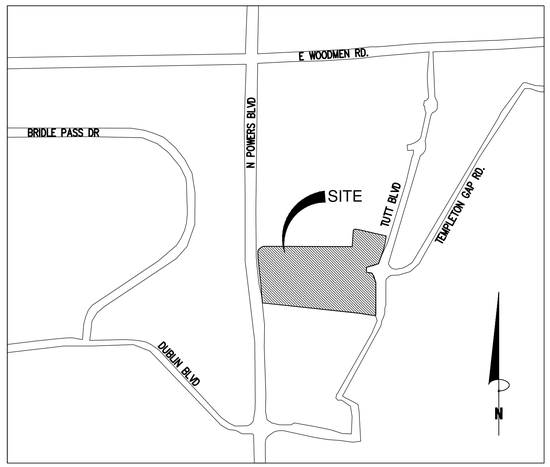
CIVIL DRAWINGS
FOR
AFW - COLORADO SPRINGS

A PORTION OF A TRACT OF LAND RECORDED AT RECEPTION
NO. 208068886 AND RECEPTION NO. 206028177
PARCEL NO. 5307300003
A PART OF THE WEST HALF OF SECTION 7, TOWNSHIP 13
SOUTH, RANGE 65 WEST OF THE SIXTH P.M.
CITY OF COLORADO SPRINGS, EL PASO COUNTY, COLORADO

PROJECT NUMBERS

Submittal	Project Number
Proj. Master:	STM-MP23-0075
DP:	AR DP-21-00220
DP:	DEPN-22-0047
DP-A:	DEPN-23-0214
STRM:	STM-REV23-0331
GEC:	STM-REV23-0330
FDR-A: (Amendment)	STM-REV23-1265 (Amendment)
FDR: (Original)	STM-REV21-1679 (Original)
PCM:	STM-REV24-0569
Variance 1 - Drop MH	STM-REV23-1266
Variance 2 - Inserta-Tee	STM-REV24-0572
Landscape	AR DP 21-00219



VICINITY MAP
SCALE 1" = 1000'

PROJECT DRAWING SETS

PCM-PERMANENT CONTROL MEASURES	
Sheet Number	Sheet Title
CM1	COVER SHEET
CM2	DETENTION POND PLAN
CM3	DETENTION POND DETAILS
CM4	DETENTION POND DETAILS

STRM - PRIVATE STORMWATER PLANS	
SHEET NUMBER	SHEET TITLE
C1.0	COVER SHEET
C1.1	GENERAL NOTES
C4.00	KEY MAP
C4.01	STORM PLAN AND PROFILE
C4.02	STORM PLAN AND PROFILE
C4.03	STORM PLAN AND PROFILE
C4.04	STORM PLAN AND PROFILE
C4.05	STORM PLAN AND PROFILE
C4.06	KEY MAP
C4.07	STORM PLAN AND PROFILE
C4.08	STORM PLAN AND PROFILE
C4.09	STORM PLAN AND PROFILE
C4.10	STORM PLAN AND PROFILE
C4.11	STORM PLAN AND PROFILE
C4.12	KEY MAP
C4.13	STORM PLAN AND PROFILE
C4.14	STORM PLAN AND PROFILE
C4.15	STORM PLAN AND PROFILE
C4.16	STORM PLAN AND PROFILE
C4.17	STORM PLAN AND PROFILE
C4.18	STORM PLAN AND PROFILE
C4.19	DETAILS
C4.20	DETAILS
C4.21	DETAILS
C4.22	DETAILS

WATERMAIN PLANS	
SHEET NUMBER	SHEET TITLE
W1	COVER SHEET
W2	GENERAL NOTES
W3	KEY MAP
W4	WATER PLAN
W5	WATER PLAN
W6	WATER PLAN
W7	WATER MAIN EAST PLAN & PROFILE (1 OF 2)
W7.1	WATER MAIN EAST PLAN & PROFILE (2 OF 2)
W7.2	WATER MAIN WEST PLAN & PROFILE (1 OF 4)
W7.3	WATER MAIN WEST PLAN & PROFILE (2 OF 4)
W7.4	WATER MAIN WEST PLAN & PROFILE (3 OF 4)
W7.5	WATER MAIN WEST PLAN & PROFILE (4 OF 4)

SANITARY MAIN PLANS	
SHEET NUMBER	SHEET TITLE
S1	COVER SHEET
S2	GENERAL NOTES
S3	KEY MAP
S4	WASTEWATER SERVICE PLAN AND PROFILES
S5	WASTEWATER SERVICE PLAN AND PROFILES

UTILITY SERVICE PLANS	
SHEET NUMBER	SHEET TITLE
U1	COVER SHEET
U2	GENERAL NOTES
U3	KEY MAP
U4	UTILITY SERVICE PLAN
U5	UTILITY SERVICE PLAN
U6	UTILITY SERVICE PLAN

GEC - GRADING & EROSION CONTROL PLANS	
SHEET NUMBER	SHEET TITLE
GEC1	COVER SHEET
EC1	GENERAL NOTES
EC2	GRADING EROSION AND SEDIMENT CONTROL PLAN - OVERALL INITIAL PLAN
EC3	GRADING EROSION AND SEDIMENT CONTROL PLAN - INITIAL
EC4	GRADING EROSION AND SEDIMENT CONTROL PLAN - INITIAL
EC5	GRADING EROSION AND SEDIMENT CONTROL PLAN - INTERIM
EC6	GRADING EROSION AND SEDIMENT CONTROL PLAN - INTERIM
EC7	GRADING EROSION AND SEDIMENT CONTROL PLAN - FINAL
EC8	GRADING EROSION AND SEDIMENT CONTROL PLAN - FINAL
EC9	GRADING EROSION AND SEDIMENT CONTROL DETAILS
EC10	GRADING EROSION AND SEDIMENT CONTROL DETAILS
G1	GRADING KEY MAP
G2	DETAILED GRADING PLAN
G3	DETAILED GRADING PLAN
G4	DETAILED GRADING PLAN
G5	DETAILED GRADING PLAN
G6	DETAILED GRADING PLAN
G7	DETAILED GRADING PLAN
G8	DETAILED GRADING PLAN
G9	DETAILED GRADING PLAN
G10	DETAILED GRADING PLAN
G11	DETAILED GRADING PLAN
P1	LAYOUT AND PAVING PLAN KEY MAP
P2	LAYOUT PAVING AND DIMENSIONING PLAN
P3	LAYOUT PAVING AND DIMENSIONING PLAN
P4	LAYOUT PAVING AND DIMENSIONING PLAN
P5	LAYOUT PAVING AND DIMENSIONING PLAN
P6	LAYOUT PAVING AND DIMENSIONING PLAN
C7.6	LAYOUT PAVING AND DIMENSIONING PLAN

Site Data

Concept Plan Name: Powers Professional Park

Master Plan Name: Dublin North

Existing Zoning: PBC (PLANNED BUSINESS CENTER) , CPC ZC 07-00076 / AO (AIRPORT OVERLAY)

Phase 1 Total Area: 25 AC (1,092,165 SF)

Drainage Basin: Property is located within Zone X (areas determined to be outside of the 500-year flood plain) as established by FEMA Firm Panel 0801C053/G, effective December 7,2021

Proposed Uses: Furniture Retail & Warehouse

TSN: 5307300003

Development Schedule: Fall 2023

Proposed Building:
Retail - Furniture Store
Business Office Support
Restaurant - Quick Serve
Warehouse
Automotive Repair Shop (Indoors)
Warehouse & Distribution

Building Setback from Property Line: 25 Feet
Maximum Building Height: 45 Feet / Proposed: 45'
Landscape Setback from Property Line: 15 Feet, 20 Feet

PARKING & BUILDING DATA

LOT NO.	BUILDING FLOOR	USE	BLDG AREAS (SF)	PARKING REQ. PER SECT. 7.5.712	PARKING REQ'D	PARKING PROVIDED
1	1ST	RETAIL - FURNITURE STORE	122,300	1 PER 600 SF	205	551
BLDG 1	1ST	BUSINESS OFFICE SUPPORT	5,150	1 PER 300 SF	8	
	1ST	RESTAURANT (QUICK SERVE)	1,225	1 PER 100 SF	12	
	1ST	WAREHOUSE	210,200	1 PER 1000 SF	210	
	1ST	AUTOMOTIVE REPAIR SHOP	10,518	1 PER 200 SF	55	
	MEZZANINE	WAREHOUSE & DISTRIBUTION	34,841	1 PER 1000 SF	35	
		TOTAL:	382,418		515	

Powers Professional Park Concept Plan Amendment History

City LUR File Number	Date Approved	Amendment Description	Notes/ Comments
CPC CP 07-00071	07/24/2007	Original approval	
CPC CP 07-00071-AM1M1	06/11/2009	Northeast area: Change of use, lot lines, building & parking layout	
CPC CP 07-00071-A2MN1	07/28/2020	Western area: New lot lines and site layout to accommodate the furniture store	
CPC CP 07-00071-A4MN1	07/28/2020	Changes of use to medical office with associated building updates, establishments of development plans replat to be established as Tuscany Plaza filing NO.2 (AR FP 18-00490)	
DEPN-22-0046	Current	Lot 1 minor amendment to existing approved concept plan. Property line & site modifications to accommodate the furniture store. Lot 2 parcels will be platted but major amendment will be needed to develop in the future.	

BENCHMARK

FIMS BENCHMARK TG24. ELEVATION=6838.24 (NVGD 1929)

FLOODPLAIN STATEMENT

THIS PROPERTY IS LOCATED WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 100 AND 500-YEAR FLOODPLAIN) AS ESTABLISHED BY FEMA FIRM PANEL 08041C0537G, EFFECTIVE DECEMBER 7, 2021, AND FEMA FIRM PANEL 08041C0536G, EFFECTIVE DECEMBER 7, 2021.

OWNER
AMERICAN FURNITURE WAREHOUSE
8820 AMERICAN WAY
ENGLEWOOD, CO 80112
CONTACT: NOLAN MORRISON
PHONE: (303) 489-3333

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LANDSCAPE ARCHITECT
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EMAIL: DANIEL@LASKINDESIGN.COM
PHONE: (602) 840-7771

BID SET 10-14-24

Bowman
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www.bowmanconsulting.com

REVISIONS

REVISION	DESCRIPTION	DATE
0	FOR CONSTRUCTION	10/08/24

MASTER COVER SHEET
AFW - COLORADO SPRINGS
CITY OF COLORADO SPRINGS
COLORADO

SEAL

NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
HE	JDB	HE

SCALE H: V:
JOB No. 050895-01-001
DATE : 10/08/2024
SHEET MC1

V:\050895 - AFW - Colorado Springs\050895-01-001 (ENG)\Engineering\Engineering Plans\MSTR CVR.dwg

PRIVATE PERMANENT CONTROL MEASURE PLAN
FOR
AFW - COLORADO SPRINGS

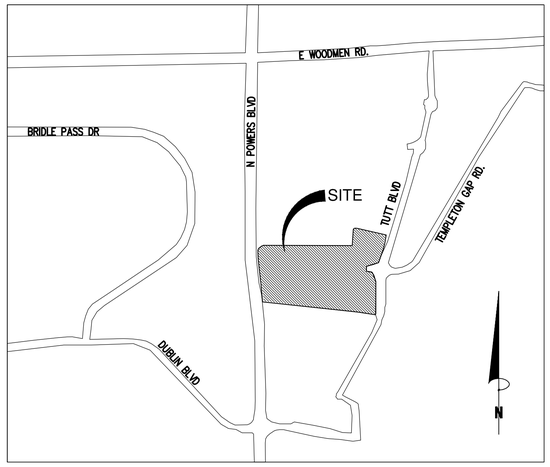
A PORTION OF A TRACT OF LAND RECORDED AT RECEPTION NO. 208068886 AND RECEPTION NO. 206028177 PARCEL NO. 5307300003 A PART OF THE WEST HALF OF SECTION 7, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH P.M. CITY OF COLORADO SPRINGS, EL PASO COUNTY, COLORADO

STANDARD PERMANENT CONTROL MEASURE PLAN NOTES:

1. THIS PCM PLAN WILL BE SUBJECTTO RE-REVIEW AND RE-ACCEPTANCE BY SWENT IF WORK ON THE PCM DOES NOT COMMENCE WITHIN TWELVE (12) MONTHS OF PLAN APPROVAL, OR SHOULD ANY OF THE FOLLOWING OCCUR: A CHANGE IN PROPERTY OWNERSHIP, PROPOSED DEVELOPMENT CHANGES, ORPROPOSED PCMREVISIONS.
2. THE CONTRACTOR SHOULD CONTACT THE ENGINEER OF RECORD AND SWENT LEAD REVIEWER IMMEDIATELY SHOULD CONSTRUCTION OF THE PCM VARY IN ANY WAY FROM THE PLANS.
3. A PROFESSIONAL ENGINEER (PE) CERTIFICATION THAT THE PCM HAS BEEN INSTALLED AND CONSTRUCTED IN GENERAL CONFORMANCE WITH THESE PLANS WILL BE REQUIRED ONCE THE PCM IS FULLY CONSTRUCTED. AN AS-CONSTRUCTED SURVEY MUST BE COMPLETED TO VERIFY FACILITY VOLUMES AND ELEVATIONS. THE AS-BUILT DRAWINGS MUST BE SUBMITTED ALONG WITH THE PE CERTIFICATION. A PE CERTIFICATION REQUIRES PERIODIC ON-SITE OBSERVATIONS BY THE ENGINEER OF RECORD OR A PERSON UNDER THEIR RESPONSIBLE CHARGE. COORDINATION WITH THE ENGINEER OF RECORD TO ENSURE THAT THE NECESSARY ON-SITE OBSERVATIONS ARE COMPLETED IS THE RESPONSIBILITY OF THE APPLICANT.
4. ACCEPTANCE OF THIS PLAN DOES NOT CONSTITUTE APPROVAL TO GRADE OR CAUSE ANY DISTURBANCE WITHIN IN ANY UTILITY EASEMENT OR RIGHT-OF-WAY. APPROVALS TO WORK WITHIN UTILITY EASEMENTS MUST BE OBTAINED FROM THE APPROPRIATE UTILITY COMPANY. IT IS NOT PERMISSIBLE FOR ANY PERSON TO MODIFY THE GRADE OF THE EARTH ON ANY UTILITY EASEMENT OR RIGHT-OF-WAY WITHOUT THE APPROPRIATE WRITTEN APPROVAL. THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARD UTILITY FACILITIES. ANY CHANGES TO EXISTING UTILITY FACILITIES TO ACCOMMODATE THE PLAN MUST BE APPROVED BY THE AFFECTED UTILITY OWNER PRIOR TO IMPLEMENTING THE PLAN. THE APPLICANT IS RESPONSIBLE FOR THE COST TO RELOCATE OR PROTECT EXISTING UTILITIES OR TO PROVIDE INTERIM ACCESS

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
	LOT LINE	
	RIGHT OF WAY	
	CENTERLINE	
	FLOOD PLAIN	
	LIMITS OF CONSTRUCTION	LOC
	LIMITS OF DISTURBANCE	LOD
	SWALE / STREAM FLOWLINE	
	OVERFLOW RELIEF PATH	
x x	FENCE LINE	x x
	EASEMENT	
	EDGE OF PAVEMENT	
	VERTICAL CURB AND GUTTER	
	MOUNTABLE CURB AND GUTTER	
	CONCRETE	
	ASPHALT SIDEWALK	
	HANDICAP PARKING	
	SIGHT TRIANGLE	
	SIGN(S)	
	PARKING COUNT INDICATOR	
255 VPD	VEHICLES PER DAY INDICATOR	255 VPD
TP	TEST PIT	TP
MW	MONITORING WELL	MW
350	MAJOR CONTOUR	350
350	MINOR CONTOUR	350
	GRADE BREAK	
	RIDGELINE	
52 22 FG, 5236 22 FG	SPOT ELEVATION	52 22 FG, 5236 22 FG
	RIP RAP	
W	WATER LINE	W
M	WATER METER	M
	WATER VALVE	
	WATER REDUCER	
	WATER FITTINGS	
	FIRE HYDRANT	
S	SANITARY LINE	S
	SANITARY MANHOLE	
	SANITARY CLEANOUT	
ST	STORM SEWER PIPE	ST
	STORM SEWER MANHOLE	
	STORM SEWER INLET	
	STORM SEWER FLARED END SECTION	
	STORM SEWER HEADWALL	
OU	OVERHEAD UTILITY	OU
UE	UNDERGROUND ELECTRIC	UE
OHE	OVERHEAD ELECTRIC	OHE
	UTILITY POLE	
	STREET LIGHT	
CATV	CABLE TV SERVICE	CATV
T	TELECOM SERVICE	T
FO	FIBER OPTIC SERVICE	FO
G	NATURAL GAS SERVICE	G
	TREE	
	TREE LINE	
	WETLANDS	



VICINITY MAP
SCALE 1" = 1000'

FLOODPLAIN STATEMENT

THIS PROPERTY IS LOCATED WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 100 AND 500-YEAR FLOODPLAIN) AS ESTABLISHED BY FEMA FIRM PANEL 08041C0537G, EFFECTIVE DECEMBER 7, 2021, AND FEMA FIRM PANEL 08041C0536G, EFFECTIVE DECEMBER 7, 2021.

CURRENT OWNER
AMERICAN FURNITURE WAREHOUSE
8820 AMERICAN WAY
ENGLEWOOD, CO 80112
CONTACT: NOLAN MORRISON
PHONE: (303) 489-3333

ARCHITECT
BUTLER DESIGN GROUP, INC.
5017 EAST WASHINGTON STREET, SUITE 107
PHOENIX, AZ 85034
CONTACT: TOBY ROGERS
PHONE: (602) 218-4785

CIVIL ENGINEER
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LANDSCAPE ARCHITECT
LASKIN & ASSOCIATES, INC.
67 WELDON AVENUE, SUITE 230
PHOENIX, AZ 85012
CONTACT: DANIEL DODSON
EMAIL: DANIEL@LASKINDESIGN.COM
PHONE: (602) 840-7771

PROJECT DATA

a. PARCEL NUMBER: 5307300003
b. FDR: ORIGINAL: STM-REV21-1679 APPROVED X/X/XXXX
AMENDMENT: STM-REV23-1265 (UNDER REVIEW)
c. RESPONSIBLE PARTY FOR ALL COMPONENTS: AMERICAN FURNITURE WAREHOUSE
d. 100-YEAR WATER SURFACE ELEVATION: 6830.45
e. EURV WATER SURFACE ELEVATION: 6829.31
f. WQCV WATER SURFACE ELEVATION: 6826.97
g. GEC: INITIAL, INTERIM, AND FINAL GRADING, EROSION CONTROL, AND STORMWATER QUALITY CONTROL PLAN FOR AFW-COLORADO SPRINGS (STM-REV23-0329)
h. LANDSCAPING PLAN: FINAL LANDSCAPE PLAN POWERS PROFESSIONAL PARK AMENDED DEVELOPMENT PLAN (AR DP 21-00219)

BENCHMARK
FIMS BENCHMARK TG24. ELEVATION=6838.24 (NVGD 1929)

Sheet List Table	
Sheet Number	Sheet Title
CM1	COVER SHEET
CM2	DETENTION POND PLAN
CM3	DETENTION POND DETAILS
CM4	DETENTION POND DETAILS

POND MAINTENANCE STATEMENT:

THE PROPERTY OWNER AMERICAN FURNITURE WAREHOUSE CO RECOGNIZES THAT THE DETENTION FACILITY OR FACILITIES MUST BE MAINTAINED FOR THE DEVELOPMENT CALLED, AMERICAN FURNITURE WAREHOUSE, LOCATED IN SECTION 07, TOWNSHIP 13, OF COLORADO SPRINGS, COLORADO. ONGOING OPERATION AND MAINTENANCE WILL BE REQUIRED TO INSURE THAT THE STORMWATER MANAGEMENT FACILITY WILL FUNCTION AS DESIGNED. THESE ACTIVITIES WILL INCLUDE ROUTINE CARE AND MAINTENANCE TO PREVENT EROSION OR SEDIMENT OR TRASH BUILD-UP. THE PERSON(S) RESPONSIBLE FOR INSPECTION AND MAINTENANCE OF THE FACILITY NEEDS TO POSSESS THE SKILLS NECESSARY TO CARE FOR LANDSCAPED AREAS. BASIC LANDSCAPING AND GARDENING TOOLS AND EQUIPMENT FOR MINOR LAND DISTURBING ACTIVITIES MAY BE REQUIRED TO CARRY OUT MAINTENANCE ACTIVITIES. INSPECTION AND MAINTENANCE SHALL BE CONDUCTED IN AND AROUND THE POND. CARE SHALL BE TAKEN WHEN CLIMBING UP OR DOWN SLOPED AREAS, AND MAINTENANCE ACTIVITIES WITHIN THE POND SHALL TAKE PLACE ONLY AFTER THE POND HAS BEEN ALLOWED TO COMPLETELY DRAIN. AMERICAN FURNITURE WAREHOUSE WILL BE RESPONSIBLE IN MAINTAINING THE POND BOTH FUNCTIONALLY AND AESTHETICALLY

ENGINEER'S STATEMENT:

THIS PERMANENT CONTROL MEASURE (PCM) PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION, WAS DESIGNED IN ACCORDANCE WITH THE CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL (MAY 2014), AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERROR OR OMISSIONS ON MY PART IN PREPARATION OF THIS PCM PLAN.

SIGNATURE: _____ DATE: 10-8-24

PRINTED NAME: HOWARD EHRSAM, PE – COLORADO NO. 54031

EMAIL ADDRESS: HEHRSAM@BOWMAN.COM

SEAL



STM-REV24-0569

DEVELOPER'S STATEMENT:
AMERICAN FURNITURE WAREHOUSE CO., A COLORADO CORPORATION HEREBY CERTIFIES THAT THE PCM FOR "AMERICAN FURNITURE WAREHOUSE" (SUBJECT PLAT) SHALL BE CONSTRUCTED ACCORDING TO THE DESIGN PRESENTED IN THIS PLAN. I UNDERSTAND THAT THE CITY OF COLORADO SPRINGS DOES NOT AND WILL NOT ASSUME LIABILITY FOR THE DRAINAGE FACILITIES DESIGNED AND/OR CERTIFIED BY MY ENGINEER AND THAT ARE SUBMITTED TO THE CITY OF COLORADO SPRINGS PURSUANT TO SECTION 7.7.906 OF THE CITY CODE; AND CANNOT, ON BEHALF OF "AMERICAN FURNITURE WAREHOUSE" (SUBJECT PLAT), GUARANTEE THAT THE FINAL DRAINAGE DESIGN REVIEW WILL ABSOLVE AMERICAN FURNITURE WAREHOUSE CO., A COLORADO CORPORATION AND/OR THEIR SUCCESSORS AND/OR ASSIGNS OF FUTURE LIABILITY FOR IMPROPER DESIGN.

NAME OF DEVELOPER: AMERICAN FURNITURE WAREHOUSE CO

AUTHORIZED SIGNATURE: _____ DATE: _____

PRINTED NAME: NOLAN MORRISON

TITLE: _____

ADDRESS: 8820 AMERICAN WAY, ENGLEWOOD, COLORADO 80112

CITY OF COLORADO SPRINGS STATEMENT:

DRAINAGE DESIGN: _____ DATE: _____
THIS IS FILED IN ACCORDANCE WITH SECTION 7.4.701 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2023 AS AMENDED.

CONDITIONS:

CONDITION STATEMENT TO BE ADDED TO THE CITY SIGNATURE BLOCK IF THE PCM CONTAINS AN EMBANKMENT THAT IS 0.5-FEET OR GREATER:
"THE CITY OF COLORADO SPRINGS APPROVES THESE PLANS BASED UPON THE NON-JURISDICTIONAL STATUS OF THE FACILITY. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO FOLLOW UP WITH THE STATE DIVISION OF WATER RESOURCES FOR JURISDICTIONAL DETERMINATION. IF UPON STATE REVIEW THE CLASSIFICATION CHANGES TO JURISDICTIONAL, ADDITIONAL CITY REVIEW AND APPROVAL WILL BE NECESSARY."

Permanent Control Measures (for Proposed Modified Private FSD Pond)

Item #	Description	Quantity	Unit	Unit Cost	Total Cost
	Drainage				
1	Outlet Structure	1	EA	$18,000	$18,000.00
2	Micropool	1	EA	$6,000	$6,000.00
3	Trickle Channel	694	LF	$60	$41,640.00
4	Presediment Forebay	3	EA	$7,000	$21,000.00
5	Seeding	2.5	AC	$2,000	$5,000.00
6	Earthwork	19736	CY	$6	$118,416.00
7	Riprap	350	CY	$55	$19,250.00
8	Concrete Spillway (43' wide)	1	EA	$20,000	$20,000.00
9					$0.00
10					$0.00
11					$0.00
12					$0.00
13					$0.00

Subtotal	$249,306.00
10% Contingency	$24,930.60
Total Improvements	**$274,236.60**

	$0.00
10% Contingency	$0.00
Total Private Improvements To Be Inspected	$0.00

	$0
10% Contingency	$0.0
Total Private Improvements Not To Be Inspected	$0.0

Grand Total	**$274,236.60**

BID SET
10-8-2024

PCM: STM-REV24-0569
STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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Lakewood, CO 80401
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REVISIONS		
REVISION	DESCRIPTION	DATE
0	FOR CONSTRUCTION	10/08/24

COVER SHEET
AFW - COLORADO SPRINGS
PERMANENT CONTROL MEASURES PLAN
CITY OF COLORADO SPRINGS
COLORADO

SEAL



DESIGN	DRAWN	CHKD
HE	VH	HE

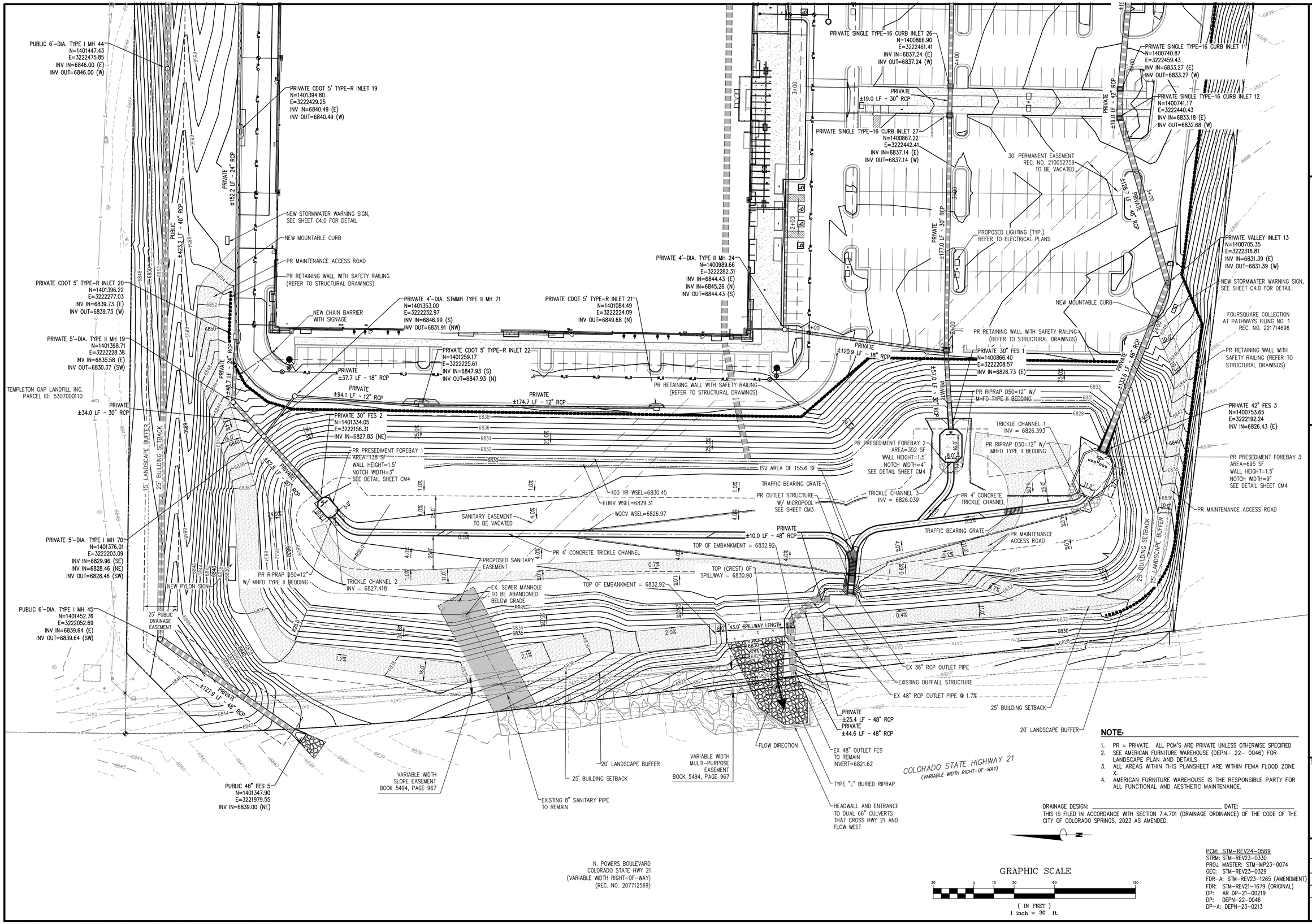
SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/17/2024

SHEET
CM1

V:\050895 - AFW - Colorado Springs\050895-01-001 (ENG)\Engineering\Engineering Plans\PCM\050895-01-001-PCM-CVR.dwg



NOTE:

1. PR = PRIVATE. ALL PCM'S ARE PRIVATE UNLESS OTHERWISE SPECIFIED
2. SEE AMERICAN FURNITURE WAREHOUSE (DEPN- 22- 0046) FOR LANDSCAPE PLAN AND DETAILS
3. ALL AREAS WITHIN THIS PLANSHEET ARE WITHIN FEMA FLOOD ZONE X.
4. AMERICAN FURNITURE WAREHOUSE IS THE RESPONSIBLE PARTY FOR ALL FUNCTIONAL AND AESTHETIC MAINTENANCE.

DRAINAGE DESIGN: _____ DATE: _____

THIS IS FILED IN ACCORDANCE WITH SECTION 7.4.701 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2023 AS AMENDED.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

PCM: STM-REV24-0569
STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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Lakewood, CO 80401
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REVISIONS		
REVISION	DESCRIPTION	DATE
0	FOR CONSTRUCTION	10/08/24

DETENTION POND PLAN

AFW - COLORADO SPRINGS
PERMANENT CONTROL MEASURES PLAN
CITY OF COLORADO SPRINGS

COLORADO

SEAL

COLORADO LICENSED
EDWARD EMRY
10-8-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

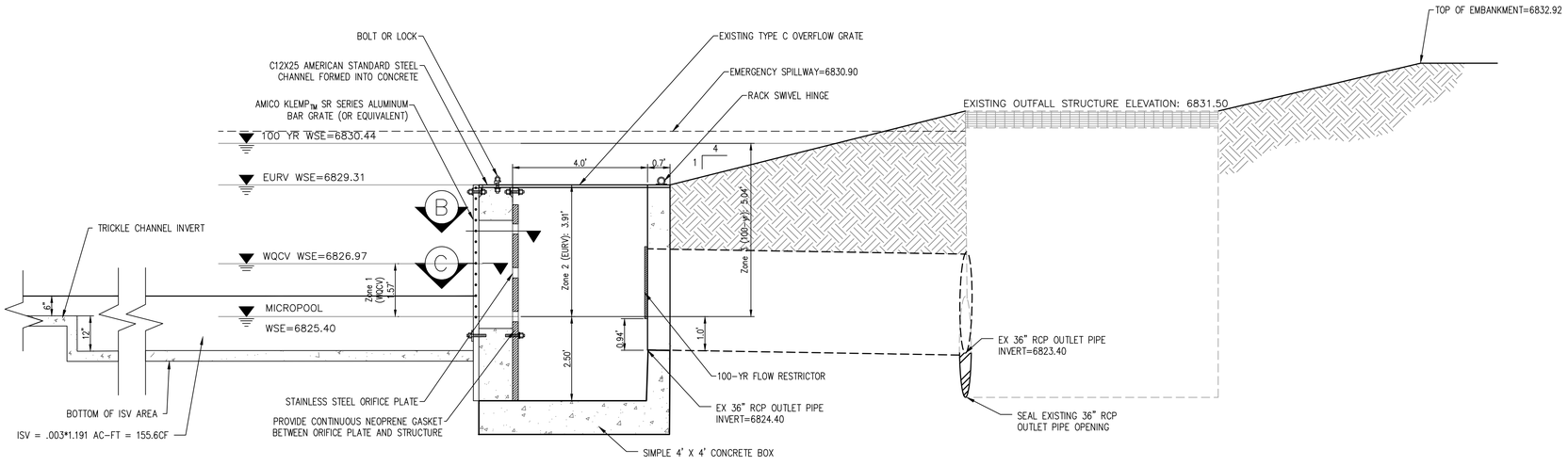
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JOB No. 050895-01-001

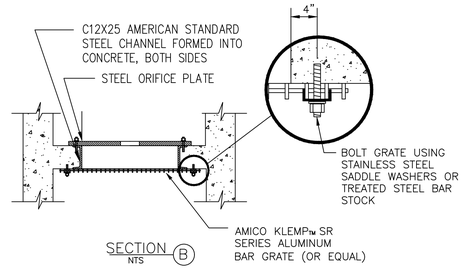
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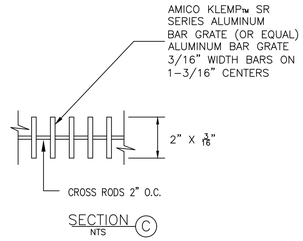
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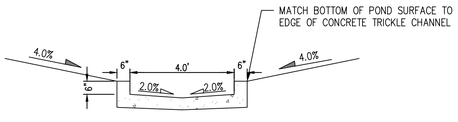
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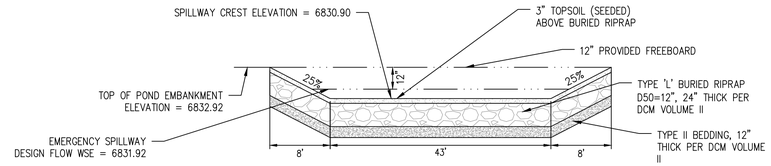
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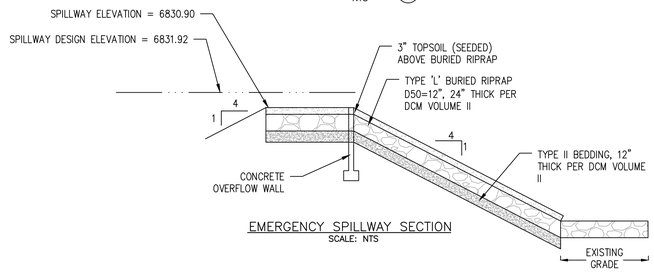
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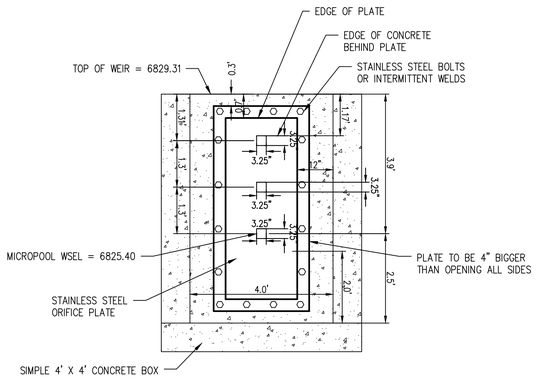
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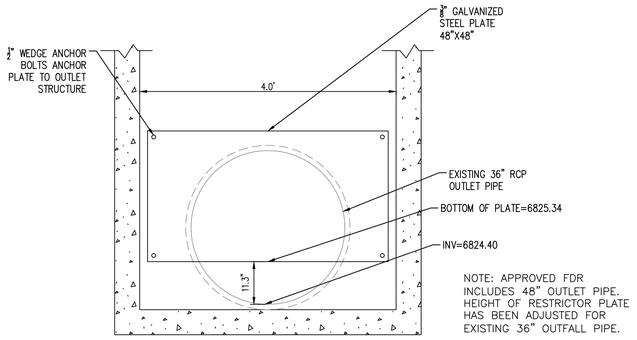
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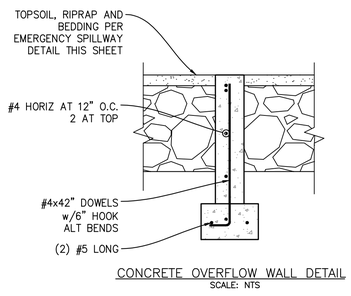
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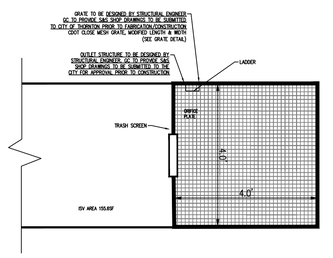
ORIFICE PLATE MOUNTED BEHIND TRASH SCREEN
SCALE: 1" = 2'



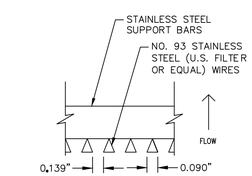
100-YR RESTRICTOR PLATE DETAIL
N.T.S.



CONCRETE OVERFLOW WALL DETAIL
SCALE: NTS



OUTLET STRUCTURE SCHEMATIC
PLAN VIEW
SCALE: 1" = 2'



TRASH RACK DETAIL
N.T.S.

DRAINAGE DESIGN: _____ DATE: _____
THIS IS FILED IN ACCORDANCE WITH SECTION 7.4.701 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2023 AS AMENDED.

PCM: STM-REV24-0569
STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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Phone: (303) 801-2900
www.bowmanconsulting.com

REVISIONS

REVISION	DESCRIPTION	DATE
0	FOR CONSTRUCTION	10/08/24

DETENTION POND DETAILS

AFW - COLORADO SPRINGS
PERMANENT CONTROL MEASURES PLAN
CITY OF COLORADO SPRINGS
COLORADO

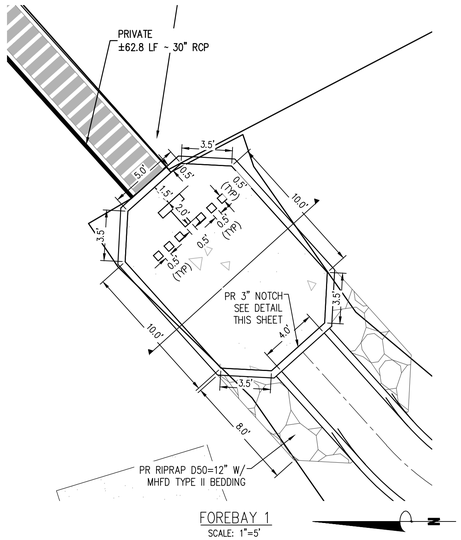
SEAL

COLORADO LICENSED
RICHARD EHRLICH
10-8-24
PROFESSIONAL ENGINEER

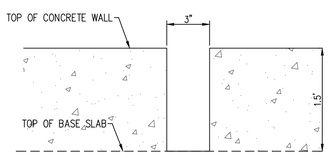
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HE	VH	HE

SCALE H: V:
JOB No. 050895-01-001
DATE : 04/17/2024
SHEET CM3

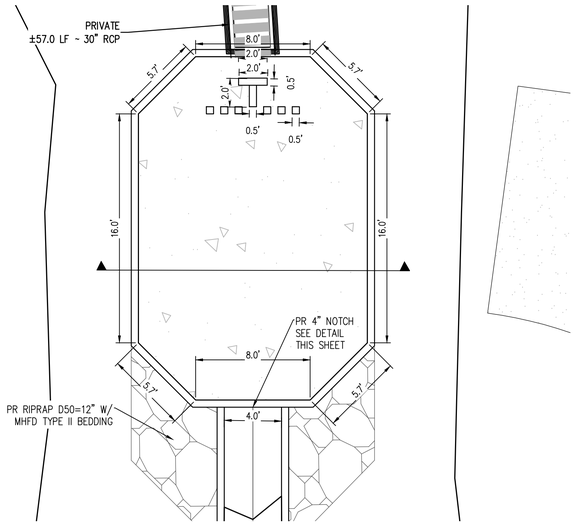
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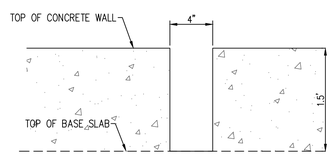
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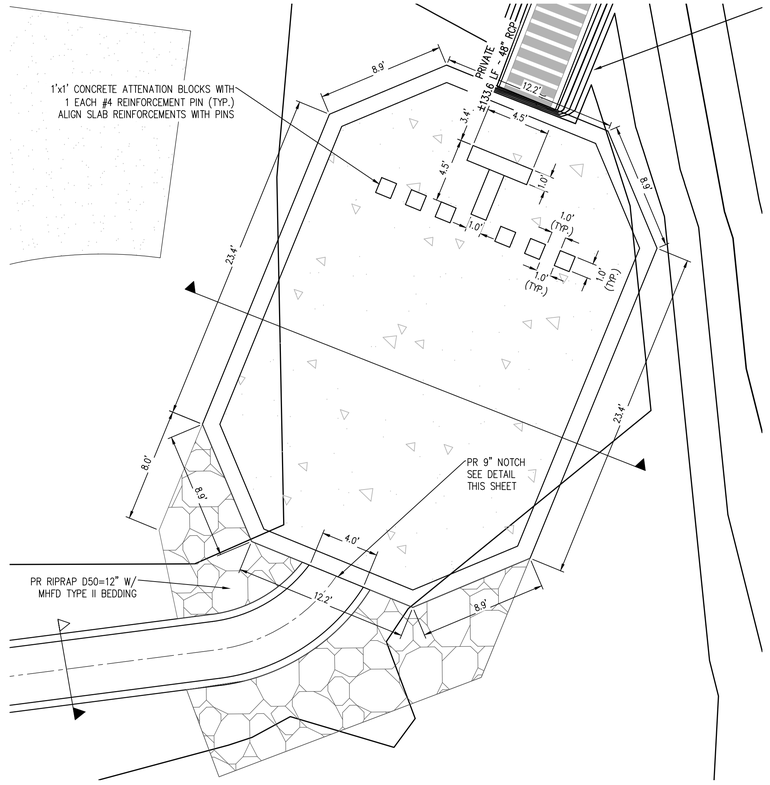
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NTS



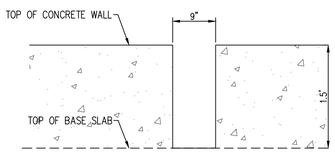
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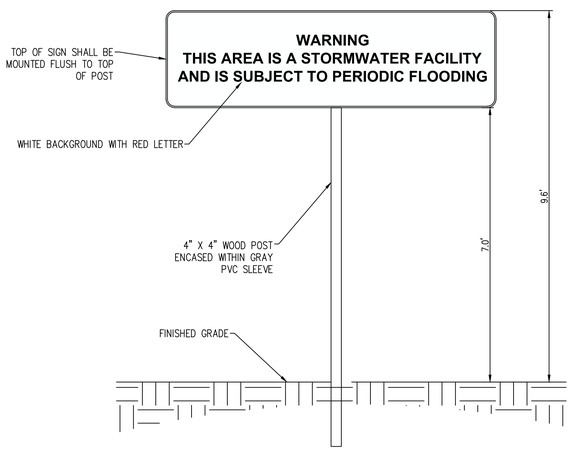
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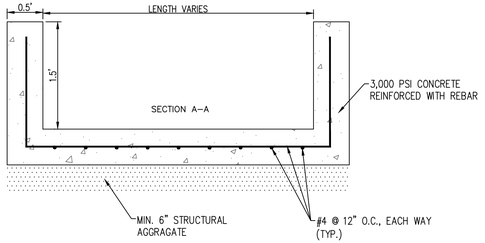
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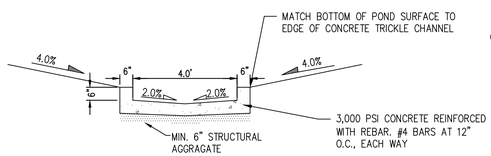


NOTCH DETAIL FOREBAY 3
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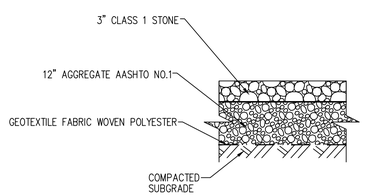


WARNING SIGN DETAIL
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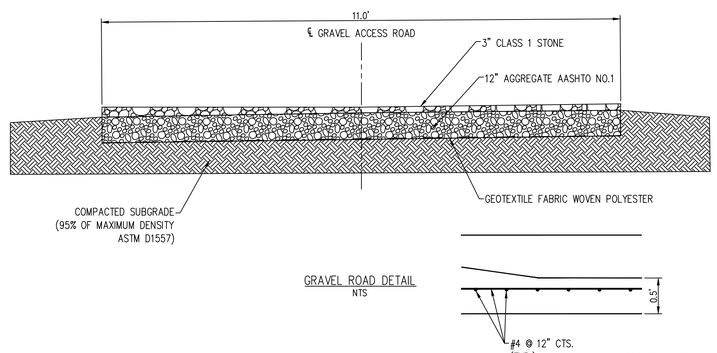


SECTION B–B
TRICKLE CHANNEL CROSS SECTION
SCALE: NTS



ALL SUBGRADE TO BE COMPACTED TO 95% MAX.
DENSITY AT OPTIMUM MOISTURE CONTENT.

GRAVEL PAVING DETAIL
NTS



GRAVEL ROAD DETAIL
NTS

DRAINAGE DESIGN: _____ DATE: _____
THIS IS FILED IN ACCORDANCE WITH SECTION 7.4.701 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2023 AS AMENDED.

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REVISIONS

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AFW - COLORADO SPRINGS
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CITY OF COLORADO SPRINGS
COLORADO

SEAL



DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/17/2024

SHEET
CM4

V:\050895 – AFW – Colorado Springs\050895-01-001 (ENG)\Engineering\Engineering Plans\PCM\050895-01-001-CD-001-STM-DET.dwg

PRIVATE STORMWATER PLAN
FOR
AFW - COLORADO SPRINGS

A PORTION OF A TRACT OF LAND RECORDED AT RECEPTION NO. 208068886 AND RECEPTION NO. 206028177 A PART OF THE WEST HALF OF SECTION 7, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH P.M. CITY OF COLORADO SPRINGS, EL PASO COUNTY, COLORADO

GENERAL NOTES

1. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF PUBLIC IMPROVEMENTS SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH IN THE LOCAL JURISDICTION MUNICIPAL CODE, TECHNICAL MANUALS, AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE TECHNICAL MANUAL OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK SHALL BE INSPECTED AND APPROVED BY PUBLIC WORKS OR UTILITIES INSPECTOR.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE.
3. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE TOWN/CITY AND ALL UTILITY COMPANIES INVOLVED WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH A MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.
5. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE CRITERIA AND SPECIFICATIONS, AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB ONSITE AT ALL TIMES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
7. IF DURING THE CONSTRUCTION PROCESS CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT PUBLIC WORKS INSPECTOR IMMEDIATELY.
8. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH MUTCD TO THE APPROPRIATE RIGHT-OF-WAY AUTHORITY (TOWN/CITY, COUNTY OR STATE) FOR APPROVAL PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN OR AFFECTING THE RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CONSTRUCTION ACTIVITIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR AS DESIGNATED TO BE PROVIDED, INSTALLED, OR CONSTRUCTED UNLESS SPECIFICALLY NOTED OTHERWISE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT INFORMATION ON A SET OF RECORD DRAWINGS KEPT ON THE CONSTRUCTION SITE AND AVAILABLE TO PUBLIC WORKS INSPECTOR AT ALL TIMES.
13. DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE CONSULTANT ENGINEER FOR CLARIFICATION AND ANNOTATE THE DIMENSION ON THE AS-BUILT RECORD DRAWINGS.
14. THE CONTRACTOR SHALL COMPLY WITH ALL TERMS AND CONDITIONS OF THE COLORADO PERMIT FOR STORM WATER DISCHARGE (IF APPLICABLE), THE STORM WATER MANAGEMENT PLAN, AND THE EROSION CONTROL PLAN.
15. ALL STRUCTURAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION PRIOR TO ANY OTHER EARTH-DISTURBING ACTIVITY. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREA IS STABILIZED WITH HARD SURFACE OR LANDSCAPING.
16. THE CONTRACTOR SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF THE WATER LINES AND DRY UTILITIES.
17. THERE SHALL BE NO SITE CONSTRUCTION ACTIVITIES ON SATURDAYS UNLESS SPECIFICALLY APPROVED BY PUBLIC WORKS INSPECTOR AND NO SITE CONSTRUCTION ACTIVITIES ON SUNDAYS OR HOLIDAYS UNLESS THERE IS PRIOR WRITTEN APPROVAL BY THE PUBLIC WORKS DIRECTOR.
18. NO SOLID OBJECT (EXCLUDING FIRE HYDRANTS AND TRAFFIC CONTROL DEVICES AND TRAFFIC SIGNS) EXCEEDING THIRTY (30) INCHES IN HEIGHT ABOVE THE FLOWLINE ELEVATION OF THE ADJACENT STREET, INCLUDING BUT NOT LIMITED TO BUILDINGS, UTILITY CABINETS, WALLS, FENCES, LANDSCAPE PLANTINGS, CROPS, CUT SLOPES, AND BERMS, SHALL BE PLACED WITHIN SIGHT DISTANCE LINES AND SIGHT DISTANCE EASEMENTS.
19. PER COLORADO SENATE BILL 18-167, ALL UNDERGROUND UTILITIES, INCLUDING STORM SEWER, MUST BE INSTALLED WITH A DETECTABLE MATERIAL SO THEY CAN BE TRACED AT GROUND LEVEL. ENSURE ALL PIPES INSTALLED ARE EQUIPPED WITH A MEANS OF BEING DETECTED, AS PER CITY STANDARD D-37.
20. PLAN REVIEW BY THE CITY OF COLORADO SPRINGS IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH DESIGN CRITERIA. THE CITY OF COLORADO SPRINGS IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS, WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE CITY OF COLORADO SPRINGS, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.
21. DRAINAGE EASEMENTS SHOWN ON DRAWINGS SHOULD BE RECORDED AND SUCH RECORDS PROVIDED TO INSPECTOR PRIOR TO THE PROBATIONARY ACCEPTANCE OF STORM SEWER.

LEGAL DESCRIPTION

A TRACT LOCATED IN THE SE1/4NW1/4 SECTION 15, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH P.M., AKA MOST OF LOT 2, F & K SUBDIVISION, MORE OR LESS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 15;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION 15, A DISTANCE OF 785.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY RIGHT OF WAY LINE OF A COUNTY ROAD;
THENCE ON AN ANGLE TO THE RIGHT OF 85°58'00" AND ALONG SAID EASTERLY RIGHT OF WAY LINE A DISTANCE OF 1,643.58 FEET;

THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 799.22 FEET TO A POINT, SAID POINT BEING 358.5 FEET WEST OF THE WESTERLY RIGHT OF WAY LINE OF COLORADO STATE HIGHWAY 83, AND 358.5 FEET BEING MEASURED AT RIGHT ANGLES THERETO;

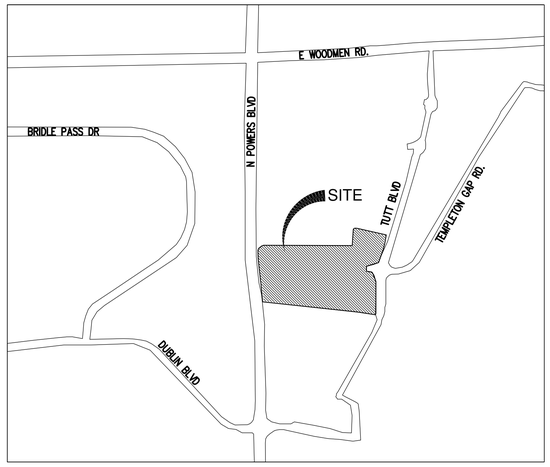
THENCE ON AN ANGLE TO THE RIGHT OF 87°15'03" AND ALONG A LINE PARALLEL TO SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 256.13 FEET TO THE TRUE POINT OF BEGINNING;
THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 358.50 FEET TO A POINT ON SAID WESTERLY RIGHT OF WAY LINE;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG SAID RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" A DISTANCE OF 358.50 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG A LINE PARALLEL TO THE SAID WESTERLY RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET TO THE TRUE POINT OF BEGINNING;

COUNTY OF EL PASO, STATE OF COLORADO



VICINITY MAP
SCALE 1" = 1000'

FLOODPLAIN STATEMENT

THIS PROPERTY IS LOCATED WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN) AS ESTABLISHED BY FEMA FIRM PANEL 08041C0537G, EFFECTIVE DECEMBER 7, 2021, AND FEMA FIRM PANEL 08041C0536G, EFFECTIVE DECEMBER 7, 2021.

