE OF GEOTEXTILES AGAINST EXCAVATION FACES MAY BE COMPROMISED BY COMPACTION. FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 8.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.



MC-3500 ISOLATOR ROW DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - 1) ZOOM CAMERA LENS OR CAMERA MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - 2) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

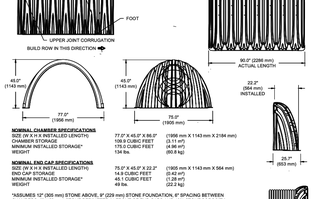
STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

MC-3500 TECHNICAL SPECIFICATION

NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.0 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 9" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

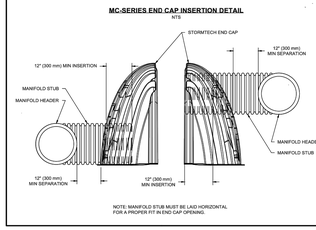
PART #	STUB	B	C
MC3500EPP06B	6" (150 mm)	33.27" (844 mm)	—
MC3500EPP06T		—	0.48" (11 mm)
MC3500EPP08B	8" (200 mm)	31.16" (791 mm)	—
MC3500EPP08T		—	0.51" (13 mm)
MC3500EPP10B	10" (250 mm)	29.04" (738 mm)	—
MC3500EPP10T		—	0.93" (24 mm)
MC3500EPP12B	12" (300 mm)	26.36" (670 mm)	—
MC3500EPP12T		—	1.33" (34 mm)
MC3500EPP15B	15" (375 mm)	23.39" (594 mm)	—
MC3500EPP15T		—	1.50" (38 mm)
MC3500EPP18B	18" (450 mm)	20.03" (509 mm)	—
MC3500EPP18T		—	1.50" (38 mm)
MC3500EPP18IC		—	1.77" (45 mm)
MC3500EPP18OT			
MC3500EPP24B	24" (600 mm)	14.48" (368 mm)	—
MC3500EPP24TW		—	2.00" (51 mm)
MC3500EPP24IC			
MC3500EPP24BW		—	2.00" (51 mm)
MC3500EPP30IC	30" (750 mm)	—	2.75" (70 mm)

CUSTOM PREFORMED INVERTS ARE AVAILABLE UPON REQUEST. FOR EXAMPLE: 30" (750 mm) SIZE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERTS ARE ROTATED AROUND END CAP CUT IN THE FIELD AND NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (255 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

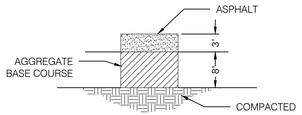
NOTE: ALL DIMENSIONS ARE NOMINAL

MC-SERIES END CAP INSERTION DETAIL

NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.



ALTERNATE: STANDARD

CONCRETE 5"
GRAVEL BASE 4"

STANDARD DUTY PAVEMENT

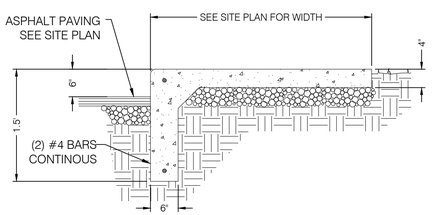
PAVEMENT SECTIONS (2)

SCALE: NTS

NOTE: 6" MIN. OF UNTREATED BASE COURSE REQ'D UNDER CURB AND GUTTER. COMPACT TO 95% ASSHTO T-180 - METHOD D.

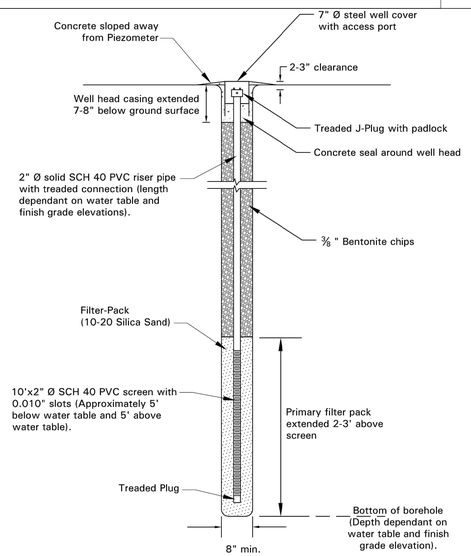
TYPICAL RELEASE CURB & GUTTER (3)

SCALE: NTS



INTEGRAL SIDEWALK & CURB (4)

SCALE: NTS



TYPICAL PIEZOMETER COMPLETION (5)

SCALE: NTS

1200116	AGEC	Typical Piezometer Completion	Figure 1

AquaShield — STORMWATER TREATMENT SOLUTIONS
2733 Kanasita Drive, Suite 111, Chattanooga, TN 37343
Phone: (888) 344-9044 Fax: (423) 826-2112
www.aquashieldinc.com

Typical Bollard Detail Plan & Section

Document:	Concrete	Rev. Date	CAD Op.	Description of Revision
Drawn By:	JCW			
Scale:	1:20			
Date:	12/08/14			

BOLLARD DETAIL (6)

SCALE: NTS

AREA 1, BED 1 MC3500 STORMTECH CHAMBERS (1)

SCALE: NTS

No.	DATE	DESCRIPTION
1	06/1/20	REVISIONS PER CITY REQ'MES
2	08/12/20	REVISIONS PER CITY REQ'MES
3	09/08/20	REVISIONS PER CITY REQ'MES

DRAWN BY: MNJ
CHECKED BY: AGA
REQ'D REV BY: KD
DATE: 03/27/20
DWG FILE: 1907191.SITE

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

PROFESSIONAL ENGINEER — 9/1/20 — No. 10360773 — M. CHRIS POULSEN — STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

BISHOP STORAGE - PHASE 1
5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

DETAIL SHEET

CDT.02
11 OF 13

PROJECT INFORMATION

ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

ADVANCED DRAINAGE SYSTEMS, INC.

SiteASSIST StormTech — FOR STORMTECH INSTRUCTIONS, DOWNLOAD THE INSTALLATION APP

BISHOP HOLDINGS - BED #2 - 10282

AM FORK, UT

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

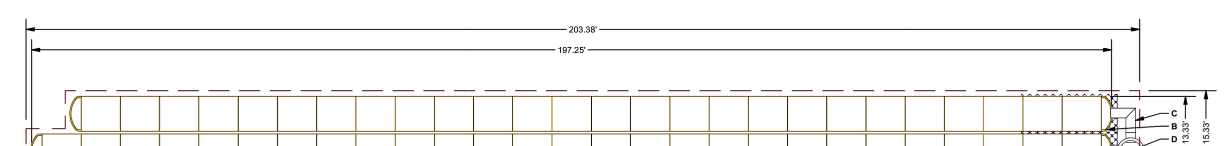
CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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PROPOSED LAYOUT		CONCEPTUAL ELEVATIONS	
53	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	12.50
4	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	7.00
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	6.00
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	6.00
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	6.00
10284	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	5.50
		TOP OF MC-3500 CHAMBER:	4.50
		24" ISOLATOR ROW INVERT:	0.92
		18" x 18" BOTTOM MANIFOLD INVERT:	0.90
3069	SYSTEM AREA (SF)	BOTTOM OF MC-3500 CHAMBER:	0.75
437.4	SYSTEM PERIMETER (ft)	BOTTOM OF STONE:	0.00

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP/TYP OF ALL 24" BOTTOM CONNECTIONS	2.06"	
PREFABRICATED END CAP	B	18" BOTTOM CORED END CAP/TYP OF ALL 18" BOTTOM CONNECTIONS	1.78"	
MANIFOLD	C	18" x 18" BOTTOM MANIFOLD, ADS N-12	1.77"	
PIPE CONNECTION	D	24" BOTTOM CONNECTION	2.06"	
CONCRETE STRUCTURE	E	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.5 CFS IN



NO ISOLATOR ROW

PLACE MINIMUM 17.50' OF ADS GEOSYNTHETICS 315WTM WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

BISHOP HOLDINGS - BED #2 - 10282, AM FORK, UT — DATE: — PROJECT #: — DRAWN: BA — CHECKED: N/A — REV / DRW / CHK / DESCRIPTION

StormTech — 520 CROMWELL AVENUE | ROCKY HILL | CT | 06067 — 860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM

ADS — 4640 TRUEMAN BLVD, HILLIARD, OH 43026, 1-800-733-7473 — ADVANCED DRAINAGE SYSTEMS, INC.

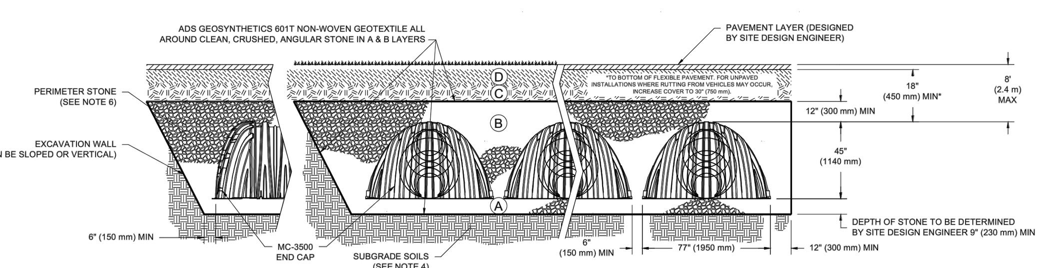
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET 2 OF 4

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



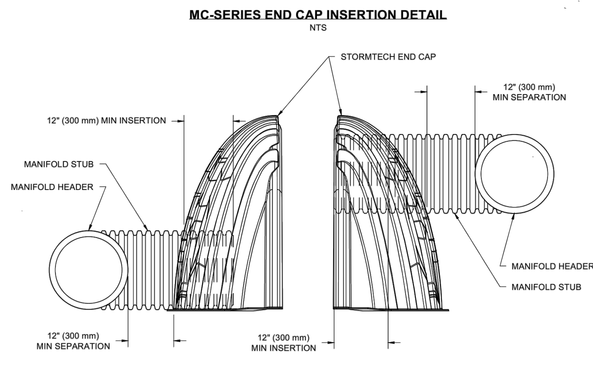
NOTES:
1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

BISHOP HOLDINGS - BED #2 - 10282, AM FORK, UT — DATE: — PROJECT #: — DRAWN: BA — CHECKED: N/A

SHEET 3 OF 4

MC-SERIES END CAP INSERTION DETAIL

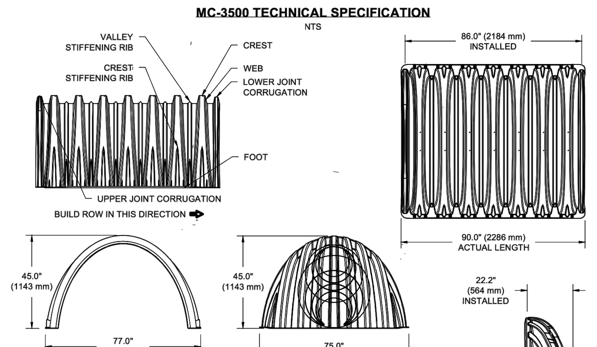
NTS



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

MC-3500 TECHNICAL SPECIFICATION

NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	77.0" X 45.0" X 86.0"	(1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE	109.9 CUBIC FEET	(3.11 m³)
MINIMUM INSTALLED STORAGE*	175.0 CUBIC FEET	(4.96 m³)
WEIGHT	134 lbs.	(60.8 kg)

NOMINAL END CAP SPECIFICATIONS

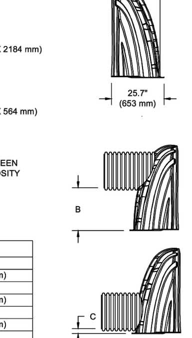
SIZE (W X H X INSTALLED LENGTH)	75.0" X 45.0" X 22.2"	(1905 mm X 1143 mm X 564 mm)
END CAP STORAGE	14.9 CUBIC FEET	(0.42 m³)
MINIMUM INSTALLED STORAGE*	45.1 CUBIC FEET	(1.28 m³)
WEIGHT	49 lbs.	(22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW			
MC3500IEPP18BC		---	1.77" (45 mm)
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW			
MC3500IEPP24BC		---	2.06" (52 mm)
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

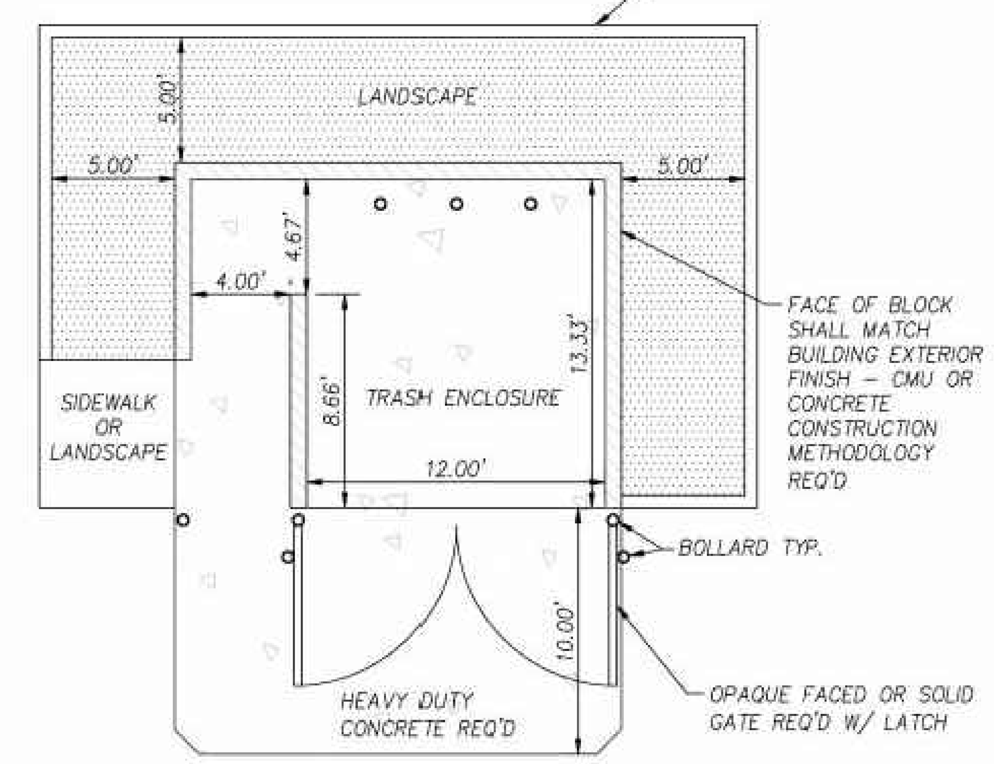
BISHOP HOLDINGS - BED #2 - 10282, AM FORK, UT — DATE: — PROJECT #: — DRAWN: BA — CHECKED: N/A

SHEET 4 OF 4

AREA 1, BED 2 MC3500 STORMTECH CHAMBERS (1)

SCALE: NTS

CITY STANDARD - DUMPSTER/ TRASH ENCLOSURE STANDARD 17.5.121.B



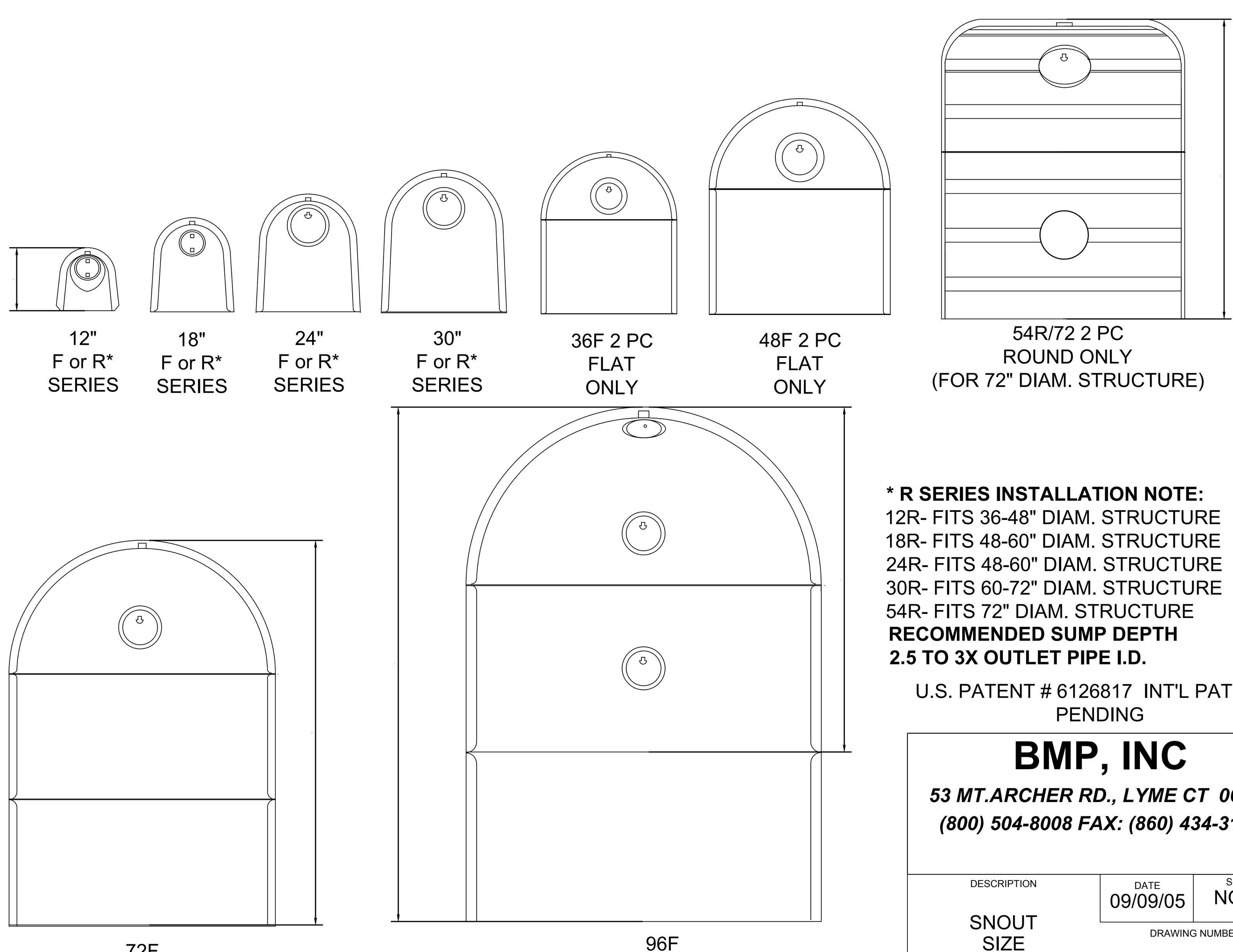
NOTES:
1. LANDSCAPE SHALL INCLUDE COMBINATION OF TREES AND SHRUBBERY TO CREATE A LANDSCAPE SCREEN FOR THE ENCLOSURE
2. ENCLOSURE SHALL BE 6' TALL MIN.
3. ENCLOSURE EXTERIOR FINISH SHALL MATCH THE EXTERIOR OF THE BUILDING FOR WHICH IT SUPPORTS.
3. LANDSCAPE DIMENSIONS SHOWN ARE MINIMUMS.
4. ENCLOSURE DIMENSIONS MAY VARY DEPENDING UPON INTENDED USE, AS SUCH, CITY ENGINEER/CITY PLANNER SHALL HAVE THE ABILITY TO REVIEW AND RECOMMEND APPROPRIATE SIZE OF A GIVEN ENCLOSURE FOR A SPECIFIC USE.
5. A VARIANCE FROM THE REQUIREMENT OF AN ENCLOSURE CAN BE GRANTED BY THE LAND USE AUTHORITY FOR A GIVEN ZONE IF IT CAN BE DEMONSTRATED THAT THE USE FOR THE SITE DOES NOT REQUIRE MORE THAN A TRADITIONAL CURB SIDE PICK UP CONTAINER. CURB SIDE CONTAINER MUST BE AVAILABLE IN THAT AREA TO QUALIFY FOR THIS EXCEPTION.

T:\LD-PROJECT-AF-CITY-STANDARDS\DUMPSTER.DWG
DATE: NOV. 18, 2010

AMERICAN FORK 1853

DUMPSTER (2)

SCALE: NTS



*** R SERIES INSTALLATION NOTE:**
12R- FITS 36-48" DIAM. STRUCTURE
18R- FITS 48-60" DIAM. STRUCTURE
24R- FITS 48-60" DIAM. STRUCTURE
30R- FITS 60-72" DIAM. STRUCTURE
54R- FITS 72" DIAM. STRUCTURE
RECOMMENDED SUMP DEPTH 2.5 TO 3X OUTLET PIPE I.D.

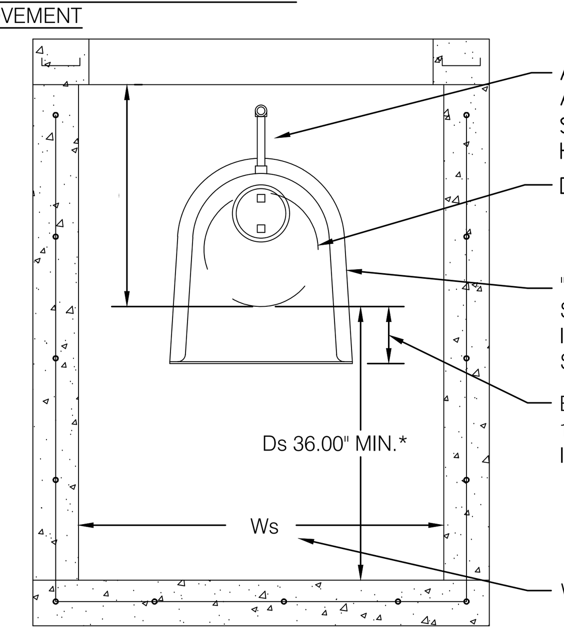
U.S. PATENT # 6126817 INT'L PATENTS PENDING

BMP, INC

53 MT.ARCHER RD., LYME CT 06371
(800) 504-8008 FAX: (860) 434-3195

DESCRIPTION	DATE	SCALE
SNOUT SIZE COMPARISON	09/09/05	NONE
	DRAWING NUMBER: SN-SIZES	

DESIGN PARAMETER GUIDELINES FOR WATER QUALITY IMPROVEMENT



RULE # 1- AT AN ABSOLUTE MINIMUM, STRUCTURE INTERNAL DIMENSIONS MUST BE AT LEAST LARGE ENOUGH TO ACCOMODATE EXTERNAL DIMENSIONS OF THE SNOUT, AND ALLOW FOR A PERSON TO INSTALL IT. REFER TO BMP, INC. CAD DETAILS FOR PART DIMENSIONS.

RULE #2- USE ONLY "F" SERIES SNOUTS FOR RECTANGULAR OR SQUARE STRUCTURES, AVAILABLE IN 12", 18", 24", 30", 48", 72" AND 96" SIZES. USE ONLY "R" SERIES SNOUTS FOR ROUND STRUCTURES, AVAILABLE IN 12", 18", 24", 30", AND 54" SIZES.

*SUMP DEPTH (Ds)- SUMP DEPTH SHOULD BE A MINIMUM OF 36" FOR ANY NEW CONSTRUCTION FOR PIPES 12" AND LESS. FOR 15"-18" PIPE MIN. DEPTH SHOULD BE 48". OPTIMAL SIZING IS AT LEAST 2.5X TO 3X OUTLET PIPE DIAMETER (Dp) FOR MAXIMUM POLLUTANT REMOVAL EFFICIENCY AND MINIMAL CLEANOUT FREQUENCY.

