REVISED
PLANNING COMMISSION MEETING
Tuesday, November 23, 2021 6:00 p.m.

Notice is hereby given that the Planning Commission of the City of Cedar Hills, Utah, will hold a **Planning Commission Meeting on Tuesday, November 23, 2021 beginning at 6:00 p.m.** This is a public meeting, and anyone is invited to attend.

NOTICE OF ELECTRONIC PARTICIPATION
This meeting will be held electronically pursuant to Utah Code 52-4-207(4), and Mayor Andersen' November 22, 2021, written determination that conducting an electronic meeting with an anchor location presents a substantial risk to the health and safety of those who may be present at the anchor location.

To join the meeting via Zoom, use the following link:
https://us02web.zoom.us/j/89127048552?pwd=NytiNUlFMTV0ZlRwOFIzWkdCUk9aUT09

Meeting ID: 891 2704 8552
Passcode: 416081

PLANNING COMMISSION MEETING
1. Call to Order
2. Public Comment: Time has been set aside for the public to express their ideas, concerns, and comments (comments limited to 3 minutes per person with a total of 30 minutes for this item)

SCHEDULED ITEMS & PUBLIC HEARINGS
3. Approval of the minutes from the October 26, 2021 Planning Commission meeting
4. Review/Recommendation and Public Hearing on the preliminary plan for The Cedars Townhomes Plat E Phase 5 located in the H-1 Hillside Residential Zone
5. Review/Recommendation and Public Hearing on the final plan for Cedar Hills Gateway Subdivision Phase 4 Lot 3 located in the SC-1 Commercial Zone
6. Discussion on the City's General Plan Land Use Element
7. Review/Action on approving the 2022 Planning Commission Schedule

ADJOURNMENT
8. Adjourn

Posted this 22nd day of November, 2021 /s/ Gretchen F. Gordon, Deputy City Recorder

Supporting documentation for this agenda is posted on the city website at www.cedarhills.org.
In accordance with the Americans with Disabilities Act, the City of Cedar Hills will make reasonable accommodations to participate in the meeting. Requests for assistance can be made by contacting the City Recorder at 801-785-9668 at least 48 hours in advance of the meeting to be held.
The order of agenda items may change to accommodate the needs of the Planning Commission, the staff, and the public.
This meeting may be held electronically to permit one or more of the commission members or staff to participate.

CITY OF CEDAR HILLS

TO:	Planning Commission
FROM:	Chandler Goodwin, City Manager
DATE:	11/23/2021

Planning Commission
Agenda Item

SUBJECT:	Review/Recommendation on the Preliminary Plan for the Cedar Townhomes Plat E Phase 5 located in the H-1 Hillside Residential Zone
APPLICANT PRESENTATION:	Kyle Spencer, Northern Engineering
STAFF PRESENTATION:	Chandler Goodwin, City Manager

BACKGROUND AND FINDINGS:

Cedars Townhomes Plat E Phase 5 was given final approval on April 9, 2002. The developer did not develop the Phase 5 portion and has come back to the City seeking changes to the overall layout of Phase 5. The concept plan shows the development of twelve townhomes that will be a part of the Cedars Townhomes HOA. Phase 5 is the last, and most difficult portion to develop, of the original Cedars Townhomes. The main concerns with this development center on geotechnical and utility issues. Staff has required that the developer submit a new Geotechnical study that shows test pits at each building location as well as engineering recommendations for construction methods. This study has been submitted to the City and staff is currently awaiting an opinion from the City Engineer. The other concern deals with how this portion of the subdivision connects to the City's utility system, namely sewer. The development of this phase will have to take into consideration these, as well as other engineering concerns in order to comply with City standards. City staff will prepare a presentation for the planning commission with all of our findings and make a recommendation to the planning commission on how to proceed.

PREVIOUS LEGISLATIVE ACTION:

Planning Commission gave conceptual approval in the October 2021 meeting.

FISCAL IMPACT:

N/A

SUPPORTING DOCUMENTS:

Cedars Phase 5 Preliminary Plan, Geotechnical Study

RECOMMENDATION:

Review submission documents and make any recommendations necessary, staff will prepare their own recommendation for the meeting. Staff is waiting on an engineering review of the civil plan set and an opinion on the geotechnical study. Staff recommends that the Planning Commission table this item until that is complete.

MOTION:

To recommend/not recommend to the City Council the preliminary plan for the Cedars Townhomes Plat E, Phase 5, subject to the following changes and recommendations {LIST ANY CHANGES}.

CEDAR HILLS TOWN HOMES PLAT 5

SEPTEMBER 2021

-INDEX OF PLAN SHEETS-

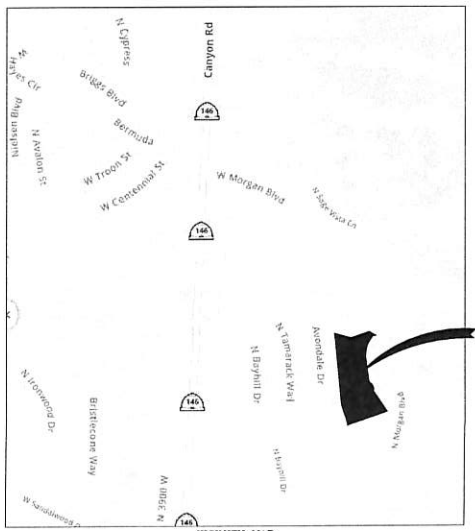
SHEET	DESCRIPTION
1	COVER SHEET
2	FINAL PLAT
3	UTILITY INDEX SHEET
4	GRADING & DRAINAGE SHEET
PP-01	STREET PLAN & PROFILE= SAGE VISTA LANE
OSU-01	OFFSITE UTILITY ACCESS
DT-01	DETAILS
ECP-01	STORM WATER POLLUTION PREVENTION PLAN
ECP-02	STORM WATER POLLUTION PREVENTION PLAN DETAILS

GENERAL

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND/OR REQUIREMENTS OF THE CEDAR HILLS PUBLIC WORKS DEPARTMENT.
2. A PRE CONSTRUCTION CONFERENCE WILL BE HELD A MINIMUM OF 3 WORKING DAYS PRIOR TO START OF WORK. ALL CONTRACTORS, SUBCONTRACTORS AND/OR UTILITY CONTRACTORS, CEDAR HILLS PUBLIC WORKS AND CITY'S ENGINEER SHOULD BE PRESENT.
3. ALL LOT DIMENSIONS, EASEMENTS AND CERTAIN OFF SITE EASEMENTS ARE TO BE TAKEN FROM THE PLAT OF CEDAR HILLS TOWN HOUSE PLAT 5.
4. ALL CONSTRUCTION STAKES MUST BE REQUESTED A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO PLANNED USE.
5. CERTAIN CONTROL POINTS WILL BE SET BY THE ENGINEER, OR HIS REPRESENTATIVE, WHICH ARE CRITICAL TO THE CONSTRUCTION STAKING OF THE PROJECT. THESE POINTS WILL BE DESIGNATED AT THE TIME THEY ARE SET AND THE CONTRACTOR SO NOTIFIED. DESTRUCTION OF THESE POINTS BY THE CONTRACTOR OR HIS SUBCONTRACTORS SHALL BE GROUNDS FOR CHARGING THE CONTRACTOR FOR REESTABLISHING SAID POINTS.

ROADWAY/STORM DRAIN

1. ALL ROADWAY CONSTRUCTION SHALL MEET THE MINIMUM REQUIREMENTS OF CEDAR HILLS TECHNICAL SPECIFICATIONS OR AS APPROVED IN THE PLANS HEREIN.
2. WHEN DISCREPANCIES OCCUR BETWEEN PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. UNTIMELY NOTIFICATION SHALL NEGATE ANY CONTRACTORS CLAIM FOR ADDITIONAL COMPENSATION.
3. ALL STORM DRAIN PIPES TO BE REINFORCED CONCRETE PIPE (RCP) CLASS III OR APPROVED EQUAL UNLESS OTHERWISE NOTED.
4. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL CLEANOUT/ACCESS LOCATIONS MEET CEDAR HILLS IRRIGATION COMPANY SPECIFICATIONS AND ARE COMPLETED UNDER THE DIRECTION OF CEDAR HILLS IRRIGATION COMPANY.
5. ALL IRRIGATION CORNERS (ANGLE POINTS) SHALL HAVE A PRE CAST - REINFORCED CONCRETE MANHOLE, WITH A WATERTIGHT SOLID MANHOLE COVER.
6. ALL STORM DRAIN INLET BOXES TO MEET CEDAR HILLS STANDARD DRAWING W/1' SEDIMENT TRAP.



VICINITY MAP
-NTS-

SEWER

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST PROVO CITY DESIGN STANDARDS & PUBLIC IMPROVEMENT SPECIFICATIONS DRAWINGS OF CEDAR HILLS.
2. FINAL APPROVAL AND ACCEPTANCE OF ALL SEWER CONSTRUCTION WILL BE BY CEDAR HILLS.
3. UPON THE COMPLETION OF WORK, THE CONTRACTOR SHALL SUBMIT 3 SETS OF AS-BUILT PLANS TO CEDAR HILLS & (1) SET TO NORTHERN ENGINEERING, INC.
4. HORIZONTAL AND VERTICAL SEPARATION OF CULINARY WATER AND SEWER SHALL BE IN COMPLIANCE WITH CEDAR HILLS STANDARDS.

WATER

1. THE WATER SYSTEM SHALL BE CONSTRUCTED TO CONFORM WITH THE STANDARDS SET FORTH IN THE "UTAH REGULATIONS FOR PUBLIC DRINKING WATER SYSTEMS", AND THE CEDAR HILLS PUBLIC WORKS DEPARTMENT STANDARD SPECIFICATIONS AND DRAWINGS.
2. CONTRACTOR SHALL NOTIFY NORTHERN ENGINEERING, INC. THREE (3) WORKING DAYS BEFORE INITIAL CONSTRUCTION BEGINS AND SHALL ALSO REQUEST CEDAR HILLS WATER DEPARTMENT INSPECTION OF WATER LINES AND APPURTENANCES TWENTY-FOUR (24) HOURS IN ADVANCE OF BACKFILLING.
3. CONTRACTOR TO FIELD VERIFY ALL VALVE BOX LID ELEVATIONS TO ASSURE THAT SAID LID ELEVATIONS MATCH FINAL STREET GRADE, AND ALL METER LID ELEVATIONS TO MATCH AN EXTENSION OF THE SIDEWALK GRADE.
4. UPON THE COMPLETION OF WORK, THE CONTRACTOR SHALL SUBMIT 3 SETS OF AS-BUILT PLANS TO CEDAR HILLS & (1) SET TO NORTHERN ENGINEERING, INC.
5. WATER VALVE LIDS ARE TO BE LABELLED "WATER" FOR CULINARY VALVES.
6. HORIZONTAL AND VERTICAL SEPARATION OF CULINARY WATER AND SEWER SHALL BE IN COMPLIANCE WITH CEDAR HILLS STANDARDS.
7. WATERLINES TO BE BEDDED IN GRANULAR MATERIAL. A MIN. OF 8" COVER OVER TOPS OF PIPE IS REQUIRED TO AVOID PENETRATION OF SUB BASE FROM ABOVE.
8. ALL CULINARY WATERLINES, REGARDLESS OF SIZE, SHALL BE DUCTILE IRON & SHALL BE POLYWRAPPED.

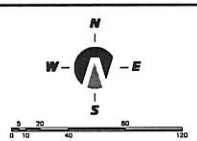
REGISTERED PROFESSIONAL ENGINEER
KYLE M. SPENCER
No. 276243
STATE OF UTAH

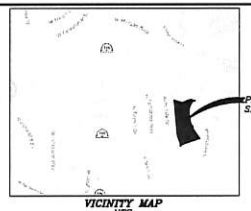
Northern ENGINEERING INC
ENGINEERING-LAND PLANNING
CONSTRUCTION MANAGEMENT

1040 E. 800 N.
OREM, UTAH 84097
(801) 802-8992

THE CEDARS AT CEDAR HILLS PLAT 5

LOCATED IN THE NORTHEAST 1/4 OF SECTION 5, TOWNSHIP 5 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN CITY OF CEDAR HILLS, UTAH COUNTY, UTAH





VICINITY MAP
-NTS-

LEGEND

- FOUND BRASS CAP
- SET 5/8" IRON PIN
- CALCULATED POINT, NOT SET
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT
- PROPERTY BOUNDARY
- CENTERLINE
- RIGHT-OF-WAY LINE
- LOT LINE
- SECTION LINE
- EASEMENT
- EXISTING DEED LINE
- ROADWAY DEDICATION TO THE CITY OF CEDAR HILLS
- COMMON AREA
- PRIVATE AREA

CURVE TABLE

CURVE	LENGTH	RADIUS	CHORD DIST.	CHORD BRG.	DELTA
C1	16.56'	15.00'	15.73'	S71°24'58"W	63°16'07"
C3	154.86'	184.00'	150.33'	S15°40'12"W	48°13'19"
C4	16.00'	20.00'	15.58'	S31°21'38"E	45°50'38"
C5	51.93'	46.00'	49.22'	S21°36'19"E	64°41'16"
C6	172.27'	200.00'	167.00'	S16°14'07"W	49°21'09"
C7	7.13'	15.00'	7.06'	N28°40'19"E	27°13'48"
C8	183.93'	216.00'	178.42'	S15°57'15"W	48°47'22"
C9	16.98'	20.00'	16.47'	N15°52'50"E	48°38'32"
C10	23.88'	30.00'	22.49'	S42°30'00"E	68°25'00"
C11	256.24'	50.00'	52.20'	N71°40'16"E	297°03'41"
C12	134.75'	184.00'	131.78'	S12°32'20"W	41°57'36"

LINE TABLE

LINE	LENGTH	DIRECTION
L1	10.48'	N20°43'10"E
L2	10.28'	N18°48'04"W
L3	10.00'	N8°15'35"W
L4	20.35'	N0°21'56"E
L5	20.00'	N20°33'42"E
L8	7.40'	S40°54'41"W

ACKNOWLEDGMENT

STATE OF UTAH }
COUNTY OF UTAH } S.S.

ON THIS _____ DAY OF _____, IN THE YEAR 20____
BEFORE ME _____, PERSONALLY APPEARED _____
WHO DULY ACKNOWLEDGED TO ME THAT (S)HE IS A _____ [MEMBER WITH MANAGEMENT AUTHORITY] [MANAGER] OF _____ A UTAH LIMITED LIABILITY COMPANY, AND IS AUTHORIZED TO EXECUTE THE FOREGOING AGREEMENT IN ITS BEHALF AND THAT HE OR SHE EXECUTED IT IN SUCH CAPACITY.

NOTARY PUBLIC _____

NOTARY FULL NAME _____ A NOTARY COMMISSIONED IN UTAH

COMMISSION NUMBER _____ MY COMMISSION EXPIRES _____

ACCEPTANCE BY LEGISLATIVE BODY

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

APPROVED _____ ATTEST _____
CITY ENGINEER (SEE SEAL) CITY RECORDER (SEE SEAL)

Northern ENGINEERING INC
ENGINEERING-LAND PLANNING
CONSTRUCTION MANAGEMENT
1040 E. 800 N.
OREM, UTAH 84097
(801) 802-8992

NOTARY PUBLIC SEAL	CITY-COUNTY ENGINEER SEAL

SURVEYOR'S CERTIFICATE

I, KENNETH E. BARNEY, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, AND THAT I HOLD A LICENSE IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT, UTAH CODE ANNOTATED, 1953 AS AMENDED, CERTIFICATE NO. 172762. 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 WITHSECTION 17-23-17, UTAH CODE ANNOTATED, 1953 AS AMENDED, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS AS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN SECTION 54-8a-2, UTAH CODE ANNOTATED,1953 AS AMENDED, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT.

DATE _____ KENNETH E. BARNEY, P.L.S.

BOUNDARY DESCRIPTION

A PARCEL OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 5, TOWNSHIP 5 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN, UTAH COUNTY, UTAH, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A BRASS CAP MONUMENT MARKING THE NORTHWEST CORNER OF SAID SECTION 5; THENCE N.89°50'52"E. ALONG THE SECTION LINE A DISTANCE OF 1672.75 FEET; THENCE SOUTH A DISTANCE OF 39.24 FEET TO THE REAL POINT OF BEGINNING;

THENCE ALONG THE BOUNDARY LINES OF THE CEDARS TOWNHOMES PLAT E PHASE 2 THE FOLLOWING 3 COURSES AND DISTANCES; (1) S.73°54'50"E. A DISTANCE OF 99.86 FEET; (2) THENCE N.70°30'21"E. A DISTANCE OF 113.90 FEET; (3) THENCE S.57°36'09"E. A DISTANCE OF 42.20 FEET TO A POINT OF INTERSECTION WITH A NON-TANGENT 15.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE ALONG THE BOUNDARY LINES OF THE CEDARS TOWNHOMES PLAT E PHASE 4 THE FOLLOWING 7 COURSES AND DISTANCES; (1) SOUTHWESTERLY A DISTANCE OF 16.56 FEET ALONG THE ARC OF SAID CURVE, HAVING A CENTRAL ANGLE OF 63°16'07" SUBTENDED BY A CHORD THAT BEARS S.71°24'58"W. A DISTANCE OF 15.73 FEET TO A POINT OF INTERSECTION WITH A CONTINUES CURVE TO THE RIGHT; (2) SOUTHWESTERLY A DISTANCE OF 154.86 FEET ALONG THE ARC OF SAID CURVE, HAVING A CENTRAL ANGLE OF 48°13'19" SUBTENDED BY A CHORD THAT BEARS S.15°40'12"W. A DISTANCE OF 150.33 FEET; (3) THENCE S.08°26'26"E. A DISTANCE OF 123.98 FEET TO A POINT OF INTERSECTION WITH A CONTINUES CURVE TO THE LEFT; (4) SOUTHEASTERLY A DISTANCE OF 16.00 FEET ALONG THE ARC OF SAID CURVE, HAVING A CENTRAL ANGLE OF 45°50'38" SUBTENDED BY A CHORD THAT BEARS S.31°21'38"E. A DISTANCE OF 15.58 FEET TO A POINT OF INTERSECTION WITH A CONTINUES CURVE TO THE RIGHT; (5) SOUTHEASTERLY A DISTANCE OF 51.93 FEET ALONG THE ARC OF SAID CURVE, HAVING A CENTRAL ANGLE OF 64°41'16" SUBTENDED BY A CHORD THAT BEARS S.21°36'19"E. A DISTANCE OF 49.22 FEET; (6) THENCE S.33°42'35"E. A DISTANCE OF 143.86 FEET; (7) THENCE S.70°53'09"W. A DISTANCE OF 243.36 FEET; THENCE ALONG THE BOUNDARY LINES OF THE CEDARS AT CEDAR HILLS PLAT J2 THE FOLLOWING 2 COURSES AND DISTANCES; (1) N.17°37'55"W. A DISTANCE OF 127.79 FEET; (2) THENCE N.05°19'59"W. A DISTANCE OF 423.00 FEET TO THE REAL POINT OF BEGINNING. CONTAINING 2.28 ACRES OF LAND.

OWNER'S DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT WE, ALL OF THE UNDERSIGNED OWNERS OF ALL THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, 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____.

MANAGING MEMBER

ROADWAY DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT WE, THE ABOVE-NAMED OWNER(S) OF ALL THE PROPERTY DESCRIBED HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, ROADWAYS, STREETS, AND EASEMENTS AND DO HEREBY DEDICATE THE STREETS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

UTILITY DEDICATION

THE ABOVE-NAMED OWNER(S) OF THE ABOVE DESCRIBED PARCEL OF LAND DOES (DO) HEREBY OFFER AND CONVEY TO ALL PUBLIC UTILITY AGENCIES AND THEIR SUCCESSORS AND ASSIGNS A PERMANENT EASEMENT AND RIGHT-OY-WAY AS SHOWN BY THE AREAS MARKED "COMMON AREA" ON THE WITHIN PLAT FOR CONSTRUCTION AND MAINTENANCE OF SUBTERRANEAN ELECTRICAL, TELEPHONE, NATURAL GAS, SEWER AND WATER LINE APPURTENANCES. TOGETHER WITH THE RIGHT-OF-WAY ACCESS THERETO.

RESERVATION OF COMMON AREAS

BY RECORDING THIS PLAT THE ABOVE NAMED OWNER(S) HAS (HAVE) DESIGNATED CERTAIN AREAS OF LAND AS COMMON AREA INTENDED FOR USE BY THE OWNERS IN THE CEDARS TOWNHOMES, A PLANNED RESIDENTIAL DEVELOPMENT, FOE INGRESS, EGRESS, RECREATION, AND OTHER RELATED ACTIVITIES (AND NOT FOR THE USE BY THE GENERAL PUBLIC) FOR COMMON USE AND ENJOYMENT OF THE OWNERS IN THE CEDARS TOWNHOMES AS MORE FULLY PROVIDE IN THE DECLARATION OF PROTECTIVE EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS APPLICABLE TO THE CEDARS TOWNHOMES. EXPANDABLE PLANNED RESIDENTIAL DEVELOPMENT.

PLANNING COMMISSION

APPROVED THIS____DAY OF_____A.D. 20____, BY THE CITY OF CEDAR HILLS PLANNING COMMISSION.

DIRECTOR - SECRETARY CHAIRMAN, PLANNING COMMISSION

THE CEDARS AT CEDAR HILLS PLAT 5

LOCATED IN THE NORTHEAST 1/4 OF SECTION 5, TOWNSHIP 5 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN CITY OF CEDAR HILLS, UTAH COUNTY, UTAH

CEDAR HILLS _____ UTAH COUNTY, UTAH

SCALE: 1" = 40 FEET

SURVEYOR'S SEAL	CLERK-RECORDER SEAL	

THE CEDARS AT CEDAR HILLS PLAT 5



THESE DRAWINGS, OR ANY PORTION THEREOF, SHALL NOT BE USED ON ANY PROJECT OR EXTENSIONS OF THIS PROJECT EXCEPT BY AGREEMENT IN WRITING WITH NORTHERN ENGINEERING, INC.

NO.	REVISIONS	BY	DATE
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DESIGNED BY:		DATE:
DRAWN BY:		DATE:
CHECKED BY:		DATE:
APPROVED:		DATE:
COGO FILE:		DATE:
REV. COGO FILE:		DATE:

Northern ENGINEERING INC
ENGINEERING–LAND PLANNING
CONSTRUCTION MANAGEMENT
1040 E. 800 N.
OREM, UTAH 84097
(801) 802–8992

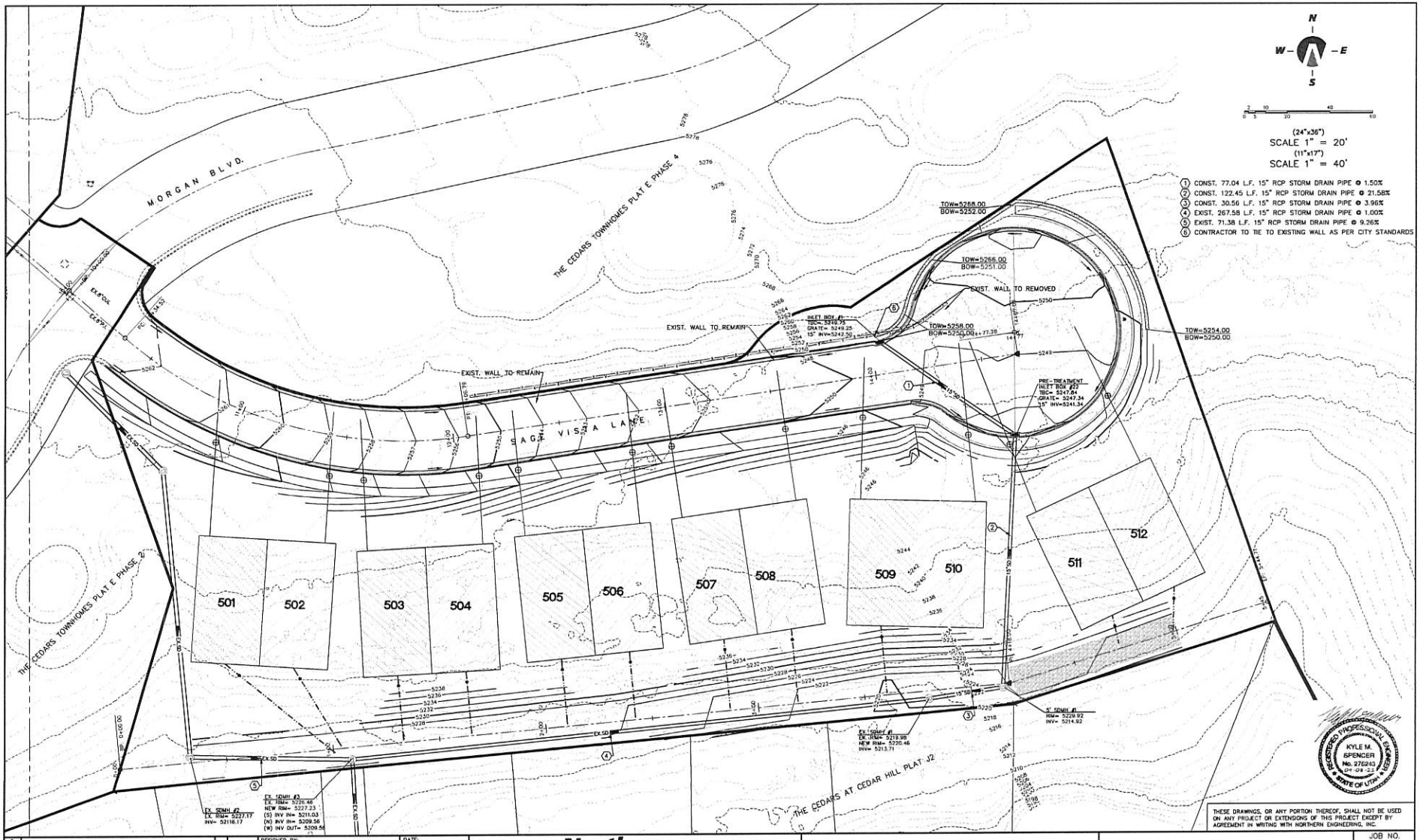
CEDAR HILLS TOWN HOME PLAT 5

UTILITY INDEX SHEET

CEDAR HILLS, UTAH

JOB NO. 3-20-064

SHEET NO. 3



NO.	REVISIONS	BY	DATE
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Northern ENGINEERING INC
ENGINEERING–LAND PLANNING
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CEDAR HILLS TOWN HOME PLAT 5

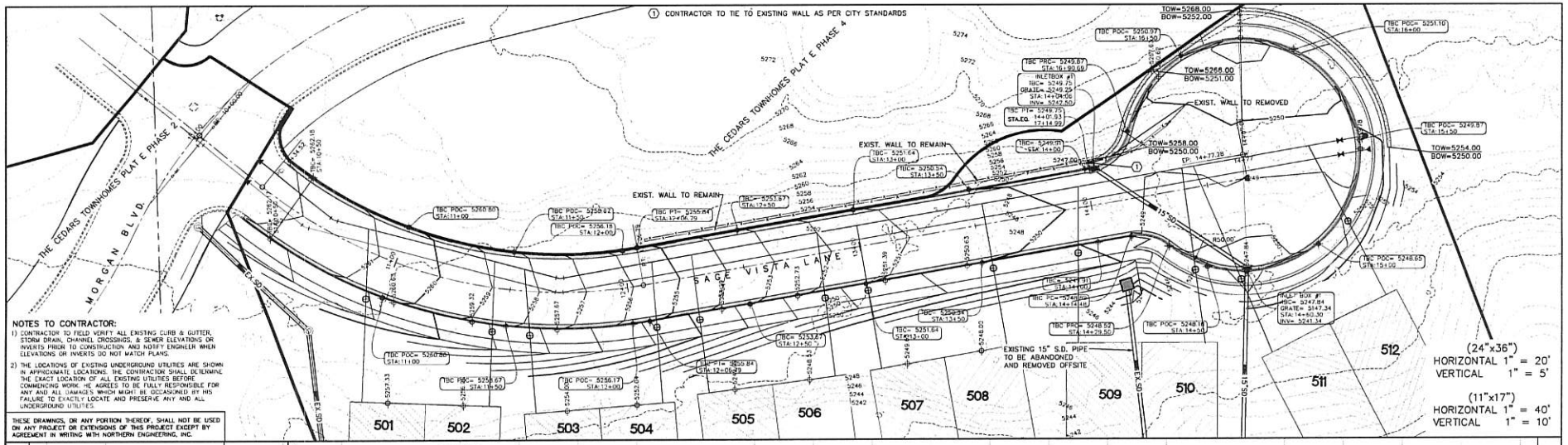
GRADING & DRAINAGE

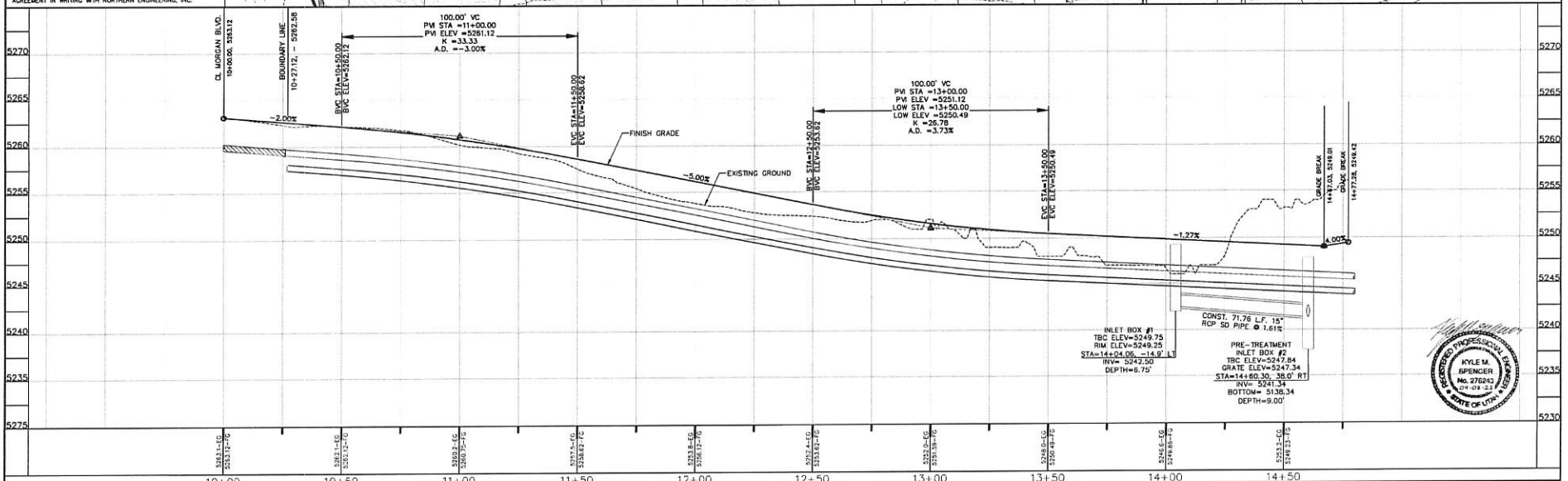
CEDAR HILLS, UTAH

JOB NO. 3-20-064

SHEET NO. 4

THESE DRAWINGS, OR ANY PORTION THEREOF, SHALL NOT BE USED ON ANY PROJECT OR EXTENSIONS OF THIS PROJECT EXCEPT BY AGREEMENT IN WRITING WITH NORTHERN ENGINEERING, INC.





KYLE M. SPENCER No. 276243 04-08-21 REGISTERED PROFESSIONAL ENGINEER STATE OF UTAH

NO.	REVISIONS	BY	DATE
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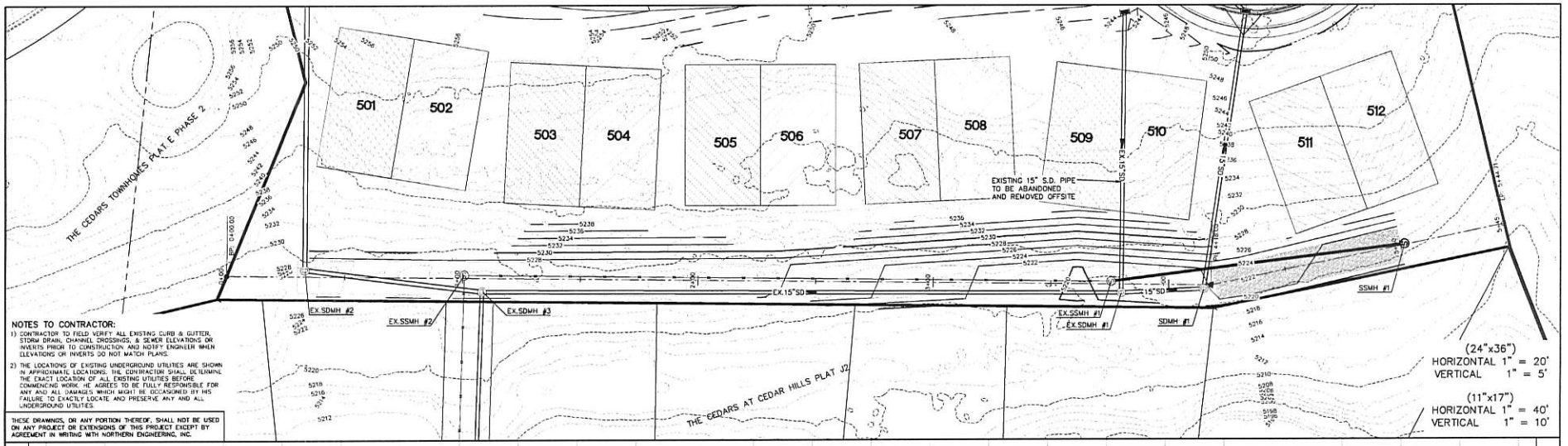
Northern ENGINEERING INC
ENGINEERING-LAND PLANNING CONSTRUCTION MANAGEMENT
1040 E. 800 N.
OREM, UTAH 84097
(801) 802-8992

CEDAR HILLS TOWN HOME PLAT 5

SAGE VISTA LANE
CEDAR HILLS, UTAH

JOB NO. 3-20-064
SHEET NO. PP-01

N:\3-20-064-00 Cedars Town\CAD\Preliminary\PP-01.dwg, 9/8/2021 11:07 AM

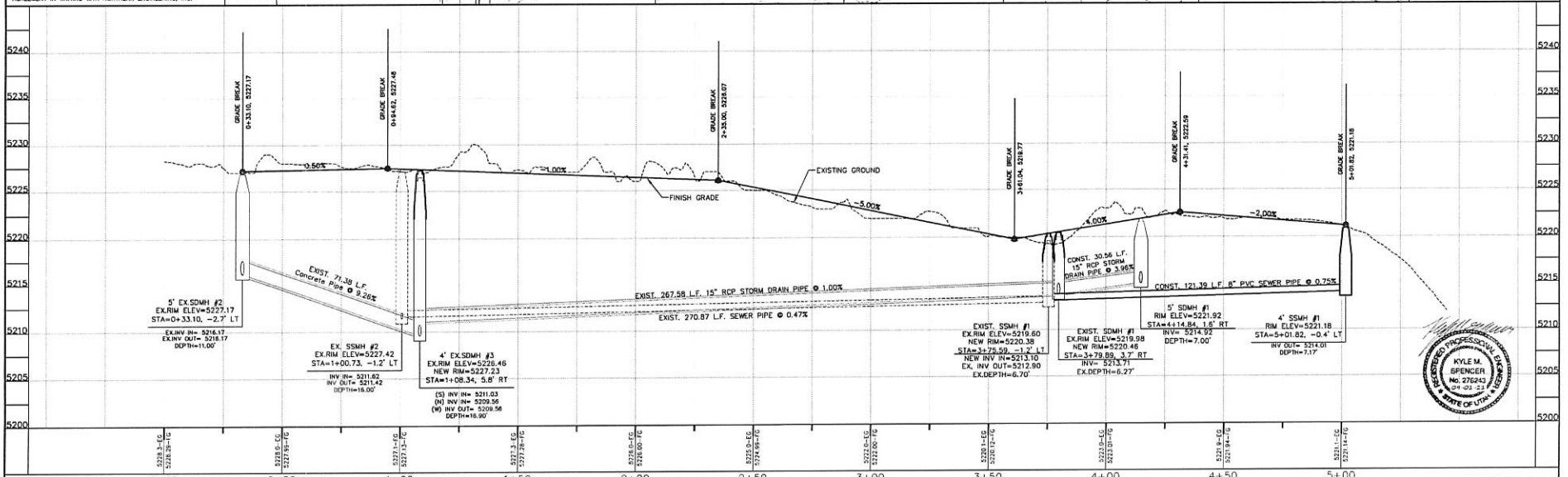


NOTES TO CONTRACTOR:

1) CONTRACTOR TO FIELD VERIFY ALL EXISTING CURB & GUTTER, STORM DRAIN, CHANNEL CROSSINGS, & SEWER ELEVATIONS OR INVERTS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER WHEN ELEVATIONS OR INVERTS DO NOT MATCH PLANS.

2) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

THESE DRAWINGS, OR ANY PORTION THEREOF, SHALL NOT BE USED ON ANY PROJECT OR EXTENSIONS OF THIS PROJECT EXCEPT BY AGREEMENT IN WRITING WITH NORTHERN ENGINEERING, INC.



KYLE M. SPENCER NO. 276243 REGISTERED PROFESSIONAL ENGINEER STATE OF UTAH

NO.	REVISIONS	BY	DATE
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1040 E. 800 N.
OREM, UTAH 84097
(801) 802-8992

CEDAR HILLS TOWN HOME PLAT 5

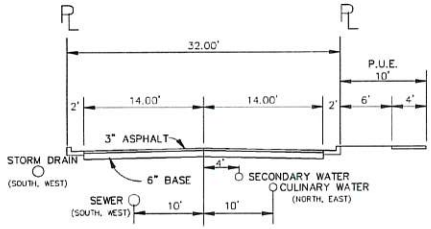
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CEDAR HILLS, UTAH

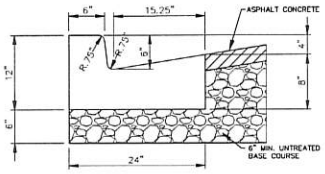
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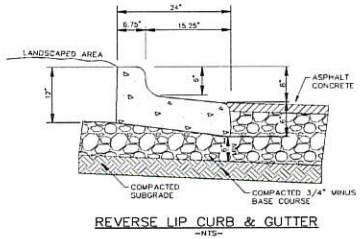
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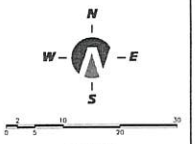
STANDARD LOCAL STREET
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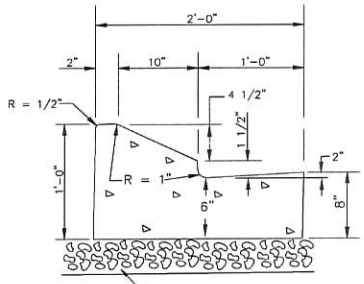
APWA TYPE E CURB & GUTTER
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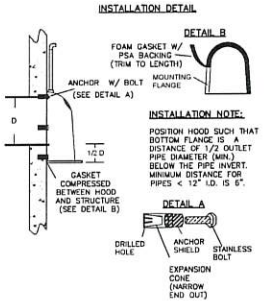
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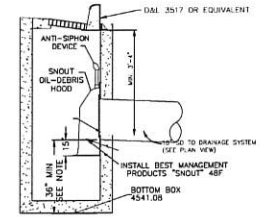


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SCALE 1" = 20'

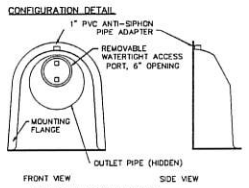


MODIFIED HIGH BACK CURB & GUTTER
-NTS-





PRE-TREATMENT BOX DETAIL
-NTS-



SNOUT OIL-WATER-DEBRIS SEPARATOR

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 CLASS 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 AND AN MOUNTING FLANGE, 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 OUTLET PIPE 1/2 THE 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





NOTE: THE PLACEMENT OF STORM DRAIN, SANITARY SEWER, SECONDARY WATER, AND CULINARY WATER UTILITY LINES SHALL BE IN COMPLIANCE WITH CEDAR HILLS STANDARDS OR AS APPROVED BY THE CITY ENGINEER. DUE TO THE CURVILINEAR NATURE OF THE STREET DESIGN, THE CITY ENGINEER REQUIRES A MINIMUM OF 6.0 FEET SEPARATION BETWEEN SECONDARY AND CULINARY WATERLINES ALONG WITH A MINIMUM OF 10.0 FEET SEPARATION BETWEEN SANITARY SEWER AND SECONDARY WATERLINES. WHERE POSSIBLE, THE SECONDARY WATERLINES SHALL BE LOCATED ON THE OPPOSITE SIDE OF CENTERLINE FROM THE CULINARY WATERLINE.

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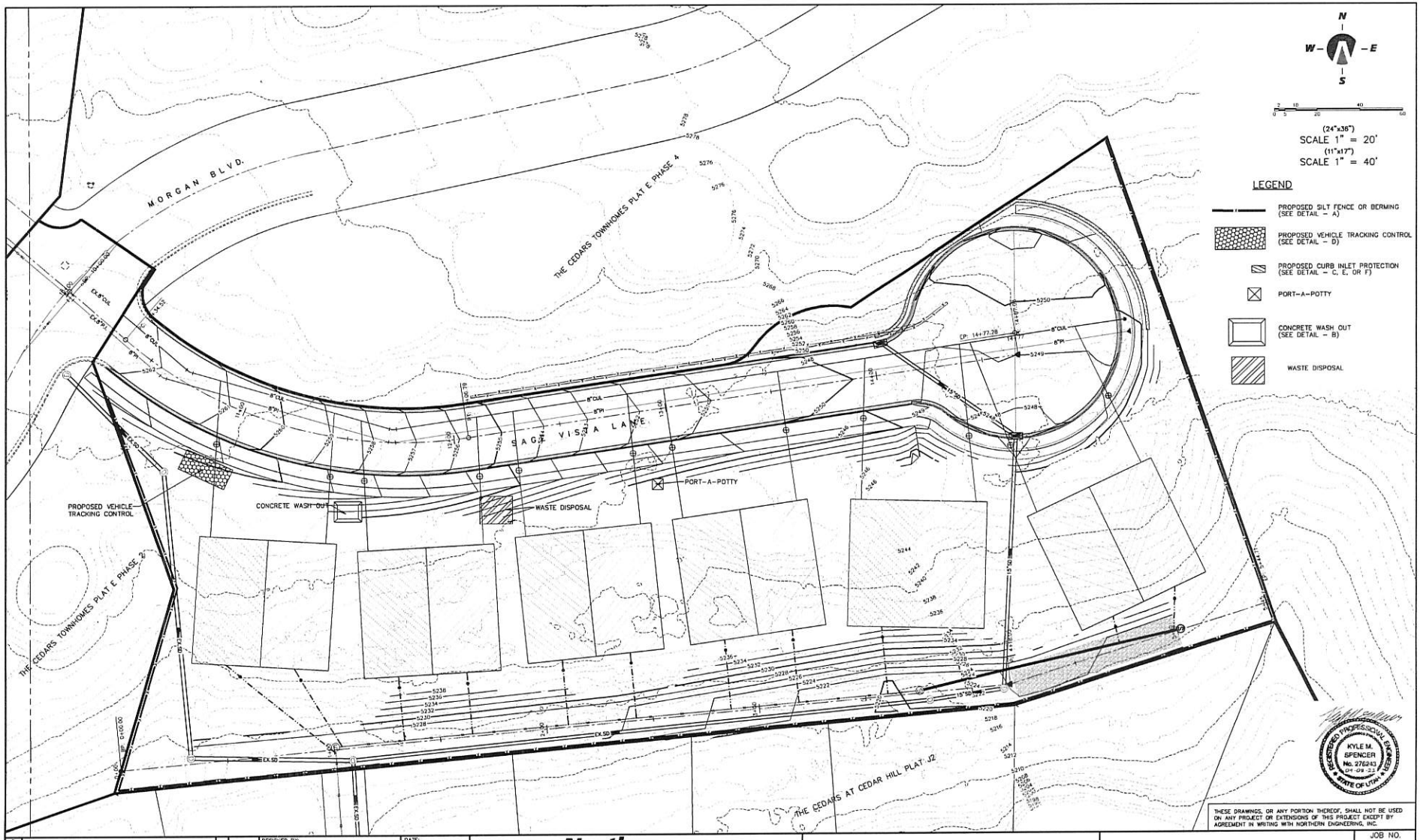
CEDAR HILLS TOWN HOME PLAT 5

DETAILS

CEDAR HILLS, UTAH

JOB NO. 3-20-064

SHEET NO. DT-01



REGISTERED PROFESSIONAL ENGINEER
KYLE M. SPENCER
No. 276243
07-09-21
STATE OF UTAH

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CEDAR HILLS TOWN HOME PLAT 5

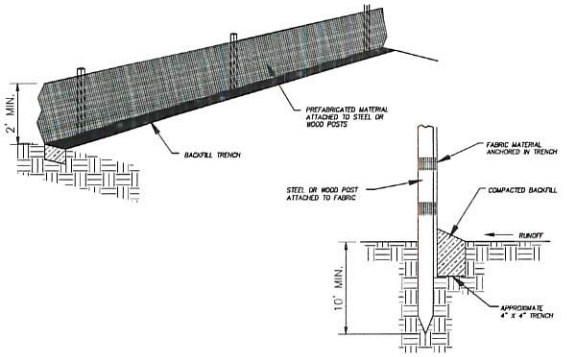
EROSION CONTROL PLAN

CEDAR HILLS, UTAH

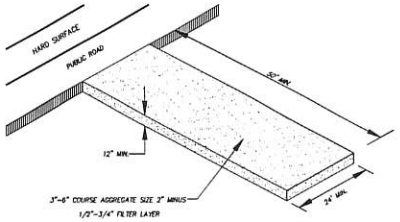
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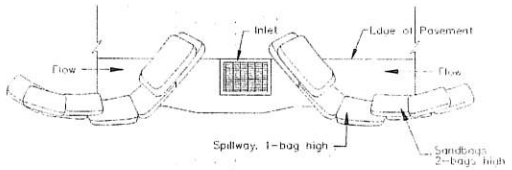
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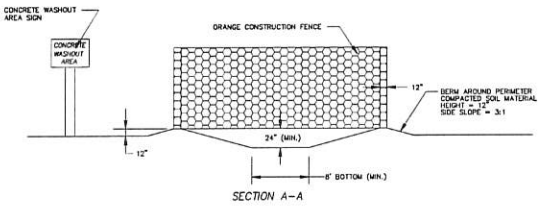
DETAIL–A
SILT FENCE DETAIL
–NTS–



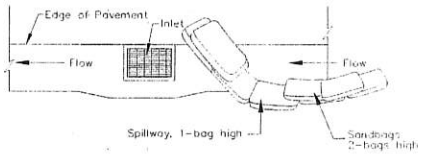
DETAIL–B
VEHICLE TRACKING DETAIL
NOT TO SCALE



TYPICAL PROTECTION FOR INLET ON SUMP

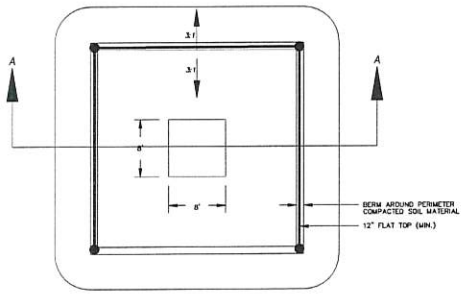


SECTION A–A



TYPICAL PROTECTION FOR INLET ON GRADE
DETAIL–C

NOTES:
1. Intended for short-term use.
2. Use to inhibit non-storm water flow
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.



CONCRETE WASHOUT PIT
–NTS–

GENERAL NOTES:

1. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AND CONTROLLING ONSITE EROSION DUE TO WIND AND RUNOFF. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL FACILITIES SHOWN.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING DRAINAGE AND EROSION CONTROL FACILITIES AS REQUIRED. STREETS SHALL BE KEPT CLEAN OF DEBRIS FROM SITE TRAFFIC.

3. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO UNFORESEEN PROBLEMS OR IF THE PLAN DOES NOT FUNCTION AS INTENDED. A REPRESENTATIVE OF THE CITY OR COUNTY PUBLIC WORKS DEPARTMENT MAY REQUIRE ADDITIONAL CONTROL DEVICES UPON INSPECTION OF PROPOSED FACILITIES.

4. CONTRACTOR SHALL USE VEHICLE TRACKING CONTROL AT ALL LOCATIONS WHERE VEHICLES WILL ENTER OR EXIT THE SITE. CONTROL FACILITIES WILL BE MAINTAINED WHILE CONSTRUCTION IS IN PROGRESS, MOVED WHEN NECESSARY, AND REMOVED WHEN THE SITE IS PAVED.

5. ALL SWPPP DRAINAGE SYSTEMS USING A GEOTECHNICAL FABRIC FOR INLET GRATE PROTECTION MUST HAVE FABRIC REGULARLY CLEANED (14 DAY INTERVAL MAX, MORE FREQUENTLY IF NEEDED) TO INSURE THAT SILT DOES NOT FORM IMPERMEABLE BARRIER OVER INLET.

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BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC.
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1-800-662-4111



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CEDAR HILLS TOWN HOME PLAT 5

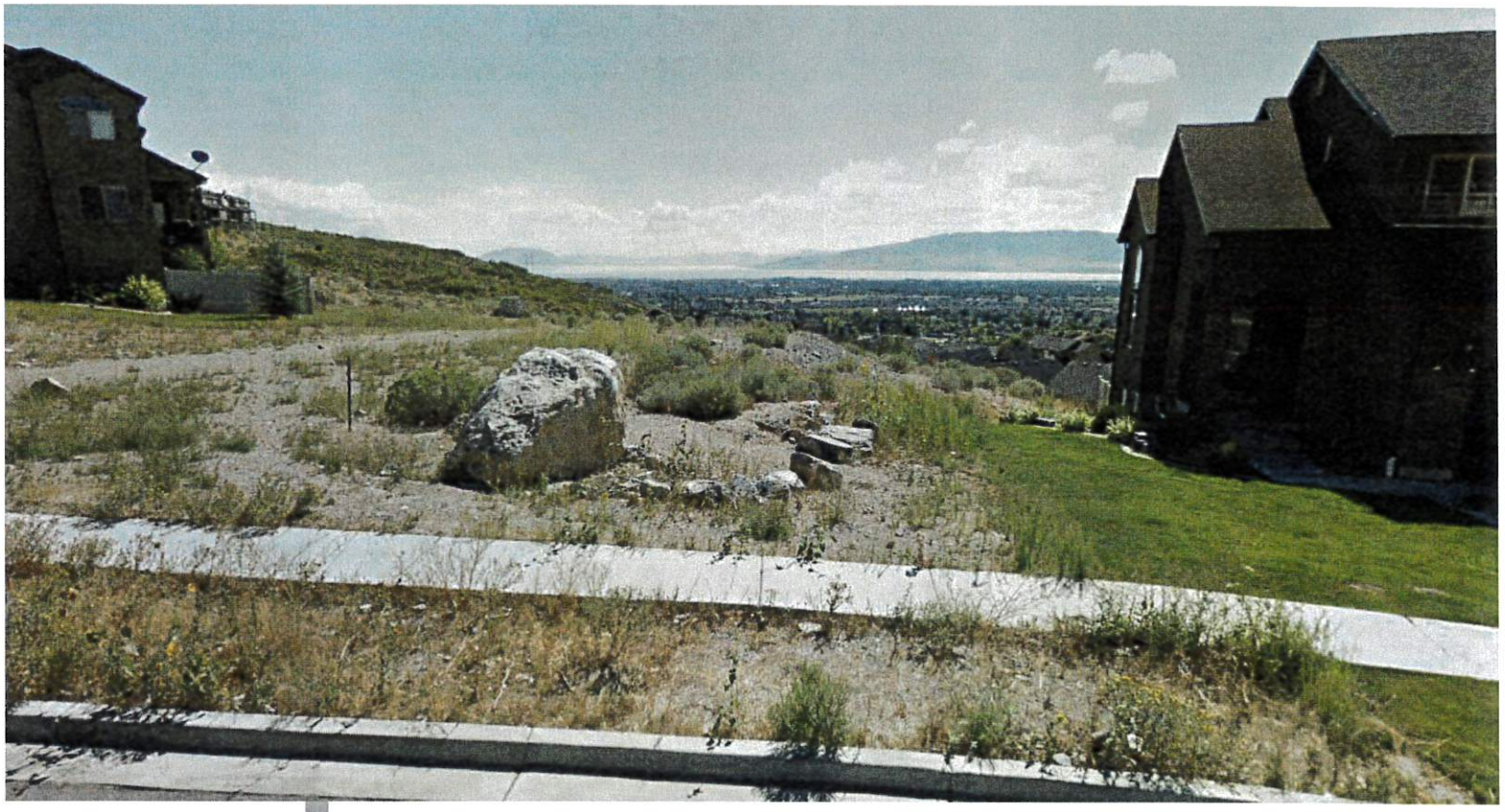
EROSION CONTROL PLAN DETAILS

CEDAR HILLS, UTAH

JOB NO. 3–20–064

SHEET NO. ECP–02

CMT ENGINEERING LABORATORIES



ENGINEERING •GEOTECHNICAL •ENVIRONMENTAL (ESA I & II) •
MATERIALS TESTING •SPECIAL INSPECTIONS •
ORGANIC CHEMISTRY • PAVEMENT
DESIGN •GEOLOGY

GEOTECHNICAL ENGINEERING STUDY

Cedar Hills Townhomes

Morgan Boulevard and Sage Vista Lane
Cedar Hills, Utah

CMT PROJECT NO. 16163

FOR:
Lone Peak Links
750 East 9000 South
Sandy, Utah 84094

May 24, 2021

CMT ENGINEERING LABORATORIES

May 24, 2021

Mr. Kyle Spencer
Lone Peak Links
750 East 9000 South
Sandy, Utah 84094

Subject: Geotechnical Engineering Study
Cedar Hills Townhomes
Morgan Boulevard and Sage Vista Lane
Cedar Hills, Utah
CMT Project No. 16163

Mr. Spencer:

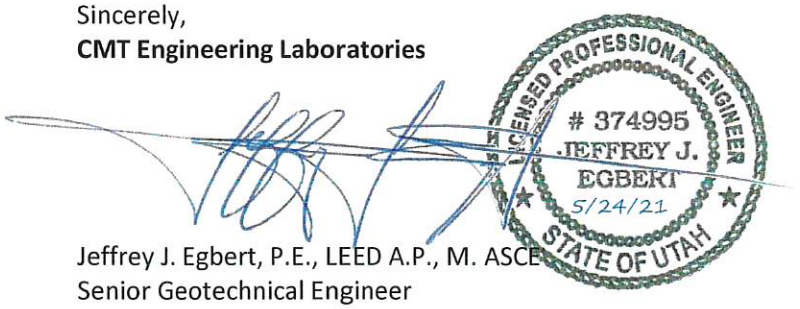
Submitted herewith is the report of our geotechnical engineering study for the subject site. This report contains the results of our findings and an engineering interpretation of the results with respect to the available project characteristics. It also contains recommendations to aid in the design and construction of the earth related phases of this project.

On April 1, 2021, a CMT Engineering Laboratories (CMT) staff professional was on-site and supervised the excavation of 6 test pits extending to depths of about 5 to 9 feet below the existing ground surface. Soil samples were obtained during the field operations and subsequently transported to our laboratory for further testing and observation.

Conventional spread and/or continuous footings may be utilized to support the proposed structures, provided the recommendations in this report are followed. A detailed discussion of design and construction criteria is presented in this report.

We appreciate the opportunity to work with you at this stage of the project. CMT offers a full range of Geotechnical Engineering, Geological, Material Testing, Special Inspection services, and Phase I and II Environmental Site Assessments. With offices throughout Utah, Idaho and Arizona, our staff is capable of efficiently serving your project needs. If we can be of further assistance or if you have any questions regarding this project, please do not hesitate to contact us at 801-492-4132 or 801-870-6730.

Sincerely,
CMT Engineering Laboratories



Jeffrey J. Egbert, P.E., LEED A.P., M. ASCE
Senior Geotechnical Engineer

Reviewed by:

Steven L. Smith, P.E.
Senior Geotechnical Engineer

CMT ENGINEERING LABORATORIES

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APPENDIX
Figure 1: Site Plan
Figures 2 -7: Test Pit Logs
Figure 8: Key to Symbols

1.0 INTRODUCTION

1.1 General

CMT Engineering Laboratories (CMT) was retained to conduct a geotechnical subsurface study for the proposed development of the site for the construction of 12 townhome units. The parcel is situated on the west side of Morgan Boulevard in Cedar Hills, Utah, as shown in the **Vicinity Map** below.



VICINITY MAP

1.2 Objectives, Scope and Authorization

The objectives and scope of our study were planned in discussions between Mr. Kyle Spencer of Northern Engineering, and Mr. Steve Smith of CMT Engineering Laboratories (CMT). In general, the objectives of this study were to define and evaluate the subsurface soil and groundwater conditions at the site, and provide appropriate foundation, earthwork, pavement and seismic recommendations to be utilized in the design and construction of the proposed development.

In accomplishing these objectives, our scope of work has included performing field exploration, which consisted of the excavating/logging/sampling of 6 test pits, performing laboratory testing on representative samples of

the subsurface soils collected in the test pits, and conducting an office program, which consisted of correlating available data, performing engineering analyses, and preparing this summary report. This scope of work was authorized by returning a signed copy of our proposal dated October 30, 2020 and executed on March 3, 2021.

1.3 Description of Proposed Construction

We understand that the proposed structures will be town home residences which we project will have two levels of conventional wood frame construction above grade and a single level of reinforced concrete below grade (basement). We project that maximum structural loads for the residences will be on the order of 4,000 pounds per lineal foot for walls and 50,000 pounds for columns. Floor slab loads are anticipated to be relatively light, with an average uniform loading not exceeding 100 pounds per square foot. If the structural loading conditions are different than we have projected, please notify us so that any appropriate modifications to our conclusions and recommendations contained herein can be made.

We anticipate that asphalt-paved residential streets will be constructed as part of the development. Traffic is projected to consist of a light volume of automobiles and pickup trucks, one or two daily medium-weight delivery trucks, a weekly garbage truck, and an occasional fire truck.

Site development will require some earthwork in the form of cutting and filling. A site grading plan was not available at the time of this report, but we project that maximum cuts and fills may be on the order of 6 to 8 feet. If deeper cuts or fills are planned, CMT should be notified to provide additional recommendations, if needed.

1.4 Executive Summary

Proposed townhome residences can be supported upon conventional spread and continuous wall foundations. The most significant geotechnical aspects regarding site development include the following:

1. Topsoil and up to 3.5 feet of fill, considered undocumented, was found on the surface at the test pit locations, which will require removal beneath structures;
2. Subsurface natural soils consist of GRAVEL (GM), extending to the maximum depth explored of about 9 feet;
3. Groundwater was not encountered in the test pits; and
4. Foundations and floor slabs may be established on suitable, undisturbed natural gravel soils or on properly placed and compacted structural fill extending to suitable, undisturbed natural gravel soils.

CMT must assess that topsoil, undocumented fills, debris, disturbed or unsuitable soils have been removed and that suitable soils have been encountered prior to placing site grading fills, footings, slabs, and pavements.

In the following sections, detailed discussions pertaining to the site are provided, including subsurface descriptions, geologic/seismic setting, earthwork, foundations, lateral resistance, lateral pressure, floor slabs, and pavements.

2.0 FIELD EXPLORATION

2.1 General

In order to define and evaluate the subsurface soil and groundwater conditions, 6 test pits were excavated with a backhoe at the site to depths of approximately 5 to 9 feet below the existing ground surface. Locations of the test pits are shown on **Figure 1, Site Plan**, included in the Appendix. The field exploration was performed under the supervision of an experienced member of our geotechnical staff.

Representative soil samples were collected by obtaining disturbed "grab" samples from within the test pits. The samples were sealed in plastic bags prior to transport to the laboratory.

The subsurface soils encountered in the test pits were classified in the field based upon visual and textural examination, logged and described in general accordance with ASTM[1] D-2488. These field classifications were supplemented by subsequent examination and testing of select samples in our laboratory. Graphical representations of the subsurface conditions encountered are presented on each individual Test Pit Log, **Figures 2 through 7**, included in the Appendix. A Key to Symbols defining the terms and symbols used on the logs, is provided as **Figure 8** in the Appendix.

Upon completion of logging and sampling, the test pits were backfilled with the excavated soils. When backfilling, minimal to no effort was made to compact the backfill and no compaction testing was performed. Thus, the test pit backfill is considered undocumented fill and settlement of the backfill in the test pits over time should be anticipated.

2.2 Infiltration Testing

An infiltration test was also performed as part of our field exploration by digging a small hole using a shovel at the bottom of a shallow test pit (about 2.5 feet deep in natural gravel soils). The testing consisted of filling the small hole with water, and measuring the rate of water drop within the small hole over a certain time period. The results of this test indicate that the silty gravel soils at this site have an infiltration rate of 15 minutes per inch. The rate will likely slow over time and an appropriate factor of safety should be applied for design.

3.0 LABORATORY TESTING

Selected samples of the subsurface soils were subjected to various laboratory tests to refine field classifications and assess pertinent engineering properties, as follows:

1. Moisture Content, ASTM D-2216, Percent moisture representative of field conditions
2. Gradation Analysis, ASTM D-1140/C-117, Grain Size Analysis

[1]American Society for Testing and Materials

Laboratory test results are presented on the test pit logs (**Figures 2 through 7**) and in the following Lab Summary table:

LAB SUMMARY TABLE

TEST PIT	DEPTH (feet)	SAMPLE TYPE	SOIL CLASS	MOISTURE CONTENT(%)	GRADATION		
					GRAV.	SAND	FINES
TP-1	4	Bag	GM	5	71	12	17
TP-1	8	Bag	GM	8	61	10	29
TP-3	3	Bag	GM	9	45	21	34
TP-3	6	Bag	GM	11	56	17	27
TP-6	4	Bag	GM	5	55	19	26

4.0 GEOLOGIC & SEISMIC CONDITIONS

4.1 Geologic Setting

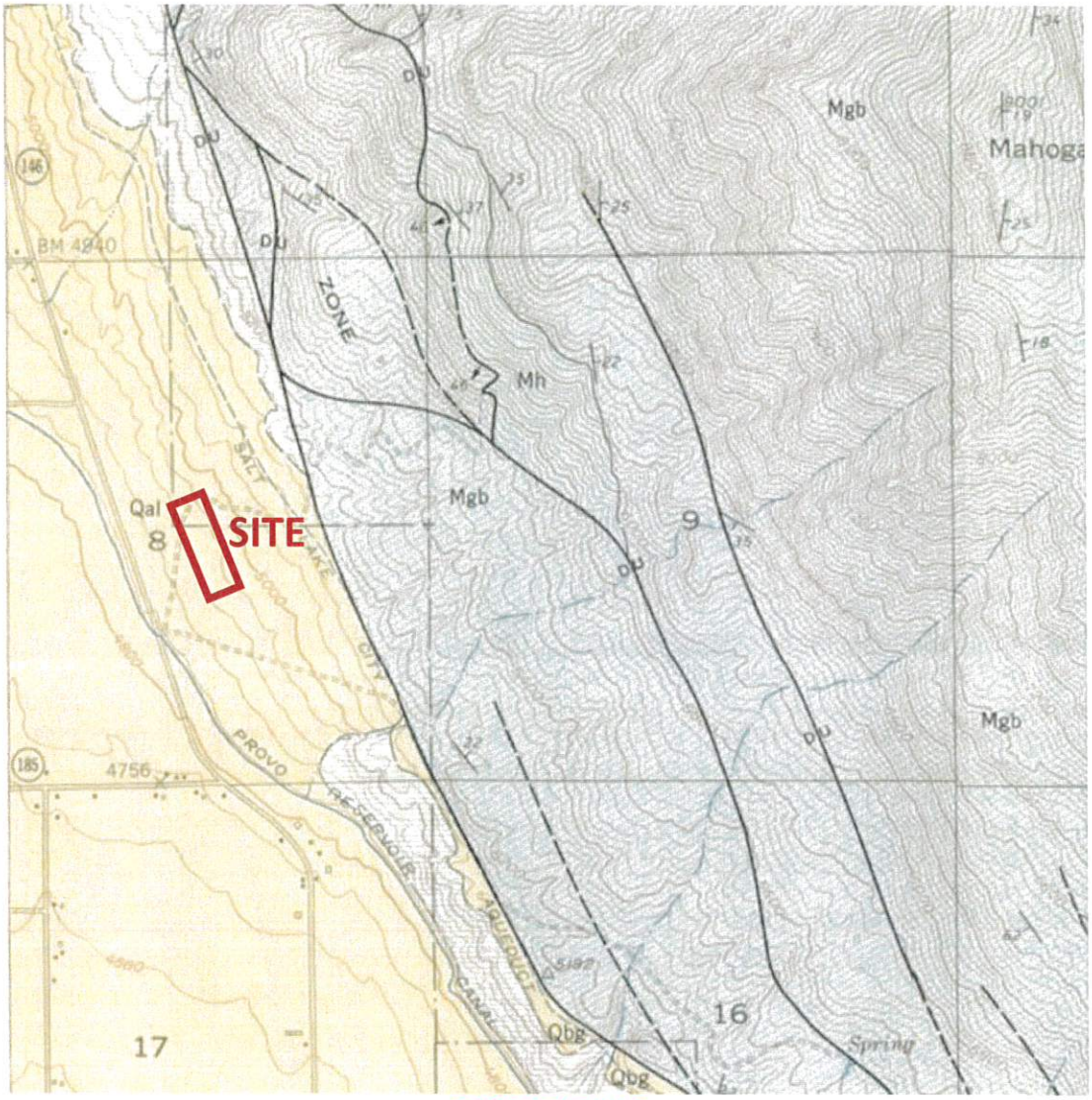
The subject site is located in the northeast portion of Utah Valley in north-central Utah at an elevation of approximately 5,252 feet above sea level. Utah Valley is a deep, sediment-filled basin that is part of the Basin and Range Physiographic Province. The valley was formed by extensional tectonic processes during the Tertiary and Quaternary geologic time periods. The valley is bordered by the Wasatch Mountain Range on the east and Lake Mountain and West Mountain on the west. Utah Valley is located within the Intermountain Seismic Belt, a zone of active tectonism and seismic activity extending from southwestern Montana to southwestern Utah. The active (evidence of movement within the past 10,000 years) Wasatch Fault Zone is part of the Intermountain Seismic Belt and extends from southeastern Idaho to central Utah along the western base of the Wasatch Mountain Range.

Much of northwestern Utah, including Utah Valley, was also previously covered by the Pleistocene age Lake Bonneville. Utah Lake, which currently occupies much of the western portion of the valley, is a remnant of this ancient fresh water lake. Lake Bonneville reached a high-stand elevation of approximately 5,092 feet above sea level at between 18,500 and 17,400 years ago. Approximately 17,400 years ago, the lake breached its basin in southeastern Idaho and dropped by almost 300 feet relatively fast as water drained into the Snake River. Following this catastrophic release, the lake level continued to drop slowly over time, primarily driven by drier climatic conditions, until reaching the current levels of Utah Lake and the larger Great Salt Lake to the north. Shoreline terraces formed at the high-stand elevation of the lake and several subsequent lower lake levels are visible in places on the mountain slopes surrounding the valley. Much of the sediment within Utah Valley was deposited as lacustrine sediments during both the transgressive (rise) and regressive (fall) phases of Lake Bonneville.

The geology of the USGS 7.5 minute Timpanogos Cave Quadrangle, which includes the subject site, was mapped by Baker and others[2]. The surficial geology at the subject site and adjacent sites has been mapped as "Alluvial

[2] Baker, A.A., Crittenden, M.D. Jr., 1961, Geology of the Timpanogos Cave Quadrangle, USGS Open File Report GQ-132, 1:24,000 scale

deposits" (Map Unit Qal) dated Pleistocene. Unit Qal is described in the referenced map as "stream gravel, valley fill and low angle alluvial cones." No fill has been mapped at the site. Refer to the **Geologic Map**, shown below.



GEOLOGIC MAP

4.2 Faulting

No surface fault traces are shown on the referenced geologic map crossing or projecting toward the subject site. The nearest active fault is the Provo Segment of the Wasatch Fault Zone 0.1 miles to the east. A surface fault hazard study was not performed as part of our scope of work. Note that the site will likely experience significant shaking if an earthquake were to occur along this fault segment, within several miles from the site. Seismic design issues are addressed in **Section 4.3** below.

4.3 Seismicity

4.3.1 Site Class

Utah has adopted the International Building Code (IBC) 2018, which determines the seismic hazard for a site based upon 2014 mapping of bedrock accelerations prepared by the United States Geologic Survey (USGS) and the soil site class. The USGS values are presented on maps incorporated into the IBC code and are also available based on latitude and longitude coordinates (grid points). For site class definitions, IBC 2018 Section 1613.2.2 refers to Chapter 20, Site Classification Procedure for Seismic Design, of ASCE[3] 7-16, which stipulates that the average values of shear wave velocity, blow count and/or shear strength within the upper 100 feet (30 meters) be utilized to determine seismic site class.

Based on average shear wave velocity data within the upper 30 meters ($V_{S,30}$) published by McDonald and Ashland[4], the subject site is located within unit description Q02, which has a log-mean $V_{S,30}$ of 294 meters per second (964 feet per second). Thus, it is our opinion the site best fits Site Class D – Stiff Soil Profile (with data), which we recommend for seismic structural design.