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ENGLEWOOD, CO 80112
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PHONE: (303) 489-3333

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BUTLER DESIGN GROUP, INC.
5017 EAST WASHINGTON STREET, SUITE 107
PHOENIX, AZ 85034
CONTACT: ORLANDO MURO
PHONE: (602) 957-1800

CIVIL ENGINEER
BOWMAN CONSULTING
1526 COLE BLVD, SUITE 100
LAKEWOOD, CO 80401
PHONE: (303) 801-2900
CONTACT: HOWARD EHRSAM P.E.
EMAIL: HEHRSAM@BOWMAN.COM
PHONE: (303) 801-2900

LANDSCAPE ARCHITECT
LASKIN & ASSOCIATES, INC.
67 WELDON AVENUE, SUITE 230
PHOENIX, AZ 85012
CONTACT: DANIEL DODSON
EMAIL: DANIEL@LASKINDESIGN.COM
PHONE: (602) 840-7771

BENCHMARK
FIMS BENCHMARK TG24. ELEVATION=6838.24 (NVGD 1929)

Sheet List Table	
SHEET NUMBER	SHEET TITLE
C1.0	COVER SHEET
C1.1	GENERAL NOTES
C4.00	KEY MAP
C4.01	STORM PLAN AND PROFILE
C4.02	STORM PLAN AND PROFILE
C4.03	STORM PLAN AND PROFILE
C4.04	STORM PLAN AND PROFILE
C4.05	STORM PLAN AND PROFILE
C4.06	KEY MAP
C4.07	STORM PLAN AND PROFILE
C4.08	STORM PLAN AND PROFILE
C4.09	STORM PLAN AND PROFILE
C4.10	STORM PLAN AND PROFILE
C4.11	STORM PLAN AND PROFILE
C4.12	KEY MAP
C4.13	STORM PLAN AND PROFILE
C4.14	STORM PLAN AND PROFILE
C4.15	STORM PLAN AND PROFILE
C4.16	STORM PLAN AND PROFILE
C4.17	STORM PLAN AND PROFILE
C4.18	STORM PLAN AND PROFILE
C4.19	DETAILS
C4.20	DETAILS
C4.21	DETAILS
C4.22	DETAILS

DRAINAGE EASEMENTS SHOWN ON DRAWINGS SHOULD BE RECORDED AND SUCH RECORDS PROVIDED TO INSPECTOR PRIOR TO THE PROBATIONARY ACCEPTANCE OF STORM SEWER.

ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID DETAILED PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE ESTABLISHED CRITERIA FOR DETAILS DRAINAGE PLANS AND SPECIFICATIONS, AND SAID DETAILED PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH THE MASTER PLAN OF THE DRAINAGE BASIN. SAID DETAILED PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR DRAINAGE FACILITY(S) IS DESIGNED. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THE DETAILED DRAINAGE PLANS AND SPECIFICATIONS.

NAME: HOWARD EHRSAM, PE – COLORADO NO. 54031

SEAL

DEVELOPER'S STATEMENT:

I, THE DEVELOPER HAVE READ AND WILL COMPLY WITH ALL OF THE REQUIREMENTS SPECIFIED IN THIS DRAINAGE REPORT AND PLAN.

BUSINESS NAME: AMERICAN FURNITURE WAREHOUSE CO

BY: NOLAN MORRISON

TITLE:

ADDRESS: 8820 AMERICAN WAY, ENGLEWOOD, COLORADO 80112

THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER REVIEW DATE

DRAINAGE DESIGN:

DATE: 19 August 2024

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

BID SET
10-8-2024

STRM: STM-REV23-0330

PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

Bowman
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1526 Cole Blvd, Suite 100
Lakewood, CO 80401
Phone: (303) 801-2900
www.bowmanconsulting.com

SUBMITTALS

SUBMITTAL	DESCRIPTION	DATE
1	FOR CONSTRUCTION	06/05/2024

COLORADO

COVER SHEET
AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS
CITY OF COLORADO SPRINGS

SEAL

COLORADO LICENSED
HOWARD EHRSAM
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: N/A V: N/A
JOB No. 050895-01-001
DATE : 04/03/2023
SHEET C1.0

Cad file name: V:\050895 - AFW - Colorado Springs\050895-01-001 (ENG)\Engineering\Engineering Plans\Stormwater Plans\050895-01-001-CVR.dwg

AR PUD 21-00460

GENERAL NOTES

1. UTILITY CONFLICTS: ALL EXISTING UTILITIES SHOWN WERE COMPILED USING THE BEST AVAILABLE INFORMATION AND FIELD OBSERVATION. BOWMAN CONSULTING INC. DOES NOT GUARANTEE THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON. CONTRACTOR TO BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION OF AND PROTECTING ALL EXISTING UTILITIES, INCLUDING THOSE NOT SHOWN OR SHOWN INCORRECTLY ON THE PLANS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IN A TIMELY FASHION TO THE SATISFACTION OF THE APPROPRIATE GOVERNING AGENCY AND THE OWNER OF THE IMPACTED UTILITY AT THE CONTRACTOR'S EXPENSE.

2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS FOR THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT THE JOB SITE AT ALL TIMES THE APPROPRIATE GOVERNING AGENCY'S PUBLIC WORKS MANUAL, ALL APPROVED EASEMENT AGREEMENTS, AND ONE (1) SIGNED COPY OF THE PLANS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY FOR ANY VARIANCE TO THE ABOVE DOCUMENTS.

3. CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE CODES, LICENSES, STANDARDS, SPECIFICATIONS, PERMITS, BONDS, ETC., WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.

4. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND MUST COMPLY WITH OSHA REGULATIONS.

5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER AND ENGINEER OF ANY PROBLEM CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.

6. THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY HIS/HER CONSTRUCTION.

7. THE CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION. THE APPROPRIATE FIRE DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSURES AND IN THE EVENT THAT ANY FIRE HYDRANTS ARE TO BE TEMPORARILY REMOVED FROM SERVICE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING AT LEAST 48 HOURS ADVANCED NOTICE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING WATER SYSTEM AND FOR OBSERVATIONS AND/OR INSPECTIONS REQUIRED.

8. THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS OR OTHER DEVICES NECESSARY FOR SAFE TRAFFIC CONTROL IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AS MODIFIED BY THE COLORADO SUPPLEMENT TO THE MUTCD. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE APPROPRIATE GOVERNING AGENCY PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT FOR WORK WITHIN THE RIGHT-OF-WAY.

9. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ANY AFFECTED UTILITY COMPANY.

10. THE CONTRACTOR SHALL OBTAIN COPIES OF THE "SOILS AND INVESTIGATION" REPORT FROM GEOTECHNICAL ENGINEER ALONG WITH THE "PAVEMENT THICKNESS DESIGN REPORT". THE CONTRACTOR MUST HAVE COPIES OF SAME ON THE SITE AT ALL TIMES.

11. THE CONTRACTOR IS REQUIRED TO PROVIDE AS-CONSTRUCTED HORIZONTAL AND VERTICAL CONSTRUCTION INFORMATION, INCLUDING THE LOCATIONS OF ALL SANITARY LINES AND SERVICES, WATER LINES AND SERVICES, AND OTHER UTILITY LINES AND SERVICES TO THE ENGINEER FOR PREPARATION OF AS-BUILT DOCUMENTS.

12. LIMITS OF CONSTRUCTION EASEMENTS AND RIGHTS-OF-WAY SHALL BE DELINEATED WITH TEMPORARY STAKING BY THE CONTRACTOR. SAFETY FENCING SHALL BE PER APPROPRIATE GOVERNING AGENCY.

13. WHERE EXCAVATION IS REQUIRED UNDER EXISTING ASPHALT OR CONCRETE PAVEMENT, THE EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO EFFECT A SMOOTH, STRAIGHT-CUT EDGE. ASPHALT PATCH SHALL BE PER APPROPRIATE GOVERNING AGENCY STANDARDS.

14. REFER TO FINAL RECORDED PLAT FOR ACTUAL LOT, TRACT, PARCEL, AND EASEMENT LOCATIONS AND DESIGNATIONS.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAYS AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.

16. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY TO THE PROJECT WORK SITE (SEE THE EROSION CONTROL PLAN). THE CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY (IF APPLICABLE) TO COMPLETE THE CONSTRUCTION AND SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

17. WATER WILL BE PROVIDED BY THE CONTRACTOR TO KEEP WIND EROSION IN CHECK. USE OF WATER AS A DUST PREVENTATIVE SHALL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF THE WORK.

18. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE PROPERTY LIMITS DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR.

19. ANY CONSTRUCTION DEBRIS OR MUD TRACKING IN THE PUBLIC RIGHT-OF-WAY RESULTING FROM THIS DEVELOPMENT SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY THE DEVELOPMENT AND SHALL PROPERLY BARRICADE THE SITE UNTIL CLEAN UP OR REPAIR IS COMPLETE.

20. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO GRADE STREET CORES, RIGHT-OF-WAY TEMPLATES, AND LOTS ACCORDING TO GRADING INSTRUCTIONS SHOWN ON PLANS.

21. STREET CONTOURS SHOWN AT PROPOSED STREET LOCATIONS REPRESENT FINISHED GRADE ELEVATION TO TOP OF ASPHALT.

22. COMPACTION FILL MATERIAL SHALL BE COMPACTED ACCORDING TO THE APPROPRIATE GOVERNING AGENCY REGULATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.

23. TOLERANCE ROUGH GRADING: TOLERANCE SHALL BE +/- 0.1 FEET.

24. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE ALL APPROPRIATE PERMITS FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAVE BEEN OBTAINED PRIOR TO GRADING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL TEMPORARY WATER DIVERSION/CONTROL DEVICES AND EROSION CONTROL DEVICES NECESSARY TO PROTECT ADJACENT PROPERTIES, WATERWAYS AND PUBLIC RIGHT-OF-WAY. CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF SAID DEVICES THROUGHOUT CONSTRUCTION AND UNTIL THE PERMANENT PROTECTION NECESSARY HAS BEEN COMPLETED.

25. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE MOST CURRENT APPROVED ARCHITECTURAL/ MECHANICAL/ELECTRICAL/PLUMBING/STRUCTURAL PLANS AND COORDINATE SAME WITH THE SITE PLAN, PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.

26. WHEN DURING THE COURSE OF CONSTRUCTION, ANY OBJECT OF AN UNUSUAL NATURE IS ENCOUNTERED, THE CONTRACTOR SHALL CEASE WORK IN THAT AREA AND IMMEDIATELY NOTIFY THE OWNER, APPROPRIATE GOVERNING AGENCY, AND/OR THE ARCHITECT/ENGINEER.

27. THE EXISTING UNDERGROUND UTILITIES SHOW HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN IN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.

28. ALL STEPS WITH THREE OR MORE RISERS SHALL HAVE HAND RAILS, PER LOCAL CODE.

29. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF EXISTING ROAD TO PROPOSED CURB AND GUTTER AND/OR PROPOSED EDGE OF PAVEMENT TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY. REMOVE AND RECONSTRUCT EXISTING PAVEMENT AND/OR CURB AS DICTATED BY FIELD CONDITIONS TO PROVIDE POSITIVE DRAINAGE AT TIE-IN-POINTS.

30. OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1 1/2 INCH DEPTH; ANY COST ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE CONTRACTOR.

31. ALL RIGHT-OF-WAY DEDICATED FOR PUBLIC USE SHALL BE CLEAR AND UNENCUMBERED.

32. AN AIR QUALITY PERMIT SHALL BE OBTAINED IF REQUIRED.

33. ANY LIGHTING SHOWN HEREON IS AS SPECIFIED BY THE CLIENT AND IS INCLUDED FOR INFORMATION PURPOSES ONLY, AS DIRECTED BY THE OWNER AND/OR PUBLIC AGENCY REQUIREMENTS. BOWMAN CONSULTING GROUP, LTD. HAS NOT PERFORMED THE LIGHTING DESIGN, AND THEREFORE DOES NOT WARRANT AND IS NOT RESPONSIBLE FOR THE DEGREE AND/OR ADEQUACY OF ILLUMINATION ON THIS PROJECT.

34. THE CONTRACTOR WILL BE REQUIRED TO NOTIFY ALL RESIDENCES WITHIN VICINITY OF THE PROPERTY BOUNDARY TEN (10) DAYS PRIOR TO ANY BLASTING IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY REQUIREMENTS.

35. NO BLASTING SHALL BE PERMITTED WITHIN 25' OF EXISTING UTILITY LINES OR STRUCTURES. BLASTING TO BE EXTENDED 25' BEYOND PROPOSED STRUCTURES IF CONDITIONS WARRANT FUTURE EXTENSIONS.

GENERAL NOTES (CONT.)

36. ALL RETAINING WALLS 4' IN HEIGHT AND OVER (MEASURED FROM BOTTOM OF FOOTER TO TOP OF WALL) REQUIRE A SEPARATE BUILDING PERMIT.

37. THE APPROVAL OF THIS PLAN DOES NOT CONSTITUTE THE APPROVAL OF FUTURE WORK.

38. ALL HANDICAPPED SPACES SHALL HAVE AN ABOVE GRADE IDENTIFICATION SIGN MEETING APPROPRIATE GOVERNING AGENCY STANDARDS.

39. WHERE A PROPOSED PIPE CROSSES OR PARALLELS A STREET OR DRIVE AISLE, THE ASPHALT SHALL BE NEATLY SAWCUT TO FULL DEPTH. AFTER INSTALLATION OF THE PIPE, THE ROADWAY SHALL BE PATCHED IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY STANDARDS.

40. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, CONDITIONS, AND CONFIRMATION AND CONDITION OF EXISTING GROUND SURFACE AND THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING EXECUTION OF THE WORK. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUANTITY AND QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED. ANY INACCURACIES OR DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS MUST BE BOUGHT TO THE OWNER'S ATTENTION IN ORDER TO CLARIFY THE EXACT NATURE OF THE WORK TO BE PERFORMED PRIOR TO THE COMMENCEMENT OF ANY WORK.

41. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING ROADS AND UTILITIES WHICH OCCURS AS A RESULT OF THE PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY.

42. ALL STREET CUT AND PATCH WORK IN PUBLIC RIGHT-OF-WAY REQUIRED FOR UTILITIES INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CITY, COUNTY, AND/OR APPROPRIATE GOVERNING AGENCY STANDARDS AND SPECIFICATIONS.

43. THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION FOR THE CONTRACTOR TO TRESPASS ON OFF-SITE PROPERTIES.

44. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.

45. THESE PLANS MAKE NO REPRESENTATION AS TO THE SUBSURFACE CONDITIONS AND THE PRESENCE OF SUBSURFACE WATER OR THE NEED FOR SUBSURFACE DRAINAGE FACILITIES.

46. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING ALL NECESSARY INSPECTIONS.

47. EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.

48. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER.

49. THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.

50. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF TEST HOLES PRIOR TO BEGINNING OF ANY CONSTRUCTION ON THE PROJECT. IF CONFLICTS ARE DISCOVERED AS A RESULT OF TEST HOLE FINDINGS, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY.

51. EXCAVATION SUPPORT SYSTEMS SHALL CONFORM TO THE PROVISIONS OF OSHA CONSTRUCTION STANDARD 29 CFR PART 1926 SUBPART P, OR CURRENT EDITION.

52. AT LOCATIONS WHERE THE FINAL SURFACE COURSE OF ASPHALT PAVEMENT IS TO BE FEATHERED INTO THE EXISTING SURFACE COURSE, THE EXISTING SURFACE COURSE IS TO BE SCABBLED TO A MINIMUM DEPTH OF 1" AND A TACK COAT APPLIED PRIOR TO FINAL PAVING TO INSURE A SMOOTH, WELL BONDED JOINT.

53. ANY NEW PAVEMENT OPENED TO TRAFFIC SHALL RECEIVE A TACK COAT PRIOR TO PLACEMENT OF ANY OVERLYING ASPHALT COURSE.

54. ALL SIDEWALKS TO BE 4" THICK CONCRETE UNLESS OTHERWISE SHOWN ON THE PLAN.

55. ALL DEMOLITION SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE APPROPRIATE GOVERNING AGENCY.

56. ALL APPLICABLE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING DEMOLITION.

57. ITEMS SHOWN TO BE RELOCATED SHALL BE CAREFULLY REMOVED AND STORED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY CAN BE PLACED IN THEIR NEW LOCATION. CONTRACTOR SHALL VERIFY THESE ITEMS WITH THE OWNER, PRIOR TO CONSTRUCTION.

58. CONTRACTOR SHALL COORDINATE REMOVAL OR RELOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD ELECTRICAL, TELEPHONE AND CABLE TV LINES AND REMOVAL OF UTILITY POLES, PEDESTALS AND TRANSFORMERS WITH UTILITY COMPANIES AND WITH DEVELOPER PRIOR TO DEMOLITION.

59. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENTS AND/OR RECONSTRUCTION OF ALL UTILITY COVER (MANHOLE FRAMES AND COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.

60. THE CONTRACTOR MUST HAVE THE APPROVED CONSTRUCTION DRAWINGS IN POSSESSION PRIOR TO THE START OF CONSTRUCTION. AT LEAST ONE (1) COPY OF THE APPROVED PLANS, WITH REVISIONS, MUST BE KEPT ON-SITE AT ALL TIMES.

61. ALL HANDICAP RAMPS SHALL BE BUILT IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE APPROPRIATE GOVERNING AGENCY STANDARDS, CDOT STANDARDS, AND CURRENT ADA REQUIREMENTS.

62. THE STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES MUST BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY ARE NOT ONLY 100% COMPLETE, BUT ALSO THAT 100% OF THE DRAINAGE AREA TO EACH FACILITY IS PERMANENTLY STABILIZED. SEED AND MULCH DOES NOT CONSTITUTE STABILIZATION IN TERMS OF THE CONTRACTOR MAINTENANCE OF THE STORM DRAIN, STORMWATER MANAGEMENT, AND WATER QUALITY FACILITIES. ALL STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES SHALL BE TURNED OVER TO THE OWNER COMPLETELY CLEAN AND FREE FROM ANY CONSTRUCTION RELATED SEDIMENT OR DEBRIS.

63. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT ALL ADA ACCESSIBLE SIDEWALKS MAINTAIN SLOPES NOT TO EXCEED 5% LONGITUDINALLY AND 2% CROSS SLOPES. SLOPES AT ACCESSIBLE PARKING SPACES AND ACCESS AISLE SHALL BE A MAXIMUM OF 2%, AND THE MANEUVERING CLEARANCE AT EXTERIOR ENTRANCES SHALL HAVE A MAXIMUM SLOPE OF 2%.

64. DURING CONSTRUCTION, NO TEMPORARY CONNECTIONS TO FIRE HYDRANTS MAY BE MADE WITHOUT THE EXPRESS AUTHORIZATION OF THE UTILITY OWNER.

CONSTRUCTION PLAN DRAINAGE STATEMENTS AND NOTES

1. THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID DETAILED PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE ESTABLISHED CRITERIA FOR DETAILED DRAINAGE PLANS AND SPECIFICATIONS, AND SAID DETAILED PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH THE MASTER PLAN OF THE DRAINAGE BASIN. SAID DETAILED DRAINAGE PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR DRAINAGE FACILITY(S) IS DESIGNED. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THE DETAILED DRAINAGE PLANS AND SPECIFICATIONS.

2. PLAN REVIEW BY CITY OF COLORADO SPRINGS STORMWATER ENTERPRISE IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH DESIGN CRITERIA. THE CITY OF COLORADO SPRINGS STORMWATER ENTERPRISE IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE CITY OF COLORADO SPRINGS STORMWATER ENTERPRISE, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND OR ACCURACY OF THIS DOCUMENT.

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
	LOT LINE	
	RIGHT OF WAY	
	CENTERLINE	
	FLOOD PLAIN	
	LIMITS OF CONSTRUCTION	LOC
	LIMITS OF DISTURBANCE	LOD
	SWALE / STREAM FLOWLINE	
	OVERFLOW RELIEF PATH	
x x	FENCE LINE	x x
	EASEMENT	
	EDGE OF PAVEMENT	
	VERTICAL CURB AND GUTTER	
	MOUNTABLE CURB AND GUTTER	
	CONCRETE SIDEWALK	
	ASPHALT SIDEWALK	
	HANDICAP PARKING	
	SIGHT TRIANGLE	
	SIGN(S)	
25	PARKING COUNT INDICATOR	25
255 VPD	VEHICLES PER DAY INDICATOR	255 VPD
TP	TEST PIT	TP
MW	MONITORING WELL	MW
350	MAJOR CONTOUR	350
350	MINOR CONTOUR	350
	GRADE BREAK	
	RIDGELINE	
52 22/16 5236 22/16	SPOT ELEVATION	52 22/16 5236 22/16
	RIP RAP	
W	WATER LINE	W
M	WATER METER	M
	WATER VALVE	
	WATER REDUCER	
	WATER FITTINGS	
	FIRE HYDRANT	
SS	SANITARY LINE	SS
	SANITARY MANHOLE	
	SANITARY CLEANOUT	
	STORM SEWER PIPE	
	STORM SEWER MANHOLE	
	STORM SEWER INLET	
	STORM SEWER FLARED END SECTION	
	STORM SEWER HEADWALL	
OU OU	OVERHEAD UTILITY	OU OU
E E	UNDERGROUND ELECTRIC	E E
OHE	OVERHEAD ELECTRIC	OHE OHE
	UTILITY POLE	
	STREET LIGHT	
CATV CATV	CABLE TV SERVICE	CATV CATV
T T	TELECOM SERVICE	T T
FO FO	FIBER OPTIC SERVICE	FO FO
G	NATURAL GAS SERVICE	G
	TREE	
	TREE LINE	
	WETLANDS	

LEGEND NOTES

1. THIS IS A STANDARD SHEET, THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PROJECT.

2. ADDITIONAL LEGENDS AND NOTES MAY BE FOUND ON OTHER SHEETS ASSOCIATED WITH THIS PLAN. THESE LEGENDS AND NOTES ARE TO BE REFERENCED IN ADDITION TO THIS STANDARD SHEET.

CONSTRUCTION STATEMENT:

WORK SHALL BE CONSTRUCTED TO CITY OF COLORADO SPRINGS STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE TO THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER REVIEW DATE

DRAINAGE DESIGN: _____

DATE: 19 August 2024

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

STRM: STM-REV23-0330

PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
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SUBMITTALS

SUBMITTAL	DESCRIPTION	DATE
1	FOR CONSTRUCTION	06/05/2024

COLORADO

GENERAL NOTES

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

SEAL

COLORADO LICENSED
EDWARD HEINZ
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: N/A V: N/A

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C1.1

Cad file name: V:\050895 - AFW - Colorado Springs\050895-01-001 (ENG)\Engineering\Engineering Plans\Stormwater Plans\050895-01-001-CVR.dwg

AR PUD 21-00460

TEMPLETON GAP LANDFILL INC.
PARCEL ID: 5307000110

C4.01

C4.02

C4.03

C4.04

C4.05

NEW PYLON SIGN

NEW CHAIN BARRIER WITH SIGNAGE

NEW TRUCK ENTRY SIGN

NEW STOP SIGN (TYP.)

NEW MOUNTABLE CURB

NEW MONUMENT SIGN

PROPOSED LIGHTING (TYP.), REFER TO ELECTRICAL PLANS

FOURSQUARE COLLECTION AT PATHWAYS FILING NO. 1 REC. NO. 221714696

MIDTOWN COLLECTION AT PATHWAYS FILING NO. 1 REC NO. 221714684

COLORADO STATE HIGHWAY 21 (PUBLISHED AS NEW ODE-ON-PIKE)

TUTT BOULEVARD (PUBLISHED AS NEW ODE-ON-PIKE)

PROJECT NUMBER: 2008-W007

DING SETBACK

E BUFFER

THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER REVIEW DATE

DRAINAGE DESIGN: [signature]

DATE: 19 August 2024

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

STRM: STM-REV23-0330

PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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SUBMITTALS

SUBMITTAL	DESCRIPTION	DATE
1	FOR CONSTRUCTION	06/05/2024

KEY MAP

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

COLORADO LICENSED
EDWARD "HE" ENGINEER
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

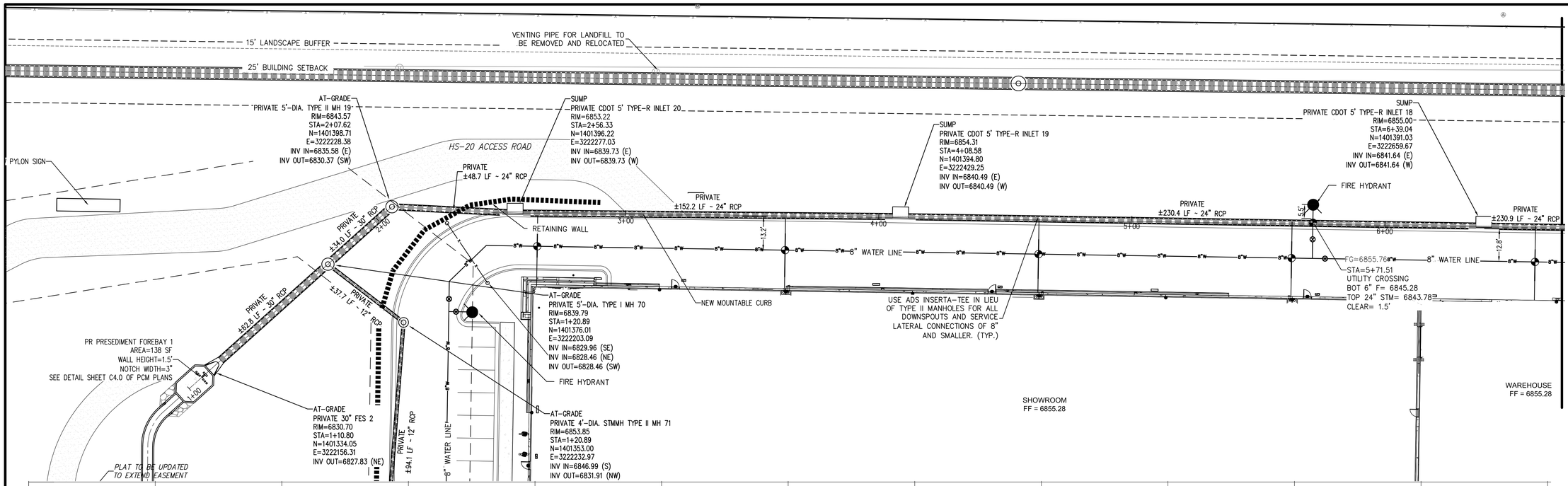
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V: N/A

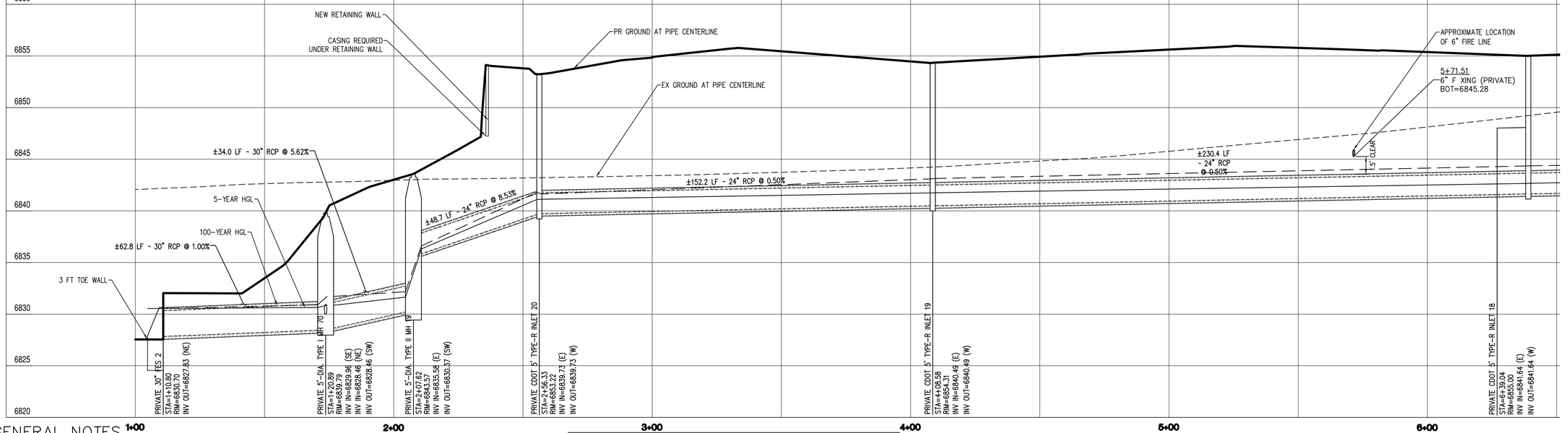
JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C4.00

AR PUD 21-00460





GENERAL NOTES

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DRAINAGE DESIGN: _____

DATE: 19 August 2024

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

SERVICE LINE CROSSING NOTE

CAUTION: SYMBOL DENOTES UTILITY CROSSING. CONTRACTOR TO MAINTAIN FOLLOWING VERTICAL CLEARANCES FOR CROSSINGS WITH WATER SERVICE LINES:
WASTEWATER: 1.5'
STORM SEWER: 1.5'
NATURAL GAS: 1'
ELECTRIC: 1'

GRAPHIC SCALE

20 0 10 20 40 80
(IN FEET)
HORIZONTAL SCALE: 1 inch = 20 ft.
VERTICAL SCALE: 1 inch = 5 ft.

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COLORADO

STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

SEAL
COLORADO LICENSED
EDWARD E. HEGGEN
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

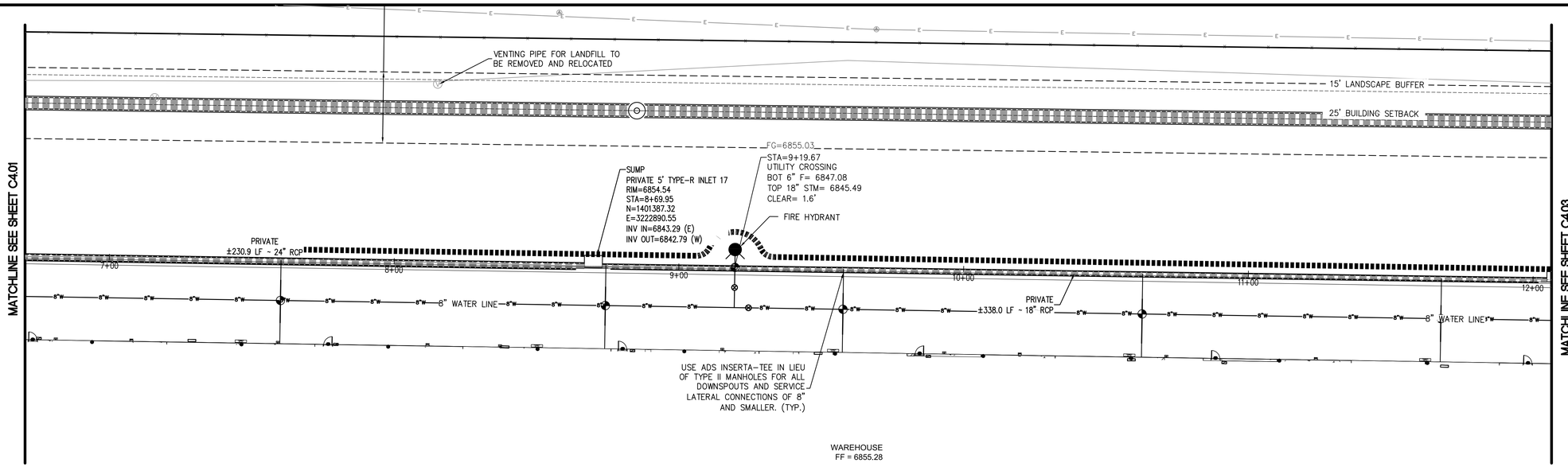
SCALE H: 1" = 20'
V: 1" = 5'

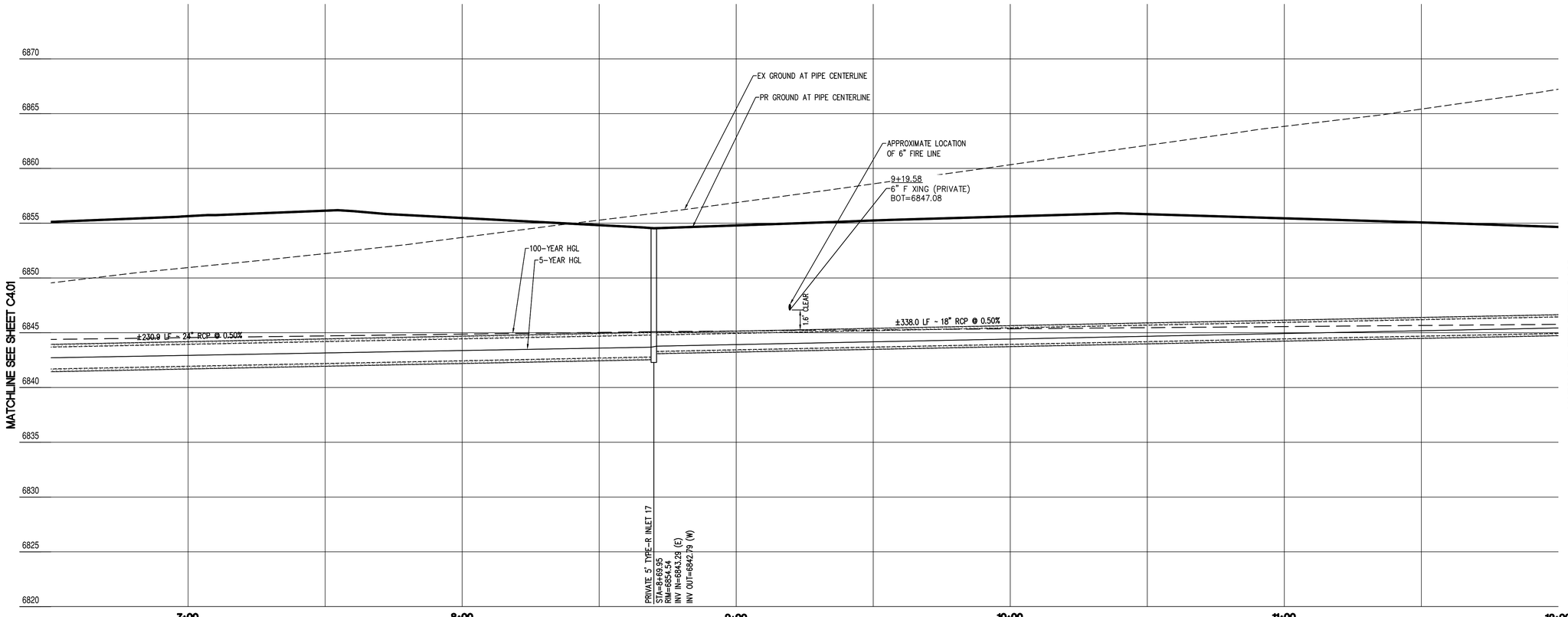
JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C4.01

AR PUD 21-00460





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DRAINAGE DESIGN: [signature]

DATE: 19 August 2024

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STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS
CITY OF COLORADO SPRINGS, COLORADO

SEAL
COLORADO LICENSED
HOWARD ENRIQUEZ
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

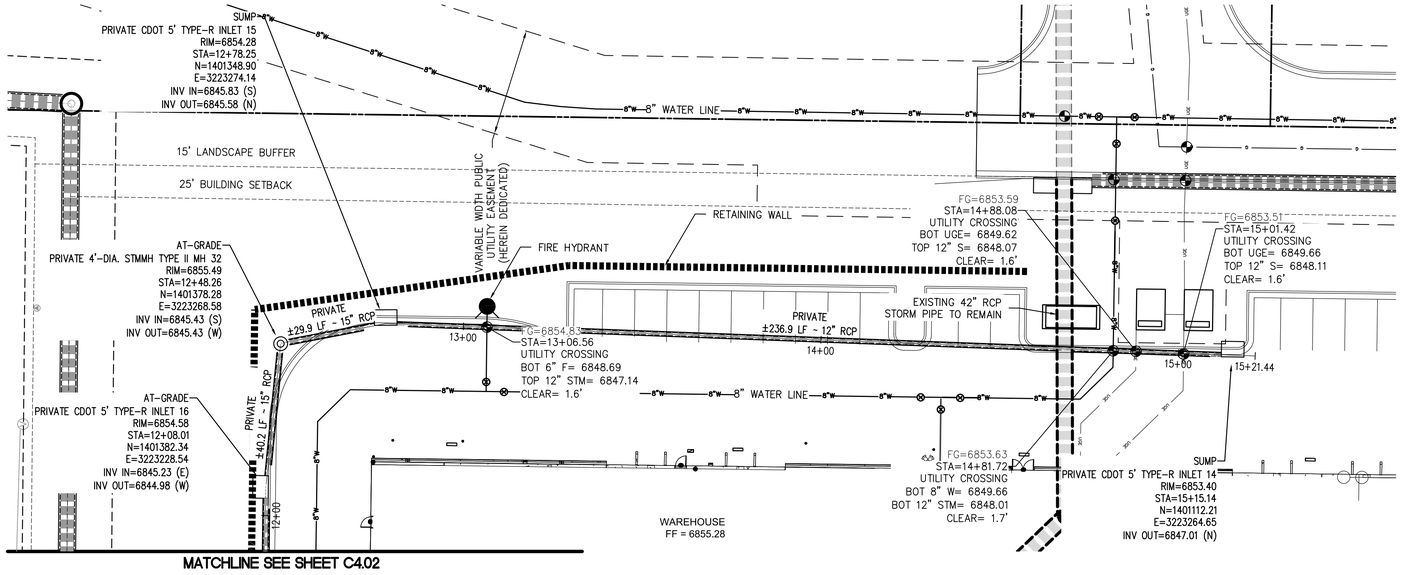
SCALE H: 1" = 20'
V: 1" = 5'

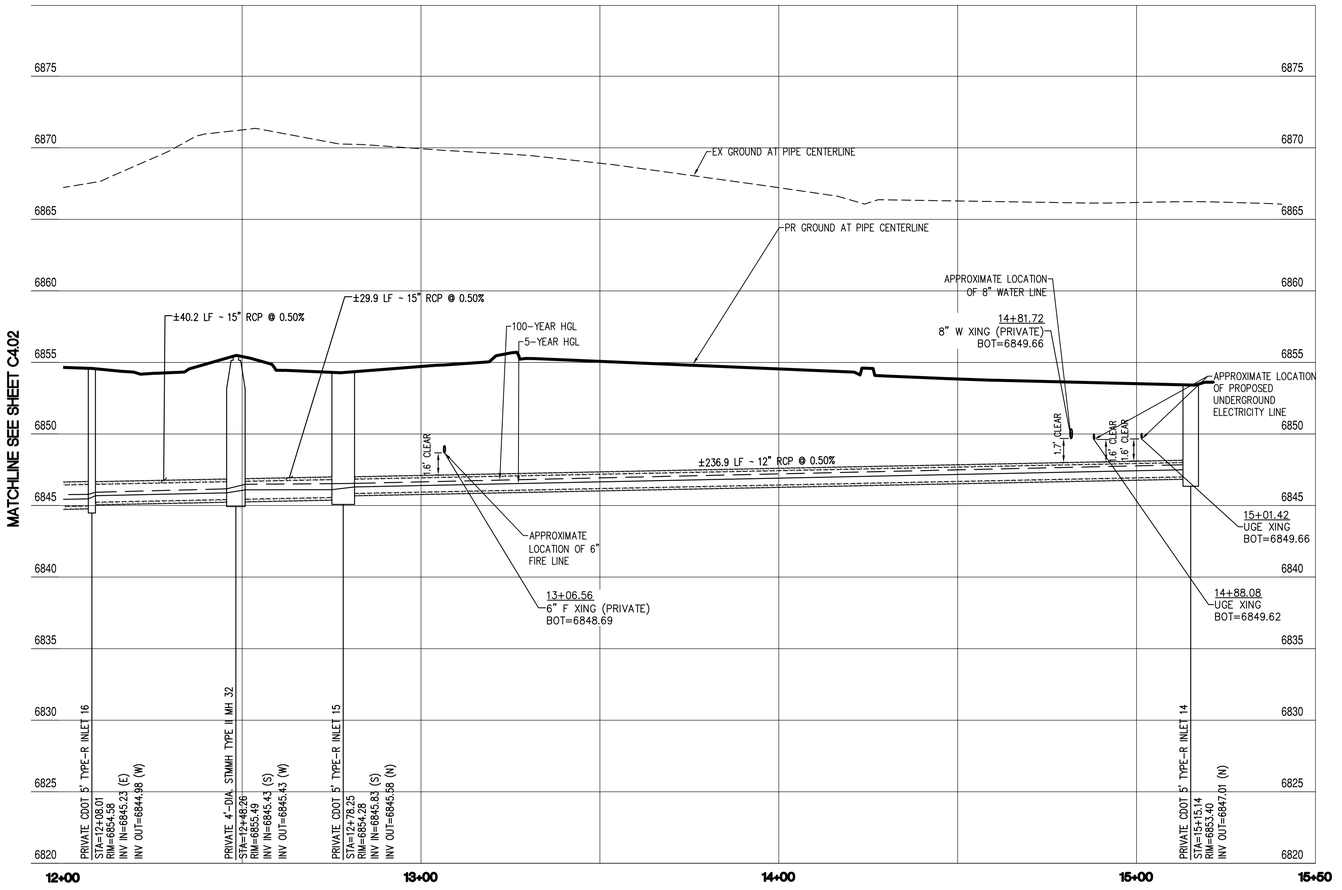
JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C4.02

AR PUD 21-00460





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(IN FEET)

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STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

COLORADO LICENSED
EDWARD VIRGIL HARD
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

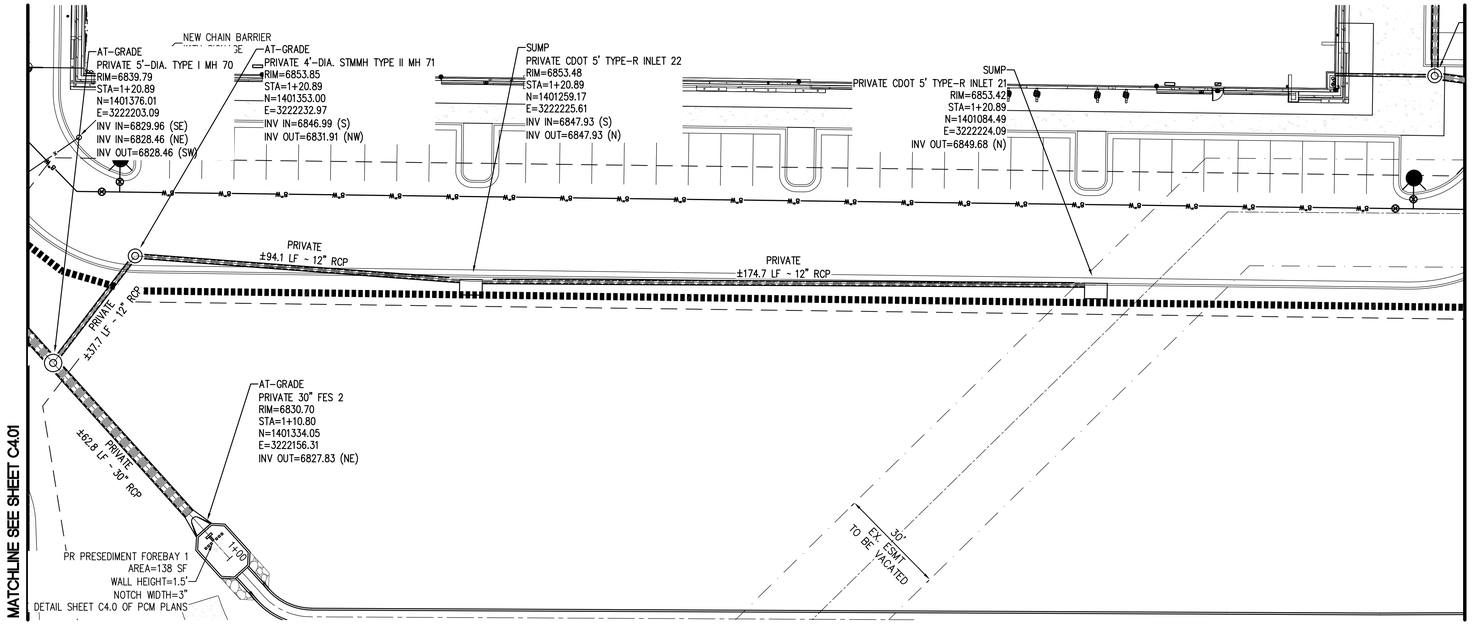
SCALE H: 1" = 20'
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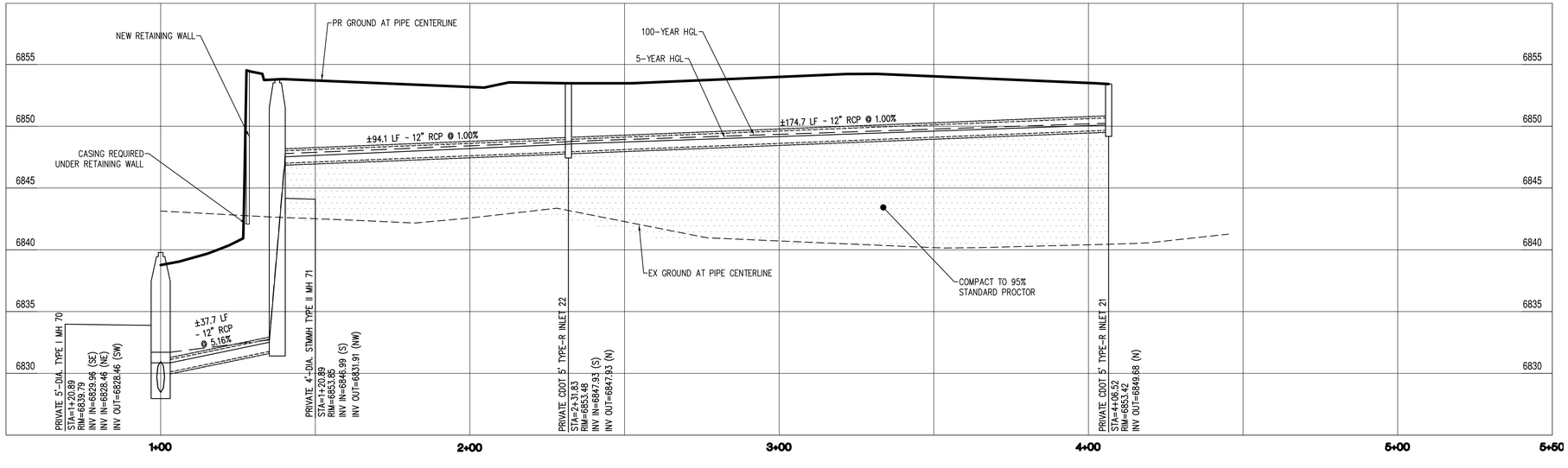
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DATE : 04/03/2023

SHEET
C4.03

AR PUD 21-00460





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STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS
CITY OF COLORADO SPRINGS
COLORADO

SEAL

COLORADO LICENSED
EDWARD HENRY
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: 1" = 20'
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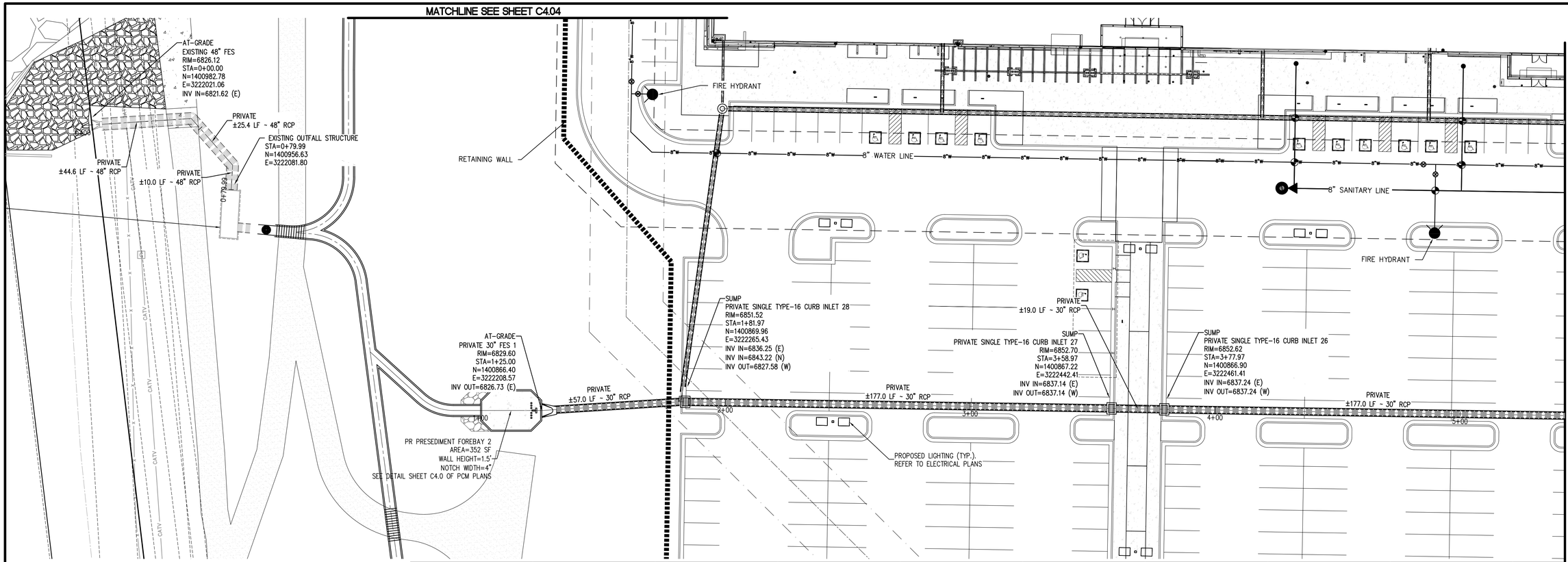
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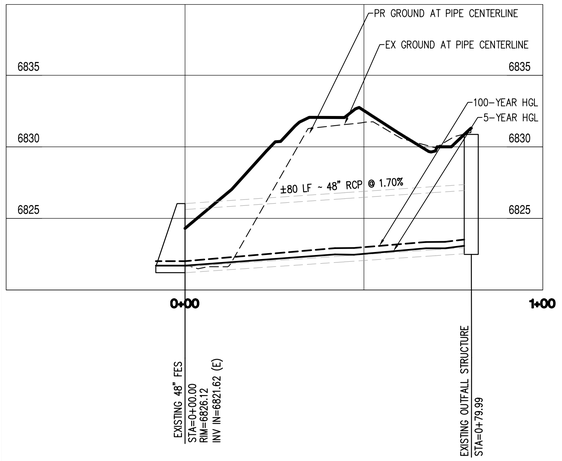
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C4.04

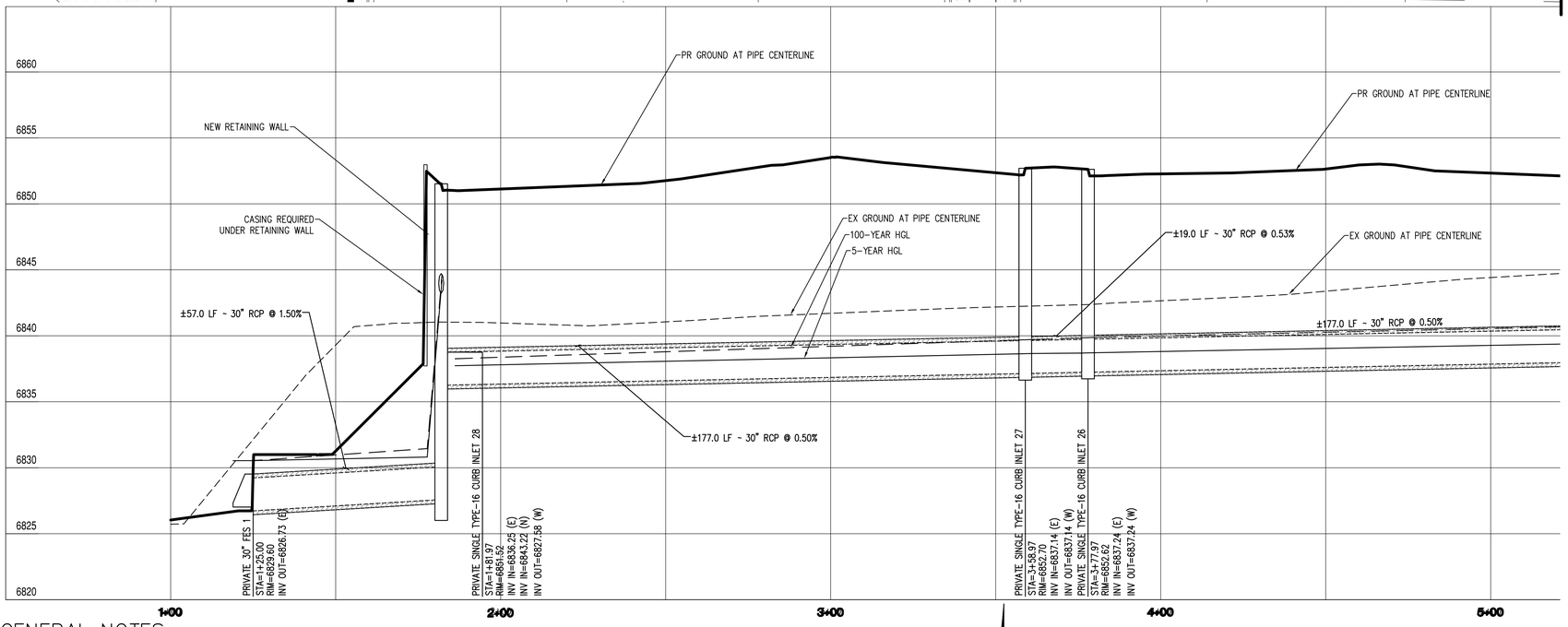
AR PUD 21-00460

MATCHLINE SEE SHEET C4.04



MATCHLINE SEE SHEET C4.04





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N

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20 0 10 20 40 80
(IN FEET)
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MATCHLINE SEE SHEET C4.08

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SUBMITTALS

STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

COLORADO LICENSED
EDWARD EHRET
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: 1" = 20'
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DATE : 04/03/2023

SHEET
C4.05

AR PUD 21-00460

TEMPLETON GAP LANDFILL INC.
PARCEL ID: 5307000110

NEW PYLON SIGN

NEW MOUNTABLE CURB

NEW CHAIN BARRIER
WITH SIGNAGE

NEW TRUCK
ENTRY SIGN

PROPOSED LIGHTING (TYP.)
REFER TO ELECTRICAL PLANS

NEW STOP SIGN (TYP.)