STRUCTURE DIMENSIONS- PLAN DIMENSIONS FOR A STRUCTURE SHOULD BE UP TO 7X AREA OF OUTLET PIPE FOR MAXIMUM POLLUTANT REMOVAL EFFICIENCY AND MINIMAL CLEANOUT FREQUENCY.
(SEE "MAINTENANCE CONSIDERATIONS" DOCUMENT FOR MORE INFORMATION)

IMPORTANT NOTICE: DO NOT CONFUSE PIPE O.D WITH PIPE I.D. A SNOUT FITS OVER A PIPE, NOT IN IT. THUS, SNOUT MUST BE SIZED TO FIT OVER PIPE OPENING IN STRUCTURE. SNOUTS ARE AVAILABLE FOR ROUND STRUCTURES TO ACCOMODATE PIPES OF 54" O.D. MAX. FOR PIPES 54" O.D. AND ABOVE, USE SQUARE OR RECTANGULAR STRUCTURES.

SIZING EXAMPLES:

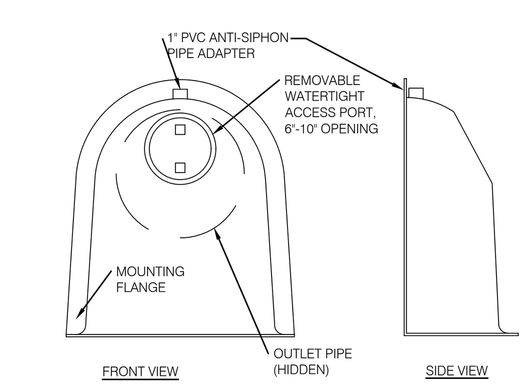
OUTLET HOLE SIZE	SNOUT SIZE
11.9" O.D. OR LESS	12 F or R (R FITS 36"-48" DIAM STRUCTURE)
12.0"-17.9" O.D.	18 F or R (R FITS 48"-60" DIAM STRUCTURE)
18.0"-23.9" O.D.	24 F or R (R FITS 48"-60" DIAM STRUCTURE)
24.0"-29.9" O.D.	30 F or R (R FITS 60"-72" DIAM STRUCTURE)
30.0"-35.9" O.D.	36F
30.0"-47.9" O.D.	48 F
30.0"-53.9" O.D.	54R/72 (FITS 72" DIAM STRUCTURE ONLY)
48.0"-71.9" O.D.	72F
72"-95.9" O.D.	96 F

BMP, INC.

53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 504-8008 FAX: (860)434-3195

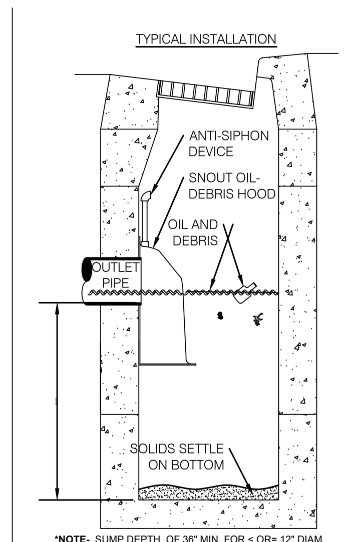
DESCRIPTION	DATE	SCALE
SNOUT SIZING CHART	09/09/05	NONE
	DRAWING NUMBER: SP-SI	

CONFIGURATION DETAIL



SNOUT OIL-WATER-DEBRIS SEPARATOR

TYPICAL INSTALLATION

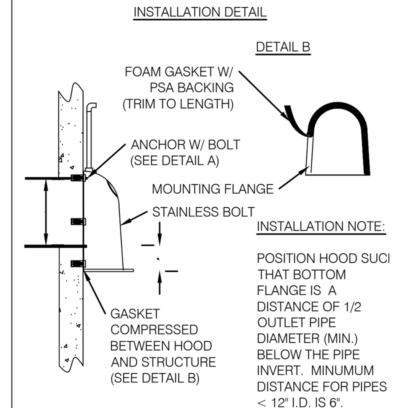


*NOTE- SUMP DEPTH OF 36" MIN. FOR < OR= 12" DIAM. OUTLET. FOR OUTLETS >OR= 15", DEPTH = 2.5-3X DIAM.

NOTES:
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
   BEST MANAGEMENT PRODUCTS, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860) 434-0277, (860) 434-3195 FAX
   TOLL FREE: (800) 504-8008 OR (888) 354-7585
   WEB SITE: www.bestmp.com
   OR PRE-APPROVED EQUAL
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES <12" I.D.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8' STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
   INSTALLATION KIT SHALL INCLUDE:
   A. INSTALLATION INSTRUCTIONS
   B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
   C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
   D. 3/8" STAINLESS STEEL BOLTS
   E. ANCHOR SHIELDS

US Patent # 6126817

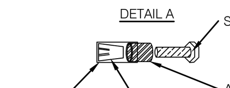
INSTALLATION DETAIL



INSTALLATION NOTE:

POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. MINUMUM DISTANCE FOR PIPES < 12" I.D. IS 6".

DETAIL A



EXPANSION CONE (NARROW END OUT)

HOOD SPECIFICATION FOR CATCH BASINS AND WATER QUALITY STRUCTURES

DESCRIPTION	DATE	SCALE
OIL- DEBRIS HOOD SPECIFICATION AND INSTALLATION (TYPICAL)	09/08/00	NONE
	DRAWING NUMBER: SP-SN	

SNOUT DETAILS (3)

SCALE: NTS

No.	DATE	DESCRIPTION
1	06/19/20	REVISIONS PER CITY REDLINES
2	08/21/20	REVISIONS PER CITY REDLINES
3	09/08/20	REVISIONS PER CITY REDLINES

DRAWN BY	MNJ
CHECKED BY	AGA
FIELD CREW	KD
DATE	03/27/20
DWG. FILE	1907191_SITE

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

PROFESSIONAL ENGINEER — 9/8/20 — No. 10360773 — M. CHRIS POULSEN — STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

BENCHMARK CIVIL

BISHOP STORAGE - PHASE 1

5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO. 1907191

DETAIL SHEET

CDT.03

12 OF 13

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

ADVANCED DRAINAGE SYSTEMS, INC.

BISHOP HOLDINGS - BED #3

AM FORK, UT

SiteASSIST — FOR STORMTECH INSTRUCTIONS, DOWNLOAD THE INSTALLATION APP

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45s76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LONG-TERM STRUCTURAL PERFORMANCE LIMITS FOR THE CHAMBERS ARE NOT EXCEEDED FOR THE FOLLOWING CONDITIONS: 120 YEARS OF LONGITUDINAL BEND CREEP, AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (+1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75 YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C) CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERY OF CHAMBERS TO THE PROJECT SITE.
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE STRUCTURAL EVALUATION SHALL ALSO DEMONSTRATE THAT SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS SHOWN IN THE STORMTECH DETAIL FROM THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

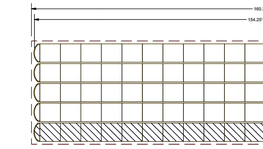
1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATOR
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTH ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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PROPOSED LAYOUT		CONCEPTUAL ELEVATIONS		"INVERT ABOVE BASE OF CHAMBERS"	
105	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/GROUND)	12.00	PART TYPE / ITEM ON LAYOUT / DESCRIPTION	INVERT / MAX FLOW
10	STORMTECH MC-3500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)	7.00	PREFABRICATED END CAP A BOTTOM CORED END CAP/TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR ROW	2.00'
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)	6.00	PREFABRICATED END CAP B 24" BOTTOM CORED END CAP/TYP OF ALL 18" BOTTOM CONNECTIONS	1.78'
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF ROCK/CONCRETE PAVEMENT)	6.00	MANIFOLD C 12" x 18" BOTTOM MANIFOLD, ADS N-12	1.77'
1.34	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	6.00	CONCRETE STRUCTURE	
19748	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED)	TOP OF STONE	0.00	O (DESIGN BY ENGINEER / PROVIDED BY OTHERS)	20.8 CFS IN
		TOP OF MC-3500 CHAMBERS	0.00		
		TOP OF MC-3500 CHAMBERS	0.00		
1747	SYSTEM AREA (SF)	BOTTOM OF MC-3500 CHAMBERS	0.00		
662.9	SYSTEM PERIMETER (ft)	BOTTOM OF STONE	0.00		



ISOLATOR ROW (SEE DETAIL)

PLACE MINIMUM 17.50" OF ADS GEOSYNTHETICS 315WTN WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERneath CHAMBER FEET FOR ADDITIONAL SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

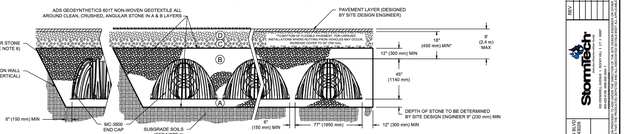
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD FOR CONNECTION TO CHAMBER.
- THIS CHAMBER SYSTEM MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INVERT TO SKILL. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PRICE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

SHEET 2 OF 5

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145* A-1, A-2-4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 4	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[1,2]

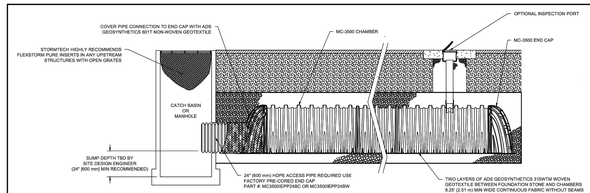
PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. DRAWINGS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45s76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 300 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C) CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SHEET 3 OF 5



MC-3500 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

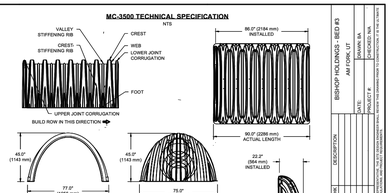
NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SHEET 4 OF 5

MC-3500 TECHNICAL SPECIFICATION

NTS

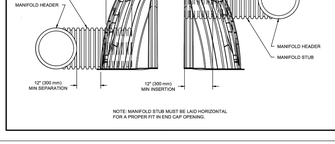


NOMINAL CHAMBER SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH): 77.0" X 45.0" X 96.0" (1956 mm X 1143 mm X 2184 mm)
CHAMBER STORAGE: 109.8 CUBIC FEET (3.11 m³)
MINIMUM INSTALLED STORAGE*: 175.0 CUBIC FEET (4.96 m³)
WEIGHT: 134 lbs. (60.8 kg)

NOMINAL END CAP SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH): 75.0" X 45.0" X 22.2" (1905 mm X 1143 mm X 564 mm)
END CAP STORAGE: 14.9 CUBIC FEET (0.42 m³)
MINIMUM INSTALLED STORAGE*: 45.1 CUBIC FEET (1.28 m³)
WEIGHT: 49 lbs. (22.2 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 9" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

MC-SERIES END CAP INSERTION DETAIL



NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING

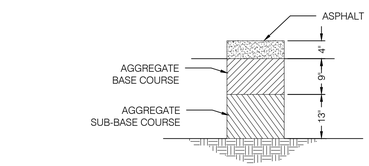
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500EPE06T	6" (150 mm)	33.27" (844 mm)	0.66" (17 mm)
MC3500EPE06B		31.18" (791 mm)	---
MC3500EPE08T	8" (200 mm)	---	0.81" (21 mm)
MC3500EPE08B		29.04" (738 mm)	---
MC3500EPE10T	10" (250 mm)	---	0.93" (24 mm)
MC3500EPE10B		26.39" (670 mm)	---
MC3500EPE12T	12" (300 mm)	---	1.33" (34 mm)
MC3500EPE12B		23.39" (594 mm)	---
MC3500EPE15T	15" (375 mm)	---	1.50" (38 mm)
MC3500EPE15B		20.03" (509 mm)	---
MC3500EPE18T	18" (450 mm)	---	---
MC3500EPE18B		---	1.77" (45 mm)
MC3500EPE18W			
MC3500EPE24T	24" (600 mm)	14.48" (368 mm)	---
MC3500EPE24B		---	2.04" (52 mm)
MC3500EPE24W			
MC3500EPE30C	30" (750 mm)	---	2.75" (70 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

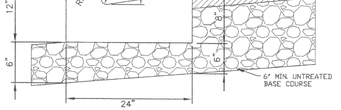
CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 12-18" (300-450 mm) SIZE ON RADIAL (MANIFOLD) ONLY. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR INVERTS GREATER THAN 15" (250 mm). THE INVERT LOCATION IN COLUMN "B" ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

SHEET 5 OF 5



STANDARD DUTY PAVEMENT PER AMERICAN FORK STANDARD SECTION 12

PAVEMENT SECTIONS (2)
SCALE: NTS



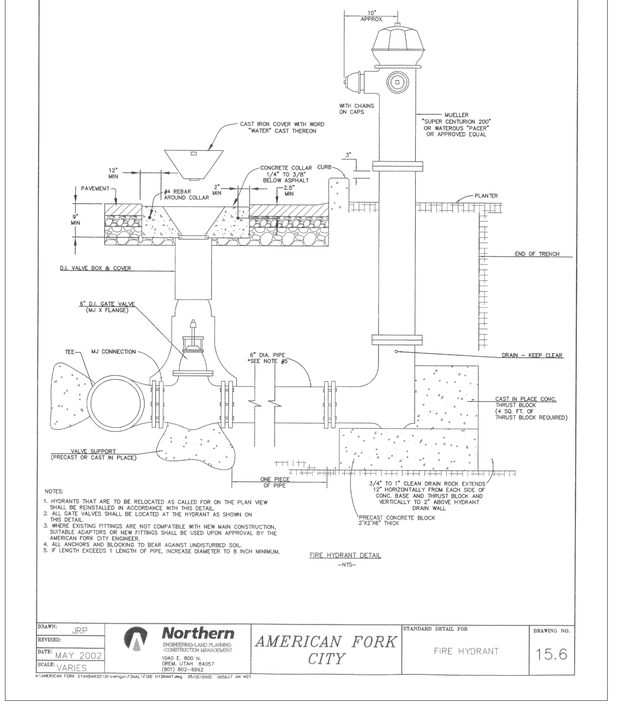
TYPE E CURB & GUTTER
-NTS-

DRAWN: JRP	Northern ENGINEERING-LAND PLANNING -CONSTRUCTION MANAGEMENT 1040 E. 800 N. OREM, UTAH 84057 (801) 802-5992	AMERICAN FORK CITY	STANDARD DETAIL FOR: TYPE B1 C&G REVERSE LIP C&G VALLEY GUTTER — DRAWING NO. 15.1
REVISED:			
DATE: MAY 2002			
SCALE: VARIES			

K:\AMERICAN FORK STANDARDS\Drawings\7.0VAL\C&G - VALLEY GUTTER.dwg 05/12/2005 09:06:56 AM MDT

CURB AND GUTTER PER (3)
SCALE: NTS

AREA 2, BED 3 MC3500 STORMTECH CHAMBERS (1)
SCALE: NTS



NOTES:
1. HYDRANTS THAT ARE TO BE RELOCATED AS CALLED FOR ON THE PLAN VIEW SHALL BE REINSTALLED IN ACCORDANCE WITH THIS DETAIL.
2. ALL GATE VALVES SHALL BE LOCATED AT THE HYDRANT AS SHOWN ON THIS DETAIL.
3. WHERE EXISTING FITTINGS ARE NOT COMPATIBLE WITH NEW MAIN CONSTRUCTION, SUITABLE ADAPTORS OR NEW FITTINGS SHALL BE USED UPON APPROVAL BY THE AMERICAN FORK CITY ENGINEER.
4. ALL ANCHORS AND BLOCKING TO BEAR AGAINST UNDISTURBED SOIL.
5. 6" LENGTH EXCEEDS 1 LENGTH OF PIPE, INCREASE DIAMETER TO 8 INCH MINIMUM.

FIRE HYDRANT DETAIL
-NTS-

DRAWN: JRP	Northern ENGINEERING-LAND PLANNING -CONSTRUCTION MANAGEMENT 1040 E. 800 N. OREM, UTAH 84057 (801) 802-5992	AMERICAN FORK CITY	STANDARD DETAIL FOR: FIRE HYDRANT — DRAWING NO. 15.6
REVISED:			
DATE: MAY 2002			
SCALE: VARIES			

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FIRE HYDRANT AND THRUST BLOCK (4)
SCALE: NTS

No.	DATE	DESCRIPTION
1	06/19/20	REVISIONS PER CITY REDLINES
2	08/21/20	REVISIONS PER CITY REDLINES
3	09/08/20	REVISIONS PER CITY REDLINES

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY	MNJ
CHECKED BY	AGA
FIELD CREW	KD
DATE	03/27/20
DWG FILE	1907191_SITE

0 0.5 1

PROFESSIONAL ENGINEER — 9/9/20 — No. 10360773 — M. CHRIS POULSEN — STATE OF UTAH

BENCHMARK CIVIL

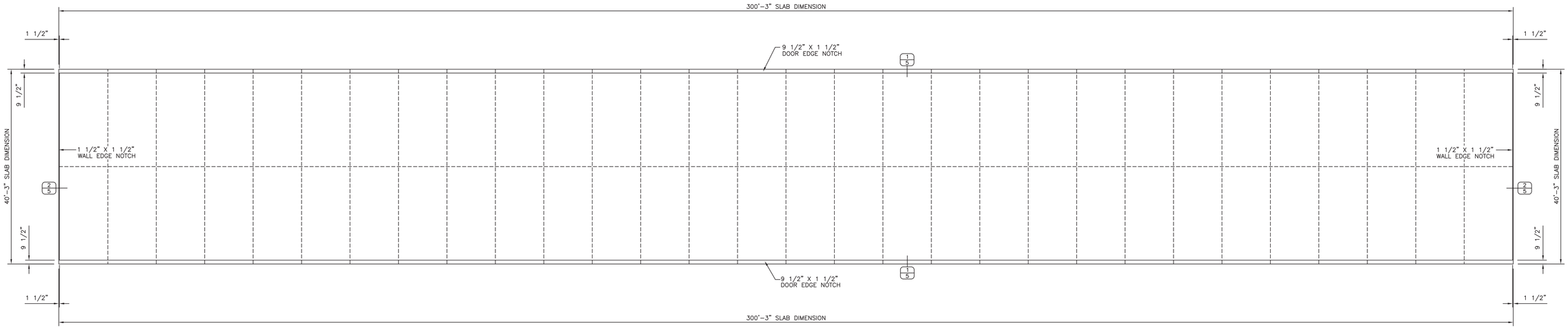
BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

BISHOP STORAGE - PHASE 1
5950 W 6400 N
AMERICAN FORK, UTAH

PROJECT NO: 1907191

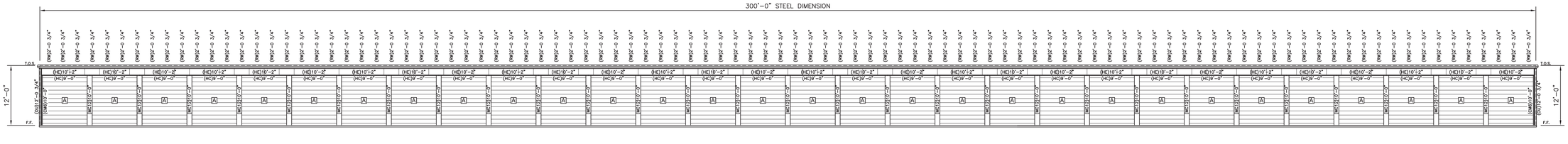
DETAIL SHEET

CDT.04
13 OF 13



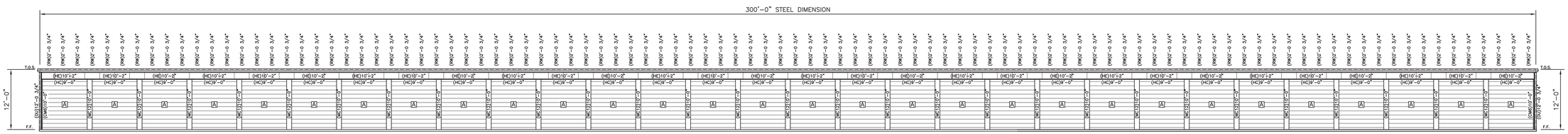
SLAB PLAN

scale - 3/32" = 1'-0"



1 FRONT ELEVATION

scale - 3/32" = 1'-0"

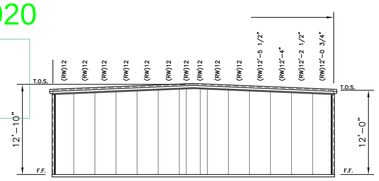


2 REAR ELEVATION

scale - 3/32" = 1'-0"

Planning Department:
Approved with Conditions
wendelin 07/13/2020

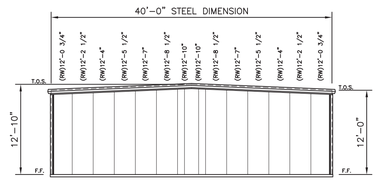
Condition: Barbed wire cannot be used along a public right-of-way.