4.3.2 Ground Motions

The 2014 USGS mapping utilized by the IBC provides values of peak ground, short period and long period spectral accelerations for the Site Class B/C boundary and the Risk-Targeted Maximum Considered Earthquake (MCE_R). This Site Class B/C boundary represents average bedrock values for the Western United States and must be corrected for local soil conditions. The following table and response spectra summarizes the peak ground, short period and long period accelerations for the MCE_R event, and incorporates appropriate soil correction factors for a Site Class D (with data) soil profile at site grid coordinates of 40.4201 degrees north latitude and -111.7480 degrees west longitude:

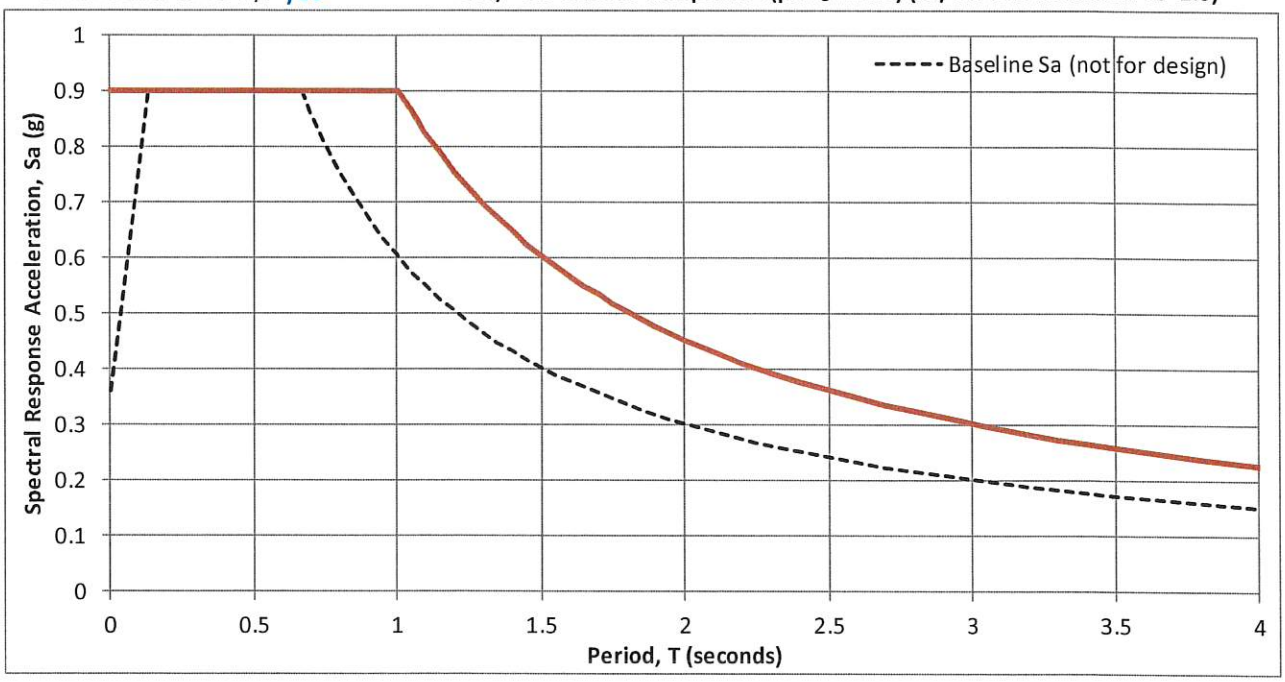
[3]American Society of Civil Engineers
[4]McDonald, G.N. and Ashland, F.X., 2008, "Earthquake Site-Conditions Map for the Wasatch Front Urban Corridor, Utah," Utah Geological Survey Special Study 125, 41 pp.

SPECTRAL ACCELERATION PERIOD, T	SITE CLASS B/C BOUNDARY [mapped values] (g)	SITE COEFFICIENT	SITE CLASS D* [adjusted for site class effects] (g)	MULTI-PLIER	DESIGN VALUES (g)
Peak Ground Acceleration	PGA = **0.617**	F_{pga} = 1.100	PGA_M = 0.679	1.000	PGA_M = 0.679
0.2 Seconds (Long Period Acceleration)	S_S = **1.352**	F_a = 1.000	S_{MS} = 1.352	0.667	S_{DS} = 0.901
	(no exceptions needed)	F_a = (N/A)	S_{MS} = (N/A)	0.667	S_{DS} = (N/A)
1.0 Second (Long Period Acceleration)	S_1 = **0.506**	F_v = N/A	S_{M1} = N/A	0.667	S_{D1} = N/A
	(Exception 2:)	F_v = (1.794)	S_{M1} = (0.908)	0.667	S_{D1} = (0.605)

NOTES: 1. TL (seconds): **8** * **Site Class D With Data**

2. Site Class: **D** **4. ASCE 7-16 Requires Site-Specific Ground Motion Hazard Analysis (Since S1 ≥ 0.2 sec) - OR Can Use Exception 2 (per §11.4.8) (Sa/Cs Plot Assumes R=Ie=1.0)**

3. Have data to verify? **yes**



As indicated in the above table, S_1 is greater than 0.2 seconds and a site-specific ground motion hazard analysis (GMHA) is required for the site, unless the Exception 2 values shown are used for seismic design. If a site-specific GMHA is desired instead of using the higher exception values, please contact CMT for a proposal to perform the GMHA.

4.3.3 Liquefaction

Liquefaction is defined as the condition when saturated, loose, sandy soils lose their support capabilities because of excessive pore water pressure which develops during a seismic event. Clayey soils, even if saturated, will generally not liquefy during a major seismic event.

The site is located within an area designated by the Utah Geologic Survey[5] as having "Very Low" liquefaction potential. This is considered as having a less than 5% probability that within a 100-year period an earthquake strong enough to cause liquefaction will occur.

A special liquefaction study was not performed for this site. We encountered unsaturated natural gravel soils, estimated to be in a dense state, within the depths we explored. In our opinion, the soils we encountered support the mapped very low liquefaction potential designation.

4.4 Other Geologic Hazards

No landslide deposits or features, including lateral spread deposits, are mapped on or adjacent to the site. The site is not located within a known or mapped potential stream flooding[6], debris flow, or rock-fall hazard area.

5.0 SITE CONDITIONS

5.1 Surface Conditions

At the time the test pits were excavated the site consisted of undeveloped land vegetated with grasses, weeds, and sage brush. The site grade sloped downward to the south with an overall relief of about 10 feet, and to the west with an overall relief of about 25 to 40 feet. Based upon aerial photos readily available online dating back to 1985, the site appears to have been undeveloped range land until the early 2000s when the surrounding development began. The site is bounded on all sides almost entirely by residential development (see **Vicinity Map** in **Section 1.1** above).

5.2 Subsurface Soils

At the locations of test pits TP-5 and TP-6 we encountered a few inches to as much as about 12 inches of topsoil at the surface. At the other test pit locations we encountered sandy gravelly fill soils up to about 3.5 feet in thickness. These fill soils are considered undocumented (not test for compaction) and unsuitable for support of footings or floor slabs.

Natural soils observed beneath the topsoil/fill soils consisted of light brown to brown, slightly moist, Silty GRAVEL (GM) with sand, and varying amounts of cobbles, extending to the maximum depth explored of about 9 feet below the surface. These natural gravel soils were estimated to be in a dense state and are projected to exhibit moderately high strength and low compressibility characteristics.

For a more descriptive interpretation of subsurface conditions, please refer to the test pit logs, **Figures 2 through 7**, which graphically represent the subsurface conditions encountered. The lines designating the interface

[5]Utah Geological Survey, "Liquefaction-Potential Map for a Part of Utah County, Utah," Utah Geological Survey Public Information Series 28, August 1994. https://ugspub.nr.utah.gov/publications/public_information/pi-28.pdf
[6]https://msc.fema.gov/portal/search?AddressQuery=Morgan%20Blvd.%20and%20Sage%20Vista%20Lane%2C%20Cedar%20Hills%2C%20UT#searchresultsanchor

between soil types on the logs generally represent approximate boundaries - in situ, the transition between soil types may be gradual.

5.3 Groundwater

Groundwater was not encountered at the time of our field explorations within the maximum depth explored of about 9 feet below the existing ground surface. Therefore, groundwater is not anticipated to be encountered in excavations at this site.

Groundwater levels can fluctuate as much as 1.5 to 2 feet seasonally. Numerous other factors such as heavy precipitation, irrigation of neighboring land, and other unforeseen factors, may also influence ground water elevations at the site. The detailed evaluation of these and other factors, which may be responsible for ground water fluctuations, and the magnitude of potential fluctuations, is beyond the scope of this study.

5.4 Site Subsurface Variations

Based on the results of the subsurface explorations and our experience, variations in the continuity and nature of subsurface conditions should be anticipated. Due to the heterogeneous characteristics of natural soils, care should be taken in interpolating or extrapolating subsurface conditions between or beyond the exploratory locations.

Also, when logging and sampling of the test pits was completed, the test pits were backfilled with the excavated soils but minimal to no effort was made to compact these soils. Thus, the test pit backfill is considered undocumented fill and settlement of the backfill in the test pits over time should be anticipated.

6.0 SITE PREPARATION AND GRADING

6.1 General

All deleterious materials should be stripped from the site prior to commencement of construction activities. This includes loose and disturbed soils, topsoil, vegetation, etc. Based upon the conditions observed in the test pits there is topsoil on the surface of portions of the site which we estimated to be up to about 12 inches in thickness. When stripping and grubbing, topsoil should be distinguished by the apparent organic content and not solely by color; thus we estimate that topsoil stripping will need to include the upper 4 to 6 inches. However, where larger brush is located roots or root balls likely extend deeper and should also be removed.

At most of the test pit locations up to approximately 3.5 feet of undocumented fill is present on the surface of the site. All undocumented fill shall be removed from beneath structures, but may remain beneath flatwork and pavements, provided the owner understands that additional maintenance may be required. Outside of building footprints, proper preparation of undocumented fill and disturbed soils for support of pavement and exterior concrete flatwork shall consist of removing the upper 12 inches, scarifying the exposed surface to a minimum depth of 8 inches, removing any debris encountered, moisture conditioning as needed, and re-

compacting the scarified soils in place to 95% of the maximum dry density. The removed 12 inches, if free of debris, organics, etc. may then be replaced in similarly compacted lifts.

Prior to placement of pavement materials the exposed subgrade must then be proofrolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice. If excessively soft or loose soils are encountered, they must be removed (up to a maximum depth of 2 feet) and replaced with structural fill.

Following stripping and grubbing the site should be observed by a CMT geotechnical engineer to assess that suitable natural soils have been exposed and any deleterious materials, loose and/or disturbed soils have been removed, prior to placing site grading fills, footings, slabs, and pavements.

Fill placed over large areas to raise overall site grades can induce settlements in the underlying natural soils. If more than 3 feet of site grading fill is anticipated over the natural ground surface, we should be notified to assess potential settlements and provide additional recommendations as needed. These recommendations may include placement of the site grading fill far in advance to allow potential settlements to occur prior to construction.

6.2 Temporary Excavations

Excavations deeper than 8 feet are not anticipated at the site. Groundwater was not encountered within the depths explored, about 6 to 9 feet, at the time of our field explorations, and thus is not anticipated to be encountered in excavations.

The natural soils encountered at this site consisted of gravel. For sandy/gravelly (cohesionless) soils, temporary construction excavations not exceeding 4 feet in depth should be no steeper than one-half horizontal to one vertical (0.5H:1V). For excavations up to 8 feet and above groundwater, side slopes should be no steeper than one horizontal to one vertical (1H:1V). Excavations encountering saturated cohesionless soils will be very difficult to maintain, and will require very flat side slopes and/or shoring, bracing and dewatering.

In clayey (cohesive) soils, temporary construction excavations not exceeding 4 feet in depth may be constructed with near-vertical side slopes. Temporary excavations up to 8 feet deep, above or below groundwater, may be constructed with side slopes no steeper than one-half horizontal to one vertical (0.5H:1V).

All excavations must be inspected periodically by qualified personnel. If any signs of instability or excessive sloughing are noted, immediate remedial action must be initiated. All excavations should be made following OSHA safety guidelines.

We anticipate that cut and fill slopes will be created at this site as part of development. Temporary cut and fill slopes should be no steeper than 1.5:1 (horizontal:vertical). Permanent cut or fill slopes should be no steeper than 2:1 unless slope stability analysis indicate steeper slopes can be achieved. If planned, retaining walls which do not exceed an exposed height of 4 feet typically do not require engineering design. If retaining walls greater than 4 feet in exposed height are planned, CMT should be notified to provide design recommendations.

6.3 Fill Material

Following are our recommendations for the various fill types we anticipate will be used at this site:

FILL MATERIAL TYPE	DESCRIPTION | RECOMMENDED SPECIFICATION
Structural Fill	Placed below structures, flatwork and pavement. Well-graded sand/gravel mixture, with maximum particle size of 4 inches, a minimum 70% passing 3/4-inch sieve, a maximum 20% passing the No. 200 sieve, and a maximum Plasticity Index of 10.
Site Grading Fill	Placed over larger areas to raise the site grade. Sandy to gravelly soil, with a maximum particle size of 6 inches, a minimum 70% passing 3/4-inch sieve, a maximum 50% passing No. 200 sieve, and a maximum Plasticity Index of 15.
Non-Structural Fill	Placed below non-structural areas, such as landscaping. On-site soils or imported soils, with a maximum particle size of 8 inches, including silt/clay soils not containing excessive amounts of degradable/organic material (see discussion below).
Stabilization Fill	Placed to stabilize soft areas prior to placing structural fill and/or site grading fill. Coarse angular gravels and cobbles 1 inch to 8 inches in size. May also use 1.5-inch to 2.0-inch gravel placed on stabilization fabric, such as Mirafi RS280i, or equivalent (see **Section 6.6**).

On-site fill and natural gravel soils may be suitable for use as structural fill, if processed to meet the requirements given above, and may also be used in site grading fill and non-structural fill situations.

All fill material should be approved by a CMT geotechnical engineer prior to placement.

6.4 Fill Placement and Compaction

The various types of compaction equipment available have their limitations as to the maximum lift thickness that can be compacted. For example, hand operated equipment is limited to lifts of about 4 inches and most "trench compactors" have a maximum, consistent compaction depth of about 6 inches. Large rollers, depending on soil and moisture conditions, can achieve compaction at 8 to 12 inches. The full thickness of each lift should be compacted to at least the following percentages of the maximum dry density as determined by ASTM D-1557 (or AASHTO[7] T-180) in accordance with the following recommendations:

LOCATION	TOTAL FILL THICKNESS (FEET)	MINIMUM PERCENTAGE OF MAXIMUM DRY DENSITY
Beneath an area extending at least 4 feet beyond the perimeter of structures, and below flatwork and pavement (applies to structural fill and site grading fill) extending at least 2 feet beyond the perimeter	0 to 5 5 to 8	95 98
Site grading fill outside area defined above	0 to 5 5 to 8	92 95
Utility trenches within structural areas	--	96

[7]American Association of State Highway and Transportation Officials

LOCATION	TOTAL FILL THICKNESS (FEET)	MINIMUM PERCENTAGE OF MAXIMUM DRY DENSITY
Roadbase and subbase	-	96
Non-structural fill	0 to 5 5 to 8	90 92

Structural fills greater than 8 feet thick are not anticipated at the site. For best compaction results, we recommend that the moisture content for structural fill/backfill be within 2% of optimum. Field density tests should be performed on each lift as necessary to verify that proper compaction is being achieved.

Where fill will be placed on slopes with a gradient steeper than 4:1 (horizontal:vertical) we recommend that the slope be benched to allow placement and compaction on level surface. Bench heights should not exceed 3 feet.

6.5 Utility Trenches

For the bedding zone around the utility, we recommend utilizing sand bedding fill material that meets current APWA[8] requirements.

All utility trench backfill material below structurally loaded facilities (foundations, floor slabs, flatwork, parking lots/drive areas, etc.) should be placed at the same density requirements established for structural fill in the previous section.

Most utility companies and local governments are requiring Type A-1a or A-1b (AASHTO Designation) soils (sand/gravel soils with limited fines) be used as backfill over utilities within public rights of way, and the backfill be compacted over the full depth above the bedding zone to at least 96% of the maximum dry density as determined by AASHTO T-180 (ASTM D-1557). The natural gravel soils at this site will not likely meet these specifications.

Where the utility does not underlie structurally loaded facilities and public rights of way, on-site fill and natural soils may be utilized as trench backfill above the bedding layer, provided they are properly moisture conditioned and compacted to the minimum requirements stated above in **Section 6.4**.

6.6 Stabilization

To stabilize soft subgrade conditions (if encountered), a mixture of coarse, clean, angular gravels and cobbles and/or 1.5- to 2.0-inch clean gravel should be utilized, as indicated above in **Section 6.3**. Often the amount of gravelly material can be reduced with the use of a geotextile fabric such as Mirafi RS280i or equivalent. Its use will also help avoid mixing of the subgrade soils with the gravelly material. After excavating the soft/disturbed soils, the fabric should be spread across the bottom of the excavation and up the sides a minimum of 18 inches.

[8] American Public Works Association

Otherwise, it should be placed in accordance with the manufacturer's recommendation, including proper overlaps. The gravel material can then be placed over the fabric in compacted lifts as described above.

7.0 FOUNDATION RECOMMENDATIONS

The following recommendations have been developed on the basis of the previously described project characteristics, including the maximum loads discussed in **Section 1.3**, the subsurface conditions observed in the field and the laboratory test data, and standard geotechnical engineering practice.

7.1 Foundation Recommendations

Based on our geotechnical engineering analyses, the proposed townhome residences may be supported upon conventional spread and/or continuous wall foundations placed on suitable, undisturbed natural gravel soils and/or on structural fill extending to suitable natural gravel soils. Footings may be designed using a net bearing pressure of 2,500 psf.

The term "net bearing pressure" refers to the pressure imposed by the portion of the structure located above lowest adjacent final grade, thus the weight of the footing and backfill to lowest adjacent final grade need not be considered. The allowable bearing pressure may be increased by 1/3 for temporary loads such as wind and seismic forces.

We also recommend the following:

1. Exterior footings subject to frost should be placed at least 30 inches below final grade.
2. Interior footings not subject to frost should be placed at least 16 inches below grade.
3. Continuous footing widths should be maintained at a minimum of 18 inches.
4. Spot footings should be a minimum of 24 inches wide.

7.2 Installation

Under no circumstances shall foundations be placed on undocumented fill, topsoil with organics, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water. If other unsuitable soils are encountered, they must be completely removed and replaced with properly compacted structural fill.

Deep, large roots may be encountered where trees and larger bushes are located or were previously located at the site; such large roots should be removed. The base of footing excavations should be observed by a CMT geotechnical engineer to confirm that suitable bearing soils have been exposed.

All fill used below footings and floor slabs should meet the requirements for structural fill, and should be placed and compacted in accordance with **Section 6** above. The width of structural replacement fill below footings should be equal to the width of the footing plus 1 foot for each foot of fill thickness. For instance, if the footing width is 2 feet and the structural fill depth beneath the footing is 2 feet, the fill replacement width should be 4 feet, centered beneath the footing.

The minimum thickness of structural fill below footings should be equivalent to one-third the thickness of structural fill below any other portion of the foundations. For example, if the maximum depth of structural fill is 6 feet, all footings for the new structure should be underlain by a minimum 2 feet of structural fill.

7.3 Estimated Settlement

Foundations designed and constructed in accordance with our recommendations could experience some settlement, but we anticipate that total settlements of footings founded as recommended above will not exceed 1 inch, with differential settlements on the order of 0.5 inches over a distance of 25 feet. We expect approximately 50% of the total settlement to initially take place during construction.

7.4 Lateral Resistance

Lateral loads imposed upon foundations due to wind or seismic forces may be resisted by the development of passive earth pressures and friction between the base of the footings and the supporting soils. In determining frictional resistance, a coefficient of 0.40 for natural gravel soils and structural fill, may be utilized for design. Passive resistance provided by properly placed and compacted structural fill above the water table may be considered equivalent to a fluid with a density of 475 pcf. A combination of passive earth resistance and friction may be utilized if the friction component of the total is divided by 1.5.

8.0 LATERAL EARTH PRESSURES

We project that basement walls up to 8 feet tall will be constructed at this site. The lateral earth pressure values given below anticipate that native gravel soils or structural fill will be used as backfill material, placed and compacted in accordance with the recommendations presented herein. If other soil types will be used as backfill, we should be notified so that appropriate modifications to these values can be provided, as needed.

The lateral pressures imposed upon subgrade facilities will depend upon the relative rigidity and movement of the backfilled structure. Following are the recommended lateral pressure values, which also assume that the soil surface behind the wall is horizontal and that the backfill within 3 feet of the wall will be compacted with hand-operated compacting equipment.

CONDITION	STATIC (psf/ft)*	SEISMIC (psf)**
Active Pressure (wall is allowed to yield, i.e. move away from the soil, with a minimum 0.001H movement/rotation at the top of the wall, where "H" is the total height of the wall)	35	133
At-Rest Pressure (wall is not allowed to yield)	55	354
Passive Pressure (wall moves into the soil)	475	850

*Equivalent Fluid Pressure (applied at 1/3 Height of 8-foot High Wall)
**Uniform Pressure, Seismic Only (applied at 1/2 Height of 8-foot High Wall)

9.0 FLOOR SLABS

Floor slabs may be established upon suitable, undisturbed, natural gravel soils and/or on structural fill extending to suitable natural gravel soils (same as for foundations). Under no circumstances shall floor slabs be established directly on any topsoil, undocumented fills, loose or disturbed soils, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water.

In order to facilitate curing of the concrete, we recommend that floor slabs be directly underlain by at least 4 inches of "free-draining" fill, such as "pea" gravel or 3/4-inch to 1-inch minus, clean, gap-graded gravel. To help control normal shrinkage and stress cracking, the floor slabs should have the following features:

1. Adequate reinforcement for the anticipated floor loads with the reinforcement continuous through interior floor joints;
2. Frequent crack control joints; and
3. Non-rigid attachment of the slabs to foundation walls and bearing slabs.

10.0 DRAINAGE RECOMMENDATIONS

10.1 Surface Drainage

It is important to the long-term performance of foundations and floor slabs, and to stability of slopes, that water not be allowed to collect near the foundation walls and infiltrate into the underlying soils. We recommend the following:

1. All areas around each residence should be sloped to provide drainage away from the foundations. We recommend a minimum slope of 4 inches in the first 10 feet away from the structure. This slope should be maintained throughout the lifetime of the structure.

2. All roof drainage should be collected in rain gutters with downspouts designed to discharge at least 10 feet from the foundation walls or well beyond the backfill limits, whichever is greater.

3. Adequate compaction of the foundation backfill should be provided. We suggest a minimum of 90% of the maximum laboratory density as determined by ASTM D-1557. Water consolidation methods should not be used under any circumstances.

4. Landscape sprinklers should be aimed away from the foundation walls. The sprinkling systems should be designed with proper drainage and be well-maintained. Over watering should be avoided.

5. Other precautions that may become evident during construction.

10.2 Foundation Subdrains

The subsurface natural soils encountered at this site primarily consisted of gravel (GM), which is a Group 1 soil per IRC[9] 2018. Thus, perimeter foundation subdrains are not needed for this site.

11.0 PAVEMENTS

All pavement areas must be prepared as discussed above in **Section 6.1**. Under no circumstances shall pavements be established over topsoil, non-engineered fills (if encountered), loose or disturbed soils, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water.

In roadway areas, subsequent to stripping and prior to the placement of pavement materials, the exposed subgrade must be proof rolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice. If excessively soft or otherwise unsuitable soils are encountered, we recommend they be removed to a minimum of 18 inches below the subgrade level and replaced with structural fill.

We anticipate the natural gravel soils, or the existing undocumented fill properly prepared as recommended in Section 6.0, will exhibit good pavement support characteristics when saturated or nearly saturated. Based on our laboratory testing experience with similar soils, our pavement design utilized a California Bearing Ratio (CBR) of 20 for these soils.

Given the projected traffic as discussed above in **Section 1.3**, the following equivalent pavement sections are recommended for approximately 4 ESAL's (18-kip equivalent single-axle loads) per day:

MATERIAL	PAVEMENT SECTION THICKNESS (inches)	
Asphalt	**3**	**3**
Road-Base	**7**	**4**
Subbase	**0**	**6**
Total Thickness	**10**	**13**

Untreated base course (UTBC) should conform to city specifications, or to 1-inch-minus UDOT specifications for A–1-a/NP, and have a minimum CBR value of 70%. Material meeting our specification for structural fill can be used for subbase, as long as the fines content (percent passing No. 200 sieve) does not exceed 15%. Roadbase and subbase material should be compacted as recommended above in **Section 6.4**. Asphalt material generally should conform to APWA requirements, having a ½-inch maximum aggregate size, a 75-gyration Superpave mix containing no more than 15% of recycled asphalt (RAP) and a PG58-28 binder.

[9]International Residential Code

12.0 QUALITY CONTROL

We recommend that CMT be retained as part of a comprehensive quality control testing and observation program. With CMT on-site we can help facilitate implementation of our recommendations and address, in a timely manner, any subsurface conditions encountered which vary from those described in this report. Without such a program CMT cannot be responsible for application of our recommendations to subsurface conditions which may vary from those described herein. This program may include, but not necessarily be limited to, the following:

12.1 Field Observations

Observations should be completed during all phases of construction such as site preparation, foundation excavation, structural fill placement and concrete placement.

12.2 Fill Compaction

Compaction testing by CMT is required for all structural supporting fill materials. Maximum Dry Density (Modified Proctor, ASTM D-1557) tests should be requested by the contractor immediately after delivery of any fill materials. The maximum density information should then be used for field density tests on each lift as necessary to ensure that the required compaction is being achieved.

12.3 Excavations

All excavation procedures and processes should be observed by a geotechnical engineer from CMT or their representative. In addition, for the recommendations in this report to be valid, all backfill and structural fill placed in trenches and all pavements should be density tested by CMT. We recommend that freshly mixed concrete be tested by CMT in accordance with ASTM designations.

13.0 LIMITATIONS

The recommendations provided herein were developed by evaluating the information obtained from the subsurface explorations and soils encountered therein. The exploration logs reflect the subsurface conditions only at the specific location at the particular time designated on the logs. Soil and ground water conditions may differ from conditions encountered at the actual exploration locations. The nature and extent of any variation in the explorations may not become evident until during the course of construction. If variations do appear, it may become necessary to re-evaluate the recommendations of this report after we have observed the variation.

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties, either expressed or implied.

We appreciate the opportunity to be of service to you on this project. If we can be of further assistance or if you have any questions regarding this project, please do not hesitate to contact us at (801) 492-4132. To schedule materials testing, please call (801) 381-5141.

APPENDIX

SUPPORTING
DOCUMENTATION



Cedar Hills Townhomes

Southwest corner of Morgan Boulevard and Sage Vista Lane, Cedar Hills, Utah

CMT ENGINEERING LABORATORIES

Site Map

Date:	3-May-21
Job #	16163

Figure: 1

Cedar Hills Townhomes

Test Pit Log **TP-1**

Southwest corner of Morgan Boulevard and Sage Vista Lane, Cedar Hills, Utah

Total Depth: 9'
Water Depth: (see Remarks)

Date: 4/1/21
Job #: 16163

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		Fill: Gravel and sand with fines, trace cobbles and boulders										
1												
2												
3												
4		Light Brown Silty GRAVEL (GM) with sand, trace cobbles, slightly moist dense (estimated)		1	5		71	12	17			
5												
6												
7												
8				2	8		61	10	29			
9		END AT 9'										
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Rubber Tire Backhoe
Excavated By: Blaine Hone
Logged By: Nate Pack

CMT ENGINEERING LABORATORIES

Figure: 2

Cedar Hills Townhomes

Test Pit Log **TP-2**

Southwest corner of Morgan Boulevard and Sage Vista Lane, Cedar Hills, Utah

Total Depth: 6.5'
Water Depth: (see Remarks)

Date: 4/1/21
Job #: 16163

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation: Gravel %	Gradation: Sand %	Gradation: Fines %	Atterberg: LL	Atterberg: PL	Atterberg: PI
0		Fill: Gravel and sand with trace wood and plastic debris										
1												
2												
3		Silty GRAVEL (GM) with sand, trace clay and cobbles, slightly moist dense (estimated)		3								
4												
5												
6				4								
		END AT 6.5'										
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °

Surface Elev. (approx): Not Given

Equipment: Rubber Tire Backhoe
Excavated By: Blaine Hone
Logged By: Nate Pack

CMT ENGINEERING LABORATORIES

Figure: 3

Cedar Hills Townhomes

Test Pit Log **TP-3**

Southwest corner of Morgan Boulevard and Sage Vista Lane, Cedar Hills, Utah

Total Depth: 6.5'
Water Depth: (see Remarks)

Date: 4/1/21
Job #: 16163

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		Fill: Gravel and sand with fines, trace cobbles and boulders										
3		Silty GRAVEL (GM) with sand, trace clay, slightly moist dense (estimated)		5	9		45	21	34			
6				6	11		56	17	27			
		END AT 6.5'										

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Rubber Tire Backhoe
Excavated By: Blaine Hone
Logged By: Nate Pack

CMT ENGINEERING LABORATORIES

Figure: 4

Cedar Hills Townhomes

Test Pit Log **TP-4**

Southwest corner of Morgan Boulevard and Sage Vista Lane, Cedar Hills, Utah

Total Depth: 6'
Water Depth: (see Remarks)

Date: 4/1/21
Job #: 16163

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		Fill: Gravel and sand										
1												
2												
3		Silty GRAVEL (GM) with sand, cobbles and boulders, trace clay, slightly moist dense (estimated)										
4												
5				7								
6		END AT 6'										
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °

Surface Elev. (approx): Not Given

Equipment: Rubber Tire Backhoe
Excavated By: Blaine Hone
Logged By: Nate Pack

CMT ENGINEERING LABORATORIES

Figure: 5

Cedar Hills Townhomes

Test Pit Log **TP-5**

Southwest corner of Morgan Boulevard and Sage Vista Lane, Cedar Hills, Utah

Total Depth: 6'
Water Depth: (see Remarks)

Date: 4/1/21
Job #: 16163

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation: Gravel %	Gradation: Sand %	Gradation: Fines %	Atterberg: LL	Atterberg: PL	Atterberg: PI
0		Topsoil with gravel										
		Brown Silty GRAVEL (GM) with sand, cobbles and boulders, slightly moist dense (estimated)										
1												
2												
3		grades light brown with trace silt and clay										
4				8								
5												
6		END AT 6'										
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °
Surface Elev. (approx): Not Given

Equipment: Rubber Tire Backhoe
Excavated By: Blaine Hone
Logged By: Nate Pack

CMT ENGINEERING LABORATORIES

Figure: 6

Cedar Hills Townhomes

Test Pit Log **TP-6**

Southwest corner of Morgan Boulevard and Sage Vista Lane, Cedar Hills, Utah

Total Depth: 5'
Water Depth: (see Remarks)

Date: 4/1/21
Job #: 16163

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		Topsoil										
1		Light Brown/Tan Silty GRAVEL (GM) with sand, cobbles, slightly moist dense (estimated)										
2												
3												
4				9	5		55	19	26			
5		grades with boulders END AT 5'										
6												
7												
8												
9												
10												
11												
12												
13												
14												

Remarks: Groundwater not encountered during excavation.

Coordinates: °, °

Surface Elev. (approx): Not Given

Equipment: Rubber Tire Backhoe
Excavated By: Blaine Hone
Logged By: Nate Pack

CMT ENGINEERING LABORATORIES

Figure: 7

Cedar Hills Townhomes

Southwest corner of Morgan Boulevard and Sage Vista Lane, Cedar Hills, Utah

Key to Symbols

Date: 4/1/21

Job #: 16163

① Depth (ft)	② GRAPHIC LOG	③ Soil Description	④ Sample Type	⑤ Sample #	⑥ Moisture (%)	⑦ Dry Density(pcf)	Gradation ⑧ Gravel %	Sand %	Fines %	Atterberg ⑨ LL	PL	PI

COLUMN DESCRIPTIONS

① **Depth (ft.):** Depth (feet) below the ground surface (including groundwater depth - see water symbol below).

② **Graphic Log:** Graphic depicting type of soil encountered (see ② below).

③ **Soil Description:** Description of soils encountered, including Unified Soil Classification Symbol (see below).

④ **Sample Type:** Type of soil sample collected at depth interval shown; sampler symbols are explained below-right.

⑤ **Sample #:** Consecutive numbering of soil samples collected during field exploration.

⑥ **Moisture (%):** Water content of soil sample measured in laboratory (percentage of dry weight of sample).

⑦ **Dry Density (pcf):** The dry density of a soil measured in laboratory (pounds per cubic foot).

⑧ **Gradation:** Percentages of Gravel, Sand and Fines (Silt/Clay), obtained from lab test results of soil passing the No. 4 and No. 200 sieves.

⑨ **Atterberg:** Individual descriptions of Atterberg Tests are as follows:

LL = Liquid Limit (%): Water content at which a soil changes from plastic to liquid behavior.

PL = Plastic Limit (%): Water content at which a soil changes from liquid to plastic behavior.

PI = Plasticity Index (%): Range of water content at which a soil exhibits plastic properties (= Liquid Limit - Plastic Limit).

STRATIFICATION	
Description	**Thickness**
Seam	Up to ½ inch
Lense	Up to 12 inches
Layer	Greater than 12 in.
Occasional	1 or less per foot
Frequent	More than 1 per foot

MODIFIERS
Trace
<5%
Some
5-12%
With
> 12%

MOISTURE CONTENT
Dry: Absence of moisture, dusty, dry to the touch.
Moist: Damp / moist to the touch, but no visible water.
Wet: Visible water, usually soil below groundwater.

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISIONS			USCS SYMBOLS	②	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material is larger than No. 200 sieve size.	GRAVELS The coarse fraction retained on No. 4 sieve.	CLEAN GRAVELS (< 5% fines)	GW		Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
			GP		Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
		GRAVELS WITH FINES (≥ 12% fines)	GM		Silty Gravels, Gravel-Sand-Silt Mixtures
			GC		Clayey Gravels, Gravel-Sand-Clay Mixtures
	SANDS The coarse fraction passing through No. 4 sieve.	CLEAN SANDS (< 5% fines)	SW		Well-Graded Sands, Gravelly Sands, Little or No Fines
			SP		Poorly-Graded Sands, Gravelly Sands, Little or No Fines
		SANDS WITH FINES (≥ 12% fines)	SM		Silty Sands, Sand-Silt Mixtures
			SC		Clayey Sands, Sand-Clay Mixtures
FINE-GRAINED SOILS More than 50% of material is smaller than No. 200 sieve size.	SILTS AND CLAYS Liquid Limit less than 50%		ML		Inorganic Silts and Sandy Silts with No Plasticity or Clayey Silts with Slight Plasticity
			CL		Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays
			OL		Organic Silts and Organic Silty Clays of Low Plasticity
	SILTS AND CLAYS Liquid Limit greater than 50%		MH		Inorganic Silts, Micacious or Diatomacious Fine Sand or Silty Soils
			CH		Inorganic Clays of High Plasticity, Fat Clays
			OH		Organic Silts and Organic Clays of Medium to High Plasticity
HIGHLY ORGANIC SOILS			PT		Peat, Soils with High Organic Contents

Note: Dual Symbols are used to indicate borderline soil classifications (i.e. GP-GM, SC-SM, etc.).

SAMPLER SYMBOLS

- Block Sample
- Bulk/Bag Sample
- Modified California Sampler
- 3.5" OD, 2.42" ID D&M Sampler
- Rock Core
- Standard Penetration Split Spoon Sampler
- Thin Wall (Shelby Tube)

WATER SYMBOL

- Encountered Water Level
- Measured Water Level (see Remarks on Logs)

1. The results of laboratory tests on the samples collected are shown on the logs at the respective sample depths.
2. The subsurface conditions represented on the logs are for the locations specified. Caution should be exercised if interpolating between or extrapolating beyond the exploration locations.
3. The information presented on each log is subject to the limitations, conclusions, and recommendations presented in this report.

CMT ENGINEERING LABORATORIES

Figure: 8

CITY OF CEDAR HILLS

TO:	Planning Commission
FROM:	Chandler Goodwin, City Manager/Planner
DATE:	November 23, 2021

Planning Commission
Agenda Item

SUBJECT:	Review/Recommendation and Public Hearing on Final Plans for Gateway Plat D Phase 4, Lot 3
APPLICANT PRESENTATION:	Charlie Openshaw
STAFF PRESENTATION:	Chandler Goodwin, City Manager

BACKGROUND AND FINDINGS:

The developer has submitted final plans for the continued development of the Gateway Subdivision, specifically Lot 3, which contains two commercial retail spaces, one of which will be occupied by Café Rio. The plan includes the development of a drive thru for the Café Rio space. Staff has submitted the engineered plan set to the City Engineer for review. Staff will present to the Planning Commission any findings from the internal zoning review to the Planning Commission at the time of the presentation. A few items that were brought up at the previous meeting that have since been addressed are the location of the ADA parking stalls, and the trash enclosure. Staff is working with the developer on a landscape plan which complies with the current code in terms of types of plantings and percentage of project. Staff will review the packet as well as all other submitted materials and present findings to the Planning Commission.