NEW MONUMENT SIGN

NEW MOUNTABLE CURB

C4.07

C4.08

C4.09

C4.10

C4.11

FOURSQUARE COLLECTION
AT PATHWAYS FILING NO. 1
REC. NO. 221714696

MIDTOWN COLLECTION AT
PATHWAYS FILING NO. 1
REC NO. 221714684

COLORADO STATE HIGHWAY 21
(PRINCIPAL ARTERIAL - 100' R.O.W.)

TITT BOULEVARD
(MINOR ARTERIAL - 80' R.O.W.)

PROJECT NUMBER: 2008-W007

DING SETBACK

E BUFFER

ER
ARD
WY 21
GHT-OF-WAY)
9)

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N

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(IN FEET)
1 inch = 60 ft.

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KEY MAP

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

COLORADO LICENSED
EDWARD HEYER
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

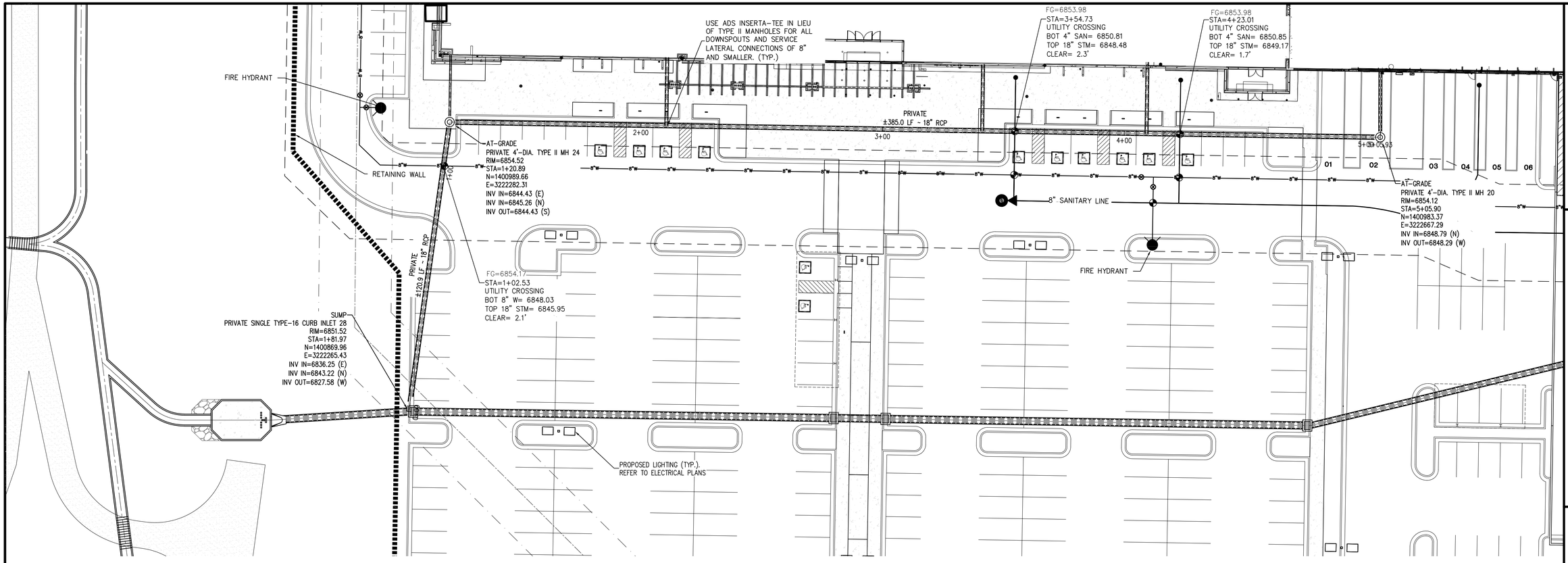
SCALE H: 1" = 60'
V: N/A

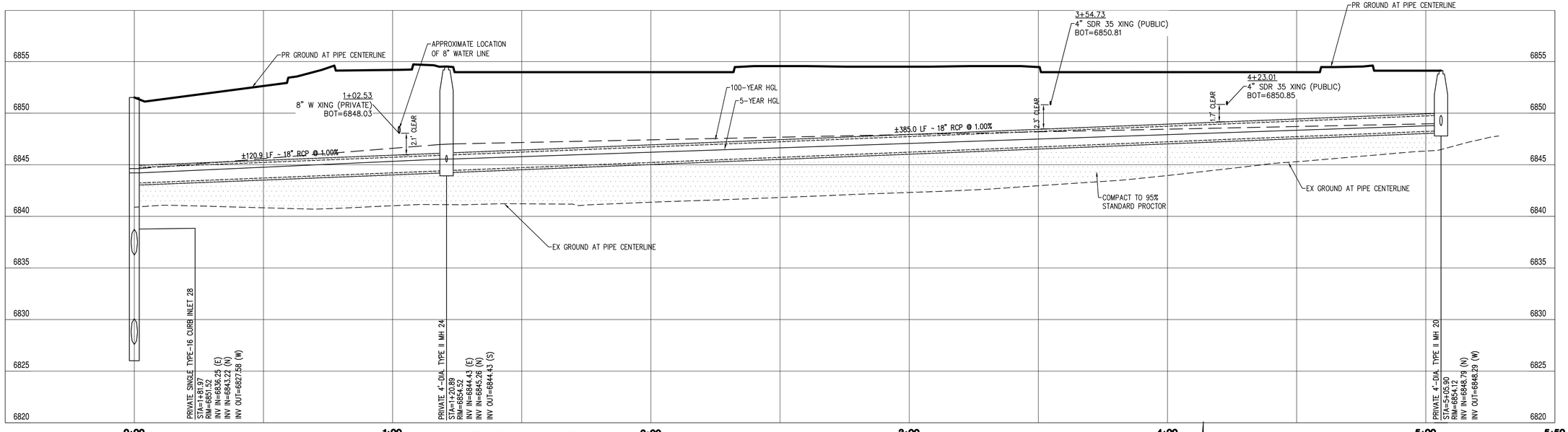
JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C4.06

AR PUD 21-00460





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DRAINAGE DESIGN: D.D.R.

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GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
HORIZONTAL SCALE: 1 inch = 20 ft.
VERTICAL SCALE: 1 inch = 5 ft.

STRM: STM-REV23-0330

PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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SUBMITTALS

SUBMITTAL	DESCRIPTION	DATE
1	FOR CONSTRUCTION	06/05/2024

COLORADO

STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

SEAL
COLORADO LICENSED
EDWARD "ERIC" HEIN
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

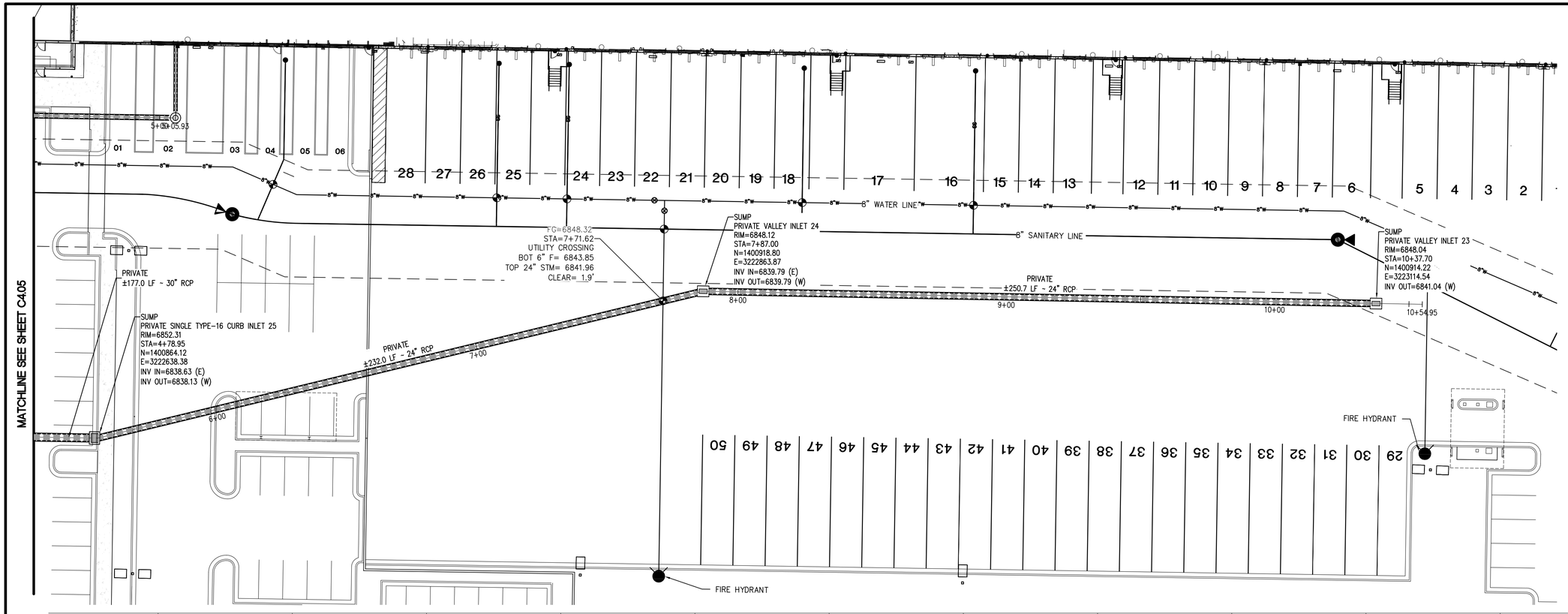
SCALE H: 1" = 20'
V: 1" = 5'

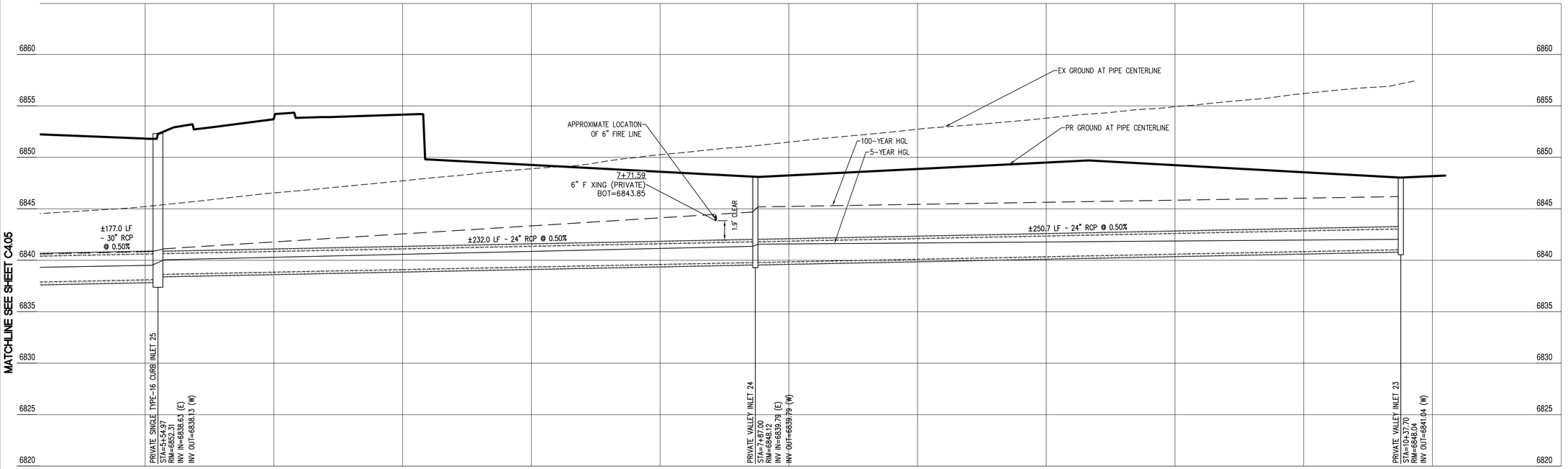
JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C4.07

AR PUD 21-00460





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DRAINAGE DESIGN: [signature]

DATE: 19 August 2024

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SERVICE LINE CROSSING NOTE

CAUTION: SYMBOL DENOTES UTILITY CROSSING. CONTRACTOR TO MAINTAIN FOLLOWING VERTICAL CLEARANCES FOR CROSSINGS WITH WATER SERVICE LINES:
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NATURAL GAS: 1'
ELECTRIC: 1'

N

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PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL
COLORADO LICENSED
EDWARD H. HEIL
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

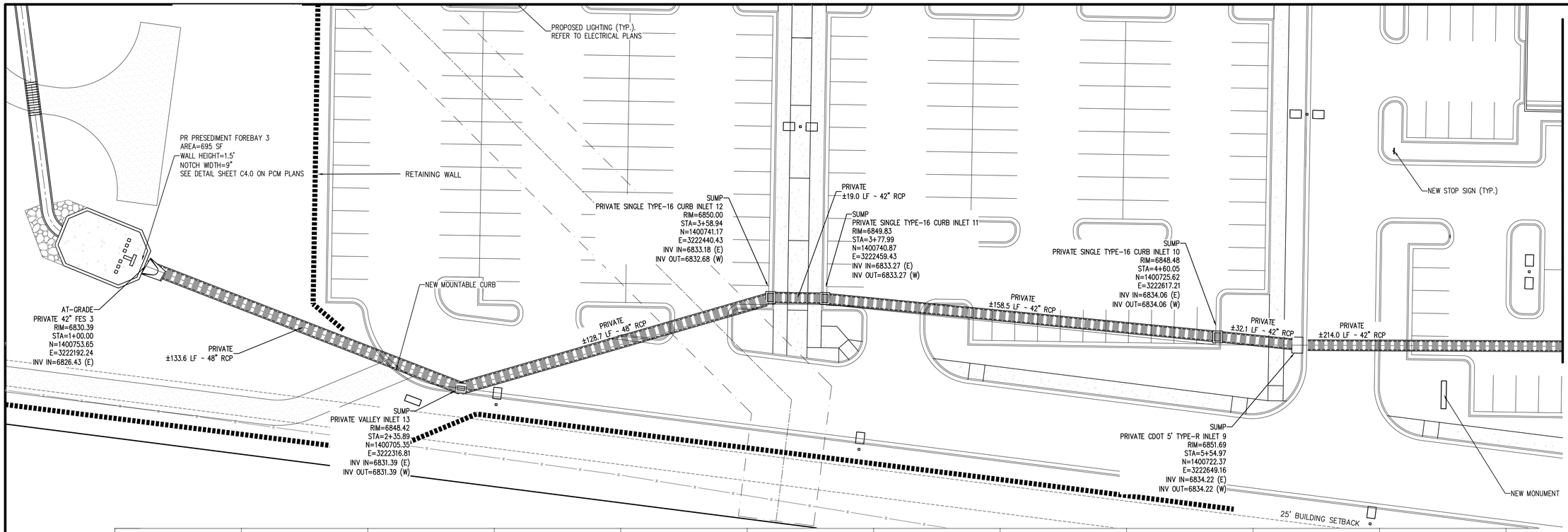
SCALE: H: 1" = 20'
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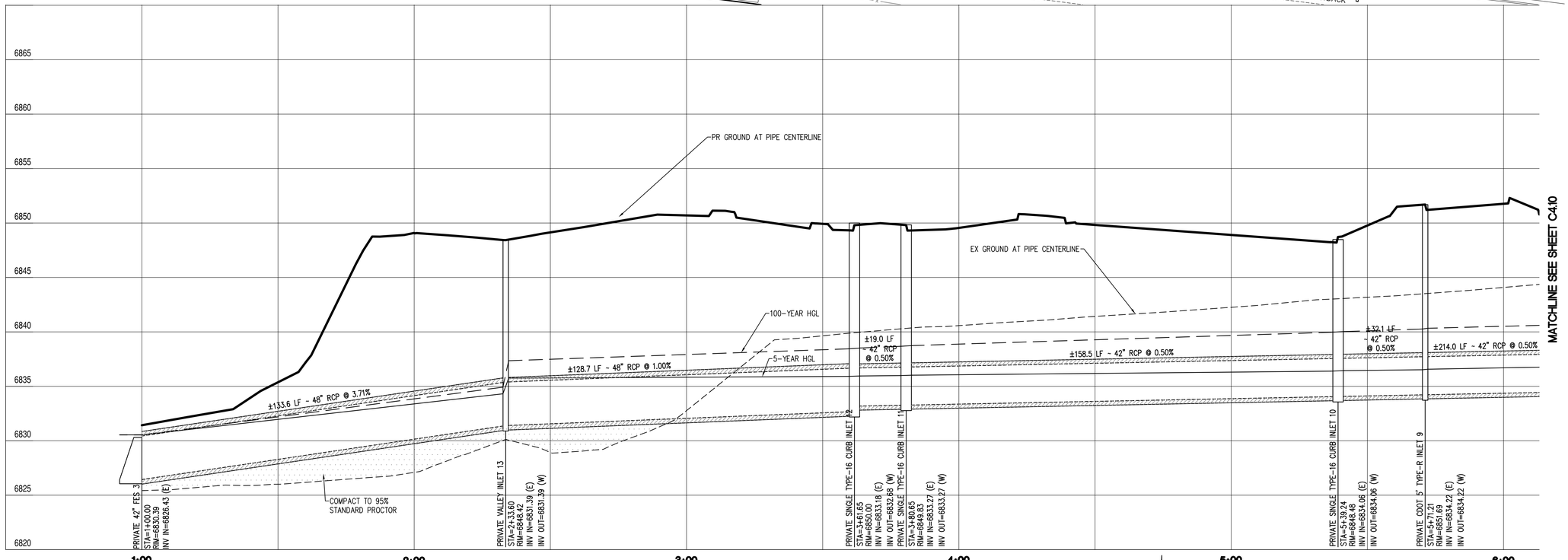
JOB No. 050895-01-001

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SHEET
C4.08

AR PUD 21-00460





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STORM PLAN AND PROFILE

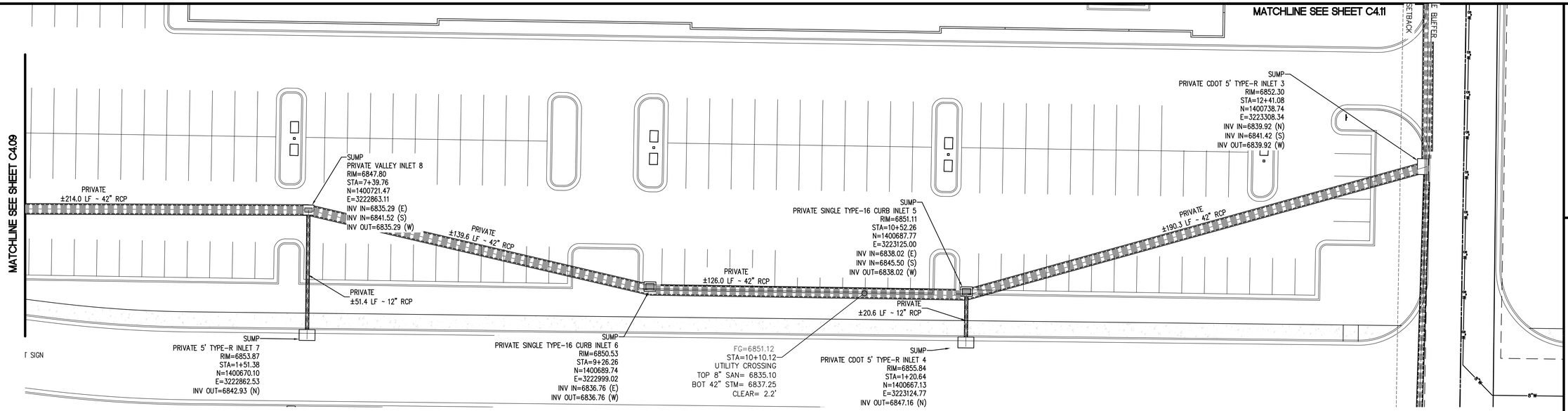
AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS
CITY OF COLORADO SPRINGS
COLORADO

SEAL
COLORADO LICENSED
HOWARD EHER
PROFESSIONAL ENGINEER
6-7-24

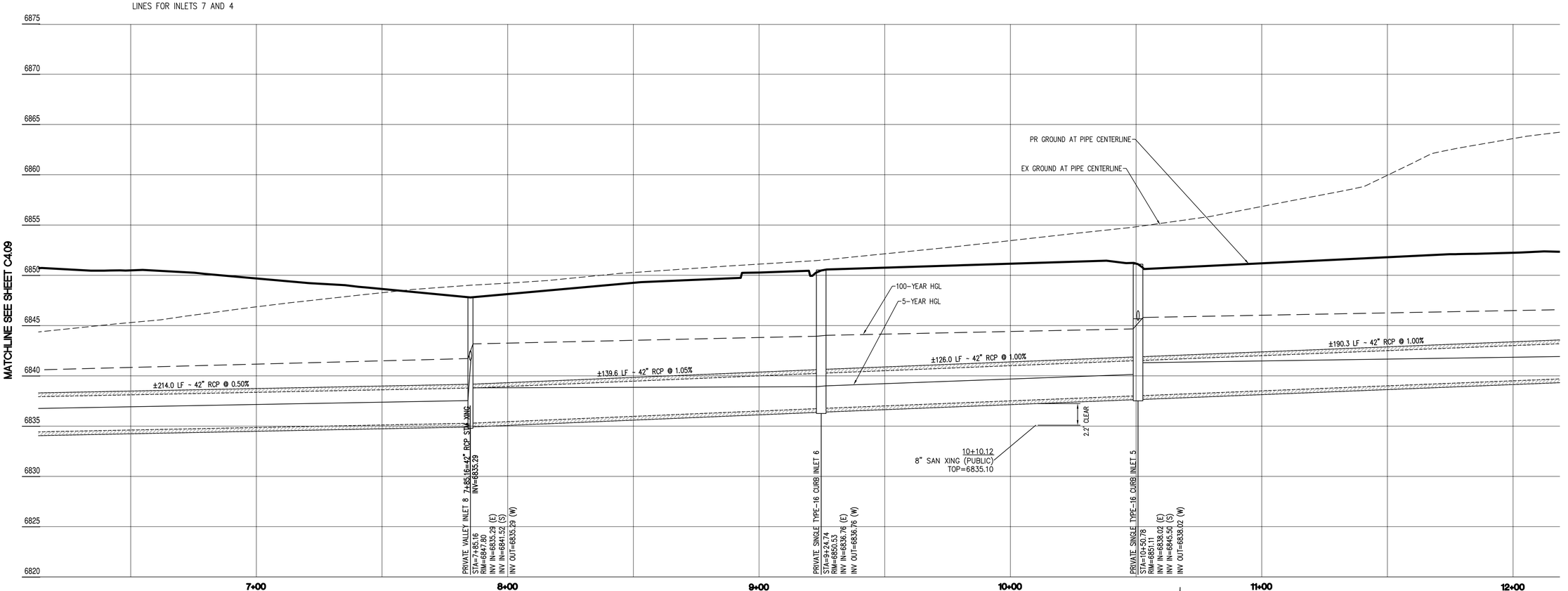
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: 1" = 20'
V: 1" = 5'
JOB No. 050895-01-001
DATE : 04/03/2023
SHEET C4.09

AR PUD 21-00460



NOTE: REFER TO SHEET 4.13
FOR PROFILES FOR BRANCH
LINES FOR INLETS 7 AND 4



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STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS
CITY OF COLORADO SPRINGS COLORADO

SEAL
COLORADO LICENSED
HOWARD EMERY
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

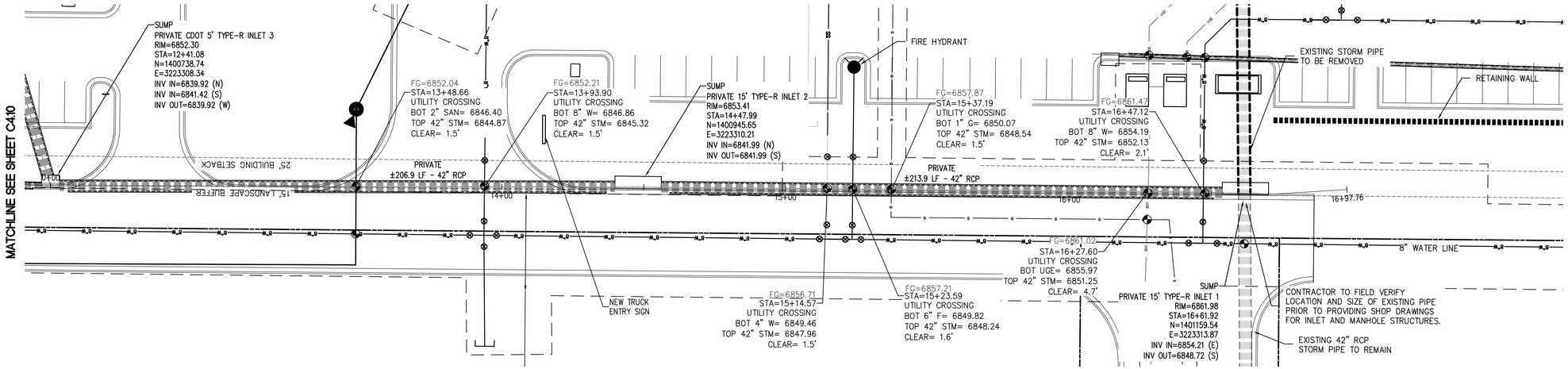
SCALE H: 1" = 20'
V: 1" = 5'

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C4.10

AR PUD 21-00460



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STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS COLORADO

SEAL
COLORADO LICENSED
VICTORIA HEIN
PROFESSIONAL ENGINEER
8-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: 1" = 20'
V: 1" = 5'

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C4.11

AR PUD 21-00460

C4.14

C4.15

C4.16

C4.17

C4.13

C4.18

NEW PYLON SIGN

NEW MOUNTABLE CURB

NEW CHAIN BARRIER WITH SIGNAGE

PROPOSED LIGHTING (TYP.). REFER TO ELECTRICAL PLANS

NEW STOP SIGN (TYP.)

NEW MONUMENT SIGN

NEW TRUCK ENTRY SIGN

COLORADO STATE HIGHWAY 21

TUTT BOULEVARD

FOURSQUARE COLLECTION AT PATHWAYS FILING NO. 1 REC. NO. 221714696

MIDTOWN COLLECTION AT PATHWAYS FILING NO. 1 REC NO. 221714684

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GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

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KEY MAP

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS
CITY OF COLORADO SPRINGS
COLORADO

SEAL

COLORADO LICENSED
HOWARD EARL ENTZ
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

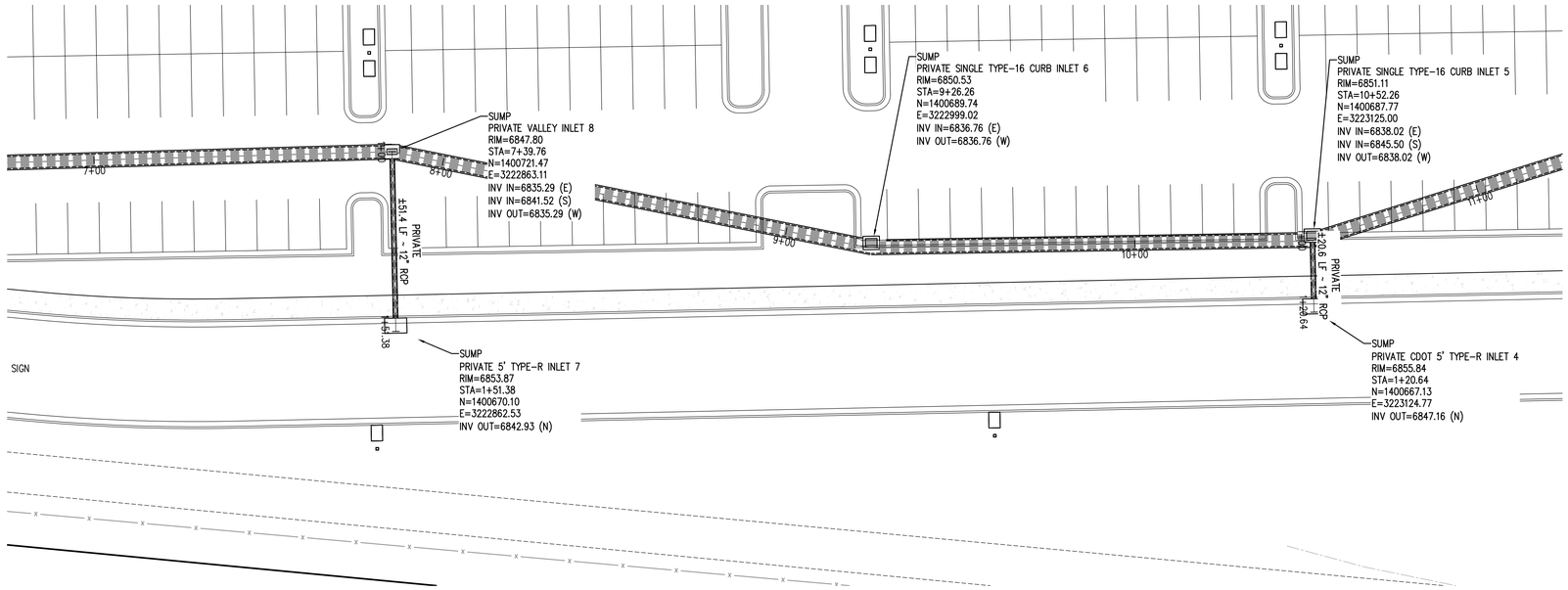
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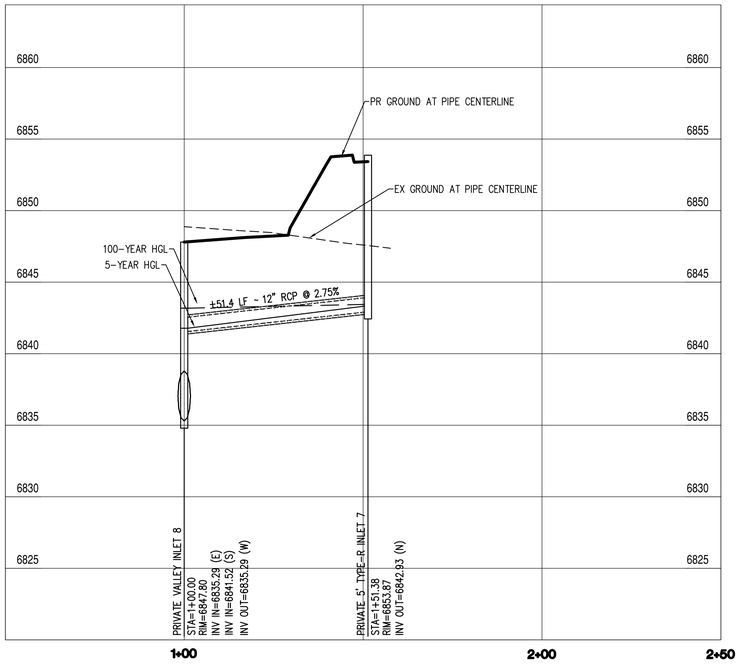
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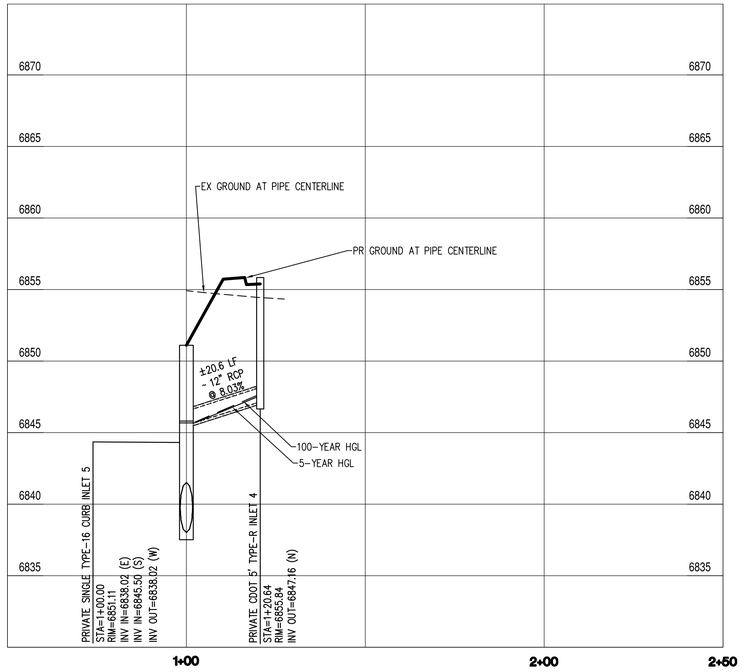
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SHEET
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PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS COLORADO

SEAL

COLORADO LICENSED
HOWARD ENGEL
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

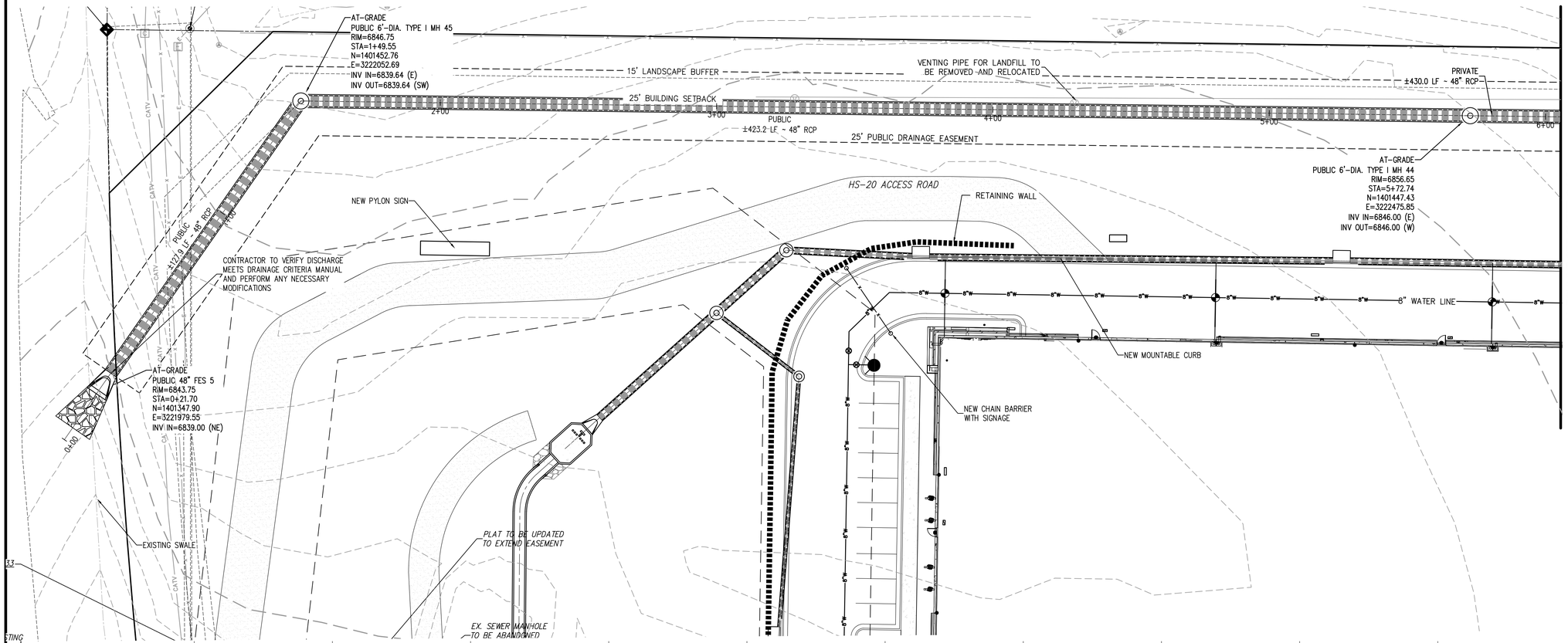
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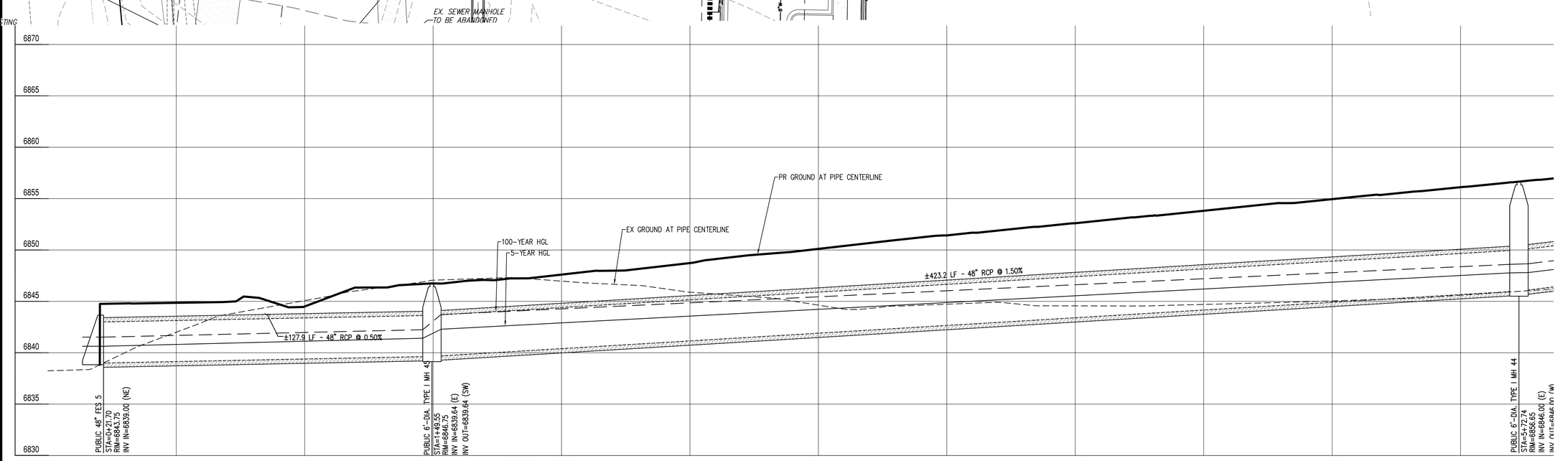
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COLORADO

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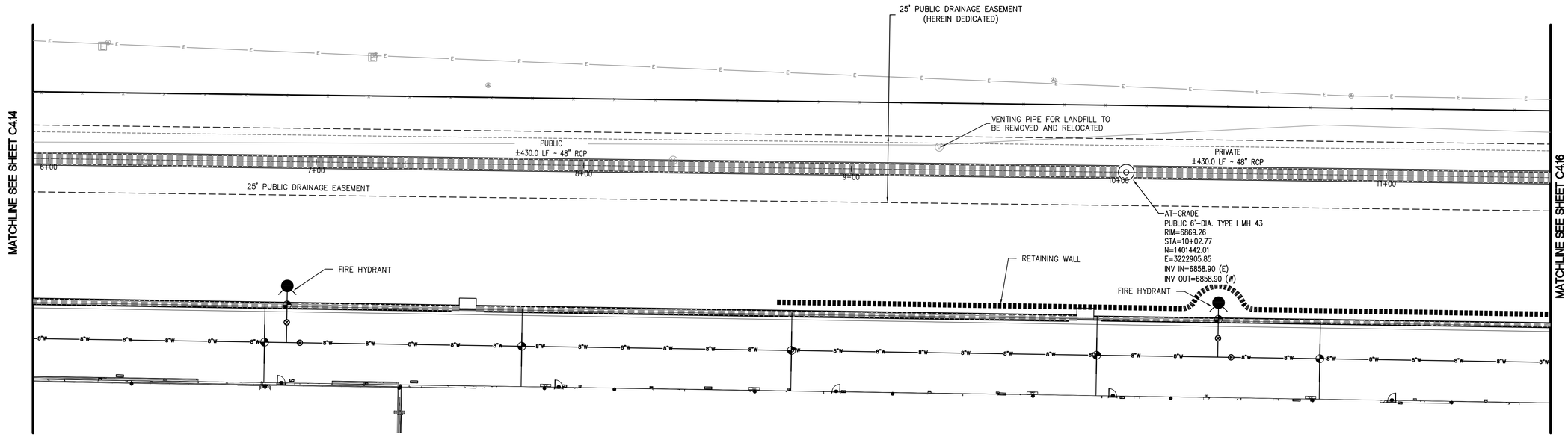
CITY OF COLORADO SPRINGS

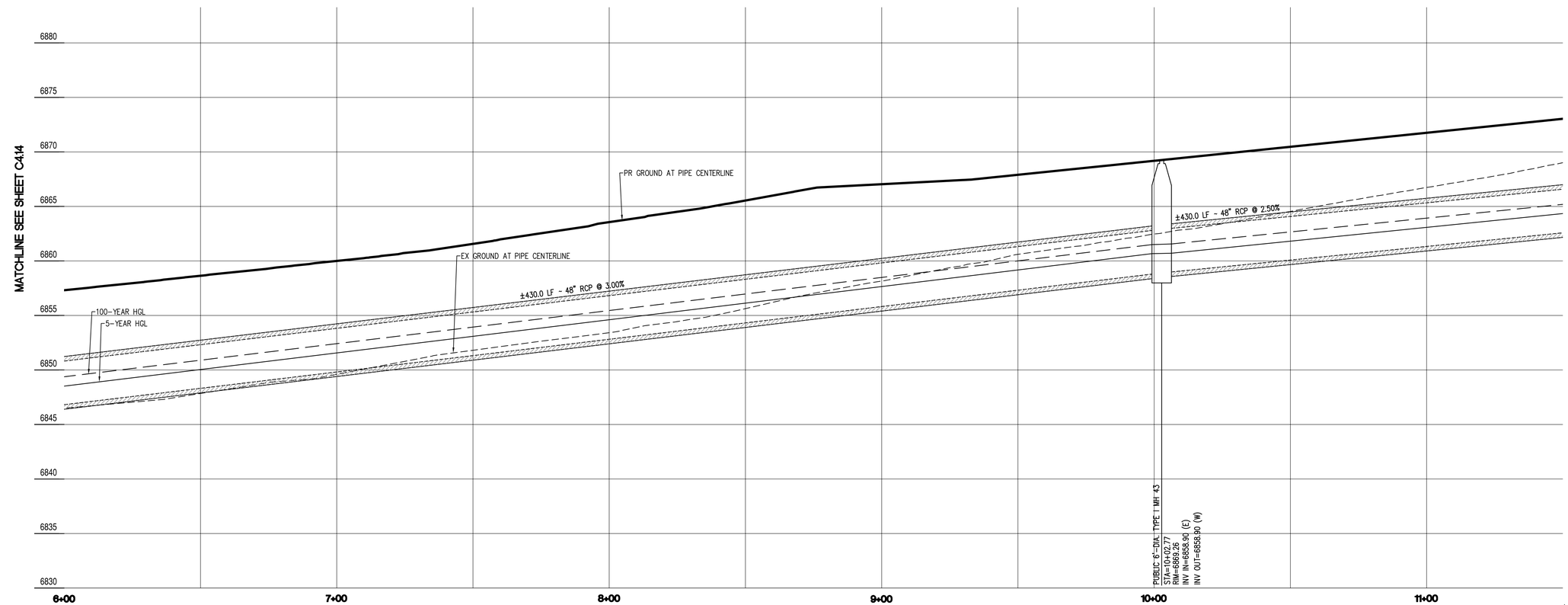
SEAL
COLORADO LICENSED
EDWARD HENSLEY
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE: H: 1" = 20' V: 1" = 5'
JOB No. 050895-01-001
DATE : 04/03/2023
SHEET C4.14

AR PUD 21-00460





THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER REVIEW DATE

DRAINAGE DESIGN:

DATE: 19 August 2024

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

GENERAL NOTES

1. ALL RCP MUST BE MINIMUM CLASS III
2. ALL STORM SEWER CONNECTIONS TO PREFABRICATED INLETS OR MANHOLES MUST USE A REINFORCED CONCRETE COLLAR
3. ALL PRIVATE TO PUBLIC STORM SEWER CONNECTIONS MUST BE INSPECTED BY ENGINEERING DEVELOPMENT REVIEW INSPECTOR
4. TYPE I MANHOLE SHALL BE USED IN ALL CASES UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. TYPE II MANHOLES SHALL BE USED ONLY WITH APPROVAL OF THE CITY ENGINEER AND ONLY WHEN THE PIPE SIZES ARE 30" OR LESS INSIDE DIAMETER.
5. REFER TO VARIANCE REQUEST TO UTILIZE ADS INSERTA-TEE IN LIEU OF TYPE II MANHOLES FOR ALL DOWNSPOUTS AND SERVICE LATERAL CONNECTIONS OF 8" AND SMALLER.

SERVICE LINE CROSSING NOTE

CAUTION: SYMBOL DENOTES UTILITY CROSSING. CONTRACTOR TO MAINTAIN FOLLOWING VERTICAL CLEARANCES FOR CROSSINGS WITH WATER SERVICE LINES:
WASTEWATER: 1.5'
STORM SEWER: 1.5'
NATURAL GAS: 1'
ELECTRIC: 1'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
HORIZONTAL SCALE: 1 inch = 20 ft.
VERTICAL SCALE: 1 inch = 5 ft.

N

STRM: STM-REV23-0330

PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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SUBMITTALS

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1	FOR CONSTRUCTION	06/05/2024

STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS
CITY OF COLORADO SPRINGS
COLORADO

SEAL

COLORADO LICENSED
JAMES W. ERICKSON
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

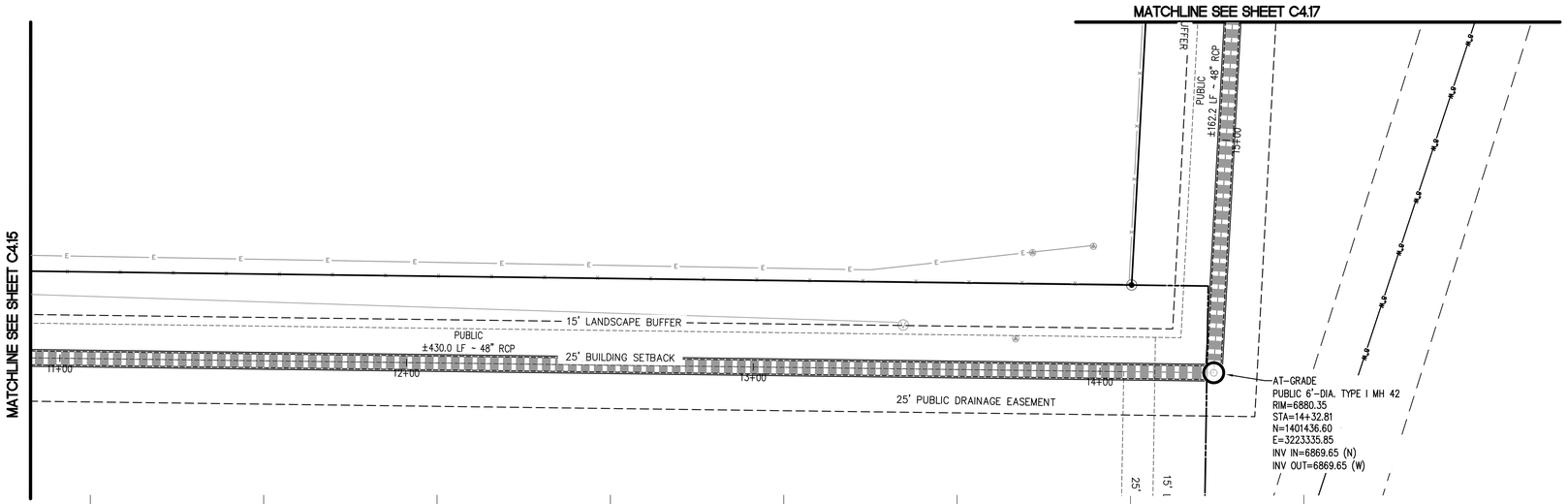
SCALE H: 1" = 20'
V: 1" = 5'

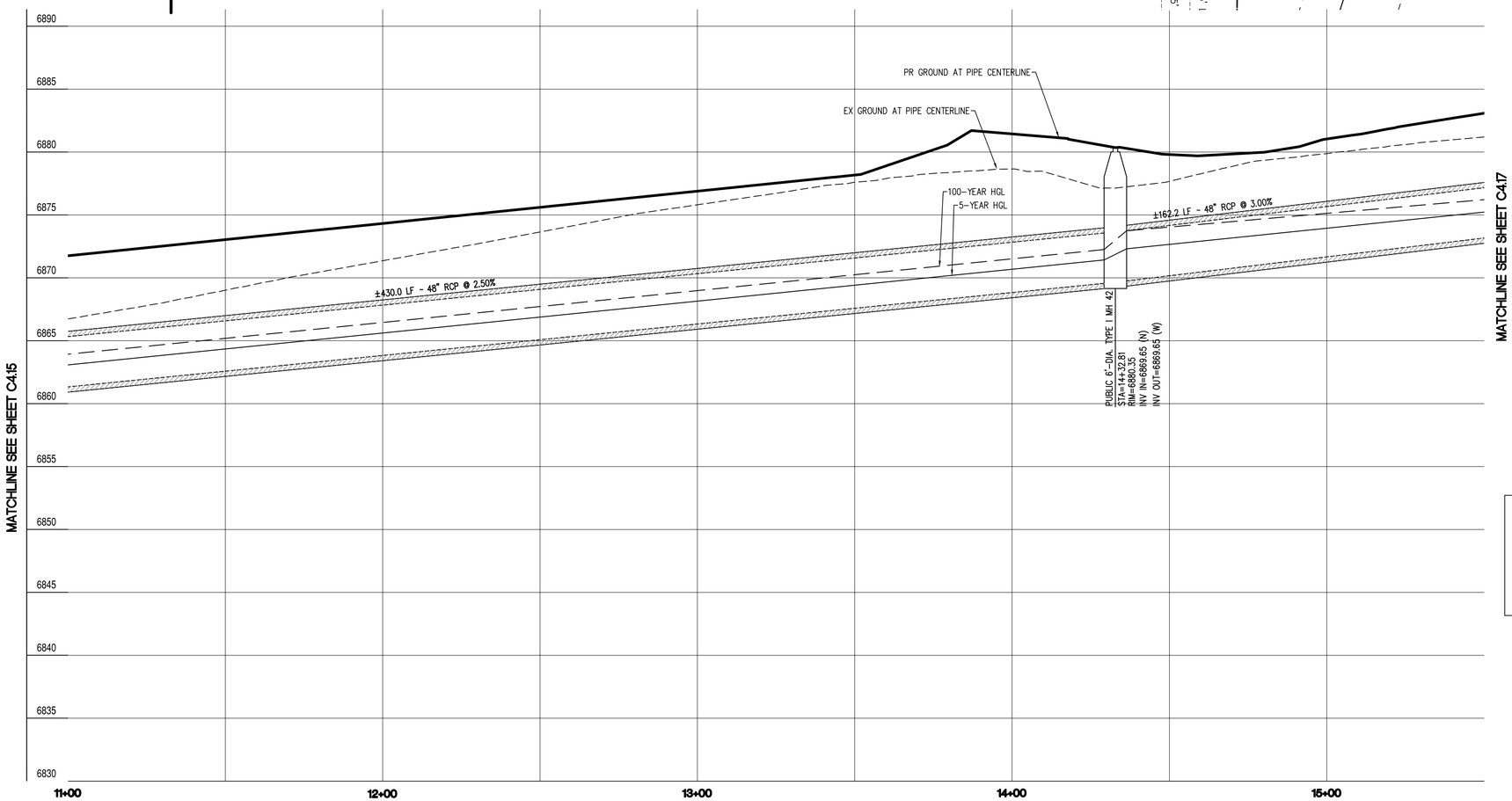
JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C4.15

AR PUD 21-00460





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ELECTRIC: 1'

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

HORIZONTAL SCALE: 1 inch = 20 ft.
VERTICAL SCALE: 1 inch = 5 ft.