3 LEFT ELEVATION

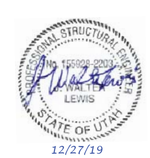
scale - 3/32" = 1'-0"

DOOR SCHEDULE
[A] (60) EACH 9'-0" X 10'-0" ROLLUP DOOR



4 RIGHT ELEVATION

scale - 3/32" = 1'-0"



12/27/19

CONSTRUCTION PRINTS ISSUED FOR	CCP BY	12/17/19 DATE

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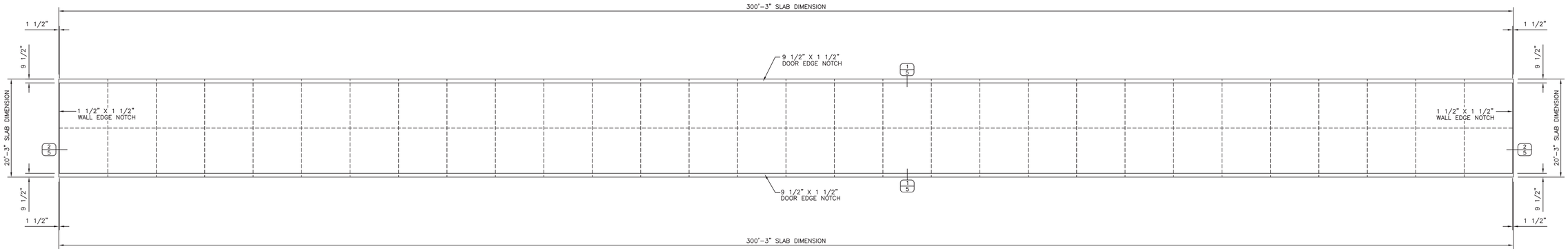
PROJECT:
40 x 300 x 12-0 BLDG. 3180

LOCATION:
American Fork, UT 84003

GENERAL STEEL
10639 W. Bradford Rd.
Littleton, CO 80127
Phone: 720-981-6050
Fax: 303-654-0238

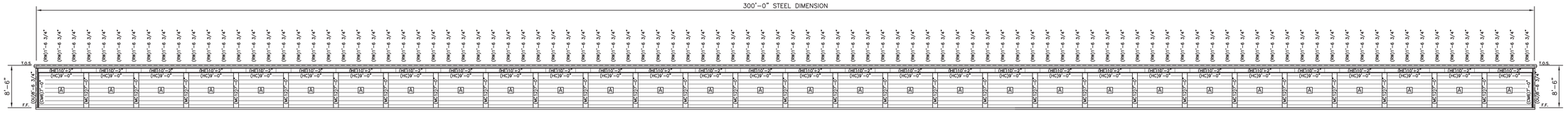
DWG #19-3181-SDE

Sheet
2 of 7



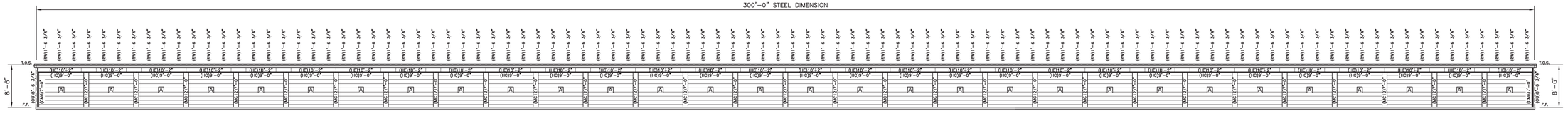
SLAB PLAN

scale - 3/32" = 1'-0"



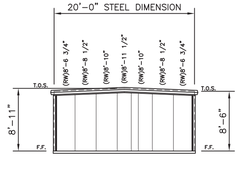
1 FRONT ELEVATION

scale - 3/32" = 1'-0"



2 REAR ELEVATION

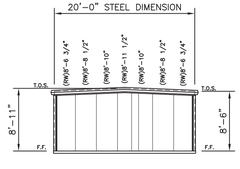
scale - 3/32" = 1'-0"



3 LEFT ELEVATION

scale - 3/32" = 1'-0"

DOOR SCHEDULE
A (60) EACH 9'-0" X 7'-0" ROLLUP DOOR



4 RIGHT ELEVATION

scale - 3/32" = 1'-0"

	CONSTRUCTION PRINTS ISSUED FOR	CCP BY
		12/17/19 DATE

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PROJECT:
20 x 300 x 8-6 BLDG. 3181

LOCATION:
American Fork, UT 84003

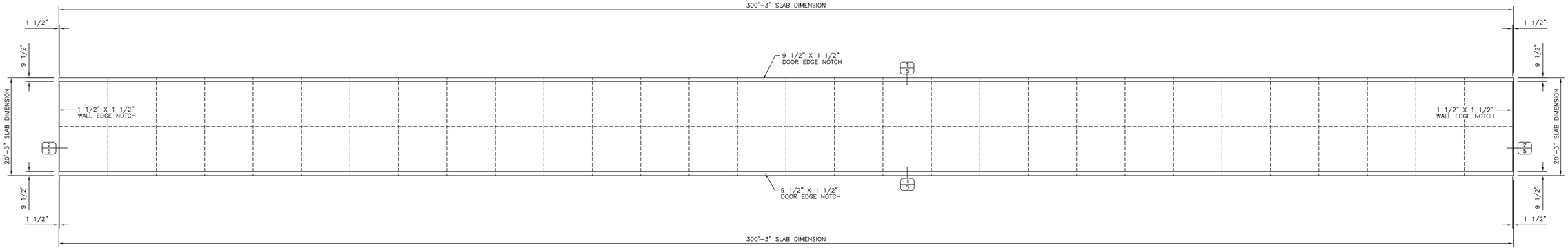
GENERAL STEEL
10639 W. Bradford Rd.
Littleton, CO 80127
Phone: 720-981-6050
Fax: 303-854-0238

DWG #19-3181-SDE

Sheet
2 of 7

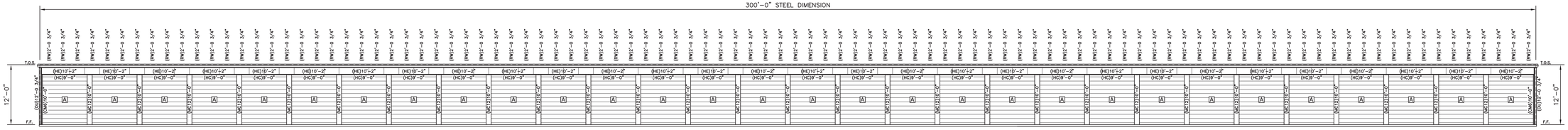


12/27/19



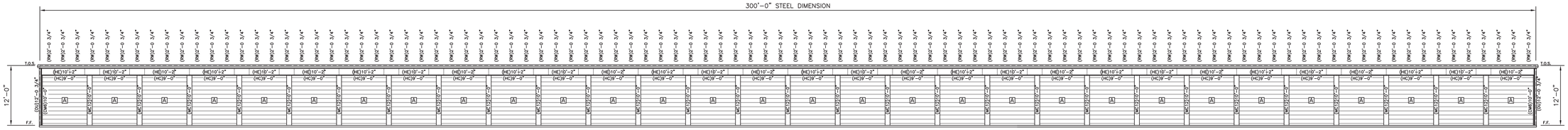
SLAB PLAN

scale - 3/32" = 1'-0"



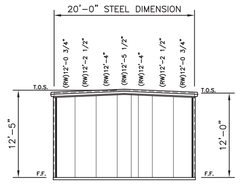
1 FRONT ELEVATION

scale - 3/32" = 1'-0"



2 REAR ELEVATION

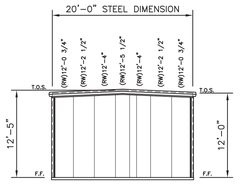
scale - 3/32" = 1'-0"



DOOR SCHEDULE
A (60) EACH 9'-0" X 10'-0" ROLLUP DOOR

3 LEFT ELEVATION

scale - 3/32" = 1'-0"



4 RIGHT ELEVATION

scale - 3/32" = 1'-0"

CONSTRUCTION PRINTS ISSUED FOR	CCP	12/17/19
	BY	DATE

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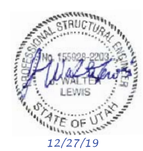
PROJECT:
20 x 300 x 12-0 BLDG. 3181-B

LOCATION:
American Fork, UT 84003

GENERAL STEEL
10639 W. Bradford Rd.
Littleton, CO 80127
Phone: 720-981-6050
Fax: 303-854-0238

DWG #19-3181-SDE

Sheet
2 of 7



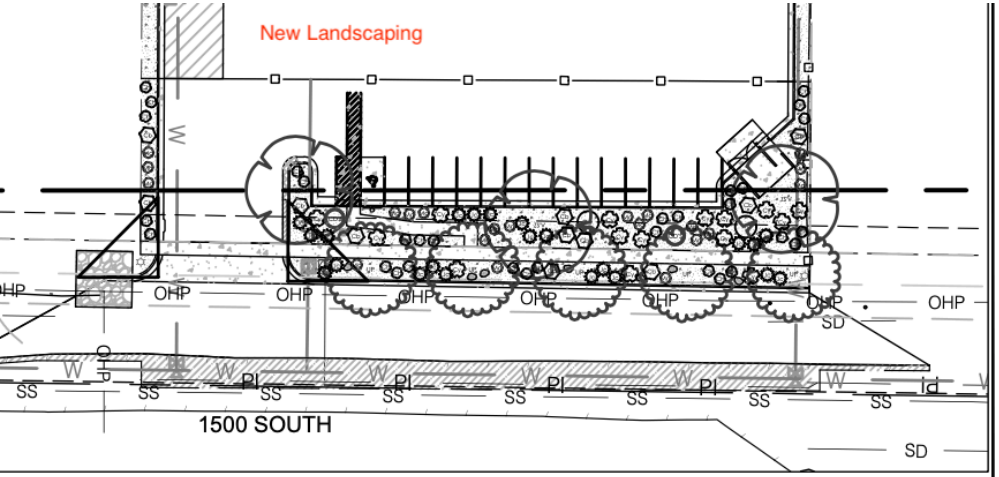
12/27/19



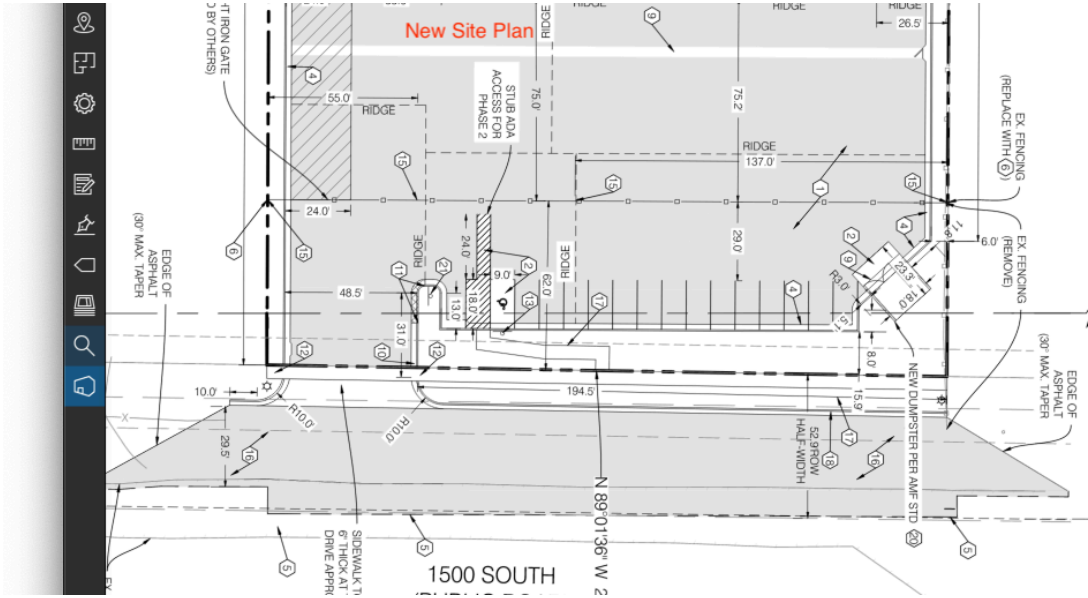
Intent is to use Black metal fencing and gate at front of building that faces frontage road.



Intent is to use 6' tall Black Vinyl Steel chain link barbed wire fencing around perimeter of site (3 sides).



This new landscaping plan, submitted on 9/10/2020 at 11.13 a.m. via email now shows the dumpster but the plan is shifted and/or the property line is shown in an incorrect location. Concertina wire fencing as shown in architectural plans are prohibited along public rights of way and may be inapproiate in the PI-1 Planned Industrial zone as determined by the Planning Commission.



From: **Wendelin Knobloch** wendelin@afcity.net
Subject: Re: Matt Bishop Storage - Planning Commission 9/16
Date: September 10, 2020 at 10:07 AM
To: Gerrit W. Timmerman, AIA GerritT@cmautah.com
Cc: Scott Sensanbaugher SSensanbaugher@afcity.net, Development Development@afcity.net, snaptrucking@gmail.com, Adam Olsen AOlsen@afcity.net, Chris Poulsen (chris@benchmarkcivil.com) chris@benchmarkcivil.com, Nasir Javed nasir@benchmarkcivil.com
Bcc: Lisa Halversen LHalversen@afcity.net, Wendelin Knobloch Wendelin@afcity.net

Gerrit,

We reviewed the staff review comments from 8/31(see attachment) on the phone yesterday and discussed that the Bishop Storage consultant team already acknowledged the missing items in their resubmittal from 9/8 (see attachment).

Please consider that without a resubmittal to bring the landscaping plan and ancillary information into compliance with the altered site plan (including but not limited to the addition of the dumpster, more landscaping area that is not covered by landscaping plan) we are simply not able to recommend approval of the project in good conscience to the planning commission.

We are on a very short time line now to complete the planning commission packet and will need your materials before noon today.

Kind regards,

Wendelin Knobloch.

MATT BISHOP STORAGE

American Fork City Technical Review Committee
Engineering Division Revise & Resubmit muyema 08/31/2020
Planning Department: Revise & Resubmit wendelin 08/31/2020

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 26 &
THE NORTHEAST QUARTER OF SECTION 35,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN
AMERICAN FORK CITY, UTAH COUNTY, UTAH

Provide plat with easements
per response to comment sheet

Due to the changes in the layout updated landscaping plans, elevations, fence details etc. are needed.

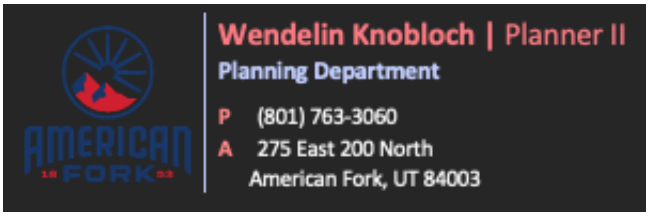
Response to American Fork City Comments
Matt Bishop Storage
Benchmark Engineering and Land Surveying
Date: 09/08/2020

Engineering Department:

Reviewer: Muyema, 08/31/20

Cover

1. Due to the changes in the layout, updated landscaping plans, elevations, fence details, etc. are needed.
   Noted



From: Scott Sensanbaugher <SSensanbaugher@afcity.net>
Sent: Thursday, September 10, 2020 7:57 AM
To: Gerrit Timmerman <GerritT@cmautah.com>; Wendelin Knobloch <Wendelin@afcity.net>
Cc: snaptrucking@gmail.com; Adam Olsen <AOlsen@afcity.net>; Tana Uyema <TUyema@afcity.net>
Subject: RE: Matt Bishop Storage - Planning Commission 9/16

Gerrit,

The landscaping is Wendelin's call. I have to defer to him on what he needs. All engineering comments have been addressed and we're good to recommend approval.

Scott

From: Gerrit Timmerman <GerritT@cmautah.com>
Sent: Wednesday, September 9, 2020 5:27 PM
To: Wendelin Knobloch <Wendelin@afcity.net>
Cc: Scott Sensanbaugher <SSensanbaugher@afcity.net>; snaptrucking@gmail.com
Subject: RE: Matt Bishop Storage - Planning Commission 9/16
Importance: High

Wendelin,

As for the updated landscape plan . . . Matt Bishop had spoken to Scott Sensanbaugher about resubmitting the same landscape plan (showing the residence/office building) and Scott was going to note that this is reflecting the future development. The landscaping in the right of way does not really change whether the building is on the site or not. It sounds like Matt Bishop and Scott had already worked something out to address this comment.

I have copied both Scott and Matt on this e-mail thread. Does this satisfy the comment or will additional information be required?

Thanks,

Gerrit W. Timmerman, AIA
Principal

Curtis Miner Architecture, LLC

LANDSCAPE PLAN SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes landscape procedures for the Project including all labor, materials, and installation necessary, but not limited to, the following:

1. Soil Amendments
2. Fine Grading
3. Cultivation
4. Landscape Edging
5. Turf Planting
6. Furnish and Installing Plant
7. Maintenance
8. Mowing
9. Weeding

1.2 SITE CONDITIONS

A. Examination: Before submitting a Bid, each Contractor shall carefully examine the Contract Documents; shall visit the site of the Work; shall fully inform themselves as to all existing conditions and limitations; and shall include in the Bid the cost of all items required by the Contract Documents are at a variance with the applicable laws, building codes, rules, regulations, or contain obvious erroneous or uncoordinated information, the Contractor shall promptly notify the Project Representative and the necessary changes shall be accomplished by Addendum.

B. Protection: Contractor to conduct the Work in such a manner to protect all existing underground utilities or structures. Contractor to repair or replace any damaged utility or structure using identical materials to match existing at no expense to the Owner.

C. Irrigation System: Do not begin planting until the irrigation system is completely installed, is adjusted for full coverage and is completely operational.

1.3 PERMITS

A. Blue Stake/ Dig Line: When digging is required, "Blue Stake" or "Dig Line" the work site and identify the approximate location of all known underground utilities or structures.

1.4 PLANT DELIVERY, QUALITY, AND AVAILABILITY

A. Unauthorized substitutions will not be accepted. If proof is submitted that specific plants or plant sizes are unobtainable, written substitution requests will be considered for the nearest equivalent plant or size. All substitution requests must be made in writing and preferably before the bid due date.

1.5 FINAL INSPECTION

A. All plants will be inspected at the time of Final Inspection prior to receiving a Landscape Substantial Completion for conformance to specified planting procedures, and for general appearance and vitality. Any plant not approved by the Project Representative will be rejected and replaced immediately.

1.6 LANDSCAPE SUBSTANTIAL COMPLETION

A. A Substantial Completion Certificate will only be issued by the Project Representative for "landscape and irrigation" in their entirety. Substantial Completion will not be proportioned to be designated areas of a project.

1.7 MAINTENANCE

A. Plant Material: The Contractor is responsible to maintain all planted materials in a healthy and growing condition for 30 days after receiving a Landscape Substantial Completion at which time the Guarantee period commences. This maintenance is to include mowing, weeding, cultivating, fertilizing, monitoring water schedules, controlling insects and diseases, re-guying and staking, and all other operations of care necessary for the promotion of root growth and plant life so that all plants are in a condition satisfactory at the end of the guarantee period. The Contractor shall be held responsible for failure to monitor watering operations and shall replace any and all plant material that is lost due to improper application of water.

1.8 GUARANTEE

A. Guarantee: A guarantee period of one year shall begin from end of maintenance period and final acceptance for trees, shrubs, and ground covers. All plants shall grow and be healthy for the guarantee period and trees shall live and grow in acceptable upright position. Any plant not alive, in poor health, or in poor condition at the end of the guarantee period will be replaced immediately. Any plant will only need to be replaced once during the guarantee period. Contractor to provide documentation showing where each plant to be replaced is located. Any outside factors, such as vandalism or lack of maintenance on the part of the Owner, shall not be part of the guarantee

PART II - PRODUCTS

2.1 LANDSCAPE MATERIALS

A. Tree Staking: All trees shall be staked for one year warranty period. All trees not plumb shall be replaced. Staked trees shall use vinyl tree ties and tree stakes two (2) inch by two (2) by eight (8) foot common pine stakes used as shown on the details.

B. Tree Wrap: Tree wrap is not to be used.

C. Mulch/Rock: See Plans. All planter beds to receive a minimum 3" layer for trees, shrubs, and perennials and 1" for groundcovers.

D. Weed Barrier: DeWitt 5 oz. weed barrier fabric. Manufactured by DeWitt Company, dewittcompany.com or approved equal.

E. Tree, Shrub, and Grass Backfill Mixture; Backfill mixture to be 50% native soil and 50% topsoil, thoroughly mixed together prior to placement.

F. Topsoil: Required for turf areas, planter beds and Backfill Mixture. Acceptable topsoil shall meet the following standards:

a. PH: 5.5-7.5

b. EC (electrical conductivity): < 2.0 mmhos per centimeter

c. SAR (sodium absorption ration): < 3.0

d. % OM (percent organic matter): >1%

e. Texture (particle size per USDA soil classification): Sand <70%; Clay < 30%; Silt < 70%, Stone fragments (gravel or any soil particle greater than two (2) mm in size) < 5% by volume.

G. Turf Sod: All sod shall be 18 month old as specified on plans (or approved equal) that has been cut fresh the morning of installation. Only sod that has been grown on a commercial sod farm shall be used. Only use sod from a single source.

H. Landscape Edging: Headers and Edging six (6) inches by four (4) inches extruded concrete curb made up of the following materials:

a. Washed mortar sand free of organic material.

b. Portland Cement (see concrete spec. below for type)

c. Reinforced fiber - Specifically produced for compatibility with aggressive alkaline environment of Portland cement-based composites.

d. Only potable water for mixing.

PART III - EXECUTION

3.1 GRADING

A. Topsoil Preparation: Grade planting areas according to the grading plan. Eliminate uneven areas and low spots. Provide for proper grading and drainage.

B. Topsoil Placement: Slope surfaced away from building at two (2) percent slope with no pockets of standing water. Establish finish grades of one (1) inches for planters below grade of adjacent paved surfaced. Provide neat, smooth, and uniform finish grades. Remove surplus sub-soil and topsoil from the site.

C. Compaction: compaction under hard surface areas (asphalt paths and concrete surfaces) shall be ninety-five (95) percent. Compaction under planting areas shall be between eighty-five (85) and ninety (90) percent.

3.2 TURF GRADING

A. The surface on which the sod is to be laid shall be firm and free from footprints, depressions, or undulations of any kind. The surface shall be free of all materials larger than 1/2" in diameter.

B. The finish grade of the topsoil adjacent to all sidewalks, mow-strips, etc. prior to the laying of sod, shall be set such that the crown of the grass shall be at the same level as the adjacent concrete or hard surface. No exceptions.

3.3 PLANTING OPERATIONS

A. Review the exact locations of all trees and shrubs with the Project Representative for approval prior to the digging of any holes. Prepare all holes according to the details on the drawings.

B. Water plants immediately upon arrival at the site. Maintain in moist condition until planted.

C. Before planting, locate all underground utilities prior to digging. Do not place plants on or near utility lines.

D. The tree planting hole should be the same depth as the root ball, and three times the diameter of the root ball.

E. Trees must be placed on undisturbed soil at the bottom of the planting hole.

F. The tree hole depth shall be determined so that the tree may be set slightly high of finish grade, 1" to 2" above the base of the trunk flare, using the top of the root ball as a guide.

G. Plant immediately after removal of container for container plants.

H. Set tree on soil and remove all burlap, wire baskets, twine, wrappings, etc. before beginning and backfilling operations. Do not use planting stock if the ball is cracked or broken before or during planting operation.

I. Apply vitamin B-1 root stimulator at the rate of one (1) tablespoon per gallon.

J. Upon completion of backfilling operation, thoroughly water tree to completely settle the soil and fill any voids that may have occurred. Use a watering hose, not the area irrigation system. If additional prepared topsoil mixture needs to be added. It should be a courser mix as required to establish finish grade as indicated on the drawings.

K. The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches. All cuts, scars, and bruises shall be properly treated according to the direction of the Project Representative. Proper pruning techniques shall be used. Do not leave stubs and do not cut the leader branch. Improper pruning shall be cause for rejection of the plant material.

L. Prepare a watering circle of 2' diameter around the trunk. For conifers, extend the watering well to the drip line of the tree canopy. Place mulch around the planted trees.

3.4 TURF - SOD LAYING

A. Top Soil Amendments: Prior to laying sod, commercial fertilizer shall be applied and incorporated into the upper four (4) inches of the topsoil at a rate of four pounds of nitrogen per one thousand (1,000) square feet. Adjust fertilization mixture and rate of application as needed to meet recommendations given by topsoil analysis. Include other amendments as required.

B. Fertilization: Three weeks after sod placement fertilize the turf at a rate of ½ pound of nitrogen per 1000 square feet. Use fertilizer specified above. Adjust fertilization mixture and rates to meet recommendations given by topsoil analysis.

C. Sod Availability and Condition: The Contractor shall satisfy himself as to the existing conditions prior to any construction. The Contractor shall be fully responsible for furnishing and lay all sod required on the plans. He shall furnish new sod as specified above and lay it so as too completely satisfy the intent and meaning of the plans and specification at no extra cost to the owner. In the case of plans and specification at no extra cost to the owner. In the case of any discrepancy in the amount of sod to be removed or amount to be used, it shall be the Contractor's responsibility to report such to the Project Representative prior to commencing the work.

D. Sod Laying: The surface upon which the new sod to be laid will be prepared as specified above. Areas where sod is to be laid shall be cut trimmed, or shaped to receive full width sod (minimum twelve (12) inches). No partial strip or pieces will be accepted.

E. Sod shall be tamped lightly as each piece is set to insure that good contact is made between edges and also the ground. Sod laid on any sloped areas shall be anchored with wooden dowels or other materials which are accepted by the grass sod industry.

F. Apply water directly after laying sod. Rainfall is not acceptable.

G. Watering of the sod shall be the complete responsibility of the Contractor by whatever means necessary to establish the sod in an acceptable manner to the end of the Maintenance period. If an irrigation system is in place on the site, but for whatever reason, water is not available in the system. It is the responsibility of the Contractor to water the sod by whatever means, until the sod is accepted by the Project Representative.

H. Protection of the newly laid sod shall be the complete responsibility of the Contractor. The Contractor shall provide acceptable visual barriers, to include barricades set appropriate distances with strings or tapes between barriers, as an indication of new work. The Contractor is to restore any damaged areas caused by others (including vehicular traffic), erosion, etc, until such time as the lawn is accepted by the Owner.