PREVIOUS LEGISLATIVE ACTION:

Planning Commission gave preliminary approval in the September 28 , 2021 meeting

FISCAL IMPACT:

N/A

SUPPORTING DOCUMENTS:

Gateway civil plan set

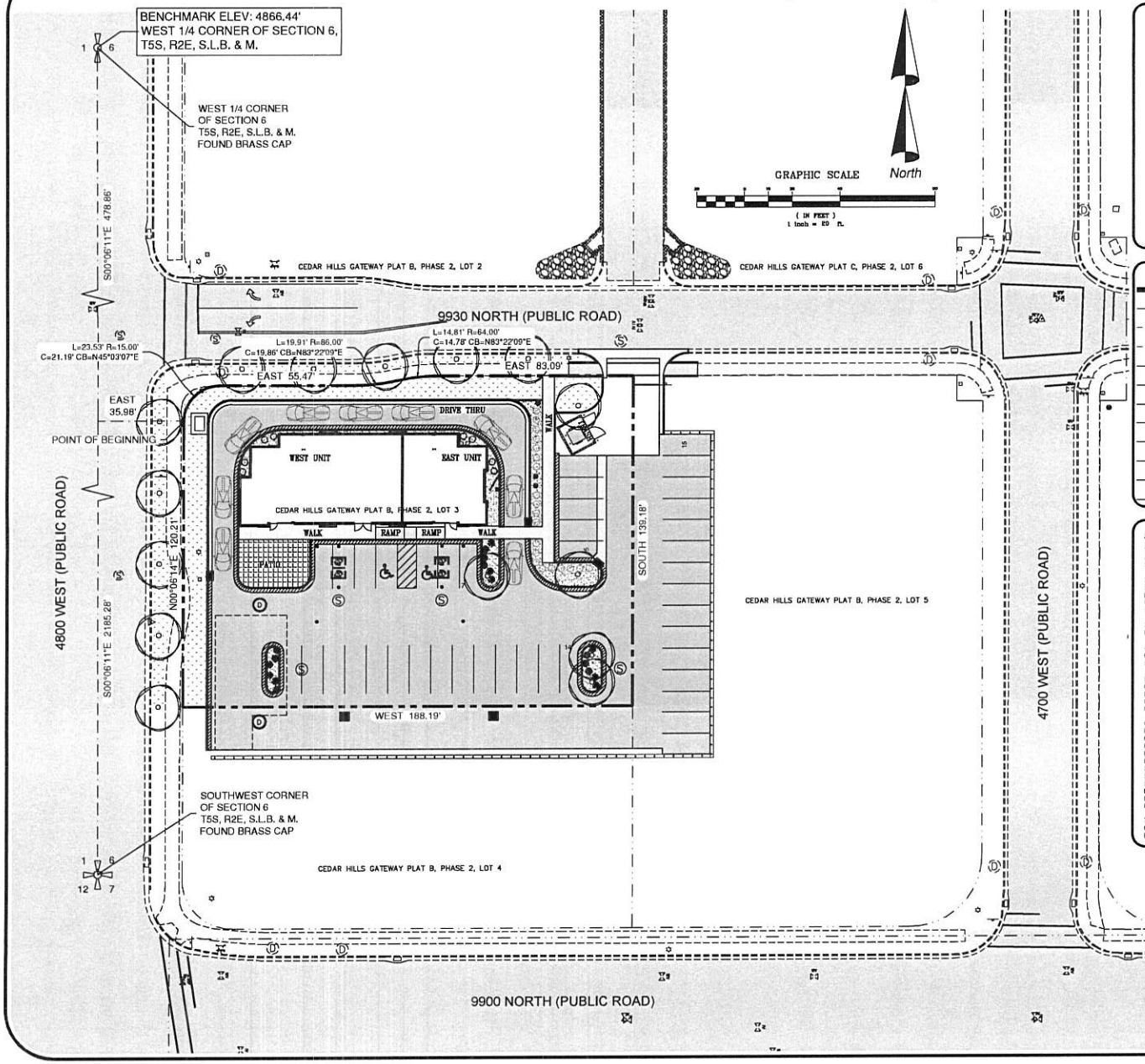
RECOMMENDATION:

Review packet and proposal, make any necessary recommendations for recommendation to the City Council

MOTION:

To recommend/not recommend the final plan for Cedar Hills Gateway Subdivision Plat D Phase 4, Lot 3, subject to the following conditions: {LIST ANY NECESSARY CONDITIONS FOR APPROVAL}

CEDAR HILLS GATEWAY PLAT "B", PHASE 2, LOT 3 - CAFE RIO



SYMBOL LEGEND:

- FIRE HYDRANT (FH)
- SEWER MANHOLE (SSMH)
- SEWER CLEANOUT (SCO)
- SD MANHOLE (SDMH)
- SD CURB INLET (SDCI)
- WATER VALVE (WV)
- PRESS. IRR. VALVE (IV)
- WATER METER (WM)
- PI CONTROL VALVE (ICV)
- POWER BOX
- UTILITY BOX

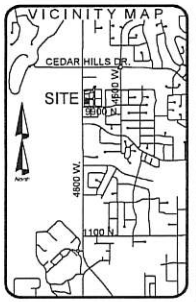
SYMBOL LEGEND:

- BOUNDARY LINE
- ADJACENT PROPERTY LINE
- PUBLIC UTILITY EASEMENT
- SETBACK
- UNDERGROUND POWER (E)
- GAS (G)
- SEWER PIPE (SS)
- STORM DRAIN PIPE (SD)
- WATER LATERAL
- WATER MAIN (CW)
- PRESSURIZED IRR. LINE (PI)
- COMMUNICATION LINE (FO)

GENERAL NOTES:

1. ALL LANDSCAPED AREAS SHALL HAVE AN AUTOMATIC, UNDERGROUND SPRINKLING SYSTEM.
2. A SAMPLING MANHOLE AND FAT AND OIL SEPARATOR/GREASE TRAP SHALL BE INSTALLED IF REQUIRED BY THE CITY AND IN ACCORDANCE WITH THE CITY OF CEDAR HILLS STANDARDS AND SPECIFICATIONS.
3. ALL SIGNAGE SHALL COMPLY WITH THE REQUIREMENTS OF THE CEDAR HILLS CITY CODE.
4. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF CEDAR HILLS CONSTRUCTION STANDARDS AND SPECIFICATIONS.
5. APPLICATION FOR INSPECTION BY THE CITY OF CEDAR HILLS ENGINEERING DEPT. SHALL BE MADE BY THE CONTRACTOR AT LEAST 48 HOURS BEFORE THE INSPECTION SERVICES WILL BE REQUIRED.
6. EXISTING UTILITIES ARE LOCATED ON THE PLANS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR THE PROTECTION OF UTILITIES AND THE ENGINEER BEARS NO RESPONSIBILITY FOR UTILITIES NOT SHOWN ON THE PLANS OR NOT IN THE LOCATION SHOWN ON THE PLANS. THIS INCLUDES ALL SERVICE LATERALS OF ANY KIND. CONTRACTOR IS TO FIELD VERIFY ALL UTILITIES SIZE AND LOCATION PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
7. SAWCUTTING OF ANY EXISTING CONCRETE CURB/GUTTER/SIDEWALK TO BE CUT AT AN EXISTING JOINT (TYPICAL).

VICINITY MAP



SITE INFORMATION:
Cedar Hills Gateway Plat "B", Phase 2, Lot 3
Address: 9920 N. 4800 W., Cedar Hills, UT

FEMA FIRM flood Insurance Map Community Panel Number 49051701 10 B, Date July 17, 2002. Zone X (Areas determined to be outside 500-year flood plain.)

OWNER
RH Cedar Hills LLC - Nathan Ricks, Manager

DEVELOPER:
Openshaw Development
Vistar "Charlie" Openshaw
2230 North University Parkway, Suite 6D
Provo, UT 84604
801-367-1444
charlesopenshaw@gmail.com

SURVEYOR, ENGINEER, PLANNER:
A.L.M. & Associates, Inc.
2230 North University Parkway, Suite 6D
Provo, UT 84604
(801) 374-6262 Greenwood@ALMonline.com

ARCHITECT:
Shane Williams

ZONING INFORMATION:
Zone - SC-1 Commercial

SITE TABULATION:
Total Area: 29,772.52 S.F. / 0.59 Ac. (100%)
Building Area: 3,852 S.F. / 0.09 Ac. (14.95%)
Impervious: 17,335.52 S.F. / 0.40 Ac. (67.26%)
Green Space: 3,998 S.F. / 0.09 Ac. (15.51%)
Patio Area: 587 S.F. / 0.01 Ac. (2.28%)

LANDSCAPE REQUIREMENT (33%):
Total Area + Street ROW Park Strip: 27,541.64 S.F.
- Green Space: 3,998 S.F. (17.59%)
- Patio Area: 587 S.F. (1.96%)
- Street ROW Park Strip: 1,769 S.F. (6.37%)

Total Landscaping: 6,354 S.F. (23.07%)

Parking Shown: 26 Stalls (2 ADA)

SHEET INDEX:

C1.0 COVER SHEET
C2.0 SITE PLAN
C3.0 UTILITY PLAN
C3.1 OFFSITE UTILITY PLAN
C3.2 UTILITY EASEMENT PLAN
C4.0 GRADING AND DRAINAGE PLAN
C5.0 SWPPP
C5.1 SWPPP BMP DETAILS
C5.2 SWPPP BMP DETAILS
C6.0 CITY DETAILS
C6.1 CITY DETAILS
C6.2 SITE DETAILS
C6.3 SITE DETAILS
C6.4 TS&S DETAILS
C6.5 SD STORM TECH DETAILS

BOUNDARY DESCRIPTION:

CEDAR HILLS GATEWAY SUBD., PLAT "B", PHASE 2, LOT 3

AREA = 25,772.52 SQ.FT. / 0.59 ACRES

NAD 83 STATE PLANE COORDINATES
NGVD 29 ELEVATION

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Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
COVER SHEET

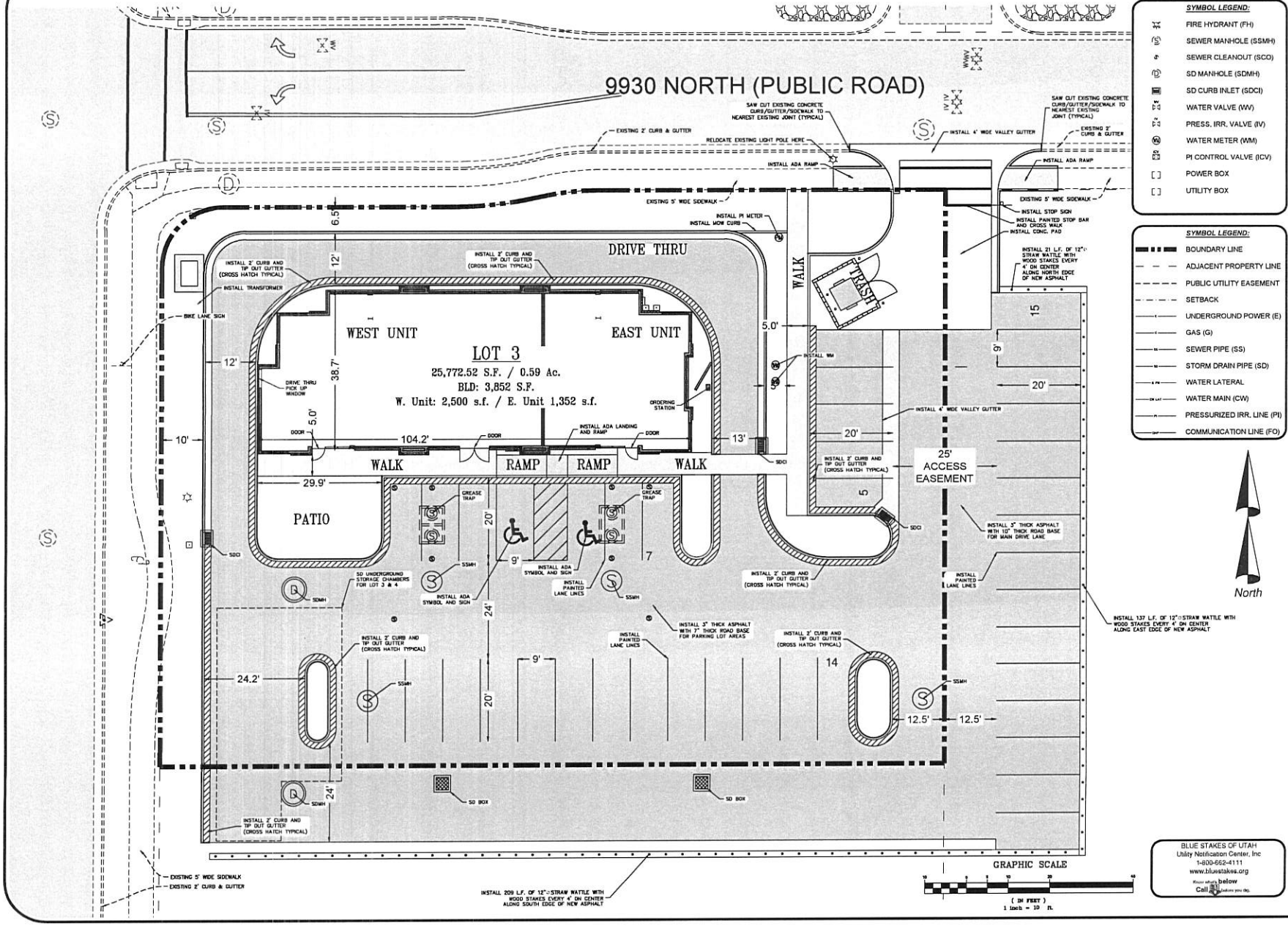
No.	Revision	Date

C1.0
OF SHEETS

Proj # 559 - 1937

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CEDAR HILLS GATEWAY PLAT "B", PHASE 2, LOT 3 - CAFE RIO SITE PLAN



SYMBOL LEGEND:

- FIRE HYDRANT (FH)
- SEWER MANHOLE (SSMH)
- SEWER CLEANOUT (SCO)
- SD MANHOLE (SDMH)
- SD CURB INLET (SDCI)
- WATER VALVE (WV)
- PRESS. IRR. VALVE (IV)
- WATER METER (WM)
- PI CONTROL VALVE (ICV)
- POWER BOX
- UTILITY BOX

SYMBOL LEGEND:

- BOUNDARY LINE
- ADJACENT PROPERTY LINE
- PUBLIC UTILITY EASEMENT
- SETBACK
- UNDERGROUND POWER (E)
- GAS (G)
- SEWER PIPE (SS)
- STORM DRAIN PIPE (SD)
- WATER LATERAL
- WATER MAIN (CW)
- PRESSURIZED IRR. LINE (PI)
- COMMUNICATION LINE (FO)

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Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
SITE PLAN

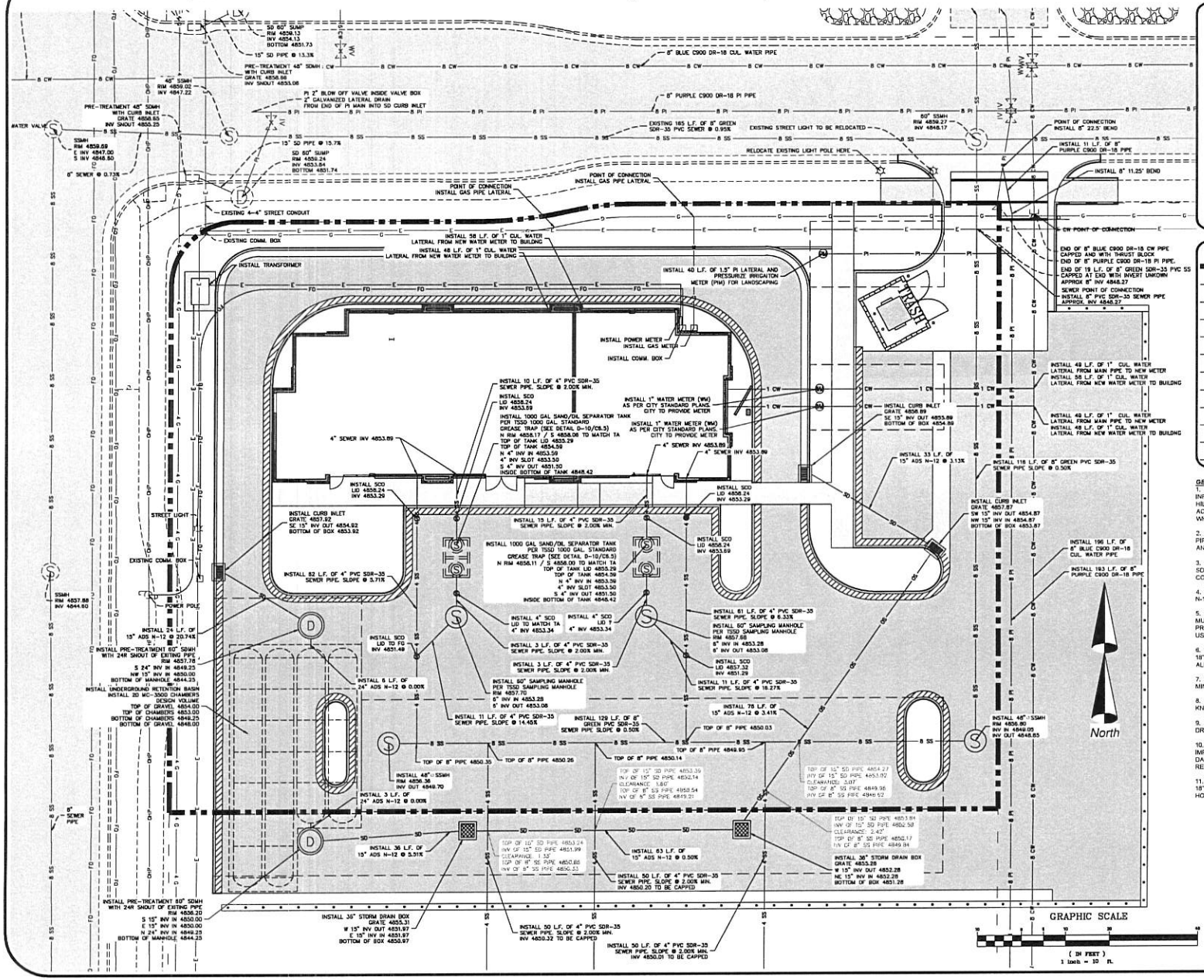
No.	Revision	Date

C2.0
OF SHEETS

Proj # 559 - 1937

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CEDAR HILLS GATEWAY PLAT "B", PHASE 2, LOT 3 - CAFE RIO UTILITY PLAN



GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

SYMBOL LEGEND:

- FIRE HYDRANT (FH)
- SEWER MANHOLE (SSMH)
- SEWER CLEANOUT (SCO)
- SD MANHOLE (SDMH)
- SD CURB INLET (SDCI)
- WATER VALVE (WV)
- PRESS. IRR. VALVE (IV)
- WATER METER (WM)
- PI CONTROL VALVE (ICV)
- POWER BOX
- UTILITY BOX

SYMBOL LEGEND:

- BOUNDARY LINE
- ADJACENT PROPERTY LINE
- PUBLIC UTILITY EASEMENT
- SETBACK
- UNDERGROUND POWER (E)
- GAS (G)
- SEWER PIPE (SS)
- STORM DRAIN PIPE (SD)
- WATER LATERAL
- WATER MAIN (CW)
- PRESSURIZED IRR. LINE (PI)
- COMMUNICATION LINE (FO)

GENERAL UTILITY NOTES:

1. ALL CEDAR HILLS OWNED / DEDICATED INFRASTRUCTURE IS TO BE INSTALLED PER CEDAR HILLS STANDARDS AND SPECIFICATIONS AND IN ACCORDANCE WITH DDW REGULATIONS. WHICHEVER IS MORE STRINGENT SHALL GOVERN.
2. ALL CULINARY PIPELINES TO BE BLUE C900 DR-18 PIPE AND TO HAVE A MINIMUM OF 4-FEET OF COVER AND AVOID HIGH POINTS.
3. ALL SANITARY SEWER PIPELINES TO BE GREEN SDR-35 PVC AND TO HAVE A MINIMUM OF 4-FEET OF COVER.
4. ALL STORM DRAIN MAIN PIPELINES TO BE ADS N-12.
5. ANY INTERRUPTIONS OF CITY UTILITY SERVICES MUST BE ACCORDING CITY STANDARDS AND PROVIDE PROPER NOTIFICATION THAT AFFECTED USERS.
6. CONTRACTOR REQUIRED TO MAINTAIN MINIMUM 18" CLEARANCE FOR ALL SERVICE LATERALS WITH ALL OTHER UTILITY PIPES.
7. WATER METER AND PI METER CANS TO HAVE A 3' MIN. SEPARATION FROM THE OUTSIDE OF EACH CAN.
8. CALL BLUE STAKE OF UTAH 1-800-662-4111 TO KNOW WHAT BELOW BEFORE YOU DIG.
9. PIPE AND OTHER ACCESSORIES MAY NOT BE DROPPED IN THE TRENCH.
10. PRESERVE AND PROTECT EXISTING CITY IMPROVEMENTS UNLESS OTHERWISE NOTED. ANY DAMAGE TO CITY IMPROVEMENTS IS TO BE REPAIRED OR REPLACED PER CITY REQUIREMENTS.
11. CULINARY WATERLINES ARE TO BE INSTALLED 18" MIN. ABOVE SEWER LINES AND MAINTAIN 10' MIN. HORIZONTAL EDGE TO EDGE CLEARANCE.

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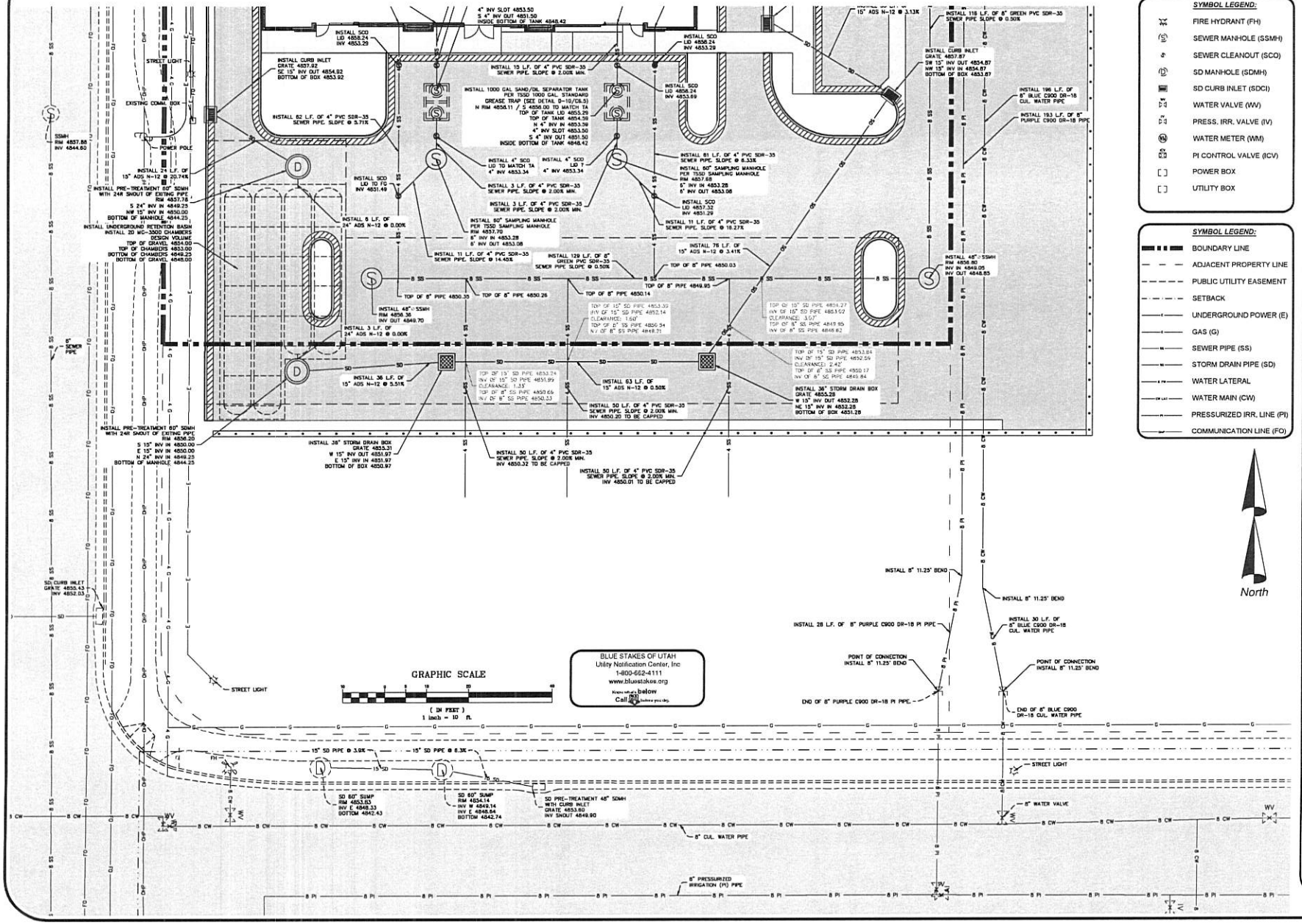
Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
UTILITY PLAN

No.	Revision	Date

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OF SHEETS
Proj # 559 - 1937

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CEDAR HILLS GATEWAY PLAT "B", PHASE 2, LOT 3 - CAFE RIO OFFSITE UTILITY PLAN



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SYMBOL LEGEND:

- FIRE HYDRANT (FH)
- SEWER MANHOLE (SSMH)
- SEWER CLEANOUT (SCO)
- SD MANHOLE (SDMH)
- SD CURB INLET (SDCI)
- WATER VALVE (WV)
- PRESS. IRR. VALVE (IV)
- WATER METER (WM)
- PI CONTROL VALVE (ICV)
- POWER BOX
- UTILITY BOX

SYMBOL LEGEND:

- BOUNDARY LINE
- ADJACENT PROPERTY LINE
- PUBLIC UTILITY EASEMENT
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Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
OFFSITE UTILITY PLAN

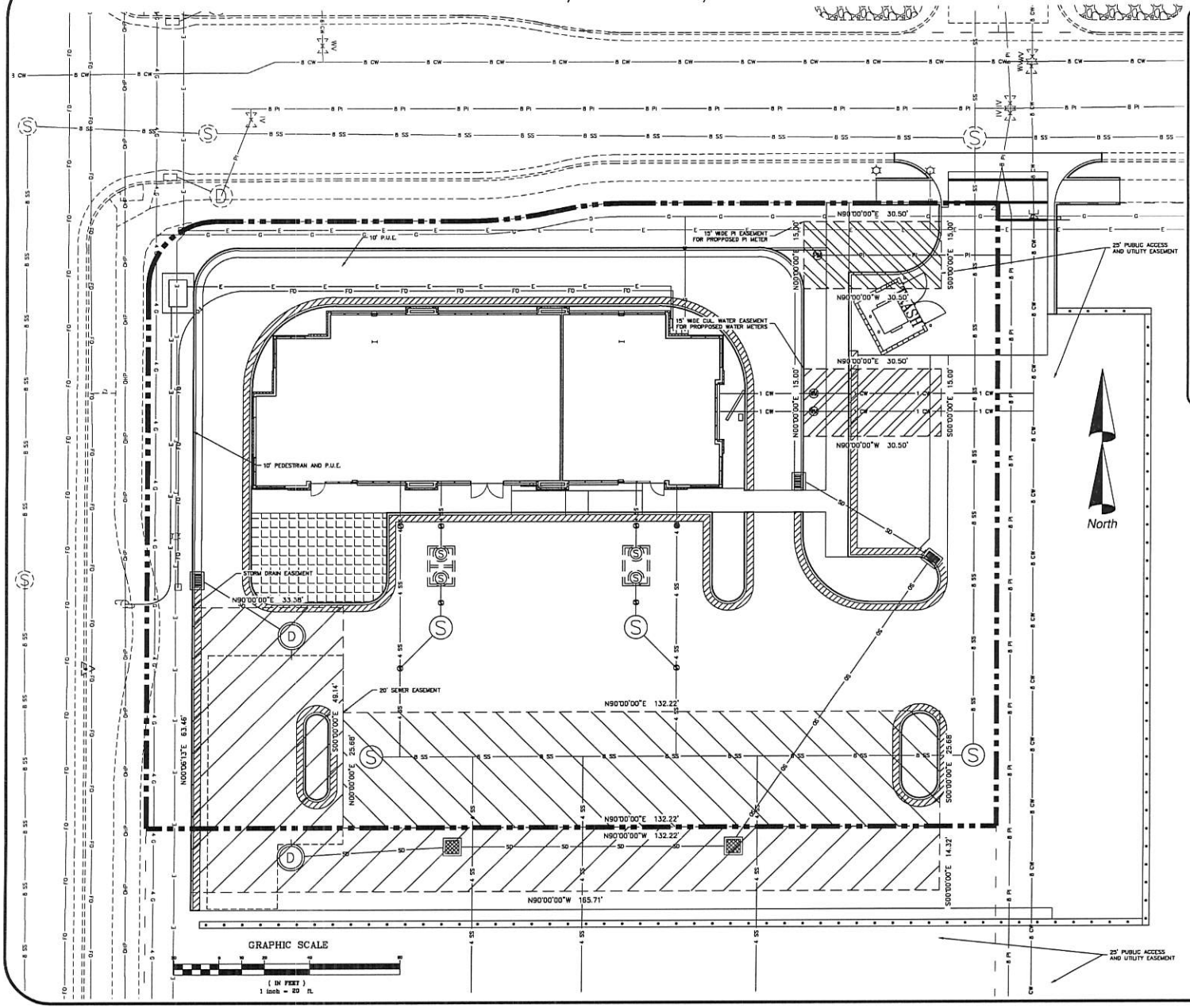
No.	Revision	Date

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OF SHEETS

Proj # 559 - 1537

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CEDAR HILLS GATEWAY PLAT "B", PHASE 2, LOT 3 - CAFE RIO UTILITY EASEMENT PLAN



ADDITIONAL SITE UTILITY EASEMENTS IN FAVOR OF CEDAR HILLS CITY.

PI EASEMENT DESCRIPTION:

COMMENCING AT A POINT LOCATED SOUTH 00°06'11"EAST ALONG THE SECTION LINE 464.04 FEET AND EAST 180.98 FEET FROM THE WEST QUARTER CORNER OF SECTION 6, TOWNSHIP 5 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE EAST 30.50 FEET; THENCE SOUTH 15.00 FEET; THENCE WEST 30.50 FEET; THENCE NORTH 15.00 FEET TO THE POINT OF BEGINNING.

CULINARY WATER EASEMENT DESCRIPTION:

COMMENCING AT A POINT LOCATED SOUTH 00°06'11"EAST ALONG THE SECTION LINE 496.93 FEET AND EAST 180.92 FEET FROM THE WEST QUARTER CORNER OF SECTION 6, TOWNSHIP 5 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE EAST 30.50 FEET; THENCE SOUTH 15.00 FEET; THENCE WEST 30.50 FEET; THENCE NORTH 15.00 FEET TO THE POINT OF BEGINNING.

SEWER EASEMENT DESCRIPTION:

COMMENCING AT A POINT LOCATED SOUTH 00°06'11"EAST ALONG THE SECTION LINE 573.39 FEET AND EAST 79.06 FEET FROM THE WEST QUARTER CORNER OF SECTION 6, TOWNSHIP 5 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE EAST 132.22 FEET; THENCE SOUTH 25.68 FEET; THENCE WEST 132.22 FEET; THENCE NORTH 26.68 FEET TO THE POINT OF BEGINNING.

STORM DRAIN EASEMENT DESCRIPTION:

COMMENCING AT A POINT LOCATED SOUTH 00°06'11"EAST ALONG THE SECTION LINE 549.93 FEET AND EAST 45.72 FEET FROM THE WEST QUARTER CORNER OF SECTION 6, TOWNSHIP 5 SOUTH, RANGE 2 EAST, SALT LAKE BASE AND MERIDIAN; THENCE EAST 33.38 FEET; THENCE SOUTH 49.14 FEET; THENCE WEST 132.22 FEET; THENCE SOUTH 14.32 FEET; THENCE WEST 165.71 FEET; THENCE NORTH 00°06'13" EAST 63.46 FEET TO THE POINT OF BEGINNING.