N

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DRAINAGE DESIGN: [signature]

DATE: 19 August 2024

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SUBMITTALS

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1	FOR CONSTRUCTION	06/05/2024

STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS COLORADO

SEAL

COLORADO LICENSED
EDWARD ENGEL
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: 1" = 20'
V: 1" = 5'

JOB No. 050895-01-001

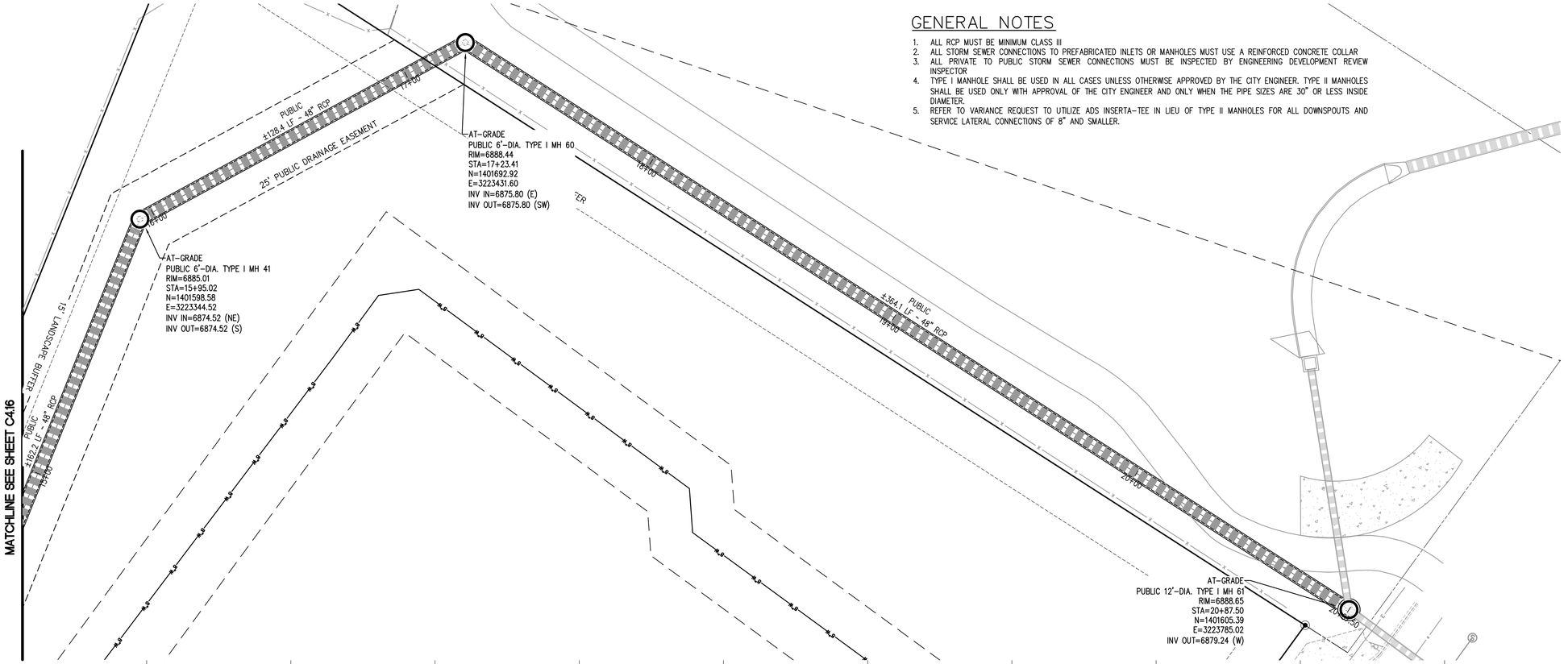
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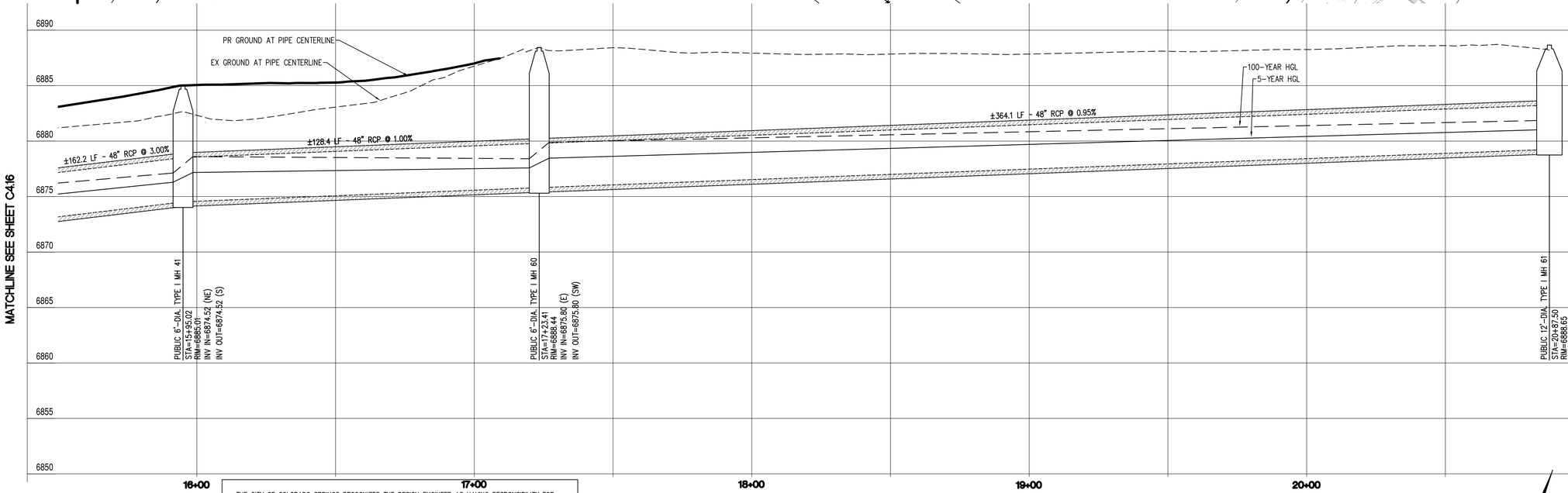
SHEET
C4.16

AR PUD 21-00460

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COLORADO

STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS
CITY OF COLORADO SPRINGS

SEAL

COLORADO LICENSED
EDWARD ENGLISH
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

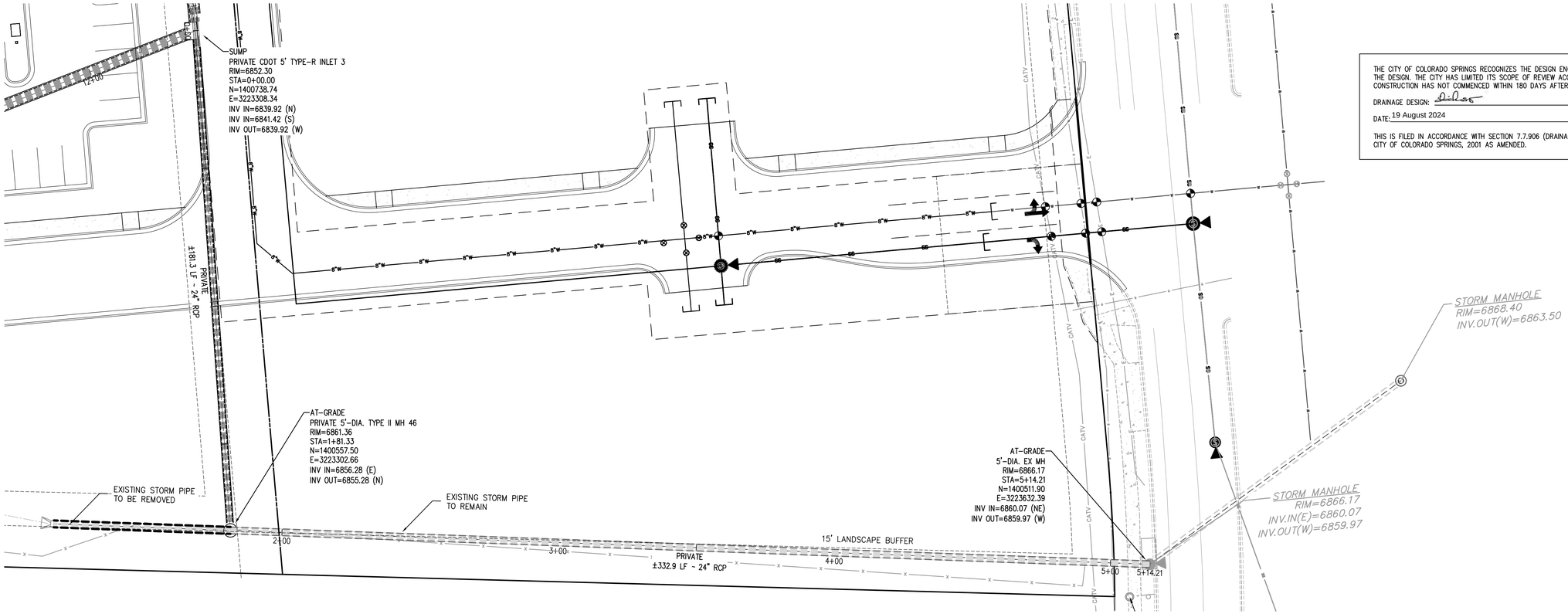
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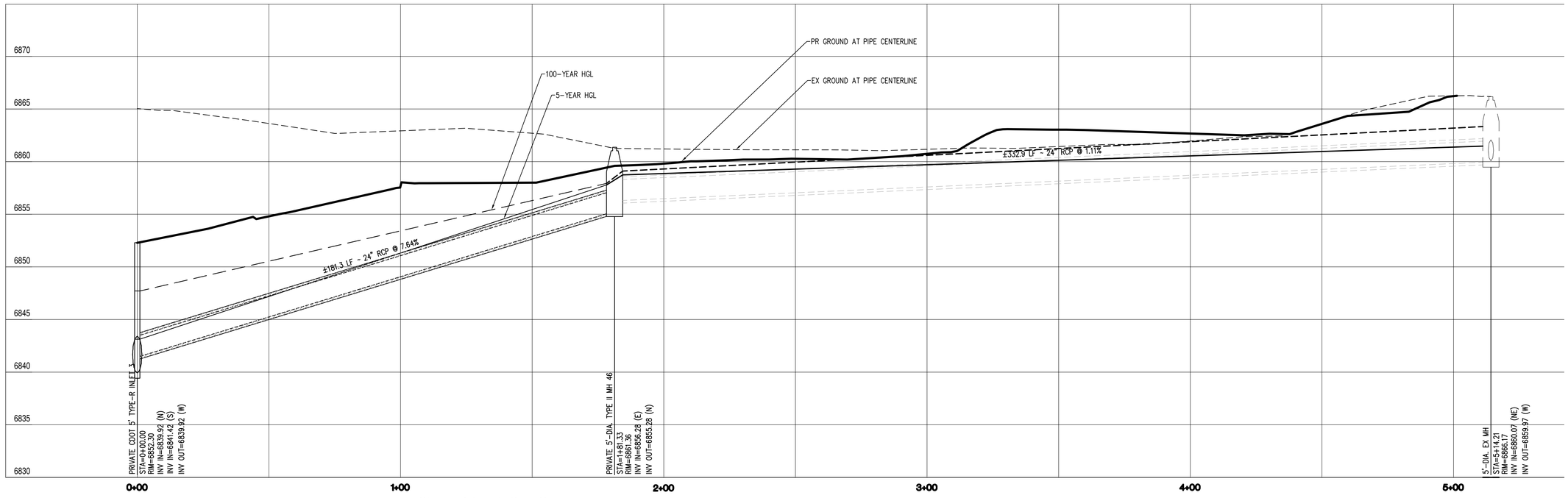
JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
C4.17

AR PUD 21-00460





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GRAPHIC SCALE

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(IN FEET)
HORIZONTAL SCALE:1 inch = 20 ft.
VERTICAL SCALE:1 inch = 5 ft.

N

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SUBMITTALS

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1	FOR CONSTRUCTION	06/05/2024

STORM PLAN AND PROFILE

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

COLORADO LICENSED
EDWARD HENRY
PROFESSIONAL ENGINEER
6-7-24

DESIGN	DRAWN	CHKD
HE	VH	HE

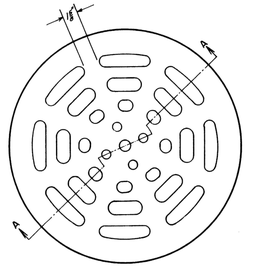
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V: 1" = 5'

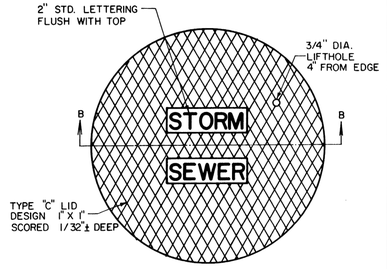
JOB No. 050895-01-001

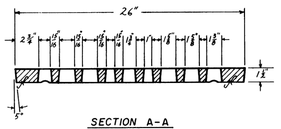
DATE : 04/03/2023

SHEET
C4.18

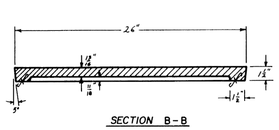
AR PUD 21-00460







(APPROX. 175 lbs)

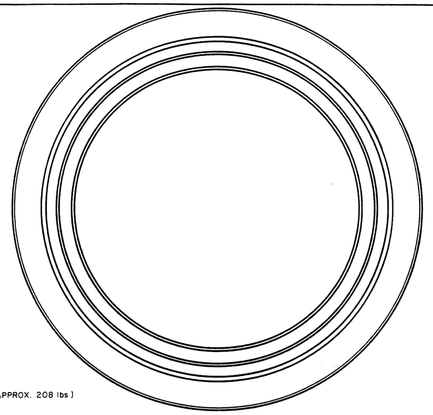


(APPROX. 144 lbs)

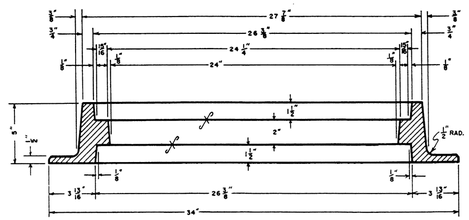
STORM SEWER GRATE & LID

1½" = 1'-0"

CITY OF COLORADO SPRINGS			
STORM SEWER GRATE & LID			
APPROVED BY: Gary R. Haynes CITY ENGINEER			
SCALE: SHOWN	DATE: 10-84	DRAWN: LTA	SHT. 1 OF 2
REVISED JAN 89 PLB		HT'S ADDED	

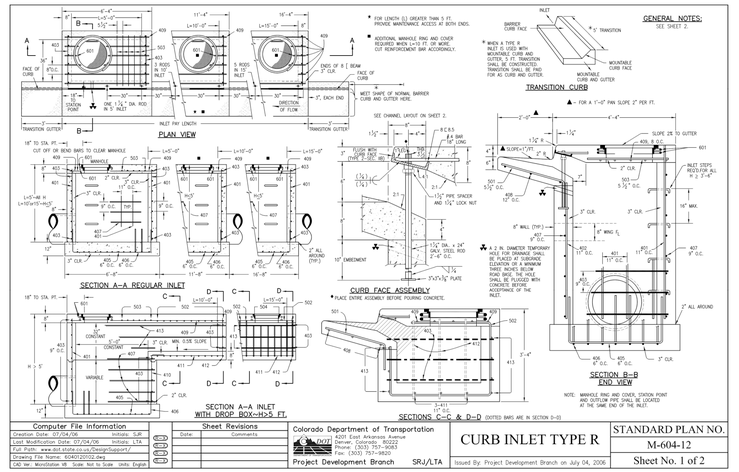


(APPROX. 208 lbs)

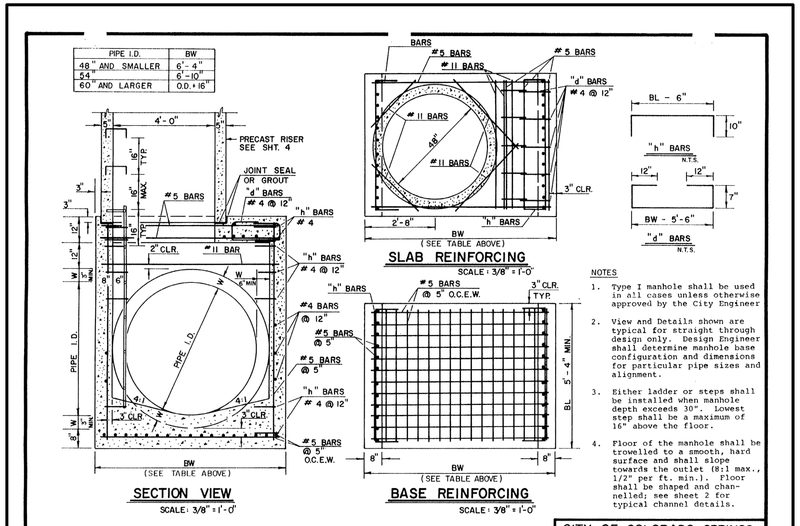


STORM SEWER REVERSIBLE FRAME

CITY OF COLORADO SPRINGS			
STORM SEWER REVERSIBLE FRAME			
APPROVED BY: Gary R. Haynes CITY ENGINEER			
SCALE: 1"=1'	DATE: 10-84	DRAWN: JF	SHT. 2 OF 2
REVISED JAN 89 PLB WEIGHT ADDED			



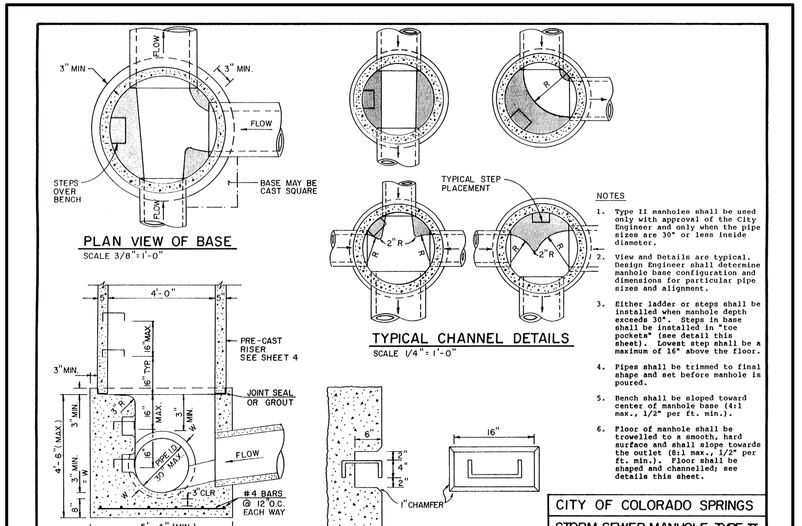
Computer File Information		Sheet Revisions			Colorado Department of Transportation	CURB INLET TYPE R	STANDARD PLAN NO.
Creation Date: 07/04/06 Initials: LJR		No.	Date	Comments	4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9083 Fax: (303) 757-9820		M-604-12
Last Modification Date: 07/04/06 Initials: LTA							
Full Path: www.dot.state.co.us/DesignSupport/							
Drawing File Name: 604012002.dwg					Project Development Branch SRJ/LTA	Issued By: Project Development Branch on July 04, 2006	Sheet No. 1 of 2
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English							



1. Type I manhole shall be used in all cases unless otherwise approved by the City Engineer.
2. View and Details shown are typical for straight through design only. Design Engineer shall determine manhole base configuration and dimensions for particular pipe sizes and alignment.
3. Either ladder or steps shall be installed when manhole depth exceeds 30". Steps in base shall be installed in "toe pockets" (see detail this sheet). Lowest step shall be a maximum of 16" above the floor.
4. Floor of the manhole shall be trowelled to a smooth, hard surface and shall slope towards the outlet (8:1 max., 1/2" per ft. min.). Floor shall be shaped and channelled; see sheet 2 for typical channel details.

TYPE I BASE MANHOLE

CITY OF COLORADO SPRINGS			
STORM SEWER MANHOLE-TYPE I			
APPROVED BY Gary R. Haynes CITY ENGINEER			
SCALE: AS SHOWN	DATE: JAN. 89	DRAWN: P.L.B.	SHEET D-20A 1 OF 4



NOTES

1. Type II manholes shall be used only with approval of the City Engineer and only when the pipe sizes are 30" or less inside diameter.
2. View and Details are typical. Design Engineer shall determine manhole base configuration and dimensions for particular pipe sizes and alignment.
3. Either ladder or steps shall be installed when manhole depth exceeds 30". Steps in base shall be installed in "toe pockets" (see detail this sheet). Lowest step shall be a maximum of 16" above the floor.
4. Pipes shall be trimmed to final shape and set before manhole is poured.
5. Bench shall be sloped toward center of manhole base (4:1 max., 1/2" per ft. min.).
6. Floor of manhole shall be trowelled to a smooth, hard surface and shall slope towards the outlet (8:1 max., 1/2" per ft. min.). Floor shall be shaped and channelled; see details this sheet.

CITY OF COLORADO SPRINGS			
STORM SEWER MANHOLE-TYPE II			
APPROVED BY Gary R. Haynes CITY ENGINEER			
SCALE: AS SHOWN	DATE: JAN. 89	DRAWN: P.L.B.	SHEET D-20B 2 OF 4

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DRAINAGE DESIGN: D.L.S.

DATE: 19 August 2024

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SUBMITTALS		
SUBMITTAL	DESCRIPTION	DATE
1	FOR CONSTRUCTION	06/05/2024

DETAILS

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS

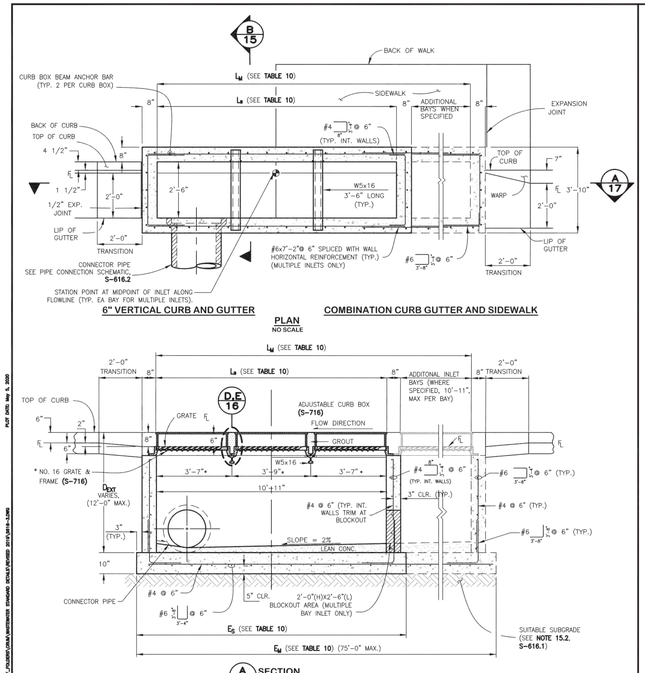
COLORADO

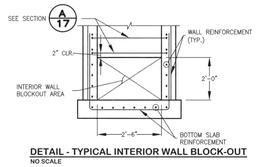
SEAL

COLORADO LICENSED
EDWARD EHRLICH
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE
SCALE	H: N/A V: N/A	
JOB No.	050895-01-001	
DATE :	04/03/2023	
SHEET	C4.19	

AR PUD 21-00460





DETAIL - TYPICAL INTERIOR WALL BLOCK-OUT
NO SCALE

TRIPLE NUMBER 16 INLET NOTES:

17.1 SEE MCPW STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11.05 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

17.2 SEE GENERAL NOTES ON **S-616.1**

17.3 EXPANSION JOINT MATERIAL SHALL BE PLACED FULL DEPTH OF THE CURB AND GUTTER, SIDEWALK, CONCRETE PAVEMENT, AS APPLICABLE. THE TOP PORTION OF THE JOINT SHALL BE SEALED WITH SILICONE SEALANT.

17.4 SEE **S-616.2** FOR REBAR PLACEMENT AROUND CONNECTOR PIPE.

* STANDARD DETAIL **S-716** APPLIES TO ALL OF THE GRATE & FRAME GEOMETRIC DIMENSIONS FOR THE TRIPLE NUMBER 16 INLET EXCEPT FOR THE FRAME LENGTH. FRAME LENGTH SHOULD BE MANUFACTURED FOR THE DIMENSIONS CALLED OUT ON THIS SHEET.

TABLE 10. NO. 16 TOTAL INLET LENGTH

INLET CONFIGURATION	L_B OR L_W INLET LENGTH	* E_B OR E_W TOTAL BOTTOM SLAB LENGTH
TRIPLE NO. 16	10'-11"	12'-9"
NO. 16 3-3-2 (EXAMPLE CONFIGURATION)	10'-11", 10'-11", 7'-1"	32'-1"
NO. 16 _-_-_ (CONFIGURATION TEMPLATE)	L_B, L_B, L_B	=3"+8"+L_B+8"+L_B+8"+L_B+8"+3"

*MAX. BOTTOM SLAB LENGTH = 75'-0"

CITY AND COUNTY OF DENVER
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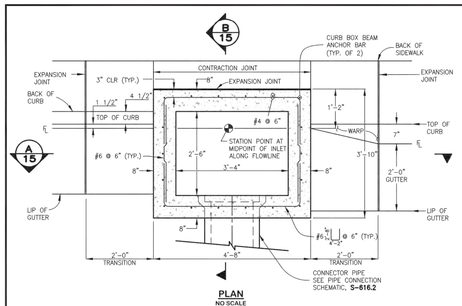
STANDARD DETAILS
TRIPLE NUMBER 16 INLET
S-616.3

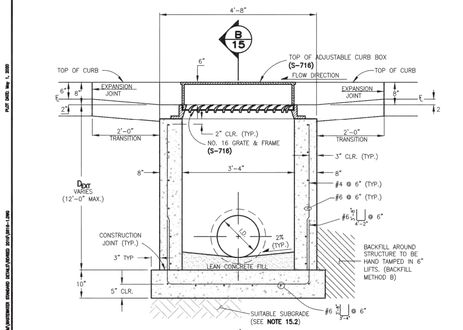
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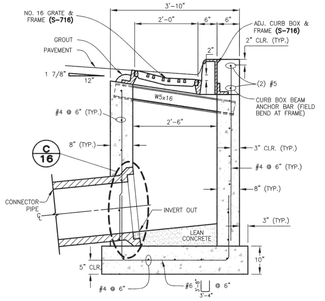
JUNE 2020

17

PLOT DATE: Mar 4, 2020
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SINGLE NUMBER 16 INLET NOTES:

15.1 FOR PAYMENT PURPOSES, INLET STRUCTURES SHALL ALSO INCLUDE 2'-0" CURB & GUTTER TRANSITION SECTION AT EACH END OF INLET PLUS SIDEWALK SECTIONS WHERE REQUIRED BEHIND INLET STRUCTURE AND TRANSITION SECTIONS.

15.2 SUB-GRADE SHALL BE 6-12" OF CLASS B BEDDING COMPACTED PER MCPW STANDARD CONSTRUCTION SPECIFICATIONS, ON SUITABLE, UNDISTURBED MATERIAL. IF SUBGRADE IS UNSUITABLE, THE SUBGRADE SHALL BE OVEREXCAVATED AND STABILIZED WITH CLASS B BEDDING PER MCPW STANDARD CONSTRUCTION SPECIFICATIONS.

15.3 FLOOR SLOPE MAY BE POURED MONOLITHIC WITH BASE.

15.4 Sc = SLOPE OF CONNECTOR = 2% MIN.

15.5 UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS OR OTHERWISE APPROVED, ALL NO. 16 INLETS SHALL BE CONSTRUCTED WITH AN ADJUSTABLE CAST IRON CURB BOX (**S-716**).

15.6 DESIGN CONDITIONS FOR INLET ALLOWS DEPTHS OF 12'-0" (MAX.). FOR INLETS MORE THAN 12'-0" FEET IN DEPTH, SHOP DRAWINGS AND DESIGN ANALYSIS SHALL BE SUBMITTED FOR APPROVAL.

15.7 ALL REINFORCING STEEL SHALL BE ASTM, A-615, GRADE 60 DEFORMED BARS. DIAMETER OF BEND MEASURED ON THE INSIDE OF THE BAR SHALL BE A MINIMUM OF 6 BAR DIAMETER.

15.8 ALL SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017.

15.9 NO FORMWORK SHALL WORK REMAIN INSIDE STRUCTURE WHEN COMPLETE.

15.10 CONCRETE MIX FOR GUTTER AND ANY ADDED STREET PANELS SHALL MEET CLASS 2 REQUIREMENTS FOR SULFATE RESISTANCE IN ACCORDANCE WITH CDOT STANDARD 601.04 ON STREETS WHERE MAGNESIUM CHLORIDE CHEMICAL DEICERS ARE APPLIED. REFER TO MCPW STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11 FOR REQUIREMENTS FOR SULFATE RESISTANCE IN CONCRETE EXPOSED TO EARTH.

15.11 SPLICING OF REINFORCING STEEL SHALL BE PERMITTED ONLY WHERE DETAILED IN DRAWINGS.

15.12 INLET WALLS SHALL BE FORMED BOTH INSIDE AND OUTSIDE. CASTING OF SIDEWALLS AGAINST EARTH IS NOT PERMITTED.

15.13 LEAN CONCRETE FILL TO BE F'C = 2000 PSI. INLET STRUCTURE, LID, STREET CURB AND GUTTER, AND PAVEMENT TO BE F'C = 4,500 PSI, MAX W/CM = 0.45 AND AIR ENTRAINED 5% TO 8%. F'C = 28 DAY COMPRESSIVE STRENGTH REQUIREMENT FOR MIX DESIGN, FIELD ACCEPTANCE.

15.14 FOR THROUGH STRUCTURES, BENCHES MUST COME TO TOP OF PIPE.

15.15 NO CORNER PENETRATIONS ON STRUCTURE.

15.16 SEE MCPW STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11.04 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

15.17 SEE **S-616.2** FOR REBAR PLACEMENT AT WALL PENETRATION DETAIL.

15.18 REFER TO "TRANSPORTATION STANDARDS AND DETAILS FOR THE ENGINEERING DIVISION" FOR ADJACENT ROADWAY AND SIDEWALK DESIGN CRITERIA.

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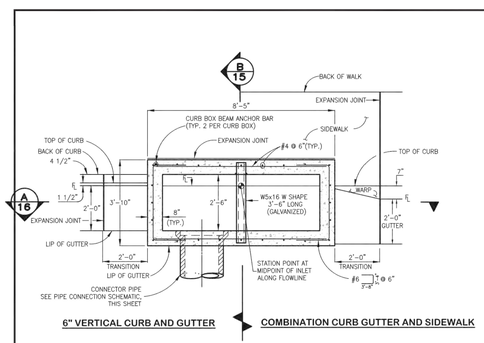
STANDARD DETAILS
SINGLE NUMBER 16 INLET
S-616.1

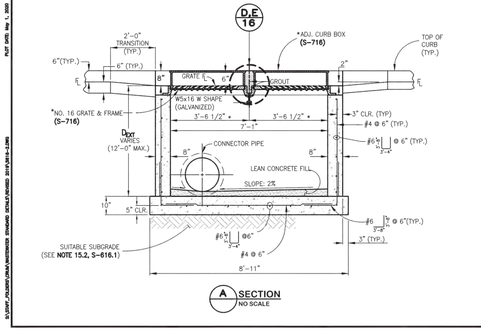
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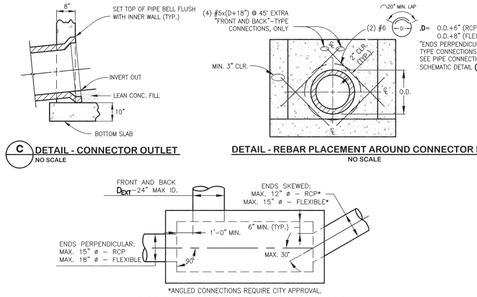
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15

PLOT DATE: Mar 4, 2020
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DOUBLE NUMBER 16 INLET NOTES:

16.1 SEE DETAIL SPECIFICATIONS SECTION 11.05 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

16.2 SEE GENERAL NOTES ON **S-616.1.**

16.3 EXPANSION JOINT MATERIAL SHALL BE PLACED FULL DEPTH OF THE CURB AND GUTTER, SIDEWALK, CONCRETE PAVEMENT, AS APPLICABLE. THE TOP PORTION OF THE JOINT SHALL BE SEALED WITH SILICONE SEALANT.

16.4 SEE **S-616.1** FOR REBAR PLACEMENT AT WALL PENETRATION DETAIL.

* STANDARD DETAIL **S-716** APPLIES TO ALL OF THE GRATE & FRAME GEOMETRIC DIMENSIONS FOR THE DOUBLE NUMBER 16 INLET EXCEPT FOR THE FRAME LENGTH. FRAME LENGTH SHOULD BE MANUFACTURED FOR THE DIMENSIONS CALLED OUT ON THIS SHEET.

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STANDARD DETAILS
DOUBLE NUMBER 16 INLET
S-616.2

ASP/JDMT

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16

PLOT DATE: Mar 4, 2020
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THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER REVIEW DATE

DRAINAGE DESIGN: _____

DATE: 19 August 2024

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

STRM: STM-REV23-0330

PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

SUBMITTALS

SUBMITAL	DESCRIPTION	DATE
1	FOR CONSTRUCTION	06/05/2024

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DETAILS

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS COLORADO

SEAL

COLORADO LICENSED
RICHARD E. HENRY
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

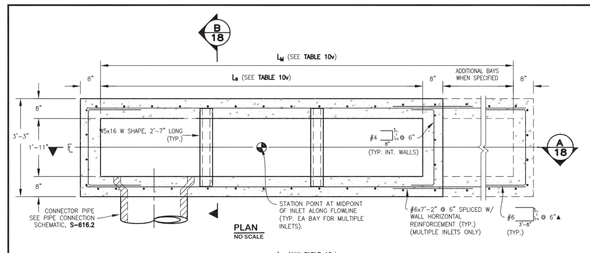
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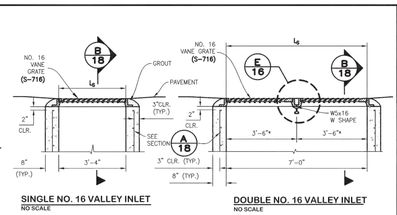
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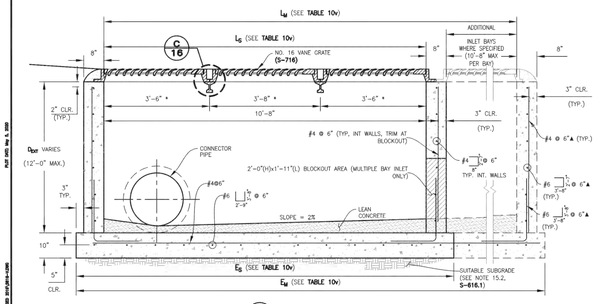
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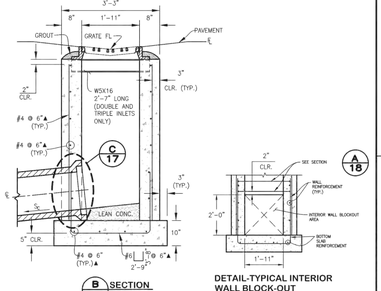
SHEET
C4.20

AR PUD 21-00460









NUMBER 16 VALLEY INLET NOTES:

18.1 SEE WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11.05 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAILS WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

18.2 SEE GENERAL NOTES ON **S-616.1**

18.3 SEE STANDARD DETAIL **S-716** FOR FRAME AND GRATE DETAILS.

18.4 SEE STANDARD DETAIL **S-616.1** FOR ADDITIONAL STRUCTURE AND BACKFILL NOTES.

* STANDARD DETAIL **S-716** APPLIES TO ALL OF THE GRATE AND FRAME GEOMETRIC DIMENSIONS FOR THE NUMBER 16 VALLEY INLET EXCEPT FOR THE FRAME LENGTH. FRAME LENGTH SHOULD BE MANUFACTURED FOR THE DIMENSIONS CALLED OUT ON THIS SHEET.

▲ REINFORCEMENT ALSO APPLICABLE TO SINGLE AND DOUBLE NO. 16 VALLEY INLETS.

TABLE 10v. NO. 16 VALLEY TOTAL INLET LENGTH

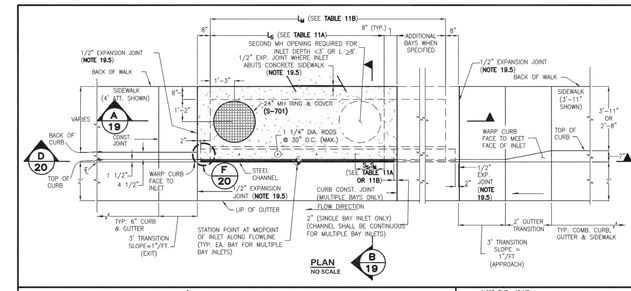
INLET CONFIGURATION	L_A OR L_B INLET LENGTH	W_G OR E_G TOTAL BOTTOM SLAB LENGTH
TRIPLE NO. 16 VALLEY	10'-8"	12'-6"
NO. 16 VALLEY 3-3-2 (EXAMPLE CONFIGURATION)	10'-8", 10'-8", 3'-0"	31'-6"
NO. 16 VALLEY _____ (CONFIGURATION TEMPLATE)	L_A, L_B, L_B, ____	=3'+8"+L_A+8"+L_B+8"+L_B+8"+3"

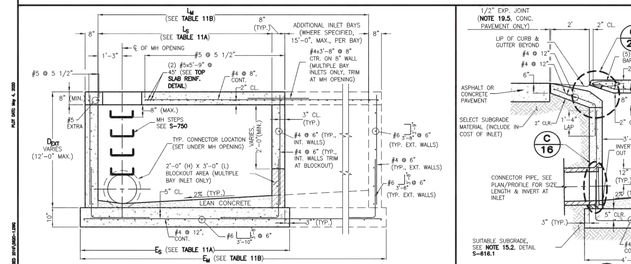
*MAX. BOTTOM SLAB LENGTH = 75'-0"

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STANDARD DETAILS
SINGLE-DOUBLE-TRIPLE NUMBER 16 INLET VALLEY
S-616V

APD | ASP/JDMT | ---- | 10/01/Dec | JUNE 2020 | 18





NUMBER 14 INLET NOTES:

19.1 SEE WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11.05 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

19.2 SEE GENERAL NOTES ON **S616.1.**

19.3 LENGTH OF STEEL CHANNEL = L_B + 12" WHEN MULTIPLE BAY INLET IS TO BE CONSTRUCTED. THE STEEL CHANNEL SHALL NOT BE SPLICED UNLESS APPROVED BY THE CITY.

19.4 CONCRETE MIX FOR LID, GUTTER, AND ANY ADDED STREET PANELS SHALL MEET CLASS 2 REQUIREMENTS FOR SULFATE RESISTANCE IN ACCORDANCE WITH CDOT STANDARD 601.04 ON STREETS WHERE MAGNESIUM CHLORIDE CHEMICAL DEICERS ARE APPLIED. REFER TO THE DETAILS SPECIFICATIONS SECTION 11 FOR REQUIREMENTS FOR SULFATE RESISTANCE IN CONCRETE EXPOSED TO THE EARTH.

19.5 EXPANSION JOINT MATERIAL SHALL BE PLACED FULL DEPTH OF THE CURB AND GUTTER, SIDEWALK, CONCRETE PAVEMENT, AND INLET THROAT OR WALL, AS APPLICABLE. THE TOP PORTION OF THE JOINT SHALL BE SEALED WITH SILICONE SEALANT.

19.6 LEAN CONCRETE FILL TO BE f'c = 2,000 psi. INLET STRUCTURE, STREET CURB AND GUTTER, LID, AND PAVEMENT TO BE f'c = 4,500 psi, MAX W/CM = 0.45 AND AIR ENTRAINED 5% TO 8%. f'c = 28 DAY COMPRESSIVE STRENGTH REQUIREMENT FOR MIX DESIGN FIELD ACCEPTANCE.

TABLE 11A. NO. 14 SINGLE BAY INLET

INLET LENGTH (L_B)	DIMENSION E_G	F_S	S_B	NO. OF RODS	MINIMUM* CONNECTOR SIZE (DIAMETER)
6'	7'-10"	1'-4"	2'-0"	2	15"
8'	10'-10"	1'-4"	2'-0"	4	18"
12'	13'-10"	1'-4"	2'-0"	5	24"
15'	16'-10"	1'-4"	2'-0"	5	24"

TABLE 11B. NO. 14 MULTIPLE BAY INLET

TOTAL INTERIOR LENGTH (L_W)	NO. BAYS 'N'	INLET LENGTH (L_B)	DIMENSION E_G	L_W	S_B	NO. OF RODS	MIN.* CONNECTOR SIZE DIA.
30'	2	30'-8"	32'-6"	32'-0"	1'-6"	14	24"
45'	3	46'-4"	48'-2"	47'-8"	1'-6"	21	24"
60'	4	62'-0"	63'-10"	63'-4"	1'-6"	28	24"
75'	5	77'-8"	79'-6"	79'-0"	1'-6"	35	24"

* INDICATES MINIMUM SIZE CONNECTOR PIPE. ACTUAL SIZE TO BE DETERMINED BY HYDRAULIC DESIGN CONDITIONS, SUBJECT TO APPROVAL BY THE CITY.

PIPE CONNECTION SCHEMATIC (NO. 14 INLET)

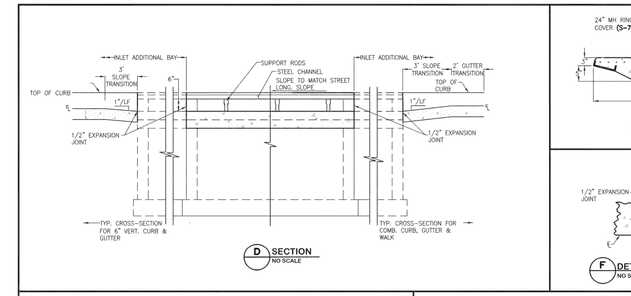
THIS DIAGRAM IS PROVIDED FOR GENERAL GUIDANCE ONLY. THE DESIGNER IS RESPONSIBLE FOR VERIFYING PROJECT SPECIFIC GEOMETRY.

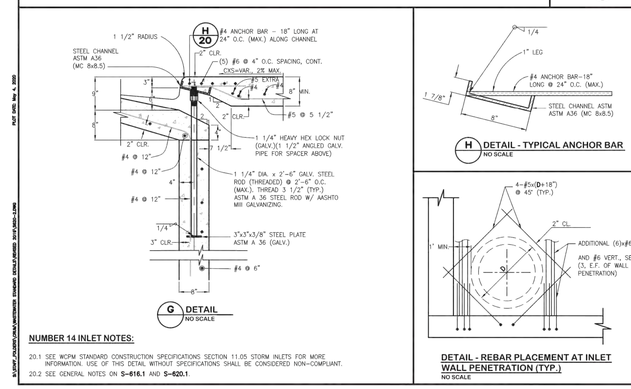
■ ANGLED CONNECTIONS REQUIRE PUBLIC WORKS APPROVAL.

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STANDARD DETAILS
NUMBER 14 INLET
PAGE 1
S-620.1

LBJ | ASP | ---- | 10/01/Dec | JUNE 2020 | 19





NUMBER 14 INLET NOTES:

20.1 SEE WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11.05 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

20.2 SEE GENERAL NOTES ON **S-616.1** AND **S-620.1**

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STANDARD DETAILS
NUMBER 14 INLET
PAGE 2
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LBJ | ASP | ---- | 10/01/Dec | JUNE 2020 | 20

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DRAINAGE DESIGN: _____

DATE: 19 August 2024

THIS IS FILED IN ACCORDANCE WITH SECTION 7.7.906 (DRAINAGE ORDINANCE) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2001 AS AMENDED.

~~STRM: STM-REV23-0330~~

PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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SUBMITTALS

SUBMITTAL	DESCRIPTION	DATE
1	FOR CONSTRUCTION	06/05/2024

DETAILS

AFW - COLORADO SPRINGS
PRIVATE STORMWATER PLANS

CITY OF COLORADO SPRINGS — COLORADO

SEAL

COLORADO LICENSED
EDWARD ENGEN
6-7-24
PROFESSIONAL ENGINEER

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: N/A V: N/A

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET C4.21

AR PUD 21-00460

STANDARD M-603-1

(SHEET 1 OF 2)
(JANUARY, 1982)

TABLE I — 2½" x ½" CORRUGATIONS, ROUND STEEL PIPE

½" MIN. COVER

PIPE DIA. in.	HEIGHT OF COVER LIMITS, H ft. WALL THICKNESS (GAUGE) SPAN x RISE	16GA	14GA	12GA	10GA	8GA
15	22	80	100	100	100	100
18	21	67	86	70	94	
21	20	57	74	60	81	
24	44	50	65	68	71	
30	37	40	52	54	58	
36	30	33	43	45	47	
42	24	47	37	41	41	
48	30	41	65	68	71	
54		36	57	60	63	
60			51	54	57	
66				49	51	
72				45	47	
78					43	
84					40	

TABLE II — 3" x 1" CORRUGATIONS, ROUND STEEL PIPE

PIPE DIA. in.	½" MIN. COVER	HEIGHT OF COVER LIMITS, H ft. WALL THICKNESS (GAUGE)				
		16GA	14GA	12GA	10GA	8GA
36	12	39	50	50	50	50
42	12	33	44	44	44	44
48	12	29	39	39	39	39
54	12	25	34	34	34	34
60	12	21	29	29	29	29
66	12	18	25	25	25	25
72	12	15	22	22	22	22
78	12	24	33	33	33	33
84	12	22	30	30	30	30
90	12	19	27	27	27	27
96	12	17	24	24	24	24
102	18		22	22	22	22
108	18			20	20	20
114	18			18	18	18
120	18			17	17	17

TABLE III — 125mm x 25mm CORRUGATIONS, ROUND STEEL PIPE

PIPE DIA. mm.	½" MIN. COVER	HEIGHT OF COVER LIMITS, H m. WALL THICKNESS (GAUGE)				
		1.6MM	2.0MM	2.5MM	3.0MM	4.0MM
300	12	22	22	22	22	22
375	12	22	22	22	22	22
450	12	22	22	22	22	22
525	12	22	22	22	22	22
600	12	22	22	22	22	22
675	12	22	22	22	22	22
750	12	22	22	22	22	22
825	12	22	22	22	22	22
900	12	22	22	22	22	22
975	12	22	22	22	22	22
1050	18		22	22	22	22
1200	18			22	22	22

* Top of Pipe to Top of Subgrade

ROUND PIPE — STEEL
PIPE-ARCH — STEEL

TABLE IV — 2½" x ½" CORRUGATIONS, PIPE-ARCH

½" MIN. COVER

PIPE SIZE* in. SPAN x RISE	EQUIV. DIA.	WALL THICKNESS	HEIGHT OF COVER LIMITS, H ft. CORNER BEARING PRESSURE 2 Tons Per Sq. Ft.	
			CORNER RADIUS	
17 x 13	15	0.064	5"	11
21 x 15	18	0.064	5"	9
24 x 18	21	0.064	5"	7
28 x 20	24	0.064	5"	6
35 x 24	30	0.064	5"	5
42 x 29	36	0.064	5"	4
49 x 33	42	0.079	5"	3
57 x 38	48	0.109	5"	5
64 x 43	54	0.109	5"	4
71 x 47	60	0.138	5"	4
77 x 52	66	0.166	5"	3
83 x 57	72	0.166	5"	3

Adopted from and in conformance with the State of Colorado Department of Highways with Revisions by the City of Colorado Springs Engineering Division

TABLE V — 3" x 1" & 125 mm x 25 mm CORRUGATIONS, STEEL PIPE-ARCH ②

PIPE SIZE* in. SPAN x RISE	EQUIV. DIA. in.	WALL THICKNESS in.	R DIM. CORNER mm.	HEIGHT OF COVER LIMITS, H ft. CORNER BEARING PRESSURE 2 Tons Per Sq. Ft.
90 x 36	36	0.064	12	6"
103 x 44	42	0.064	12	6"
112 x 51	48	0.064	12	6"
122 x 58	54	0.064	12	6"
58 x 51	60	0.064	12	18"
73 x 55	65	0.064	12	12"
81 x 58	72	0.064	12	12"
95 x 66	78	0.064	12	12"
105 x 67	84	0.075	12	12"
103 x 71	90	0.109	18	18"
112 x 75	96	0.109	18	18"
117 x 79	102	0.109	18	18"
127 x 83	108	0.138	24	18"
137 x 87	114	0.138	24	18"
142 x 91	120	0.168	24	18"

② PIPE-ARCH IS INTENDED FOR USE WHERE MINIMUM COVER REQUIRED FOR ROUND PIPE MAY NOT BE MET.
WHEN COVER EXCEEDS 15FT.- USE ROUND PIPE.

▼ SEE THIRD GENERAL NOTE

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS APPLICABLE TO THE PROJECT.

THE TABLES ON THESE SHEETS SHOW MINIMUM THICKNESS FOR STRUCTURAL REQUIRE-MENTS ONLY. THICKNESS SHALL BE INCREASED WHERE ABRASIVE OR CORROSIVE CONDITIONS ARE ANTICIPATED. HEAVIER METAL AND/OR PAVED INVERTS SHALL BE USED WHERE SITE INVESTIGATIONS INDICATE CORROSIVE AND/OR ABRASIVE CONDITIONS.

▼ COVER GREATER THAN 40 FT. SHALL BE USED ONLY AFTER THOROUGH INVESTIGATION OF FOUNDATION MATERIAL.

PIPE SHALL BE FURNISHED WITH LONGITUDINAL SEAMS AT THE SIDES OR QUARTER POINTS BUT NOT ALONG TOP OF VERTICAL AXIS.

~~SPECIAL PLANT-MADE OR FIELD-FABRICATED BENDS, TRANSITIONS, OR ELBOWS SHALL BE USED WHERE NECESSARY TO CONFORM TO ALIGNMENT OR TO AVOID OBSTRUCTIONS. NO EXTRA PAYMENT WILL BE MADE FOR SUCH SPECIAL PIPE, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONTRACT.~~

~~WHEN A CULVERT IS TO BE EXTENDED WITH PIPE OF A DIFFERENT MATERIAL, THE CONNECTION SHALL BE MADE WITH A SPECIAL FITTING OR ADAPTER.~~

~~ELEVATIONS AND CAP SIZES (INVERT SHALL MATCH THE DOWNSTREAM) AND THE SPAN AND RISE DIMENSIONS OF THE CULVERTS TO BE EXTENDED.~~

~~THE MINIMUM COVER, EXCLUDING PAVEMENT, OVER CORRUGATED METAL PIPE CULVERT SHALL BE AS STATED BY THE ENGINEER, BUT SHALL NOT BE LESS THAN SHOWN IN TABLE I, II, III, IV, AND V.~~

~~INSTALLATION OF CULVERTS SHALL BE IN ACCORDANCE WITH SECTION 603.~~

TRENCH INSTALLATION:
INSTALLATION AND MINIMUM FILL HEIGHTS SHALL CONFORM TO THE "A" STANDARD FOR "PIPE SEWER IN TRENCH".

CITY OF COLORADO SPRINGS
METAL CULVERT PIPE
APPROVED BY Joseph R. Hayes
CITY ENGINEER
SCALE: NO SCALE | DATE: JAN. 90 | DRAWN: PL.B. | SHEET D - 26

STANDARD M-510-1

(SHEET 1 OF 2)
(JANUARY, 1982)

TABLE I — 6" x 2" CORRUGATIONS, ROUND STEEL PIPE

PIPE DIA. in.	½" MIN. COVER in.	HEIGHT OF COVER LIMITS, H ft. WALL THICKNESS (GAUGE)					
		0.105	0.135	0.164	0.188	0.218	0.249	0.280
60	12	47	68	90	100	100	100	100
66	12	43	62	81	99	100	100	100
72	12	40	57	75	91	100	100	100
78	12	36	52	69	84	98	100	100
84	12	34	49	64	78	91	100	100
90	12	31	45	59	72	84	96	100
96	12	28	42	55	67	78	89	100
102	12	26	38	50	62	73	83	93
108	18	25	36	47	57	67	77	86
114	18	23	34	44	54	63	72	81
120	18	22	32	42	51	60	68	77
126	18	21	30	40	48	57	65	73
132	18	20	29	38	46	54	62	70
138	18	19	28	36	44	52	59	67
144	18	18	26	34	42	49	57	64
150	24	18	25	33	41	48	56	63
156	24	17	24	32	39	47	54	61
162	24	16	23	31	38	45	52	59
168	24	15	22	30	37	44	51	57
174	24	15	21	29	36	43	49	56
180	24	14	20	28	35	41	48	54
186	24	13	20	28	34	40	47	53
192	30		19	27	33	39	45	51
198	30		19	26	32	38	44	50
204	30		18	26	32	38	43	49
210	30		18	25	31	37	42	48
216	30			25	30	36	41	47
222	30			24	30	35	41	46
228	30			24	29	35	40	45
234	30			23	29	34	39	44
240	36				28	34	39	44
246	36				28	33	38	43
252	36				27	33	38	42
258	36				27	32	37	42
264	36				27	32	36	41
270	36				26	31	36	41
276	36				26	31	35	40
282	42					31	35	40
288	42					30	35	39
294	42					30	34	39
300	42					30	34	38
306	42					29	33	38

TABLE II — 6" x 2" CORRUGATIONS, STEEL PIPE-ARCH ②

PIPE SIZE* in. SPAN x RISE	½" MIN. COVER in.	WALL THICKNESS	HEIGHT OF COVER LIMITS, H ft. CORNER BEARING PRESSURE 2 Tons Per Sq. Ft.
6-1 x 4-1	12	0.109	15
6-4 x 4-4	12	0.109	13
7-0 x 4-8	12	0.109	12
7-2 x 5-1	12	0.109	14
7-5 x 5-3	12	0.109	13
7-8 x 5-6	12	0.109	12
7-11 x 5-9	12	0.109	12
8-1 x 6-0	18	0.109	12
8-10 x 6-1	18	0.109	11
9-4 x 6-5	18	0.109	10
9-8 x 6-9	18	0.109	10
10-1 x 7-0	18	0.109	9
10-5 x 7-4	18	0.109	10
10-8 x 7-11	18	0.109	9
11-1 x 7-10	18	0.109	9
11-5 x 8-2	18	0.109	8
11-10 x 7-9	30	0.109	9
12-4 x 7-9	30	0.109	8
12-8 x 7-11	30	0.109	8
12-8 x 8-1	30	0.109	8
13-0 x 8-4	30	0.109	13
13-5 x 9-4	30	0.109	12
14-0 x 9-8	30	0.109	12
14-5 x 9-10	30	0.109	12
14-9 x 10-0	30	0.109	11
15-1 x 10-3	30	0.109	11
15-4 x 10-6	30	0.109	11
15-7 x 10-9	30	0.109	11
15-10 x 10-8	30	0.109	10
16-2 x 10-10	30	0.134	10
16-6 x 11-0	30	0.134	10
17-0 x 11-4	30	0.134	10
17-5 x 11-5	30	0.134	10
17-9 x 11-9	30	0.134	9
17-11 x 11-10	30	0.134	9
18-1 x 11-10	30	0.168	9
18-6 x 12-0	30	0.168	9
19-1 x 12-3	30	0.168	8
19-3 x 12-4	30	0.168	8
19-8 x 12-8	30	0.168	8
20-1 x 12-10	30	0.168	7
20-6 x 13-1	30	0.168	7
20-7 x 13-2	30	0.168	6

* TOP OF PIPE TO TOP OF SUBGRADE.