I. All sod that has not been laid within 24 hours shall be deemed unacceptable and will be removed from the site.

3.5 WEED BARRIER

A. Cut a slit or x at each plant location no larger than necessary to install plant.

B. Overlap rows of fabric min. 6"

C. Stable fabric edges and overlaps to ground.

END OF SECTION

LANDSCAPE GENERAL NOTES

INSTALLER RESPONSIBILITIES AND LIABILITIES

1. THESE PLANS ARE FOR BASIC DESIGN LAYOUT AND INFORMATION. THE INSTALLER IS REQUIRED TO REFER TO THEIR INDIVIDUAL TRADE - SCOPE OF WORK. OWNER ASSUMES NO LIABILITIES FOR INADEQUATE ENGINEERING CALCULATIONS. MANUFACTURER PRODUCT DEFECTS, INSTALLATION OF ANY LANDSCAPING AND COMPONENTS, OR TIME EXECUTION.
2. THE INSTALLER OF ALL LANDSCAPING AND IRRIGATION SYSTEMS ARE LIABLE AND RESPONSIBLE FOR ALL JURISDICTIONAL AND CODE REQUIREMENTS, TIME EXECUTIONS, AND INSTALLED PRODUCTS AND MATERIALS.

GRADING AND DRAINAGE REQUIREMENTS

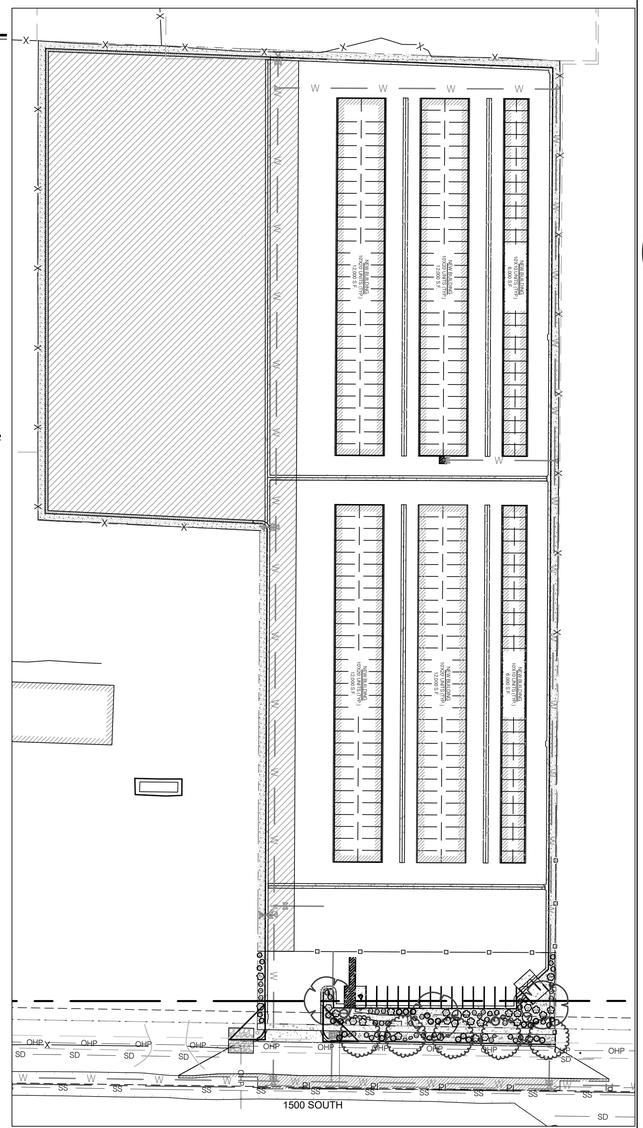
1. ALL GRADING IS TO SLOPE AWAY FROM THE STRUCTURE PER CODE.
2. FINISHED GRADE IS NOT PERMITTED BY CODE TO DRAIN ON NEIGHBORING PROPERTIES
3. 6" MIN. FOUNDATION LEFT EXPOSED AT ALL CONDITIONS
4. LANDSCAPER TO MAINTAIN OR IMPROVE EXISTING FINAL GRADE AND PROPER DRAINAGE ESTABLISHED BY THE EXCAVATOR'S FINAL GRADE ACTIVITIES INCLUDING ANY MAINTENANCE, PRESERVATION, OR EXAGGERATION OF SLOPES, BERMS, AND SWALES.
5. IF ANY SWALE, BERM, OR GRADE HAS BEEN DAMAGED OR IS INCORRECT TO ENSURE CORRECT WATER FLOW THE TRADE CONTRACTOR IS RESPONSIBLE TO FIX STATED ISSUE.
6. ROOF RUN-OFF DEVICES SHOULD BE INSTALLED TO COLLECT AND DISCHARGE ALL ROOF RUNOFF A MINIMUM OF 10 FEET FROM FOUNDATION ELEMENTS OR BEYOND THE LIMITS OF BACKFILL AROUND THE FOUNDATION WALLS; WHICHEVER DISTANCE IS GREATER.
7. THE GROUND SURFACE WITHIN 10 FEET OF THE FOUNDATIONS SHOULD BE SLOPED TO DRAIN AWAY FROM THE STRUCTURE WITH A MINIMUM FALL OF 6 INCHES.

LANDSCAPING REQUIREMENTS

1. ALL LANDSCAPING IS TO BE INSTALLED PER ALL GOVERNING JURISDICTIONS I.E. INTERNATIONAL BUILDING CODE, CITY CODES.
2. NON-COMPLIANCE TO ALL GOVERNING JURISDICTION REQUIREMENTS AND REGULATION ARE THE RESPONSIBILITY OF THE LANDSCAPING INSTALLER.
3. ALL PLANTED LANDSCAPING IS TO BE INSTALLED ACCORDING TO THE NURSERY CARE AND INSTALLATION INSTRUCTIONS WHERE PURCHASED AND BASED ON INDIVIDUAL SOIL CONDITIONS AND SITE CONDITIONS.

LANDSCAPE NOTES

1. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES OF ALL MATERIALS FOR BIDDING AND INSTALLATION PURPOSES. IF DISCREPANCIES EXIST, THE PLAN SHALL DICTATE QUANTITIES TO BE USED.
2. PLANT MATERIAL TO BE INSTALLED PER PLANT LEGEND. IF SUBSTITUTIONS ARE WANTED, PROPOSED LANDSCAPE CHANGES MUST BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO PLANTING.
3. NEW LAWN AREAS TO BE SODDED WITH DROUGHT TOLERANT VARIETY. FINE LEVEL ALL AREAS PRIOR TO LAYING SOD.
4. SANDY LOAM TOPSOIL TO BE IMPLEMENTED AT THE FOLLOWING DEPTHS: 6" TOPSOIL (WITH 2" HUMUS MIXED INTO TOPSOIL PRIOR TO SPREADING) IN ALL NEW PLANTER AREAS AND 4" IN ALL NEW LAWN AREAS. PLANTER BEDS TO BE EXCAVATED AS NECESSARY IN ORDER TO ACCOMMODATE NEW TOPSOIL AND/OR PLANTER BED MULCH TO REACH FINISHED GRADE.
5. 4"X6" EXTRUDED CONCRETE MOW CURB TO BE INSTALLED BETWEEN ALL LAWN AND PLANTER AREAS PER PLAN. ANY TREES LOCATED IN LAWN MUST HAVE A 4' CONCRETE TREE RING.
6. DeWitt 5 OZ. WEED BARRIER FABRIC TO BE INSTALLED IN ALL PLANTER AREAS EXCEPT UNDER ANNUAL PLANTING AREAS AS SHOWN ON PLAN.
7. ROCK MULCH TO BE IMPLEMENTED AT THE FOLLOWING DEPTHS: 3" IN ALL TREE, SHRUB, AND PERENNIAL PLANTER AREAS; ANNUAL PLANTING AREAS AS SHOWN ON PLAN TO RECEIVE 4" OF SOIL AID MATERIAL. PULL BARK MULCH MIN. 3" AWAY FROM BASE OF ALL PERENNIALS AND SHRUBS AND MIN. 6" AWAY FROM ALL TREES.
8. CONTRACTOR TO PROVIDE NEW AUTOMATIC UNDERGROUND IRRIGATION SYSTEM TO BE INSTALLED IN ALL LANDSCAPE AREAS. ALL LAWN AREA TO RECEIVE 100% HEAD TO HEAD COVERAGE WITH SPRAY AND ROTARY SPRINKLER HEADS. ALL PLANTER AREAS NEED TO RECEIVE A FULL DRIP SYSTEM TO EACH TREE AND SHRUB ON PROJECT. SEE IRRIGATION PLAN.



SITE REQUIREMENT CALCULATIONS

STREET FRONTAGE		
1500 SOUTH	REQUIRED:	PROVIDED:
1 TREE / 40 FT (167 LN FT)	5	5
AT LEAST 80% SHADE TREES		
TREE COUNT:	**REQUIRED:**	**PROVIDED:**
1 TREE / 6 PARKING STALLS	3	3
1 SHRUB / 25 SQ FT ISLAND (364 SQ FT)	15	15
PARKING LOT PERIMETER:		
TURF LESS THAN 50%		
75% COVERAGE (TOTAL 12,637 SQ FT BEFORE FENCE)	9,477	10,236 W/ TREE CANOPY

PLANT SCHEDULE

DECIDUOUS TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
UP	UP	5	Ulmus parvifolia Lacebark Elm	B & B	2"Cal
ZS'V	ZS'V	3	Zelkova serrata `Village Green` Sawleaf Zelkova	B & B	2"Cal

EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
CD'S	CD'S	2	Cedrus deodara `Snow Sprite` Snow Sprite Deodar Cedar	5` TALL	

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
Au	Au	2	Amelanchier utahensis Utah Serviceberry	10 gal
Ch	Ch	31	Chaenomeles speciosa `Orange Storm` Orange Storm Flowering Quince	5 gal
Cb	Cb	11	Cotoneaster dammeri `Coral Beauty` Coral Beauty Cotoneaster	5 gal
Cy	Cy	15	Cytisus scoparius `Moonlight` Moonlight Broom	5 gal
Jc	Jc	22	Juniperus chinensis `Daub`s Frosted` Daub`s Frosted Juniper	5 gal
Mg	Mg	21	Miscanthus sinensis `Gracillimus` Malden Grass	5 gal

REFERENCE NOTES SCHEDULE

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
I-03	1"-1.5" OQUIRRH GRAVEL, 3" DEPTH. PLANTING AREAS TO RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS.	18,065 sf

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
I-07	BOULDERS - DECORATIVE	7

ISSUE DATE	PROJECT NUMBER
09-10-2020	UT20031

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
3		
4		
5		
6		
7		

PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

0' 10' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

PROJECT INFORMATION

AF STORAGE
16 WEST 1500 NORTH
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Developer / Property Owner:
BISHOP HOLDING, LLC
MATT BISHOP
801-830-7745
SNAPTRUCKING@GMAIL.COM

Client / Engineer:
BENCHMARK ENGINEERING & LAND SURVEYING
9130 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
WWW.BENCHMARKCIVIL.COM

LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture & Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 960-2698
www.pkjdesigngroup.com

LICENSE STAMP

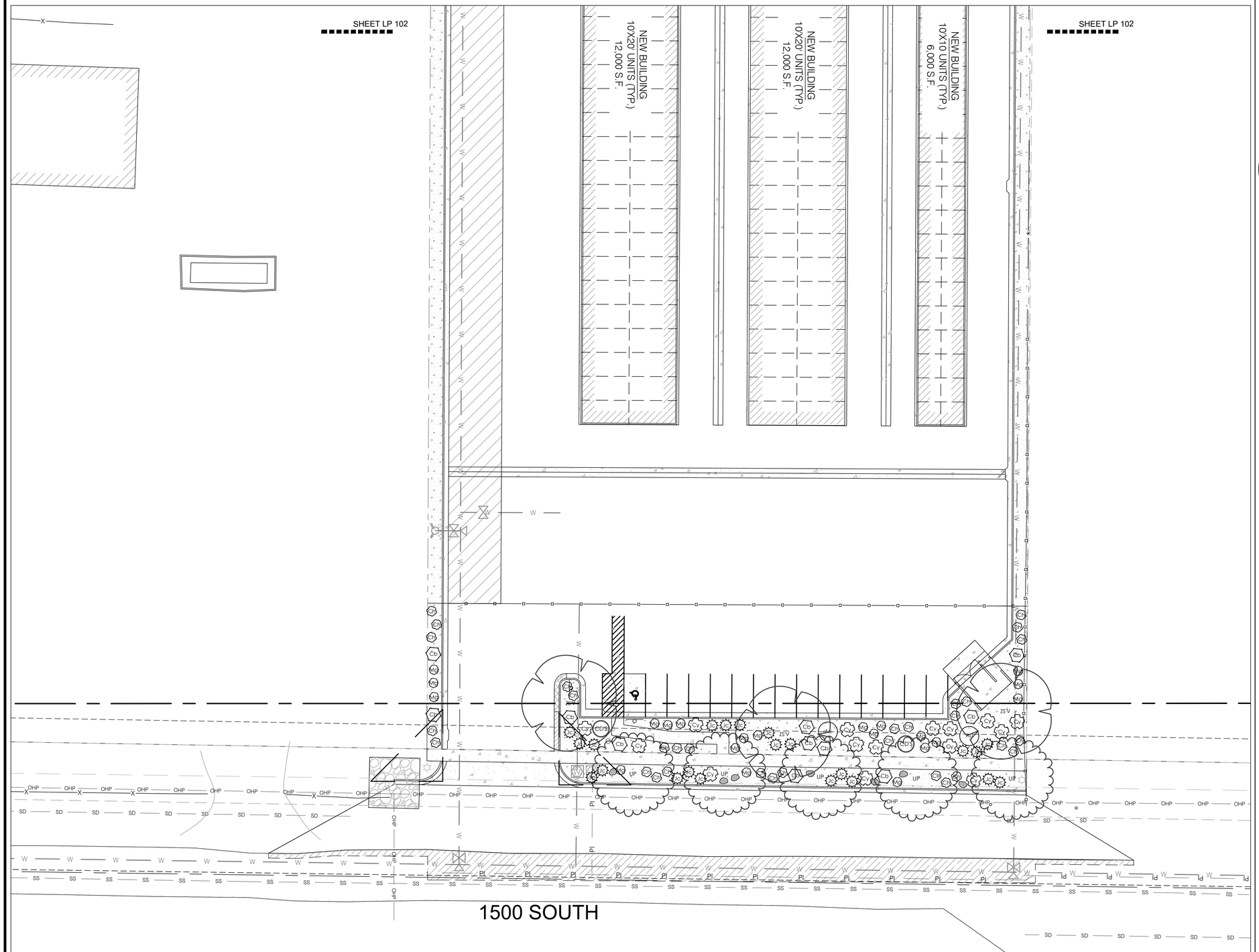
LICENSED LANDSCAPE ARCHITECT
KENT AINSWORTH
9129647-5301
09/10/2020
REGISTERED
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	KBA
CHECKED:	TM
PLOT DATE:	9/10/2020

LANDSCAPE PLAN

LP-100



PLANT SCHEDULE

DECIDUOUS TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
UP	UP	5	Ulmus parvifolia Lacebark Elm	B & B	2"Cal
ZS'V	ZS'V	3	Zelkova serrata `Village Green` Sawleaf Zelkova	B & B	2"Cal

EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
CD'S	CD'S	2	Cedrus deodara `Snow Sprite` Snow Sprite Deodar Cedar	5` TALL	

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
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Cb	Cb	11	Cotoneaster dammeri `Coral Beauty` Coral Beauty Cotoneaster	5 gal
Cy	Cy	15	Cytisus scoparius `Moonlight` Moonlight Broom	5 gal
Jc	Jc	22	Juniperus chinensis `Daub's Frosted` Daub's Frosted Juniper	5 gal
Mg	Mg	21	Miscanthus sinensis `Gracillimus` Malden Grass	5 gal

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1	XXXX	XX-XX-XX
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0' 10' 20' 40' 80'
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AF STORAGE
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AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Developer / Property Owner:
BISHOP HOLDING, LLC
MATT BISHOP
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SNAPTRUCKING@GMAIL.COM

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& LAND SURVEYING
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LICENSE STAMP

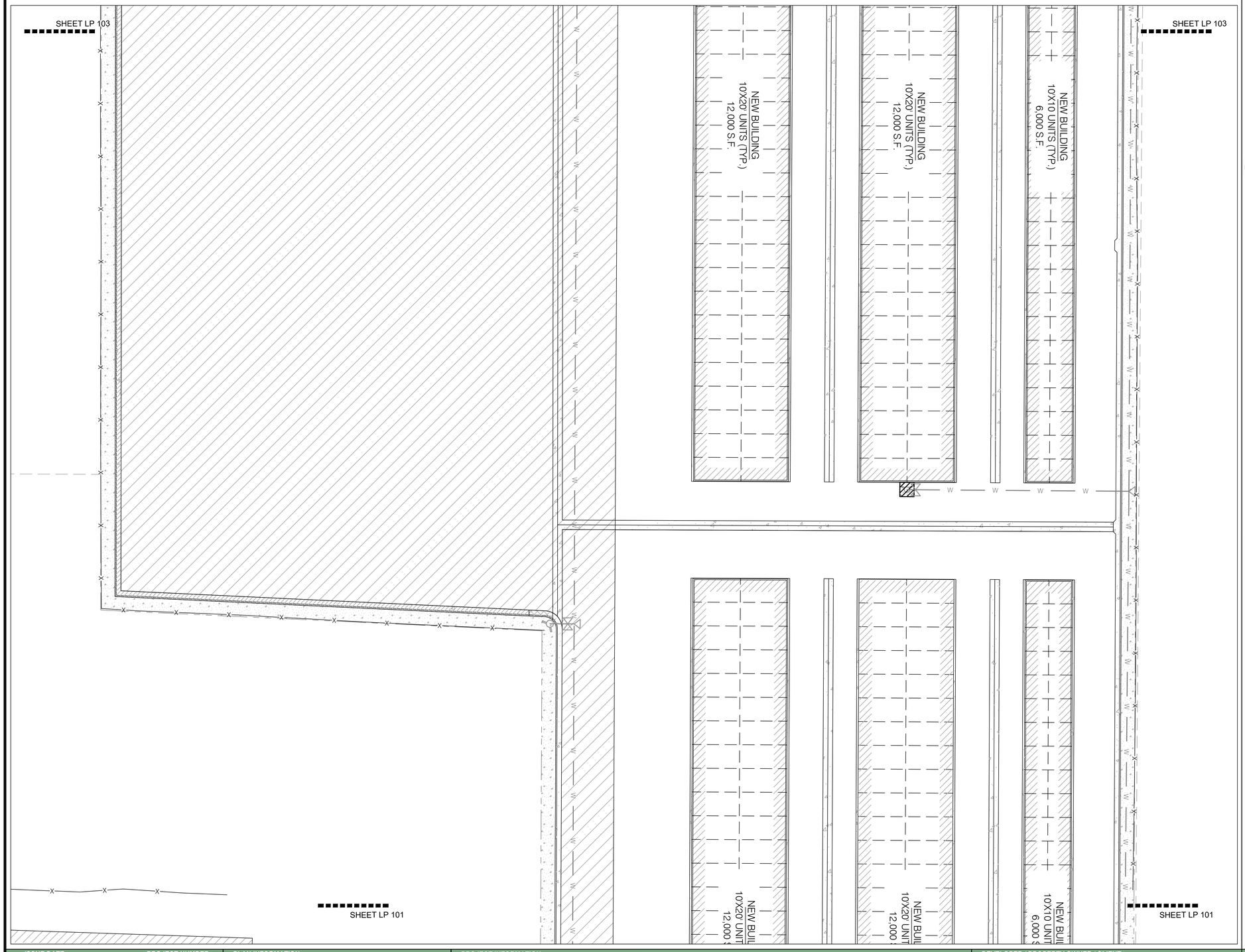
JOSEPH T. ANDERSEN 8129121-5301 LANDSCAPE ARCHITECT 06/02/2020 LICENSE RENEWAL DATE STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	KBA
CHECKED:	TM
PLOT DATE:	9/10/2020

LANDSCAPE PLAN

LP-101



PLANT SCHEDULE

DECIDUOUS TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
UP	UP	5	Ulmus parvifolia Lacebark Elm	B & B	2"Cal
ZS'V	ZS'V	3	Zelkova serrata `Village Green` Sawleaf Zelkova	B & B	2"Cal

EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
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REFERENCE NOTES SCHEDULE

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
1-03	1"-1.5" OQUIRRH GRAVEL, 3" DEPTH, PLANTING AREAS TO RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS.	18,065 sf

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
1-07	BOULDERS - DECORATIVE	7

ISSUE DATE 09-10-2020 **PROJECT NUMBER** UT20031

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
3		
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PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

N

0' 10' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

PROJECT INFORMATION

AF STORAGE
16 WEST 1500 NORTH
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Developer / Property Owner:
BISHOP HOLDING, LLC
MATT BISHOP
801-830-7745
SNAPTRUCKING@GMAIL.COM

Client / Engineer:
BENCHMARK ENGINEERING
& LAND SURVEYING
9130 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
WWW.BENCHMARKCIVIL.COM

LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 960-2698
www.pkjdesigngroup.com

LICENSE STAMP

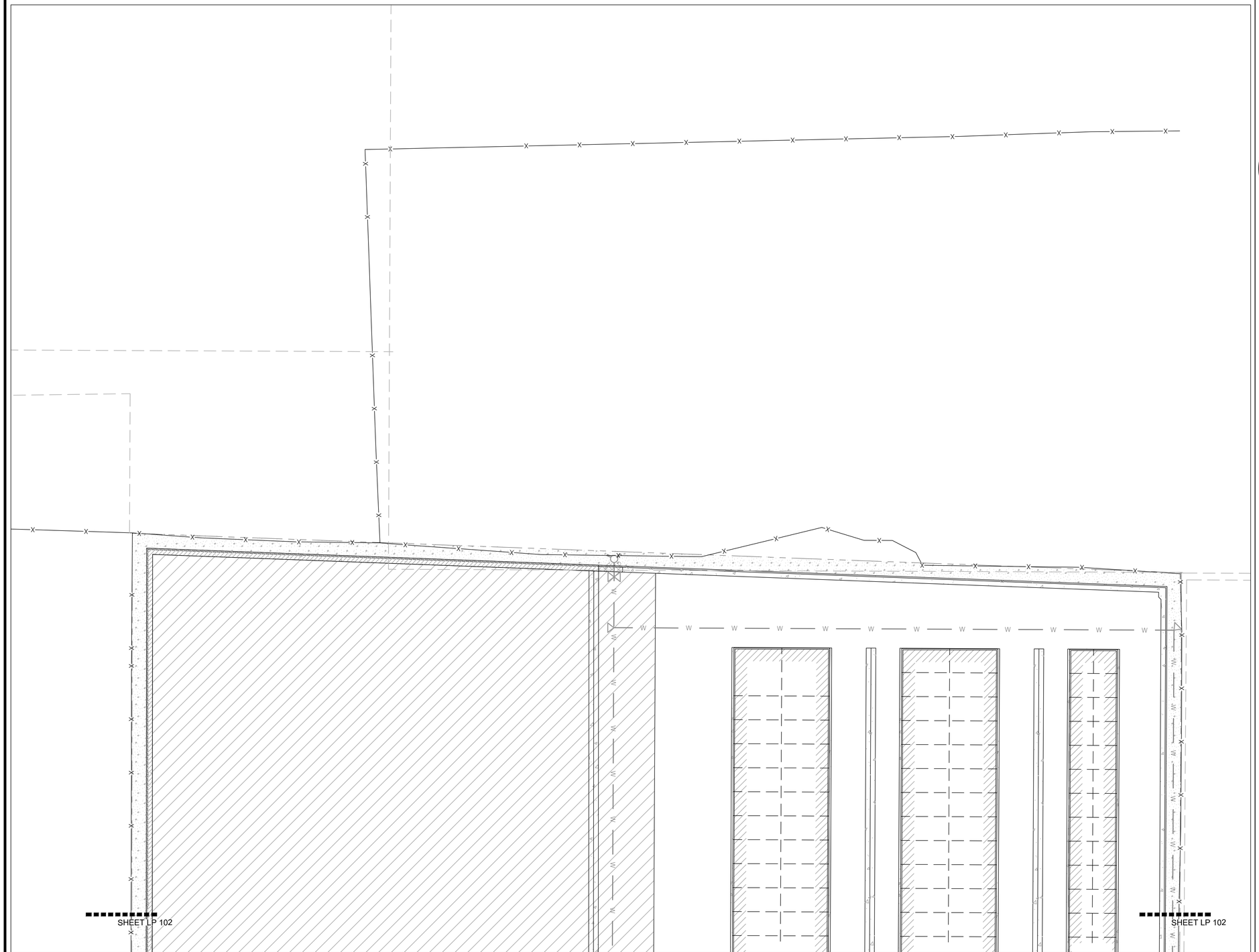
LICENSED LANDSCAPE ARCHITECT
JOSEPH T. ANSMITH
8128121-5301
06/02/2020
RENEWAL DATE
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	KBA
CHECKED:	TM
PLOT DATE:	9/10/2020