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Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
UTILITY EASEMENT PLAN

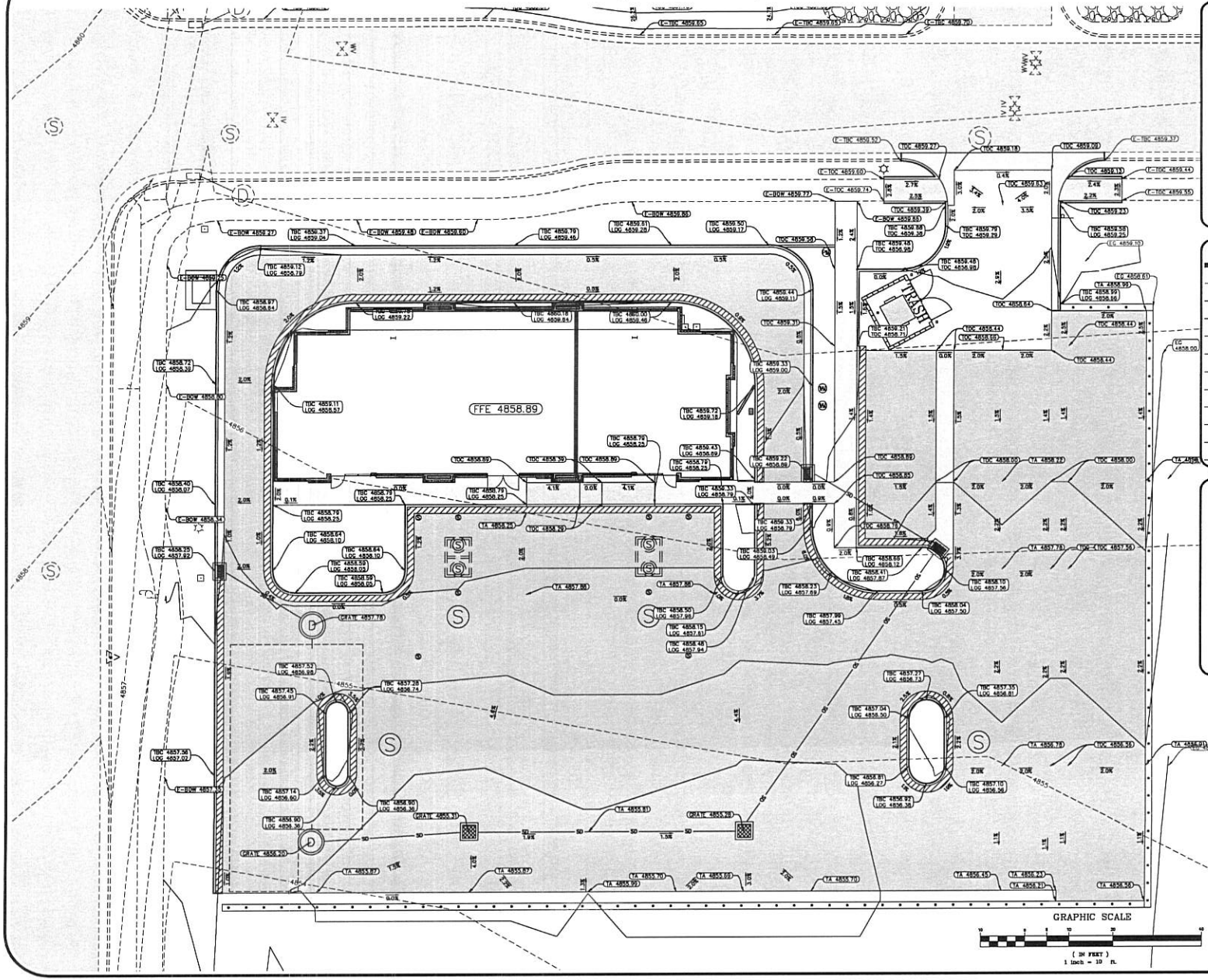
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OF SHEETS

Proj # 559 - 1937

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CEDAR HILLS GATEWAY PLAT "B", PHASE 2, LOT 3 - CAFE RIO GRADING PLAN



SYMBOL LEGEND:

- FIRE HYDRANT (FH)
- SEWER MANHOLE (SSMH)
- SEWER CLEANOUT (SCO)
- SD MANHOLE (SDMH)
- SD CURB INLET (SDCI)
- WATER VALVE (WV)
- PRESS. IRR. VALVE (IV)
- WATER METER (WM)
- PI CONTROL VALVE (ICV)
- POWER BOX
- UTILITY BOX

SYMBOL LEGEND:

- BOUNDARY LINE
- ADJACENT PROPERTY LINE
- PUBLIC UTILITY EASEMENT
- SETBACK
- UNDERGROUND POWER (E)
- GAS (G)
- SEWER PIPE (SS)
- STORM DRAIN PIPE (SD)
- WATER LATERAL
- WATER MAIN (CW)
- PRESSURIZED IRR. LINE (PI)
- COMMUNICATION LINE (FO)

SPOT ELEVATION LEGEND:

BOW	BACK OF SIDEWALK
EG	EXISTING GRADE
FG	FINISH GRADE
FFE	FINISH FLOOR ELEVATION
FOW	FACE OF SIDEWALK
INV	INVERT OR FLOW OF PIPE
LOG	LIP OF GUTTER
TA	TOP OF ASPHALT
TBC	TOP BACK OF CURB
TOC	TOP OF CONCRETE

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Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
GRADING PLAN

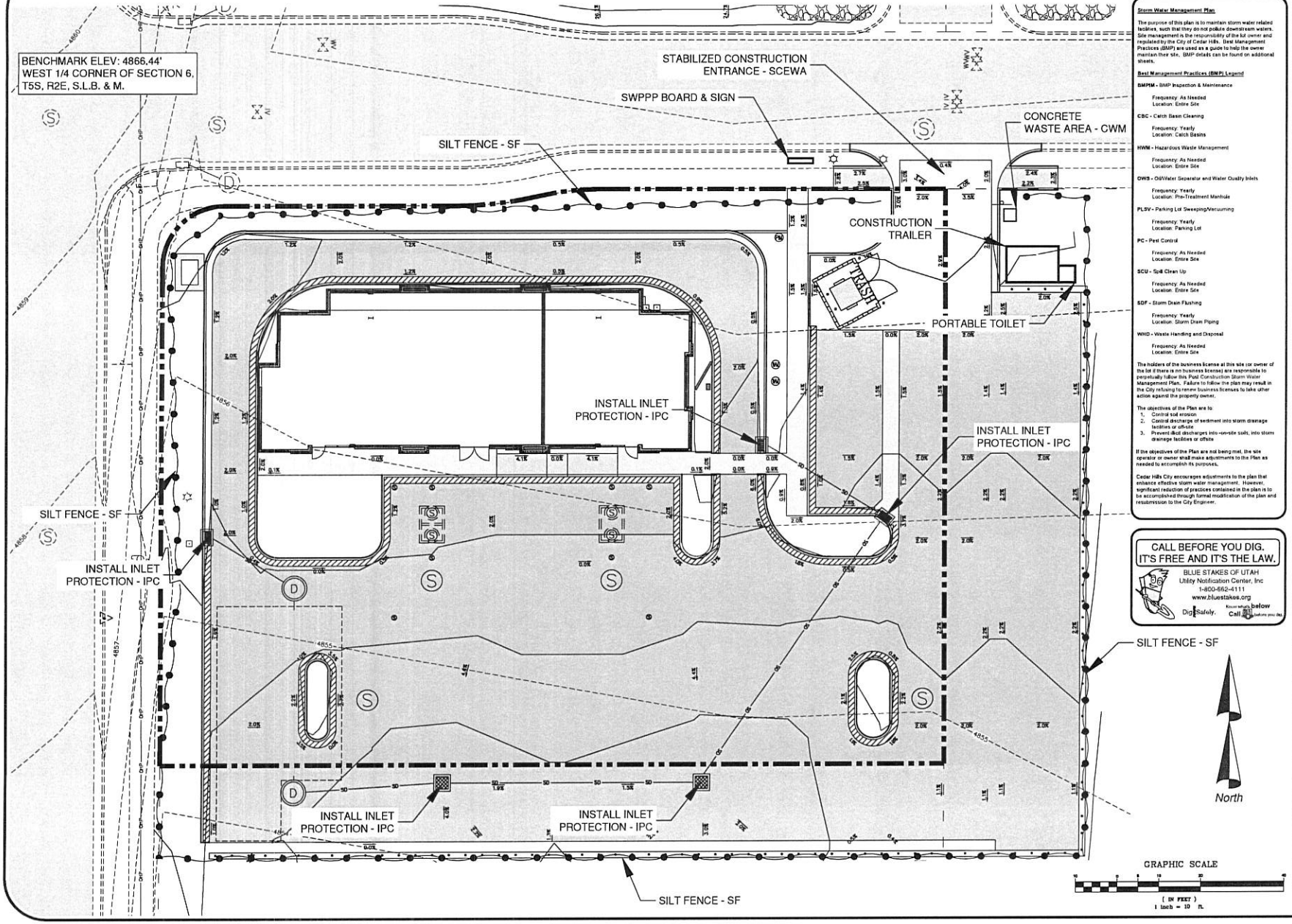
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Proj # 559 - 1937

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CEDAR HILLS GATEWAY PLAT "B", PHASE 2, LOT 3 - CAFE RIO SWPPP



Storm Water Management Plan

The purpose of this plan is to maintain storm water related facilities, such that they do not pollute downstream waters. Site management is the responsibility of the lot owner and regulated by the City of Cedar Hills. Best Management Practices (BMP) are used as a guide to help the owner maintain their site. BMP details can be found on additional sheets.

Best Management Practices (BMP) Legend

BMPIM - BMP Inspection & Maintenance

Frequency: As Needed
Location: Entire Site

CBC - Catch Basin Cleaning

Frequency: Yearly
Location: Catch Basins

HWM - Hazardous Waste Management

Frequency: As Needed
Location: Entire Site

OWS - Oil/Water Separator and Water Quality Inlets

Frequency: Yearly
Location: Pre-Treatment Manhole

PLSV - Parking Lot Sweeping/Vacuuming

Frequency: Yearly
Location: Parking Lot

PC - Pest Control

Frequency: As Needed
Location: Entire Site

SCU - Spill Clean Up

Frequency: As Needed
Location: Entire Site

SDF - Storm Drain Flushing

Frequency: Yearly
Location: Storm Drain Piping

WHD - Waste Handling and Disposal

Frequency: As Needed
Location: Entire Site

The holders of the business license at this site (or owner of the lot if there is no business license) are responsible to perpetually follow this Post Construction Storm Water Management Plan. Failure to follow the plan may result in the City refusing to renew business licenses to take other action against the property owner.

The objectives of the Plan are to:

1. Control soil erosion
2. Control discharge of sediment into storm drainage facilities or offsite
3. Prevent illicit discharges into on-site soils, into storm drainage facilities or offsite

If the objectives of the Plan are not being met, the site operator or owner shall make adjustments to the Plan as needed to accomplish its purposes.

Cedar Hills City encourages adjustments to the plan that enhance effective storm water management. However, significant reduction of practices contained in the plan is to be accomplished through formal modification of the plan and resubmission to the City Engineer.

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Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
SWPPP

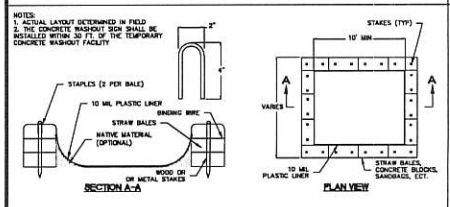
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Proj # 559 - 1537

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BMP: Concrete Waste Management — CWM



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.

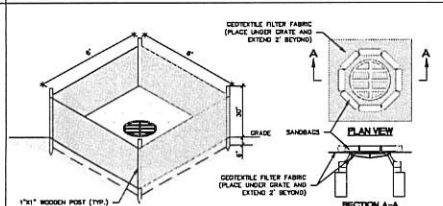
OBJECTIVES:
- ☐ Housekeeping Practices
- ☒ Contain Waste
- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☐ Control Site Perimeter
- ☐ Control Internal Erosion

TARGETED POLLUTANTS:
- ☐ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☐ Floatable Materials
- ☒ Other Waste

IMPLEMENTATION REQUIREMENTS:
- ☐ Capital Costs
- ☐ O&M Costs
- ☐ Maintenance
- ☒ Training

- ☐ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

BMP: Inlet Protection — IP



DESCRIPTION:
Silt fencing or sand bags placed around inlet to storm drain system.

APPLICATION:
Construct at inlets in paved and unpaved areas where upgradient area is to be disturbed by construction activities.

INSTALLATION/APPLICATION CRITERIA:
> Place geotextile filter fabric around inlet grate extending two feet past the grate in all directions with fencing.
> Place geotextile filter fabric around and under inlet grate extending two feet past the grate in all directions with sand bags around grate.

LIMITATIONS:
> Recommended for maximum drainage area of one acre.
> Excess flows may bypass the inlet requiring down gradient controls.
> Ponding will occur at inlet.

MAINTENANCE:
> Inspect inlet protection after every large storm event and at a minimum of once monthly.
> Remove sediment accumulated when it reaches 4-inches in depth.
> Replace filter fabric and clean if clogging is apparent.

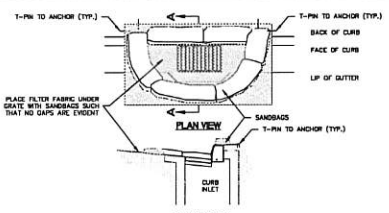
OBJECTIVES:
- ☐ Housekeeping Practices
- ☐ Contain Waste
- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☒ Control Site Perimeter
- ☒ Control Internal Erosion

TARGETED POLLUTANTS:
- ☐ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☒ Floatable Materials
- ☐ Other Waste

IMPLEMENTATION REQUIREMENTS:
- ☒ Capital Costs
- ☐ O&M Costs
- ☒ Maintenance
- ☐ Training

- ☐ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

BMP: Inlet Protection Curb — IPC



DESCRIPTION:
Filter fabric and sand bags placed around inlet to storm drain system.

APPLICATION:
Construct at inlets in paved and unpaved areas where upgradient area is to be disturbed by construction activities.

INSTALLATION/APPLICATION CRITERIA:
> Place geotextile filter fabric around and under inlet grate extending two feet past the grate in all directions with sand bags around grate.

LIMITATIONS:
> Recommended for maximum drainage area of one acre.
> Excess flows may bypass the inlet requiring down gradient controls.
> Ponding will occur at inlet.

MAINTENANCE:
> Inspect inlet protection after every large storm event and at a minimum of once monthly.
> Remove sediment accumulated when it reaches 4-inches in depth.
> Replace filter fabric and clean if clogging is apparent.

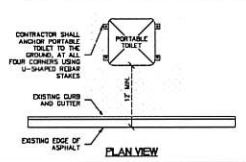
OBJECTIVES:
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- ☐ Contain Waste
- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☒ Control Site Perimeter
- ☒ Control Internal Erosion

TARGETED POLLUTANTS:
- ☒ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☒ Floatable Materials
- ☐ Other Waste

IMPLEMENTATION REQUIREMENTS:
- ☒ Capital Costs
- ☐ O&M Costs
- ☒ Maintenance
- ☐ Training

- ☐ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

BMP: Portable Toilets — PT



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.
< Stake toilets to prevent them from tipping.

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

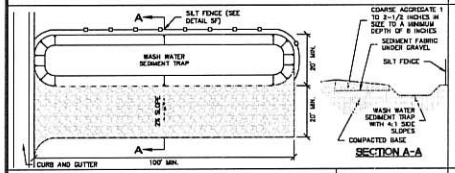
OBJECTIVES:
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- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☐ Control Site Perimeter
- ☐ Control Internal Erosion

TARGETED POLLUTANTS:
- ☐ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☐ Floatable Materials
- ☒ Other Waste

IMPLEMENTATION REQUIREMENTS:
- ☐ Capital Costs
- ☒ O&M Costs
- ☒ Maintenance
- ☐ Training

- ☐ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

BMP: Stabilized Construction Entrance & Wash Area — SCEWA



DESCRIPTION:
A stabilized pad of crushed stone located where construction traffic enters or leaves the site from or to paved surface. The area can be used to spray off vehicles before they leave the site.

APPLICATIONS:
At any point of ingress or egress at a construction site where adjacent traveled way is paved. Generally applies to sites over 2 acres unless special conditions exist.

INSTALLATION/APPLICATION CRITERIA:
< Clear and grub area and grade to provide maximum slope of 2%.
< Compact subgrade and place filter fabric if desired (recommended for entrances to remain for more than 3 months).
< Place coarse aggregate, 1 to 2-1/2 inches in size, to a minimum depth of 8 inches.
< Provide water to the area that can be used to spray off vehicles as needed to prevent the tracking of mud off of the construction site. This may not be needed during dry periods of work, but is needed when construction is proceeding under wet conditions.
< Provide berming as needed to prevent sediment laden wash water from entering storm water facilities or other water bodies, or leaving the site.

LIMITATIONS:
< Requires periodic top dressing with additional stones.
< Should be used in conjunction with street sweeping on adjacent public right-ofway.
< Must be situated such that waste water does not run off site.

MAINTENANCE:
< Inspect daily for loss of gravel or sediment buildup.
< Inspect adjacent roadway for sediment deposit and clean by shoveling and sweeping.
< Repair entrance and replace gravel as required to maintain control in good working condition.

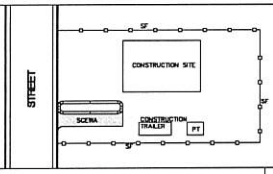
OBJECTIVES:
- ☒ Housekeeping Practices
- ☐ Contain Waste
- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☒ Control Site Perimeter
- ☐ Control Internal Erosion

TARGETED POLLUTANTS:
- ☒ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☐ Floatable Materials
- ☐ Other Waste

IMPLEMENTATION REQUIREMENTS:
- ☒ Capital Costs
- ☒ O&M Costs
- ☒ Maintenance
- ☐ Training

- ☐ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

BMP: Sediment Control on Small Construction Sites — SCSCS



DESCRIPTION:
Control the perimeter, vehicular access, and the delivery of materials to small construction sites so that sediment, landscaping materials and other construction debris is not in the street. This BMP is intended to be applied to residential construction sites and small nonresidential sites.

APPROACH:
> Prior to any building construction on a site, identify the point of access to the property. This should generally be the location of the future driveway. Fence the remainder of the street frontage of the property, as well as side lot lines (as far as necessary to prevent access) with temporary fencing (silt fence may be used where silt fence is needed). This fencing is to remain in place until all construction or landscape material deliveries are complete. No access is to be made at any point other than the designated point of access.
> Control the perimeter of the site so that sediment-laden storm water does not leave the site during construction. This may involve sediment control measures such as silt fences, drainage swales or berms, straw or hay bale barriers, or rock check dams.
> Either utilize the curb cut or leave the curb, gutter and sidewalk in place (and replace it if needed when work is complete). Do not place anything in the gutter, including dirt ramps.
> Excavate for and place a bed of gravel or clean rock the full width of the future driveway (16' minimum), a distance of 27 feet back from the back of sidewalk. Place the rock to the depth necessary to prevent material delivery vehicles from contacting the on-site soils.
> At the proper time, the gravel or rock bed can be modified to serve as the base for concrete driveway placement. At that point, the concrete driveway will prevent delivery and other vehicles from coming into contact with on-site soils.

LIMITATIONS:
> It may be necessary to pump concrete to locations away from the bed of gravel or rock.
> Parking of workers' vehicles may require that the bed of gravel or rock be enlarged to make space for vehicle parking that keeps the vehicles from contacting the on-site soils.
> Builders, subcontractors, material suppliers, vendors and other visitors to the site must be educated to adhere to the practices outlined.
> Landscaping and construction materials must be placed on the lot, not the street or walk.

MAINTENANCE:
> Repair fencing as needed to maintain control of access.
> Repair sediment control measures as needed during construction.
> Replenish and dress up the gravel/rock area as needed during the course of construction.
> Any tracking of soil onto the adjacent street indicates inadequate performance of this BMP. Remove soil tracked onto the street at the end of any day that it occurs and take corrective measures to prevent soil tracking onto the street from recurring.

APPLICATIONS:
- ☐ Manufacturing
- ☒ Material Handling
- ☐ Vehicle Maintenance
- ☒ Construction
- ☐ Commercial Activities
- ☐ Roadways
- ☐ Waste Containment
- ☒ Housekeeping Practices

TARGETED POLLUTANTS:
- ☒ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☒ Floatable Materials
- ☐ Other Waste

IMPLEMENTATION REQUIREMENTS:
- ☐ Capital Costs
- ☐ O&M Costs
- ☒ Maintenance
- ■ Training

- ☐ High Impact
- ☒ Medium Impact
- ☐ Low or Unknown Impact

BMP: Spill Clean UP — SCU

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 #801-536-4100) for any spill of reportable quantity.

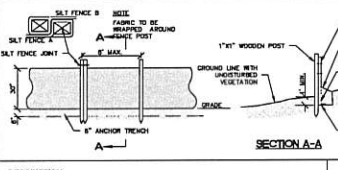
OBJECTIVES:
- ☒ Housekeeping Practices
- ☒ Contain Waste
- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☐ Protect Slopes/Channels
- ☐ Control Site Perimeter
- ☐ Control Internal Erosion

TARGETED POLLUTANTS:
- ☐ Sediment
- ☐ Nutrients
- ■ Toxic Materials
- ☐ Oil & Grease
- ☐ Floatable Materials
- ☐ Other Waste

IMPLEMENTATION REQUIREMENTS:
- ☒ Capital Costs
- ☐ O&M Costs
- ☐ Maintenance
- ■ Training

- ■ High Impact
- ☐ Medium Impact
- ☐ Low or Unknown Impact

BMP: Silt Fence — SF



DESCRIPTION:
A temporary sediment barrier consisting of entrenched filter fabric stretched across and secured to supporting posts.

APPLICATION:
> Perimeter control: place barrier at downgradient limits of disturbance
> Sediment barrier: place barrier at toe of slope or soil stockpile
> Protection of existing waterways: place barrier near top of stream bank
> Inlet protection: place fence surrounding catch basins

INSTALLATION/APPLICATION CRITERIA:
> Place posts 6 feet apart on center along contour (or use preassembled unit) and drive 2 feet minimum into ground. Excavate an anchor trench immediately upgradient of posts.
> Secure wire mesh (14 gage min. With 6 inch openings) to upslope side of posts. Attach with heavy duty 1 inch long wire staples, tie wires or hog rings.
> Cut fabric to required width, unroll along length of barrier and drape over barrier. Secure fabric to mesh with twine, staples, or similar, with trailing edge extending into anchor trench.
> Backfill trench over filter fabric to anchor.

LIMITATIONS:
> Recommended maximum drainage area of 0.5 acre per 100 feet of fence
> Recommended maximum upgradient slope length of 150 feet
> Recommended maximum uphill grade of 2:1 (50%)
> Recommended maximum flow rate of 0.5 cfs
> Ponding should not be allowed behind fence

MAINTENANCE:
> Inspect immediately after any rainfall and at least daily during prolonged rainfall.
> Look for runoff bypassing ends of barriers or undercutting barriers.
> Repair or replace damaged areas of the barrier and remove accumulated sediment.
> Reanchor fence as necessary to prevent shortcutting.
> Remove accumulated sediment when it reaches ½ the height of the fence.

OBJECTIVES:
- ☐ Housekeeping Practices
- ☐ Contain Waste
- ☐ Minimize Disturbed Areas
- ☐ Stabilize Disturbed Areas
- ☒ Protect Slopes/Channels
- ☒ Control Site Perimeter
- ☒ Control Internal Erosion

TARGETED POLLUTANTS:
- ☒ Sediment
- ☐ Nutrients
- ☐ Toxic Materials
- ☐ Oil & Grease
- ☐ Floatable Materials
- ☐ Other Waste

IMPLEMENTATION REQUIREMENTS:
- ☒ Capital Costs
- ☒ O&M Costs
- ☒ Maintenance
- ☐ Training

- ☐ High Impact
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Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
SWPPP DETAILS

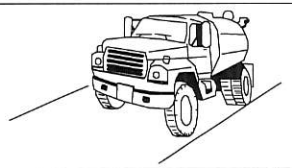
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BMP: Dust Controls — DC



DESCRIPTION:

Dust control measures are used to stabilize soil from wind erosion, and reduce dust by construction activities.

APPLICATION

Dust control is useful in any process area, loading and unloading area, material handling areas, and transfer areas where dust is generated. Street sweeping is limited to areas that are paved.

INSTALLATION/APPLICATION CRITERIA:

>Two kinds of street sweepers are common: brush and vacuum. Vacuum sweepers are more efficient and work best when the area is dry.
>Mechanical equipment should be operated according to the manufacturers' recommendations and should be inspected regularly.
>Water may be sprayed on the ground surface to moisten dry soils, making it less susceptible to wind erosion.

LIMITATIONS:

>Street sweeping is labor and equipment intensive and may not be effective for all pollutants.
>Water sprayed from water trucks must be done at a rate such that the water is absorbed in the soil; if excessive amounts of water are used, it may run off, carrying soil with it.

MAINTENANCE:

If excess water results from water spraying, dust-contaminated waters should not be allowed to run off site. Areas may need to be resprayed to keep dust from spreading.

OBJECTIVES:

- [x] Housekeeping Practices
- [ ] Contain Waste
- [x] Minimize Disturbed Areas
- [x] Stabilize Disturbed Areas
- [ ] Protect Slopes/Channels
- [ ] Control Site Perimeter
- [ ] Control Internal Erosion

TARGETED POLLUTANTS:

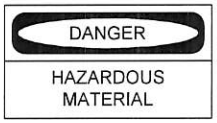
- [x] Sediment
- [ ] Nutrients
- [ ] Toxic Materials
- [x] Oil & Grease
- [ ] Floatable Materials
- [ ] Other Waste

IMPLEMENTATION REQUIREMENTS:

- [x] Capital Costs
- [ ] O&M Costs
- [x] Maintenance
- [x] Training

- [ ] High Impact
- [x] Medium Impact
- [ ] Low or Unknown Impact

BMP: Hazardous Waste Management — HWM



DESCRIPTION:

Prevent or reduce the discharge of pollutants to storm water from hazardous waste through proper material use, waste disposal, and training of employees. Another important aspect of this BMP is to insure the use of sub-consultants who are properly licensed and trained.

APPLICATION:

Many of the chemicals used on-site can be hazardous materials which become hazardous waste upon disposal. These wastes may include:
> Paints and solvents, petroleum products such as oils, fuels and greases; herbicides and pesticides; acids for cleaning masonry; and concrete curing compounds.
In addition, sites with existing structures may contain wastes which must be disposed of in accordance with federal, state and local regulations, including:
> Sandblasting grit mixed with lead, cadmium or chromium based paints, asbestos, and PCBs.

INSTALLATION/APPLICATION CRITERIA:

The following steps will help reduce storm water pollution from hazardous wastes:
> Use all of the product before disposing of the container.
> Do not remove the original product label, it contains important safety and disposal information.
> Do not over-apply herbicides and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over-application is expensive and environmentally harmful. Do not apply these chemicals just before it rains. People applying pesticides must be certified in accordance with federal and state regulations.

LIMITATIONS:

Hazardous waste that cannot be reused or recycled must be disposed of by a licensed hazardous waste collector.

MAINTENANCE:

> Inspect hazardous waste receptacles and areas regularly.
> Arrange for regular hazardous waste collection.

OBJECTIVES:

- [ ] Housekeeping Practices
- [x] Contain Waste
- [ ] Minimize Disturbed Areas
- [ ] Stabilize Disturbed Areas
- [x] Protect Slopes/Channels
- [x] Control Site Perimeter
- [x] Control Internal Erosion

TARGETED POLLUTANTS:

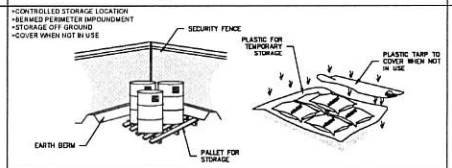
- [x] Sediment
- [ ] Nutrients
- [ ] Toxic Materials
- [x] Oil & Grease
- [x] Floatable Materials
- [ ] Other Waste

IMPLEMENTATION REQUIREMENTS:

- [x] Capital Costs
- [x] O&M Costs
- [x] Maintenance
- [ ] Training

- [x] High Impact
- [ ] Medium Impact
- [ ] Low or Unknown Impact

BMP: Materials Storage — MS



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.
>Verify that 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.

OBJECTIVES:

- [x] Housekeeping Practices
- [x] Contain Waste
- [ ] Minimize Disturbed Areas
- [ ] Stabilize Disturbed Areas
- [ ] Protect Slopes/Channels
- [ ] Control Site Perimeter
- [ ] Control Internal Erosion

TARGETED POLLUTANTS:

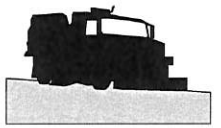
- [ ] Sediment
- [ ] Nutrients
- [x] Toxic Materials
- [ ] Oil & Grease
- [x] Floatable Materials
- [x] Other Waste

IMPLEMENTATION REQUIREMENTS:

- [x] Capital Costs
- [x] O&M Costs
- [x] Maintenance
- [x] Training

- [ ] High Impact
- [x] Medium Impact
- [ ] Low or Unknown Impact

BMP: Street Cleaning — SC



DESCRIPTION:

Reduce the discharges of pollutants to stormwater from street surfaces by conducting street cleaning on a regular basis.

APPROACH:

< Prioritize cleaning to use the most sophisticated sweepers, at the highest frequency, and in areas with the highest pollutant loading.
< Restrict street parking prior to and during sweeping.
< Increase sweeping frequency just before the rainy season.
< Proper maintenance and operation of sweepers greatly increase their efficiency.
< Keep accurate operation logs to track programs.
< Reduce the number of parked vehicles using regulations.
< Sweepers effective at removing smaller particles (less than 10 microns) may generate dust that would lead to concerns over worker and public safety.
< Equipment selection can be key for this particular BMP. There are two types used, the mechanical broom sweepers (more effective at picking up large debris and cleaning wet streets), and the vacuum sweepers (more effective at removing fine particles and associated heavy metals). Many communities find it useful to have a compliment of both types in their fleet.

LIMITATIONS:

< Conventional sweepers are not able to remove oil and grease.
< Mechanical sweepers are not effective at removing finer sediments.
< Effectiveness may also be limited by street conditions, traffic congestion,presence of construction projects, climatic conditions and condition of curbs.

MAINTENANCE:

< Replace worn parts as necessary.
< Install main and gutter brooms of the appropriate weight.

Program Elements:

- [ ] New Development
- [ ] Residential
- [ ] Commercial Activities
- [ ] Industrial Activities
- [x] Municipal Facilities
- [x] Illegal Discharges

TARGETED POLLUTANTS:

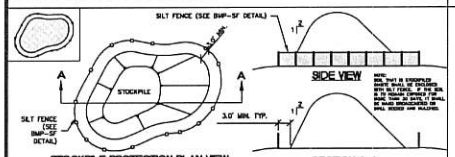
- [x] Sediment
- [x] Nutrients
- [x] Heavy Metals
- [x] Toxic Materials
- [x] Oxygen Demanding
- [ ] Oil & Grease
- [x] Floatable Materials
- [ ] Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS:

- [x] Capital Costs
- [x] O&M Costs
- [x] Regulatory
- [x] Training
- [x] Staffing
- [x] Administrative

- [x] High Impact
- [x] Medium Impact
- [ ] Low or Unknown Impact

BMP: Stockpile Management — SPM



DESCRIPTION:

Stockpile management includes measures to minimize erosion and sediment transport from soil stockpiles.

APPLICATION:

> Stockpile management should be used when soils or other erodible materials are stored at the construction site.
> Special attention should be given to stockpiles in close proximity to natural or man made storm systems.

INSTALLATION/APPLICATION CRITERIA:

> Locate stockpiles away from all drainage system components including storm sewer inlets.
>Where practical, choose stockpile locations that that will remain undisturbed for the longest period of time as the phases of construction progress.
>Place sediment control BMP's around the perimeter of the stockpile, such as sediment control logs, rock socks, silt fence, straw bales and sand bags.
> For stockpiles in active use, provide a stabilized designated access point on the upgradient side of the stockpile.
>Stabilize the stockpile surface with surface roughening, temporary seeding and mulching, erosion control blankets, or soil binders.

LIMITATIONS:

> Soils stockpiled for an extended period (typically for more than 60 days) should be seeded and mulched with a temporary grass cover once the stockpile is placed (typically within 14 days). Use of mulch only or a soil binder is acceptable if the stockpile will be in place for a more limited time period (typically 30-60 days).
>Time frames for stabilization of stockpiles noted in this fact sheet are "typical" guidelines. Check permit requirements for specific federal, state, and/or local requirements that may be more prescriptive.
>Stockpiles should not be placed in streets or paved areas unless no other practical alternative exists.
>See the Stabilized Staging Area Fact Sheet for guidance when staging in roadways is unavoidable due to space or rights-of-way constraints.
>For paved areas, rock socks must be used for perimeter control and all inlets with the potential to receive sediment from the stockpile (even from vehicle tracking) must be protected.

MAINTENANCE:

> Inspect perimeter controls and inlet protection in accordance with their respective BMP Fact Sheets.
>Where sanding, mulch and/or soil binders are used, reseeding or reapplication of soil binder may be necessary.
>When temporary removal of a perimeter BMP is necessary to access a stockpile, ensure BMPs are reinstalled in accordance with their respective design detail section.
>When the stockpile is no longer needed, properly dispose of excess materials and revegetate or otherwise stabilize the ground surface where the stockpile was located.

OBJECTIVES:

- [ ] Housekeeping Practices
- [ ] Contain Waste
- [x] Minimize Disturbed Areas
- [x] Stabilize Disturbed Areas
- [x] Protect Slopes/Channels
- [x] Control Site Perimeter
- [x] Control Internal Erosion

TARGETED POLLUTANTS:

- [x] Sediment
- [ ] Nutrients
- [ ] Toxic Materials
- [x] Oil & Grease
- [ ] Floatable Materials
- [ ] Other Waste

IMPLEMENTATION REQUIREMENTS:

- [x] Capital Costs
- [x] O&M Costs
- [x] Maintenance
- [ ] Training

- [ ] High Impact
- [x] Medium Impact
- [ ] Low or Unknown Impact

BMP: Vehicle and Equipment Cleaning — VEC



DESCRIPTION:

Prevent or reduce the discharge of pollutants to storm water from vehicle and equipment cleaning by using off-site facilities, washing in designated, contained areas only, eliminating discharges to the storm drain by infiltrating or recycling the wash water, and/or training employees and subcontractors.

INSTALLATION/APPLICATION:

>Use off-site commercial washing businesses as much as possible. Washing vehicles and equipment outdoors or in areas where wash water flows onto paved surfaces or into drainage pathways can pollute storm water. If you wash a large number of vehicles or pieces of equipment, consider conducting this work at an off-site commercial business. These businesses are better equipped to handle and dispose of the wash waters properly. Performing this work off-site can also be economical by eliminating the need for a separate washing operation at your site.
>If washing must occur on-site, use designated, bermed wash areas to prevent wash water contact with storm water, creeks, rivers, and other water bodies. The wash area can be sloped for wash water collection and subsequent infiltration into the ground.
>Use as little water as possible to avoid having to install erosion and sediment controls for the wash area. Use phosphate-free biodegradable soaps. Educate employees and subcontractors on pollution prevention measures. Do not permit steam cleaning on-site. Steam cleaning can generate significant pollutant concentrations.

LIMITATIONS:

>Even phosphate-free, biodegradable soaps have been shown to be toxic to fish before the soap degrades.
>Sending vehicles/equipment off-site should be done in conjunction with Stabilized Construction Entrance.

MAINTENANCE:

>Minimal, some berm repair may be necessary.

OBJECTIVES:

- [x] Housekeeping Practices
- [ ] Contain Waste
- [ ] Minimize Disturbed Areas
- [ ] Stabilize Disturbed Areas
- [ ] Protect Slopes/Channels
- [x] Control Site Perimeter
- [x] Control Internal Erosion

TARGETED POLLUTANTS:

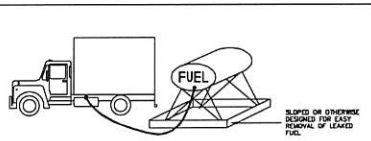
- [ ] Sediment
- [ ] Nutrients
- [x] Toxic Materials
- [x] Oil & Grease
- [ ] Floatable Materials
- [ ] Other Waste

IMPLEMENTATION REQUIREMENTS:

- [x] Capital Costs
- [ ] O&M Costs
- [x] Maintenance
- [ ] Training

- [x] High Impact
- [ ] Medium Impact
- [ ] Low or Unknown Impact

BMP: Vehicle and Equipment Fueling — VEF



DESCRIPTION:

Prevent fuel spills and leaks, and reduce their impacts to storm water by using off-site facilities, fueling in designated areas only, enclosing or covering stored fuel, implementing spill controls, and training employees and subcontractors.

INSTALLATION/APPLICATION:

>Use off-site fueling stations as much as possible. Fueling vehicles and equipment outdoors or in areas where fuel may spill/leak onto paved surfaces or into drainage pathways can pollute storm water. If you fuel a large number of vehicles or pieces of equipment, consider using an off-site fueling station. These businesses are better equipped to handle fuel and spills properly, performing this work off-site can also be economical by eliminating the need for a separate fueling area at your site.
>If fueling must occur on-site, use designated areas, located away from drainage courses, to prevent the runon of storm water and the runoff of spills. Discourage"topping-off" of fuel tanks.
>Always use secondary containment, such as a drain pan or drop cloth, when fueling to catch spills/leaks. Place a stockpile of spill cleanup materials where it will be readily accessible. Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
>Carry out all Federal and State requirements regarding stationary above ground storage tanks.(40 CF Sub. J) Avoid mobile fueling of mobile construction equipment around the site; rather, transport the equipment to designated fueling areas. With the exception of tracked equipment such as bulldozers and perhaps forklifts, most vehicles should be able to travel to a designated area with little lost time. Train employees and subcontractors in proper fueling and cleanup procedures.

LIMITATIONS:

Sending vehicles/equipment off-site should be done in conjunction with Stabilized Construction Entrance.

MAINTENANCE:

>Keep ample supplies of spill cleanup materials on-site.
>Inspect fueling areas and storage tanks on a regular schedule.

OBJECTIVES:

- [x] Housekeeping Practices
- [ ] Contain Waste
- [ ] Minimize Disturbed Areas
- [ ] Stabilize Disturbed Areas
- [ ] Protect Slopes/Channels
- [x] Control Site Perimeter
- [ ] Control Internal Erosion

TARGETED POLLUTANTS:

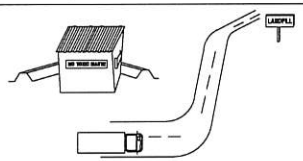
- [ ] Sediment
- [ ] Nutrients
- [x] Toxic Materials
- [x] Oil & Grease
- [ ] Floatable Materials
- [ ] Other Waste

IMPLEMENTATION REQUIREMENTS:

- [x] Capital Costs
- [x] O&M Costs
- [x] Maintenance
- [x] Training

- [ ] High Impact
- [x] Medium Impact
- [ ] Low or Unknown Impact

BMP: Waste Disposal — WD



DESCRIPTION:

Controlled storage and disposal of solid waste generated by construction activities.