② PIPE-ARCH IS INTENDED FOR USE WHERE MINIMUM COVER REQUIRED FOR ROUND PIPE CAN NOT BE MET.
USE ROUND PIPE WHEN COVER EXCEEDS 15 FEET.

H ——— HEIGHT OF COVER LIMIT, H FT. MUST, MAXIMUM HEIGHT OF FILL OVER TOP OF CULVERT, INCLUDING PAVEMENT.

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS APPLICABLE TO THE PROJECT.

PIPE OR PIPE-ARCH WITH ENDS CUT TO FIT A SLOPE, SHALL BE FURNISHED WITH THE TOP OF THE PIPE OR PIPE-ARCH AT THE TOP OF SLOPE AS SHOWN ON THE PLANS.

WHERE MULTIPLE PIPES ARE USED, THEY SHALL BE SPACED SO THAT ADJACENT SIDES OF THE PIPE SHALL BE AT LEAST ONE-HALF DIAMETER OR ONE-HALF SPAN APART TO PERMIT EFFECTIVE TAMPING OF THE FILL MATERIAL. WHERE THE SPAN OF THE PIPE-ARCH IS 84" OR LESS, THE FACES OF ADJACENT SIDES NEED NOT BE MORE THAN 3 FEET.

DURING CONSTRUCTION, APPROVED COVER SHALL BE PROVIDED TO PROTECT THE STRUCTURE FROM DAMAGE.

COVER DEPTHS FROM 100 FEET SHALL BE USED ONLY AFTER THOR-OUGH INVESTIGATION OF FOUNDATION MATERIAL.

▼ —— PIPE ARCH WITH EQUAL PERIMETER AND WITH SPAN AND RISE DIMENSIONS APPROXIMATELY EQUAL TO THE THOSE REQUIRED BY PLANS WILL BE PERMITTED.

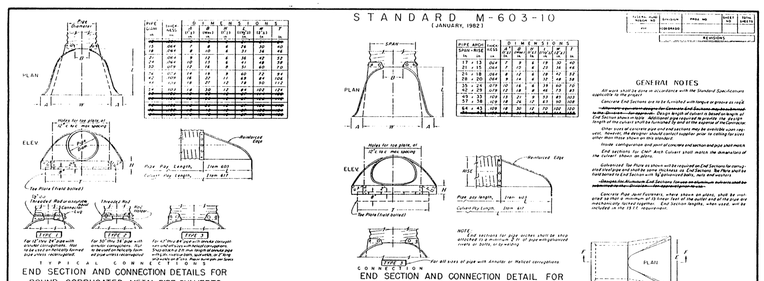
PIPE OR PIPE ARCH IN UNDERSIZING WITH SECTION 603 APPROVED BY INSTITUTION FOR STRUCTURAL PLATE PIPE OR PIPE-ARCH.

CITY OF COLORADO SPRINGS
STRUCTURAL PLATE CULVERT PIPE
APPROVED BY Joseph R. Hayes
CITY ENGINEER
SCALE: NO SCALE | DATE: JAN. 90 | DRAWN: PL.B. | SHEET D - 27

Adopted from and in conformance with the State of Colorado Department of Highways with Revisions by the City of Colorado Springs Engineering Division

STANDARD M-603-10

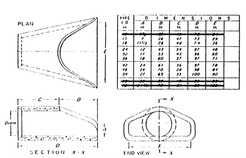
(JANUARY, 1982)



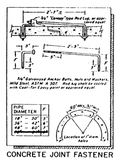
END SECTION AND CONNECTION DETAILS FOR ROUND CORRUGATED METAL PIPE CULVERTS

PIPE DIA. in.	A in.	B in.	C in.	D in.	E in.	F in.
12	12.4	8	4	8	12	12
15	15.5	8	4	8	12	12
18	18.6	8	4	8	12	12
21	21.7	8	4	8	12	12
24	24.8	8	4	8	12	12
30	31.0	12	6	12	18	18
36	37.2	12	6	12	18	18
42	43.4	12	6	12	18	18
48	49.6	12	6	12	18	18
54	55.8	12	6	12	18	18
60	62.0	12	6	12	18	18
66	68.2	12	6	12	18	18
72	74.4	12	6	12	18	18
78	80.6	12	6	12	18	18
84	86.8	12	6	12	18	18
90	93.0	12	6	12	18	18
96	99.2	12	6	12	18	18
102	105.4	12	6	12	18	18
108	111.6	12	6	12	18	18
114	117.8	12	6	12	18	18
120	124.0	12	6	12	18	18

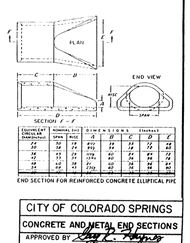
END SECTION AND CONNECTION DETAIL FOR CORRUGATED METAL PIPE ARCH CULVERT



END SECTION FOR REINFORCED CONCRETE CIRCULAR PIPE



CONCRETE JOINT FASTENER



EQUIVALENT CIRCULAR DIAMETER	NOMINAL SIZE SPAN	RISE	A	B	C	D	E	F
24	19	15	24	24	24	24	24	24
30	24	19	30	30	30	30	30	30
36	29	23	36	36	36	36	36	36
42	34	27	42	42	42	42	42	42
48	38	30	48	48	48	48	48	48
54	43	34	54	54	54	54	54	54
60	48	38	60	60	60	60	60	60
66	53	42	66	66	66	66	66	66
72	58	46	72	72	72	72	72	72

END SECTION FOR REINFORCED CONCRETE ELLIPTICAL PIPE

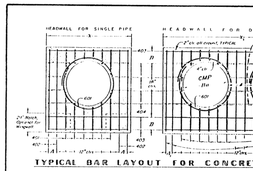
CITY OF COLORADO SPRINGS
CONCRETE AND METAL END SECTIONS
APPROVED BY Joseph R. Hayes
CITY ENGINEER
SCALE: NO SCALE | DATE: JAN. 90 | DRAWN: PL.B. | SHEET D - 28

Adopted from and in conformance with the State of Colorado Department of Highways with Revisions by the City of Colorado Springs Engineering Division

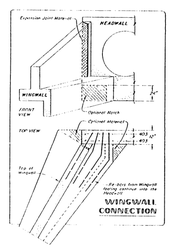
*Depth of toe wall to be increased if required by scour potential. Indicate dimension on plan.

STANDARD M-601-10

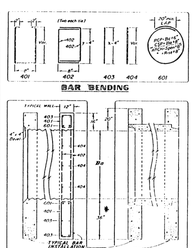
(JANUARY, 1982)



TYPICAL BAR LAYOUT FOR CONCRETE HEADWALLS



WINGWALL CONNECTION



HEADWALL FOR RCP — ROUND

Pipe Dia. in.	Dimensions X ft. in.	Y ft. in.	A ft. in.	A_1 ft. in.	A_2 ft. in.	F ft. in.	B ft. in.	Quantities Concrete CY.	Steel No.	Steel Lbs.
12	3-0	2-0	1-6	0-6	0-6	1-0	3-0	0.3	4	10
15	3-6	2-3	1-6	0-6	0-6	1-0	3-0	0.4	4	10
18	4-0	2-6	1-6	0-6	0-6	1-0	3-0	0.4	4	10
21	4-6	2-9	1-6	0-6	0-6	1-0	3-0	0.5	4	10
24	5-0	3-0	1-6	0-6	0-6	1-0	3-0	0.6	4	10
27	5-6	3-3	1-6	0-6	0-6	1-0	3-0	0.7	4	10
30	6-0	3-6	1-6	0-6	0-6	1-0	3-0	0.8	4	10
33	6-6	3-9	1-6	0-6	0-6	1-0	3-0	0.9	4	10
36	7-0	4-0	1-6	0-6	0-6	1-0	3-0	1.0	4	10
42	8-0	4-6	2-0	0-6	0-6	1-0	4-0	1.4	4	10
48	9-0	5-0	2-0	0-6	0-6	1-0	4-0	1.7	4	10
54	10-0	5-6	2-0	0-6	0-6	1-0	4-0	2.0	4	10
60	11-0	6-0	2-0	0-6	0-6	1-0	4-0	2.4	4	10
66	12-0	6-6	2-0	0-6	0-6	1-0	4-0	2.8	4	10
72	13-0	7-0	2-0	0-6	0-6	1-0	4-0	3.2	4	10
78	14-0	7-6	2-0	0-6	0-6	1-0	4-0	3.6	4	10
84	15-0	8-0	2-0	0-6	0-6	1-0	4-0	4.1	4	10
90	16-0	8-6	2-0	0-6	0-6	1-0	4-0	4.6	4	10
96	17-0	9-0	2-0	0-6	0-6	1-0	4-0	5.1	4	10
102	18-0	9-6	2-0	0-6	0-6	1-0	4-0	5.6	4	10
108	19-0	10-0	2-0	0-6	0-6	1-0	4-0	6.2	4	10
114	20-0	10-6	2-0	0-6	0-6	1-0	4-0	6.7	4	10
120	21-0	11-0	2-0	0-6	0-6	1-0	4-0	7.3	4	10

HEADWALL FOR CMP — ROUND

Pipe Dia. in.	Dimensions X ft. in.	Y ft. in.	A ft. in.	A_1 ft. in.	A_2 ft. in.	F ft. in.	B ft. in.	Quantities Concrete CY.	Steel No.	Steel Lbs.
12	3-0	2-0	1-6	0-6	0-6	1-0	3-0	0.3	4	10
15	3-6	2-3	1-6	0-6	0-6	1-0	3-0	0.4	4	10
18	4-0	2-6	1-6	0-6	0-6	1-0	3-0	0.4	4	10
21	4-6	2-9	1-6	0-6	0-6	1-0	3-0	0.5	4	10
24	5-0	3-0	1-6	0-6	0-6	1-0	3-0	0.6	4	10
27	5-6	3-3	1-6	0-6	0-6	1-0	3-0	0.7	4	10
30	6-0	3-6	1-6	0-6	0-6	1-0	3-0	0.8	4	10
33	6-6	3-9	1-6	0-6	0-6	1-0	3-0	0.9	4	10
36	7-0	4-0	1-6	0-6	0-6	1-0	3-0	1.0	4	10
42	8-0	4-6	2-0	0-6	0-6	1-0	4-0	1.4	4	10
48	9-0	5-0	2-0	0-6	0-6	1-0	4-0	1.7	4	10
54	10-0	5-6	2-0	0-6	0-6	1-0	4-0	2.0	4	10
60	11-0	6-0	2-0	0-6	0-6	1-0	4-0	2.4	4	10
66	12-0	6-6	2-0	0-6	0-6	1-0	4-0	2.8	4	10
72	13-0	7-0	2-0	0-6	0-6	1-0	4-0	3.2	4	10
78	14-0	7-6	2-0	0-6	0-6	1-0	4-0	3.6	4	10
84	15-0	8-0	2-0	0-6	0-6	1-0	4-0	4.1	4	10
90	16-0	8-6	2-0	0-6	0-6	1-0	4-0	4.6	4	10
96	17-0	9-0	2-0	0-6	0-6	1-0	4-0	5.1	4	10
102	18-0	9-6	2-0	0-6	0-6	1-0	4-0	5.6	4	10
108	19-0	10-0	2-0	0-6	0-6	1-0	4-0	6.2	4	10
114	20-0	10-6	2-0	0-6	0-6	1-0	4-0	6.7	4	10
120	21-0	11-0	2-0	0-6	0-6	1-0	4-0	7.3	4	10

HEADWALL FOR CMP — ARCH

Span Dim.	Rise Dim.	X ft. in.	Y ft. in.	A ft. in.	A_1 ft. in.	A_2 ft. in.	F ft. in.	B ft. in.	Quantities Concrete CY.	Steel No.	Steel Lbs.
17-11	13-5	4-0	3-0	2-0	0-6	0-6	1-0	4-0	0.6	4	10
21-4	15-5	4-6	3-3	2-0	0-6	0-6	1-0	4-0	0.7	4	10
24-5	18-1	5-0	3-6	2-0	0-6	0-6	1-0	4-0	0.8	4	10
28-4	20-5	5-6	3-9	2-0	0-6	0-6	1-0	4-0	0.9	4	10
35-0	24-0	6-6	4-6	2-0	0-6	0-6	1-0	4-0	1.3	4	10
42-0	29-0	7-6	5-0	2-0	0-6	0-6	1-0	4-0	1.7	4	10
49-0	33-0	8-6	5-6	2-0	0-6	0-6	1-0	4-0	2.1	4	10
57-0	38-0	9-6	6-6	2-0	0-6	0-6	1-0	4-0	2.7	4	10
64-0	43-0	10-6	7-6	2-0	0-6	0-6	1-0	4-0	3.3	4	10
71-0	47-0	11-6	8-0	2-0	0-6	0-6	1-0	4-0	3.9	4	10
77-0	52-0	12-6	9-0	2-0	0-6	0-6	1-0	4-0	4.5	4	10
83-0	57-0	13-6	9-6	2-0	0-6	0-6	1-0	4-0	5.1	4	10

HEADWALL FOR STRUCTURAL PLATE — ARCH

Span Dim.	Rise Dim.	X ft. in.	Y ft. in.	A ft. in.	A_1 ft. in.	A_2 ft. in.	F ft. in.	B ft. in.	Quantities Concrete CY.	Steel No.	Steel Lbs.
17-11	13-5	4-0	3-0	2-0	0-6	0-6	1-0	4-0	0.6	4	10
21-4	15-5	4-6	3-3	2-0	0-6	0-6	1-0	4-0	0.7	4	10
24-5	18-1	5-0	3-6	2-0	0-6	0-6	1-0	4-0	0.8	4	10
28-4	20-5	5-6	3-9	2-0	0-6	0-6	1-0	4-0	0.9	4	10
35-0	24-0	6-6	4-6	2-0	0-6	0-6	1-0	4-0	1.3	4	10
42-0	29-0	7-6	5-0	2-0	0-6	0-6	1-0	4-0	1.7	4	10
49-0	33-0	8-6	5-6	2-0	0-6	0-6	1-0	4-0	2.1	4	10
57-0	38-0	9-6	6-6	2-0	0-6	0-6	1-0	4-0	2.7	4	10
64-0	43-0	10-6	7-6	2-0	0-6	0-6	1-0	4-0	3.3	4	10
71-0	47-0	11-6	8-0	2-0	0-6	0-6	1-0	4-0	3.9	4	10
77-0	52-0	12-6	9-0	2-0	0-6	0-6	1-0	4-0	4.5	4	10
83-0	57-0	13-6	9-6	2-0	0-6	0-6	1-0	4-0	5.1	4	10

GENERAL NOTES

All work shall be done in accordance with the Standard Specifications applicable to the project.

Concrete shall be Class A or B.

Headwall shall be perpendicular to the culvert (unless otherwise shown on the plans.

For Wingwall details, see Standard M-607-10.

Where required by pipe has been delivered from Structural Concrete quality

~~Add 2 or more reinforcing bars shall be placed as near the adjacent pipes will be To Secure Concrete in Structural Type or Structural Plate Pipe, OR as Rare-earth.~

INITIAL, INTERIM, AND FINAL
GRADING, EROSION CONTROL, AND STORMWATER QUALITY CONTROL PLAN
FOR
AFW - COLORADO SPRINGS

A PORTION OF A TRACT OF LAND RECORDED AT RECEPTION NO. 208068886 AND RECEPTION NO. 206028177
A PART OF THE WEST HALF OF SECTION 7, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH P.M.
CITY OF COLORADO SPRINGS, EL PASO COUNTY, COLORADO

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. IF SUCH WORK IS PERFORMED IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLAN, THE WORK WILL NOT BECOME HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE, OR STABILITY OF A PUBLIC WAY, DRAINAGE CHANNEL, OR OTHER PROPERTY.

PRINT NAME: HOWARD EHRSAM, PE DATE: _____

PHONE NUMBER: (303) 801-2905

SEAL

Construction Control Measures Cost Estimate				
ITEM DESCRIPTION	UNIT	QTY.	UNIT PRICE	AMOUNT
Concrete Washout Area	ea	2	$ 760.00	$ 1,520.00
Drill Seeding	ac	0	$ 525.00	$ -
Drill Seeding and Hay Crimped	ac	0	$ 785.00	$ -
Dust Control - CaCl	sf	0	$ 0.07	$ -
Dust Control - Organic	sf	0	$ 0.03	$ -
Erosion Control Blanket	sf	0	$ 0.37	$ -
Flexterra/Bio Flex Material Inlet	sf	0	$ 0.11	$ -
Inlet Protection	ea	30	$ 165.00	$ 4,950.00
Hydro Mulch	sf	322373.1	$ 0.03	$ 9,671.19
Hydro Seed	sf	322373.1	$ 0.06	$ 19,342.39
Temporary Outlet Protection	ea	1	$ 500.00	$ 500.00
Check Dam	sf	1500	$ 18.00	$ 27,000.00
Rock Socks	ea	26	$ 110.00	$ 2,860.00
Silt Fence	lf	1260	$ 2.50	$ 3,150.00
Straw Hay Bale Check Dam	ea	0	$ 17.00	$ -
Sediment Control Log	lf	0	$ 2.75	$ -
Surface Roughening	ac	0	$ 225.00	$ -
Vehicle Tracking Control	ea	2	$ 1,325.00	$ 2,650.00
Blue Grass Sod	sf	0	$ 0.35	$ -
Gravel Mulch	sf	0	$ 1.50	$ -
Bark Mulch	sf	0	$ 0.40	$ -
Temporary Diversion Ditch	lf	2611	$ 20.00	$ 52,220.00
Temporary Sediment Basin	ea	2	$ 1,500.00	$ 3,000.00
Maintenance of BMPs	is		40%	$ 50,745.43
TOTAL EROSION CONTROL MEASURE PRICE				**$ 177,609.01**

OWNER'S STATEMENT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN INCLUDING CONSTRUCTION CONTROL MEASURE INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS ACCORDING TO THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

NAME OF OWNER: NOLAN MORRISON DATE: _____

OWNER SIGNATURE: _____

TITLE: _____

PHONE NUMBER: 303-489-3333

ADDRESS: 8820 AMERICAN WAY, ENGLEWOOD, COLORADO 80112

EMAIL: nmorrison@afw.net

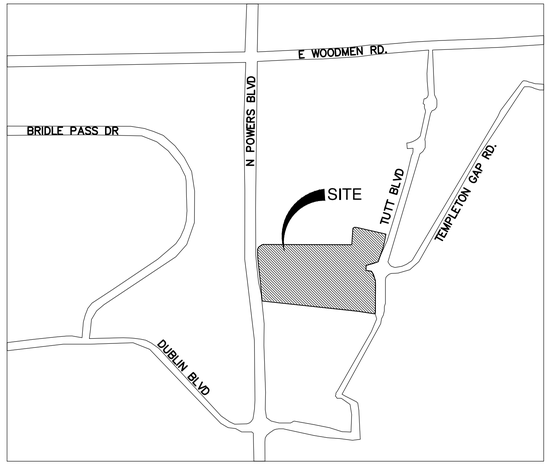
CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL REVIEW

THIS GRADING AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH CITY CODE. THIS PLAN IS REVIEWED IN ACCORDANCE WITH THE STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.

DATE: _____

FOR THE SWENT MANAGER

NOTES:



VICINITY MAP

SCALE 1" = 1000'

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
GEC1	COVER SHEET
EC1	GENERAL NOTES
EC2	GRADING EROSION AND SEDIMENT CONTROL PLAN – OVERALL INITIAL PLAN
EC3	GRADING EROSION AND SEDIMENT CONTROL PLAN – INITIAL
EC4	GRADING EROSION AND SEDIMENT CONTROL PLAN – INITIAL
EC5	GRADING EROSION AND SEDIMENT CONTROL PLAN – INTERIM
EC6	GRADING EROSION AND SEDIMENT CONTROL PLAN – INTERIM
EC7	GRADING EROSION AND SEDIMENT CONTROL PLAN – FINAL
EC8	GRADING EROSION AND SEDIMENT CONTROL PLAN – FINAL
EC9	GRADING EROSION AND SEDIMENT CONTROL DETAILS
EC10	GRADING EROSION AND SEDIMENT CONTROL DETAILS
G1	GRADING KEY MAP
G2	DETAILED GRADING PLAN
G3	DETAILED GRADING PLAN
G4	DETAILED GRADING PLAN
G5	DETAILED GRADING PLAN
G6	DETAILED GRADING PLAN
G7	DETAILED GRADING PLAN
G8	DETAILED GRADING PLAN
G9	DETAILED GRADING PLAN
G10	DETAILED GRADING PLAN
G11	DETAILED GRADING PLAN
P1	LAYOUT AND PAVING PLAN KEY MAP
P2	LAYOUT PAVING AND DIMENSIONING PLAN
P3	LAYOUT PAVING AND DIMENSIONING PLAN
P4	LAYOUT PAVING AND DIMENSIONING PLAN
P5	LAYOUT PAVING AND DIMENSIONING PLAN
P6	LAYOUT PAVING AND DIMENSIONING PLAN
C7.6	LAYOUT PAVING AND DIMENSIONING PLAN

PROJECT INFORMATION:

- ANTICIPATED CONSTRUCTION START DATE IS MARCH 01, 2024.
- COMPLETION/FINAL STABILIZATION DATE IS JUNE 1, 2025.
- ANTICIPATED SOIL DISTURBANCE START DATE IS MARCH 01, 2024.
- COMPLETION/FINAL SOIL DISTURBANCE DATE IS JUNE 1, 2025.
- AFTER THE GEC PLAN AND CSWMP ARE BOTH APPROVED, A CITY GEC PERMIT MUST BE OBTAINED. PLEASE USE THE CITY SOFTWARE, ACCELA, TO COMPLETE AND SUBMIT THE GEC PERMIT APPLICATION AND PAY THE PERMIT FEE. AFTER YOUR GEC PERMIT APPLICATION HAS BEEN SUBMITTED, YOU WILL RECEIVE AN EMAIL WITH FURTHER INSTRUCTIONS. CONSTRUCTION ACTIVITIES SHALL NOT BEGIN UNTIL A GEC PERMIT HAS BEEN OBTAINED. FOR ADDITIONAL INFORMATION, CALL (719) 385-5980.
- THE FDR WAS APPROVED PRIOR TO THE REQUIREMENT FOR GREEN INFRASTRUCTURE,THERE ARE NO PLANNED INFILTRATION AREA (PIAS) ON THIS SITE

LEGAL DESCRIPTION

A TRACT LOCATED IN THE SE1/4NW1/4 SECTION 15, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH P.M., AKA MOST OF LOT 2, F & K SUBDIVISION, MORE OR LESS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 15;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION 15, A DISTANCE OF 785.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY RIGHT OF WAY LINE OF A COUNTY ROAD;
THENCE ON AN ANGLE TO THE RIGHT OF 85°58'00" AND ALONG SAID EASTERLY RIGHT OF WAY LINE A DISTANCE OF 1,643.58 FEET;

THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 799.22 FEET TO A POINT, SAID POINT BEING 358.5 FEET WEST OF THE WESTERLY RIGHT OF WAY LINE OF COLORADO STATE HIGHWAY 83, AND 358.5 FEET BEING MEASURED AT RIGHT ANGLES THERETO;

THENCE ON AN ANGLE TO THE RIGHT OF 87°15'03" AND ALONG A LINE PARALLEL TO SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 256.13 FEET TO THE TRUE POINT OF BEGINNING;
THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 358.50 FEET TO A POINT ON SAID WESTERLY RIGHT OF WAY LINE;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG SAID RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" A DISTANCE OF 358.50 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG A LINE PARALLEL TO THE SAID WESTERLY RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET TO THE TRUE POINT OF BEGINNING;

COUNTY OF DOUGLAS, STATE OF COLORADO

FLOODPLAIN STATEMENT

THIS PROPERTY IS LOCATED WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN) AS ESTABLISHED BY FEMA FIRM PANEL 08041C0537G, EFFECTIVE DECEMBER 7, 2021, AND FEMA FIRM PANEL 08041C0536G, EFFECTIVE DECEMBER 7, 2021.

BENCHMARK

FIMS BENCHMARK TG24. ELEVATION=6838.24 (NVGD 1929)

RECEIVING WATERS:

THE RECEIVING WATERS FOR THE SITE ARE AS FOLLOWS: SAND CREEK WHICH FLOWS TO FOUNTAIN CREEK WHICH IS A TRIBUTARY TO THE ARKANSAS RIVER.

NON-STRUCTURAL CONTROL MEASURES NOTE

NON STRUCTURAL CONTROL MEASURES FOR THIS PROJECT ARE TO INCLUDE STREET SWEEPING ON ALL PROPOSED ROADWAYS AND SPILL PREVENTION, CONTAINMENT AND CONTROL OF CONSTRUCTION MATERIALS SUCH AS PAINT, FUEL, ETC.

PRESERVATION EASEMENTS

NO PRESERVATION EASEMENTS ON SITE

BATCH PLANT

BATCH PLANTS WILL NOT BE UTILIZED

GEOLOGIC HAZARDS

NO GEOLOGIC HAZARDS ON SITE

BID SET
10-17-24

Know what's **below.**
Call before you dig.

STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

CURRENT OWNER
AMERICAN FURNITURE WAREHOUSE
8820 AMERICAN WAY
ENGLEWOOD, CO 80112
CONTACT: NOLAN MORRISON
PHONE: (303) 489-3333

ARCHITECT
BUTLER DESIGN GROUP, INC.
5017 EAST WASHINGTON STREET, SUITE 107
PHOENIX, AZ 85034
CONTACT: ORLANDO MURO
PHONE: (602) 957-1800

CIVIL ENGINEER
BOWMAN CONSULTING
1526 COLE BLVD, SUITE 100
LAKEWOOD, CO 80401
PHONE: (303) 801-2900
CONTACT: HOWARD EHRSAM P.E.
EMAIL: HEHRSAM@BOWMAN.COM
PHONE: (303) 801-2900

LANDSCAPE ARCHITECT
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67 WELDON AVENUE, SUITE 230
PHOENIX, AZ 85012
CONTACT: DANIEL DODSON
EMAIL: DANIEL@LASKINDESIGN.COM
PHONE: (602) 840-7771

Bowman
1526 Cole Blvd, Suite 100
Lakewood, CO 80401
Phone: (303) 801-2900
www.bowman.com

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REVISIONS

REVISION	DESCRIPTION	DATE
0	FOR CONSTRUCTION	10/08/2024

COLORADO

COVER SHEET

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
GEC1

ABBREVIATIONS

A	AREA OF ARC	K	SIGHT DISTANCE COEFFICIENT OR RATE
AASHTO	AMERICAN ASSOCIATION OF STATE HWY & TRANS. OFFICIALS	Ke	OF VERTICAL CURVATURE CULVERT ENTRANCE LOSS COEFFICIENT
AB	AS-BUILT		
AC	ACRE	L	LENGTH
AD	ALGEBRAIC DIFFERENCE IN GRADE	LAT	LATERAL
AE	ACCESS EASEMENT	LCG	LIMITS OF CLEARING & GRADING
ADJ	ADJACENT	LF	LINEAR FEET
AGGR	AGGREGATE	LIP	LIP OF PAN
AHD	AHEAD	LL	LOWER LEVEL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	LOS	LINE OF SIGHT
APT	ANGLE POINT	LP	LOW POINT
APPROX	APPROXIMATE	LS	LOADING SPACE
ARCH	ARCHITECTURAL	LT	LEFT
ASPH	ASPHALT	M	MONUMENT FOUND
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	MAX	MAXIMUM
AWWA	AMERICAN WATER WORKS ASSOCIATION	ME	MATCH EXISTING
		MECH	MECHANICAL
B	BREADTH	MH	MANHOLE
BOC	BACK OF CURB	MI	MILE
BF	BASEMENT FLOOR	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BM	BENCHMARK	MPH	MILES PER HOUR
BMP	BEST MANAGEMENT PRACTICES (WATER QUALITY)	MS	MEDIAN STRIP
		MSL	MEAN SEA LEVEL
BOV	BLOW OFF VALVE	N	NORTHING/NORTH
BRG	BEARING	N/A	NOT APPLICABLE
BRL	BUILDING RESTRICTION LINE	NBL	NORTH BOUND LANE
BVCE	BEGINNING VERTICAL CURVE ELEVATION	N/F	NOW OR FORMERLY
BVCS	BEGINNING VERTICAL CURVE STATION	NFA	NET FLOOR AREA
BW	BOTTOM OF WALL	NO. & #	NUMBER
		NTS	NOT TO SCALE
c,e	CENTER CORRECTION ON VERTICAL CURVE	OC	ON CENTER
C	CONCRETE ELEVATION OR RUNOFF COEFFICIENT	OBJ	OBJECT
		OD	OUTSIDE DIAMETER
CATV	CABLE TELEVISION	OH	OVERHANG
C&G	CURB AND GUTTER	O/H	OVERHEAD
CB	CATCH BASIN	OHC	OVERHEAD CABLE
CBR	CALIFORNIA BEARING RATIO	OHE	OVERHEAD ELECTRIC
CC	CENTER TO CENTER	OHT	OVERHEAD TELEPHONE
CDOT	COLORADO DEPT. OF TRANSPORTATION		
CF	CUBIC FEET	P	PERIMETER OR PAVEMENT ELEVATION
CFS	CUBIC FEET PER SECOND	PL	PROPERTY LINE
CG(R)	CURB AND GUTTER (REVERSE SLOPE)	P&P	PLAN AND PROFILE
CH	CHORD	PC	POINT OF CURVATURE
CHBRG	CHORD BEARING	PCC	POINT OF COMPOUND CURVATURE
CIP	CAST IRON PIPE	PCR	POINT OF CURB RETURN
C	CENTERLINE	PCEP	POINT OF CURVE EDGE OF PAVEMENT
CLR	CLEAR	PCTC	POINT OF CURVATURE TOP OF CURB
CM	CUBIC METERS	PI	POINT OF INTERSECTION
CMP	CORRUGATED METAL PIPE	PG	PAGE
CMS	CUBIC METERS PER SECOND	PGL	POINT OF GRADE LINE
CN	RUNOFF CURVE NUMBER	PRC	POINT OF REVERSE CURVATURE
CONT	CONTINUOUS	PRELIM	PRELIMINARY
CO	CLEAN OUT	PROP	PROPOSED
CONC	CONCRETE	PT	POINT OF TANGENCY
CS	CURB STOP	PUE	PUBLIC UTILITY EASEMENT
CT	COURT	PVC	POLYVINYL CHLORIDE PIPE OR
CTR	CENTER		POINT OF VERTICAL CURVATURE
CTRL	CONTROL LINE	PVI	POINT OF VERTICAL INTERSECTION
CY	CUBIC YARD	PVT	POINT OF VERTICAL TANGENCY
		PVMT	PAVEMENT
D	DEPTH	PVRC	POINT OF VERTICAL REVERSE CURVE
DA	DRAINAGE AREA		
DB	DEED BOOK	Q (cfs)	AMOUNT OF RUNOFF (FLOW RATE)
DET	DETAIL		
DIA	DIAMETER	R	RADIUS
DIP	DUCTILE IRON PIPE	RCP	REINFORCED CONCRETE PIPE
DI	DROP INLET	RDCR	REDUCER
DIST	DISTANCE	RD	ROAD OR ROOF DRAIN
DL	DOMESTIC LINE	REINF	REINFORCED
DM	DROP MANHOLE	REQD	REQUIRED
DOM	DOMESTIC	RET	RETAINING
DR	DRIVE DRAIN	REV	REVISION
DRN	DRAINAGE	RGP	ROUGH GRADING PLAN
DRNG	DRAINAGE AREA	RMA	RESOURCE MANAGEMENT AREA
DS	DOWN SPOUT	ROM	REMOTE OUTSIDE MONITOR
DU	DWELLING UNITS	RPA	RESOURCE PROTECTION AREA
DWG	DRAWING	RR	RAILROAD
D/W	DRIVEWAY	RT	RIGHT
		RTE	ROUTE
E	DELTA	R/W & ROW	RIGHT OF WAY
EA	EASTING/EAST		
EBL	EACH	S	SPEED OR SLOPE
EC	EAST BOUND LANE	SAN	SANITARY SEWER
EG	EROSION CONTROL	SANMH	SANITARY SEWER MANHOLE
EGL	EDGE OF GUTTER	SBL	SOUTH BOUND LANE
EL	ENERGY GRADIENT LINE	SCH	SCHEDULE
ELEC	ELECTRIC	SD	SIGHT DISTANCE
ELEV	ELEVATION	SEC	SECTION
ENGR	ENGINEER	SEW	SEWER
ENT	ENTRANCE	SF	SQUARE FEET
EOA	EDGE OF ASPHALT	SH	SHOULDER
EOC	EDGE OF CONCRETE	SP	SPACE OR SITE PLAN
EOP	EDGE OF PAVEMENT	SPEC	SPECIFICATIONS
EQUIP	EQUIPMENT	STA	STATION
ESMT	EASEMENT	STD	STANDARD
ETD	EXISTING TO BE DEMOLISHED	STK	STACK
ETR	EXISTING TO REMAIN	STM	STORM SEWER
ETRL	EXISTING TO BE RELOCATED	STMMH	STORM SEWER MANHOLE
ETRP	EXISTING TO BE REPLACED	STR	STRUCTURE
EVCE	ENDING VERTICAL CURVE ELEVATION	SVC	SERVICE
EVCS	ENDING VERTICAL CURVE STATION	S/W	SIDEWALK
EW	END WALL	SW	SIDEWALK ELEVATION
EX	EXISTING	SWM	STORM WATER MANAGEMENT
EQC	ENVIRONMENTAL QUALITY CORRIDOR	Sx	CROSS SLOPE
		SY	SQUARE YARD
F	FIRE LINE		
FAR	FLOOR AREA RATIO	T	TANGENT
FOC	FACE OF CURB	TB	TOP OF BANK OR TEST BORING
FD	FLOOR DRAIN	TBR	TO BE REMOVED
FES	FLARED END SECTION	TOC	TOP OF CURB
FF	FIRST FLOOR OR FINISH FLOOR	Tc	TIME OF CONCENTRATION
FG	FINISH GRADE	TEL	TELEPHONE
FH	FIRE HYDRANT	TEMP	TEMPORARY
FL	FLOW LINE	TH	TEST HOLE
FND	FOUNDATION	TOF	TOP OF FOUNDATION
FOY	FOYER	TOP	TOP OF PIPE
FP	FLOOD PLAIN	TP	TEST PIT OR TREE PROTECTION
FPS	FEET PER SECOND	TW	TOP OF WALL OR TAILWATER
FS	FIRE SERVICE OR FACTOR OF SAFETY	TYP	TYPICAL
FT	FOOT OR FEET		
		UE	UTILITY EASEMENT
G	GAS	UG	UNDERGROUND
GAR	GARAGE	UGE	UNDERGROUND ELECTRIC
GB	GRADE BREAK	UGT	UNDERGROUND TELEPHONE
GFA	GROSS FLOOR AREA	UCC	UNDERGROUND CABLE
GR	GUARD RAIL OR GRATE INLET	UD	UNDERDRAIN
GV	GATE VALVE	UL	UPPER LEVEL
		UP	UTILITY POLE
H	HEAD	USGS	US GEOLOGICAL SURVEY
HC	HANDICAP	UTIL	UTILITY
HB	HORIZONTAL BEND		
HBP	HOT BITUMINOUS PAVEMENT	V OR VOL	VOLUME
HGL	HYDRAULIC GRADE LINE	V OR VEL	VELOCITY
HORZ	HORIZONTAL	VAN	HANDICAPPED VAN PARKING SPACE
HP	HIGH POINT	VB	VERTICAL BEND
HR	HAND RAIL	VC	VERTICAL CURVE
HT	HEIGHT	VF	VERTICAL FOOT
HW	HEADWATER		
		W	WEIGHT OR WIDTH
I	RAINFALL INTENSITY	WBL	WEST BOUND LANE
ID	INSIDE DIAMETER OR IDENTIFICATION	WL	WATER LINE
IE	INVERT ELEVATION	WM	WATER METER
IN	INCH	W/M OR WM	WATER MAIN
INV	INVERT	W/TB	WITH THRUST BLOCK
IP	IRON PIPE	WSEL	WATER SURFACE ELEVATION
IPF	IRON PIPE FOUND	WV	WATER VALVE
IPS	IRON PIPE SET		
IRR	IRRIGATION	XING	CROSSING
		XF	TRANSFORMER
JB	JUNCTION BOX		
JNT	JOINT	YI	YARD INLET
		YR	YEAR

811 Know what's below. Call before you dig.

STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
	LOT LINE	
	RIGHT OF WAY	
	CENTERLINE	
	FLOOD PLAIN	
	LIMITS OF CONSTRUCTION	
	LIMITS OF DISTURBANCE	
	SWALE / STREAM FLOWLINE	
	OVERFLOW RELIEF PATH	
	FENCE LINE	
	EASEMENT	
	EDGE OF PAVEMENT	
	VERTICAL CURB AND GUTTER	
	MOUNTABLE CURB AND GUTTER	
	CONCRETE SIDEWALK	
	ASPHALT SIDEWALK	
	HANDICAP PARKING	
	SIGHT TRIANGLE	
	SIGN(S)	
	PARKING COUNT INDICATOR	
255 VPD	VEHICLES PER DAY INDICATOR	255 VPD
TP	TEST PIT	TP
MW	MONITORING WELL	MW
350	MAJOR CONTOUR	350
350	MINOR CONTOUR	350
	GRADE BREAK	
	RIDGELINE	
52 22/FG 5236 22/FG	SPOT ELEVATION	52 22/FG 5236 22/FG
	RIP RAP	
W	WATER LINE	W
M	WATER METER	M
	WATER VALVE	
	WATER REDUCER	
	WATER FITTINGS	
	FIRE HYDRANT	
S	SANITARY LINE	S
	SANITARY MANHOLE	
	SANITARY CLEANOUT	
	STORM SEWER PIPE	
ST	STORM SEWER MANHOLE	ST
	STORM SEWER INLET	
	STORM SEWER FLARED END SECTION	
	STORM SEWER HEADWALL	
OU	OVERHEAD UTILITY	OU
E	UNDERGROUND ELECTRIC	E
OHE	OVERHEAD ELECTRIC	OHE
	UTILITY POLE	
	STREET LIGHT	
CATV	CABLE TV SERVICE	CATV
T	TELECOM SERVICE	T
FO	FIBER OPTIC SERVICE	FO
G	NATURAL GAS SERVICE	G
	TREE	
	TREE LINE	
	WETLANDS	

LEGEND NOTES

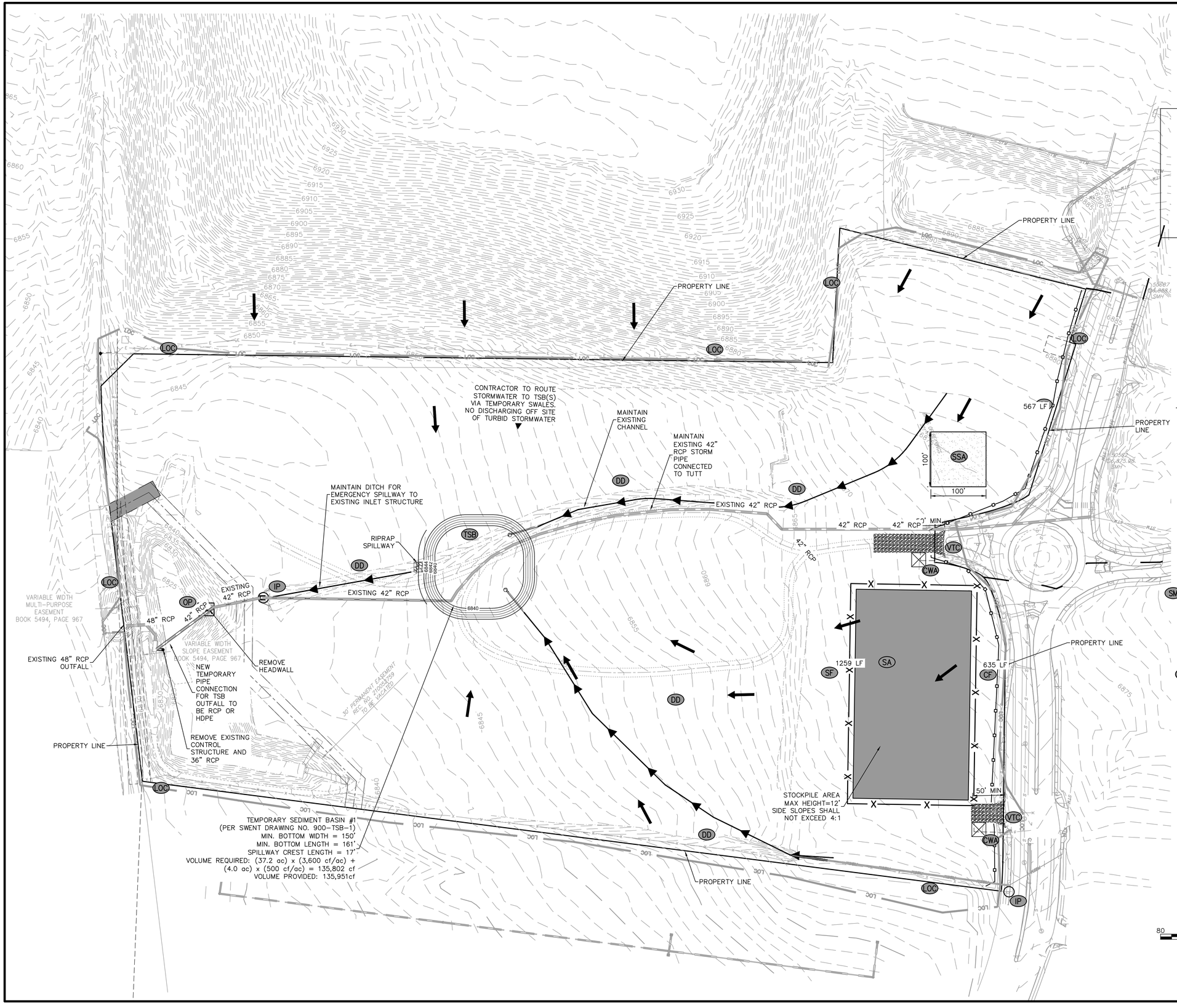
1. THIS IS A STANDARD SHEET, THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PROJECT.
2. ADDITIONAL LEGENDS AND NOTES MAY BE FOUND ON OTHER SHEETS ASSOCIATED WITH THIS PLAN. THESE LEGENDS AND NOTES ARE TO BE REFERENCED IN ADDITION TO THIS STANDARD SHEET.

CONSTRUCTION STATEMENT:

WORK SHALL BE CONSTRUCTED TO CITY OF THORNTON STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE TO THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

GENERAL NOTES

1. UTILITY CONFLICTS: ALL EXISTING UTILITIES SHOWN WERE COMPILED USING THE BEST AVAILABLE INFORMATION AND FIELD OBSERVATION. BOWMAN CONSULTING INC. DOES NOT GUARANTEE THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON. CONTRACTOR TO BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION OF AND PROTECTING ALL EXISTING UTILITIES, INCLUDING THOSE NOT SHOWN OR SHOWN INCORRECTLY ON THE PLANS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IN A TIMELY FASHION TO THE SATISFACTION OF THE APPROPRIATE GOVERNING AGENCY AND THE OWNER OF THE IMPACTED UTILITY AT THE CONTRACTOR'S EXPENSE.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS FOR THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT THE JOB SITE AT ALL TIMES THE APPROPRIATE GOVERNING AGENCY'S PUBLIC WORKS MANUAL, ALL APPROVED EASEMENT AGREEMENTS, AND ONE (1) SIGNED COPY OF THE PLANS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY FOR ANY VARIANCE TO THE ABOVE DOCUMENTS.
3. CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE CODES, LICENSES, STANDARDS, SPECIFICATIONS, PERMITS, BONDS, ETC., WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
4. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND MUST COMPLY WITH OSHA REGULATIONS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER AND ENGINEER OF ANY PROBLEM CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
6. THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY HIS/HER CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAY AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
8. THE CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION. THE APPROPRIATE FIRE DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSURES AND IN THE EVENT THAT ANY FIRE HYDRANTS ARE TO BE TEMPORARILY REMOVED FROM SERVICE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING AT LEAST 48 HOURS ADVANCED NOTICE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING WATER SYSTEM AND FOR OBSERVATIONS AND/OR INSPECTIONS REQUIRED.
9. THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS OR OTHER DEVICES NECESSARY FOR SAFE TRAFFIC CONTROL IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AS MODIFIED BY THE COLORADO SUPPLEMENT TO THE MUTCD. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE APPROPRIATE GOVERNING AGENCY PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT FOR WORK WITHIN THE RIGHT-OF-WAY.
10. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ANY AFFECTED UTILITY COMPANY.
11. THE CONTRACTOR SHALL OBTAIN COPIES OF THE "SOILS AND INVESTIGATION" REPORT FROM GEOTECHNICAL ENGINEER ALONG WITH THE "PAVEMENT THICKNESS DESIGN REPORT". THE CONTRACTOR MUST HAVE COPIES OF SAME ON THE SITE AT ALL TIMES.
12. THE CONTRACTOR IS REQUIRED TO PROVIDE AS-CONSTRUCTED HORIZONTAL AND VERTICAL CONSTRUCTION INFORMATION, INCLUDING THE LOCATIONS OF ALL SANITARY LINES AND SERVICES, WATER LINES AND SERVICES, AND OTHER UTILITY LINES AND SERVICES TO THE ENGINEER FOR PREPARATION OF AS-BUILT DOCUMENTS.
13. LIMITS OF CONSTRUCTION EASEMENTS AND RIGHTS-OF-WAY SHALL BE DELINEATED WITH TEMPORARY STAKING BY THE CONTRACTOR. SAFETY FENCING SHALL BE PER APPROPRIATE GOVERNING AGENCY.
14. WHERE EXCAVATION IS REQUIRED UNDER EXISTING ASPHALT OR CONCRETE PAVEMENT, THE EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO EFFECT A SMOOTH, STRAIGHT-CUT EDGE. ASPHALT PATCH SHALL BE PER APPROPRIATE GOVERNING AGENCY STANDARDS.
15. REFER TO FINAL RECORDED PLAT FOR ACTUAL LOT, TRACT, PARCEL, AND EASEMENT LOCATIONS AND DESIGNATIONS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAYS AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
17. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY TO THE PROJECT WORK SITE (SEE THE EROSION CONTROL PLAN). THE CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY (IF APPLICABLE) TO COMPLETE THE CONSTRUCTION AND SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
18. WATER WILL BE PROVIDED BY THE CONTRACTOR TO KEEP WIND EROSION IN CHECK. USE OF WATER AS A DUST PREVENTATIVE SHALL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF THE WORK.
19. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE PROPERTY LIMITS DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR.
20. ANY CONSTRUCTION DEBRIS OR MUD TRACKING IN THE PUBLIC RIGHT-OF-WAY RESULTING FROM THIS DEVELOPMENT SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY THE DEVELOPMENT AND SHALL PROPERLY BARRICADE THE SITE UNTIL CLEAN UP OR REPAIR IS COMPLETE.
21. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO GRADE STREET CORES, RIGHT-OF-WAY TEMPLATES, AND LOTS ACCORDING TO GRADING INSTRUCTIONS SHOWN ON PLANS.
22. STREET CONTOURS SHOWN AT PROPOSED STREET LOCATIONS REPRESENT FINISHED GRADE ELEVATION TO TOP OF ASPHALT.
23. COMPACTION FILL MATERIAL SHALL BE COMPACTED ACCORDING TO THE APPROPRIATE GOVERNING AGENCY REGULATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
24. TOLERANCE ROUGH GRADING: TOLERANCE SHALL BE +/- 0.1 FEET.
25. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE ALL APPROPRIATE PERMITS FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAVE BEEN OBTAINED PRIOR TO GRADING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL TEMPORARY WATER DIVERSION/CONTROL DEVICES AND EROSION CONTROL DEVICES NECESSARY TO PROTECT ADJACENT PROPERTIES, WATERWAYS AND PUBLIC RIGHT-OF-WAY. CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF SAID DEVICES THROUGHOUT CONSTRUCTION AND UNTIL THE PERMANENT PROTECTION NECESSARY HAS BEEN COMPLETED.
26. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE MOST CURRENT APPROVED ARCHITECTURAL/ MECHANICAL/ELECTRICAL/PLUMBING/STRUCTURAL PLANS AND COORDINATE SAME WITH THE SITE PLAN, PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
27. WHEN DURING THE COURSE OF CONSTRUCTION, ANY OBJECT OF AN UNUSUAL NATURE IS ENCOUNTERED, THE CONTRACTOR SHALL CEASE WORK IN THAT AREA AND IMMEDIATELY NOTIFY THE OWNER, APPROPRIATE GOVERNING AGENCY, AND/OR THE ARCHITECT/ENGINEER.
28. THE EXISTING UNDERGROUND UTILITIES SHOW HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN IN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.
29. ALL STEPS WITH THREE OR MORE RISERS SHALL HAVE HAND RAILS, PER LOCAL CODE.
30. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF EXISTING ROAD TO PROPOSED CURB AND GUTTER AND/OR PROPOSED EDGE OF PAVEMENT TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY. REMOVE AND RECONSTRUCT EXISTING PAVEMENT AND/OR CURB AS DICTATED BY FIELD CONDITIONS TO PROVIDE POSITIVE DRAINAGE AT TIE-IN-POINTS.
31. OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1 1/2 INCH DEPTH; ANY COST ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE CONTRACTOR.
32. ALL RIGHT-OF-WAY DEDICATED FOR PUBLIC USE SHALL BE CLEAR AND UNENCUMBERED.
33. AN AIR QUALITY PERMIT SHALL BE OBTAINED IF REQUIRED.
34. ANY LIGHTING SHOWN HEREON IS AS SPECIFIED BY THE CLIENT AND IS INCLUDED FOR INFORMATION PURPOSES ONLY, AS DIRECTED BY THE OWNER AND/OR PUBLIC AGENCY REQUIREMENTS. BOWMAN CONSULTING GROUP, LTD. HAS NOT PERFORMED THE LIGHTING DESIGN, AND THEREFORE DOES NOT WARRANT AND IS NOT RESPONSIBLE FOR THE DEGREE AND/OR ADEQUACY OF ILLUMINATION ON THIS PROJECT.
35. THE CONTRACTOR WILL BE REQUIRED TO NOTIFY ALL RESIDENCES WITHIN VICINITY OF THE PROPERTY BOUNDARY TEN (10) DAYS PRIOR TO ANY BLASTING IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY REQUIREMENTS.
36. NO BLASTING SHALL BE PERMITTED WITHIN 25' OF EXISTING UTILITY LINES OR STRUCTURES. BLASTING TO BE EXTENDED 25' BEYOND PROPOSED STRUCTURES IF CONDITIONS WARRANT FUTURE EXTENSIONS.
37. ALL RETAINING WALLS 2' IN HEIGHT AND OVER REQUIRE A SEPARATE BUILDING PERMIT.
38. THE APPROVAL OF THIS PLAN DOES NOT CONSTITUTE THE APPROVAL OF FUTURE WORK.
39. ALL HANDICAPPED SPACES SHALL HAVE AN ABOVE GRADE IDENTIFICATION SIGN MEETING APPROPRIATE GOVERNING AGENCY STANDARDS.
40. WHERE A PROPOSED PIPE CROSSES OR PARALLELS A STREET OR DRIVE AISLE, THE ASPHALT SHALL BE NEATLY SAWCUT TO FULL DEPTH. AFTER INSTALLATION OF THE PIPE, THE ROADWAY SHALL BE PATCHED IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY STANDARDS.
41. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, CONDITIONS, AND CONFIRMATION AND CONDITION OF EXISTING GROUND SURFACE AND THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING EXECUTION OF THE WORK. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUANTITY AND QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED. ANY INACCURACIES OR DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS MUST BE BOUGHT TO THE OWNER'S ATTENTION IN ORDER TO CLARIFY THE EXACT NATURE OF THE WORK TO BE PERFORMED PRIOR TO THE COMMENCEMENT OF ANY WORK.
42. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING ROADS AND UTILITIES WHICH OCCURS AS A RESULT OF THE PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY.
43. ALL STREET CUT AND PATCH WORK IN PUBLIC RIGHT-OF-WAY REQUIRED FOR UTILITIES INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CITY, COUNTY, AND/OR APPROPRIATE GOVERNING AGENCY STANDARDS AND SPECIFICATIONS.
44. THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION FOR THE CONTRACTOR TO TRESPASS ON OFF-SITE PROPERTIES.
45. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
46. THESE PLANS MAKE NO REPRESENTATION AS TO THE SUBSURFACE CONDITIONS AND THE PRESENCE OF SUBSURFACE WATER OR THE NEED FOR SUBSURFACE DRAINAGE FACILITIES.
47. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING ALL NECESSARY INSPECTIONS.
48. EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
49. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER.
50. THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
51. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF TEST HOLES PRIOR TO BEGINNING OF ANY CONSTRUCTION ON THE PROJECT. IF CONFLICTS ARE DISCOVERED AS A RESULT OF TEST HOLE FINDINGS, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY.
52. EXCAVATION SUPPORT SYSTEMS SHALL CONFORM TO THE PROVISIONS OF OSHA CONSTRUCTION STANDARD 29 CFR PART 1926 SUBPART P, OR CURRENT EDITION.
53. AT LOCATIONS WHERE THE FINAL SURFACE COURSE OF ASPHALT PAVEMENT IS TO BE FEATHERED INTO THE EXISTING SURFACE COURSE, THE EXISTING SURFACE COURSE IS TO BE SCABBLED TO A MINIMUM DEPTH OF 1" AND A TACK COAT APPLIED PRIOR TO FINAL PAVING TO INSURE A SMOOTH, WELL BONDED JOINT.
54. ANY NEW PAVEMENT OPENED TO TRAFFIC SHALL RECEIVE A TACK COAT PRIOR TO PLACEMENT OF ANY OVERLYING ASPHALT COURSE.
55. ALL SIDEWALKS TO BE 4" THICK CONCRETE UNLESS OTHERWISE SHOWN ON THE PLAN.
56. ALL DEMOLITION SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE APPROPRIATE GOVERNING AGENCY.
57. ALL APPLICABLE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING DEMOLITION.
58. ITEMS SHOWN TO BE RELOCATED SHALL BE CAREFULLY REMOVED AND STORED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY CAN BE PLACED IN THEIR NEW LOCATION. CONTRACTOR SHALL VERIFY THESE ITEMS WITH THE OWNER, PRIOR TO CONSTRUCTION.
59. CONTRACTOR SHALL COORDINATE REMOVAL OR RELOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD ELECTRICAL, TELEPHONE AND CABLE TV LINES AND REMOVAL OF UTILITY POLES, PEDESTALS AND TRANSFORMERS WITH UTILITY COMPANIES AND WITH DEVELOPER PRIOR TO DEMOLITION.
60. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENTS AND/OR RECONSTRUCTION OF ALL UTILITY COVER (MANHOLE FRAMES AND COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
61. THE CONTRACTOR MUST HAVE THE APPROVED CONSTRUCTION DRAWINGS IN POSSESSION PRIOR TO THE START OF CONSTRUCTION. AT LEAST ONE (1) COPY OF THE APPROVED PLANS, WITH REVISIONS, MUST BE KEPT ON-SITE AT ALL TIMES.
62. ALL HANDICAP RAMPS SHALL BE BUILT IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE APPROPRIATE GOVERNING AGENCY STANDARDS, CDOT STANDARDS, AND CURRENT ADA REQUIREMENTS.
63. THE STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES MUST BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY ARE NOT ONLY 100% COMPLETE, BUT ALSO THAT 100% OF THE DRAINAGE AREA TO EACH FACILITY IS PERMANENTLY STABILIZED. SEED AND MULCH DOES NOT CONSTITUTE STABILIZATION IN TERMS OF THE CONTRACTOR MAINTENANCE OF THE STORM DRAIN, STORMWATER MANAGEMENT, AND WATER QUALITY FACILITIES. ALL STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES SHALL BE TURNED OVER TO THE OWNER COMPLETELY CLEAN AND FREE FROM