LANDSCAPE PLAN

LP-102



PLANT SCHEDULE

DECIDUOUS TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
UP	UP	5	Ulmus parvifolia Lacebark Elm	B & B	2"Cal
ZS'V	ZS'V	3	Zelkova serrata `Village Green` Sawleaf Zelkova	B & B	2"Cal

EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
CD'S	CD'S	2	Cedrus deodara `Snow Sprite` Snow Sprite Deodar Cedar	5` TALL	

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
Au	Au	2	Amelanchier utahensis Utah Serviceberry	10 gal
Ch	Ch	31	Chaenomeles speciosa `Orange Storm` Orange Storm Flowering Quince	5 gal
Cb	Cb	11	Cotoneaster dammeri `Coral Beauty` Coral Beauty Cotoneaster	5 gal
Cy	Cy	15	Cytisus scoparius `Moonlight` Moonlight Broom	5 gal
Jc	Jc	22	Juniperus chinensis `Daub`s Frosted` Daub`s Frosted Juniper	5 gal
Mg	Mg	21	Miscanthus sinensis `Gracillimus` Malden Grass	5 gal

REFERENCE NOTES SCHEDULE

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
I-03	1"-1.5" QQUIRRH GRAVEL, 3" DEPTH. PLANTING AREAS TO RECEIVE MIN. 12" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS.	18,065 sf

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
I-07	BOULDERS - DECORATIVE	7

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LICENSE STAMP

LICENSED LANDSCAPE ARCHITECT
KEVIN AINSWORTH
9128727-5301
09/10/2020
STATE OF UTAH

DRAWING INFO

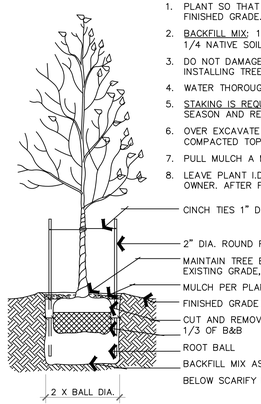
PM:	JTA
DRAWN:	KBA
CHECKED:	TM
PLOT DATE:	9/10/2020

LANDSCAPE PLAN

LP-103

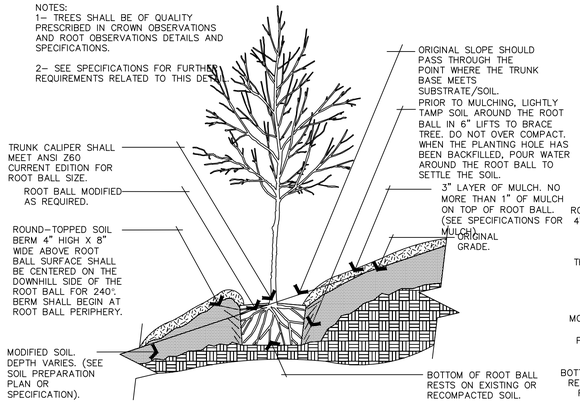
NOTES:

1. PLANT SO THAT THE TOP OF THE ROOT BALL IS EVEN WITH THE FINISHED GRADE.
2. BACKFILL MIX: 1/2 SANDY LOAM TOPSOIL + 1/4 ORGANIC MULCH, & 1/4 NATIVE SOILS.
3. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKES.
4. WATER THOROUGHLY AFTER INSTALLATION.
5. STAKING IS REQUIRED: LOOSEN TREE STAKES AFTER FIRST GROWING SEASON AND REMOVE TREE STAKES AFTER SECOND GROWING SEASON.
6. OVER EXCAVATE PITS TO 3' DEPTH AND INSTALL ADDITIONAL COMPACTED TOPSOIL UNDER TREE.
7. PULL MULCH A MINIMUM OF 6" AWAY FROM TRUNK OF TREE.
8. LEAVE PLANT I.D. TAGS ON THE TREES UNTIL ACCEPTANCE BY THE OWNER. AFTER FINAL ACCEPTANCE, REMOVE I.D. TAGS.

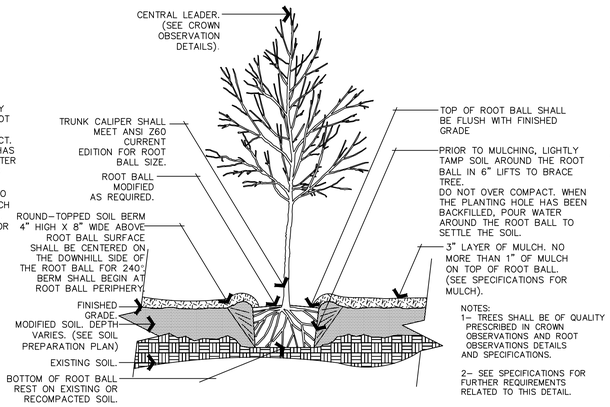


A DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

NOTES:
1- TREES SHALL BE OF QUALITY PRESCRIBED IN CROWN OBSERVATIONS AND ROOT OBSERVATIONS DETAILS AND SPECIFICATIONS.
2- SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

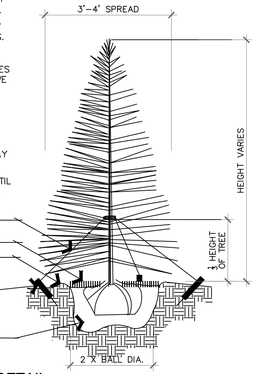


B TREE ON SLOPE 5% (20:1) TO 50% (2:1)
NOT TO SCALE
PKJ DESIGN GROUP



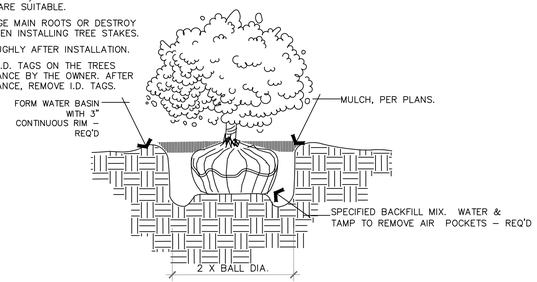
C TREE w/ BERM (EXISTING SOIL MODIFIED)
NOT TO SCALE
PKJ DESIGN GROUP

NOTES:
1. PLANT SO THAT THE TOP OF THE ROOT BALL IS EVEN WITH THE FINISHED GRADE.
2. BACKFILL MIX: 1/2 SANDY LOAM TOPSOIL + 1/4 ORGANIC MULCH, & 1/4 NATIVE SOILS.
3. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKES.
4. WATER THOROUGHLY AFTER INSTALLATION.
5. STAKING IS REQUIRED: LOOSEN TREE STAKES AFTER FIRST GROWING SEASON AND REMOVE TREE STAKES AFTER SECOND GROWING SEASON.
6. OVER EXCAVATE PITS TO 3' DEPTH AND INSTALL ADDITIONAL COMPACTED TOPSOIL UNDER TREE.
7. PULL COBBLE ROCK A MINIMUM OF 6" AWAY FROM TRUNK OF TREE.
8. LEAVE PLANT I.D. TAGS ON THE TREES UNTIL ACCEPTANCE BY THE OWNER. AFTER FINAL ACCEPTANCE, REMOVE I.D. TAGS.

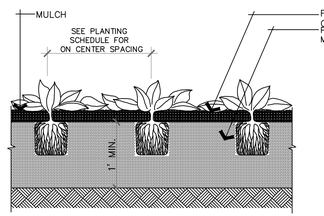


D EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

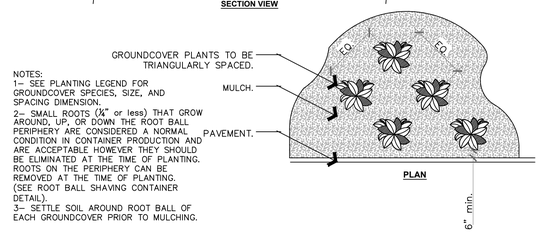
NOTES:
1. IF PLANT IS BALL & BURLAP, CUT AND REMOVE TOP 1/3 OF BURLAP FROM ROOT BALL.
2. IF PLANT IS CONTAINERIZED, SCARIFY ROOT BALL PRIOR TO PLANTING.
3. BACKFILL MIX: 1/2 SANDY LOAM + 1/4 ORGANIC MULCH + 1/4 NATIVE SOILS IF NATIVE SOILS ARE SUITABLE.
4. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKES.
5. WATER THOROUGHLY AFTER INSTALLATION.
8. LEAVE PLANT I.D. TAGS ON THE TREES UNTIL ACCEPTANCE BY THE OWNER. AFTER FINAL ACCEPTANCE, REMOVE I.D. TAGS.



E SHRUB PLANTING DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

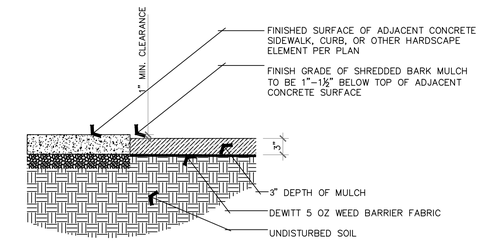


F PERENNIAL PLANTING
NOT TO SCALE
PKJ DESIGN GROUP



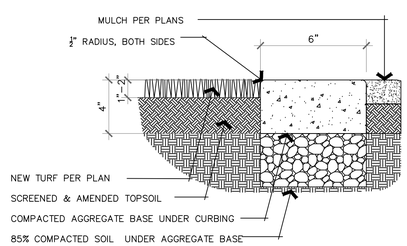
NOTES:
1- SEE PLANTING LEGEND FOR GROUNDCOVER SPECIES, SIZE, AND SPACING DIMENSION.
2- SMALL ROOTS (¼" or less) THAT GROW AROUND, UP, OR DOWN THE ROOT BALL PERIPHERY ARE CONSIDERED A NORMAL CONDITION IN CONTAINER PRODUCTION AND ARE ACCEPTABLE HOWEVER THEY SHOULD BE ELIMINATED AT THE TIME OF PLANTING. ROOTS ON THE PERIPHERY CAN BE REMOVED AT THE TIME OF PLANTING. (SEE ROOT BALL SHAVING CONTAINER DETAIL).
3- SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PRIOR TO MULCHING.

G GROUNDCOVER
NOT TO SCALE
PKJ DESIGN GROUP

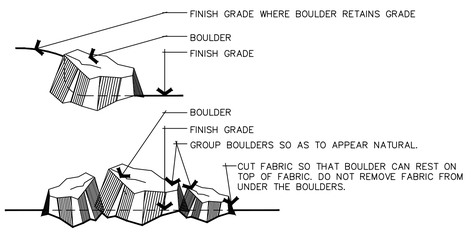


H MULCH DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

NOTE:
1. PROVIDE CONTROL JOINT IN CONCRETE EDGE AT 10' INTERVALS, PROVIDE EXPANSION JOINTS EVERY 30'.



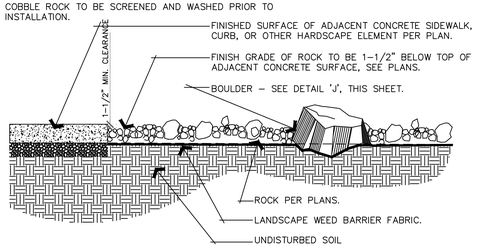
I CONCRETE MOWCURB DETAIL
NOT TO SCALE
PKJ DESIGN GROUP



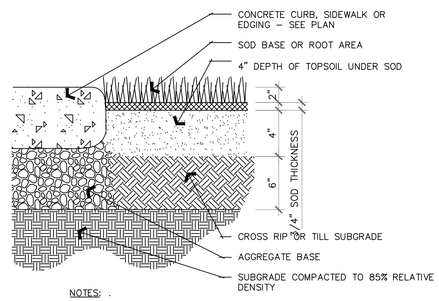
NOTE:
PLACE ALL BOULDERS SUCH THAT 1/4 OF THE TOTAL MASS OF EACH BOULDER IS BELOW FINISH GRADE.

J BOULDER PLACEMENT DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

NOTES:
1. KEEP TOP OF COBBLE ROCK 1½" BELOW ADJACENT WALKS AND CURBS. DO NOT ALLOW COBBLE ROCK TO TOUCH THE TRUNK OF ANY PLANT. INSTALL COBBLE ROCK AFTER INSTALLATION OF WEED BARRIER FABRIC AND PLANT MATERIAL.
2. CONTRACTOR TO ENSURE THAT TOP OF WEED BARRIER FABRIC IS FREE OF SOILS AND DEBRIS PRIOR TO PLACING COBBLE ROCK.
3. SEE LANDSCAPE PLANS FOR ROCK TYPE AND DEPTH.
4. COBBLE ROCK TO BE SCREENED AND WASHED PRIOR TO INSTALLATION.



K COBBLE ROCK AND WEED BARRIER DETAIL
NOT TO SCALE
PKJ DESIGN GROUP



NOTES: .
1. ENSURE FINISH GRADE IS 1"– 2" BELOW TOP OF CURB, WALK, OR EDGING.
2. TURF IS THE MOST HEALTHY AND WATER EFFICIENT WHEN MOWED AT A MIN. HEIGHT OF 2" – 2 ½".

L SOD LAYING DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

ISSUE DATE	PROJECT NUMBER
09-10-2020	UT20031

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LICENSE STAMP

LICENSED LANDSCAPE ARCHITECT JEREMY AINSWORTH 813917-5301 9/10/2020 STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	KBA
CHECKED:	TM
PLOT DATE:	9/10/2020

LANDSCAPE DETAILS

LP-501

AF STORAGE

AMERICAN FORK, UTAH

IRRIGATION SPECIFICATIONS

IRRIGATION SPECIFICATIONS

PART I - GENERAL

1.1 SUMMARY

Work to be done includes all labor, materials, equipment and services required to complete the Project irrigation system as indicated on the Construction Drawings, and as specified herein. Includes but is not limited to: Furnishing and installing underground and above ground sprinkler system complete with any accessories necessary for proper function and operation of the system. All plant material on the Project shall be irrigated. Removal and disposal of any existing sprinkler system components are not to be saved, which are disturbed during the construction process. Restoration of any altered or damaged existing landscape to original state and condition.

1.2 SYSTEM DESCRIPTION

A. Design of irrigation components: Locations of irrigation components on Construction Drawings may be approximate. Piping, sleeving and/or other components shown on Construction drawings may be shown schematically for graphic clarity and demonstration of component groupings and separations. All irrigation components shall be placed in landscaped areas, with the exception of pope and wire in sleeving under hardscapes. Actual routing of pipe, wire or other components may be altered due to site conditions not accounted for in the design process.

B. Construction requirements: Actual placement may vary as required to achieve a minimum of 100% coverage without overspray onto hardscape, buildings or other features.

C. Layout of Irrigation Components: During layout and staking, consult with Owner Approved Representative (hereafter referred to as OAR) to verify proper placement of irrigation components and to provide Contractor recommendations for changes, where revisions may be advisable. Small or minor adjustments to system layout are permissible to avoid existing field obstructions such as utility boxes or street light poles. Contractor shall place remote control valves in groups as practical to economize on quantity of manifold isolation valves. Quick coupler valves shall be placed with manifold groups and protected by manifold isolation valves. Quick coupler valves are shown on Construction Documents in approximate locations.

1.3 DEFINITIONS

A. Water Supply: Secondary water piping and components, furnished and installed by others to provide irrigation water to this Project, including but not limited to filter, saddles, nipples, spools, shut off valves, corporation stop valves, water meters, pressure regulation valves, and piping upstream of (or prior to) the Point of Connection.

B. Point of Connection: Location where the Contractor shall tie into the water supply. May require filter, saddle, nipples, spools, isolation valves or Stop and Waste valve for landscape irrigation needs and use.

C. Main Line Piping: Pressurized piping downstream of the Point of Connection to provide water to remote control valves and quick couplers. Normally under constant pressure.

D. Lateral Line Piping: Circuit piping downstream of remote control valves to provide water to sprinkler heads, sprinkler heads, drip systems or bubblers.

1.4 REFERENCES

A. The following standards will apply to the work of this Section:

a. ASTM-American Society for Testing and Materials

b. IA - The Irrigation Association: Main BMP Document, Landscape Irrigation Scheduling and Water Management Document.

1.5 SUBMITTALS

A. At least thirty (30) days prior to ordering of any materials, the Contractor shall provide manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system. Submittals shall be in three ring binders or other similar bound form. Provide five copies of submittals to OAR for distribution. Place cover or index sheet indicating order in submittal document. No material shall be ordered, delivered or any work preceded in the field until the required submittals have need reviewed in its entirety and stamped approved. Delivered material shall match the approved samples.

B. Operation and Maintenance Manual:

a. At least thirty (30) days prior to final inspection, the Contractor shall provide Operation and Maintenance manual to OAR, containing:

i. Manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system.

ii. Parts list for each operating element of the system

iii. Manufacturer printed literature on operation and maintenance of operating elements of the system.

iv. Section listing instructions for overall system operation and maintenance. Include directions for Spring Start-up and Winterization.

b. Project Record Copy

i. Maintain at project site one copy of all project documents clearly marked "Project Record Copy". Mark any deviation in material installation on Construction drawings. Maintain and update drawing at least weekly. Project Record Copy to be available to OAR on demand.

ii. Completed Project As-Built Drawings

1. Prior to final inspection, prepare and submit to OAR accurate as-built drawings
2. Show detail and dimension changes made during installation. Show significant details and dimensions that were not shown in original Contract Documents.
3. Field dimension locations of sleeving, points of connection, main line piping, wiring runs not contained in main line pipe trenches, valves and valve boxes, quick coupler valves.
4. Dimensions are to be taken from permanent constructed surfaces, features, or finished edges located at or above finished grade.
5. Controller Map: upon completion of system, place in each controller a color coded copy of the area that controller services: indicating zone number, type of plant material and location on project that zone services. Laminate map with heat shrink clear plastic.

1.6 QUALITY ASSURANCE

A. Acceptance: Do not install work of this section prior to acceptance by OAR of area to receive such work.

B. Regulatory Requirements: All work and materials shall be according to any and all rules, regulations or codes, whether they are State or Local laws and ordinances. Contract documents, drawings or specifications may not be construed or interpreted to permit work or materials not conforming to the above codes.

C. Adequate Water Supply: Water supply to this Project exists, installed by others. Connections to these supply lines shall be by this Contractor. Verify that proper connection is available to supply line and is of adequate size. Verify that secondary connection components may be installed if necessary. Perform static pressure test prior to commencement of work. Notify OAR in writing of problems encountered prior to proceeding.

D. Workmanship and Materials:

a. It is the intent of this specification that all material herein specified and shown on the construction documents shall be of the highest quality available and meeting the requirements specified.

b. All work shall be performed in accordance with the best standards of practice relating to the trade.

E. Contractor Qualifications:

a. Contractor shall provide document or resume including at least the following items:

i. That Contractor has been installing sprinklers on commercial projects for five previous consecutive years.

ii. Contractor is licensed to perform Landscape and Irrigation construction in the State of this Project.

iii. Contractor is bondable for the work to be performed.

iv. References of five projects of similar size and scope completed within the last five years. Three of the projects listed shall be local.

v. Listing of suppliers where materials will be obtained for use on this Project.

vi. Project site Foreman or Supervisor has at least five consecutive years of commercial irrigation installation experience. This person shall be a current Certified Irrigation Contractor in good standing as set forth by the Irrigation Association. This person shall be on Project site at least 75% of each working day.

vii. Evidence that Contractor currently employs workers in sufficient quantities to complete Project within time limits that are established by the Contract.

viii. All General laborers or workers on the Project shall be previously trained and familiar with sprinkler installation and have a minimum of one-year experience. Those workers performing tasks related to PVC pipe shall have certificates designated below.

1.7 DELIVERY-STORAGE-HANDLING

A. During delivery, installation and storage of materials for Project, all materials shall be protected from contamination, damage, vandalism, and prolonged exposure to sunlight. All material stored at Project site shall be neatly organized in a compact arrangement and storage shall not disrupt Project Owner or other trades on Project site. All material to be installed shall be handled by Contractor with care to avoid breakage or damage. Damaged materials attributed to Contractor shall be replaced with new at Contractor's expense.

1.8 SEQUENCING

A. Perform site survey, research utility records, contact utility location services. The Contractor shall familiarize himself with all hazards and utilities prior to work commencement. Install sleeving prior to installation of concrete, paving or other permanent site elements. Irrigation system Point of Connection components, backflow prevention and pressure regulation devices shall be installed and operational prior to all downstream components. All main lines shall be thoroughly flushed of all debris prior to installation of any sprinkler heads.

1.9 WARRANTY

A. Contractor shall provide one year Warranty. Warranty shall cover all materials, workmanship and labor. Warranty shall include filling and or repairing depressions or replacing turf or other plantings due to settlement of irrigation trenches or irrigation system elements. Valve boxes, sprinklers or other components settles from original finish grade shall be restored to proper grade. Irrigation system shall have been adjusted to provide proper, adequate coverage of irrigated areas.

1.10 OWNER'S INSTRUCTION

A. After system is installed, inspected, and approved, instruct Owner's Representatives in complete operation and maintenance procedures. Coordinate instruction with references to previously submitted Operation and Maintenance Manual.

1.11 MAINTENANCE

A. Furnish the following items to Owner's Representative:

a. Two quick coupler keys with hose swivels.

b. One of each type or size of quick coupler valve and remote control valve. Five percent of total quantities used of each sprinkler and sprinkler nozzle.

B. Provide the following services:

a. Winterize entire irrigation system installed under this contract. Winterize by 'blow-out' method using compressed air. Compressor shall be capable of minimum of 175 CFM. This operation shall occur at the end of first growing season after need for plant irrigation but prior to freezing. Compressor shall be capable of evacuation system of all water pressure regulation device. Compressor shall be regulated to not more than 60 PSI. Start up system the following spring after danger of freezing has passed. Contractor shall train Owner's Representative in proper start-up and winterization procedure.

PART 2 - PRODUCTS

2.1 GENERAL NOTES

A. Contractor shall provide materials to be used on this Project. Contractor shall not remove any material purchased for this Project from the Project Site, nor mix Project materials with other Contractor owned materials. Owner retains right to purchase and provide project material.

2.2 POINT OF CONNECTION

A. The Contractor shall connect onto existing irrigation or water main line as needed for Point(s) of Connection. Contractor shall install new main line as indicate.

2.3 CONNECTION ASSEMBLY

A. Secondary water shall be used on this Project. Install filter as needed.

2.4 CONTROL SYSTEM

A. Power supply to the irrigation controller shall be provided for by this Contract.

B. Controller shall be as specified in the drawings. Controller shall be surge protected.

a. Installation of wall-mount controllers: Irrigation contractor shall be responsible for this task. Power configuration for wall-mount controllers shall be 120 VAC unless otherwise noted.

b. Locate Controller(s) in general location shown on Construction drawings. Coordinate power supply and breaker allocation with electrical contractor. Contractor shall be responsible for all power connections to Controllers, whether they are wall mount or pedestal mount. Contractor shall coordinate with electrical or other Project trades as needed to facilitate installation of power to controllers.