APPLICATION:

All construction sites.

INSTALLATION:

> Designate one or several waste collection areas with easy access for consruction vehicles and personnel. Ensure no waterways or storm drainage inlets are located near the waste collection areas.
> Construct compacted earthen berm (See Earth Berm Barrier BMP Fact Sheet), or similar perimeter containment around collection area for impoundment in the case of spills, and to trap any windblown trash.
> Use water tight containers with covers to remain closed when not in use. Provide separate containers for different waste types where appropriate and label clearly.
> Ensure all on site personnel are aware of and utilize designated waste collection area properly and for intended use only (e.g. all toxic, hazardous, or recyclable materials shall be properly disposed of separately from general construction waste).
> Arrange for periodic pickup, transfer and disposal of collected waste at an authorized disposal location. Include regular Porta-potty service in waste management activities.

LIMITATIONS:

> On-site personnel are responsible for correct disposal of waste.

MAINTENANCE:

> Discuss waste management procedures at progress meetings.
> Collect site trash daily and deposit in covered containers at designated collection areas.
> Check containers for leakage or inadequate covers and replace as needed.
> Randomly check disposed materials for any unauthorized waste (e.g. toxic materials).
> During daily site inspections check that waste is not being incorrectly disposed of on-site (e.g. burial, burning, surface discharge, discharge to storm drain).

OBJECTIVES:

- [x] Housekeeping Practices
- [x] Contain Waste
- [ ] Minimize Disturbed Areas
- [ ] Stabilize Disturbed Areas
- [ ] Protect Slopes/Channels
- [ ] Control Site Perimeter
- [ ] Control Internal Erosion

TARGETED POLLUTANTS:

- [ ] Sediment
- [ ] Nutrients
- [x] Toxic Materials
- [ ] Oil & Grease
- [ ] Floatable Materials
- [x] Other Waste

IMPLEMENTATION REQUIREMENTS:

- [ ] Capital Costs
- [ ] O&M Costs
- [x] Maintenance
- [x] Training

- [x] High Impact
- [ ] Medium Impact
- [ ] Low or Unknown Impact

A.L.M. & Associates, Inc.
Engineering · Surveying · Development · Planning
2230 North University Parkway, Building 6D, Provo, Utah 84604 ph:(801) 374 - 6282

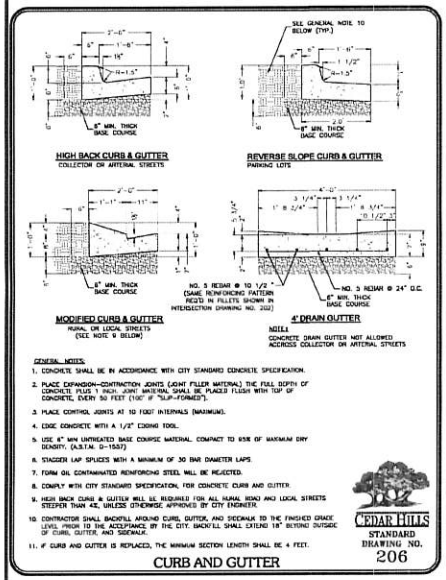
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OPENSHAW DEVELOPMENT
SWPPP DETAILS

No.	Revision	Date

C5.2
OF SHEETS

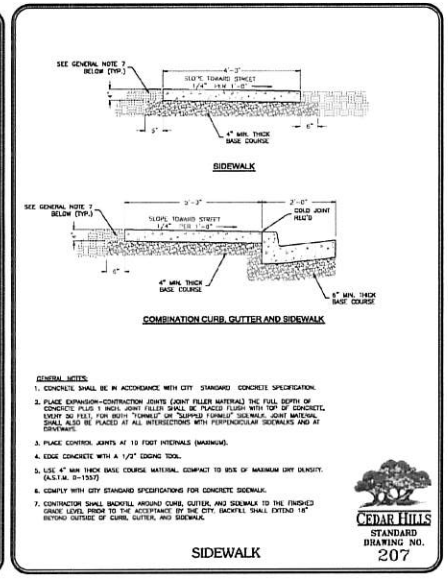
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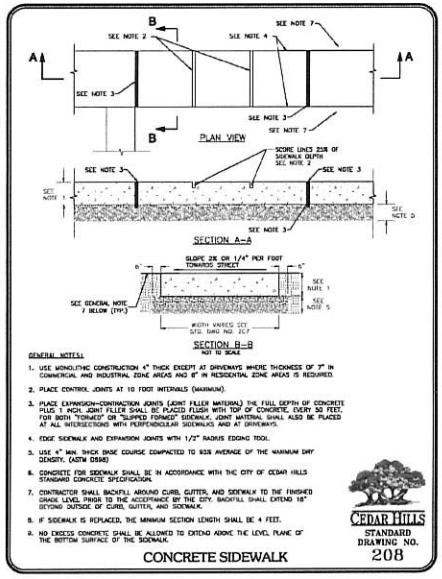
CURB AND GUTTER

CEDAR HILLS STANDARD DRAWING NO. 206



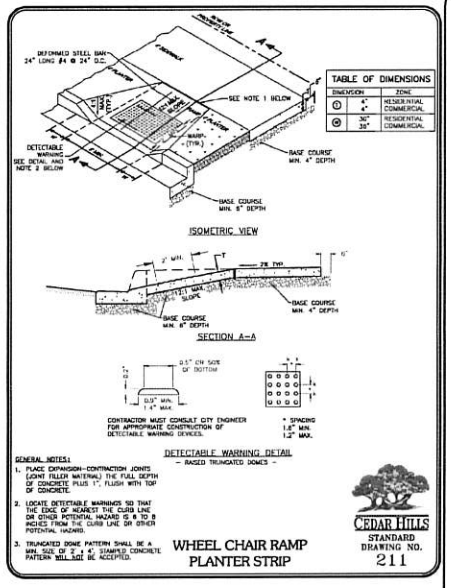
SIDEWALK

CEDAR HILLS STANDARD DRAWING NO. 207



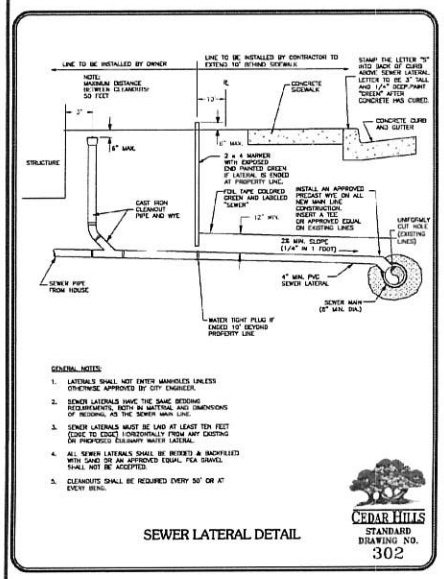
CONCRETE SIDEWALK

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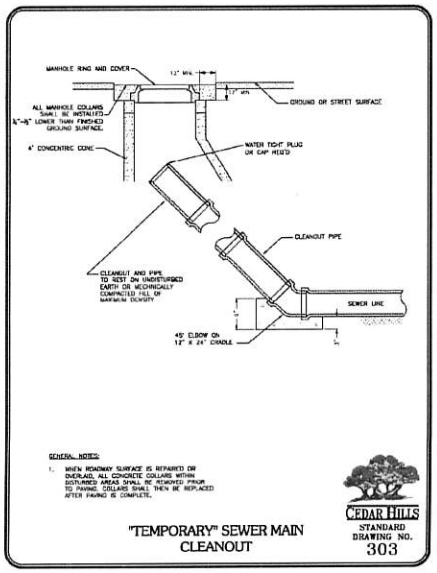


WHEEL CHAIR RAMP
PLANTER STRIP

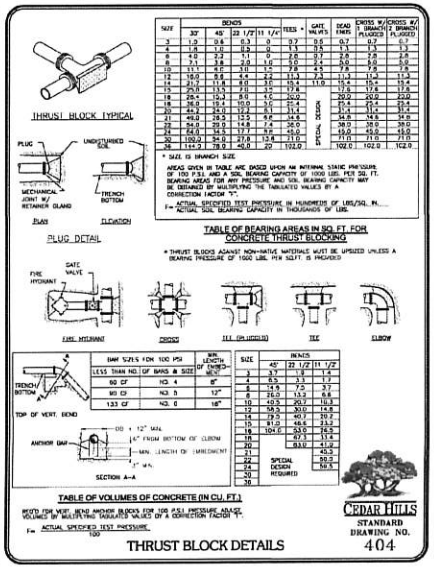
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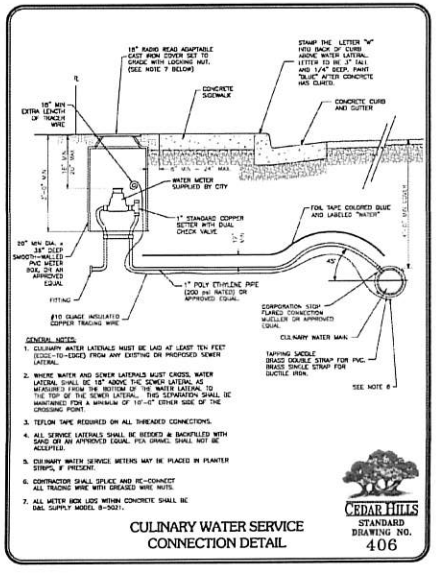
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CEDAR HILLS STANDARD DRAWING NO. 303



CEDAR HILLS STANDARD DRAWING NO. 404



CEDAR HILLS STANDARD DRAWING NO. 406

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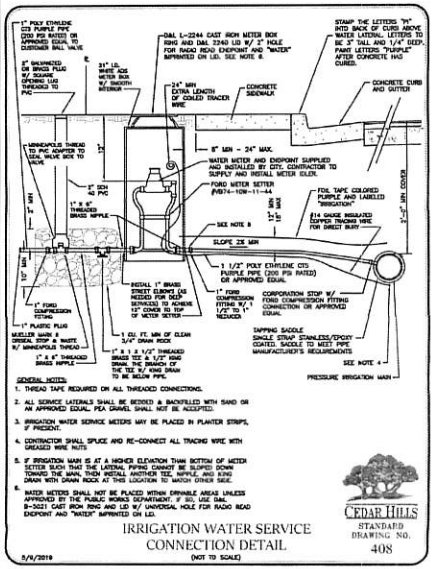
Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
CITY DETAILS

No.	Revision	Date

C6.0
OF SHEETS

Proj # 559 - 1937

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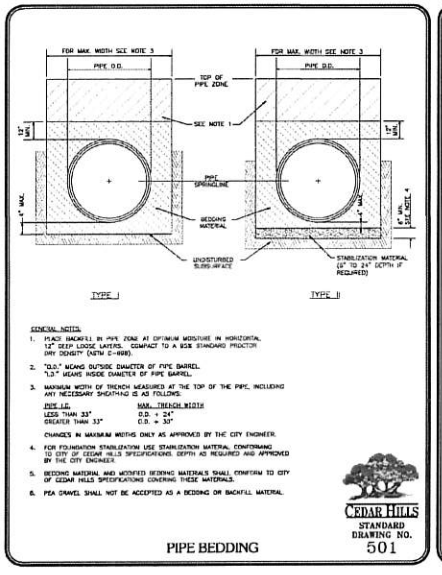
GENERAL NOTES:

1. THREAD TAPE REQUIRED ON ALL THREADED CONNECTIONS.
2. ALL SERVICE LATERALS SHALL BE BEDDED & BACKFILLED WITH SAND OR AN APPROVED EQUAL. PEA GRAVEL SHALL NOT BE ACCEPTED.
3. IRRIGATION WATER SERVICE METERS MAY BE PLACED IN PLANTER STRIPS, 3' PREFERRED.
4. CONTRACTOR SHALL SPLICE AND RE-CONNECT ALL TRACING WIRE WITH GREASED WIRE NUTS
5. 9' IRRIGATION MAIN IS AT A HIGHER ELEVATION THAN BOTTOM OF METER SETTER SUCH THAT THE LATERAL PIPING CANNOT BE SLOPED DOWN TOWARD THE MAIN. THEN INSTALL ANOTHER TEE, NIPPLE, AND RING DRAIN WITH DRAIN ROCK AT THIS LOCATION TO MATCH OTHER SIDE.
6. WATER METERS SHALL NOT BE PLACED WITHIN DRIVABLE AREAS UNLESS APPROVED BY THE PUBLIC WORKS DEPARTMENT. IF SO, USE DAL B-3021 CAST IRON RING AND LID W/ UNIVERSAL HOLE FOR RADIO READ ENDPOINT AND "WATER" IMPRINTED ON LID.

IRRIGATION WATER SERVICE CONNECTION DETAIL
(NOT TO SCALE)

5/9/2019

CEDAR HILLS
STANDARD DRAWING NO. 408



GENERAL NOTES:

1. PLACE BACKFILL IN PIPE ZONE AT OPTIMUM MOISTURE IN HORIZONTAL 12" DEEP LOOSE LAYERS. COMPACT TO A 95% STANDARD PROCTOR DRY DENSITY (ASTM D-698).
2. "O.D." MEANS OUTSIDE DIAMETER OF PIPE BARREL. "I.D." MEANS INSIDE DIAMETER OF PIPE BARREL.
3. MAXIMUM WIDTH OF TRENCH MEASURED AT THE TOP OF THE PIPE, INCLUDING ANY NECESSARY SHORING IS AS FOLLOWS:

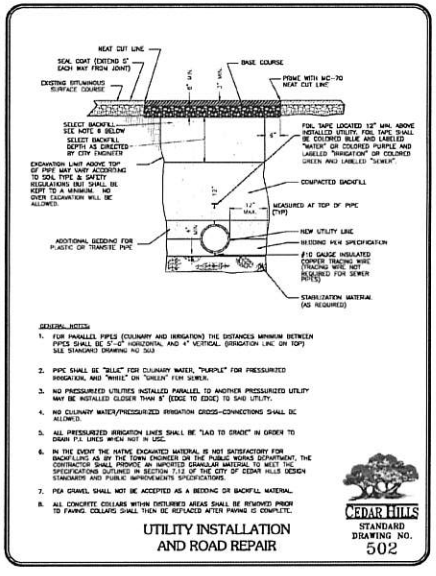
PIPE I.D.	MAX. TRENCH WIDTH
LESS THAN 33"	O.D. + 24"
GREATER THAN 33"	O.D. + 30"

CHANGES IN MAXIMUM WIDTHS ONLY AS APPROVED BY THE CITY ENGINEER.

4. FOR FOUNDATION STABILIZATION USE STABILIZATION MATERIAL CONFORMING TO CITY OF CEDAR HILLS SPECIFICATIONS. DEPTH AS REQUIRED AND APPROVED BY THE CITY ENGINEER.
5. BEDDING MATERIAL AND MOISTURE DENSITY CONTROL SHALL CONFORM TO CITY OF CEDAR HILLS SPECIFICATIONS COVERING THESE MATERIALS.
6. PEA GRAVEL SHALL NOT BE ACCEPTED AS A BEDDING OR BACKFILL MATERIAL.

PIPE BEDDING

CEDAR HILLS
STANDARD DRAWING NO. 501

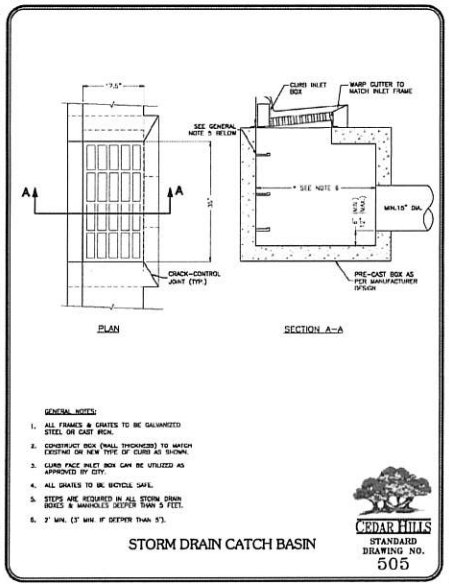


GENERAL NOTES:

1. FOR PARALLEL PIPES (CULINARY AND IRRIGATION) THE DISTANCES MINIMUM BETWEEN PIPES SHALL BE 5'-0" HORIZONTAL AND 4" VERTICAL (IRRIGATION LINE ON TOP) SEE STANDARD DRAWING NO 503
2. PIPE SHALL BE "BLUE" FOR CULINARY WATER, "PURPLE" FOR PRESSURIZED IRRIGATION, AND "WHITE" OR "GREEN" FOR SEWER.
3. NO PRESSURIZED UTILITIES INSTALLED PARALLEL TO ANOTHER PRESSURIZED UTILITY MAY BE INSTALLED CLOSER THAN 5' (EDGE TO EDGE) TO SAID UTILITY.
4. NO CULINARY WATER/PRESSURIZED IRRIGATION CROSS-CONNECTIONS SHALL BE ALLOWED.
5. ALL PRESSURIZED IRRIGATION LINES SHALL BE "LAID TO GRADE" IN ORDER TO DRAIN P.I. LINES WHEN NOT IN USE.
6. IN THE EVENT THE NATIVE EXCAVATED MATERIAL IS NOT SATISFACTORY FOR BACKFILLING AS DETERMINED BY THE TOWN ENGINEER OR THE PUBLIC WORKS DEPARTMENT, THE CONTRACTOR SHALL PROVIDE AN IMPORTED GRANULAR MATERIAL TO MEET THE SPECIFICATIONS OUTLINED IN SECTION 7.12 OF THE CITY OF CEDAR HILLS DESIGN STANDARDS AND PUBLIC IMPROVEMENTS SPECIFICATIONS.
7. PEA GRAVEL SHALL NOT BE ACCEPTED AS A BEDDING OR BACKFILL MATERIAL.
8. ALL CONCRETE COLLARS WITHIN DISTURBED AREAS SHALL BE REMOVED PRIOR TO PAVING. COLLARS SHALL THEN BE REPLACED AFTER PAVING IS COMPLETE.

UTILITY INSTALLATION AND ROAD REPAIR

CEDAR HILLS
STANDARD DRAWING NO. 502

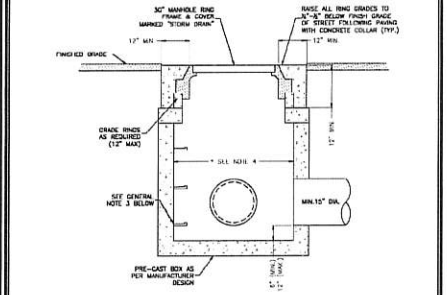


GENERAL NOTES:

1. ALL FRAMES & GRATES TO BE GALVANIZED STEEL OR CAST IRON.
2. CONSTRUCT BOX (WALL THICKNESS) TO MATCH EXISTING OR NEW TYPE OF CURB AS SHOWN.
3. CURB FACE INLET BOX CAN BE UTILIZED AS APPROVED BY CITY.
4. ALL GRATES TO BE BICYCLE SAFE.
5. STEPS ARE REQUIRED IN ALL STORM DRAIN BOXES & MANHOLES DEEPER THAN 5 FEET.
6. 2' MIN. (3' MIN. IF DEEPER THAN 5').

STORM DRAIN CATCH BASIN

CEDAR HILLS
STANDARD DRAWING NO. 505

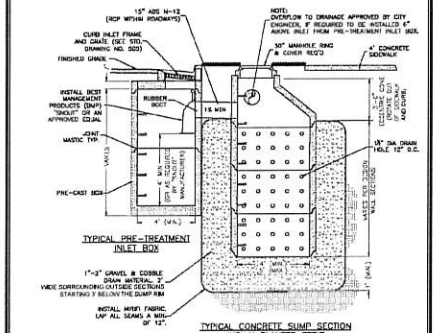


GENERAL NOTES:

1. ALL FRAMES & GRATES TO BE GALVANIZED STEEL OR CAST IRON.
3. CONSTRUCT BOX, FRAME & GRATE TO SUPPORT AN H-20 LOADING.
3. STEPS ARE REQUIRED IN ALL STORM DRAIN BOXES & MANHOLES DEEPER THAN 5 FEET.
4. 2' MIN. (3' MIN. IF DEEPER THAN 5').

STORM DRAIN COLLECTION BOX

CEDAR HILLS
STANDARD DRAWING NO. 506



GENERAL NOTES:

1. MANHOLE BASE AND ALL SECTIONS SHALL BE PRECAST TO CONFORM TO ASTM C478.
2. STEPS ARE REQUIRED WITHIN SUMP & CATCH BASIN.
3. THE PRE-TREATMENT MANHOLE SHALL BE CONSTRUCTED TO ENSURE WATER TIGHTNESS
4. THE MANHOLE RING & COVER SHALL BE CENTERED WITHIN PLANTER STRIP.
5. THE SUMP LID SHALL NOT BE LOCATED IN THE SIDEWALK SECTION OR IN THE CURB.
6. ANY APPROVED EQUIVALENTS REQUIRE CITY ENGINEER'S WRITTEN APPROVAL
7. D & L 1-3518 OR APPROVED EQUIVALENT IS PREFERRED FOR CURB-FACED INLETS
8. NO STEPS SHALL BE ALLOWED IN "DOWN-SLOPING" CUL-DE-SACS.
9. PLACE SUFFICIENT GRADE RINGS UNDER LID ASSEMBLY TO ENSURE CONCRETE CONE WILL BE BELOW CURB AND SIDEWALK CONCRETE.

MODIFIED PRE-TREATMENT MANHOLE AND STORM WATER SUMP DETAIL

CEDAR HILLS

507A

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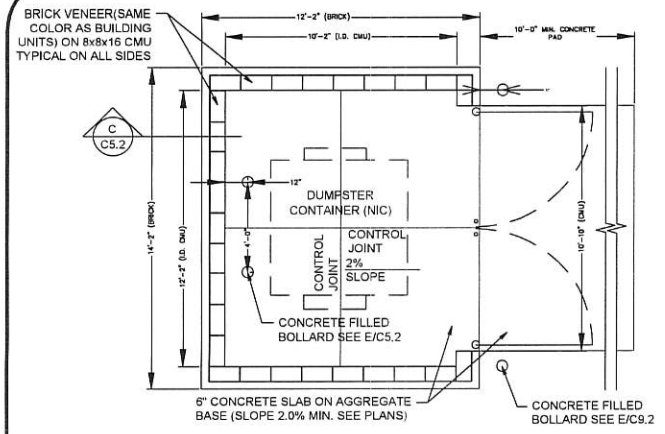
Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
CITY DETAILS

No.	Revision	Date

C6.1
OF SHEETS

Proj # 559 - 1937

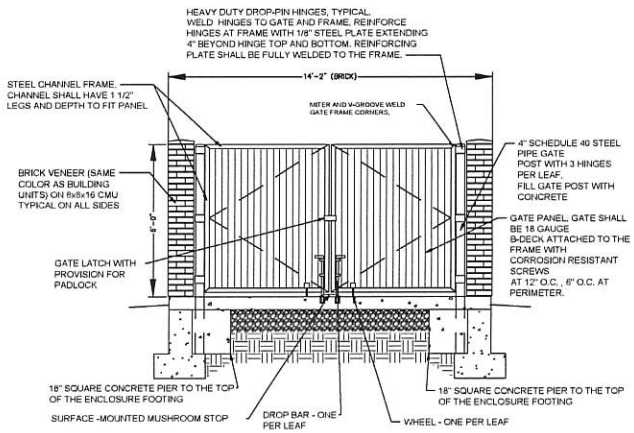
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MASONRY DUMPSTER ENCLOSURE

A

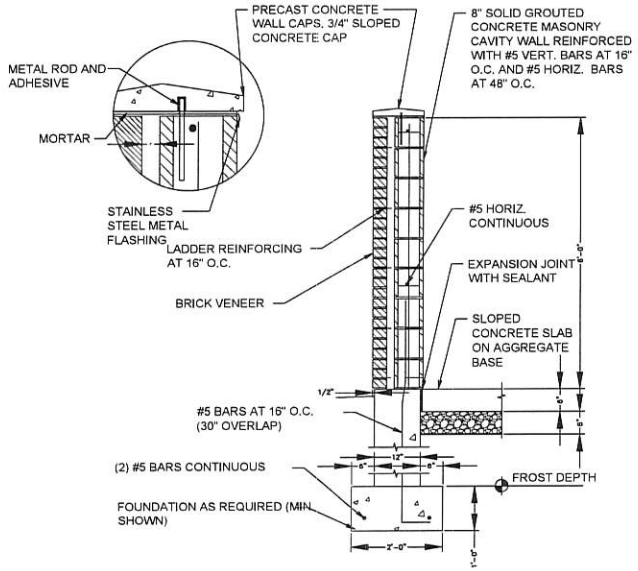
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MASONRY GATE ENCLOSURE

B

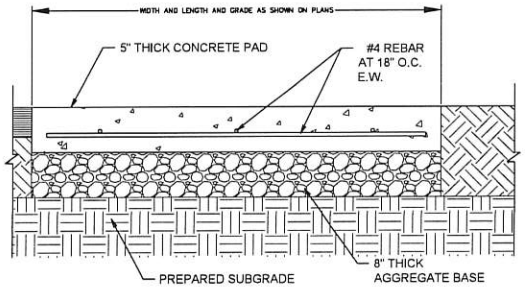
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MASONRY DUMPSTER ENCLOSURE

C

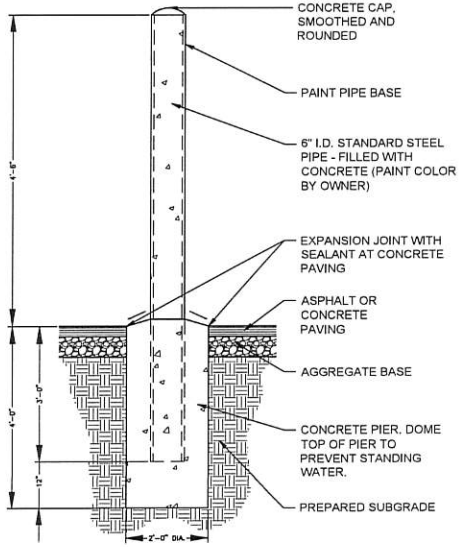
N.T.S.



DUMPSTER PAD SECTION

D

N.T.S.



CONCRETE BOLLARD

E

N.T.S.

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Cedar Hills Gateway, Plat "B", Phase 2, Lot 3

OPENSHAW DEVELOPMENT

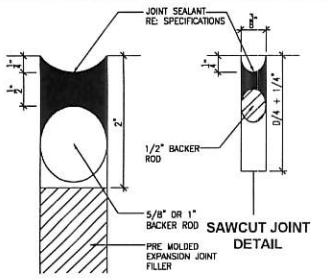
SITE DETAILS

No.	Revision	Date

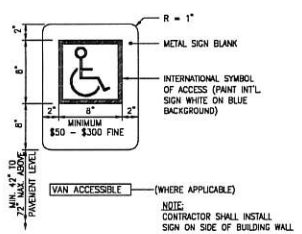
C6.2

Proj # 559 - 1537

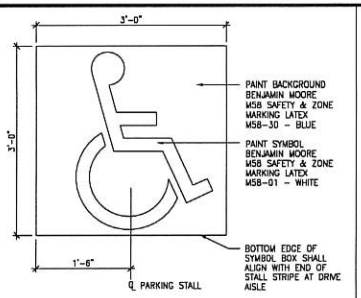
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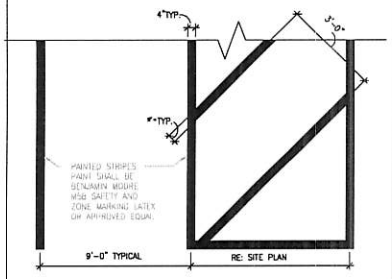
CONCRETE JOINT SEALANT N.T.S. | 1



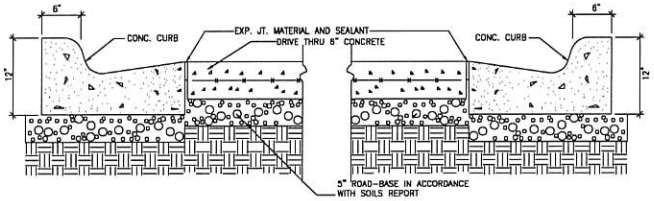
ACCESSIBLE PARKING SIGN N.T.S. | 2



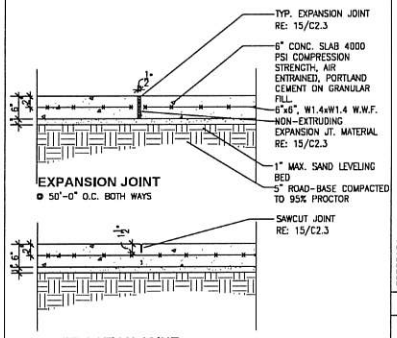
HANDICAP PAVEMENT SYMBOL 1"=1'-0" | 3



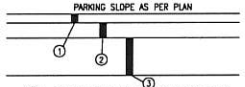
PARKING STRIPING 1/2"=1'-0" | 4



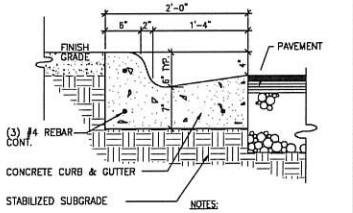
DRIVE THRU CURB AND GUTTER N.T.S. | 6



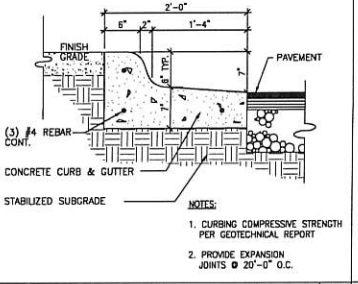
6" CONCRETE PAVEMENT N.T.S. | 7



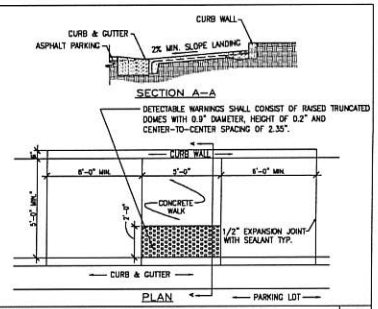
TYP. ASPHALT PAVEMENT N.T.S. | 8



CONCRETE CURB & GUTTER TIP-IN N.T.S. | 9



CONCRETE CURB & GUTTER TIP-OUT N.T.S. | 10



ADA ACCESS RAMP N.T.S. | 12

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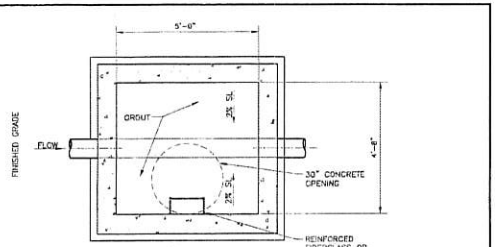
Cedar Hills Galeway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
SITE DETAILS

No.	Revision	Date

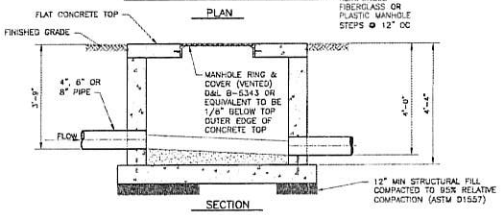
C6.3 OF SHEETS

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PLAN

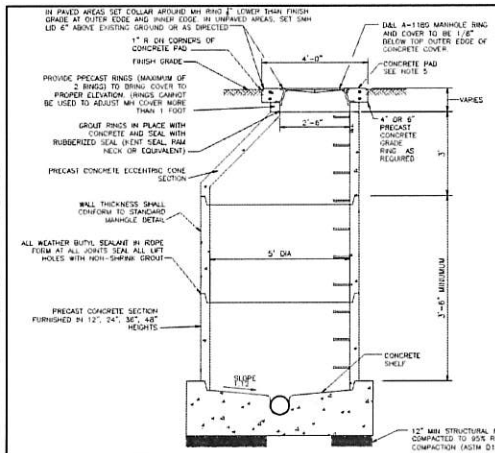


SECTION

NOTES:
1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
2. REINFORCING STEEL SHALL BE ASTW A615 GRADE 60.
3. THE CONCRETE COVER OVER THE REINFORCING STEEL SHALL BE A MINIMUM OF 1½-INCH.
4. THE STRUCTURE SHALL BE DESIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF UTAH.
5. THE STRUCTURE SHALL AT MINIMUM MEET THE FOLLOWING DESIGN CRITERIA:
   a) WALLS DESIGNED FOR SATURATED EQUIVALENT FLUID AT-REST SOIL PRESSURE OF 120 PCF PLUS TRUCK SURCHARGE.
   b) TRUCK LOADING USING AN AASHTO H-20 TRUCK LOAD.
6. PIPING PER CITY OR DISTRICT REQUIREMENTS.
7. ALL MANHOLES SHALL HAVE REINFORCED FIBERGLASS OR PLASTIC MANHOLE STEPS.
8. ALL MANHOLES MUST HAVE ROUND, NOTCHED, VENTED LIDS WITH PICK HOLES FOR REMOVAL.
9. THE MINIMUM WIDTH OF CHANNEL WITHIN MANHOLE TO BE DIAMETER OF PIPE.
10. CONTACT DISTRICT INSPECTOR 48 HOURS (2 BUSINESS DAYS) PRIOR TO CONSTRUCTION.

TIMPANOGOS SPECIAL SERVICES DISTRICT
SAMPLING MANHOLE
4FT OR LESS

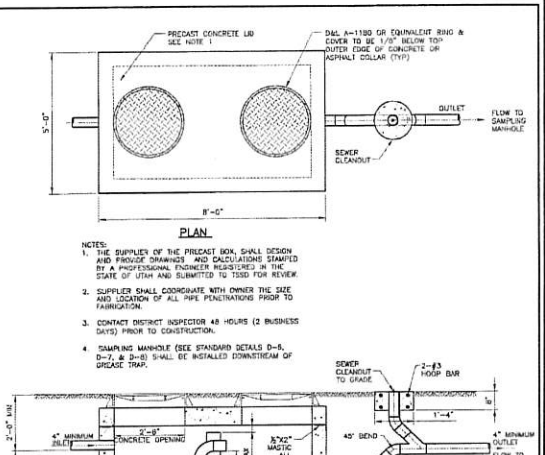
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DATE: AUG 07 | FILE NAME: | DRAWING NAME: D-6



NOTES:
1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
2. REINFORCING STEEL SHALL BE ASTW A615 GRADE 60.
3. THE CONCRETE COVER OVER THE REINFORCING STEEL SHALL BE A MINIMUM OF 1½-INCH.
4. THE STRUCTURE SHALL BE DESIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF UTAH.
5. THE STRUCTURE SHALL AT A MINIMUM MEET THE FOLLOWING DESIGN CRITERIA:
   a) WALLS DESIGNED FOR SATURATED EQUIVALENT FLUID AT-REST SOIL PRESSURE OF 120 PCF PLUS TRUCK SURCHARGE.
   b) TRUCK LOADING USING AN AASHTO H-20 TRUCK LOAD.
6. PIPING PER CITY OR DISTRICT REQUIREMENTS.
7. ALL MANHOLES SHALL HAVE STAINLESS STEEL OR PLASTIC STEPS.
8. ALL MANHOLES MUST HAVE ROUND, NOTCHED LIDS WITH PICK HOLES FOR REMOVAL.
9. THE MINIMUM WIDTH OF CHANNEL WITHIN MANHOLE TO BE DIAMETER OF PIPE.
10. THE CHANNEL WITHIN THE MANHOLE SHALL SLOPE GRADUALLY DOWNWARD SUCH THAT THE OUTLET IS 3 INCHES LOWER THAN THE INLET.
11. CONTACT DISTRICT INSPECTOR 48 HOURS (2 BUSINESS DAYS) PRIOR TO CONSTRUCTION.