CONTRACTOR TO ROUTE STORMWATER TO TSB(S) VIA TEMPORARY SWALES. NO DISCHARGING OFF SITE OF TURBID STORMWATER
MAINTAIN EXISTING CHANNEL
MAINTAIN EXISTING 42" RCP STORM PIPE CONNECTED TO TUTT
MAINTAIN DITCH FOR EMERGENCY SPILLWAY TO EXISTING INLET STRUCTURE
RIPRAP SPILLWAY
EXISTING 42" RCP
EXISTING 48" RCP OUTFALL
VARIABLE WIDTH MULTI-PURPOSE EASEMENT BOOK 5494, PAGE 967
VARIABLE WIDTH SLOPE EASEMENT BOOK 5494, PAGE 967
REMOVE HEADWALL
NEW TEMPORARY PIPE CONNECTION FOR TSB OUTFALL TO BE RCP OR HDPE
REMOVE EXISTING CONTROL STRUCTURE AND 36" RCP
30' PERMANENT EASEMENT REC NO. 2100047759 TO BE VACATED
PROPERTY LINE
TEMPORARY SEDIMENT BASIN #1
(PER SWENT DRAWING NO. 900-TSB-1)
MIN. BOTTOM WIDTH = 150'
MIN. BOTTOM LENGTH = 161'
SPILLWAY CREST LENGTH = 17'
VOLUME REQUIRED: (37.2 ac) x (3,600 cf/ac) +
(4.0 ac) x (500 cf/ac) = 135,802 cf
VOLUME PROVIDED: 135,951cf
567 LF
1259 LF
635 LF
100'
50' MIN
STOCKPILE AREA
MAX HEIGHT=12'
SIDE SLOPES SHALL
NOT EXCEED 4:1
42" RCP
42" RCP
42" RCP

IZZY LLC
PARCEL ID: 5307300008

TEMPLETON GAP LANDFILL INC.
PARCEL ID: 5307000110

TEMPLETON GAP LANDFILL I
PARCEL ID: 5307000110

PROPERTY LINE

CONTRACTOR TO ROUTE STORMWATER TO TSB(S) VIA TEMPORARY SWALES. NO DISCHARGING OFF SITE OF TURBID STORMWATER

MAINTAIN EXISTING 42" RCP STORM PIPE CONNECTED TO TUTT

MAINTAIN EXISTING CHANNEL

EXISTING 42" RCP

MAINTAIN DITCH FOR EMERGENCY SPILLWAY TO EXISTING INLET STRUCTURE

RIPRAP SPILLWAY

EXISTING 42" RCP

EXISTING 42" RCP

EXISTING TYPE 1 SDMH #2
STA 16+12.64
RIM=6850.81
INV IN=6842.93
INV OUT=6842.83

161.00'

150.00'

EXISTING 48" RCP OUTFALL

EXISTING 42" RCP

CONNECT TO EXISTING

48" RCP

42" RCP

REMOVE HEADWALL

MAINTAIN EXISTING STRUCTURE AND PIPE

NEW TEMPORARY PIPE CONNECTION FOR TSB OUTFALL TO BE RCP OR HDPE

REMOVE EXISTING CONTROL STRUCTURE AND 36" RCP

CONNECT TO EXISTING STRUCTURE

EXISTING TYPE 1 SDMH #1
STA 13+35.38
RIM=6843.64
INV IN=6836.34
INV OUT=6836.04

VARIABLE WIDTH SLOPE EASEMENT BK 5494, PAGE 967

VARIABLE WIDTH MULTI-PURPOSE EASEMENT BOOK 5494, PAGE 967

N. POWERS BOULEVARD (VARIABLE WIDTH RIGHT-OF-WAY)

100' PERMANENT EASEMENT REC. NO. 2000025759 TO BE VACATED

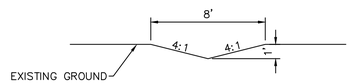
PROPERTY LINE

TEMPORARY SEDIMENT BASIN #1
(PER SWENT DRAWING NO. 900-TSB-1)
MIN. BOTTOM WIDTH = 150'
MIN. BOTTOM LENGTH = 161'
SPILLWAY CREST LENGTH = 17'
VOLUME REQUIRED: (37.2 ac) x (3,600 cf/ac) + (4.0 ac) x (500 cf/ac) = 135,802 cf
VOLUME PROVIDED: 135,951cf

UNPLATTED
(BOOK 2418, PAGE 314)

PROPERTY LINE

TYPICAL DIVERSION DITCH



DISTURBED AREA:
TOTAL SITE AREA = 34.01 ACRES
LIMITS OF DISTURBANCE = 35.37 ACRES

MATCHLINE SEE SHEET EC4

	350	EXISTING GROUND MAJOR CONTOUR
	349	EXISTING GROUND MINOR CONTOUR
	350	PROPOSED GRADE MAJOR CONTOUR
	349	PROPOSED GRADE MINOR CONTOUR
		PROPERTY BOUNDARY
		FLOW DIRECTION
LOC	LOC	LIMITS OF CONSTRUCTION/DISTURBANCE
CF		CONSTRUCTION FENCE
SF	X	SILT FENCE
DD		DIVERSION DITCH
SSA		STABILIZED STAGING AREA
VTC		VEHICLE TRACKING CONTROL
SA		STOCKPILE AREA
SM SR		SURFACE ROUGHENING / SEEDING AND MULCHING
ECB		EROSION CONTROL BLANKET
IP		INLET PROTECTION
OP		OUTLET PROTECTION
SBB		STRAW BAIL BARRIER
RRB SCL		REINFORCED ROCK BERM / SEDIMENT CONTROL LOG
RS		ROCK SOCK / CURB SOCK
TSB		SEDIMENT BASIN
CWA		CONCRETE WASHOUT AREA
PT	P	PORT-O-LET
TSD		TEMPORARY SLOPE DRAIN

REFER TO SHEETS EC9 AND EC10 DETAILS

N

50 25 0 50 100
GRAPHIC SCALE
1" = 50'

Know what's below. Call before you dig.

STRM: STM-REV23-0330
PROJ MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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www.bowman.com

REVISIONS

REVISION	DESCRIPTION	DATE
0	FOR CONSTRUCTION	10/08/2024

GRADING EROSION AND SEDIMENT CONTROL PLAN - INITIAL

AFW - COLORADO SPRINGS GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

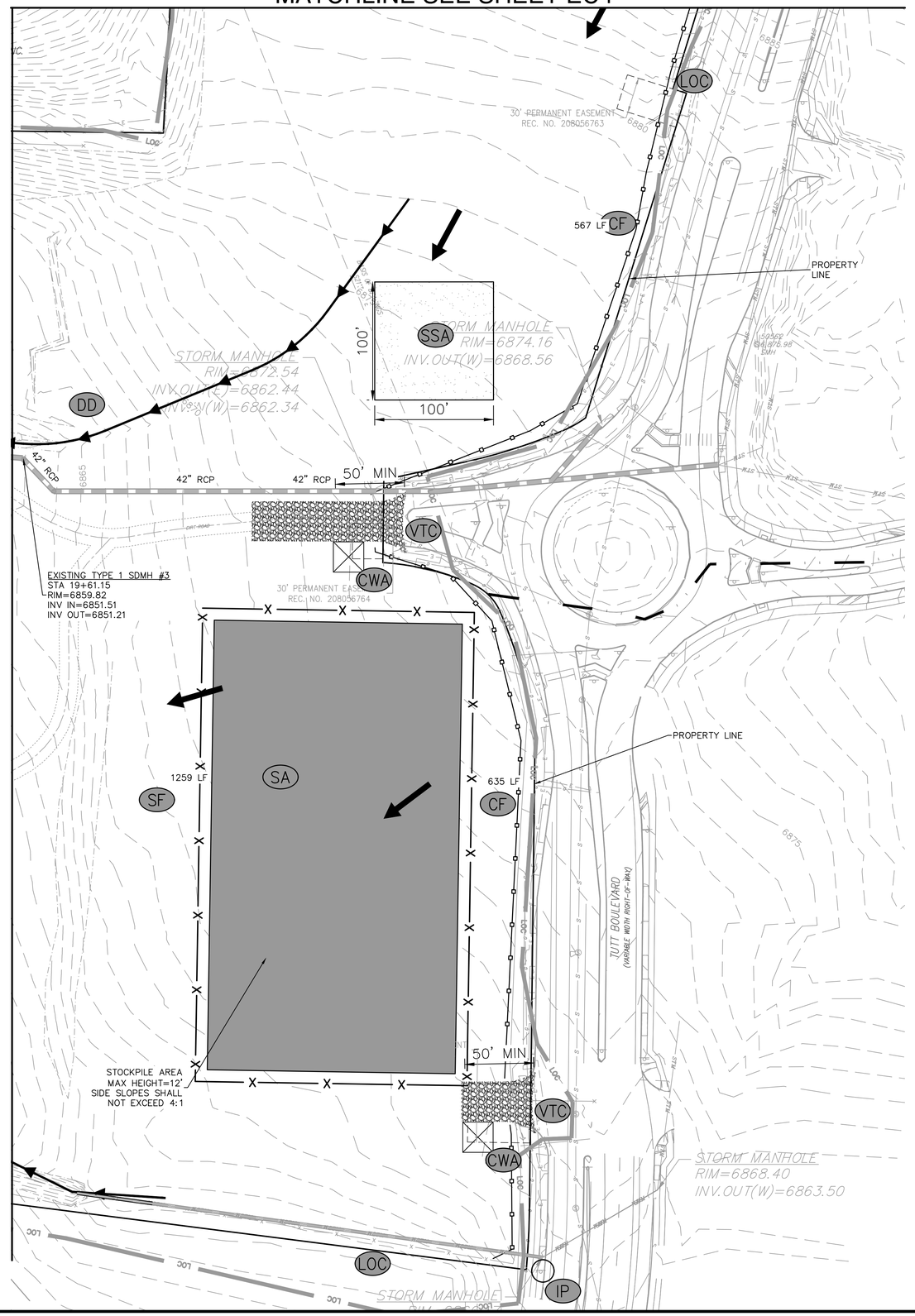
SCALE H:
V:

JOB No. 050895-01-001

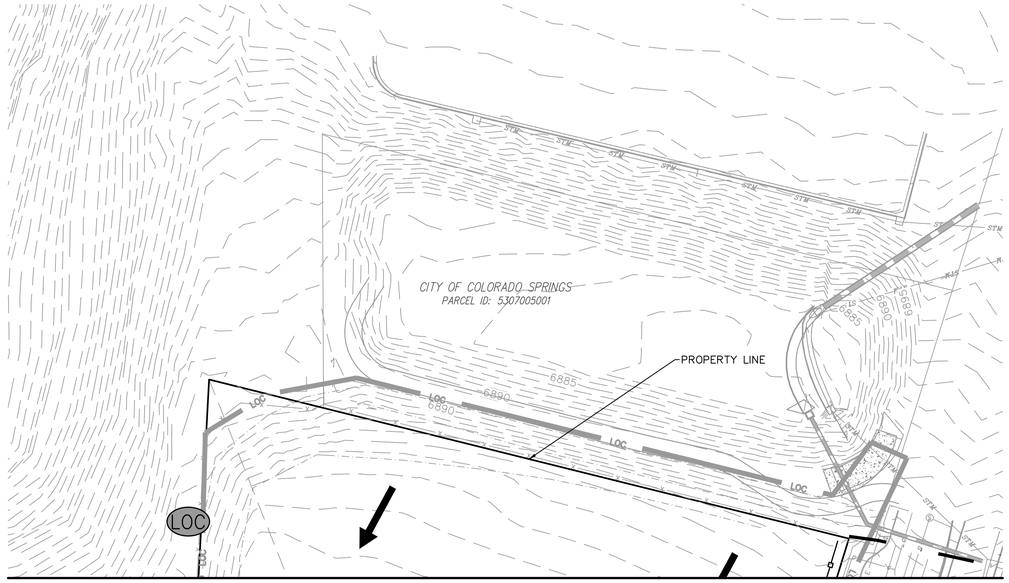
DATE : 04/03/2023

SHEET
EC3

MATCHLINE SEE SHEET EC4

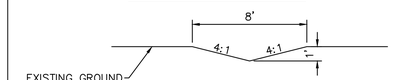


MATCHLINE SEE SHEET EC3



MATCHLINE SEE SHEET EC4

TYPICAL DIVERSION DITCH



DISTURBED AREA:
TOTAL SITE AREA = 34.01 ACRES
LIMITS OF DISTURBANCE = 35.37 ACRES

350	EXISTING GROUND MAJOR CONTOUR
349	EXISTING GROUND MINOR CONTOUR
350	PROPOSED GRADE MAJOR CONTOUR
349	PROPOSED GRADE MINOR CONTOUR
	PROPERTY BOUNDARY
	FLOW DIRECTION
LOC	LIMITS OF CONSTRUCTION/DISTURBANCE
CF	CONSTRUCTION FENCE
SF	SILT FENCE
DD	DIVERSION DITCH
SSA	STABILIZED STAGING AREA
VTC	VEHICLE TRACKING CONTROL
SA	STOCKPILE AREA
SM SR	SURFACE ROUGHENING / SEEDING AND MULCHING
ECB	EROSION CONTROL BLANKET
IP	INLET PROTECTION
OP	OUTLET PROTECTION
SBB	STRAW BAIL BARRIER
RRB SCL	REINFORCED ROCK BERM / SEDIMENT CONTROL LOG
RS	ROCK SOCK / CURB SOCK
TSB	SEDIMENT BASIN
CWA	CONCRETE WASHOUT AREA
PT	PORT-O-LET
TSD	TEMPORARY SLOPE DRAIN

REFER TO SHEETS EC9 AND EC10 DETAILS

N

50 25 0 50 100
GRAPHIC SCALE
1" = 50'

811 Know what's **below.** **Call** before you dig.

STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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Phone: (303) 801-2900
www.bowman.com

REVISIONS

REVISION	DESCRIPTION	DATE
0	FOR CONSTRUCTION	10/08/2024

GRADING EROSION AND SEDIMENT CONTROL PLAN - INITIAL

AFW - COLORADO SPRINGS GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET EC4

IZZY LLC
PARCEL ID: 5307300008

TRIBUTARY AREA
FOR TEMPORARY SEDIMENT BASIN #3
AREA: 48.38 ACRES

TEMPLETON GAP LANDFILL INC.
PARCEL ID: 5307000110

TEMPLETON GAP LANDFILL INC.
PARCEL ID: 5307000110

25' PUBLIC DRAINAGE EASEMENT
(HEREIN DEDICATED)

PROPERTY LINE

TEMPLETON GAP LANDFILL I
PARCEL ID: 5307000110

NEW STOP SIGN

24" RCP

30" RCP

NEW MOUNTABLE CURB

NEW CHAIN BARRIER
WITH SIGNAGE

67.14'

12" RCP

TEMPORARY SEDIMENT BASIN #2
(PERMANENT POND)
MIN. BOTTOM WIDTH = 67'
MIN. BOTTOM LENGTH = 593'
SPILLWAY CREST LENGTH = 43'
Q = CIA = (.87)(3.42)(48.38) = 143.9 CFS
VOLUME REQUIRED = 290,283 CF
VOLUME PROVIDED = 589,191 CF

NEW RETAINING WALL

25' BUILDING SETBACK

20' LANDSCAPE BUFFER

N. POWERS BOULEVARD
COLORADO STATE HWY 21
(VARIABLE WIDTH RIGHT-OF-WAY)
(REC. NO. 207712569)

VARIABLE WIDTH
SLOPE EASEMENT
BOOK 5494, PAGE 967

VARIABLE WIDTH
MULTI-PURPOSE
EASEMENT
BOOK 5494, PAGE 967

48" RCP

18" RCP

PROPOSED LIGHTING (TYP.)
REFER TO ELECTRICAL PLANS

NEW STOP SIGN (TYP.)

42" RCP

NEW MONUMENT SIGN

FOURSQUARE COLLECTION
AT PATHWAYS FILING NO. 1
REC. NO. 221714696

UNPLATTED
(BOOK 2418, PAGE 314)

PROPERTY LINE

DIRT ROAD

MATCHLINE SEE SHEET EC6

DISTURBED AREA:
TOTAL SITE AREA = 34.01 ACRES
LIMITS OF DISTURBANCE = 35.30 ACRES

EROSION CONTROL LEGEND

350	EXISTING GROUND MAJOR CONTOUR
349	EXISTING GROUND MINOR CONTOUR
350	PROPOSED GRADE MAJOR CONTOUR
349	PROPOSED GRADE MINOR CONTOUR
	PROPERTY BOUNDARY
	FLOW DIRECTION
LOC	LIMITS OF CONSTRUCTION/DISTURBANCE
CF	CONSTRUCTION FENCE
SF	SILT FENCE
DD	DIVERSION DITCH
SSA	STABILIZED STAGING AREA
VTC	VEHICLE TRACKING CONTROL
SA	STOCKPILE AREA
SM SR	SURFACE ROUGHENING / SEEDING AND MULCHING
ECB	EROSION CONTROL BLANKET
IP	INLET PROTECTION
OP	OUTLET PROTECTION
SBB	STRAW BAIL BARRIER
RRB SCL	REINFORCED ROCK BERM / SEDIMENT CONTROL LOG
RS	ROCK SOCK / CURB SOCK
SB	SEDIMENT BASIN
CWA	CONCRETE WASHOUT AREA
PT	PORT-O-LET
TSD	TEMPORARY SLOPE DRAIN

REFER TO SHEETS EC9 AND EC10 DETAILS

GRAPHIC SCALE
1" = 50'

Know what's below.
Call before you dig.

STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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REVISIONS		
REVISION	DESCRIPTION	DATE
0	FOR CONSTRUCTION	10/08/2024

GRADING EROSION AND SEDIMENT CONTROL PLAN - INTERIM

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

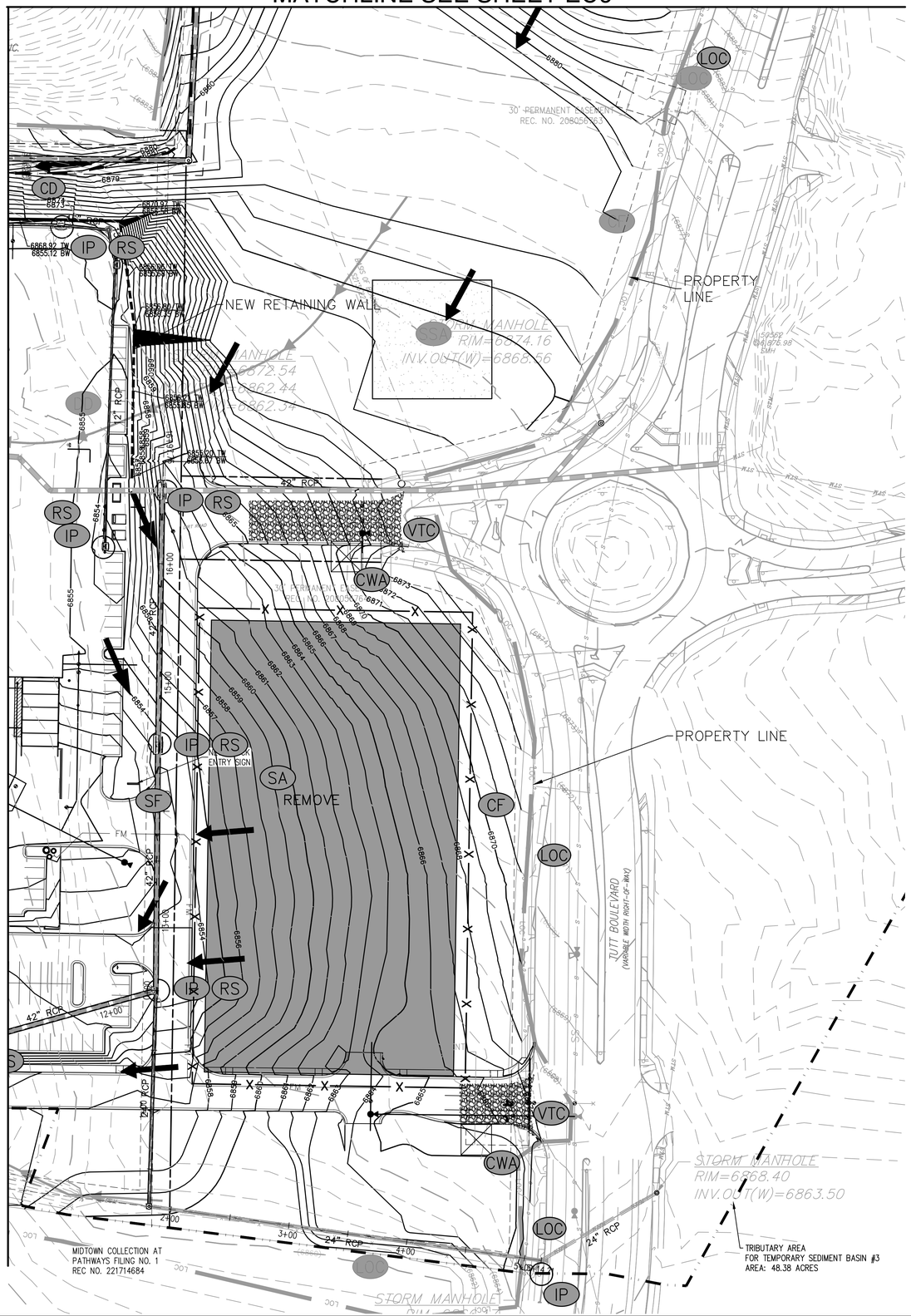
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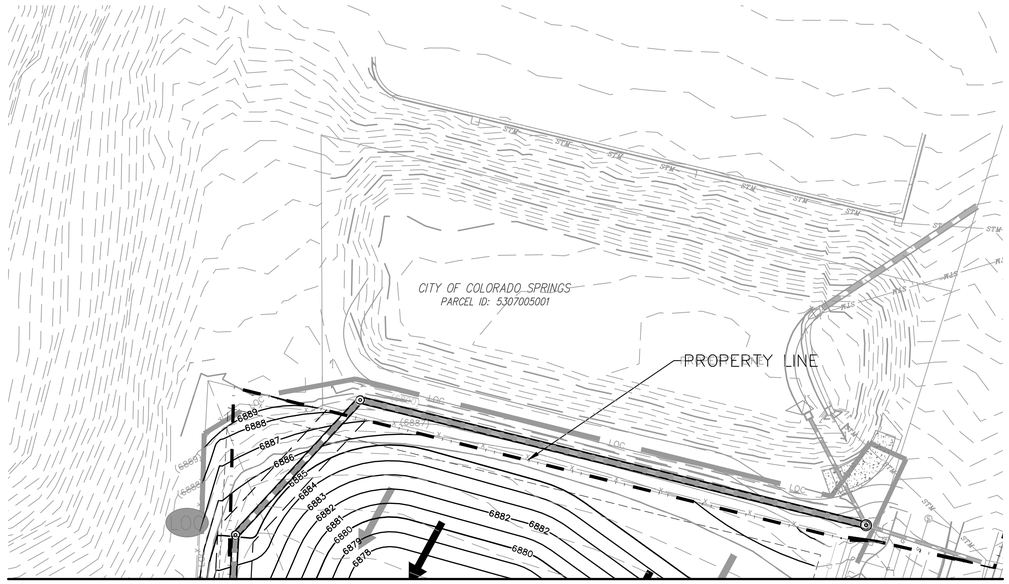
DATE : 04/03/2023

SHEET
EC5

MATCHLINE SEE SHEET EC5

MATCHLINE SEE SHEET EC6





MATCHLINE SEE SHEET EC6

DISTURBED AREA:
TOTAL SITE AREA = 34.01 ACRES
LIMITS OF DISTURBANCE = 35.30 ACRES

EROSION CONTROL LEGEND

350	EXISTING GROUND MAJOR CONTOUR
349	EXISTING GROUND MINOR CONTOUR
350	PROPOSED GRADE MAJOR CONTOUR
349	PROPOSED GRADE MINOR CONTOUR
	PROPERTY BOUNDARY
	FLOW DIRECTION
LOC	LIMITS OF CONSTRUCTION/DISTURBANCE
CF	CONSTRUCTION FENCE
SF	SILT FENCE
DD	DIVERSION DITCH
SSA	STABILIZED STAGING AREA
VTC	VEHICLE TRACKING CONTROL
SA	STOCKPILE AREA
SM SR	SURFACE ROUGHENING / SEEDING AND MULCHING
ECB	EROSION CONTROL BLANKET
IP	INLET PROTECTION
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SBB	STRAW BAIL BARRIER
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RS	ROCK SOCK / CURB SOCK
SB	SEDIMENT BASIN
CWA	CONCRETE WASHOUT AREA
PT	PORT-O-LET
TSD	TEMPORARY SLOPE DRAIN

REFER TO SHEETS EC9 AND EC10 DETAILS

50 25 0 50 100
GRAPHIC SCALE
1" = 50'

N

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GRADING EROSION AND SEDIMENT CONTROL PLAN - INTERIM

AFW - COLORADO SPRINGS GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

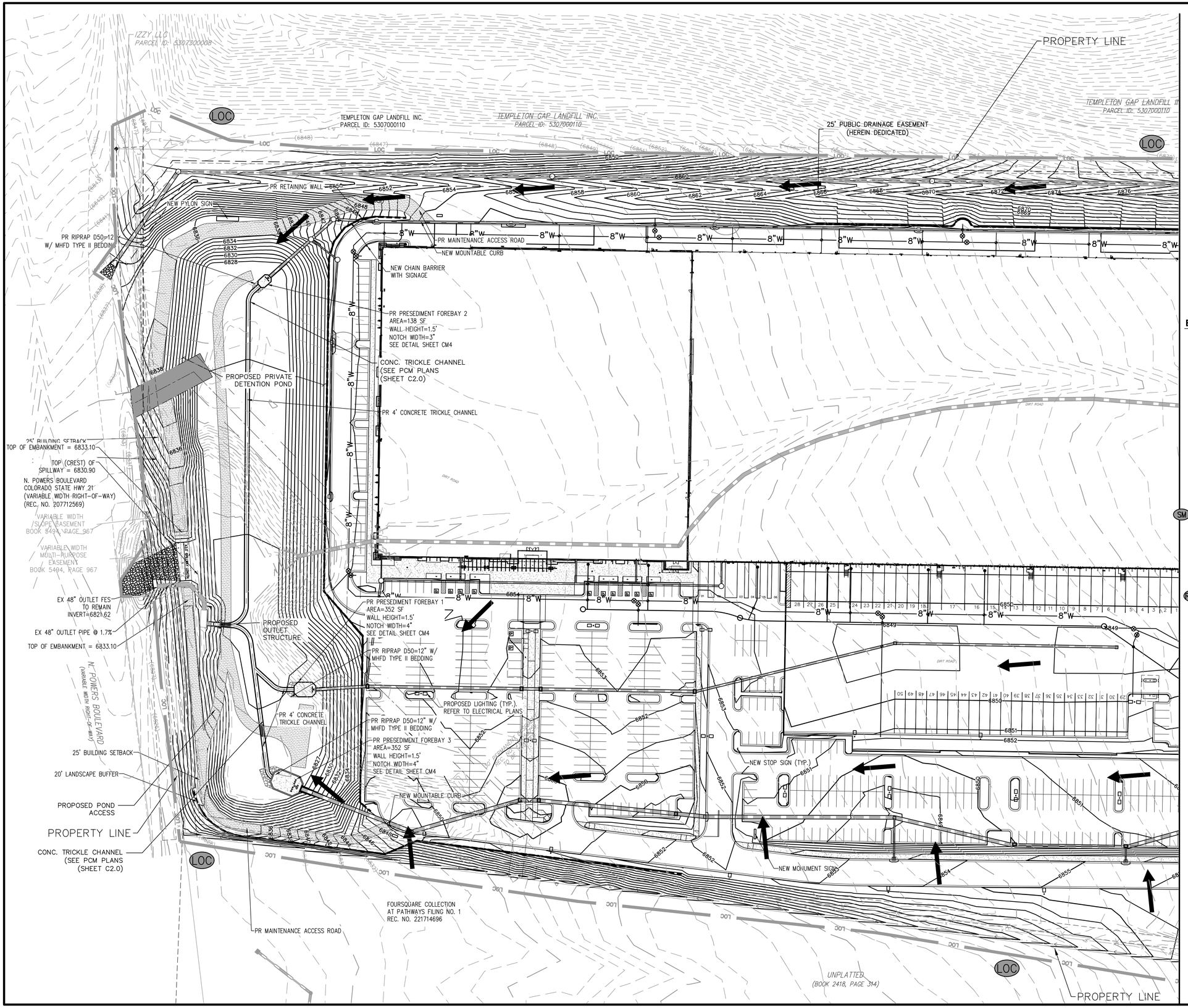
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
EC6



MATCHLINE SEE SHEET EC8

DISTURBED AREA:
TOTAL SITE AREA = 34.01 ACRES
LIMITS OF DISTURBANCE = 35.30 ACRES

SEE APPROVED LANDSCAPE PLANS
FOR FINAL STABILIZATION DETAILS

EROSION CONTROL LEGEND

- 350 — EXISTING GROUND MAJOR CONTOUR
- 349 — EXISTING GROUND MINOR CONTOUR
- 350 — PROPOSED GRADE MAJOR CONTOUR
- 349 — PROPOSED GRADE MINOR CONTOUR
- PROPERTY BOUNDARY
- FLOW DIRECTION
- LOC — LIMITS OF CONSTRUCTION/DISTURBANCE
- CF — CONSTRUCTION FENCE
- SF — SILT FENCE
- DD — DIVERSION DITCH
- SSA — STABILIZED STAGING AREA
- VTC — VEHICLE TRACKING CONTROL
- SA — STOCKPILE AREA
- SM SR — SURFACE ROUGHENING / SEEDING AND MULCHING
- ECB — EROSION CONTROL BLANKET
- IP — INLET PROTECTION
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- SBB — STRAW BAIL BARRIER
- RRB SCL — REINFORCED ROCK BERM / SEDIMENT CONTROL LOG
- RS — ROCK SOCK / CURB SOCK
- TSB — SEDIMENT BASIN
- CWA — CONCRETE WASHOUT AREA
- PT — PORT-O-LET
- TSD — TEMPORARY SLOPE DRAIN

80 40 0 80 160
GRAPHIC SCALE
1" = 80'

N

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GRADING EROSION AND SEDIMENT CONTROL PLAN - FINAL

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

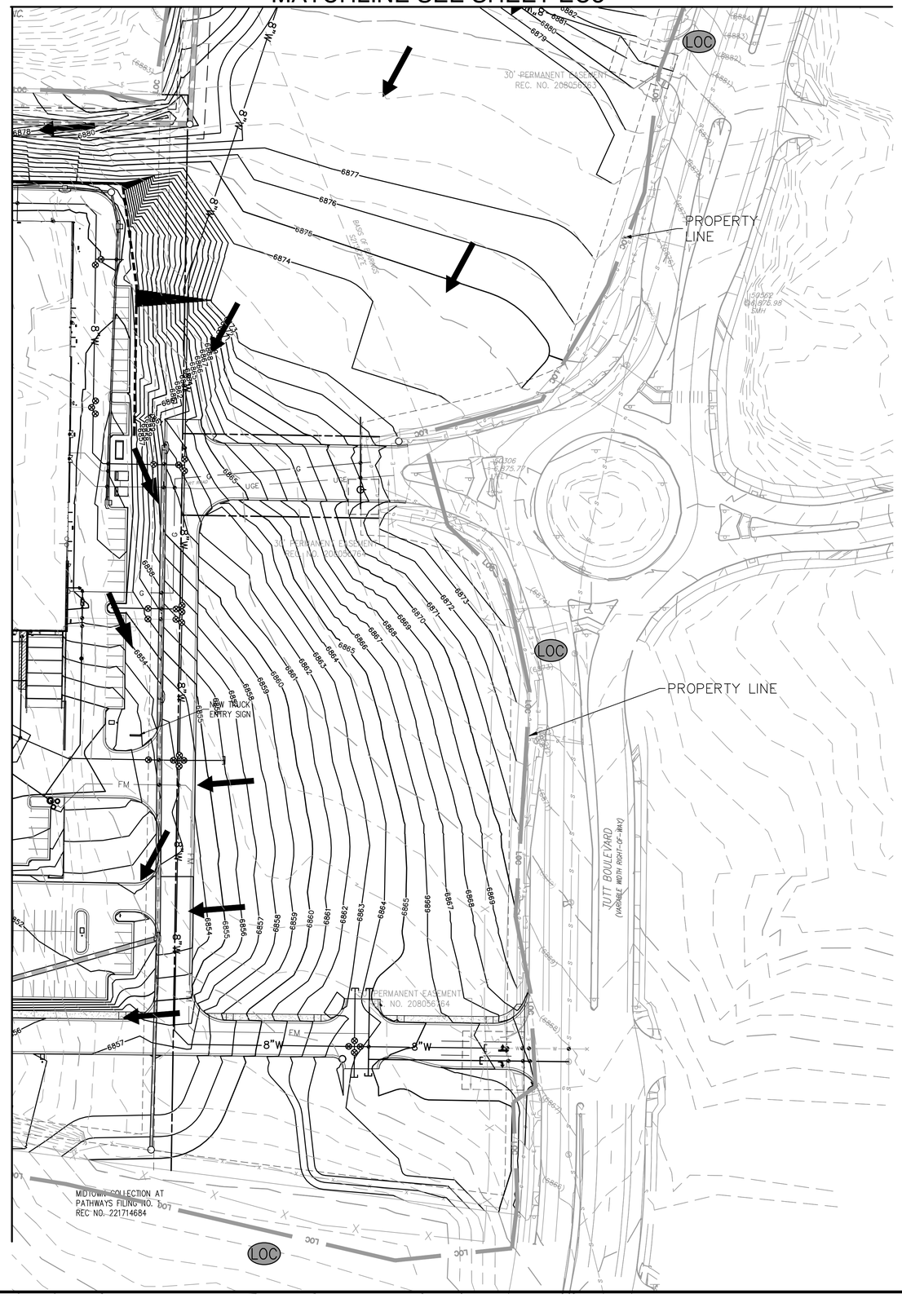
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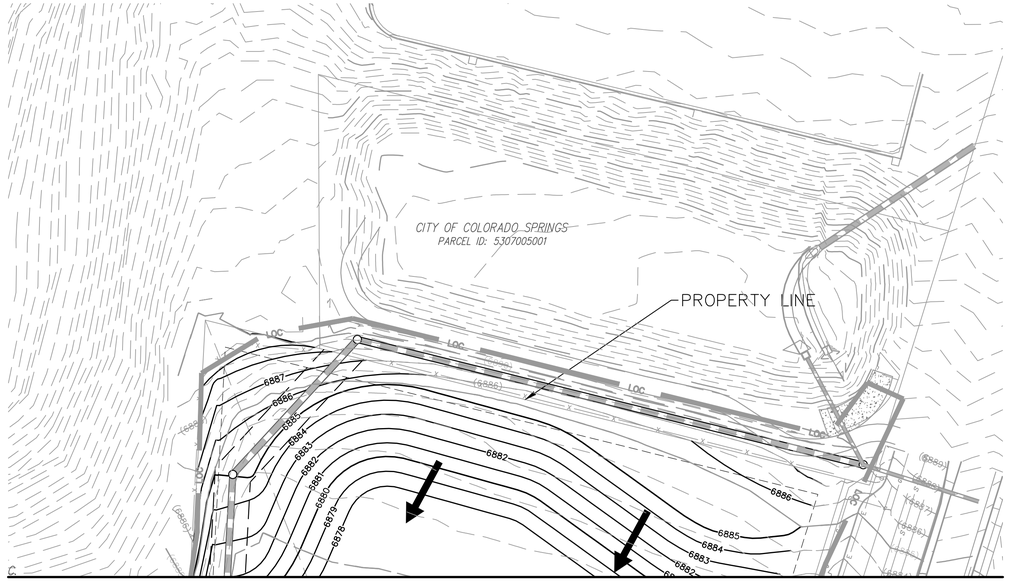
JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
EC7

MATCHLINE SEE SHEET EC8





MATCHLINE SEE SHEET EC8

DISTURBED AREA:
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LIMITS OF DISTURBANCE = 35.30 ACRES

SEE APPROVED LANDSCAPE PLANS FOR FINAL STABILIZATION DETAILS

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TSD	TEMPORARY SLOPE DRAIN

80 40 0 80 160
GRAPHIC SCALE
1" = 80'

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AFW - COLORADO SPRINGS GEC PLANS
COLORADO SPRINGS COLORADO

SEAL

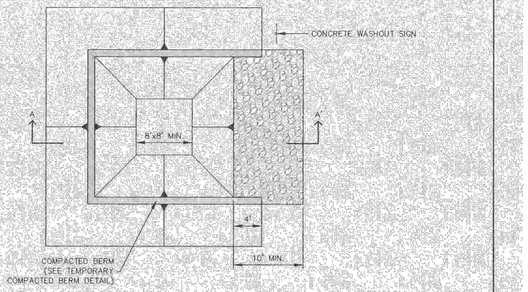
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SCALE H: V:

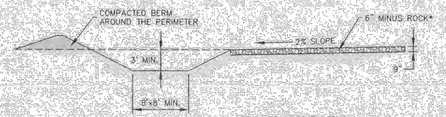
JOB No. 050895-01-001

DATE : 04/03/2023

SHEET EC8



CONCRETE WASHOUT AREA PLAN



SECTION A-A'

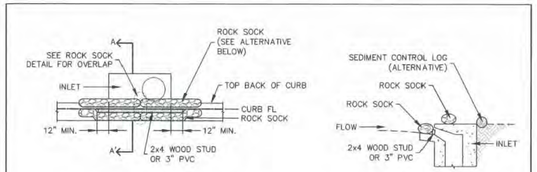
*ROCK REQUIRED BASED ON SITE CONDITIONS AT THE DISCRETION OF THE GEC INSPECTOR.

CWA

STORMWATER ENTERPRISE

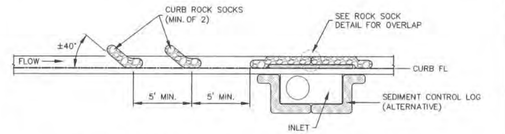
CONCRETE WASHOUT AREA

APPROVED:			
CLIENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-CWA-1	



CURB INLET PROTECTION PLAN

SECTION A-A'



CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

INSTALLATION NOTES

1. SEE ROCK SOCK DETAIL FOR INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE ROCK SOCK SHALL BE APPROXIMATELY 40 DEGREES FROM THE CURB.
3. ROCK SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5' APART.
4. AT LEAST TWO CURB ROCK SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADIENT INLETS.
5. ADDITIONAL ROCK SOCKS MAY BE REQUIRED AT GEC INSPECTOR'S DISCRETION.

MAINTENANCE NOTES

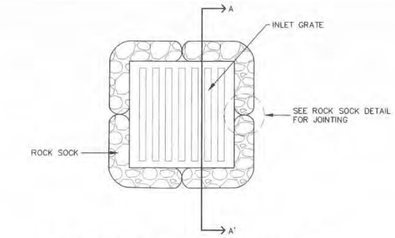
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. ROCK SOCKS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA BEHIND INLET AFTER ROCK SOCKS ARE REMOVED WHEN REMOVAL IS APPROPRIATE.

IP-1

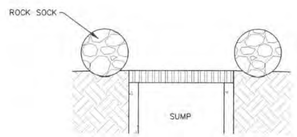
STORMWATER ENTERPRISE

ON-GRADE INLET PROTECTION

APPROVED:			
CLIENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-IP-1	



ROCK SOCK SUMP INLET PROTECTION PLAN



SECTION A-A'

INSTALLATION NOTES

1. SEE ROCK SOCK DETAIL FOR INSTALLATION REQUIREMENTS.
2. SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.
3. CONTROL MEASURES MUST BE WRAPPED AROUND INLET AS TIGHTLY AS POSSIBLE.

MAINTENANCE NOTES

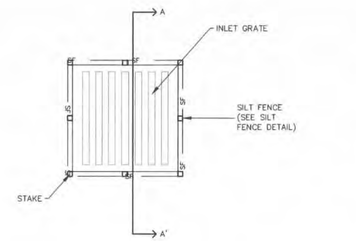
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2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. ROCK SOCKS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AROUND INLET AFTER ROCK SOCKS ARE REMOVED WHEN REMOVAL IS APPROPRIATE.

IP-2

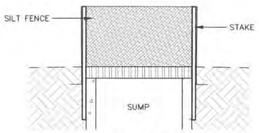
STORMWATER ENTERPRISE

SUMP INLET PROTECTION

APPROVED:			
CLIENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-IP-2	



SILT FENCE SUMP INLET PROTECTION PLAN



SECTION A-A'

INSTALLATION NOTES

1. SEE SILT FENCE DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF THREE FEET.
3. SILT FENCE FABRIC SHOULD HAVE A FLOW RATE IN EXCESS OF 30 GALLONS PER MINUTE PER SQUARE YARD SO AS TO ALLOW SOME WATER FLOW AND NOT DAM THE WATER. STANDARD, LOW-FLOW SILT FENCE FABRIC WILL NOT BE ALLOWED.

MAINTENANCE NOTES

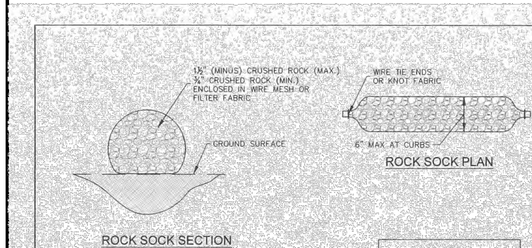
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2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN DEPTH OF THE INLET BARRIER.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AROUND INLET AFTER SILT FENCE IS REMOVED WHEN REMOVAL IS APPROPRIATE.

IP-3

STORMWATER ENTERPRISE

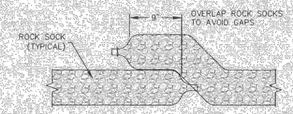
SUMP INLET PROTECTION

APPROVED:			
CLIENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-IP-3	



ROCK SOCK SECTION

ROCK SOCK PLAN



ROCK SOCK OVERLAP

GRADATION TABLE

	MASS PERCENT PASSING SQUARE MESH SIEVES
	No. 4
2"	100
1½"	90-100
1"	20-55
¾"	0-15
⅜"	0-5

MATCHES SPECIFICATIONS FOR No. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M-43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES

INSTALLATION NOTES

1. CRUSHED ROCK SHALL BE BETWEEN MAX. 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET AND MIN. ¾" CRUSHED ROCK.
2. WIRE MESH SHALL HAVE OPENINGS SMALLER THAN THE SMALLEST SIZE ROCK.
3. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2' CENTERS ON ENDS OF SOCKS.

MAINTENANCE NOTES

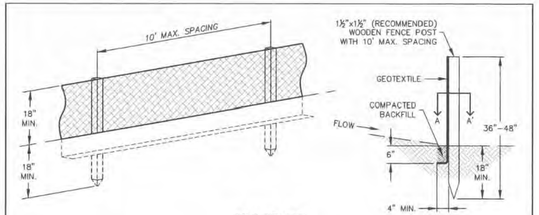
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2. ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED OR DAMAGED BEYOND REPAIR.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN THE DEPTH REACHES ½ OF THE HEIGHT OF THE ROCK SOCK.
4. ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL DISTURBED AREA IS STABILIZED.
5. PERMANENTLY STABILIZE AREA AFTER ROCK SOCKS HAVE BEEN REMOVED.

RS

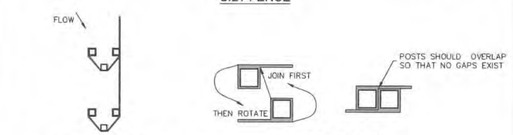
STORMWATER ENTERPRISE

ROCK SOCK

APPROVED:			
CLIENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-RS	



SILT FENCE



J-HOOK INSTALLATION

SECTION A-A'

INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED ON A FLAT SURFACE 2'-5' AWAY FROM TOE OF THE SLOPE TO ALLOW FOR PONDING AND DEPOSITION.
2. COMPACT THE TRENCH USING A JUMPING JACK OR WHEEL ROLLING TO THE POINT THAT THE FENCE RESISTS BEING PULLED OUT OF THE GROUND BY HAND.
3. SILT FENCE SHALL BE TAUT WITH NO SAGS AFTER IT HAS BEEN ANCHORED.
4. FABRIC SHALL BE ATTACHED TO POSTS WITH 1" HEAVY DUTY STAPLES OR 1" NAILS. THESE SHOULD BE PLACED VERTICALLY DOWN THE POST, 3" APART.
5. THE PREFERRED INSTALLATION METHOD USES A TRENCHER OR SILT FENCE INSTALLATION DEVICE.
6. INSTALL SILT FENCE ALONG THE CONTOUR OF THE SLOPES OR IN A MANNER TO AVOID CREATING CONCENTRATED FLOW (SUCH AS A "J-HOOK" INSTALLATION).

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES ½ OF THE DESIGN HEIGHT OF THE SILT FENCE.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SILT FENCE IS REMOVED.

SF

STORMWATER ENTERPRISE

SILT FENCE

APPROVED:			
CLIENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-SF	

SEEDING & MULCHING

ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.

SOIL PREPARATION

1. IN AREAS TO BE SEEDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRIABLE CONDITION. LESS THAN 85% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
2. AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
3. THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
4. TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.

SEEDING

1. ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
2. SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE.
   - SEED DEPTH MUST BE ¼ TO ½ INCHES WHEN DRILL-SEEDING IS USED.
3. BROADCAST SEEDING OR HYDRO-SEEDING WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
   - SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLION DRILL OR HYDRO-SEEDING.
   - BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL.

MULCHING

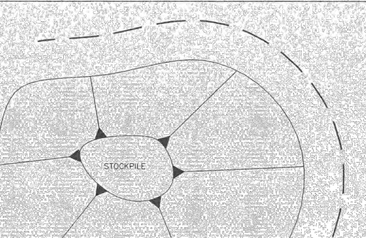
1. MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING; HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
2. MULCHING REQUIREMENTS INCLUDE:
   - HAY OR STRAW MULCH:
     - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.
     - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.
     - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
   - HYDRAULIC MULCHING:
     - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
     - IF HYDRO-SEEDING IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.
     - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.
   - EROSION CONTROL BLANKET
     - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

SM

STORMWATER ENTERPRISE

SEEDING & MULCHING

APPROVED:			
CLIENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-SM	



STOCKPILE PROTECTION PLAN



STOCKPILE PROTECTION ELEVATION

INSTALLATION NOTES

1. INSTALL PERIMETER CONTROL AROUND STOCKPILE ON DOWNGRADIENT SIDE. PERIMETER CONTROL MUST BE SUITABLE TO SITE CONDITIONS AND INSTALLED ACCORDING TO THE RELEVANT DETAIL.
2. FOR STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS INCLUDING PERIMETER CONTROL ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. IF PERIMETER CONTROLS MUST BE MOVED TO ACCESS STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORK DAY.
3. ACCUMULATED SEDIMENT MUST BE REMOVED ACCORDING TO PERIMETER CONTROL DETAIL.