C. Wires connecting the remote control valves to the irrigation controller are single conductors, type PE. Wire construction shall incorporate a solid copper conductor and polyethylene (PE) insulation with a minimum thickness of 0.045 inches. The wires shall be UL listed for direct burial in irrigation systems and be rated at a minimum of 30 VAC. Paige Electric Co., LP specification number P7079D.

a. A minimum of 24" of additional wire shall be left at each valve, each splice box and at each controller.

b. Common wire shall be white in color, 12 gauge. Control wire shall be red in color, 14 gauge. Spare wire shall be looped within each valve box of the grouping it is to service.

D. RCV wire splicing connectors shall be 3M brand DBY or DBR. Wire splicing between controller and valves shall be avoided if at all possible. Any wire splices shall be contained within a valve box. Splices within a valve box that contains no control valves shall be stamped 'WIRE SPLICE' or 'WS' on box lid.

2.5 SLEEVING

A. Contractor shall be responsible to protect existing underground utilities and components. Sleeving minimum size shall be 2". Sleeving 2" through 4" in size shall be S/40 PVC solvent weld. Sleeving 6" and larger shall be CL 200 PVC gasketed. Sleeve diameter shall be at least two times the diameter of the pipe within the sleeve. Sleeves shall be extended 6" minimum beyond walk or edge of pavement. Wire or cable shall not be installed in the same sleeve as piping, but shall be installed in separate sleeves. Sleeve ends on sleeve sizes 4" and larger shall be capped with integral corresponding sized PVC slip cap, pressure fit, until used, to prevent contamination. Sleeves shall be installed at appropriate depths for main line pipe or lateral pipe.

2.6 MAIN LINE PIPE

A. All main line pipe 4" and larger shall be Class 200 gasketed bell end. All main line pipe 3" in size and smaller shall be Schedule 40 PVC solvent weld bell end.

a. Maximum flows allowed through main line pipe shall be:

3/4"	8 GPM
1"	12 GPM
1-1/2"	30 GPM
2"	53 GPM
2-1/2"	75 GPM
3"	110 GPM
4"	180 GPM

b. Main line pipe shall be buried with 24" cover

2.7 MAIN LINE FITTINGS

A. All main line fittings 3" and larger shall be gasketed ductile iron material. All ductile iron fittings having change of direction shall have proper concrete thrust block installed. All main line fittings smaller than 3" in size shall be Schedule 80 PVC.

2.8 ISOLATION VALVES

A. Isolation valves 3" and larger shall be Waterous brand model 2500 cast iron gate valve, resilient wedge, push on type, with 2" square operating nut. Place sleeve of 6" or larger pipe over top of valve vertically and then extend to grade. Place 10" round valve box over sleeve at grade.

B. Isolation valves 2-1/2" and smaller shall be Apollo brand 70 series brass ball valves, contained in a Carson Standard size valve box. Valves shall be installed with S/80 PVC TOE Nipples on both sides of the valve. Valve shall be placed so that the handle is vertical toward the top of the valve box in the 'off' position.

2.9 MANIFOLDS

A. Action Manifold fittings shall be used to create unions on both sides of each control valve, allowing the valve to be removed from the box without cutting piping. Valves shall be located in boxes with ample space surrounding them to allow access for maintenance and repair. Where practical, group remote control valves in close proximity, and protect each grouping with a manifold isolation valve as shown in details. Manifold Main Line (or Sub-Main Line) and all manifold components and isolation valves shall be at least as large as the largest diameter lateral served by the respective manifold.

2.10 REMOTE CONTROL VALVES

A. Remote control valves shall be as specified on the drawings. Remote control valves shall be located separately and individually in separate control boxes.

2.11 MANUAL CONTROL VALVES

A. Quick coupler valve shall be attached to the manifold sub-main line using a Lasco G175212 swing joint assembly with snap-lock outlet and brass stabilizer elbow. Quick coupler valve shall be placed within a Carson 10" round valve box. Top of quick coupler valve cover shall allow for complete installation of valve box lid, but also allow for insertion and operation of key. Base of quick coupler valve and top of quick coupler swing joint shall be encased in ¾" gravel. Contractor shall not place quick coupler valves further than 200 feet apart, to allow for spot watering or supplemental irrigation of new plant material. Quick coupler valve at POC shall not be eliminated or relocated.

2.12 LATERAL LINE PIPE

A. All lateral piping shall be Schedule 40 PVC, solvent weld, and bell end. Lateral pipe shall be buried with 12-18" of cover typically. Lateral pipe shall be ¾", 1", 1 ¼", 1 ½" or 2" in size as indicated on Construction Drawings.

2.13 LATERAL LINE FITTINGS

A. All lateral line fittings shall be S/40 PVC

2.14 Spray Sprinklers

A. Spray head sprinklers shall be as specified on the drawings. Nozzles shall be as specified on the drawings.

2.15 VALVE BOXES

A. Carson valve boxes shall be used on this project. Sizes are as directed in these Specifications, detail sheets or plan sheets. Valve boxes shall be centered over the control valve or element they cover. Valve box shall be sized large enough to allow ample room for services access, removal or replacement of valve or element. Valve box shall be set to flush to finish grade of topsoil or barked areas. Contractor shall provide extensions or stack additional valve boxes as necessary to bring valve box pit to proper grade.

2.16 IMPORT BACKFILL

A. All main line pipe, lateral line pipe and other irrigation elements shall be bedded and backfilled with clean soil, free of rocks 1" and larger. Contractor shall furnish and install additional backfill material as necessary due to rocky conditions. Trenches and other elements shall be compacted and/or water settled to eliminate settling. Debris from trenching operations un-usable for fill shall be removed from project and disposed of properly by Contractor.

2.17 OTHER PRODUCTS

A. Substitution of equivalent products is subject to the OAR's approval and must be designated as accepted in writing.

a. The Contractor shall provide materials to make the system complete and operational.

PART 3 - EXECUTION

3.1 PREPARATION

A. Contractor shall repair or replace work damaged by irrigation system installation. If damaged work is new, replacement or the original installer of that work shall perform repairs. The existing landscape of this Project shall remain in place. Contractor shall protect and work around existing plant material. Coordination of trench and valve locations shall be laid out the OAR prior to any excavation occurring. Plant material deemed damaged by the OAR shall be replaced with new plant material at Contractor's expense. Contractor shall not cut existing tree roots larger than 2" to install this Project. Route pipe, wire and irrigation elements around tree canopy drip line to minimize damage to tree roots. Contractor shall have no part of existing system used by other portions of site landscape without water for without water for more than 24 hours at a time.

3.2 TRENCHING AND BACKFILING

A. Pulling of pipe shall not be permitted on this project. Over excavate trenches both in width and depth. Ensure base of trench is rock or debris free to protect pipe and wire. Grade trench base to ensure flat, even support of piping. Backfill with clean soil or import material. Contractor shall backfill no less than 2" around entire pipe with clean, rock free fill. Main line piping and fittings shall not be backfilled until OAR has inspected and pipe has passed pressure testing. Perform balance of backfill operation to eliminate any settling.

3.3 SLEEVING

A. Sleeve all piping and wiring that pass under paving or hardscape features. Wiring shall be placed in separate sleeving from piping. Sleeves shall be positioned relative to structures or obstructions to allow for pipe or wire within to be removed if necessary.

3.4 GRADES AND DRAINAGE

A. Place irrigation pipe and other elements at uniform grades. Winterization shall be by evacuation with compressed air. Automatic drains shall not be installed on this Project. Manual drains shall only be installed at POC where designated on Construction Drawings.

3.5 PVC PIPE

A. Install pipe to allow for expansion and contraction as recommended by pipe manufacturer.

B. Install main line pipes with 18" of cover, lateral line pipes with 12" of cover.

C. Drawings show diagrammatic or conceptual location of piping - Contractor shall install piping to minimize change of direction, avoid placement under large trees or large shrubs, avoid placement under hardscape features.

D. Plastic pipe shall be cut squarely. Burrs shall be removed. Spigot ends of pipes 3" and larger shall be beveled.

E. Pipe shall not be glued unless ambient temperature is at least 50 degress F. Pipe shall not be glued in rainy conditions unless properly tented. All solvent weld joints shall be assembled using IPS 711 glue and P70 primer according to manufacturer's specification, no exceptions. All workers performing glue operations shall provide evidence of certification. Glued main line pipe shall cure a minimum of 24 hours prior to being energized. Lateral lines shall cure a minimum of 2 hours prior to being energized and shall not remain under constant pressure unless cured for 24 hours.

F. Appropriate thrust blocking shall be performed on fittings 3" and larger. All threaded joints shall be wrapped with Teflon tape or paste unless directed by product manufacturer or sealing by o-ring.

3.6 CONTROLLERS

A. All grounding for pedestal controllers shall be as directed by controller manufacturer and ASIC guidelines, not to exceed a resistance reading of 5 OHMs.

B. Locate controllers in protected, inconspicuous places, when possible. Coordinate location of pedestal controllers with Landscape Architect to minimize visibility.

C. Coordinate location of wall mount controllers with building or electrical Contractor to facilitate electrical service and future maintenance needs. Wall mount shall be securely fastened to surface. If exterior mounted, wall mount controllers shall have electrical service wire and field control wire in separate, appropriate sized weatherproof electrical conduit, PVC pipe shall not be used.

D. Wire under hardscape surfaces shall be placed continuously in conduit. Contractor shall be responsible to coordinate sleeving needs for conduit or sweeps elbows from exterior to interior of building.

E. Pedestal controllers shall be placed upon VIT-Strong Box Quick Pad as per manufacturer's recommendations. Controllers shall be oriented such that Owner's Representative maintenance personnel may access easily and perform field system tests efficiently.

F. Place Standard valve box at base of controller or nearby to allow for three to five feet of slack field control wire to be placed at each controller. This Contractor shall provide conduit access if needed for Electrical Contractor. Electrical supply and installation, as well as hook-up to controller shall be by this Contractor.

3.7 VALVES

A. Isolation valves, remote control valves, and quick coupler valves shall be installed according to manufacturer recommendation and Contract Specifications and Details.

B. Valve boxes shall be set over valves so that all parts of the valve can be reached for service.

C. Valve box and lid shall be set to be flush with finished grade. Only o ne remote control valve may be installed in a Carson 1419124 box. Place a minimum of 4" of ¾" washed gravel beneath valve box for drainage. Bottom of remote control valve shall be a minimum of 2" above gravel.

3.8 SPRINKLER HEADS

A. No sprinkler shall be located closer than 6" to walls, fences, or buildings.

B. Heads adjacent to walks, curbs. Or paths shall be located at grade and 2" away from hardscape.

C. Control valves shall be opened and fully flush lateral line pipe and swing joints prior to installation of sprinklers.

D. Spray heads shall be installed and flushed again prior to installation of nozzles.

E. Contractor shall be responsible for adjustment if necessary due to grade changes during landscape construction.

3.9 FIELD QUALITY CONTROL

A. Main line pipes shall not be backfilled or accepted until the system has been tested for 2 hours at 100 psi.

B. Main line pressure test shall include all pipe and components from the point of connection to the upstream side of remote control valves. Test shall include all manifold components under constant pressure. Piping may be tested in sections that can be isolated.

C. Contractor shall provide pressurized water pump to increase or boost pressure where existing static pressure is less than 100 psi.

D. Schedule testing with OAR 48 hours in advance for approval.

E. Leaks or defects shall promptly be repaired or rectified at the Contractors expense and retested until able to pass testing.

F. Grounding resistance at pedestal controller shall also be tested and shall not exceed 5 OHMs.

3.10 ADJUSTMENT

A. Sprinkler heads shall be adjusted to proper height when installed. Changes in grade or adjustment of head height after installation shall be considered a part of the original contract and at Contractor's expense.

B. Adjust all sprinkler heads for arc, radius, proper trim and distribution to cover all landscaped areas that are to be irrigated.

C. Adjust sprinklers so they do not water buildings, structures, or other hardscape features.

D. Adjust run times of station to meet needs of plant material the station services.

3.11 CLEANING

A. Contractor shall be responsible for cleanliness of jobsite. Work areas shall be swept cleanly and picker up daily.

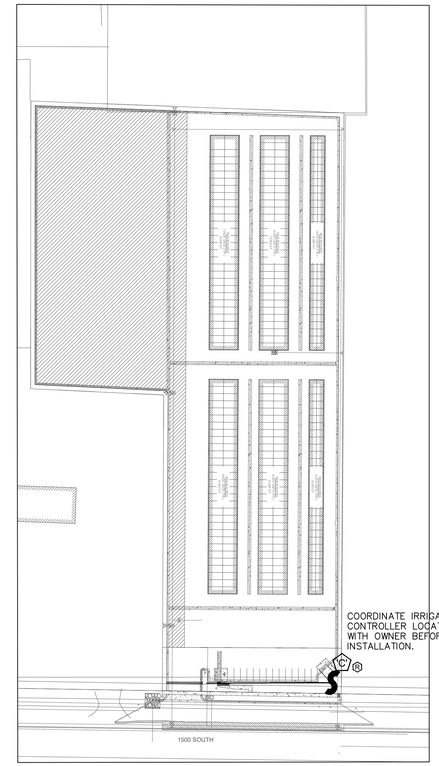
B. Open trenches or hazards shall be protected with yellow caution tape.

C. Contractor is responsible for removal and disposal offsite of trash and debris generated as a result of this Project.

D. OAR shall perform periodic as well as a final cleanliness inspection.

E. Contractor shall leave Project in at least a 'broom clean' condition.

END OF SECTION



1.5" MAINLINE ROUTING ,CONTROLLER AND P.O.C. LOCATION OVERVIEW

ISSUE DATE	PROJECT NUMBER
9/10/2020	UT20031

NO.	REVISION	DATE
1		
2		
3		
4		
5		
6		
7		

PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

N

0' 50' 100' 200' 400'

GRAPHIC SCALE: 1" = 100'

PROJECT INFORMATION

AF STORAGE

16 WEST 1500 NORTH
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Developer / Property Owner:

BISHOP HOLDING, LLC
MATT BISHOP
801-830-7745
SNAPTRUCKING@GMAIL.COM

Building Architect / Engineer:

BENCHMARK CIVIL

BENCHMARK ENGINEERING
& LAND SURVEYING
9130 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
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LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
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www.pkjdesigngroup.com

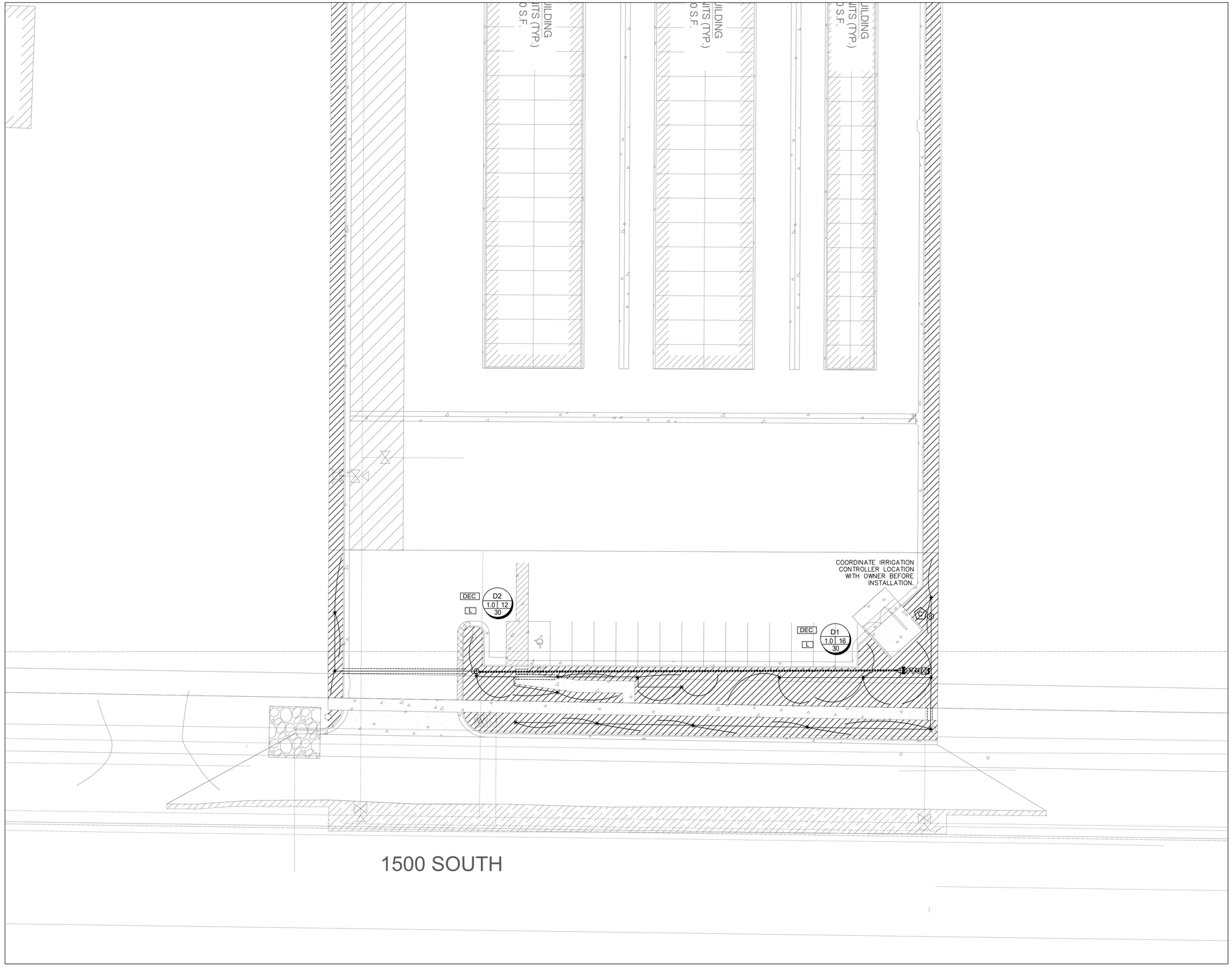
LICENSE STAMP

LICENSED LANDSCAPE ARCHITECT
JEREMY AINSWORTH
812812 - 5301
09/10/2020
STATE OF UTAH

DRAWING INFO	
PM:	KBA
DRAWN:	KBA
CHECKED:	JTA
PLOT DATE:	9/10/2020

IRRIGATION COVER SHEET

IR 100



IRRIGATION LEGEND

SYMBOL	MANUFACTURER—MODEL NUMBER	PAT.	RD.	PSI	GPM Q	T	H	TT	TQ	F
◔ ◓ ◆	RAINBIRD RD04-S-PRS POP UP SPRAY 5 SERIES	Q,T,H,F	5'	30	.10	.15	.20	na	na	.40
◔ ◓ ●	RAINBIRD RD04-S-PRS POP UP SPRAY 8 U-SERIES	Q,T,H,F	8'	30	.26	.35	.52	na	na	1.05
◔ ◓ ●	RAINBIRD RD04-S-PRS POP UP SPRAY 10 U-SERIES	Q,T,H,F	10'	30	.39	.53	.79	na	na	1.58
◔ ◓ ◆	RAINBIRD RD04-S-PRS POP UP SPRAY 12 U-SERIES	Q,T,H,TT,TQ,F	12'	30	.65	.87	1.30	1.74	1.95	2.60
▽ ▽ ▼	RAINBIRD RD04-S-PRS POP UP SPRAY 15 U-SERIES	Q,T,H,TT	15'	30	.92	1.23	1.85	2.48	2.78	3.70
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 SST	SST	15'	30	1.21					
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 EST	EST	15'	30	.61					
	RAINBIRD 5000 SERIES MPR NOZZLES	Q,T,H,F	varies	30	varies	varies	varies	na	na	varies
	RAINBIRD 8005 SERIES #8, #14, #26 NOZZLES	Q,T,H,F	65'	30	6.6	12.6	24.3	na	na	varies
C	CONTROLLER: RAINBIRD ESP-LXD CONTROLLER WITH LIMR REMOTE KIT, CONTRACTOR TO ADJUST LOCATION WITH OWNER PRIOR TO CONSTRUCTION.									
DEC	VALVE DECODER (AT ALL VALVE GROUPINGS) INSTALL PER MANUFACTURER'S SPEC.									
L	LIGHTNING ARRESTER (AT ALL VALVE GROUPINGS) INSTALL PER MANUFACTURER'S SPEC.									
	MASTER VALVE									
	FLOW SENSOR									
R	RAINBIRD WR2-RC WIRELESS RAIN SHUT OFF DEVICE									
	POINT OF CONNECTION (SECONDARY WATER) SEE PLAN FOR SIZE									
	2" T SUPER AMIAD PLASTIC FILTER - INSTALL PER MANUFACTURE'S. RECOMMENDATIONS (130 MICRON)									
Q	QUICK COUPLER: RAINBIRD 44LRC INSTALL PER MANUFACTURER'S SPEC. 10" RND. VALVE BOX. SEE DETAIL									
	ISOLATION BALL VALVE - LINE SIZED INSTALL PER MANUFACTURER'S SPEC.									
	REMOTE CONTROL VALVE: RAINBIRD PESB-NP-PRS-D AUTOMATIC CONTROL VALVE (SIZE AS NOTED ON PLAN) JUMBO BOX-PURPLE LID									
	DRIP CONTROL ZONE KIT: RAINBIRD XCZ-(PER PLAN)-PRBR-COM MED FLOW (SIZE AS NOTED ON PLAN)									
	DRIP CONNECTION. PROVIDE DRIP IRRIGATION TO ALL TREES, SHRUBS AND PERENNIALS IN PLANTER AREAS									
▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪	SUB-MAINLINE: SCHEDULE 40 PVC WITH SCHEDULE 80 FITTINGS, 1.5" DIAMETER 24" MIN. COVER									
———	LATERAL LINE: SCHEDULE 40 PVC WITH SCH. 40 FITTINGS. SEE PIPE SIZING CHART									
~~	DRIP LINE: RAINBIRD XFSP-09-18-100 OR EQUIVALENT									
- - - - - - - - - - - - - - - -	CLASS 200 SLEEVE PER PLAN									
NOT SHOWN	WIRE CHASE. SIZE TO BE TWICE THE DIAMETER OF THE WIRE BUNDLE WITHIN. 1.1/4" DIAMETER MINIMUM									
NOT SHOWN	14 GAUGE SOLID COPPER SINGLE STRAND CONTROL WIRE. INSTALL PER MANUFACTURER'S SPEC. PROVIDE 2 WIRE LOOP SYSTEM.									

DRIP ZONE

TYPE	PART NUMBER	EMITTER FLOW	EMITTER SPACING	ROW SPACING	ROW SPACING
XFS DRIPLINE	XFSP-09-18	.9 GPH	18"	18"	18-21 IN.

TOTAL DRIP ZONE FLOW	20 GPM	TIME TO APPLY 1/4" OF WATER	23
MAX. LATERAL LENGTH OF TUBING	350 FT	REQUIRED NUMBER OF STAKES	500
TOTAL LENGTH OF ZONE DRIPLINE	2,000 FT (varies per plan)	NUMBER OF FLUSH POINTS	2
APPLICATION RATE	.64 IN. / HR	SUGGESTED HEADER & FOOTER PIPE SIZE	CLASS 200 1.25"

*NUMBERS MAY CHANGE DUE TO SIZE OF DRIP ZONE PER PLAN

90 Day Establishment Period Irrigation Schedule (April, May, June)

	Type	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Operating Pressure
Turf	Turf	15 min	15 min	15 min	15 min	15 min	15 min	15 min	30 psi
Shrubs	Shrubs	25 min	0	25 min	0	25 min	0	25 min	40 psi

Note: Begin irrigation 4:00 am, only 1 cycle per day.