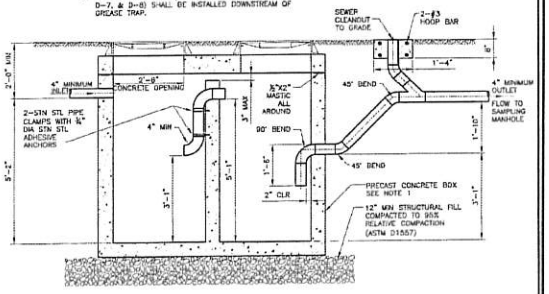
TIMPANOGOS SPECIAL SERVICES DISTRICT
SAMPLING MANHOLE
7-FT OR DEEPER

DRAWN: | DESIGNED: | CHECKED: | APPROVED:
DATE: AUG 07 | FILE NAME: | DRAWING NAME: D-8



PLAN

NOTES:
1. THE SUPPLIER OF THE PRECAST BOX, SHALL DESIGN AND PRODUCE DRAWINGS AND CALCULATIONS STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF UTAH AND SUBMITTED TO TSSD FOR REVIEW.
2. SUPPLIER SHALL COORDINATE WITH OWNER THE SIZE AND LOCATION OF ALL PIPE PENETRATIONS PRIOR TO FABRICATION.
3. CONTACT DISTRICT INSPECTOR 48 HOURS (2 BUSINESS DAYS) PRIOR TO CONSTRUCTION.
4. SAMPLING MANHOLE (SEE STANDARD DETAILS D-5, D-7, & D-8) SHALL BE INSTALLED DOWNSTREAM OF GREASE TRAP.



SECTION

TIMPANOGOS SPECIAL SERVICES DISTRICT
1000 GALLON STANDARD GREASE TRAP

DRAWN: | DESIGNED: | CHECKED: | APPROVED:
DATE: AUG 07 | FILE NAME: | DRAWING NAME: D-10

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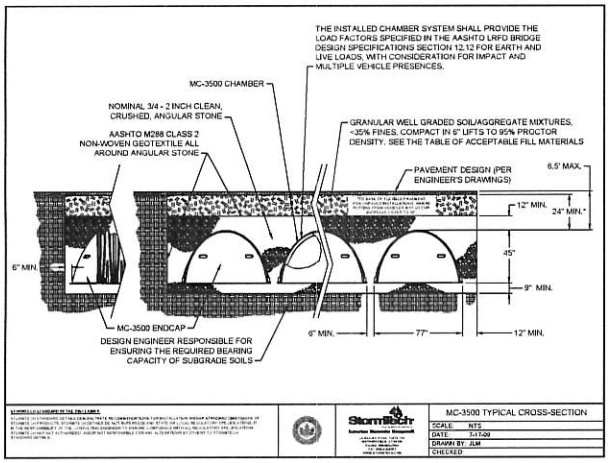
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OPENSHAW DEVELOPMENT
TSSD DETAILS

No.	Revision	Date

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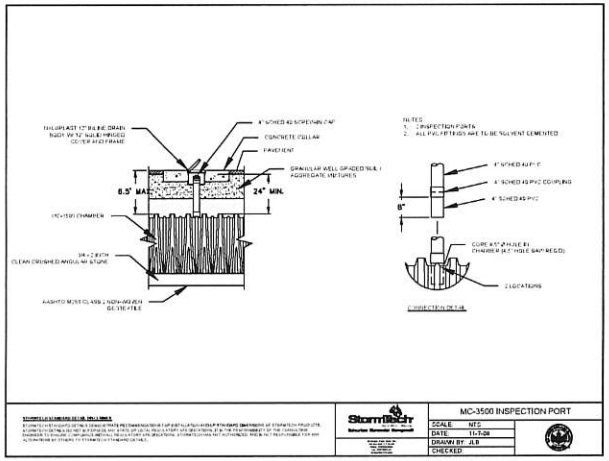
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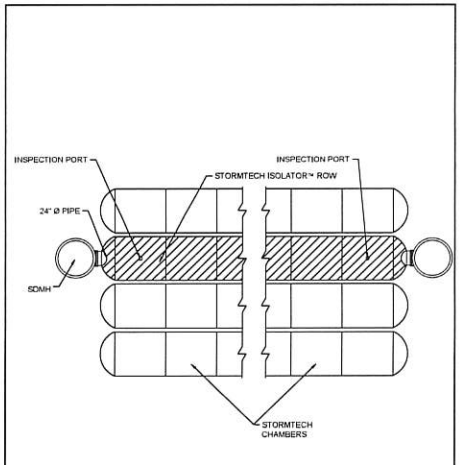
MC-3500 TYPICAL CROSS-SECTION

SCALE:	NTS
DATE:	7-17-09
DRAWN BY:	JLM
CHECKED:	



MC-3500 INSPECTION PORT

SCALE:	NTS
DATE:	11-1-08
DRAWN BY:	JLB
CHECKED:	



MC-3500 INLET AND SCOUR PROTECTION

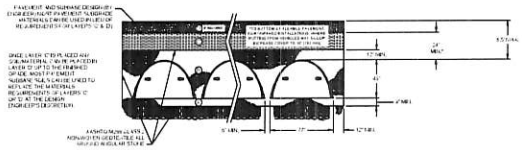
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DATE:	7-17-09
DRAWN BY:	JLM
CHECKED:	

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION[1]	COMPACTION/DENSITY REQUIREMENT
D	FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF THE FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THIS LAYER.	ANY SOIL/ROCK MATERIALS WITHIN SUBSTRUCTURE PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATION MAY INCLUDE STRINGER MATERIAL AND PREPARATION REQUIREMENTS.
C	FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B LAYER) TO 24" ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL GRADED SOIL/AGGREGATE MIXTURES, < 35% FINES. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LAYER C OR B.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFTER 24" (600mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150mm) LIFTS TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY.
B	EMBEDMENT STONE SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" - 2" INCH	3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" - 2" INCH	3, 35, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY.

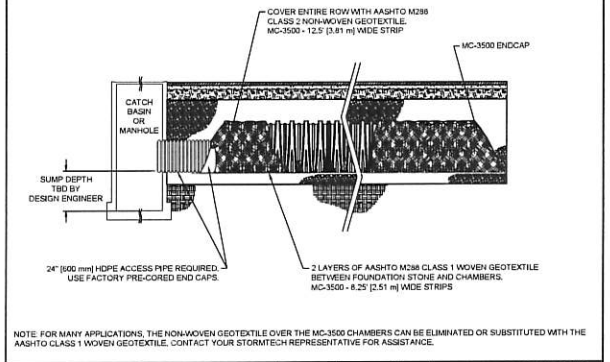
PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE "CLEAN, CRUSHED, ANGULAR NO. 4 AASHTO M43 STONE".

2. MEAN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR A LOOSE LIFT OF MATERIALS WHEN PLACED AND COMPACTED IN A 12" (305 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH AN APPROPRIATE COMPACTOR.



STORMTECH MC-3500 ACCEPTABLE FILL

SCALE:	NTS
DATE:	7-17-09
DRAWN BY:	JLM
CHECKED:	



NOTE: FOR MANY APPLICATIONS, THE NON-WOVEN GEOTEXTILE OVER THE MC-3500 CHAMBERS CAN BE ELIMINATED OR SUBSTITUTED WITH THE AASHTO CLASS 1 WOVEN GEOTEXTILE. CONTACT YOUR STORMTECH REPRESENTATIVE FOR ASSISTANCE.

MC-3500 ISOLATOR™ ROW PROFILE

SCALE:	NTS
DATE:	7-17-09
DRAWN BY:	JLM
CHECKED:	

MC-3500 STORMWATER CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500 OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MADE FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW.
4. 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.
5. ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
   - A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET.
   - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL CROSS SECTION IS BASED.
6. THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.

STORMWATER CHAMBER SPECIFICATIONS

SCALE:	NTS
DATE:	7-15-09
DRAWN BY:	JLM
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Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
SD STROM TECH DETAILS

No.	Revision	Date

C6.5 OF SHEETS

Proj # 559 - 1937

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CEDAR HILLS GATEWAY PLAT "B", PHASE 2, LOT 3 - CAFE RIO LANDSCAPE PLAN

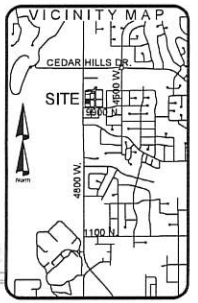
BENCHMARK ELEV: 4866.44'
WEST 1/4 CORNER OF SECTION 6,
T5S, R2E, S.L.B. & M.

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

PLANTING SCHEDULE

SYMBOL	DESIGNATION	COMMON NAME	SIZE	MIN. HEIGHT	MATURE SIZE (HXW)	QTY
	DECIDUOUS TREE					
	Gleditsia triacanthos	HONEYLOCUST OR EQUIV. SHADE TREE	2" CAL.		30' X 35'-45'	15
	EVERGREEN TREE					
	Ilex crenata 'Sky Pencil'	SKY PENCIL HOLLY	5 GAL.	7'	2' X 8'	10
	ORNAMENTAL GRASS					
	Festuca glauca 'Elijah Blue'	ELIJAH BLUE FESCUE	5 GAL.		1' X .75'	9
	Calamagrostis acutiflora 'Karl Foerster'	FOERSTER FEATHER REED GRASS	5 GAL.		3' X 2.5'	18
	Helictotrichon sempervirens	BLUE OAT GRASS	5 GAL.		3' X 3'	20
	GROUNDCOVER					
	Carpinus betulus 'Frans Fontaine'	KENTUCKY BLUE GRASS	SOD		4" TURF	4,342 S.F.
	2" - 3" SORENSEN RIVER ROCK @ 4" - 6" MIN. DEPTH WITH DEWITT PRO #5 WEED BARRIER FABRIC					1,831 S.F.

VICINITY MAP



SITE INFORMATION:
Cedar Hills Gateway Plat "B", Phase 2, Lot 3
Address: 9920 N. 4800 W., Cedar Hills, UT

OWNER
RH Cedar Hills LLC - Nathan Ricks, Manager

DEVELOPER:
Openshaw Development
Walter "Charlie" Openshaw
2230 North University Parkway, Suite 6D
Provo, UT 84604
801-367-1444
charlesopenshaw@gmail.com

SURVEYOR, ENGINEER, PLANNER:
A.L.M. & Associates, Inc
2230 North University Parkway, Suite 6D
Provo, UT 84604
(801) 374-6262 Greenwood@ALMonline.com

ZONING INFORMATION:
Zone - SC-1 Commercial

SITE TABULATION:
Total Area: 25,772.52 S.F. (100%)
Building Area: 3,392 S.F. (13.16%)
Impervious: 17,336.94 S.F. (67.27%)
Green Space: 4,532.74 S.F. (17.59%)
Patio Area: 510.84 S.F. (1.98%)

LANDSCAPE REQUIREMENT (33%):
Total Area + Street Park Strip: 27,413.64 S.F.
- Green Space: 4,532.74 S.F. (17.59%)
- Patio Area: 510.84 S.F. (1.86%)
- Street Park Strip: 1,641.12 S.F. (6.37%)

Total Landscaping: 6,684.70 S.F. (24.38%)

SYMBOL LEGEND:
- FIRE HYDRANT (FH)
- SEWER MANHOLE (SSMH)
- SEWER CLEANOUT (SCO)
- SD MANHOLE (SDMH)
- SD CURB INLET (SDCI)
- WATER VALVE (WV)
- PRESS. IRR. VALVE (IV)
- WATER METER (WM)
- PI CONTROL VALVE (ICV)
- POWER BOX
- UTILITY BOX

SYMBOL LEGEND:
- BOUNDARY LINE
- ADJACENT PROPERTY LINE
- UNDERGROUND POWER (E)
- GAS (G)
- SEWER PIPE (SS)
- STORM DRAIN PIPE (SD)
- WATER LATERAL
- WATER MAIN (CW)
- PRESSURIZED IRR. LINE (PI)
- COMMUNICATION LINE (FO)

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SEAL

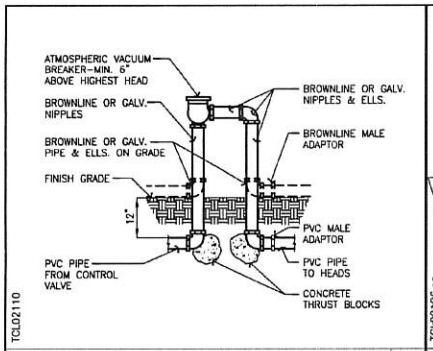
Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
LANDSCAPING PLAN

No.	Revision	Date

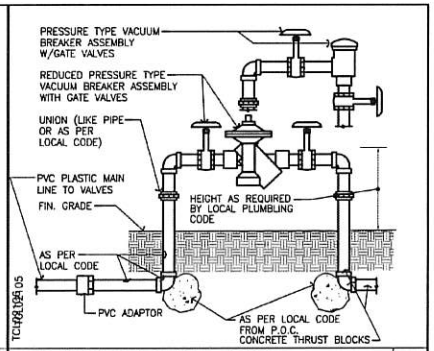
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Proj # 559 - 1937

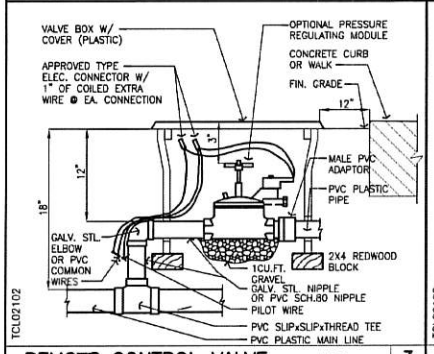
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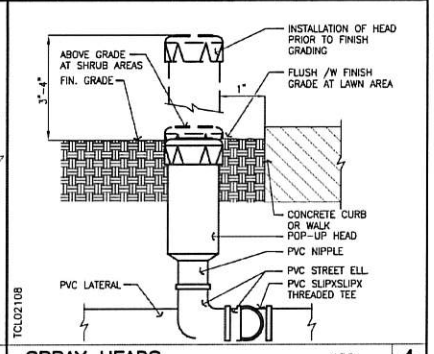
ATMOSPHERIC VAC BREAKER N.T.S. 2



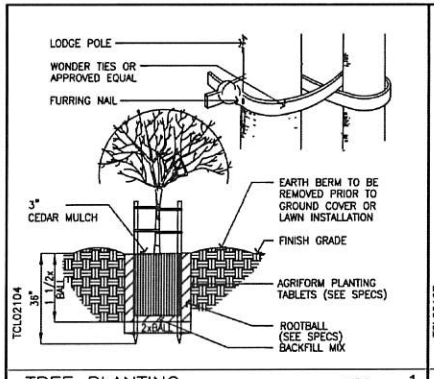
RP/PRESSURE VAC. BRKR. N.T.S. 1



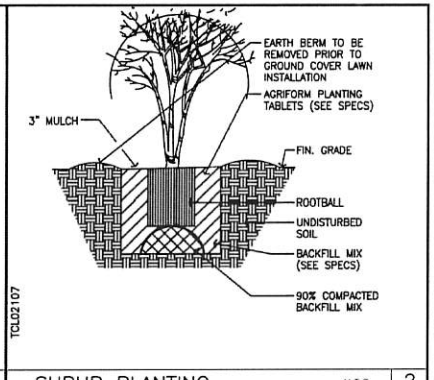
REMOTE CONTROL VALVE N.T.S. 3



SPRAY HEADS N.T.S. 4



TREE PLANTING N.T.S. 1



SHRUB PLANTING N.T.S. 2

SITE INFORMATION:
Cedar Hills Gateway Plat "D", Lot 4
Address: 9920 N. 4600 W., Cedar Hills, UT

OWNER
RH Cedar Hills LLC - Nathan Ricks, Manager

DEVELOPER:
Shiny Shell Car Wash - Coldwater Capital
3135 S. Richmond Street, SLC, UT 84106
Jason
(801) 573-0258 / jeff@coldwatercap.com

SURVEYOR, ENGINEER, PLANNER:
A.L.M. & Associates, Inc
2230 North University Parkway, Suite 6D
Provo, UT 84604
(801) 374-6262 Greenwood@ALMonline.com

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SEAL

Cedar Hills Gateway, Plat "B", Phase 2, Lot 3
OPENSHAW DEVELOPMENT
LANDSCAPE DETAILS

No.	Revision	Date

L1.1
OF SHEETS

Proj # 559 - 1937

PLANTING NOTE:

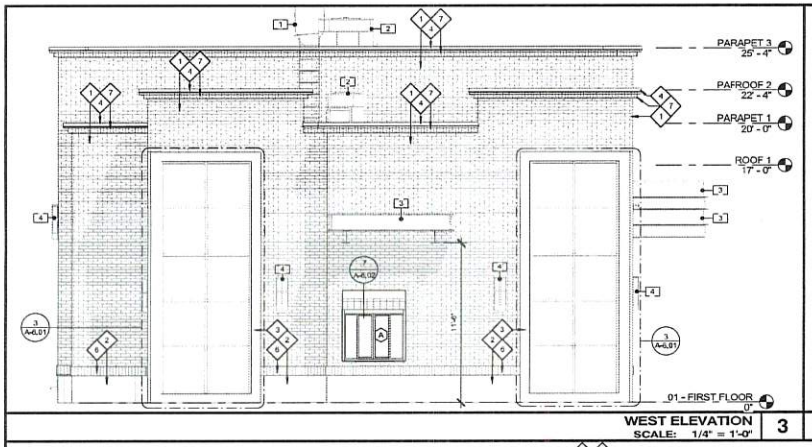
1. NO SUBSTITUTIONS SHALL BE ALLOWED WITHOUT APPROVAL. QUANTITIES IN THE PLANT LIST ARE FOR INFORMATION ONLY. CONTRACTOR SHALL VERIFY.
2. ALL PLANT LOCATIONS ARE APPROXIMATE, ADJUST AS NECESSARY TO AVOID CONFLICTS.
3. EDGING SHALL BE STEEL PER SPEC, OR OWNER APPROVED EQUAL. INSTALL STAKES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
4. THE PLANTING BEDS RECEIVING MULCH SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE PRIOR TO PLANTING AND MULCH PLACEMENT. APPLY IN ACCORDANCE WITH STANDARD TRADE PRACTICE.
5. WEED BARRIER FABRIC, AS NOTED IN THE SPECIFICATIONS, SHALL BE INSTALLED IN ALL SHRUB PLANTING BEDS TO RECEIVE GRAVEL MULCH.
6. TURF SHALL BE LOCALLY HARDY BLUEGRASS / FESCUE MIX SOD.
7. WHEN CLAY SOIL IS ENCOUNTERED IN THE ESTABLISHMENT OF THE LAWN OR THE INSTALLATION OF PLANT MATERIAL, SOIL SHALL BE IMPROVED IN ACCORDANCE WITH STANDARD TRADE PRACTICE, i.e. ADDITION OF LIME, GYPSUM, ETC.
8. ANY PLANTING BED ADJACENT TO WALKS OR CURBING SHALL HAVE THE GRADE LOWERED TO A SUFFICIENT DEPTH TO ALLOW THE TOP OF THE MULCH TO MATCH THE TOP OF WALK OR CURBING.
9. MULCH SHALL BE GRAY GRANITE 3" AGGREGATE (OR APPROVED SUBSTITUTE IF NOT AVAILABLE)
10. INSTALL PROFESSIONAL GRADE LANDSCAPE WEED BARRIER UNDERLAYMENT IN ALL AREAS TO RECEIVE GRAVEL MULCH.
11. TURF GRASS TO BE INSTALLED AS SOD.
12. TOPSOIL DEPTH:
    TURF AREAS = 4" TOPSOIL DEPTH
    SHRUB AREAS = 8" TOPSOIL DEPTH
13. ALL TURF AREAS TO BE IRRIGATED BY ROTARY AND SPRAY HEADS
14. ALL SHRUBS AND GROUNDCOVER TO BE IRRIGATED BY DRIP IRRIGATION
15. SHADE TREES IN STREET PARK STRIP AREAS TO BE INSTALLED EVERY 35-40 FEET

IRRIGATION NOTES:

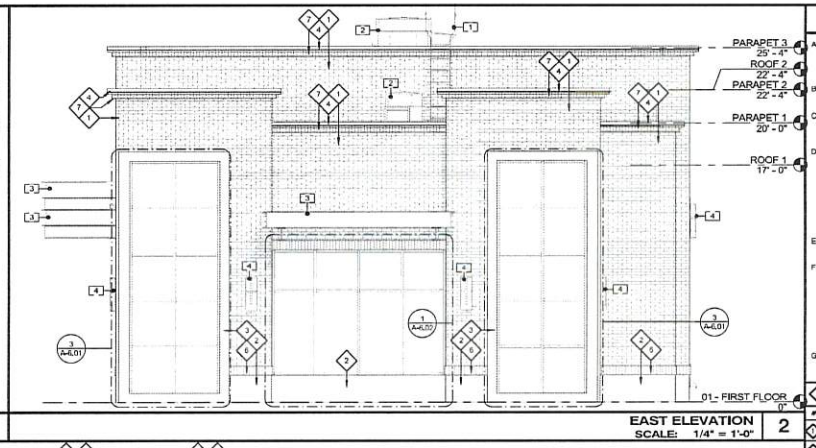
1. IRRIGATION CONTRACTOR SHALL COORDINATE WITH PAVING CONTRACTOR ON THE TIMING OF THE INSTALLATION OF SLEEVES UNDER PAVED AREAS. INSTALLATION OF SLEEVES IS RESPONSIBILITY OF IRRIGATION CONTRACTOR.
2. SYSTEM SHALL BE DESIGNED AND INSTALLED TO MEET THE CRITERIA OUTLINED IN THE PERFORMANCE SPEC.
3. FOR AREAS TO BE IRRIGATED SEE THE IRRIGATION CONCEPT PLAN.
4. SYSTEM ONCE OPERATIONAL SHALL BE CAPABLE OF APPLYING 1" OF WATER PER WEEK TO ALL LANDSCAPE AREAS.
5. MAINLINE ROUTING SHOWN ON THE "IRRIGATION CONCEPT PLAN" IS DIAGRAMMATIC. AVOID ANY CONFLICTS AMONG UTILITIES, PLANTINGS, AND ARCHITECTURAL FEATURES.
6. IN ADJUSTING THE TIME CLOCK ON THE IRRIGATION CONTROLLER, THE IRRIGATION CONTRACTOR SHALL BE AWARE THAT TRAPPED WATER BETWEEN WALKS AND THE BUILDINGS FOUNDATION IS A CONCERN.THEREFORE, THE SPRINKLER ZONES RESPONSIBLE FOR IRRIGATING THESE AREAS SHALL BE SET TO AVOID SUCH A SITUATION.
7. IRRIGATION CONTRACTOR SHALL COORDINATE BACKFLOW PREVENTER LOCATION. LOCATION SHALL MEET THE FOLLOWING CRITERIA
   - BACKFLOW PREVENTER SHALL BE INSTALLED AT THE DISTANCE ABOVE THE HIGHEST SPRINKLER HEAD AS REQUIRED BY LOCAL CODES.
8. SYSTEM TO BE DESIGNED TO AVOID SPRAYING WATER ON BUILDING OR ACROSS WALKS.
9. PROPOSED HEAD LAYOUT AND SYSTEM ROUTING SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL PRIOR TO COMMENCING WORK.
10. BACKFLOW PREVENTOR SHALL BE ENCLOSED IN A LOCKABLE COVER DEVICE.
11. ALL IRRIGATION SHALL BE BASE BID.
12. CONTRACTOR SHALL COORDINATE LOCATION FOR IRRIGATION CONTROLLER WITH OWNER.
13. CONTRACTOR SHALL DETERMINE CONNECTION POINT TO DOMESTIC FOR IRRIGATION SUPPLY. PROVIDE SEPARATE METER FOR IRRIGATION SYSTEM.

ALL DRAWINGS, DESIGNS, PLANS, AND SPECIFICATIONS AS INSTRUMENTS OF SERVICE ARE AND SHALL REMAIN THE PROPERTY OF A.L.M. & ASSOCIATES, INC. THESE DOCUMENTS ARE NOT TO BE CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY, WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF A.L.M. & ASSOCIATES, INC.

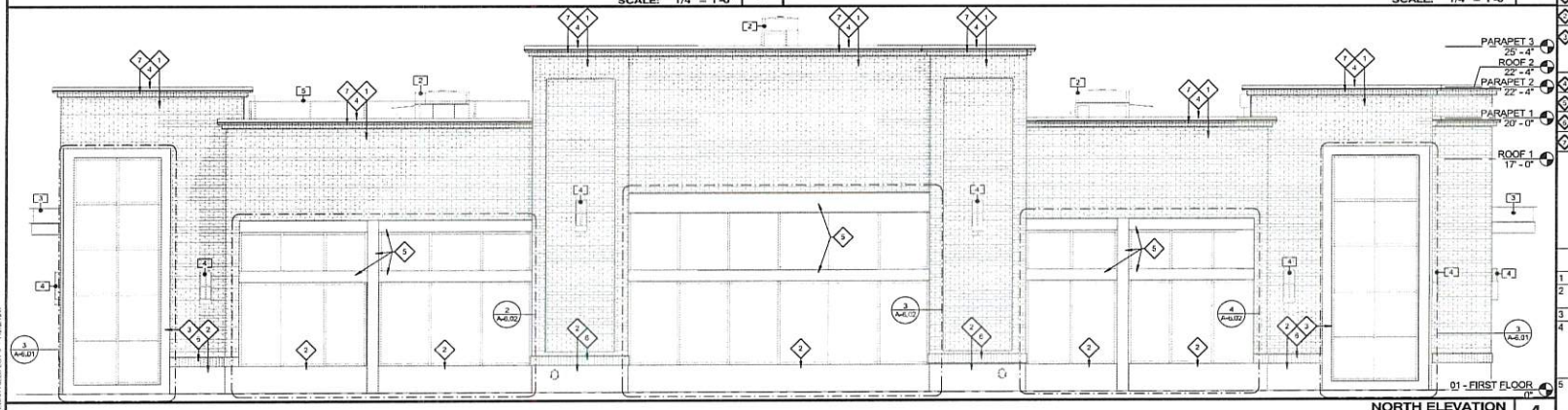
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WEST ELEVATION 3
SCALE: 1/4" = 1'-0"



EAST ELEVATION 2
SCALE: 1/4" = 1'-0"



NORTH ELEVATION 4
SCALE: 1/4" = 1'-0"



SOUTH ELEVATION 1
SCALE: 1/4" = 1'-0"

GENERAL NOTES

A. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS, AND ASSEMBLIES PRIOR TO CONSTRUCTION. REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ARCHITECT.

B. EXPOSED CONCRETE FOUNDATION AND RETAINING WALLS TO RECEIVE RUBBED FINISH.

C. CONCRETE WALLS RETAINING EARTH (BELOW GRADE) TO RECEIVE TOW COATS OF BITUMINOUS DAMP PROOFING MATERIAL.

D. PROVIDE PRE-FINISHED NUMBERS ON THE FRONT, EXTERIOR OF THE BUILDING INDICATION THE BUILDING ADDRESS NUMBER ASSIGNED BY THE CITY IN ACCORDANCE WITH CURRENT CITY ORDINANCE. COLOR OF PRE-FINISHED NUMBERS TO CONTRAST SIGNIFICANTLY WITH BACKGROUND COLOR OF EXTERIOR WALL THAT ADDRESS MUST BE PERMANENTLY FASTENED TO THE EXTERIOR OF THE BUILDING PRIOR TO OCCUPANCY.

E. SEE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.

F. EXTERIOR SIGNAGE: THE OWNER IS RESPONSIBLE TO OBTAIN A SEPARATE PERMIT FOR ANY EXTERIOR SIGNS IN ACCORDANCE WITH CURRENT CITY SIGN ORDINANCE. THE OWNER IS RESPONSIBLE TO CONTRACT DIRECTLY WITH SIGN VENDORS. SIGN VENDORS SHALL INSTALL THEIR RESPECTIVE SIGNAGE. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND COORDINATE ALL BACKING AND POWER REQUIREMENTS FOR EACH SIGN.

G. NOT ALL SHEET NOTES ARE NECESSARILY USED ON EACH SHEET

EXT. MATERIAL LEGEND

#	TYPE	BOND / STYLE	COLOR
1	EXTERIOR BRICK	RUNNING	TBD
2	24"X48" CEMENTITIOUS PANEL	STACKED	GRAY
3	METAL WALL PANEL (PAC-CLAD WALL PANEL - FLUSH OR SIMILAR) OR BRAKE METAL SIDING - COLOR BLACK	N/A	BLACK
4	METAL PARAPET CAP	N/A	BLACK
5	WIDE FLANGE BEAM/COLUMN	N/A	DARK GRAY
6	EXTERIOR BRICK SOLDIER COURSE	8" SOLDIER COURSE	TBD
7	EXTERIOR BRICK CORBELING	RUNNING (CORBELING)	TBD

NOTE: COLORS ON ALL MATERIALS SHALL BE BY ARCHITECT.

NOTE: REFER TO MANUFACTURER DETAILS FOR CEMENTITIOUS PANEL INSTALLATION AND ASSEMBLY.

SHEET NOTES

1	ROOF ACCESS LADDER - SEE DETAILS
2	ROOF MOUNTED HVAC UNIT - SEE MECHANICAL PLANS
3	EXTERIOR METAL AWNING - SEE DETAILS
4	EXTERIOR WALL MOUNTED LIGHT (MAXIM MOON RAY 18" LED OUTDOOR WALL LIGHT STYLE #32D02 - DARK BRONZE FINISH OR SIMILAR) - COORDINATE WITH OWNER
5	42" METAL GUARD RAIL (GRAY) AT ROOF ACCESS HATCH TO BE INSTALLED AS PER CODE
6	EXTERIOR WALL MOUNTED SIGNAGE (FUTURE) - CONTRACTOR TO PROVIDE ELECTRICAL CONNECTIONS AND WALL BRACING AS REQUIRED - TO BE INSTALLED AS PER CODE AND AS PER CEDAR HILLS DESIGN STANDARDS - COORDINATE WITH OWNER

W2 DESIGN GROUP
3167 North Canyon Road
Provo, UT 84604
Phone: 801.358.9940
shane@w2designgroup.com

STATE OF UTAH
SHANE WILLIAMS
10189741-030
LICENSED ARCHITECT

CEDAR HILLS GATEWAY - LOT 3

LOT 3
9925 N 4800 W
CEDAR HILLS, UT

CONSTRUCTION BID SET

Revision Date	Revision Number

PROJECT NO.	W2-2124
DATE	10.4.21
DRAWN BY	DW
CHECKED BY	SW

SHEET DESCRIPTION
EXTERIOR ELEVATIONS

SHEET NUMBER
A-2.01

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WEST ELEVATION - COLOR
SCALE: 1/4" = 1'-0" 4



EAST ELEVATION - COLOR
SCALE: 1/4" = 1'-0" 3

GENERAL NOTES

A. GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS, AND ASSEMBLIES PRIOR TO CONSTRUCTION. REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ARCHITECT.

B. EXPOSED CONCRETE FOUNDATION AND RETAINING WALLS TO RECEIVE RUBBED FINISH.

C. CONCRETE WALLS RETAINING EARTH (BELOW GRADE) TO RECEIVE TOW COATS OF BITUMINOUS DAMP PROOFING MATERIAL.

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E. SEE STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION.

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G. NOT ALL SHEET NOTES ARE NECESSARILY USED ON EACH SHEET

SHEET NOTES



NORTH ELEVATION - COLOR
SCALE: 1/4" = 1'-0" 2



SOUTH ELEVATION - COLOR
SCALE: 1/4" = 1'-0" 1

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3167 North Canyon Road
Provo, UT 84604
Phone: 801.358.9940
shane@w2designgroup.com

STATE OF UTAH
SHANE WILLIAMS
10189741-030
LICENSED ARCHITECT

CONSTRUCTION BID SET

CEDAR HILLS GATEWAY - LOT 3

LOT 3
9925 N 4800 W
CEDAR HILLS, UT

Revision Date	Revision Number

PROJECT NO.	W2-2124
DATE	10.4.21
DRAWN BY	DW
CHECKED BY	SW

SHEET DESCRIPTION
EXTERIOR ELEVATIONS - COLOR

SHEET NUMBER
A-2.02

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CITY OF CEDAR HILLS

TO:	Planning Commission
FROM:	Chandler Goodwin, City Manager
DATE:	November 23, 2021

Planning Commission
Agenda Item

SUBJECT:	Discussion on the Cedar Hills General Plan Land Use Element
APPLICANT PRESENTATION:	N/A
STAFF PRESENTATION:	Chandler Goodwin, City Manager

BACKGROUND AND FINDINGS:

The City Council has given the direction to staff to update the Land Use Element and appropriate notice has been given to the necessary entities. The current land use element is out of date in relation to development in Cedar Hills. A land use element should be a high-level guide on large scale development in the community. With Cedar Hills nearly built out, the question that must be answered in the new land use element is not on development but on redevelopment. How do we envision the City in the next 10-20 years? As part of the preparation for this discussion, staff has prepared a draft land use element, using relevant portions of the current plan and incorporating future land uses. Planning Commission should prepare by reviewing the document, specifically the goals, policies, and guidelines that will serve to direct land use discussions and decisions in the coming years.

PREVIOUS LEGISLATIVE ACTION:

City Council gave notice of the intent to amend the General Plan in the October 19, 2021 City Council meeting

FISCAL IMPACT:

N/A

SUPPORTING DOCUMENTS:

Draft Land Use Element, Current Land Use Element

RECOMMENDATION:

Review the current and the proposed land use elements, and come prepared to discuss changes, goals, priorities, and guidelines

MOTION:

No motion necessary, discussion item ony.

Town of Cedar Hills • General Plan

LAND USE ELEMENT

I. Introduction

The Land Use Element of the Cedar Hills General Plan, prepared by the Cedar Hills Planning Commission, is designed to promote sound land use decisions within the jurisdiction and areas surrounding Cedar Hills located in the annexation declaration policy of the town. According to the Utah Code § 10-9-302 (2) (a), the Land Use Element should designate the proposed general distribution and location and extent of uses of land for housing, business, industry, agriculture, recreation, education, public buildings and grounds, open space, and other categories of public and private uses of land as appropriate. The Utah Code conveys further that a community may include a statement of the standards of population density and building intensity recommended for various land use categories.

Under that direction and authority, this Land Use Element has been organized in order to provide the citizens, both present and future, a plan for future development patterns. The Planning Commission believes that if each concept, goal, and policy of the element is adhered to, the result will be a well planned, functional and aesthetically pleasing community.

The Land Use Element of the Cedar Hills General Plan is intended to be consistent with all other laws, ordinances, and resolutions of Cedar Hills, the State of Utah, and the United States. If any section of this Land Use Element is found to be unlawful, the specific section may be severed with all other sections remaining valid. In all other cases of conflict, the more strict of two or more laws, ordinances, or resolutions shall apply.

II. Purpose of the Land Use Element

Land use patterns, location of uses, transitions between different uses, and the density or intensity of uses are critical components of community character. The purpose of the Cedar Hills Land Use Element is to direct land use decisions in such a manner that in the future there is sufficient land for residential, commercial, industrial and public uses. The Land Use Element should assist decision makers in locating these uses appropriately in order to enhance community character, preserve and protect important natural resources, and enable the community to provide adequate and efficient public services in the future. The Land Use Element includes a Land Use Map which indicates recommended future land use patterns for all locations within the Cedar Hills General Plan area.

The Land Use Element of the Cedar Hills General Plan will allow current and future residents, property owners and developers, elected officials, and staff to approach land use issues from a similar standpoint resulting in improved coordination, efficient delivery of public services, and elimination of competition between public entities in attracting development.