SP

STORMWATER ENTERPRISE

STOCKPILE PROTECTION

APPROVED:			
CLIENT MANAGER			
ISSUED: 10/7/19	REVISED: 8/19/2020	DRAWING NO. 900-SP	

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GRADING EROSION AND SEDIMENT CONTROL DETAILS

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

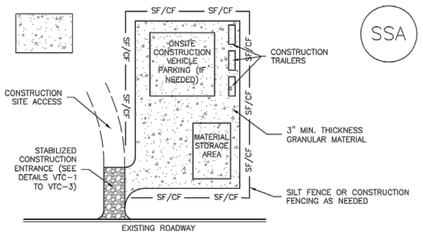
SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
EC9

STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF STAGING AREA(S).
   -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

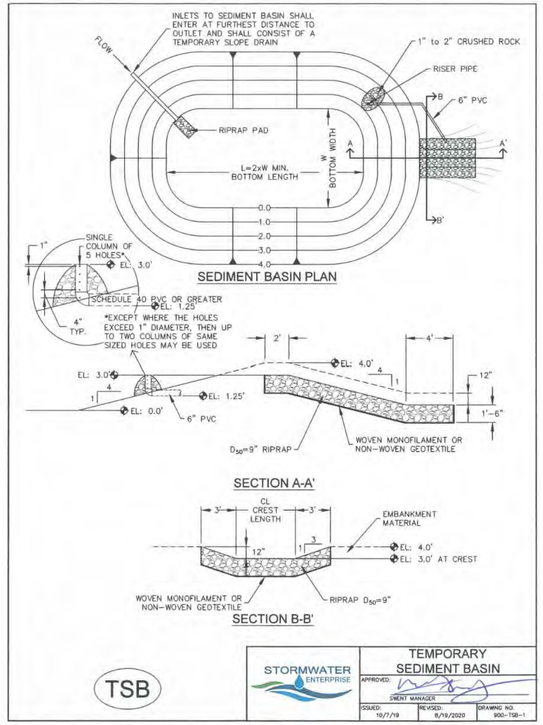
STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)



TSB

STORMWATER ENTERPRISE — TEMPORARY SEDIMENT BASIN

APPROVED: SMENT MANAGER	ISSUED:	REVISED:	DRAWING NO.
	10/7/19	8/19/2020	900-TSB-1

UPSTREAM DRAINAGE AREA (ROUNDED TO NEAREST ACRE), (AC)	BASIN BOTTOM WIDTH (W), (FT)	SPILLWAY CREST LENGTH (CL), (FT)	HOLE DIAMETER (HD), (IN)
1	12½"	2	3/32
2	21	3	1/16
3	28	5	1/8
4	33½	6	5/16
5	38½	8	7/32
6	43	9	9/32
7	47¼	11	5/32
8	51	12	7/32
9	55	13	1/4
10	58¼	15	9/32
11	61	16	5/32
12	64	18	7
13	67½	19	1/16
14	70½	21	1/16
15	73¼	22	1/16

INSTALLATION NOTES

1. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
2. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES, AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE No. 200 SIEVE
3. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-698.
4. PIPE SCHEDULE 40 OR GREATER SHALL BE USED.
5. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES. DESIGN CALCULATIONS MUST BE APPROVED PRIOR TO IMPLEMENTATION.

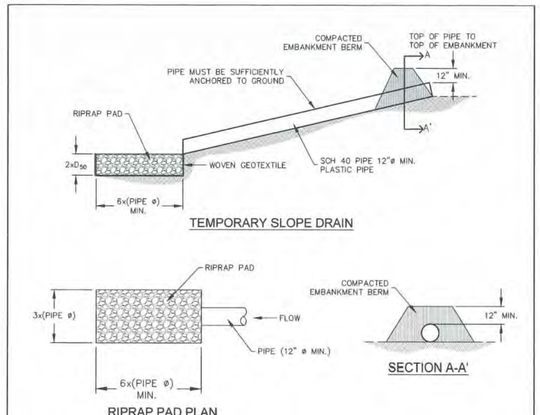
MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN CONTROL MEASURE EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E. TWO FEET BELOW SPILLWAY CREST).
3. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SEDIMENT BASIN REMOVAL.

TSB

STORMWATER ENTERPRISE — TEMPORARY SEDIMENT BASIN

APPROVED: SMENT MANAGER	ISSUED:	REVISED:	DRAWING NO.
	10/7/19	8/19/2020	900-TSB-2



INSTALLATION NOTES

1. THE LISTED DIMENSIONS ARE CONSIDERED A MINIMUM; LARGER DRAINS CAN BE IMPLEMENTED BY THE CONTRACTOR.
2. DETAILS SHOW MINIMUM COVER; INCREASE COVER AS NECESSARY.

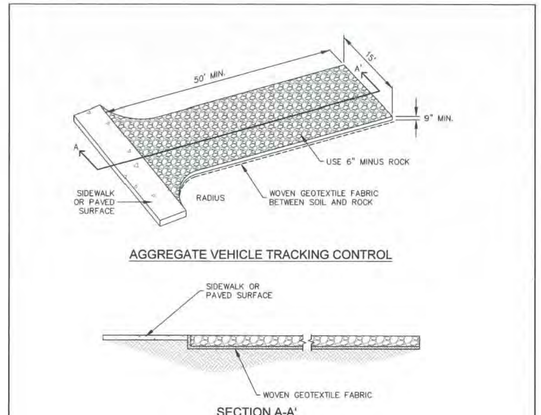
MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. INSPECT INLETS AND OUTLETS AFTER STORMS TO PREVENT EXCESS CLOGGING. BREACHES IN PIPES SHOULD BE REPAIRED AS SOON AS FEASIBLY POSSIBLE.
3. INSPECT RIPRAP PAD AT OUTLET FOR SIGNS OF EROSION. IF SIGNS OF EROSION EXIST, ADDITIONAL ARMORING MAY BE INSTALLED.
4. TEMPORARY SLOPE DRAINS SHOULD REMAIN UNTIL THEY ARE NOT NEEDED, BUT SHOULD BE REMOVED BEFORE THE END OF CONSTRUCTION.
5. PERMANENTLY STABILIZE AREA AFTER TEMPORARY SLOPE DRAINS ARE REMOVED.

TSD

STORMWATER ENTERPRISE — TEMPORARY SLOPE DRAIN

APPROVED: SMENT MANAGER	ISSUED:	REVISED:	DRAWING NO.
	10/7/19	8/19/2020	900-TSD



INSTALLATION NOTES

1. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
2. STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
4. ROCK SHOULD CONSIST OF 6" MINUS ROCK.
5. INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY, BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
3. ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
4. PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.

VTC

STORMWATER ENTERPRISE — VEHICLE TRACKING CONTROL

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	10/7/19	8/19/2020	900-VTC

STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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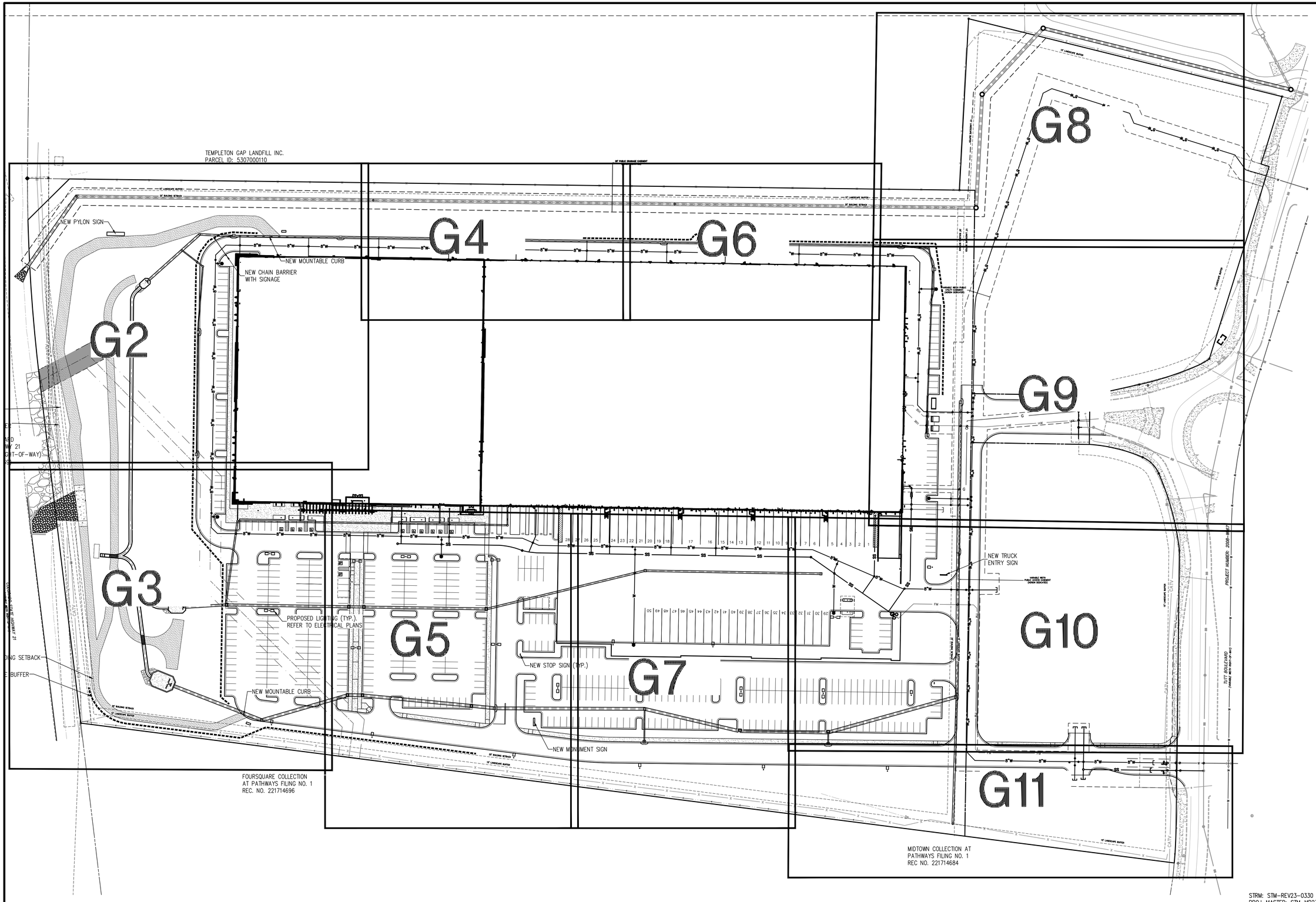
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GRADING EROSION AND SEDIMENT CONTROL DETAILS
AFW - COLORADO SPRINGS GEC PLANS
COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: V:
JOB No. 050895-01-001
DATE : 04/03/2023
SHEET EC10



N

STRM: STM-REV23-0330
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GRADING KEY MAP

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS, COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
G1

PARCEL ID: 5307000110

PROPERTY LINE

S89°16'42"E 1269.71'

N45°20'27"E 83.21'

-15' LANDSCAPE BUFFER

25' BUILDING SETBACK

PROTECT LANDFILL PIPING IN PLACE

SWALE

NEW PYLON SIGN

30' SEWER EASEMENT

L=2282.27'
R=2425.00'
Δ=53°56'46"

EG=(48.85)
EG=(47.85)
EG=(46.25)
EG=(46.60)
EG=(46.63)
EG=(42.33)
EG=(39.75)
EG=(36.65)
EG=(32.56)
EG=(27.40)

6853.93 TW
6849.41 BW

6854.06 TW
6847.66 BW

6853.56 TW
6853.10 BW

6853.22 TW
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6838.61 BW

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P=54.23
P=53.87
P=52.86
P=54.10
P=53.76
P=54.05
P=53.91
P=53.84
P=53.91
P=52.94

SW=54.78

8"W

C=55.28

NEW MOUNTABLE CURB

NEW CHAIN BARRIER W SIGNAGE

PROPOSED UTILITY ESMNT

PROPOSED FOREBAY SEE PCM PLANS (SHEET C4.0)

PLAT TO BE UPDATED TO EXTEND EASEMENT

EX. SEWER MANHOLE TO BE ABANDONED BELOW GRADE

CONC. TRICKLE CHANNEL (SEE PCM PLANS (SHEET C2.0)

PROPOSED PRIVATE DETENTION POND

EX. 777 LF OF 8" PVC SANITARY LINE TO BE GROUTED

30' EX. ESMT. TO BE RELINQUISHED

NEW EASEMENT FOR EXISTING FACILITIES VIA REPLAT

SAN. MANHOLE LID# WW.197633

61.89@ X:6,846.45 Y:1,

25' BUILDING SETBACK

20' LANDSCAPE BUFFER

N06°49'37"W 110.05'

N06°49'37"W 386.08'

N. POWERS BOULEVARD
COLORADO STATE HWY 21
(VARIABLE WIDTH RIGHT-OF-WAY)
(REC. NO. 207712569)

FF=6855.28

MATCHLINE SEE SHEET G3

MATCHLINE SEE SHEET G4

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

Know what's below.
Call before you dig.

STRM: STM-REV23-0330
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DETAILED GRADING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
G2

MATCHLINE SEE SHEET G2

MATCHLINE SEE SHEET G5

FF=6855.28

COLORADO STATE HIGHWAY 21
(VARIABLE WIDTH RIGHT-OF-WAY)

N06°49'37"W 386.08'

N82°42'23"W 1572.62'

PROPERTY LINE

EXISTING OUTLET CONTROL STUCTURE

EXISTING 48" STORM DRAIN PIPE

PROPOSED OUTLET STRUCTURE

PROPOSED FOREBAY SEE PCM PLANS (SHEET C2.0)

CONC. TRICKLE CHANNEL (SEE PCM PLANS (SHEET C2.0)

PROPOSED POND ACCESS

PROPOSED FOREBAY SEE PCM PLANS (SHEET C4.0)

25' BUILDING SETBACK

20' LANDSCAPE BUFFER

15' LANDSCAPE BUFFER

NEW MOUNTABLE CURB

PROPOSED LIGHTING (TYP.). REFER TO ELECTRICAL PLANS

GRAPHIC SCALE
1" = 20'

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COLORADO SPRINGS

DETAILED GRADING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS

SEAL

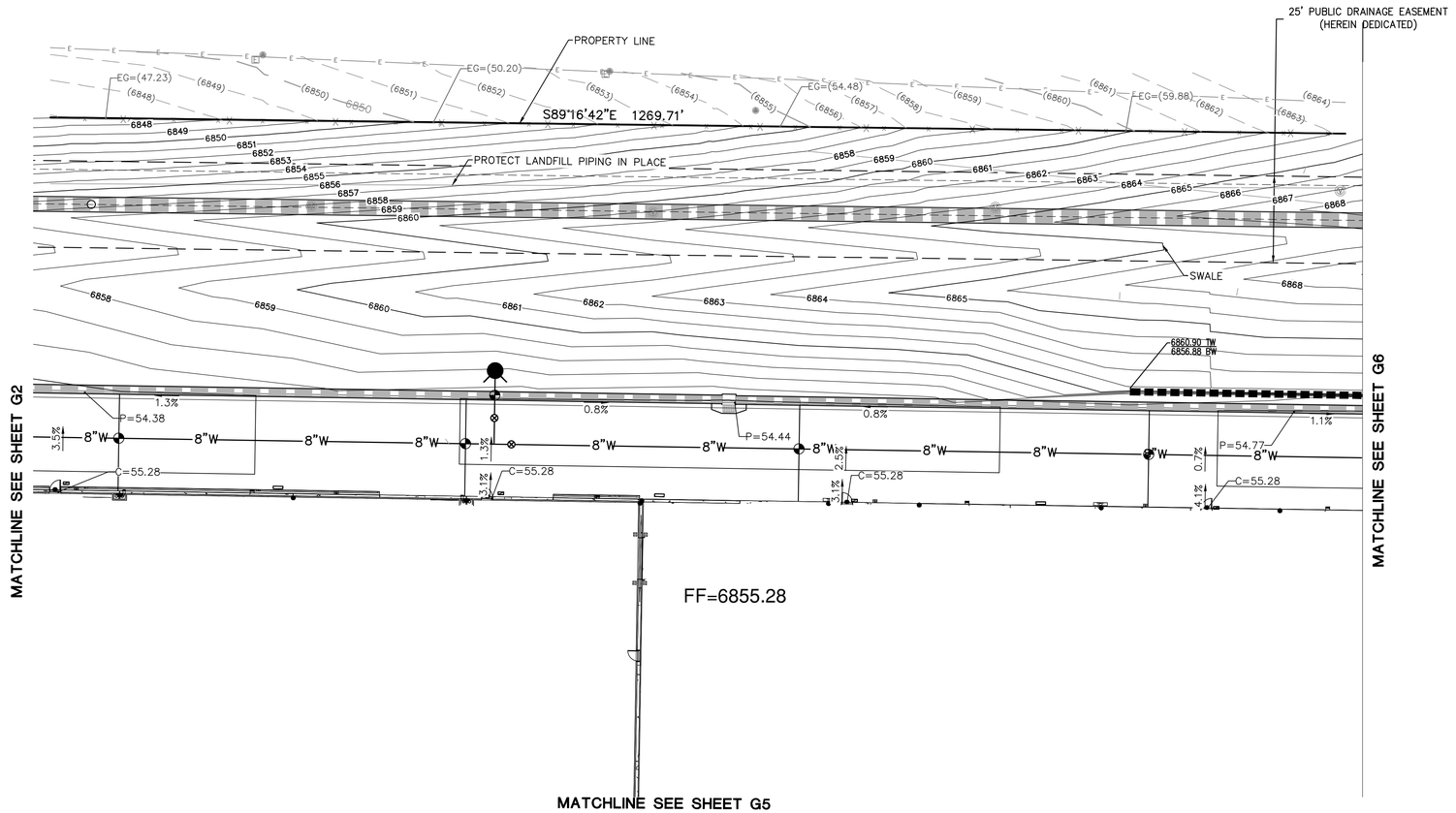
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
G3



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

Know what's **below.**
Call before you dig.

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COLORADO

DETAILED GRADING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

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DATE : 04/03/2023

SHEET
G4

FF=6855.28

MATCHLINE SEE SHEET G4

MATCHLINE SEE SHEET G3

MATCHLINE SEE SHEET G7

25' BUILDING SETBACK

15' LANDSCAPE BUFFER

PROPERTY LINE

NEW MONUMENT SIGN

NEW P=51.65 (TYP.)

6851.06 TW
6843.41 BW

6850.82 TW
6845.78 BW

6850.93 TW
6847.18 BW

6850.93 TW
6848.58 BW

6851.03 TW
6850.35 BW

FG=6835.52
EG=(6836.5)

FG=6837.08
EG=(6838.1)

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FG=6841.84
EG=(6842.8)

FG=6843.02
EG=(6844.0)

FG=6844.28
EG=(6845.3)

GRAPHIC SCALE
1" = 20'

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REVISION	DESCRIPTION	DATE
0	FOR CONSTRUCTION	10/08/2024

DETAILED GRADING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS, COLORADO

SEAL

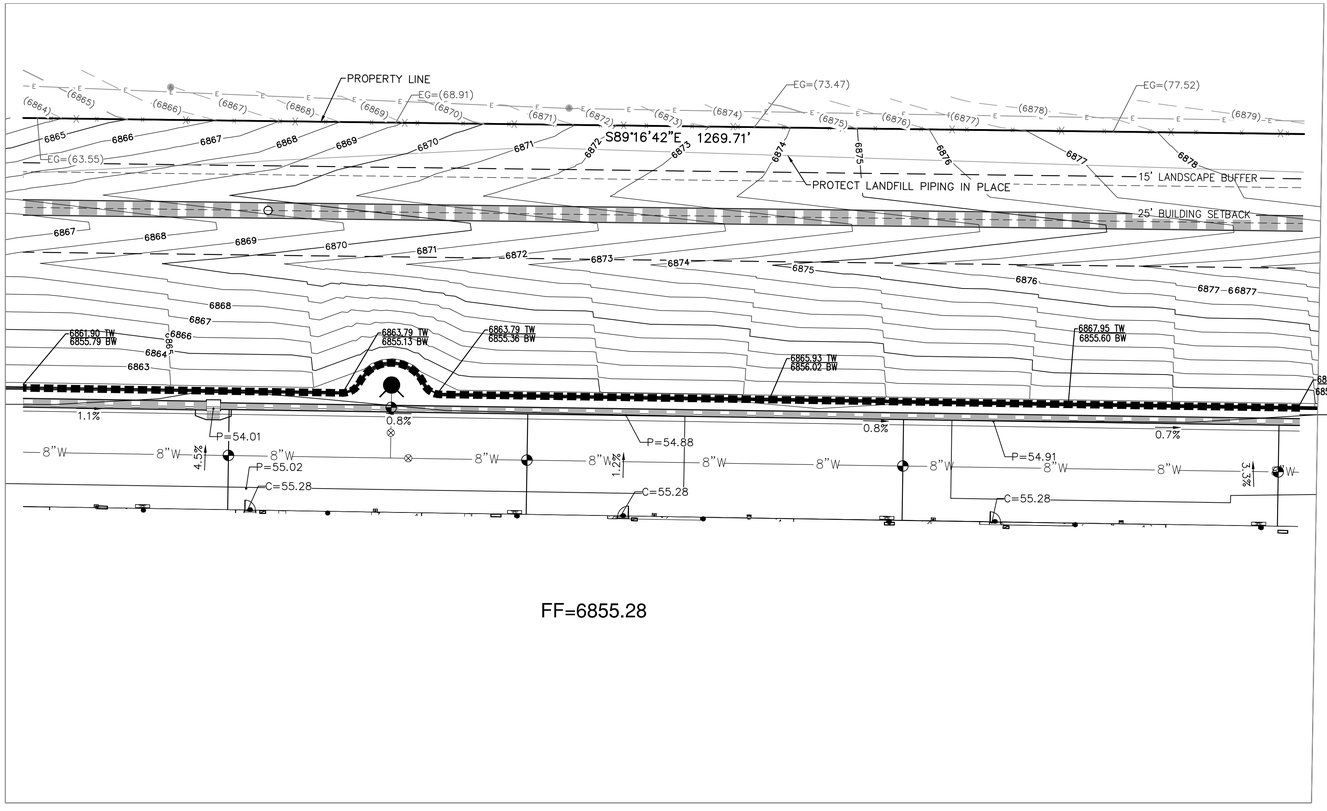
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
G5



MATCHLINE SEE SHEET G4

MATCHLINE SEE SHEET G9

MATCHLINE SEE SHEET G7

N

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

Know what's below.
Call before you dig.

STRM: STM-REV23-0330
PROJ. MASTER: STM-MP23-0074
GEC: STM-REV23-0329
FDR-A: STM-REV23-1265 (AMENDMENT)
FDR: STM-REV21-1679 (ORIGINAL)
DP: AR DP-21-00219
DP: DEPN-22-0046
DP-A: DEPN-23-0213

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COLORADO

DETAILED GRADING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

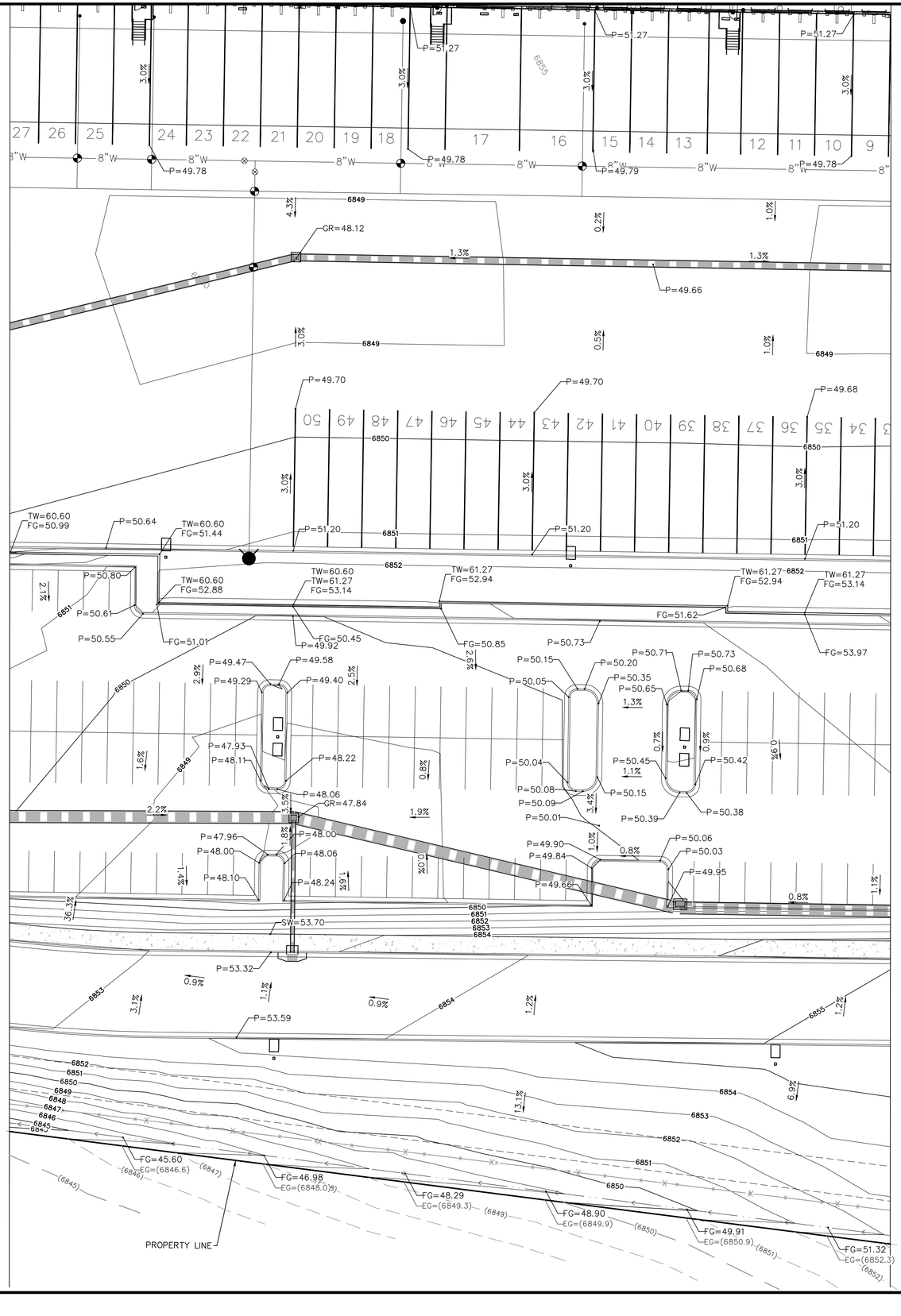
SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
G6

MATCHLINE SEE SHEET G5



MATCHLINE SEE SHEET G10

N

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

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DETAILED GRADING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS, COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

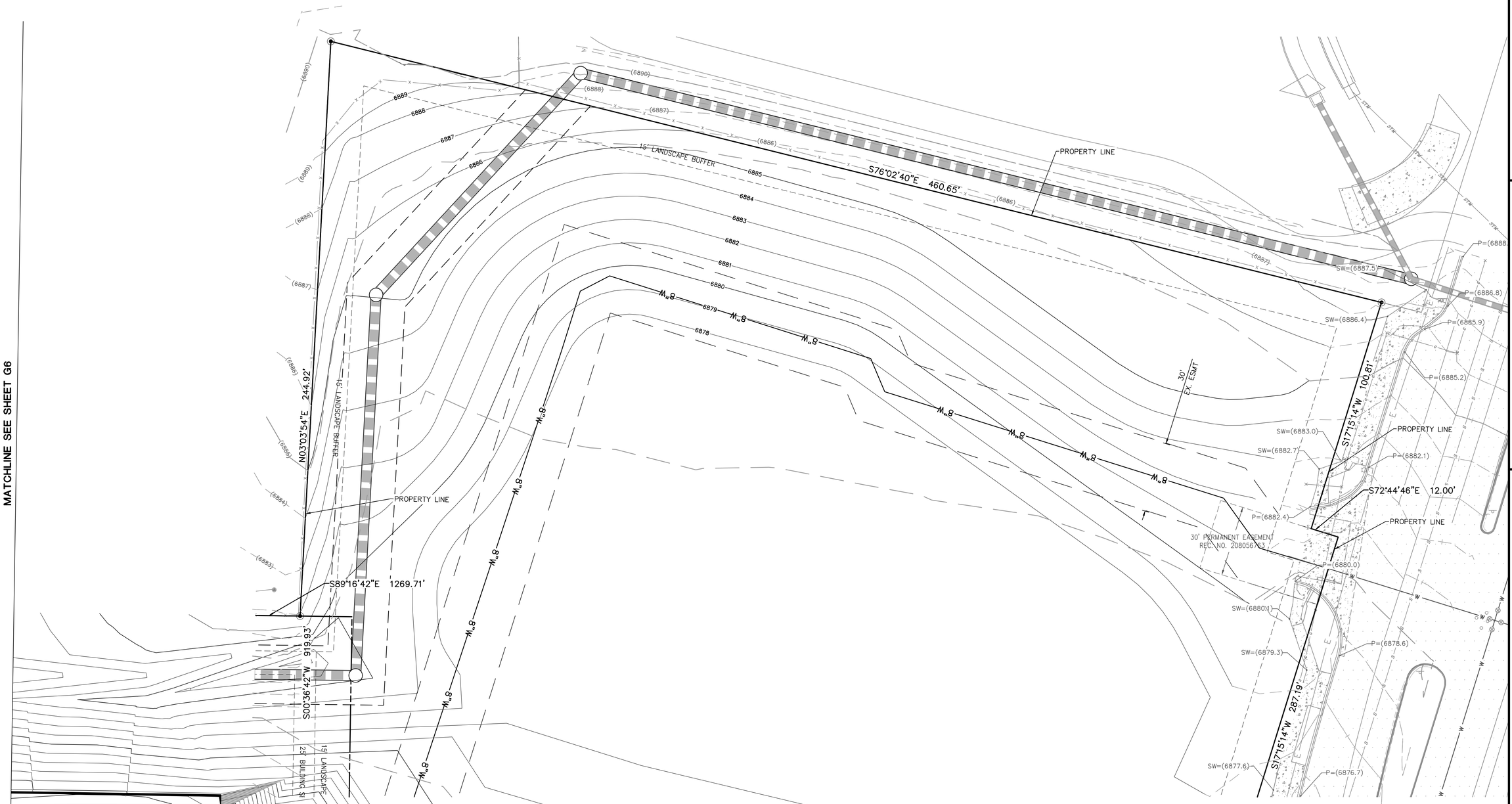
SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
G7

MATCHLINE SEE SHEET G6



MATCHLINE SEE SHEET G9

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COLORADO

DETAILED GRADING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

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DATE : 04/03/2023

SHEET
G8

MATCHLINE SEE SHEET G8

MATCHLINE SEE SHEET G6

MATCHLINE SEE SHEET G10

FF=6855.28

TUTT BOULEVARD (EXISTING ROAD)

15' LANDSCAPE BUFFER

PROPERTY LINE

PROPERTY LINE

30' PROPOSED UTILITY ESMT

30' EX. ESMT

20' PROPOSED UTILITY ESMT

50' PROPOSED UTILITY ESMT

VARIABLE WIDTH PUBLIC UTILITY EASEMENT (HEREIN DEDICATED)

STORM MANHOLE
RIM=6874.16
INV.OUT(W)=6868.56

6868.18 TW
6856.61 BW

6856.80 TW
6856.35 BW

6856.04 TW
6855.72 BW

6855.69 TW
6855.20 BW

P=54.01
P=54.26
P=55.17
P=55.28
P=55.45
P=54.56
P=54.23
P=54.11
P=54.08
P=54.15
P=54.35
P=54.07
P=53.82
P=53.75
P=53.59
P=53.36
P=53.32
P=53.38
P=53.54
P=54.55
P=54.71
P=54.77
P=54.76
P=54.69
P=54.50
P=60.53
P=64.53
P=65.91
P=60.92
P=64.2
P=61.45
P=72.41
P=(6876.6)
P=(6876.0)
P=(6875.5)
P=(6875.2)
P=(6874.9)
P=(6873.4)
P=(6872.4)
P=(6874.3)
P=(6873.5)
P=(6872.9)

SW=(6877.5)
SW=(6876.8)
SW=(6876.3)
SW=(6875.8)
SW=(6874.3)
SW=(6873.1)
SW=(6874.9)
SW=(6874.4)
SW=(6873.9)

C=55.28
0.7%
1.7%
4.7%
1.1%
0.9%
2.8%
3.5%
18.2%
11.0%
0.7%
0.8%
5.4%
4.3%
1.6%
1.5%
0.8%

8" W
8" W
8" W

MATCHLINE SEE SHEET G7

MATCHLINE SEE SHEET G9

MATCHLINE SEE SHEET G11

NEW TRUCK ENTRY SIGN

PROPERTY LINE

50' PERMANENT EASEMENT
REC. NO. 208056764

TUTT BOULEVARD
(EXISTING ROAD)

GRAPHIC SCALE
1" = 20'

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DETAILED GRADING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS, COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: V:

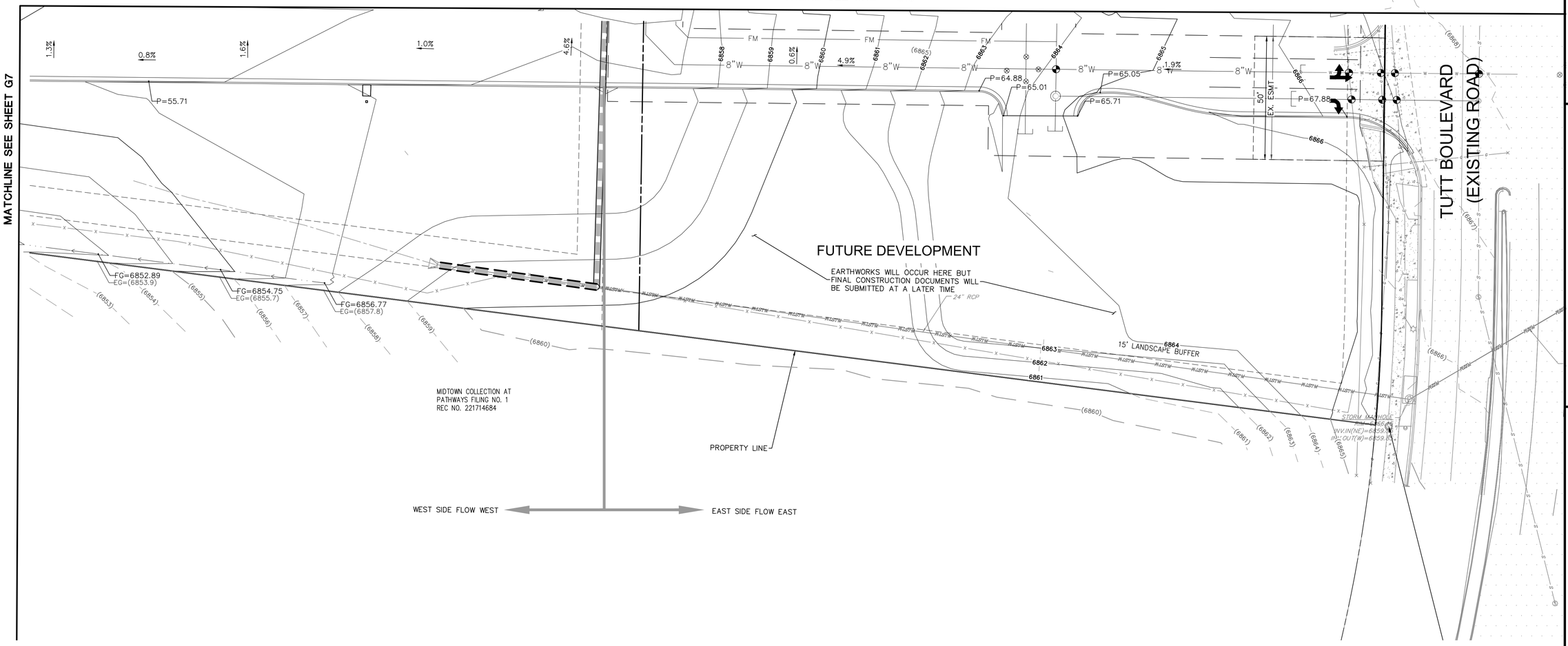
JOB No. 050895-01-001

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SHEET
G10

MATCHLINE SEE SHEET G10

MATCHLINE SEE SHEET G7



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

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DETAILED GRADING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS, COLORADO

SEAL

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HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
G11

TEMPLETON GAP LANDFILL INC.
PARCEL ID: 5307000110

NEW PYLON SIGN

NEW MOUNTABLE CURB

NEW CHAIN BARRIER
WITH SIGNAGE

P2

P4

P6

P3

P5

P7

PROPOSED LIGHTING (TYP.).
REFER TO ELECTRICAL PLANS

NEW STOP SIGN (TYP.)

NEW MONUMENT SIGN

NEW TRUCK
ENTRY SIGN

FOURSQUARE COLLECTION
AT PATHWAYS FILING NO. 1
REC. NO. 221714696

MIDTOWN COLLECTION AT
PATHWAYS FILING NO. 1
REC NO. 221714684

GRAPHIC SCALE
1" = 60'

N

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LAYOUT AND PAVING PLAN KEY MAP

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
P1

PAVING KEY NOTES

1. CONSTRUCT 4" AC OVER 6" BASE COURSE PER GEOTECH REPORT
1a. CONSTRUCT 4.5" AC OVER 6" BASE PER GEOTECH REPORT
2. INSTALL 6-INCH SPILL CURB PER CO SPRINGS STD DET 6B TYPE 2 MODIFIED TO 1.5' WIDTH GUTTER.
2a. INSTALL 6-INCH CATCH CURB PER CO SPRINGS STD DET 6B MODIFIED TO 1.5' WIDTH GUTTER.
3. INSTALL 4" THICK SIDEWALK PER CO SPRINGS STANDARDS
7. RETAINING WALL, REFER TO ROSCH RETAINING WALL PLANS FOR DETAILS
8. CONSTRUCT 8" OF AGGREGATE BASE COURSE OVER COMPACTED SUBGRADE PER GEOTECH REPORT
16. INSTALL PVC IRRIGATION SLEEVES. SEE LANDSCAPE PLANS FOR SIZE, DEPTH AND NUMBER OF SLEEVES.
17. INSTALL MONUMENT SIGN.

..... PAVEMENT TYPE TRANSITION

TEMPLETON GAP LANDFILL INC.
PARCEL ID: 5307000110

PROPERTY LINE

S89°16'42"E 1269.71'

PROPERTY LINE

N45°20'27"E 83.21'

15' LANDSCAPE BUFFER

25' BUILDING SETBACK

NEW PYLON SIGN

25'

5'

16' ACCESS ROAD

L=226.27'
Δ=5°20'46"
R=2425.00'

79.11'

108.13'

22' W

8" W

29'

NEW MOUNTABLE CURB

NEW CHAIN BARRIER WITH SIGNAGE

PROPERTY LINE

SAN. MANHOLE LID# WW.197633

NEW EASEMENT FOR EXISTING FACILITIES VIA REPLAT

PLAT TO BE UPDATED TO EXTEND EASEMENT

EX. SEWER MANHOLE TO BE ABANDONED BELOW GRADE

5.5' S/W

AMERICAN FURNITURE WAREHOUSE

26'

16'

EX. 777 LF OF 8" PVC SANITARY LINE TO BE GROUTED

30' EXISTING EASEMENT TO BE VACATED

N09°49'37"W 110.05'

25' BUILDING SETBACK

20' LANDSCAPE BUFFER

269.09'

N06°49'37"W 386.08'

N. POWERS BOULEVARD
COLORADO STATE HWY 21
(VARIABLE WIDTH RIGHT-OF-WAY)
(REC. NO. 207712569)

MATCHLINE SEE SHEET P3

MATCHLINE SEE SHEET P4

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

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LAYOUT PAVING AND DIMENSIONING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS, COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

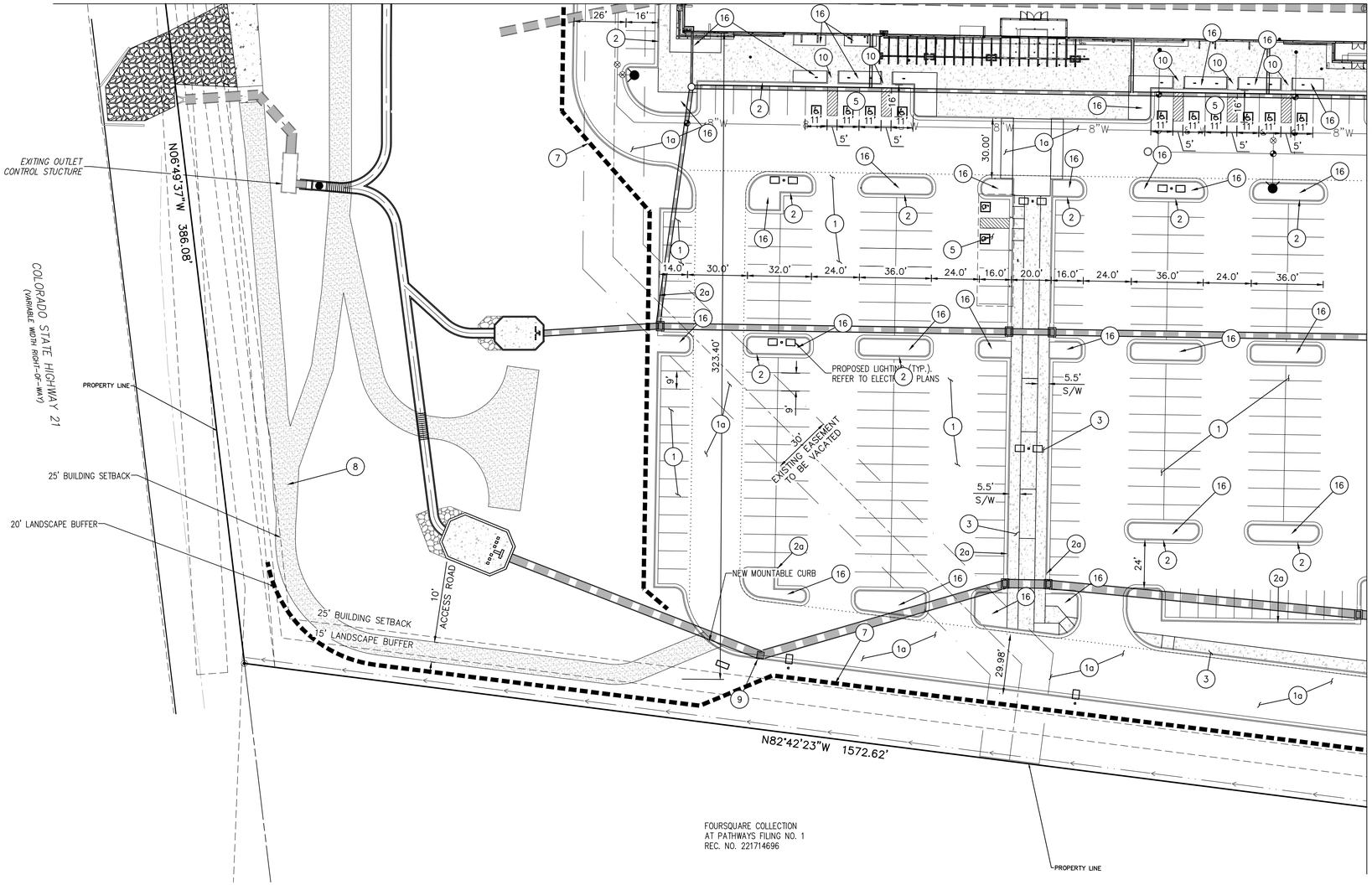
SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
P2

MATCHLINE SEE SHEET P2



MATCHLINE SEE SHEET P5

PAVING KEY NOTES

1. CONSTRUCT 4" AC OVER 6" BASE COURSE PER GEOTECH REPORT
1a. CONSTRUCT 4.5" AC OVER 6" BASE PER GEOTECH REPORT
2. INSTALL 6-INCH SPILL CURB PER CO SPRINGS STD DET 6B TYPE 2 MODIFIED TO 1.5' WIDTH GUTTER.
2a. INSTALL 6-INCH CATCH CURB PER CO SPRINGS STD DET 6B MODIFIED TO 1.5' WIDTH GUTTER.
3. INSTALL 4" THICK SIDEWALK PER CO SPRINGS STANDARDS
5. ADA PARKING SPACE – SLOPE NOT TO EXCEED 2% IN ANY DIRECTION
7. RETAINING WALL, REFER TO ROSCH RETAINING WALL PLANS FOR DETAILS
8. CONSTRUCT 8" OF AGGREGATE BASE COURSE OVER COMPACTED SUBGRADE PER GEOTECH REPORT
9. INSTALL TYPE 4 MOUNTABLE CURB PER CO SPRINGS STD DTL 6B
10. INSTALL RAMP WITH GROOVED DETECTABLE WARNING SURFACE
16. INSTALL PVC IRRIGATION SLEEVES. SEE LANDSCAPE PLANS FOR SIZE, DEPTH AND NUMBER OF SLEEVES.

PAVEMENT TYPE TRANSITION

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

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LAYOUT PAVING AND DIMENSIONING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET P3

PAVING KEY NOTES

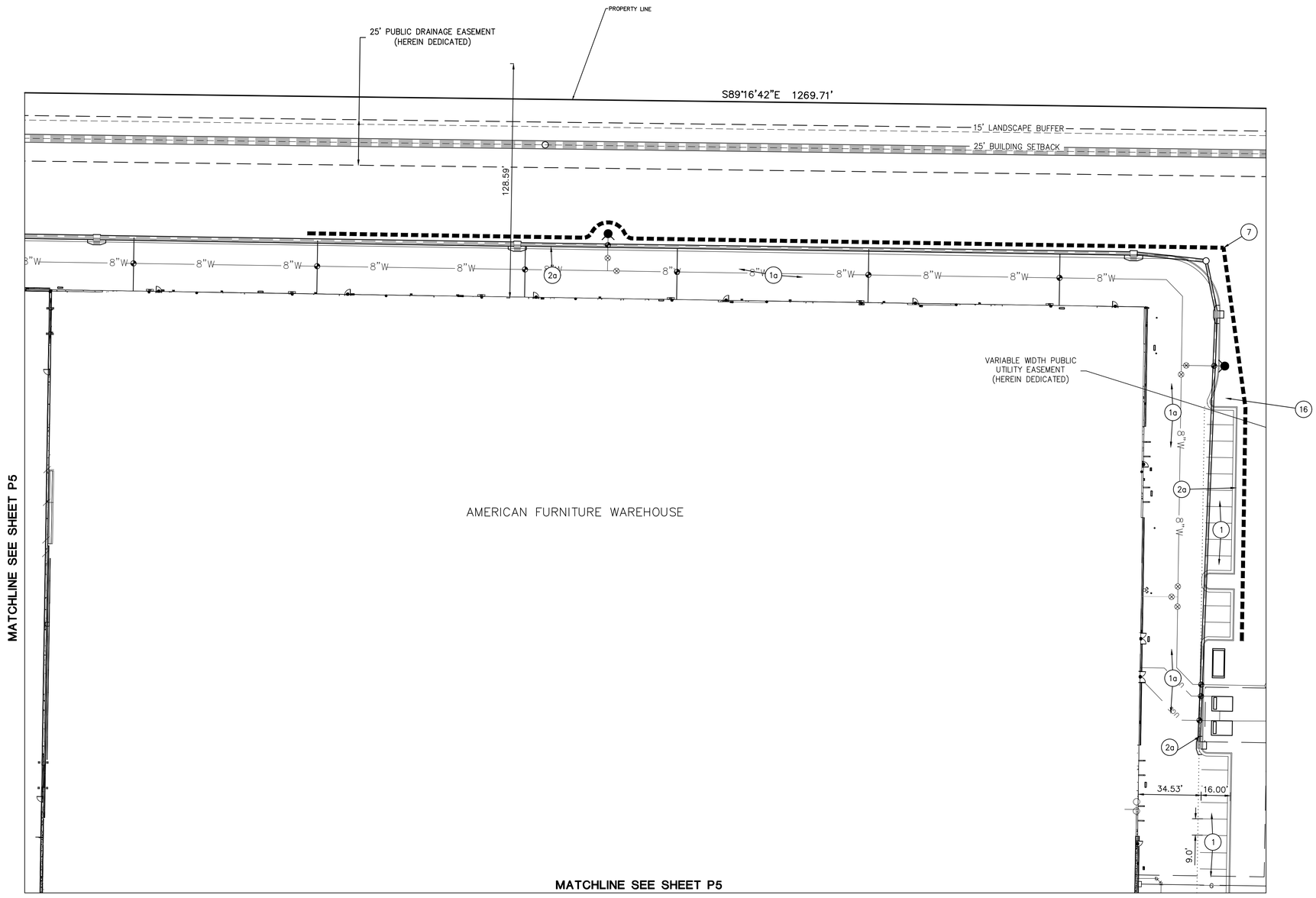
(1a) CONSTRUCT 4.5" AC OVER 6" BASE PER GEOTECH REPORT

(2a) INSTALL 6-INCH CATCH CURB PER CO SPRINGS STD DET 6B MODIFIED TO 1.5' WIDTH GUTTER.

(7) RETAINING WALL, REFER TO ROSCH RETAINING WALL PLANS FOR DETAILS

(16) INSTALL PVC IRRIGATION SLEEVES. SEE LANDSCAPE PLANS FOR SIZE, DEPTH AND NUMBER OF SLEEVES.

..... PAVEMENT TYPE TRANSITION



30 15 0 30 60
GRAPHIC SCALE
1" = 30'

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LAYOUT PAVING AND DIMENSIONING PLAN

AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

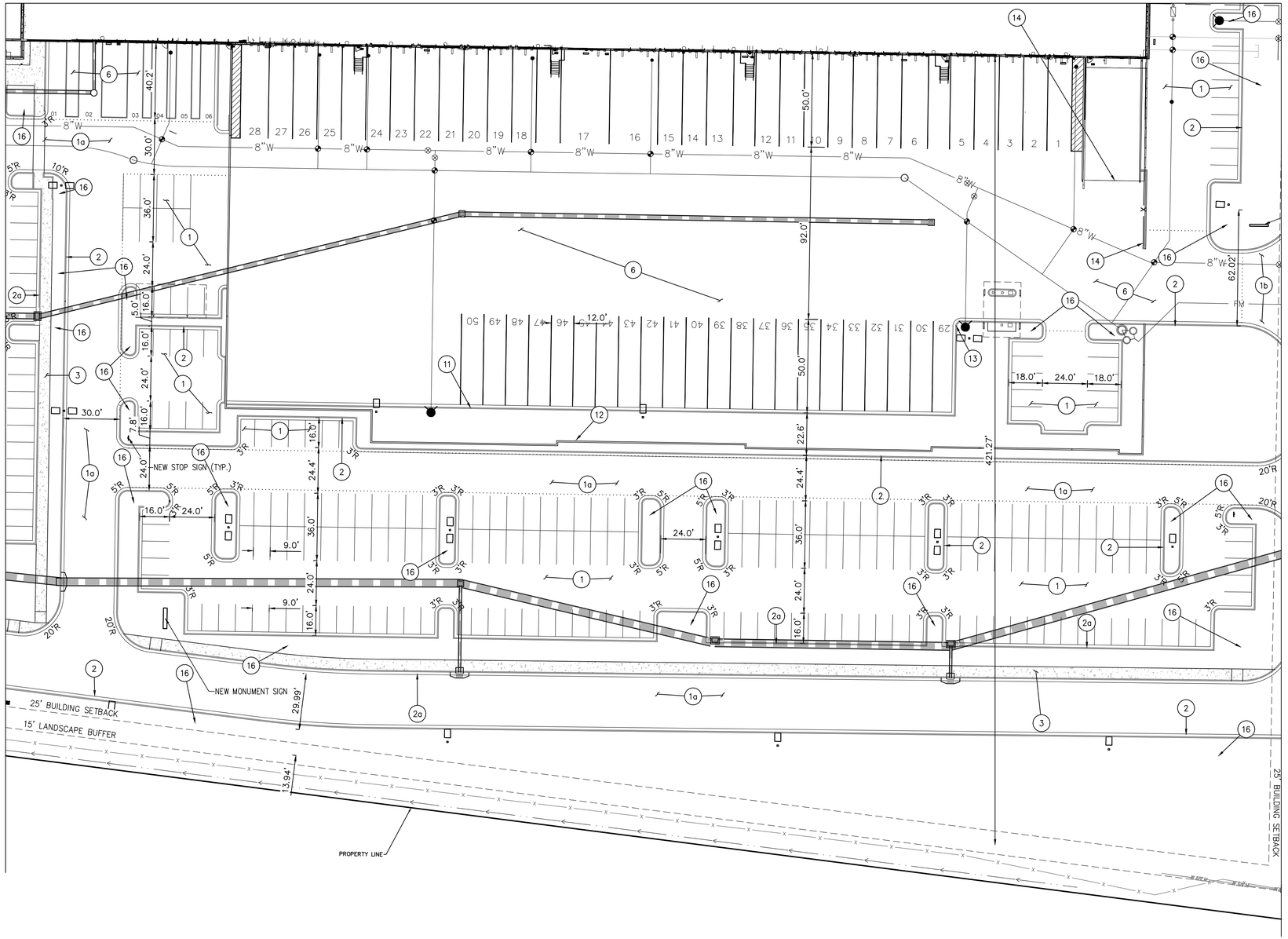
SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
P4

MATCHLINE SEE SHEET P4



PAVING KEY NOTES

1. CONSTRUCT 4" AC OVER 6" BASE COURSE PER GEOTECH REPORT
1a. CONSTRUCT 4.5" AC OVER 6" BASE PER GEOTECH REPORT
1b. CONSTRUCT 6" AC OVER 8" BASE PER GEOTECH REPORT
2. INSTALL 6-INCH SPILL CURB PER CO SPRINGS STD DET 6B TYPE 2
2a. INSTALL 6-INCH CATCH CURB
3. INSTALL 4" THICK SIDEWALK PER CO SPRINGS STANDARDS
6. INSTALL 7" CONCRETE PAVEMENT ON PREPARED SUBGRADE PER GEOTECH REPORT
7. RETAINING WALL, REFER TO ROSCH RETAINING WALL PLANS FOR DETAILS
11. INSTALL CONCRETE CURB PER CO SPRINGS STD DET 6B TYPE 1 MODIFIED TO BE 1' TALL CURB
12. TRUCK YARD WALL, REFER TO ARCHITECTURAL PLANS FOR DETAILS
13. TRANSITION FROM 1' CURB TO 0.5' CURB
14. INSTALL GATE PER ARCHITECTURAL PLANS
16. INSTALL PVC IRRIGATION SLEEVES. SEE LANDSCAPE PLANS FOR SIZE, DEPTH AND NUMBER OF SLEEVES.