Regular Irrigation Schedule (see Seasonal Differential Chart)

	Type	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Operating Pressure
Turf	Turf	15 min	15 min		15 min		15 min		30 psi
Shrubs	Shrubs	45 min		45 min		45 min		45 min	40 psi

Note: Begin irrigation 4:00 am, only 1 cycle per day.

Seasonal Differential

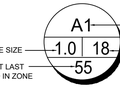
	April	May	June	July	August	Sept.	October
Turf	10 min	10 min	15 min	15 min	15 min	10 min	10 min
Shrubs	30 min	30 min	45 min	45 min	45 min	30 min	30 min

IRRIGATION NOTES

1. ALL CONNECTIONS ARE SECONDARY WATER AND SHOULD BE NOTED AS SUCH. THEREFORE ALL PARTS MUST MEET SECONDARY WATER STANDARDS.
2. ALL PIPE TO BE SCHEDULE 40 PVC PIPE. NO POLY PIPE SHALL BE INCLUDED. FITTINGS UP TO 1.1/2" MUST BE SCHEDULE 40 OR BETTER. FITTINGS LARGER THAN 1.1/2" MUST BE SCHEDULE 80 OR BETTER.
3. CONTRACTOR SHALL HAVE ALL UTILITIES BLUE STAKED PRIOR TO DIGGING. ANY DAMAGE TO THE UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER.
4. PLACE ALL IRRIGATION IN LANDSCAPE AREAS AND ON THE PROPERTY OF THE OWNER.
5. MODIFY LOCATION OF IRRIGATION COMPONENTS TO AVOID PLACING TREES, SHRUBS AND OTHER SITE ELEMENTS DIRECTLY OVER PIPE, PER PLANS. DO NOT LOCATE VALVE BOXES IN LAWN AREAS UNLESS DIRECTED TO BY LANDSCAPE ARCHITECT.
6. CONTRACTOR SHALL INSTALL A 1" THREADED TEE WITH 1" THREADED PLUG AT POINT OF CONNECTION IN ORDER TO BLOW OUT THE SYSTEM WITH AN AIR COMPRESSOR EACH FALL.
7. CONTRACTOR SHALL USE ONLY COMMERCIAL GRADE IRRIGATION PRODUCTS AND IS RESPONSIBLE FOR ENSURING ACCURATE COUNTS AND QUANTITIES OF ALL IRRIGATION MATERIALS FOR BIDDING AND INSTALLATION PURPOSES.
8. INSTALL DRIP IRRIGATION PER DETAILS. CONTRACTOR SHALL MAKE ADJUSTMENTS AS NECESSARY.
9. CONTRACTOR SHALL PROVIDE AND INSTALL SLEEVES FOR ALL PIPES AND WIRES UNDER PAVEMENT AND SIDEWALKS. SLEEVES SHALL BE 2 SIZES LARGER THAN PIPE INSIDE. ALL WIRE SHALL BE IN SEPARATE SLEEVES (NOT SHOWN). ALL CONTROL WIRE SHALL BE INSTALLED IN CLASS 200 PIPE. PLACE JUNCTION BOXES WHERE NECESSARY TO MINIMIZE LONG RUNS OR AT DIRECTIONAL CHANGES.
10. WATER LINES AND ELECTRICAL LINES MUST NOT SHARE CONDUITS. ALL WIRE CONNECTIONS MUST BE CONTAINED IN VALVE BOX WITH 3' OF EXTRA WIRE. WIRE TO BE CONNECTED TO MAIN LINE PIPE WHERE POSSIBLE WITH TAPE AT 25' INTERVALS. SLACK IN CONTROL WIRES REQUIRED AT EVERY CHANGE OF DIRECTION. WIRES MUST HAVE SEPARATE COLORS FOR COMMON, CONTROL AND SPARE. MINIMUM 1 SPARE WIRE FOR EVERY 5 VALVES. ALL CONTROL WIRES TO BE INSULATED 14 GAUGE COPPER. ALL SPARE WIRES MUST "HOME RUN" TO CONTROLLER AND SPARE WIRES AVAILABLE AT ALL VALVE MANIFOLDS AND CLUSTERS.
11. ALL SLEEVES INSTALLED SHALL BE DUCT TAPED TO PREVENT DIRT OR OTHER DEBRIS ENTERING PIPE. ALL SLEEVES SHALL BE IDENTIFIED BY WOOD OR PVC STAKES AND BE SPRAY PAINTED WITH MARKING PAINT. REMOVE STAKES ONCE IRRIGATION SYSTEM IS COMPLETE.
12. IRRIGATION SYSTEM MUST CONTAIN CHECK VALVES TO PREVENT LOW POINT DRAINAGE.
13. SPACE ALL SPRAY HEADS 2" AWAY FROM ANY HARDSCAPE.
14. CONTRACTOR SHALL MATCH PRECIPITATION RATES AS MUCH AS POSSIBLE FOR ALL LANDSCAPED AREAS. OVERHEAD IRRIGATION MUST HAVE A MINIMUM DU (DISTRIBUTION UNIFORMITY) OF 60%.
15. IRRIGATION CONTRACTOR SHALL PRESSURE TEST MAINLINE FOR LEAKS PRIOR TO BACKFILLING.
16. MAIN LINES SHALL BE 18" DEEP MIN. AND LATERAL LINES 12" DEEP MIN. NO ROCK GREATER THAN 1/2" DIAMETER SHALL BE ALLOWED IN TRENCHES. TRENCHING BACKFILL MATERIAL SHALL BE COMPACTED TO PROPER FINISHED GRADE.
17. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CITY AND/OR COUNTY CODES. THE CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY PERMITS.
18. IRRIGATION INSTALLATION TO COMPLY WITH APPLICABLE CITY SPECIFICATIONS AND DRAWINGS.
19. ACTUAL INSTALLATION OF IRRIGATION SYSTEM MAY VARY SOMEWHAT FROM PLANS. THE CONTRACTOR IS RESPONSIBLE TO MAKE ADJUSTMENTS AS NEEDED TO ENSURE PROPER COVERAGE OF ALL LANDSCAPED AREAS.
20. CONTRACTOR SHALL INSTALL IRRIGATION SYSTEM WITH HEAD TO HEAD COVERAGE IN ALL TURF AREAS. USE VAN AND/OR U-SERIES NOZZLES AS NECESSARY TO PROVIDE PROPER COVERAGE AND TO KEEP WATER OFF OF BUILDINGS AND HARDSCAPES.
21. POWER TO CONTROLLER TO BE PROVIDED BY OWNER. OWNER TO SPECIFY EXACT LOCATION OF CONTROLLER. INSTALL PER MANUFACTURERS INSTRUCTIONS. CONTRACTOR SHALL INSTALL A RAIN SENSOR WITH CONTROLLER UNLESS OTHERWISE DIRECTED BY OWNER OR LA.
22. INVESTIGATE TO MAKE SURE THAT THE IRRIGATION SYSTEM IS, IN FACT, BEING CONNECTED TO A SECONDARY SYSTEM. IF IT IS NOT CONNECTED TO SECONDARY, CONTACT THE OWNER AND LANDSCAPE ARCHITECT TO COORDINATE PROVISION AND INSTALLATION OF A BACKFLOW PREVENTOR.
23. LATERAL LINES SHALL BE NO SMALLER THAN 3/4". LANDSCAPE CONTRACTOR TO ENSURE THE FOLLOWING PIPE SIZES DO NOT EXCEED THE SUGGESTED GPM LISTED BELOW:

3/4"	8 GPM
1"	12 GPM
1-1/2"	30 GPM
2"	53 GPM
2-1/2"	75 GPM
3"	110 GPM
4"	180 GPM

VALVE ID TAG



NOTE:
1. VALVE ID TAGS ARE LOCATED NEAR VALVES IN THE ORDER THE VALVES APPEAR ON THE DRAWING

ISSUE DATE	PROJECT NUMBER
9/10/2020	UT20031

NO.	REVISION	DATE
1		
2		
3		
4		
5		
6		
7		

PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

N

0' 10' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

PROJECT INFORMATION

AF STORAGE
16 WEST 1500 NORTH
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Developer / Property Owner:
BISHOP HOLDING, LLC
MATT BISHOP
801-830-7745
SNAPTRUCKING@GMAIL.COM

Building Architect / Engineer:
BENCHMARK ENGINEERING & LAND SURVEYING
9130 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
WWW.BENCHMARKCIVIL.COM

LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture / Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 960-2698
www.pkjdesigngroup.com

LICENSE STAMP

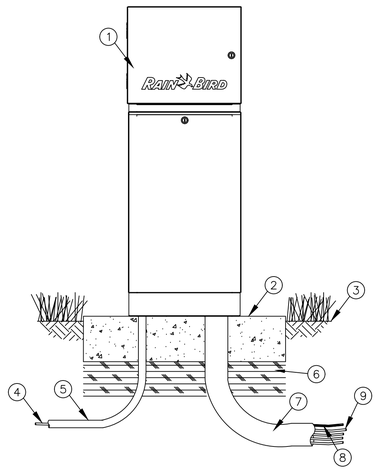
LICENSED LANDSCAPE ARCHITECT
JEREMY ANSWORTH
812812-5501
09/10/2020
STATE OF UTAH

DRAWING INFO

PM: KBA
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CHECKED: JTA
PLOT DATE: 9/10/2020

IRRIGATION PLAN

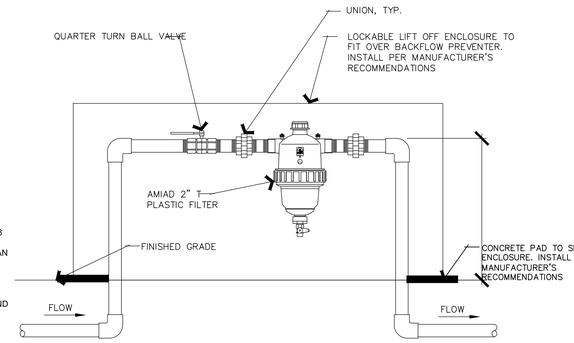
IR 101



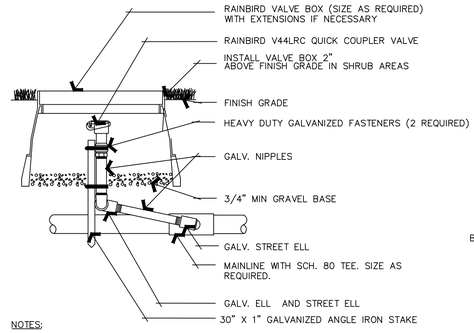
1. IRRIGATION CONTROLLER: RAIN BIRD ESP-LXMEF CONTROLLER WITH FLOW SMART MODULE IN LXMM METAL CABINET AND LXMMPED METAL PEDESTAL. INSTALL CONTROLLER, CABINET AND PEDESTAL PER MANUFACTURER'S RECOMMENDATIONS.
2. CONCRETE PAD: 6-INCH MINIMUM THICKNESS
3. FINISH GRADE
4. POWER SUPPLY WIRE
5. 1-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR POWER SUPPLY
6. COMPACTED SUBGRADE
7. 3-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL FOR STATION WIRES
8. FLOW SENSOR WIRE (PE 39, 89 OR 54) TO FLOW SENSOR
9. MASTER VALVE AND REMOTE CONTROL VALVE WIRES

NOTES:
1. ESP-LXMEF CONTROLLER IS AVAILABLE IN 8- OR 12-STATION BASE MODELS. ADDITIONAL MODULES IN 4-, 8- AND 12-STATION VERSIONS MAY BE ADDED TO BRING THE CONTROLLER UP TO 48 STATIONS MAXIMUM.
2. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE USED IN CONTROLLER.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.

A ESP-LXME CONTROLLER IN METAL PEDESTAL — NOT TO SCALE — PKJ DESIGN GROUP

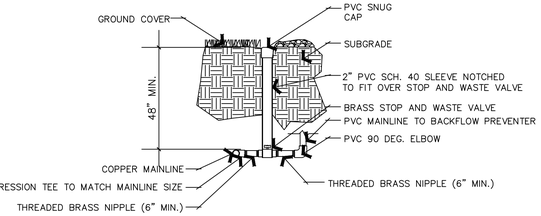


B 2" PLASTIC FILTER DETAIL — NOT TO SCALE — PKJ DESIGN GROUP



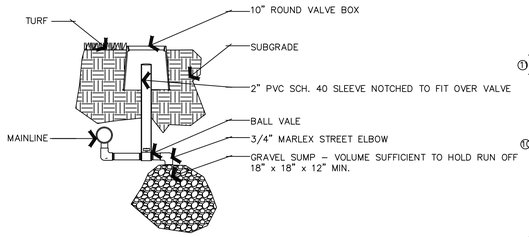
NOTES:
1. FLUSH ALL PIPING PRIOR TO INSTALLING VALVE.
2. WRAP ALL THREADS WITH TEFLON TAPE. 1 1/2 TO 2 WRAPS MAXIMUM.
3. COMPACT SOILS AROUND VALVE BOX TO 80% OF ORIGINAL DRY DENSITY.
4. INSTALL GEOFABRIC UNDER VALVE BOXES AND TAPE TO PIPE NIPPLES AND VALVE BOX.
5. BOX COLOR – GREEN IN TURF AND TAN IN PLANTER AREAS.
6. IRRIGATION SYSTEM TO BE BLOWN OUT WITH AIR COMPRESSOR THROUGH QUICK COUPLERS BEFORE FREEZING TEMPERATURES OCCUR, TYP.

C RAINBIRD QUICK COUPLER — NOT TO SCALE — PKJ DESIGN GROUP



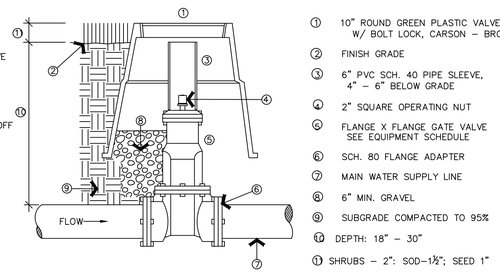
NOTES:
1. ALL PVC NIPPLES AND ELBOWS TO BE SCH. 40 UNLESS OTHERWISE NOTED.
2. PROVIDE VALVE KEY TO OWNER

D STOP AND WASTE VALVE ASSEMBLY — NOT TO SCALE — PKJ DESIGN GROUP



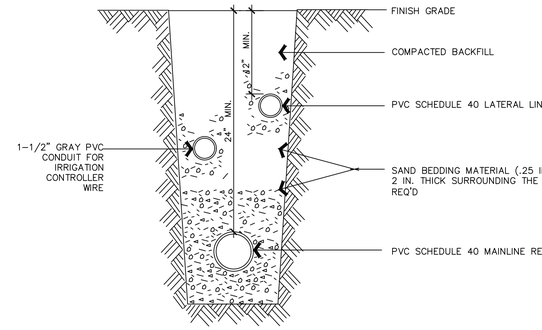
NOTES:
1. ALL PVC NIPPLES AND ELBOWS TO BE SCH. 80 UNLESS OTHERWISE NOTED.
2. PROVIDE VALVE KEY TO OWNER

E MANUAL DRAIN ASSEMBLY — NOT TO SCALE — PKJ DESIGN GROUP

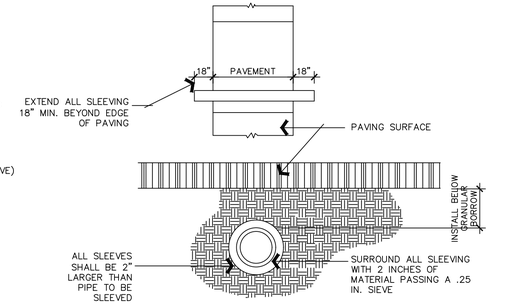


1. 10" ROUND GREEN PLASTIC VALVE BOX W/ BOLT LOCK, CARSON – BROOKS
2. FINISH GRADE
3. 6" PVC SCH. 40 PIPE SLEEVE, 4" – 6" BELOW GRADE
4. 2" SQUARE OPERATING NUT
5. FLANGE X FLANGE GATE VALVE SEE EQUIPMENT SCHEDULE
6. SCH. 80 FLANGE ADAPTER
7. MAIN WATER SUPPLY LINE
8. 6" MIN. GRAVEL
9. SUBGRADE COMPACTED TO 95%
10. DEPTH: 18" – 30"
11. SHRUBS – 2": SOD–1½"; SEED 1"

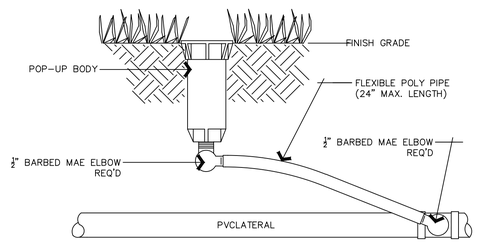
F GATE VALVE ASSEMBLY — NOT TO SCALE — PKJ DESIGN GROUP



G TRENCHING DETAIL — NOT TO SCALE — PKJ DESIGN GROUP

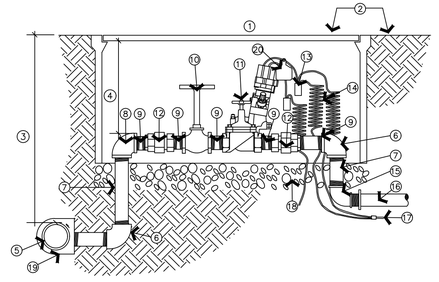


H TYPICAL SLEEVING — NOT TO SCALE — PKJ DESIGN GROUP



NOTES:
1. INSTALL SPRAY AND ROTARY HEADS PER THIS DETAIL.
2. INSTALL 2" AWAY FROM HARDSCAPES.

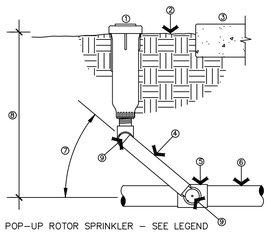
I SPRAY HEAD DETAIL — NOT TO SCALE — PKJ DESIGN GROUP



NOTES:
1. ONE REMOTE CONTROL VALVE PER BOX .
2. ALL FITTINGS AND PIPE IN MANIFOLD SHALL BE THREADED SCH. 80 PVC USING TEFLON TAPE AND #5 RECTOR SEAL.

1. CARSON–BROOKS 1419–12 STANDARD OR 1220–12 JUMBO VALVE BOX WITH STAINLESS STEEL BOLTS (BOLT DOWN LID).
2. INSTALL AT GRADE
3. 30" MAX. DEPTH
4. 10"–14"
5. MAIN WATER SUPPLY LINE
6. PVC SCH. 80 ELBOW
7. PVC SCH. 80 NIPPLE; LENGTH AS REQUIRED (TYP.)
8. PVC SCH. 80 ELL SAME SIZE AS VALVE
9. SCH. 80 NIPPLE. SIZE AS NECESSARY
10. MILWAUKEE BRAND OR APPROVED AMERICAN–MADE BRASS GATE VALVE W/ NON RISING STEM (LINE SIZE)
11. ELECTRIC CONTROL VALVE – SEE EQUIPMENT SCHEDULE
12. PVC SCH. 80 UNION
13. WATER TIGHT CONNECTORS (3M DBY ONLY)
14. PROVIDE 36" EXPANSION LOOP AT EACH WIRE CONNECTOR IN BOX
15. SCH. 80 ELBOW WITH SCH. 80 NIPPLE INTO SxT BUSHING TO LATERAL
16. LATERAL LINE
17. CONTROL WIRES
18. 6" MINIMUM DEPTH OF WASHED 3/4" GRAVEL
19. PVC SCH. 80 TEE SxSxS WITH SCH. 80 SxT BUSHING OR DOUBLE STRAP SADDLE.
20. ID TAG: RAINBIRD VID SERIES OR APPROVED EQUAL

J CONTROL VALVE ASSEMBLY — NOT TO SCALE — PKJ DESIGN GROUP



1. POP–UP ROTOR SPRINKLER – SEE LEGEND
2. FINISH GRADE
3. NOTE: ALL ROTOR HEADS TO BE PLACED 2" CLEAR OF ALL HARDSCAPE SURFACES
4. SCH. 80 THREADED NIPPLE
5. PVC SCH. 40 SxSxT TEE (OR ELL)
6. PVC LATERAL LINE, SIZE AS NOTED ON PLAN
7. SWING JOINT ARM INSTALLED AT ANGLE BETWEEN 30 AND 45 DRG. OF LATERAL PIPE. USE MALE THREAD MODEL
8. DEPTH – SEE NOTES & TRENCH DETAIL
9. MARLEX STREET ELL'S (3)

I POP UP ROTOR DETAIL — NOT TO SCALE — PKJ DESIGN GROUP

ISSUE DATE	PROJECT NUMBER
9/10/2020	UT20031

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PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

PROJECT INFORMATION

AF STORAGE
16 WEST 1500 NORTH
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Developer / Property Owner:
BISHOP HOLDING, LLC
MATT BISHOP
801-830-7745
SNAPTRUCKING@GMAIL.COM

Building Architect / Engineer:
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9130 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
WWW.BENCHMARKCIVIL.COM

LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture / Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 960-2698
www.pkjdesigngroup.com

LICENSE STAMP

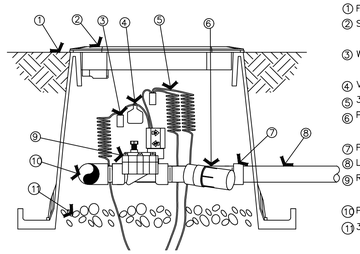
LICENSED LANDSCAPE ARCHITECT — ANSEM ANSWORTH — 812812-5301 — 09/10/2020 — STATE OF UTAH

DRAWING INFO

PM:	KBA
DRAWN:	KBA
CHECKED:	JTA
PLOT DATE:	9/10/2020

IRRIGATION DETAILS

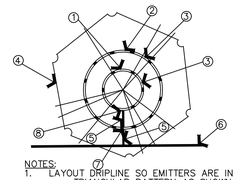
IR 501



① FINISH GRADE
② STANDARD VALVE BOX WITH COVER:
RAIN BIRD VB–STD
③ WATERPROOF CONNECTION:
RAIN BIRD DB SERIES
④ VALVE ID TAG
⑤ 30–INCH LINEAR LENGTH OF WIRE, COILED
⑥ PRESSURE REGULATING FILTER:
RAIN BIRD PRF–100–RBY (INCLUDED IN XCZ–100–PRF KIT)
⑦ PVC SCH 40 FEMALE ADAPTOR
⑧ LATERAL PIPE
⑨ REMOTE CONTROL VALVE:
RAIN BIRD 100–DV (INCLUDED IN XCZ–100–PRF KIT)
⑩ PVC SCH 40 TEE OR ELL TO MANIFOLD
⑪ 3–INCH MINIMUM DEPTH OF 3/4–INCH WASHED GRAVEL

L DRIP CONTROL VALVE ASSEMBLY

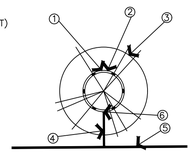
NOT TO SCALE — PKJ DESIGN GROUP



TREE

① 8' RADIUS
② 16' RADIUS
③ RAIN BIRD XFS–09–18–100 OR EQUIVALENT
④ TREE (DECIDUOUS OR EVERGREEN)
⑤ RAIN BIRD XT–700 TUBING OR EQUIVALENT AS APPROVED BY ARCHITECT
⑥ LATERAL LINE
⑦ 4–WAY BARBED TEE
⑧ BARBED TEE

NOTES:
1. LAYOUT DRIPLINE SO EMITTERS ARE IN TRIANGULAR PATTERN AS SHOWN
2. APPROXIMATELY 16.2 GPH PER TREE



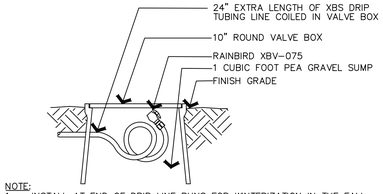
SHRUB

① 12" RADIUS
② RAIN BIRD XFS–09–18–100 OR EQUIVALENT
③ SHRUB
④ RAIN BIRD XT–700 TUBING OR EQUIVALENT AS APPROVED BY ARCHITECT
⑤ LATERAL LINE
⑥ BARBED TEE

NOTE:
1. APPROXIMATELY 5.4 GPH PER SHRUB

M DRIP IRRIGATION - IN LINE EMITTERS

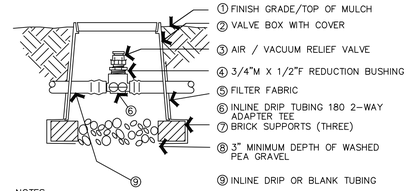
NOT TO SCALE — PKJ DESIGN GROUP



NOTE:
1. INSTALL AT END OF DRIP LINE RUNS FOR WINTERIZATION IN THE FALL.