It is the intent of Cedar Hills to regulate growth in such a manner so that public services and facilities required to serve proposed development are functional prior to development approval. In order to accomplish this task, Cedar Hills will develop a Capital Improvements Program which organizes future capital expenditures of the town. The program will indicate where the community will focus expansion of service provision and construction of public facilities, and provide a general timeline for completion of the improvements. For any development which requires services not currently found in the Capital Improvements Program, the developer will be responsible for providing such services. Cedar Hills may consider future reimbursement for any public facilities provided by a developer.

The Land Use Element is divided into two Chapters. Chapter 1 describes desired uses of land currently located within the incorporated boundaries of Cedar Hills, and generally the types of uses which are allowed under the current Zoning Ordinance. Chapter 2 describes areas of future annexation complete with desired uses and Land Use Categories.

III. Key Land Use Element Issues

Several key issues pertain to areas located both within the community, Chapter 1, and areas within the Annexation Policy Declaration of Cedar Hills, Chapter 2. Prior to making land use decisions which impact the ability of Cedar Hills to guide future development patterns, these issues should be addressed by the Planning Commission and City Council.

1. Accommodation of Growth in Accordance with Community Goals and Objectives.

The Land Use Element establishes a planned pattern for the development of the community in the future. It reflects historical development patterns, and the current amount and type of development occurring at present. The Land Use Element also provides a guide for future development patterns which reflect the desires of Cedar Hills residents, land owners, elected officials, and staff. The Land Use Element is a combined effort of all individuals and groups that may be affected by land use decisions.

2. Development Guidance.

Development of land will create a long term effect on Cedar Hills. Cedar Hills desires to make well informed decisions that will benefit the community in the future. The Land Use Element provides direction and predictability for both developers and decision makers. It establishes the community's vision for the future and guides the development of land accordingly. If individual developments correspond with the Land Use Element, the residents of Cedar Hills can expect to create the envisioned community. As development occurs within the community, the Land Use Element should be updated and revised to provide decision makers a tool with which to make proper land use decisions.

3. Land Use Compatibility.

The current Zoning Ordinance of Cedar Hills is an attempt to create a pattern of compatible land uses. As the community continues to expand, it will be important to maintain an organized land use pattern. By developing and mapping land use categories for areas which will be annexed in the future, the community can reduce the potential for incompatible land uses located adjacent to one another.

4. Preservation of the Natural Environment and Open Space.

Cedar Hills and the Land Use Element recognize the importance of the natural environment and open space in the community. Many of the goals and objectives found in this element reflect the community's desire to protect the environment and provide open areas for the use and enjoyment of the residents. Although aesthetics play an important role in preservation of the environment and open space, there are also areas within Cedar Hills which are difficult to develop. These areas, such as steep slopes, flood plains, ridgelines, fault zones, and other areas containing geographic hazards should be avoided to the extent possible.

5. Distinctive Community Character.

The residents and elected officials of Cedar Hills would like to see the community maintain a level of individualism and unique community character. Design guidelines, regulation of signage, landscaping requirements and other policies of the community are meant to provide opportunities for unique and highly desirable development to occur, not simply add to the burden of potential developers.

6. Infill Development.

The Land Use Element supports the efficient use of public and private resources by promoting the development of vacant land or under developed parcels in existing developed areas. By doing so, reductions in overall capital expenditures, by reducing the need for new public services and facilities, may be achieved.

7. Joint Planning Efforts.

The residents and elected officials of Cedar Hills recognize that the community effects and is affected by surrounding areas. When land use decisions made by Cedar Hills may effect surrounding jurisdictions, including Utah County, every effort will be made to inform all interested parties. Conversely, Cedar Hills will make every effort to be informed about land use decisions that may affect the community.

8. Agricultural Protection.

Cedar Hills desires to protect the production of food and other agricultural products through appropriate zoning, tax and density incentives. Cedar Hills does not support development that would encroach upon areas where agricultural uses are desired by the land owner.

9. Financing Capital Facilities

Cedar Hills Town intends has established Levels of Service (LOS) for each public service the Town provides to the residents (See Appendix B). Cedar Hills will be responsible for correcting existing deficiencies, while private development will participate in capital improvements through exactions, dedications, impact fees and other reasonable means.

CHAPTER 1

Desired Uses of Land Located Within Current Cedar Hills Town Boundary

At the present time, all land located within the municipal boundary has been assigned zoning. Current zoning and the requirements of each zone may be found in the Zoning Ordinance of Cedar Hills. The Land Use Element of Cedar Hills is intended to be consistent with the Zoning Ordinance and all other laws, ordinances, and resolutions of Cedar Hills, the State of Utah, and the United States. The Zoning Map of Cedar Hills provides a graphic representation of the land located in each zone. A description of each current zoning district and the intended land use within different zones is provided as follows:

1. R-1-10,000

The R-1-10,000 zone is characterized by single family homes located on lots of not less than 10,000 square feet. Uses in this zone should be residential in nature to provide single family homes, accessory structures, parks, trails, open space, and efficient transportation circulation. Other uses not in conflict with the residential nature may be allowed as a Conditional Use.

Development in the R-1-10,000 zone is the highest intensity residential use in the community at the current time. This high intensity use demands more concentrated public service provisions. Special attention to the availability of adequate public services should be a concern of the community in this zone. Institutional uses (government buildings, schools, churches, health care facilities, public safety facilities) may be located within this zone.

Sensitive areas in this zone should be avoided to the extent possible. Steep slopes, wetlands, the one hundred year flood plain, land slide, ridgelines and all other geographic features which could be detrimental to residential structures should be carefully reviewed prior to project approval.

2. R-1-20,000

The R-1-20,000 zone provides an area for single family residential housing on larger lots of not less than 20,000 square feet, or roughly one half acre. The zone provides for subdivision type development while allowing a variety of more rural type uses than the R-1-10,000 zone.

Sensitive areas in this zone should be avoided to the extent possible. Steep slopes, wetlands, the one hundred year flood plain, land slide and all other geographic features which could be detrimental to residential structures should be carefully reviewed prior to project approval.

The R-1-20,000 zone also provides a buffer area between the urban development pattern in the R-1-10,000 zone and the agriculture based RA-1 zone and the more development sensitive H-1 zone. Other uses not in conflict with the residential nature may be allowed as a Conditional Use.

3. RA-1

The rural agriculture zone of Cedar Hills provides for single family homes equal to one unit per acre. The purpose of this district is to allow for continued agricultural uses and to protect the property from encroachment by conflicting uses. Ideally, this area would provide housing for residents in the agriculture sector and workers associated with agricultural uses. Careful consideration of farming issues, such as odors, dust, noise, and chemicals (fertilizers, pesticides) should be reviewed prior to development approval which approaches this zone in order to protect the future of the agricultural industry in Cedar Hills.

Sensitive areas in this zone should be avoided to the extent possible. Steep slopes, wetlands, the one hundred year flood plain, land slide and all other geographic features which could be detrimental to residential structures should be carefully reviewed prior to project approval.

This zone is located in a corridor between 4000 West and Canyon Road. However, when reviewing development applications, Cedar Hills should allow for some future residential development in the RA-1 zone, consistent with the current use of the RA-1 zone.

4. H-1

The hillside area of Cedar Hills located on the east side of the community is characterized by limited development on the sensitive foothills of Mahogany Mountain. Cedar Hills recognizes that this zone contains areas more sensitive to development than other areas within the community. Designed to minimize impact on the hillsides and provide a sense of openness, while retaining a portion of the land in its natural state, development in this zone will be limited to one unit per acre.

Clustered, master planned developments may be allowed in this zone. Clustering will most likely provide a more efficient use of the land and keep public service costs to a minimum. Interconnected open space amenities through development of this type assist to create conservation of view sheds, ridgelines, and trail systems.

Architectural design and building materials can aid in creating housing which blends into the natural surroundings providing attractive development. Particularly in this zone, sensitive areas should be avoided to the extent possible. Steep slopes, wetlands, the one hundred year flood plain, land slide, ridgelines and all other geographic features which could be detrimental to residential structures should be carefully reviewed prior to project approval.

5. SC-1

This zone provides for commercial and retail uses within the community. To the extent possible, commercial uses should attempt to minimize impact on residential areas. The zone allows the community to better balance the tax base, and provides residents with employment opportunities, retail goods, and office space. Special attention should be given to traffic, design, location, safety and signage in the zone. Cedar Hills will encourage commercial development which will directly benefit the residents of the community. Cedar Hills recognizes that not all commercial and industrial uses are compatible with other uses in the community.

CHAPTER 2

Desired Uses of Land Within the Cedar Hills Annexation Policy Declaration

In order to create an organized growth pattern for future development in areas of Cedar Hills which have yet to be annexed, the Land Use Element must include desired future land use patterns and account for the impact the new areas will have on the community. It is the intention of Cedar Hills to plan for these areas to be compatible with adjacent land use patterns and existing zoning designations when annexed. In order to do so, six general land use designations have been assigned to land located within the annexation policy declaration area. Each of the designations are meant to be general and somewhat flexible in nature. Each of these designations are described below and can be found on the Cedar Hills General Plan Map.

Current density in Cedar Hills averages approximately two dwelling units per acre. It is the intention of the Planning Commission and City Council to create a land use element that would maintain a similar overall density in the future while providing a variety of housing styles, types, and price ranges.

Because the Land Use Element primarily addresses land development, it is important to reiterate that the community desires to protect the natural environment and open space found within the community. These areas, such as steep slopes, flood plains, ridgelines, fault zones, and other areas containing geographic hazards should be avoided to the extent possible.

1. Low Density Residential

Generally located in the central section of Cedar Hills, this area will be characterized by development of single family homes, accessory buildings, parks, trails, open space, and other

compatible uses. The general density of the Low Density Residential area will be one (1) unit per acre. This area is suitable for low density developments with substantial open spaces to provide protection and preservation of ridgelines, view corridors, hillsides, wildlife habitat, and aesthetic attributes. However, developments may occur on lots smaller than one half acre provided that the overall density of the area is not increased. For example, a subdivision containing a portion of one acre lots and a portion of quarter acre lots may be approved. Likewise, a developer who would like to develop quarter acre lots and retain the remainder of the parcel as open space would be encouraged to do so. A wide variety of housing types and styles, and development flexibility is allowed and encouraged by Cedar Hills.

Cedar Hills believes that low density, carefully planned, single family housing may enhance many features of the community such as Manila Creek, and provide parcels with spectacular views of Utah Valley and the surrounding Mountains. Likewise, by limiting the number of homes in these areas, the community can protect these types of areas. As each application for development approval is submitted in the low density residential area, it will be carefully reviewed for conformance with the objectives of the General Plan.

The transportation, parks and recreation, and open space desires for this area can be found in other elements of this General Plan. Prior to annexation and development approval in this area, each of the General Plan elements should be reviewed in order to coordinate future development which conforms to the General Plan of Cedar Hills.

2. Medium Density Residential

Located along the east side of Canyon Road, and in areas on both the northern and southern portions of the community, the Medium Density Residential area will be characterized by development of single family homes, accessory buildings, parks, trails, open space, and other compatible uses. The general density of the Medium Density Residential area is two (2) units per acre. Minimum lot size is not as important in this area as overall density. Clustered, master planned developments which contain substantial open space are encouraged in this area. Interconnected open space amenities through developments assist to create an recreation and open space system available for use by residents and is highly encouraged.

The medium density residential area will also provide a transition area from low density residential uses into the high density residential area of higher intensity uses. Because this area will provide such a transition, all development concepts and layout should be reviewed with compatibility in mind.

The transportation, parks and recreation, and open space desires for this area can be found in other elements of this General Plan. Prior to annexation and development approval in this area, each of the General Plan elements should be reviewed in order to coordinate future development which conforms to the General Plan of Cedar Hills.

3. High Density Residential

High density housing, characterized by single family developments with a density of three (3) to four (4) units per acre, is located throughout the community in areas suitable for single family residential development. When reviewing developments in the high density residential area, careful attention should be paid to impact on surrounding developments and integration of transportation, and open space.

Located near main roads and commercial areas of the community, the high density residential area may provide a significant portion of the future population of Cedar Hills.

The transportation, parks and recreation, and open space desires for this area can be found in other elements of this General Plan. Prior to annexation and development approval in this area, each of the General Plan elements should be reviewed in order to coordinate future development which conforms to the General Plan of Cedar Hills.

4. Very High Density Residential

The Very High Density Residential area, located on the western side of the community near the SC-1 zone, future main roadways, and the new High School, should provide for multi-family housing, factory built homes, and rental units. This area will allow access to the commercial, retail, and institutional uses in the community. This area will also provide a transition from the higher intensity commercial and retail uses to less intensive residential uses.

Landscaping, off street parking requirements, traffic circulation, and other high density housing planning issues will play an important role in project review in this area.

The transportation, parks and recreation, and open space desires for this area can be found in other elements of this General Plan. Prior to annexation and development approval in this area, each of the General Plan elements should be reviewed in order to coordinate future development which conforms to the General Plan of Cedar Hills.

5. Commercial-Retail District

Commercial and retail development will be encouraged in the Commercial-Retail District. The district will be located in two areas of the community, one on the western side of Cedar Hills adjacent to the SC-1 zone, and the other near the intersection of Canyon Drive and S.R. 92. Commercial and retail businesses that provide services directly to the residents of Cedar Hills will be highly encouraged. Transportation and other considerations may limit the types of businesses approved in the district.

In particular, the Commercial-Retail District located adjacent to S.R. 92 because of it proximity to American Fork Canyon, should include very low intensity commercial activities such as bike rentals, fishing supplies, and other businesses catering to visitors of the canyon.

The transportation, parks and recreation, and open space desires for this area can be found in other elements of this General Plan. Prior to annexation and development approval in this area, each of the General Plan elements should be reviewed in order to coordinate future development which conforms to the General Plan of Cedar Hills.

Land Use Element Goals and Policies

Goal # 1: Make land use decisions that conform to the Cedar Hills General Plan and the Elements of the General Plan.

Policy: As each subdivision is reviewed by the staff, Planning Commission and City Council, reference to the General Plan and each relevant Element will occur prior to final approval.

Policy: Each applicant will be required to demonstrate how the proposed development is consistent with the General Plan and the Elements of the General Plan.

Goal # 2: Update the Land Use Element on a regular basis to provide current Planning Commissions with a useful tool for making land use decisions.

Policy: The Planning Commission shall review the land use element on an annual basis and amend the land use element as needed.

Policy: Prior to zone changes, density amendments, and other land use decisions, the Planning Commission will make necessary adjustments to the Land Use Element to reflect such changes.

Goal # 3: Maintain Consistency between the Land Use Element, General Plan, and Zoning Ordinance.

Policy: Review the General Plan, Land Use Element, and Zoning Ordinance in order to maintain consistency between these documents and minimize any potential conflict in making land use decisions.

Goal # 4: Preserve the integrity of the Land Use Element by requiring all developments and zone changes to be consistent.

Policy: The Planning Commission will not recommend approval for any development or zone change which is inconsistent with the General Plan or Land Use Element.

Policy: If a development or zone change is found to be beneficial to the community by the Planning Commission, the Planning Commission will recommend that the General Plan and Land Use Element be amended prior to approval of the development or zone change.

Goal #5: Provide established levels of service to residents of the town.

Policy: Cedar Hills town will correct existing deficiencies in the provision of public services at the adopted Level of Service (LOS).

Policy: Private development will participate in the provision of public services through exactions, dedications, impact fees, and other reasonable means.

LAND USE ELEMENT

1 INTRODUCTION

This Element of the General Plan is intended to provide land use policy direction and guidance to decision-makers as they address future land use changes within the City. The Land Use Element is to be used in conjunction with the adopted Zoning Map of the City of Cedar Hills (Figure 1).

*See Appendix for full-size Zoning Map

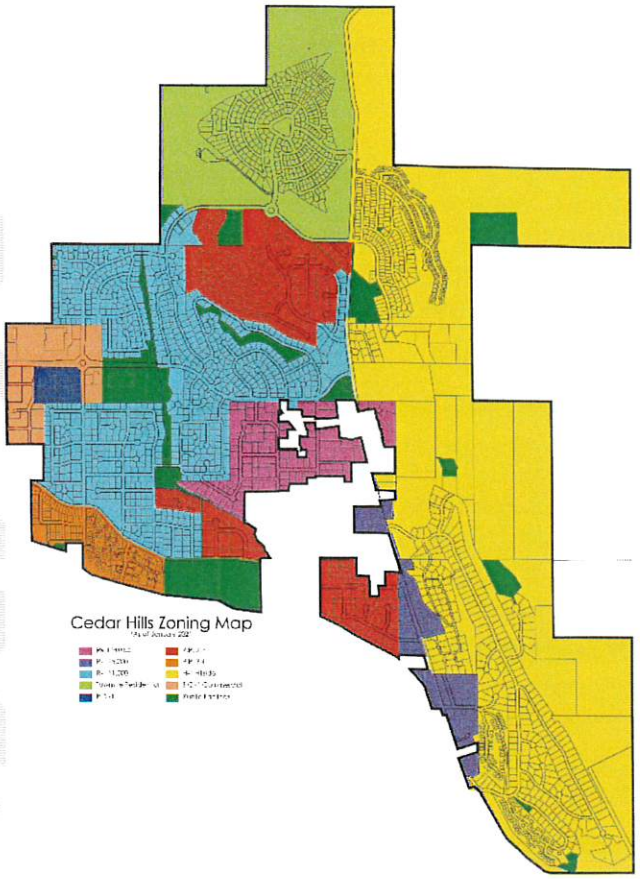


Figure 1: Cedar Hills Zoning Map 2020

1.1 DEVELOPMENT GUIDANCE

Development of land will create a long-term effect on Cedar Hills. Cedar Hills desires to make well informed decisions that will benefit the community in the future. The Land Use Element provides direction and predictability for both developers and decision makers. It establishes the community's vision for the future and guides the development of land accordingly. If individual developments correspond with the Land Use Element, the residents of Cedar Hills can expect to create the envisioned community. As development occurs within the community, the Land Use Element should be updated and revised to provide decision makers a tool with which to make proper land use decisions.

1.2 LAND USE COMPATIBILITY

The current Zoning Ordinance of Cedar Hills is an attempt to create a pattern of compatible land uses. As the community continues to expand and redevelop, it will be important to maintain an organized land use pattern. By developing and mapping land use categories for areas which will be redeveloped in the future, the community can reduce the potential for incompatible land uses located adjacent to one another.

1.3 PRESERVATION OF THE NATURAL ENVIRONMENT AND OPEN SPACE

Cedar Hills and the Land Use Element recognize the importance of the natural environment and open space in the community. Many of the goals and objectives found in this element reflect the community's desire to protect the environment and provide open areas for the use and enjoyment of the residents. Although aesthetics play an important role in preservation of the environment and open space, there are also areas

within Cedar Hills which are difficult to develop. In areas, such as steep slopes, flood plains, ridgelines, fault zones, and other areas containing geographic hazards, development should be avoided to the extent possible.

1.4 DISTINCTIVE COMMUNITY CHARACTER

The residents and elected officials of Cedar Hills would like to see the community maintain a level of individualism and unique community character. Design guidelines, regulation of signage, landscaping requirements, enforcement of zoning ordinances and other policies of the community are meant to provide opportunities for unique and highly desirable development to occur, not simply add to the burden of potential developers and residents.

1.5 INFILL DEVELOPMENT

The Land Use Element supports the efficient use of public and private resources by promoting the development of vacant land or under-developed parcels in existing developed areas. By doing so, reductions in overall capital expenditures, by reducing the need for new public services and facilities, may be achieved.

1.6 JOINT PLANNING EFFORTS

The residents and elected officials of Cedar Hills recognize that the community effects and is affected by surrounding areas. When land use decisions made by Cedar Hills may effect surrounding jurisdictions, including Utah County, every effort will be made to inform all interested parties. Conversely, Cedar Hills will make every effort to be informed about land use decisions that may affect the community.

1.7 CURRENT LAND USE

Cedar Hills sits in the north eastern end of Utah Valley adjacent the Wasatch Mountains, and American Fork Canyon. The City is a bedroom community, with access to regional transportation connectors. Cedar Hills encompasses approximately 2.73 square miles, adjacent to regionally significant transportation corridors, and containing parks, trails, and open space. The predominant land use in the City is single-family residential. Commercial and public facility uses are also featured as major land use components throughout the City. There are nine zoning classifications in Cedar Hills, with the SC-1 Commercial zone consisting of three districts and one overlay zone. Although Cedar Hills is a relatively new community, established in 1977, the City is nearly built out. Cedar Hills experienced rapid growth through the early 2000's, resulting in limited land for future development. Because Cedar Hills was imagined as a bedroom community, there are no manufacturing or industrial zones. While agriculture was an important aspect of Cedar Hills from its early days, as development has occurred, agriculture has become less prevalent within the community and the current zones do not reflect an agricultural component.

2 RESIDENTIAL ZONES:

2.1 INTENT OF RESIDENTIAL ZONES:

At the present time, all land located within the municipal boundary has been assigned zoning. Current zoning and the requirements of each zone may be found in the Zoning Ordinance of Cedar Hills. The Land Use Element

of Cedar Hills is intended to be consistent with the Zoning Ordinance and all other laws, ordinances, and resolutions of Cedar Hills, the State of Utah, and the United States. The Zoning Map of Cedar Hills provides a graphic representation of the land located in each zones.

2.2 RESIDENTIAL ZONE DESCRIPTIONS

The RR 1-20,000 Residential Zone was created for single family use with building lots a minimum of twenty thousand (20,000) square feet in size. Lots in this zone have large animal rights, and may be used for agricultural-type uses.

The R-1 15,000 Residential Zone was created as a medium density single family residential zone, requiring fifteen thousand (15,000) square feet per lot for development. This zone still allows for large animal rights.

The R-1 11,000 Residential Zone is characterized by medium density single family homes, of not less than eleven thousand (11,000) square feet. These neighborhoods are supplemented by parks and trails, as well as other public uses, such as schools.

The Townsite Residential Zone is a master planned community, with density clustered in a certain area, with an open space dedication consisting of portions of the Cedar Hills Golf Course. While the homes are in close proximity to one and other, with the open space dedication taken into consideration, this zone is still medium density.

The PR 2.2 Residential Zone is characterized by spacious single family lots of approximately half an acre. Parks, trails, and other public uses are commingled within this zone.

The PR 3.4 Residential Zone is characterized by a mix of single family detached housing and attached housing units located in a coordinated design setting.

The H-1 Hillside Residential Zone is characterized by both attached single family units, as well as spacious single family lots. Sensitivity is given to hillside conditions when developing in the H-1 Zone. Developments may include clustered housing with open space dedications to meet requirements.

The PD-1 Zone, is the Planned Development zone, and is characterized by higher density single family detached housing. These developments are master planned homeowner's associations, and are guided by development agreements.

3 COMMERCIAL ZONES:

3.1 INTENT OF COMMERCIAL ZONE:

The SC-1 Commercial Zone is created and designed to promote economic development in the community which will provide a more stable economic tax base, while minimizing impacts on the residential nature of the City. Areas for commercial development have been identified on the Zoning Map of Cedar Hills. Additionally, the intent of the SC-1 Commercial Zone is to create a commercial City center and a place for the community to gather, provide for a convenient place for community services, and to provide for mixed-use land uses as well as generate sales tax.

3.1.1 KEY ECONOMIC ISSUES

Many issues of economic development deal with compatibility and conflicts with residential uses, and although important, other issues must be addressed as well. Cedar Hills must look to the future and attempt to create a self-sustaining, economically viable community. With frontage on North County Boulevard, the SC-1 Zone is strategically located to provide access to the City's commercial center via the most travelled thoroughfare. As commercial development occurs, care should be given to reducing the impact of the various developments as it approaches residential areas.

3.1.2 NEIGHBORHOOD COMPATIBILITY

Prior to development approval, the City should attempt to minimize impacts that commercial development might have on the surrounding areas. Special attention should be paid to potential traffic problems, pedestrian access, intermodal transportation, noise and air pollution, and other relevant impacts. While the City recognizes that many impacts can only be mitigated rather than eliminated, during the development and approval phase, discussion should be centered on the potential for a development to disrupt adjacent residential neighborhoods.

3.1.3 CREATION OF AESTHETICALLY PLEASING COMMERCIAL DEVELOPMENT

Commercial development in Cedar Hills should consist of innovative and aesthetically pleasing design. This includes an abundance of landscaping, proper use of colors, massing, and adequate, yet attractive parking areas. The standards for development in the Commercial Zone found in the City Code should be maintained throughout the complete development of the SC-1 Zone.

3.2 COMMERCIAL ZONE AND DISTRICT DESCRIPTIONS

The SC-1 Commercial Zone, or Shopping Center Zone, is located adjacent to regionally significant transportation corridors, and is comprised of three distinct districts; the office, mixed-use, and retail districts, as well as an retail/mixed-use overlay district.

The office district is adjacent to residential neighborhoods, as well as public facilities, and must take into consideration the impact that the uses within the zone will have on surrounding neighborhoods. The intent of the Office District is to provide office space. It shall consist of the least intense land uses found in the SC-1 Commercial Zone.

The Mixed-Use District is considered a transition district, as it has conditional and permitted uses that may be found in either the office or the retail district. The Mixed-Use District is intended to consist of lower intensity uses than the Retail District, and may be comprised of retail, office, and residential components.

The Retail District is intended to be the retail center for the City, and generate on-site sales tax. This District is adjacent to North County Boulevard, where the most intense commercial uses may be found.

The Retail/Mixed-Use Overlay is intended to provide a buffer for residential areas that are adjacent to the SC-1 Commercial Zone. Uses within the Overlay Zone may be from the Retail or the Mixed-Use Districts.

4 PUBLIC FACILITIES ZONE:

The PF Public Facilities Zone is appropriate for uses such as schools, public buildings, open space, parks, public utilities, and other related uses, although many of these uses are also allowed as permitted or conditional uses in other zones.

The PF Public Facilities zone has been established to provide areas for the location and establishment of facilities owned and maintained by the public and quasi-public entities and that utilize relatively large areas of land.

It is the intent of this zone to create areas that serve the public interest. These areas of interest could be for education, providing general municipal services or utilities, preserving natural areas, creating public gathering spaces, or uses that are recreational in nature.

The City of Cedar Hills has established a Parks Master Plan (see Appendix _), whereby design, rehabilitation and construction projects are established. Cedar Hills is committed to providing safe recreational areas, including parks and trails, in a fiscally responsible manner.

5 FUTURE ZONING:

FUTURE LAND USE:

The Future Land Use Map serves to guide decision makers in their understanding of public and private developments and infrastructure improvements. Although Cedar Hills is a relatively young community, established in 1977, it has developed quickly. As such, very little land remains for future residential and commercial growth. Also, because Cedar Hills is a younger community, there are few locations in need of redevelopment. The Future Land Use Map anticipates potential development in the community within the next ten to twenty years. While Cedar Hills is experiencing limited growth, there is the desire in the community to preserve existing neighborhoods, develop public amenities, and protect open space and natural areas. The future land use categories build off existing and proposed uses, while recognizing that future zone changes would generally adhere to the land use categories depicted in the Future Land Use Map. However, a flexible interpretation of the map by the Planning Commission and the City Council, provided the proposed change is consistent with the vision, goals, and strategies of this General Plan.

LAND USE CATEGORIES:

Stable Neighborhood: Stable Neighborhood identifies residential areas throughout Cedar Hills that are mostly built out and not likely to experience change or redevelopment into an alternate land use. This land use category supports a variety of residential developments reflecting various densities, housing types, and styles. A focus of this land use is the preservation of the existing character of the neighborhoods. This goal should be kept in mind when considering any new development or redevelopment application.

Future Residential: This land use category represents areas of Cedar Hills that present an opportunity for the development of residential housing. These areas are not yet fully developed, but are best suited to residential development. Any development within these areas should be consistent with the vision, goals, and strategies of this General Plan.

Commercial: The Economic Center identifies the commercial and office uses in the community. While Cedar Hills has limited land available for economic development, it becomes critical to preserve these areas for future economic uses to meet the intent of the SC-1 Zone. These areas are located near arterial roads and major corridors. The focus of uses within this land use category is to provide amenities and services to members of the community, while providing a location for gathering.

Future Commercial: This land use category recognizes economic opportunities within Cedar Hills, and supports the infill, development, and redevelopment of commercial areas within the City. These areas could support a variety of services and amenities that bring value and convenience to the community, while also providing gathering spaces which are a critical component of the Economic Center.

Parks and Trails: Uses within this land use category are areas that are not always required to be maintained, but often are maintained to provide recreational options for members of the community. This land use category also includes parks and trails. Cedar Hills recognizes the value that these types of spaces bring to the community in terms of recreational opportunities and gathering places. Other types of areas are maintained by the City, but are not necessarily intended for recreational or gathering purposes. These are areas that are critical to the City's utility infrastructure, and are maintained in a way that provides aesthetic beauty to the community.

Open Space Areas: As Cedar Hills is situated adjacent to a wildland interface area, it is critical that the City recognize the impact that our community has on the surrounding area. As a result, the preservation of natural areas that are set aside for the habitat and migration of animals, and to allow for natural hydraulic flows that could affect the community. Any proposal to alter these areas should take into consideration the original intent of the natural area, and ensure that existing conditions are preserved.

Public Facilities: Uses in this land use category contain public facilities and schools. As public

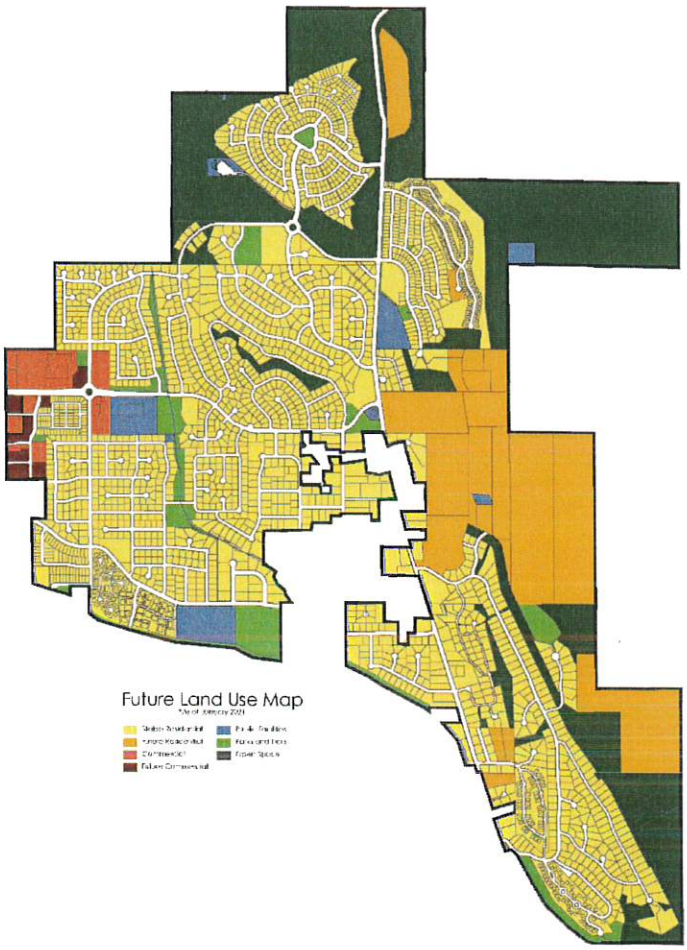


Figure 2: Cedar Hills Future Land Use Map

buildings, these sites should strive for the highest level of design and efficiency. These buildings may be governmental or educational in nature, or facilities that allow for the transmission of utilities throughout the community.

*See Appendix _ for full size Future Land Use Map

6 LAND USE GUIDELINES:

Planning Commission and the City Council should evaluate the proposed Land Use Element and establish guidelines that will help direct land use decisions in the City of Cedar Hills

The following land use guidelines should be followed throughout the City:

1. The identity of Cedar Hills should be strengthened by land uses which improve the image of the community and foster a positive, healthy living environment conducive to long- term residency.

2. The relationship of planned land uses should reflect consideration of existing development, environmental conditions, service and transportation needs, and fiscal impacts.

3. Redevelopment should emphasize the reuse of developed areas and existing community resources in such a way as to increase the livability and aesthetics of the City.

4. The Land Use Plan should provide for a full range and mix of land uses including residential, commercial, and public use areas.

5. Transitions between differing land uses and intensities should be made gradually with compatible uses, particularly where natural or man-made buffers are not available. Adequate screening and buffering should be required to protect existing residential areas from more intense land uses.

6. Growth should be guided to locations contiguous to existing development to provide City services and transportation in a cost-effective and efficient manner.

7. Development approval should be tied to the construction of culinary water, sewer, storm drainage, and circulation systems.

8. Density increases should be considered only after adequate infrastructure and resource availability have been sufficiently demonstrated.

9. An interconnecting public open space system should be provided, including pedestrian linkages, recreational areas, natural areas, and drainage ways.

10. Commercial uses should be highly accessible, clustered near the center of their service areas, and developed in harmony with the uses and character of surrounding districts.

11. Land use patterns should be encouraged that reduce travel distances, limit pollution, allow for alternative modes of transportation, and conserve energy.

12. The quality and usefulness of parks and open space should be maximized. Open spaces that are small, inaccessible, difficult to maintain, or encumbered by utilities, drainage basins, or excessive slopes should not be encouraged.

13. Land use decisions should be based on a comprehensive understanding of their effects on the environment and surrounding areas. Desirable natural resources should be conserved.

7 GOALS AND POLICIES OF THE LAND USE ELEMENT:

GOAL – 1: Make land use decisions that conform to the Cedar Hills General Plan and the Elements of the General Plan

POLICY: As each subdivision is reviewed by the staff, Planning Commission and City Council, reference to the General Plan and each relevant element will occur prior to final approval.

POLICY: Each applicant will be required to demonstrate how the proposed development is consistent with the General Plan and the elements of the General Plan.

GOAL – 2: Update the Land Use Element on a regular basis to provide current Planning Commissions with a useful tool for making land use decisions.

POLICY: The Planning Commission shall review the Land Use Element on an annual basis and amend the Land Use Element as needed.

POLICY: Prior to zone changes, density amendments, and other land use decisions, the Planning Commission will make necessary adjustments to the Land Use Element to reflect such changes.

GOAL – 3: Maintain consistency between the Land Use Element, General Plan, and Zoning Ordinance.

POLICY: Review the General Plan, Land Use Element, and Zoning Ordinance in order to maintain consistency between these documents and minimize any potential conflict in making land use decisions.

GOAL – 4: Preserve the integrity of the Land Use Element by requiring all developments and zone changes to be consistent.

POLICY: The Planning Commission will not recommend approval for any development or zone change which is inconsistent with the General Plan or Land Use Element.

POLICY: If a development or zone change is found to be beneficial to the community by the Planning Commission, the Planning Commission will recommend that the General Plan and Land Use Element be amended prior to approval of the development or zone change.

GOAL – 5: Provide established levels of service to the residents of the City.

POLICY: The City of Cedar Hills will correct existing deficiencies in the provision of public services at the adopted level of service (LOS).

POLICY: Private development will participate in the provision of public services through exactions, dedications, impact fees, and other reasonable means.

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PUBLIC NOTICE OF REGULAR MEETINGS FOR THE PLANNING COMMISSION 2022

The City of Cedar Hills, Utah, hereby gives notice that the Planning Commission will hold its regular meetings beginning at 6:00 p.m. at the Community Recreation Center, 10640 N Clubhouse Drive, Cedar Hills, Utah on Tuesdays according to the following schedule:

MONTH	DATES	TIME
January	25	6:00 p.m.
February	22	6:00 p.m.
March	22	6:00 p.m.
April	26	6:00 p.m.
May	24	6:00 p.m.
June	28	6:00 p.m.
July	26	6:00 p.m.
August	23	6:00 p.m.
September	27	6:00 p.m.
October	25	6:00 p.m.
November	22	6:00 p.m.
December	No Meeting	