N FLUSH CAP BOX

NOT TO SCALE — PKJ DESIGN GROUP



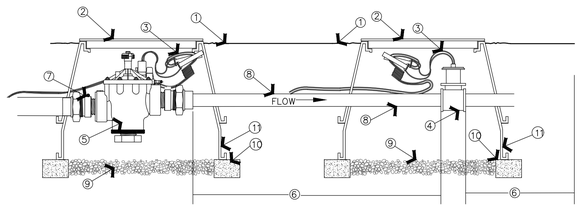
① FINISH GRADE/TOP OF MULCH
② VALVE BOX WITH COVER
③ AIR / VACUUM RELIEF VALVE
④ 3/4"M X 1/2"F REDUCTION BUSHING
⑤ FILTER FABRIC
⑥ INLINE DRIP TUBING 180 2–WAY ADAPTER TEE
⑦ BRICK SUPPORTS (THREE)
⑧ 3" MINIMUM DEPTH OF WASHED PEA GRAVEL
⑨ INLINE DRIP OR BLANK TUBING

NOTES:
1. SECURE ALL BARB FITTINGS WITH A STAINLESS STEEL PINCH CLAMP.
2. INSTALL A AIR/VACUUM RELIEF VALVE AT HIGH POINTS WITHIN DRIP ZONE.
3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.

O DRIP AIR/VACUUM RELIEF VALVE ASSEMBLY

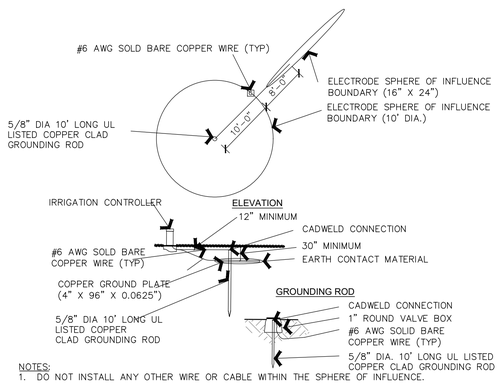
NOT TO SCALE — PKJ DESIGN GROUP

① FINISH GRADE
② GREEN VALVE BOX AND COVER
③ CONTROL WIRES WITH 12" MIN. SERVICE COIL AND WATERPROOF WIRE SPLICE CONNECTORS –
④ FLOW SENSOR PER IRRIGATION LEGEND
⑤ RAIN BIRD PESB SERIES MASTER VALVE
⑥ STRAIGHT PIPE REQUIRED: MINIMUM 10x PIPE DIAMETER UPSTREAM & MINIMUM 5x PIPE DIAMETER DOWNSTREAM
⑦ UNIONS
⑧ PVC MAINLINE – LENGTH AS REQUIRED
⑨ 6" DEPTH OF WASHED ¾" GRAVEL
⑩ CONTINUOUS BRICK SUPPORTS
⑪ VALVE BOX EXTENSIONS REQUIRED



P MASTER VALVE & FLOW SENSOR

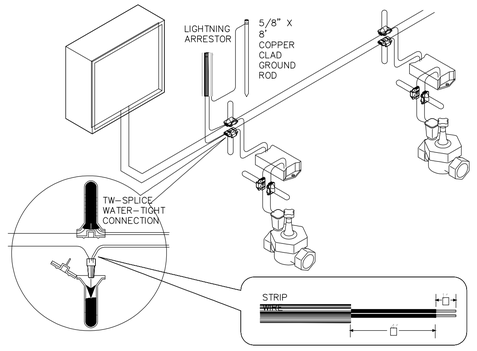
NOT TO SCALE — PKJ DESIGN GROUP



NOTES:
1. DO NOT INSTALL ANY OTHER WIRE OR CABLE WITHIN THE SPHERE OF INFLUENCE.
2. PLACE 100 LB POWER SET SOIL AMENDMENT TO EACH PLATE AS PER MANUFACTURER'S RECOMMENDATIONS.

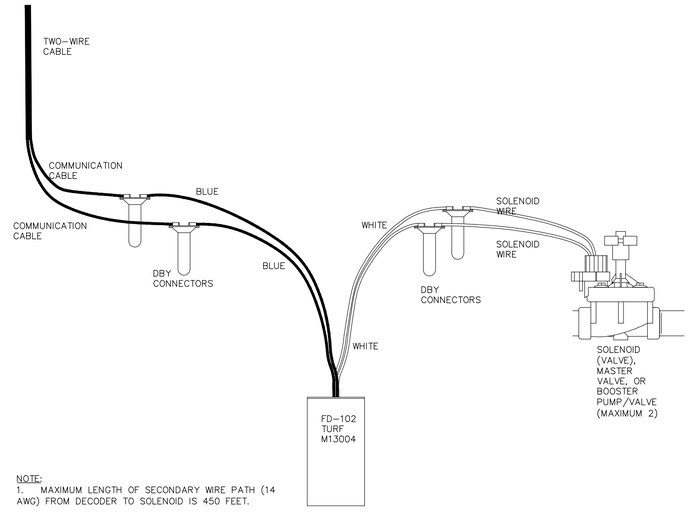
Q GROUNDING DETAIL

NOT TO SCALE — PKJ DESIGN GROUP



R 2-WIRE CONNECTION

NOT TO SCALE — PKJ DESIGN GROUP



NOTE:
1. MAXIMUM LENGTH OF SECONDARY WIRE PATH (14 AWG) FROM DECODER TO SOLENOID IS 450 FEET.

S DECODER WIRING

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PROJECT INFORMATION

AF STORAGE
16 WEST 1500 NORTH
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Developer / Property Owner:
BISHOP HOLDING, LLC
MATT BISHOP
801-830-7745
SNAPTRUCKING@GMAIL.COM

Building Architect / Engineer:
BENCHMARK ENGINEERING & LAND SURVEYING
9130 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
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3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 960-2698
www.pkjdesigngroup.com

LICENSE STAMP

LICENSED LANDSCAPE ARCHITECT
JEREMY ANDREWS
8128121-5301
09/10/2020
ELECTRONIC SEAL
STATE OF UTAH

PM:	KBA
DRAWN:	KBA
CHECKED:	JTA
PLOT DATE:	9/10/2020

IR 502

Hearing, review and action on amendments to Section 17.4.401 (CC-1) of the American Fork City Development Code

Attached is a draft of revisions to the CC-1 zone. Consideration of items brought forward during the two dates this went to Planning Commission, for discussion, have been incorporated. Revisions to allowed uses within the zone have been made, as have some basic design parameters. The main purpose of the revisions is to allow residential uses downtown, as well as updating and refining allowed uses within the area.

Upon review and a motion of recommendation, this will move to the City Council for final action.

Potential Motions

APPROVAL

Mr. Chairman, I move that we recommend approval of the amendments to Section 17.4.401 of the Development Code.

DENIAL

Mr. Chairman, I move that we recommend denial of the amendments to Section 17.4.401 of the Development Code.

TABLE

Mr. Chairman, I move that we table action on the amendments to Section 17.4.401 of the Development Code.

Sec 17.4.401 CC-1 Central Commercial Zone

1. Intent. The intent in establishing the CC-1 central commercial zone is to provide a place where retail and service uses can be constructed and maintained which will serve the needs of the citizens of American Fork City and surrounding areas. It is the further intent in establishing this zone to maintain the central business district as the "heart of the city" ~~and to these ends, to promote its development in step with the increase in population within the trading area~~ allowing residential units to be located therein while maintaining street level commercial uses. The uses characteristic of this zone are retail stores, banks, office buildings, theaters, hotels, ~~and~~ a wide variety of specialty shops, restaurants, and higher density residential uses. Conversely, uses which tend to create business dead spots, cause undue scattering of business and generally tend to thwart the use of the land for its primary purpose~~s, have been~~ shall be excluded from the zone.
2. Permitted ~~and conditional~~ uses. The following buildings, structures, and uses of land shall be permitted upon compliance with the requirements set forth in this code.
    1. ~~Caretaker~~ Multi-family residential dwellings when located above or adjacent to a permitted commercial/non-residential establishment. There shall be no maximum density for residential units within the zone. Ground or main level residential uses shall be prohibited along Main Street. Provision of required off-street parking stalls shall determine the number and subsequent density of residential units.
    2. Hotels and motels.
    3. General retail stores and shops providing goods and services for sale at retail in the customary manner, provided that all storage and sales activity shall be contained within a building. ~~Also, manufacturing and processing activities which are an integral part of and incidental to the retail establishment.~~
    4. Office buildings, medical clinics~~, hospital~~.
    5. Restaurants and ~~food drive-ins~~ fast food with sit-down and/or take-out. Fast food with drive through service shall not be permitted along Main Street.
    6. Personal service establishments, such as barber and beauty shops, photographic studios, shoe repair, laundries (commercial and self-service), reception centers, and similar establishments.
    7. Automotive service establishments, including gasoline stations, car washes, parking lots ~~and storage garages~~, and minor automotive repair establishments.
    8. Public parks and buildings.
    9. Establishments of the sale of hardware, lumber, plumbing and heating equipment and similar building products provided that there shall be no outside storage or display.
    10. ~~Automobile, motorcycle, snow mobile sales structures and lots (for both new and used units). Also the related repair facilities when such facilities are included as an integral part of the sales structure.~~
    11. Recreational enterprises including bowling alleys, recreation centers, motion picture theaters (indoor only), athletic clubs, private clubs, and fraternal lodges.
    12. Funeral homes.
    13. ~~Hospitals.~~
    14. Accessory signs in accordance with the applicable provisions of Section 17.5.128.
    15. Check Cashing and similar businesses subject to the provisions of Section 17.6.114 of this code and Section 5.30 of the city code.
    16. Permitted accessory uses. Accessory uses and structures shall be permitted in the CC-1 zone provided they are incidental to, and do not substantially alter the character of the permitted principle use or structure. such permitted accessory uses and structures include, but are not limited to buildings such as garages, carports, equipment storage buildings, and supply storage buildings which are customarily used in conjunction with and incidental to a principle use or structure permitted in the CC-1 zone.

17. Ancillary commercial structures subject to the conditions set forth under Section 17.6.105.
18. Pre-schools and day care nurseries, subject to approval of a site plan in accordance with the provisions of Section 17.6.101.
19. Other uses similar to the foregoing which are determined by the planning commission to be similar to and in harmony with the intent of the zone, but not including self service storage facilities (mini-warehouse).
20. Low power radio service antenna facilities, subject to the provisions of Section 17.6.112 of this code.
21. Specialty schools, subject to the approval of a site plan in accordance with the provisions of Section 17.6.101.

3. Area, width, and location requirements. There shall be no area, width, and location requirements for ~~commercial~~ buildings and structures constructed in accordance with the building code except that an area sufficient to accommodate parking, loading, unloading and vehicular access shall be provided and maintained.
4. Special provisions.
    1. All material, merchandise, and equipment (except vehicles in running order) shall be stored within an enclosed building.
    2. All display, sales and repair activities shall be conducted within a fully enclosed building, except those activities that are customarily and appropriately conducted in the open, including but not limited to automobile sales lots and automobile service stations, temporary sales of Christmas trees, and nursery stock, shall be permitted outside a building unless otherwise prohibited under the terms of this code.
    3. No dust, odor, smoke, vibration, or intermittent light, glare, or noise shall be permitted which is discernible beyond the premises except for normal traffic movement.
    4. All off-street parking shall be hard-surfaced. Parking areas shall be located toward the interior of properties. Parking areas shall not front public streets and must be located in a project's interior.
    5. All buildings ~~located adjacent to~~ abutting a ~~major~~ street shall have at least one entrance~~-way~~ facing onto said street, with a maximum building setback range of 10'-15' from said street. At least fifty percent of any wall area that faces a street or other public space shall contain display areas, windows, or doorways. Windows must allow views into working areas or lobbies, pedestrian entrances or display areas. Walls facing side streets must contain at least twenty-five percent of the wall space in windows, display areas, or doors. Blank walls (i.e., walls without any doors or windows) are prohibited. A variety of compatible exterior materials (minimum 4), colors and design shall be used on all buildings. Architectural style shall consider historical precedent and material used within the downtown area and compliment that precedent. All buildings and structures located at the edge of the CC-1 zone shall be of a height consistent with those within the neighboring zone (two-stories maximum height).
    6. All buildings and uses within this zone shall comply with all applicable supplementary development standards as set forth in this code.
    7. All gasoline service station pumps shall be set back at least twenty feet from all property lines.
    8. Prior to the issuance of a building permit for any development within the zone, a site plan shall be submitted to and approved by the planning commission. Said site plan shall be prepared and approved in accordance with the provisions of Section 17.6.101.
    9. As a means of mitigating safety hazards or adverse visual impacts the city may require, as a condition of site plan approval, the installation of landscape features. Where landscaping is required, the site plan shall, in addition to all other plan elements, contain a landscape plan showing the location, type and initial size of all planting materials and other landscape features, and the location of the proposed sprinkler system.

AMERICAN FORK CITY
PLANNING COMMISSION MINUTES
SEPTEMBER 2, 2020

The American Fork City Planning Commission met in a regular session on September 2, 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	
	Ryan Hunter	-attended part of meeting
	Christine Anderson	
	Harold Dudley	-attended part of meeting
	Rod Brocious	
	Geoff Dupaix	

Absent:

Staff Present:	Adam Olsen, City Planner
	Wendelin Knobloch, Planner
	Ben Hunter, Engineer
	Lisa Halversen, Administrative Assistant

Others Present:

Public Comments Received:

1. Discussion on amendments to the CC-1 zone

Mr. Adam Olsen displayed a draft of potential changes to the CC-1 zone. Comments from the August 5th Planning Commission meeting were taken into consideration and formulated within the draft. While the intent is to allow residential uses within the zone, he asked commissioners to look at the allowed commercial uses and suggest changes if some of the uses do not seem fitting for a downtown core. If there are uses not listed that should be, he asked for suggested additions.

As this was a discussion item, no formal action will be taken. Upon reaching agreement among commissioners, this issue will then be scheduled for a formal public hearing and recommendation to City Council.

Mr. Olsen wants commissioners to look at all of the possible permitted uses. He stated that in section 4 of the code, number 5, he added language to ensure that buildings are pushed up to the street front as much as possible, with language to promote visibility into buildings to enhance the

pedestrian atmosphere. In number 4 of section 4, he added that parking would be to the interior of the buildings instead of in the front. He opened the meeting up to the commissioners for comments.

Chairman Woffinden offered his opinion about section 2, number 10. He doesn't like allowing auto dealers, he wants to avoid having "mom and pop" dealers take over old houses and put cars in the front yard.

Mr. Olsen asked if the Chairman wanted to take these out of the CC zone entirely, or just put a minimum size requirement in for that type of use.

The chairman thought that we ought to get rid of it in the downtown altogether, they take too much space and a bunch of used cars in the front yard isn't attractive.

Ms. Anderson and Mr. Dupaix agreed that auto dealerships aren't conducive to a walkable pedestrian community.

Ms. Anderson also felt that number 9, the hardware store, doesn't really fit as well.

Mr. Brocious talked about his experience living in Chicago, he felt that there are times when a downtown resident may need something from a hardware store. He would allow that kind of business but not allow outside storage.

Mr. Olsen gave the example of Bert's Waterworks on Main Street, that business doesn't seem to be too out of character.

Ms. Anderson agreed, and said she was thinking of something big like a Home Depot or big-box store. The smaller space will probably limit the size of their displays.

Mr. Chris Christiansen gave the example of Ace Hardware, he felt that a smaller store like that would be appropriate.

Mr. Geoff Dupaix questioned allowing hospital uses. He doesn't believe that something like American Fork Hospital would be appropriate for the downtown area.

Mr. Olsen replied that hospitals are more suited for the Professional Office zone, they typically require larger spaces and more parking.

Chairman Woffinden said that most hospitals don't want to be in the center of town anyway, it's too hard to get in and out.

Mr. Olsen asked commissioners their opinion about fast food and drive-through restaurants.

Ms. Anderson is unsure. She had ideas of what Main Street should look like that don't include a drive-through on Main Street. Other places in the CC-1 zone would be OK for these types of businesses, she just feels like maybe there should be different rules for the Main Street area specifically. That would need to be more restrictive.

Mr. Olsen said that the main idea of making changes is to add residential into the CC-1 and downtown core.

Mr. Dupaix is fine without drive-through food in the area of Main Street. The goal is to make it walkable so there will need to be a few more restrictions. Drive-throughs require additional space, which can create conflicts with plans to be pedestrian-friendly.

Mr. Wendelin Knobloch added that successful drive-through restaurants are the antithesis of walkable areas.

Ms. Anderson asked how we limit such businesses as funeral homes, etc. from being on Main Street but still allow them in the CC-1.

Mr. Olsen replied that by their nature they're not a good fit in a downtown core. These businesses need more space and parking and wouldn't locate there.

Chairman Woffinden agreed that there might need to be a more restrictive core of the CC-1.

Mr. Olsen pointed out that the CC-1 zone is already a small zone that is only about a block both ways. He suggests just adding wording such as "not fronting Main Street."

Ms. Anderson asked if what they are writing now is specifying what the current uses are or what the future uses will be.

Mr. Olsen said that if commissioners take a use out that is currently allowed and there is one of those businesses now, they will be grandfathered in. This use will be allowed to continue if it is continuous. In theory, you can remove a funeral home from the zone and it would not affect a current funeral home in the zone unless they ceased operations for a year or more. He believes that parking will be a limiting factor for many businesses that we don't necessarily want in that area.

Mr. Brocious wanted to be sure that residential uses are limited to the second floor and up, that the main level is only for commercial use.

Mr. Olsen said that on Main Street that would be a given, but on some of the side streets it might be appropriate to allow residential use on ground level.

Ms. Anderson thought that it might be good to specify a percentage of commercial/residential mix on the main level, she doesn't want the commercial to totally drop off after you leave Main Street.

Mr. Olsen said that Provo has some strictly residential buildings in the center of the block in the downtown, they are tucked behind the first level buildings in the interior of the block.

Mr. Dupaix said that sometimes there are places with two or three levels of commercial, with residential on top of that. He doesn't want to limit commercial to just the main floor.

Mr. Olsen replied that you probably don't want to force commercial to be on any floor besides the first, but it may extend beyond the first floor if desired.

Ms. Anderson asked about the location of parking lots as specified in number 7.

Mr. Olsen said that he has addressed this in number 4 of "special provisions." He can also add language that parking areas may not front streets and must be in the interior or rear. Parking in the front can be prohibited, building setbacks in the front will be 10 feet.

Mr. Brocious asked about special provision 5, the frontage and display requirements seem to apply mostly to Main Street. Do we really need this requirement in areas not on Main Street?

Ms. Anderson brought up the buildings near Fresh Market, they chose to have glass fronts, maybe that's a good commercial model.

Mr. Olsen said that if you have an interior residential building it probably wouldn't front the street anyway.

Mr. Brocious pointed out that someone may buy an old building and not want to change the front. They may be grandfathered in anyway.

There is a discussion regarding "fronting," "abutting" and "adjacent to" as terms describing relationship to a street. Mr. Olsen feels that "abutting" may be the best word to use.

Chairman Woffinden suggested that if commissioners use "abutting," it ought to also be consistently used across the entire code.

Mr. Brocious added that if residential use will be above commercial use, there ought to be a requirement regarding what residential use will be allowed to put on the outside of the building, like clotheslines, etc.

Mr. Olsen replied that there will be different treatments on the outside. There will be a requirement for a minimum number of mixed materials.

Ms. Anderson suggestsed four as a minimum mixed materials requirement.

Mr. Olsen said that commissioners can make additional tweaks as staff starts to see plans come in. This is a preparatory exercise, there aren't current plans under consideration for this area.

Ms. Anderson assumed that special provision 5 only restricts the ground level use, Mr. Olsen affirmed.

Mr. Dupaix asked about a restaurant along the sidewalk, can it use the additional sidewalk space for outside dining? He felt that maybe we should give them a range of like 10-15 feet for setbacks.

Mr. Olsen said that Park City has variation in their setbacks, some are recessed and some are pushed out.

Commissioners liked the idea of outside dining on the sidewalks.

Chairman Woffinden added that sidewalk dining is a hassle in the winter with the snow, especially on the north-facing side of Main Street.

Ms. Anderson asked about the front setbacks that should be specified. She felt that 5 feet might be too little.

Mr. Knobloch suggested that planning commissioners can make adjustments to the plans as they come in. A variety of building front setback possibilities may be allowed while not giving enough space for parking.

Mr. Olsen reviewed the types of signs allowed in downtown. They are restricted to what can go on the building, and no pole signs are allowed.

Ms. Anderson liked the idea of hanging signs for pedestrians, and said that no electronic signs are allowed downtown. She also inquired about how to keep the area family-friendly, with no adult bookstores, etc.

Mr. Olsen replied that adult uses are only allowed in industrial zones.

Ms. Anderson asked about sidewalks, will they be regular or stamped concrete?

Mr. Olsen said that UDOT controls most of the space, standard sidewalks would be most probable. He asked where commissioners would like to go from here.

Chairman Woffinden suggested moving forward to a public hearing.

Mr. Olsen indicated that he will prepare a draft, a public hearing can be scheduled and this item can be moved forward.

Ms. Anderson asked about check-cashing establishments as a permitted use.

Mr. Olsen said that they are already limited to a mile apart, and he thought that based on the numbers, the city is at its limit of those businesses.

Ms. Anderson thought that provision 2 number 1 regarding multi-family residences is ambiguous.

Mr. Olsen will put together a draft. As development comes in there might be changes, but this will give something to work with.

Ms. Anderson asked about the areas where they differ, such as what Main Street requirements will be, do they need further discussion specifically about Main Street?

Mr. Olsen said that he has made notes and commissioners are free to give him more suggestions.

2. Other Business

There was no other business to discuss.

3. Site Plan Committee Report

Mr. Knobloch reviewed the upcoming Planning Commission items. The next meeting will be held on Wednesday, September 16. A CC-1 draft ordinance will be discussed, as well as some plats in the TOD zone. A Timp Hollow subdivision and Catalyst subdivision may be on the agenda as well.

4. Review and action on the minutes of the August 19, 2020 Planning Commission Regular Session

Ms. Anderson moved to recommend approval of the minutes of the August 19, 2020 Planning Commission Regular Session.

Mr. Christiansen seconded the motion. Voting was as follows:

Chairman Woffinden	**Aye**
Chris Christiansen	**Aye**
Christine Anderson	**Aye**
Ryan Hunter	**dropped call**
Harold Dudley	**dropped call**
Rod Brocious	**Aye**
Geoff Dupaix	**Abstain**

The motion passed.

5. Adjournment

Mr. Dupaix motioned to adjourn.
Mr. Christiansen seconded the motion. All voted in favor.

Meeting adjourned at 8 pm.

Lisa Halversen, Administrative Assistant