..... PAVEMENT TYPE TRANSITION

Know what's **below.** **Call** before you dig.

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

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COLORADO SPRINGS COLORADO

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HE	VH	HE

SCALE H:
V:

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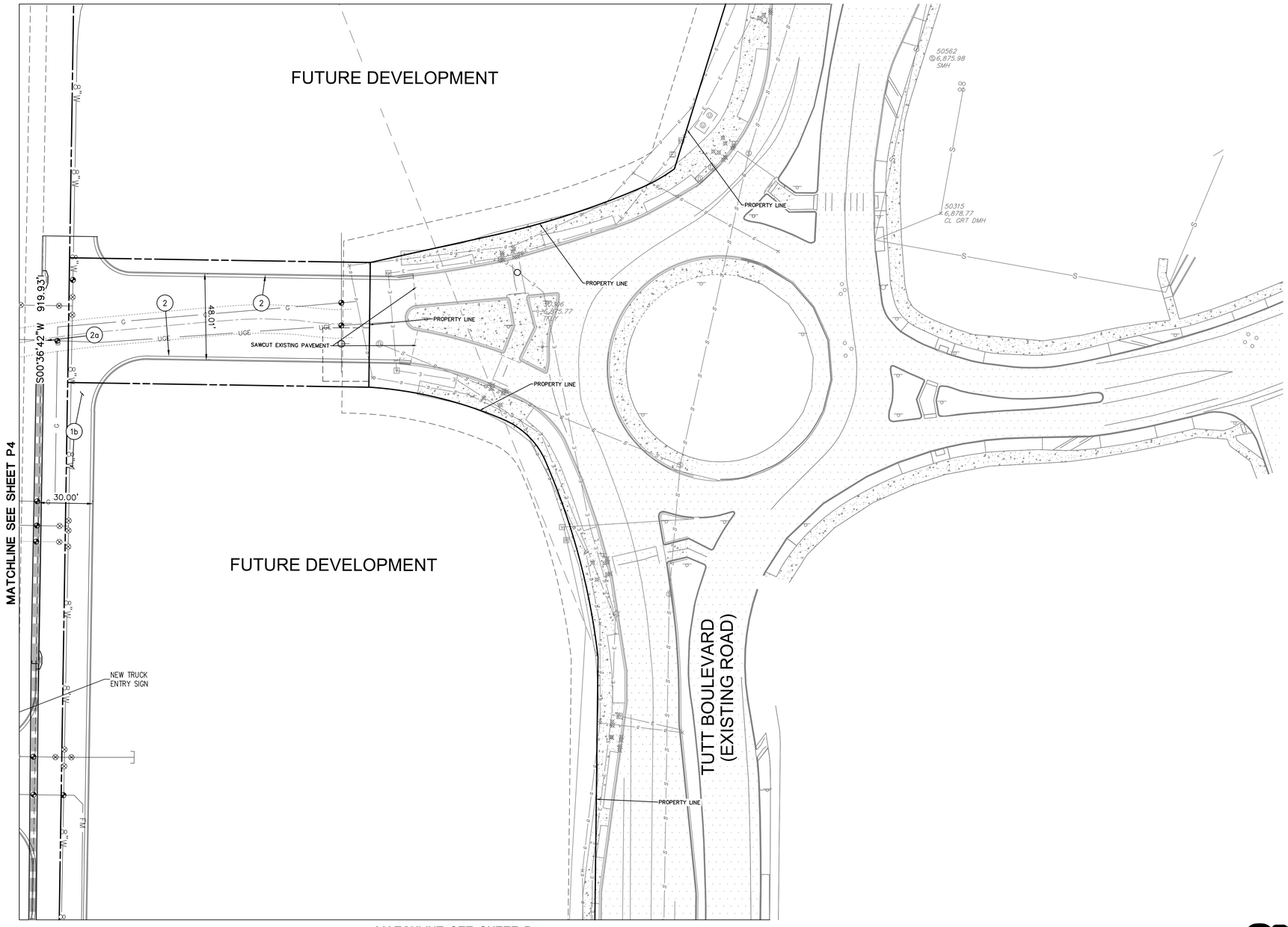
DATE : 04/03/2023

SHEET
P5

PAVING KEY NOTES

1. CONSTRUCT 4" AC OVER 6" BASE COURSE PER GEOTECH REPORT
1b. CONSTRUCT 6" AC OVER 8" BASE PER GEOTECH REPORT
2. INSTALL 6-INCH SPILL CURB PER CO SPRINGS STD DET 6B TYPE 2
2a. INSTALL 6-INCH CATCH CURB

..... PAVEMENT TYPE TRANSITION



30 15 0 30 60
GRAPHIC SCALE
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AFW - COLORADO SPRINGS
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COLORADO SPRINGS
COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: V:

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SHEET
P6

PAVING KEY NOTES

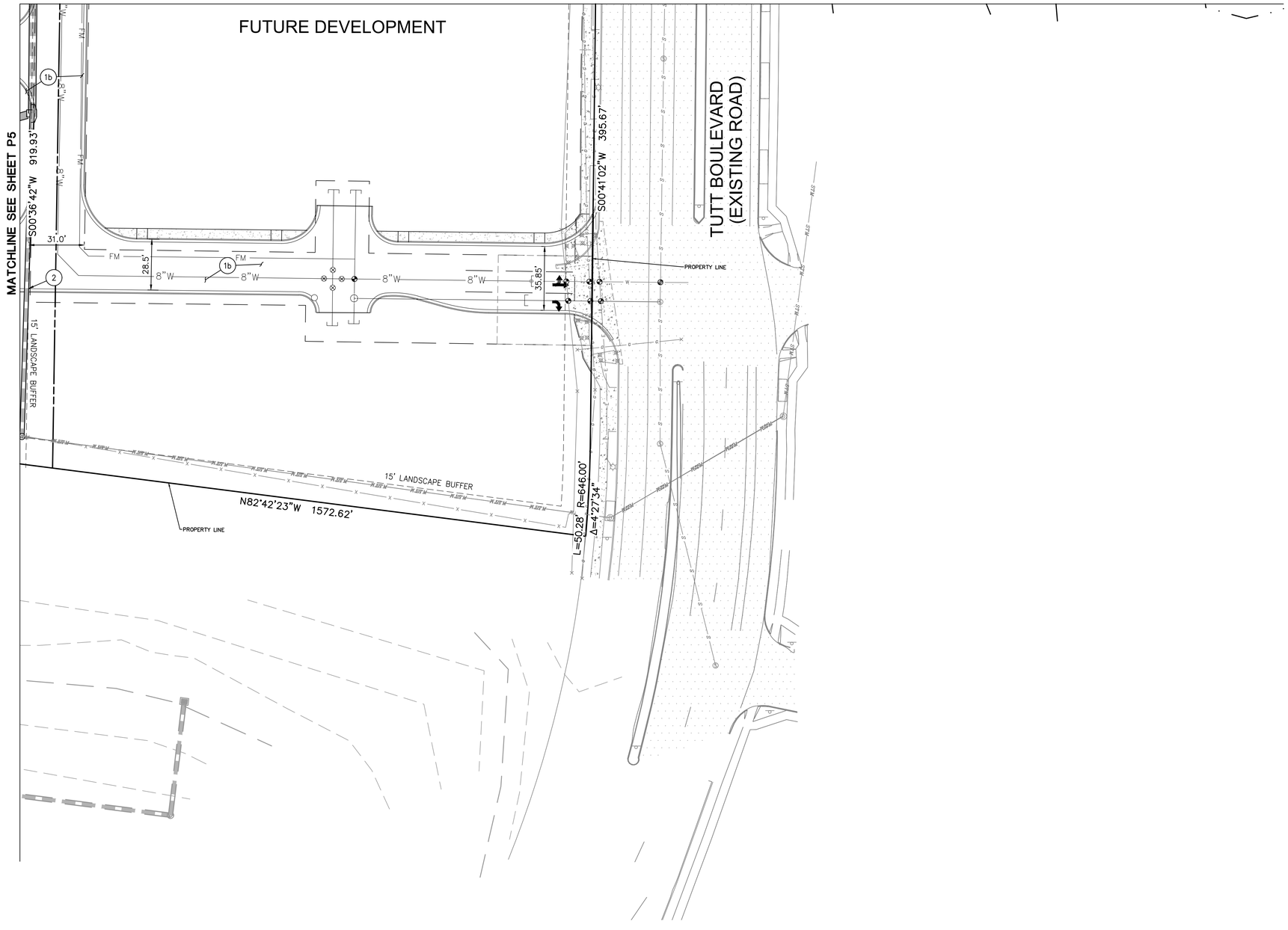
1 CONSTRUCT 4" AC OVER 6" BASE COURSE PER GEOTECH REPORT

1b CONSTRUCT 6" AC OVER 8" BASE PER GEOTECH REPORT

2 INSTALL 6-INCH SPILL CURB PER CO SPRINGS STD DET 6B TYPE 2

..... PAVEMENT TYPE TRANSITION

MATCHLINE SEE SHEET P7



30 15 0 30 60

GRAPHIC SCALE
1" = 30'

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AFW - COLORADO SPRINGS
GEC PLANS

COLORADO SPRINGS COLORADO

SEAL

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/03/2023

SHEET
P7

FLOODPLAIN STATEMENT

THIS PROPERTY IS LOCATED WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN) AS ESTABLISHED BY FEMA FIRM PANEL 08041C0537G, EFFECTIVE DECEMBER 7, 2021, AND FEMA FIRM PANEL 08041C0536G, EFFECTIVE DECEMBER 7, 2021.

SANITARY SEWER PLANS
FOR
AFW - COLORADO SPRINGS

A PORTION OF A TRACT OF LAND RECORDED AT RECEPTION NO. 208068886 AND RECEPTION NO. 206028177
A PART OF THE WEST HALF OF SECTION 7, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH P.M.
CITY OF COLORADO SPRINGS, EL PASO COUNTY, COLORADO

WASTEWATER PLAN NOTES

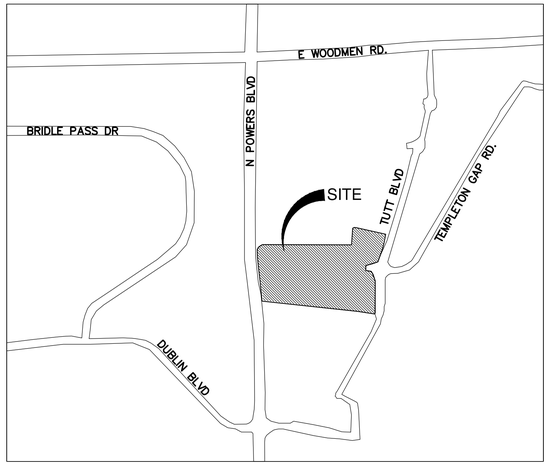
THE CONTRACTOR SHALL NOTIFY COLORADO SPRINGS UTILITIES' INSPECTIONS OFFICE (719) 668-4658 A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

GENERAL:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET *COLORADO SPRINGS UTILITIES' WASTEWATER LINE EXTENSION AND SERVICE STANDARDS* (WASTEWATER STANDARDS).
2. THE CONTRACTOR SHALL OBTAIN LOCATES PRIOR TO ANY EXCAVATION.
3. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF LOCATIONS OF EXISTING PIPELINES, MANHOLES AND SERVICE LINES. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AND THE ENGINEER OF RECORD IMMEDIATELY.
4. NO TREES OR STRUCTURES ARE PERMITTED WITHIN FIFTEEN FEET (15') OF A WASTEWATER MAIN.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY FACILITIES AS A RESULT OF HIS ACTIONS. THE CONTRACTOR SHALL MAKE ALL THE REQUIRED REPAIRS IMMEDIATELY TO THE SATISFACTION OF COLORADO SPRINGS UTILITIES.
6. ALL FIELD STAKING SHALL COMPLY WITH THE WASTEWATER STANDARDS.
7. THE CONTRACTOR SHALL ENSURE THAT WASTEWATER SERVICE TO ADJACENT PROPERTIES IS MAINTAINED DURING CONSTRUCTION.
8. ALL MANHOLES LOCATED WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO FINISH GRADE. IF MANHOLES ARE IN POOR CONDITION OR IF THE DISTANCE BETWEEN THE RING/COVER AND CONE OF THE MANHOLE EXCEEDS THE WASTEWATER STANDARDS, THE CONTRACTOR MAY BE REQUIRED TO REPLACE PART OR ALL OF THE EXISTING MANHOLES.
9. REUSE OR SALVAGE OF ANY MATERIAL IS LEFT TO THE DISCRETION OF THE COLORADO SPRINGS UTILITIES INSPECTOR.
10. ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE *CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS MANUAL*.

WASTEWATER PROJECT - SPECIFIC NOTES

	APPLICABLE	NON-APPLICABLE	
1.	☐	☒	CORROSION PROTECTION IS REQUIRED FOR ALL DUCTILE IRON PIPE. ALL PROTECTION SHALL COMPLY WITH THE WASTEWATER STANDARDS.
2.	☐	☒	THIS PROJECT IS CONNECTING TO AN EXISTING MANHOLE. A MANHOLE ASSESSMENT HAS BEEN COMPLETED FOR THIS PROJECT. THE FOLLOWING CHECKED ITEMS ARE REQUIRED: ☐ THE CONTRACTOR SHALL PROVIDE A BYPASS PUMPING PLAN FOR APPROVAL BY COLORADO SPRINGS UTILITIES AND COMPLY WITH ALL THE REQUIREMENTS THEREIN. ☐ REPAIR THE EXISTING MANHOLE (REFER TO PLAN AND PROFILE FOR REQUIREMENTS). ☐ REPLACE THE EXISTING MANHOLE (REFER TO PLAN AND PROFILE FOR REQUIREMENTS.
3.	☐	☒	MANHOLES ARE BEING ABANDONED, THE CONTRACTOR SHALL: • PLUG THE "IN" AND "OUT" INVERTS WITH A WATERTIGHT MECHANICAL PLUG AND GROUT WITH APPROVED MATERIAL. • REMOVE AND DISPOSE OF THE CONE SECTION. • REMOVE THE RING AND COVER AND RETURN THEM TO COLORADO SPRINGS UTILITIES. • FILL THE MANHOLE WITH APPROVED MATERIAL.
4.	☐	☒	WASTEWATER MAINS EXISTS UNDERNEATH A PROPOSED STRUCTURE, CONTRACTOR SHALL: ☐ REMOVE IT ☐ GROUT IT FULL
5.	☐	☒	WASTEWATER MAIN TO BE ABANDONED EXISTS WITHIN RIGHT-OF-WAY, THE CONTRACTOR SHALL: ☐ REMOVE IT ☐ GROUT IT FULL
6.	☒	☐	PIPELINES LESS THAN 1.04% GRADE ARE PROPOSED. THE CONTRACTOR SHALL COMPLY WITH THE ADDITIONAL REQUIREMENTS AS SPECIFIED WITHIN THE WASTEWATER STANDARDS.
7.	☒	☐	THIS PROJECT IS UTILIZING EXISTING WASTEWATER STUB(S) IN AN "AS-IS" CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE STUB(S), CONNECTION, AND SUBSEQUENT EXTENSION MEET ALL CURRENT WASTEWATER STANDARDS AND DO NOT HAVE ANY DEFECTS.
8.	☒	☐	COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF THE DEPTH, LOCATION, OR CONDITION OF ANY EXISTING STUB(S) SHOWN ON ANY 'AS CONSTRUCTED' DRAWINGS. FURTHER, THE EXISTING STUB SHALL BE INCLUDED IN THE TWO-YEAR WARRANTY PERIOD FOR THIS PROJECT.
9.	☒	☐	A WASTEWATER STUB OR STUBS ARE PROPOSED WITH THIS PROJECT. COLORADO SPRINGS UTILITIES WILL INSPECT THE CONSTRUCTION BUT DOES NOT GUARANTEE THAT THE DESIGN OR INSTALLATION OF THE PROPOSED STUB(S) WILL MEET FUTURE DEVELOPMENT REQUIREMENTS. FURTHER, THE PROPOSED STUB(S) WILL NOT BE INCLUDED IN THE TWO-YEAR WARRANTY PERIOD FOR THIS PROJECT AND WILL NOT BE ACCEPTED OR OWNED BY COLORADO SPRINGS UTILITIES.



VICINITY MAP
SCALE 1" = 1000'

Sheet List Table	
SHEET NUMBER	SHEET TITLE
S1	COVER SHEET
S2	GENERAL NOTES
S3	KEY MAP
S4	WASTEWATER SERVICE PLAN AND PROFILES
S5	WASTEWATER SERVICE PLAN AND PROFILES
S6	FORCE MAIN AND PUMP STATION PLAN
S6.1	FORCE MAIN AND PUMP STATION PROFILE
S7	PUMP STATION PLAN AND SECTION VIEWS
S7.1	PUMP STATION DETAILS

FIMS MAP NUMBER: O-22
TAX SCHEDULE NO.: 5307300003
PRESSURE ZONE: BRIARGATE
MAX STATIC PRESSURE:
UTILITY DESIGN CAD FILE NO.: CF20233275
UAP FILE NO:
DEVELOPMENT PLAN NO.: DEPN-22-0046

APPROVAL DATE: 5/22/2023
PLAT REC. NO.: (IN PROGRESS)
PUBLIC UTILITY EASEMENT REC. NO: (REPLAT IN PROGRESS)
NOTICE OF PRIVATE WASTEWATER SYSTEM REC. NO.:
NOTICE OF PRIVATE WATER SYSTEM REC. NO.:

COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

PROJECT NUMBER: 2023-S033
WORK ORDER NUMBER: 3993273
CSU SHEET 1 OF 3

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

LEGAL DESCRIPTION

A TRACT LOCATED IN THE SE1/4NW1/4 SECTION 15, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH P.M., AKA MOST OF LOT 2, F & K SUBDIVISION, MORE OR LESS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 15;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION 15, A DISTANCE OF 785.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY RIGHT OF WAY LINE OF A COUNTY ROAD;
THENCE ON AN ANGLE TO THE RIGHT OF 85°58'00" AND ALONG SAID EASTERLY RIGHT OF WAY LINE A DISTANCE OF 1,643.58 FEET;

THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 799.22 FEET TO A POINT, SAID POINT BEING 358.5 FEET WEST OF THE WESTERLY RIGHT OF WAY LINE OF COLORADO STATE HIGHWAY 83, AND 358.5 FEET BEING MEASURED AT RIGHT ANGLES THERETO;

THENCE ON AN ANGLE TO THE RIGHT OF 87°15'03" AND ALONG A LINE PARALLEL TO SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 256.13 FEET TO THE TRUE POINT OF BEGINNING;
THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 358.50 FEET TO A POINT ON SAID WESTERLY RIGHT OF WAY LINE;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG SAID RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" A DISTANCE OF 358.50 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG A LINE PARALLEL TO THE SAID WESTERLY RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET TO THE TRUE POINT OF BEGINNING;

COUNTY OF EL PASO, STATE OF COLORADO

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE CITY OF COLORADO SPRINGS AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

HOWARD EHRSAM P.E. DATE

BID SET
10-10-2024

OWNER/DEVELOPER PLAN APPROVAL

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THEY SHALL, AT THEIR EXPENSE, BE SOLELY RESPONSIBLE FOR 1) THE INSTALLATION OF THE PROPOSED UTILITY INFRASTRUCTURE IN ACCORDANCE WITH THESE PLANS, AND 2) ALL DAMAGES AND DEFECTS ARISING FROM, OR RELATED TO, THE INSTALLATION, MAINTENANCE OR OPERATION OF THE PUBLIC UTILITY INFRASTRUCTURE FROM THE DATE OF PRELIMINARY ACCEPTANCE FOR A PERIOD OF TWO YEARS, OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LATER.

THE UNDERSIGNED UNDERSTANDS THAT ALL PRIVATE UTILITY INFRASTRUCTURE, AS INDICATED ON THESE PLANS, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER, AS REQUIRED BY *COLORADO SPRINGS UTILITIES' LINE EXTENSION AND SERVICE STANDARDS*.

☐ **PUBLIC WATER MAIN PROPOSED** ☒ **PUBLIC WASTEWATER MAIN PROPOSED** ☐ **PRIVATE WATER SERVICE LINE (<4") AND/OR PRIVATE WASTEWATER SERVICE LINE (<8")**
☐ **PRIVATE WATER MAIN PROPOSED** ☐ **PRIVATE WASTEWATER MAIN PROPOSED**

SIGNED: _____ DATE: 10/10/2024
OWNER/DEVELOPER
NOLAN MORRISON
OWNER/DEVELOPER (PRINT NAME)
DBA: AMERICAN FURNITURE WAREHOUSE CO
ADDRESS: 8820 AMERICAN WAY, ENGLEWOOD, COLORADO 80112
PHONE: 303-489-3333
EMAIL: nmorrison@afw.net

BENCHMARK

FIMS BENCHMARK TG24. ELEVATION=6838.24 (NVGD 1929)

Know what's **below.** **Call** before you dig.

CURRENT OWNER

AMERICAN FURNITURE WAREHOUSE
8820 AMERICAN WAY
ENGLEWOOD, CO 80112
CONTACT: NOLAN MORRISON
PHONE: (303) 489-3333

ARCHITECT

BUTLER DESIGN GROUP, INC.
5017 EAST WASHINGTON STREET, SUITE 107
PHOENIX, AZ 85034
CONTACT: TOBY ROGERS
PHONE: (602) 218-4785

CIVIL ENGINEER

BOWMAN CONSULTING
1526 COLE BLVD, SUITE 100
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PHONE: (303) 801-2900
CONTACT: HOWARD EHRSAM P.E.
EMAIL: HEHRSAM@BOWMAN.COM
PHONE: (303) 801-2905

LANDSCAPE ARCHITECT

LASKIN & ASSOCIATES, INC.
67 WELDON AVENUE, SUITE 230
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EMAIL: DANIEL@LASKINDESIGN.COM
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REVISIONS

REVISION	DESCRIPTION	DATE
A	1ST SEWER COMMENTS	10/30/23
B	2ND SEWER COMMENTS	01/26/24
C	3RD SEWER COMMENTS	04/12/24
D	4TH SEWER COMMENTS	05/01/24
E	5TH SEWER PLAN COMMENTS	10/10/24

COLORADO

COVER SHEET

AFW - COLORADO SPRINGS
SANITARY SEWER PLANS

CITY OF COLORADO SPRINGS

SEAL
NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
HE	VH	HE
SCALE	H: N/A V: N/A	
JOB No.	050895-01-001	
DATE :	04/12/2023	
SHEET	S1	

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
	LOT LINE	
	RIGHT OF WAY	
	CENTERLINE	
	FLOOD PLAIN	
	LIMITS OF CONSTRUCTION	
	LIMITS OF DISTURBANCE	
	SWALE / STREAM FLOWLINE	
	OVERFLOW RELIEF PATH	
X	FENCE LINE	X
	EASEMENT	
	EDGE OF PAVEMENT	
	VERTICAL CURB AND GUTTER	
	MOUNTABLE CURB AND GUTTER	
	CONCRETE SIDEWALK	
	ASPHALT SIDEWALK	
	HANDICAP PARKING	
	SIGHT TRIANGLE	
	SIGN(S)	
	PARKING COUNT INDICATOR	
255 VPD	VEHICLES PER DAY INDICATOR	255 VPD
TP	TEST PIT	TP
MW	MONITORING WELL	MW
350	MAJOR CONTOUR	350
350	MINOR CONTOUR	350
	GRADE BREAK	
	RIDGELINE	
52 22 FG / 5236 22 FG	SPOT ELEVATION	52 22 FG / 5236 22 FG
	RIP RAP	
W	WATER LINE	W
M	WATER METER	M
	WATER VALVE	
	WATER REDUCER	
	WATER FITTINGS	
	FIRE HYDRANT	
SS	SANITARY LINE	SS
	SANITARY MANHOLE	
	SANITARY CLEANOUT	
SD	STORM SEWER PIPE	
SD	STORM SEWER MANHOLE	
	STORM SEWER INLET	
	STORM SEWER FLARED END SECTION	
	STORM SEWER HEADWALL	
OU	OVERHEAD UTILITY	OU
E	UNDERGROUND ELECTRIC	E
OHE	OVERHEAD ELECTRIC	OHE
	UTILITY POLE	
	STREET LIGHT	
CATV	CABLE TV SERVICE	CATV
T	TELECOM SERVICE	T
FO	FIBER OPTIC SERVICE	FO
G	NATURAL GAS SERVICE	G
	TREE	
	TREE LINE	
	WETLANDS	

LEGEND NOTES

1. THIS IS A STANDARD SHEET, THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PROJECT.
2. ADDITIONAL LEGENDS AND NOTES MAY BE FOUND ON OTHER SHEETS ASSOCIATED WITH THIS PLAN. THESE LEGENDS AND NOTES ARE TO BE REFERENCED IN ADDITION TO THIS STANDARD SHEET.

CONSTRUCTION STATEMENT:

WORK SHALL BE CONSTRUCTED TO CITY OF COLORADO SPRINGS STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE TO THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

ABBREVIATIONS

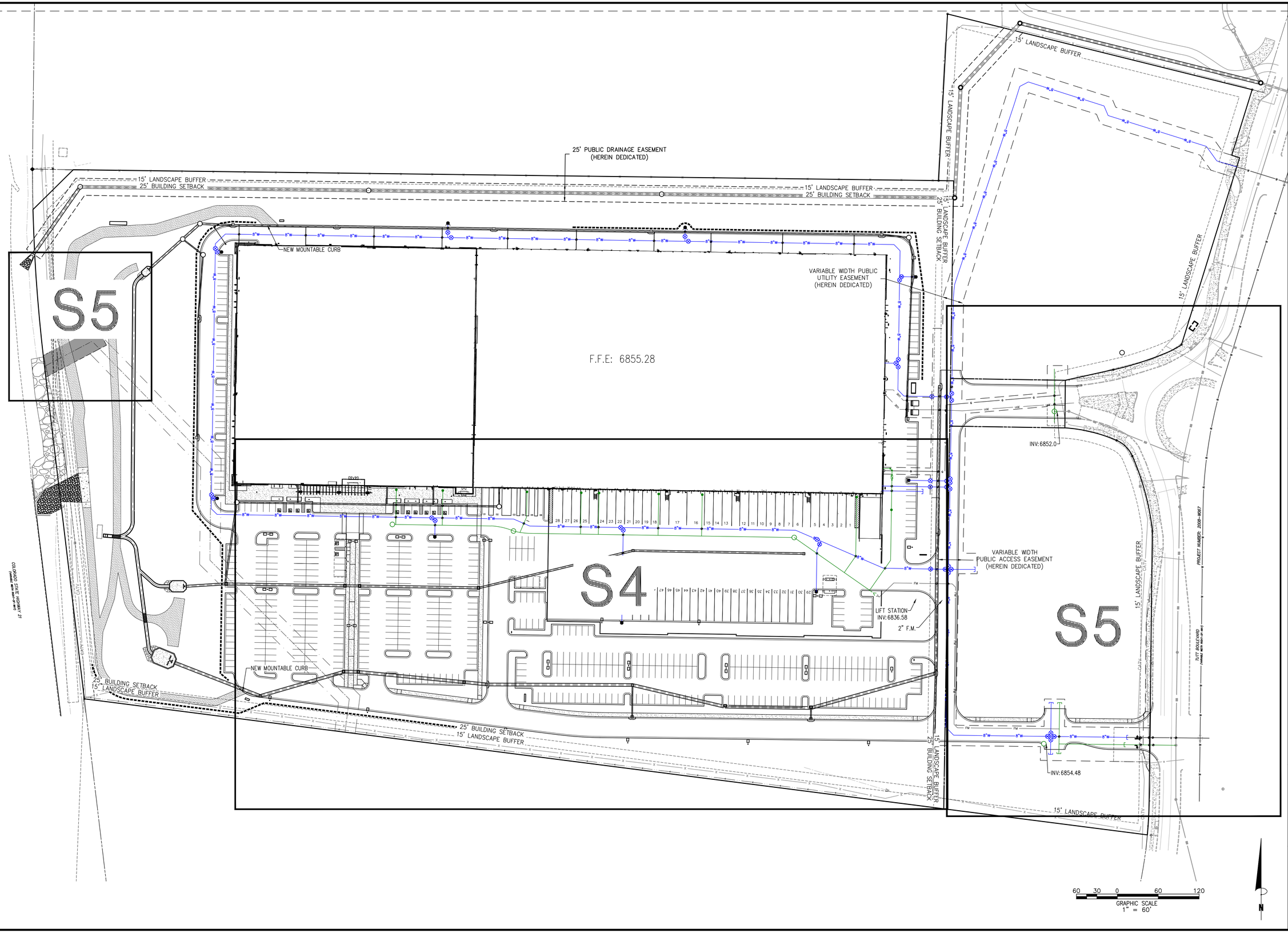
A	AREA OF ARC	K	SIGHT DISTANCE COEFFICIENT OR
AASHTO	AMERICAN ASSOCIATION OF STATE HWY & TRANS. OFFICIALS	Ke	RATE OF VERTICAL CURVATURE CULVERT ENTRANCE LOSS COEFFICIENT
AB	AS-BUILT		
AC	ACRE	L	LENGTH
AD	ALGEBRAIC DIFFERENCE IN GRADE	LAT	LATERAL
AE	ACCESS EASEMENT	LCG	LIMITS OF CLEARING & GRADING
ADJ	ADJACENT	LF	LINEAR FEET
AGGR	AGGREGATE	LIP	LIP OF PAN
AHD	AHEAD	LL	LOWER LEVEL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	LOS	LINE OF SIGHT
APT	ANGLE POINT APPROXIMATE	LP LS	LOW POINT LOADING SPACE
APPROX	ARCHITECTURAL	LT	LEFT
ARCH	ASPHALT		
ASPH	AMERICAN SOCIETY FOR TESTING AND MATERIALS	M	MONUMENT FOUND
ASTM	AMERICAN WATER WORKS ASSOCIATION	MAX	MAXIMUM
		ME	MATCH EXISTING
AWWA	BREADTH	MECH	MECHANICAL
	BACK OF CURB	MH	MANHOLE
B	BASEMENT FLOOR	MI	MILE
BOC	BUILDING	MIN	MINIMUM
BF	BENCHMARK	MISC	MISCELLANEOUS
BLDG	BEST MANAGEMENT PRACTICES	MPH	MILES PER HOUR
BM	(WATER QUALITY)	MS	MEDIAN STRIP
BMP	BLOW OFF VALVE	MSL	MEAN SEA LEVEL
	BEARING		
BOV	BUILDING RESTRICTION LINE	N	NORTHING/NORTH
BRG	BEGINNING VERTICAL CURVE ELEVATION	N/A	NOT APPLICABLE
BRL	BEGINNING VERTICAL CURVE STATION	NBL	NORTH BOUND LANE
BVCE	BOTTOM OF WALL	N/F	NOW OR FORMERLY
BVCS		NFA	NET FLOOR AREA
BW	CENTER CORRECTION ON VERTICAL CURVE	NO. & #	NUMBER
	RUNOFF COEFFICIENT	NTS	NOT TO SCALE
c.e	CABLE TELEVISION		
C	CURB AND GUTTER	OC	ON CENTER
CATV	CATCH BASIN	OBJ	OBJECT
C&G	CALIFORNIA BEARING RATIO	OD	OUTSIDE DIAMETER
CB	CENTER TO CENTER	OH	OVERHANG
CBR	COLORADO DEPT. OF TRANSPORTATION	O/H	OVERHEAD
CC	CUBIC FEET	OHC	OVERHEAD CABLE
CDOT	CUBIC FEET PER SECOND	OHE	OVERHEAD ELECTRIC
CF	CURB AND GUTTER (REVERSE SLOPE)	OHT	OVERHEAD TELEPHONE
CFS	CHORD		
CG(R)	CHORD BEARING	P	PERIMETER
CH	CAST IRON PIPE	PL	PROPERTY LINE
CHBRG	CENTERLINE	P&P	PLAN AND PROFILE
CIP	CLEAR	PC	POINT OF CURVATURE
CL	CUBIC METERS	PCC	POINT OF COMPOUND CURVATURE
CLR	CORRUGATED METAL PIPE	PCR	POINT OF CURB RETURN
CM	CUBIC METERS PER SECOND	PCEP	POINT OF CURVE EDGE OF PAVEMENT
CMP	RUNOFF CURVE NUMBER	PCTC	POINT OF CURVATURE TOP OF CURB
CMS	CONTINUOUS	PI	POINT OF INTERSECTION
CN	CLEAN OUT	PG	PAGE
CONT	CONCRETE	PGL	POINT OF GRADE LINE
CO	CURB STOP	PRC	POINT OF REVERSE CURVATURE
CONC	COURT	PRELIM	PRELIMINARY
CS	CENTER	PROP	PROPOSED
CT	CONTROL LINE	PT	POINT OF TANGENCY
CTR	CUBIC YARD	PUE	PUBLIC UTILITY EASEMENT
CTRL		PVC	POLYVINYL CHLORIDE PIPE OR
CY	DEPTH		POINT OF VERTICAL CURVATURE
	DRAINAGE AREA	PVI	POINT OF VERTICAL INTERSECTION
D	DEED BOOK	PVT	POINT OF VERTICAL TANGENCY
DA	DETAIL	PVMT	PAVEMENT
DB	DIAMETER	PVRC	POINT OF VERTICAL REVERSE CURVE
DET	DUCTILE IRON PIPE		
DIA	DROP INLET	Q (cfs)	AMOUNT OF RUNOFF (FLOW RATE)
DIP	DISTANCE		
DI	DOMESTIC LINE	R	RADIUS
DIST	DROP MANHOLE	RCP	REINFORCED CONCRETE PIPE
DL	DOMESTIC	RDCR	REDUCER
DM	DRIVE DRAIN	RD	ROAD OR ROOF DRAIN
DOM	DRAINAGE	REINF	REINFORCED
DR	DRAINAGE AREA	REQD	REQUIRED
DRN	DOWN SPOUT	RET	RETAINING
DRNG	DWELLING UNITS	REV	REVISION
DS	DRAWING	RGP	ROUGH GRADING PLAN
DU	DRIVEWAY	RMA	RESOURCE MANAGEMENT AREA
DWG	DELTA	ROM	REMOTE OUTSIDE MONITOR
D/W		RPA	RESOURCE PROTECTION AREA
	EASTING/EAST	RR	RAILROAD
	EACH	RT	RIGHT
E	EAST BOUND LANE	RTE	ROUTE
EA	EROSION CONTROL	R/W & ROW	RIGHT OF WAY
EBL	EDGE OF GUTTER		
EC	ENERGY GRADIENT LINE	S	SPEED OR SLOPE
EG	ELEVATION	SAN	SANITARY SEWER
EGL	ELECTRIC	SANMH	SANITARY SEWER MANHOLE
EL	ELEVATION	SBL	SOUTH BOUND LANE
ELEC	ENGINEER	SCH	SCHEDULE
ELEV	ENTRANCE	SD	SIGHT DISTANCE
ENGR	EDGE OF ASPHALT	SEC	SECTION
ENT	EDGE OF CONCRETE	SEW	SEWER
EOA	EDGE OF PAVEMENT	SF	SQUARE FEET
EOC	EQUIPMENT	SH	SHOULDER
EOP	EASEMENT	SP	SPACE OR SITE PLAN
EQUIP	EXISTING TO BE DEMOLISHED	SPEC	SPECIFICATIONS
ESMT	EXISTING TO REMAIN	STA	STATION
ETD	EXISTING TO BE RELOCATED	STD	STANDARD
ETR	EXISTING TO BE REPLACED	STK	STACK
ETRL	ENDING VERTICAL CURVE ELEVATION	STM	STORM SEWER
ETRP	ENDING VERTICAL CURVE STATION	STMMH	STORM SEWER MANHOLE
EVCE	END WALL	STR	STRUCTURE
EVCS	EXISTING	SVC	SERVICE
EW	ENVIRONMENTAL QUALITY CORRIDOR	S/W	SIDEWALK
EX		SWM	STORM WATER MANAGEMENT
EQC	FIRE LINE	Sx	CROSS SLOPE
	FLOOR AREA RATIO	SY	SQUARE YARD
F	FACE OF CURB		
FAR	FLOOR DRAIN	T	TANGENT
FDC	FLARED END SECTION	TB	TOP OF BANK OR TEST BORING
FD	FIRST FLOOR OR FINISH FLOOR	TBR	TO BE REMOVED
FES	FINISH GRADE	TOC	TOP OF CURB
FF	FIRE HYDRANT	Tc	TIME OF CONCENTRATION
FG	FLOW LINE	TEL	TELEPHONE
FH	FOUNDATION	TEMP	TEMPORARY
FL	FOYER	TH	TEST HOLE
FND	FLOOD PLAIN	TOF	TOP OF FOUNDATION
FOY	FEET PER SECOND	TOP	TOP OF PIPE
FP	FIRE SERVICE OR FACTOR OF SAFETY	TP	TEST PIT OR TREE PROTECTION
FPS	FOOT OR FEET	TW	TOP OF WALL OR TAILWATER
FS		TYP	TYPICAL
FT	GAS		
	GARAGE	UE	UTILITY EASEMENT
G	GRADE BREAK	UG	UNDERGROUND
GAR	GROSS FLOOR AREA	UGE	UNDERGROUND ELECTRIC
GB	GUARD RAIL OR GRATE INLET	UGT	UNDERGROUND TELEPHONE
GFA	GATE VALVE	UGC	UNDERGROUND CABLE
GR		UD	UNDERDRAIN
GV	HEAD	UL	UPPER LEVEL
	HANDICAP	UP	UTILITY POLE
H	HORIZONTAL BEND	USGS	US GEOLOGICAL SURVEY
HC	HOT BITUMINOUS PAVEMENT	UTIL	UTILITY
HB	HYDRAULIC GRADE LINE		
HBP	HORIZONTAL	V OR VOL	VOLUME
HGL	HIGH POINT	V OR VEL	VELOCITY
HORZ	HAND RAIL	VAN	HANDICAPPED VAN PARKING SPACE
HP	HEIGHT	VB	VERTICAL BEND
HR	HEADWATER	VC	VERTICAL CURVE
HT		VF	VERTICAL FOOT
HW	RAINFALL INTENSITY		
	INSIDE DIAMETER OR IDENTIFICATION	W	WEIGHT OR WIDTH
I	INVERT ELEVATION	WBL	WEST BOUND LANE
ID	INCH	WL	WATER LINE
IE	INVERT	WM	WATER METER
IN	IRON PIPE	W/M OR WM	WATER MAIN
INV	IRON PIPE FOUND	W/TB	WITH THRUST BLOCK
IP	IRON PIPE SET	WSEL	WATER SURFACE ELEVATION
IPF	IRRIGATION	WV	WATER VALVE
IPS			
IRR	JUNCTION BOX	XING	CROSSING
	JOINT	XF	TRANSFORMER
JB			
JNT		YI	YARD INLET
		YR	YEAR

GENERAL NOTES

1. UTILITY CONFLICTS: ALL EXISTING UTILITIES SHOWN WERE COMPILED USING THE BEST AVAILABLE INFORMATION AND FIELD OBSERVATION. BOWMAN CONSULTING INC. DOES NOT GUARANTEE THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON. CONTRACTOR TO BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION OF AND PROTECTING ALL EXISTING UTILITIES, INCLUDING THOSE NOT SHOWN OR SHOWN INCORRECTLY ON THE PLANS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IN A TIMELY FASHION TO THE SATISFACTION OF THE APPROPRIATE GOVERNING AGENCY AND THE OWNER OF THE IMPACTED UTILITY AT THE CONTRACTOR'S EXPENSE.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS FOR THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT THE JOB SITE AT ALL TIMES THE APPROPRIATE GOVERNING AGENCY'S PUBLIC WORKS MANUAL, ALL APPROVED EASEMENT AGREEMENTS, AND ONE (1) SIGNED COPY OF THE PLANS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY FOR ANY VARIANCE TO THE ABOVE DOCUMENTS.
3. CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE CODES, LICENSES, STANDARDS, SPECIFICATIONS, PERMITS, BONDS, ETC., WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
4. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND MUST COMPLY WITH OSHA REGULATIONS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER AND ENGINEER OF ANY PROBLEM CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
6. THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY HIS/HER CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAY AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
8. THE CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION. THE APPROPRIATE FIRE DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSURES AND IN THE EVENT THAT ANY FIRE HYDRANTS ARE TO BE TEMPORARILY REMOVED FROM SERVICE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING AT LEAST 48 HOURS ADVANCED NOTICE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING WATER SYSTEM AND FOR OBSERVATIONS AND/OR INSPECTIONS REQUIRED.
9. THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS OR OTHER DEVICES NECESSARY FOR SAFE TRAFFIC CONTROL IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AS MODIFIED BY THE COLORADO SUPPLEMENT TO THE MUTCD. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE APPROPRIATE GOVERNING AGENCY PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT FOR WORK WITHIN THE RIGHT-OF-WAY.
10. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ANY AFFECTED UTILITY COMPANY.
11. THE CONTRACTOR SHALL OBTAIN COPIES OF THE "SOILS AND INVESTIGATION" REPORT FROM GEOTECHNICAL ENGINEER ALONG WITH THE "PAVEMENT THICKNESS DESIGN REPORT". THE CONTRACTOR MUST HAVE COPIES OF SAME ON THE SITE AT ALL TIMES.
12. THE CONTRACTOR IS REQUIRED TO PROVIDE AS-CONSTRUCTED HORIZONTAL AND VERTICAL CONSTRUCTION INFORMATION, INCLUDING THE LOCATIONS OF ALL SANITARY LINES AND SERVICES, WATER LINES AND SERVICES, AND OTHER UTILITY LINES AND SERVICES TO THE ENGINEER FOR PREPARATION OF AS-BUILT DOCUMENTS.
13. LIMITS OF CONSTRUCTION EASEMENTS AND RIGHTS-OF-WAY SHALL BE DELINEATED WITH TEMPORARY STAKING BY THE CONTRACTOR. SAFETY FENCING SHALL BE PER APPROPRIATE GOVERNING AGENCY.
14. WHERE EXCAVATION IS REQUIRED UNDER EXISTING ASPHALT OR CONCRETE PAVEMENT, THE EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO EFFECT A SMOOTH, STRAIGHT-CUT EDGE. ASPHALT PATCH SHALL BE PER APPROPRIATE GOVERNING AGENCY STANDARDS.
15. REFER TO FINAL RECORDED PLAT FOR ACTUAL LOT, TRACT, PARCEL, AND EASEMENT LOCATIONS AND DESIGNATIONS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAYS AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
17. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY TO THE PROJECT WORK SITE (SEE THE EROSION CONTROL PLAN). THE CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY (IF APPLICABLE) TO COMPLETE THE CONSTRUCTION AND SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
18. WATER WILL BE PROVIDED BY THE CONTRACTOR TO KEEP WIND EROSION IN CHECK. USE OF WATER AS A DUST PREVENTATIVE SHALL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF THE WORK.
19. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE PROPERTY LIMITS DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR.
20. ANY CONSTRUCTION DEBRIS OR MUD TRACKING IN THE PUBLIC RIGHT-OF-WAY RESULTING FROM THIS DEVELOPMENT SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY THE DEVELOPMENT AND SHALL PROPERLY BARRICADE THE SITE UNTIL CLEAN UP OR REPAIR IS COMPLETE.
21. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO GRADE STREET CORES, RIGHT-OF-WAY TEMPLATES, AND LOTS ACCORDING TO GRADING INSTRUCTIONS SHOWN ON PLANS.
22. STREET CONTOURS SHOWN AT PROPOSED STREET LOCATIONS REPRESENT FINISHED GRADE ELEVATION TO TOP OF ASPHALT.
23. COMPACTION FILL MATERIAL SHALL BE COMPACTED ACCORDING TO THE APPROPRIATE GOVERNING AGENCY REGULATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
24. TOLERANCE ROUGH GRADING: TOLERANCE SHALL BE +/- 0.1 FEET.
25. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE ALL APPROPRIATE PERMITS FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAVE BEEN OBTAINED PRIOR TO GRADING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL TEMPORARY WATER DIVERSION/CONTROL DEVICES AND EROSION CONTROL DEVICES NECESSARY TO PROTECT ADJACENT PROPERTIES, WATERWAYS AND PUBLIC RIGHT-OF-WAY. CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF SAID DEVICES THROUGHOUT CONSTRUCTION AND UNTIL THE PERMANENT PROTECTION NECESSARY HAS BEEN COMPLETED.
26. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE MOST CURRENT APPROVED ARCHITECTURAL/ MECHANICAL/ELECTRICAL/PLUMBING/STRUCTURAL PLANS AND COORDINATE SAME WITH THE SITE PLAN, PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
27. WHEN DURING THE COURSE OF CONSTRUCTION, ANY OBJECT OF AN UNUSUAL NATURE IS ENCOUNTERED, THE CONTRACTOR SHALL CEASE WORK IN THAT AREA AND IMMEDIATELY NOTIFY THE OWNER, APPROPRIATE GOVERNING AGENCY, AND/OR THE ARCHITECT/ENGINEER.
28. THE EXISTING UNDERGROUND UTILITIES SHOW HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN IN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.
29. ALL STEPS WITH THREE OR MORE RISERS SHALL HAVE HAND RAILS, PER LOCAL CODE.
30. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF EXISTING ROAD TO PROPOSED CURB AND GUTTER AND/OR PROPOSED EDGE OF PAVEMENT TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY. REMOVE AND RECONSTRUCT EXISTING PAVEMENT AND/OR CURB AS DICTATED BY FIELD CONDITIONS TO PROVIDE POSITIVE DRAINAGE AT TIE-IN-POINTS.
31. OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1 1/2 INCH DEPTH; ANY COST ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE CONTRACTOR.
32. ALL RIGHT-OF-WAY DEDICATED FOR PUBLIC USE SHALL BE CLEAR AND UNENCUMBERED.
33. AN AIR QUALITY PERMIT SHALL BE OBTAINED IF REQUIRED.
34. ANY LIGHTING SHOWN HEREON IS AS SPECIFIED BY THE CLIENT AND IS INCLUDED FOR INFORMATION PURPOSES ONLY, AS DIRECTED BY THE OWNER AND/OR PUBLIC AGENCY REQUIREMENTS. BOWMAN CONSULTING GROUP, LTD. HAS NOT PERFORMED THE LIGHTING DESIGN, AND THEREFORE DOES NOT WARRANT AND IS NOT RESPONSIBLE FOR THE DEGREE AND/OR ADEQUACY OF ILLUMINATION ON THIS PROJECT.
35. THE CONTRACTOR WILL BE REQUIRED TO NOTIFY ALL RESIDENCES WITHIN VICINITY OF THE PROPERTY BOUNDARY TEN (10) DAYS PRIOR TO ANY BLASTING IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY REQUIREMENTS.
36. NO BLASTING SHALL BE PERMITTED WITHIN 25' OF EXISTING UTILITY LINES OR STRUCTURES. BLASTING TO BE EXTENDED 25' BEYOND PROPOSED STRUCTURES IF CONDITIONS WARRANT FUTURE EXTENSIONS.
37. ALL RETAINING WALLS 2' IN HEIGHT AND OVER REQUIRE A SEPARATE BUILDING PERMIT.
38. THE APPROVAL OF THIS PLAN DOES NOT CONSTITUTE THE APPROVAL OF FUTURE WORK.
39. ALL HANDICAPPED SPACES SHALL HAVE AN ABOVE GRADE IDENTIFICATION SIGN MEETING APPROPRIATE GOVERNING AGENCY STANDARDS.
40. WHERE A PROPOSED PIPE CROSSES OR PARALLELS A STREET OR DRIVE AISLE, THE ASPHALT SHALL BE NEATLY SAWCUT TO FULL DEPTH. AFTER INSTALLATION OF THE PIPE, THE ROADWAY SHALL BE PATCHED IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY STANDARDS.

GENERAL NOTES (CONT.)

41. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, CONDITIONS, AND CONFIRMATION AND CONDITION OF EXISTING GROUND SURFACE AND THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING EXECUTION OF THE WORK. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUANTITY AND QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED. ANY INACCURACIES OR DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS MUST BE BOUGHT TO THE OWNER'S ATTENTION IN ORDER TO CLARIFY THE EXACT NATURE OF THE WORK TO BE PERFORMED PRIOR TO THE COMMENCEMENT OF ANY WORK.
42. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING ROADS AND UTILITIES WHICH OCCURS AS A RESULT OF THE PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY.
43. ALL STREET CUT AND PATCH WORK IN PUBLIC RIGHT-OF-WAY REQUIRED FOR UTILITIES INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CITY, COUNTY, AND/OR APPROPRIATE GOVERNING AGENCY STANDARDS AND SPECIFICATIONS.
44. THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION FOR THE CONTRACTOR TO TRESPASS ON OFF-SITE PROPERTIES.
45. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
46. THESE PLANS MAKE NO REPRESENTATION AS TO THE SUBSURFACE CONDITIONS AND THE PRESENCE OF SUBSURFACE WATER OR THE NEED FOR SUBSURFACE DRAINAGE FACILITIES.
47. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING ALL NECESSARY INSPECTIONS.
48. EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
49. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER.
50. THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
51. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF TEST HOLES PRIOR TO BEGINNING OF ANY CONSTRUCTION ON THE PROJECT. IF CONFLICTS ARE DISCOVERED AS A RESULT OF TEST HOLE FINDINGS, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY.
52. EXCAVATION SUPPORT SYSTEMS SHALL CONFORM TO THE PROVISIONS OF OSHA CONSTRUCTION STANDARD 29 CFR PART 1926 SUBPART P, OR CURRENT EDITION.
53. AT LOCATIONS WHERE THE FINAL SURFACE COURSE OF ASPHALT PAVEMENT IS TO BE FEATHERED INTO THE EXISTING SURFACE COURSE, THE EXISTING SURFACE COURSE IS TO BE SCABBLED TO A MINIMUM DEPTH OF 1" AND A TACK COAT APPLIED PRIOR TO FINAL PAVING TO INSURE A SMOOTH, WELL BONDED JOINT.
54. ANY NEW PAVEMENT OPENED TO TRAFFIC SHALL RECEIVE A TACK COAT PRIOR TO PLACEMENT OF ANY OVERLYING ASPHALT COURSE.
55. ALL SIDEWALKS TO BE 4" THICK CONCRETE UNLESS OTHERWISE SHOWN ON THE PLAN.
56. ALL DEMOLITION SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE APPROPRIATE GOVERNING AGENCY.
57. ALL APPLICABLE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING DEMOLITION.
58. ITEMS SHOWN TO BE RELOCATED SHALL BE CAREFULLY REMOVED AND STORED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY CAN BE PLACED IN THEIR NEW LOCATION. CONTRACTOR SHALL VERIFY THESE ITEMS WITH THE OWNER, PRIOR TO CONSTRUCTION.
59. CONTRACTOR SHALL COORDINATE REMOVAL OR RELOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD ELECTRICAL, TELEPHONE AND CABLE TV LINES AND REMOVAL OF UTILITY POLES, PEDESTALS AND TRANSFORMERS WITH UTILITY COMPANIES AND WITH DEVELOPER PRIOR TO DEMOLITION.
60. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENTS AND/OR RECONSTRUCTION OF ALL UTILITY COVER (MANHOLE FRAMES AND COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
61. THE CONTRACTOR MUST HAVE THE APPROVED CONSTRUCTION DRAWINGS IN POSSESSION PRIOR TO THE START OF CONSTRUCTION. AT LEAST ONE (1) COPY OF THE APPROVED PLANS, WITH REVISIONS, MUST BE KEPT ON-SITE AT ALL TIMES.
62. ALL HANDICAP RAMPS SHALL BE BUILT IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE APPROPRIATE GOVERNING AGENCY STANDARDS, CDOT STANDARDS, AND CURRENT ADA REQUIREMENTS.
63. THE STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES MUST BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY ARE NOT ONLY 100% COMPLETE, BUT ALSO THAT 100% OF THE DRAINAGE AREA TO EACH FACILITY IS PERMANENTLY STABILIZED. SEED AND MULCH DOES NOT CONSTITUTE STABILIZATION IN TERMS OF THE CONTRACTOR MAINTENANCE OF THE STORM DRAIN, STORMWATER MANAGEMENT, AND WATER QUALITY FACILITIES. ALL STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES SHALL BE TURNED OVER TO THE OWNER COMPLETELY CLEAN AND FREE FROM ANY CONSTRUCTION RELATED SEDIMENT OR DEBRIS.
64. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT ALL ADA ACCESSIBLE SIDEWALKS MAINTAIN SLOPES NOT TO EXCEED 5% LONGITUDINALLY AND 2% CROSS SLOPES. SLOPES AT



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A	1ST SEWER COMMENTS	10/30/23
B	2ND SEWER COMMENTS	01/26/24
C	3RD SEWER COMMENTS	04/12/24
D	4TH SEWER COMMENTS	05/01/24
E	5TH SEWER PLAN COMMENTS	10/10/24

KEY MAP

AFW - COLORADO SPRINGS
SANITARY SEWER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

NOT FOR CONSTRUCTION

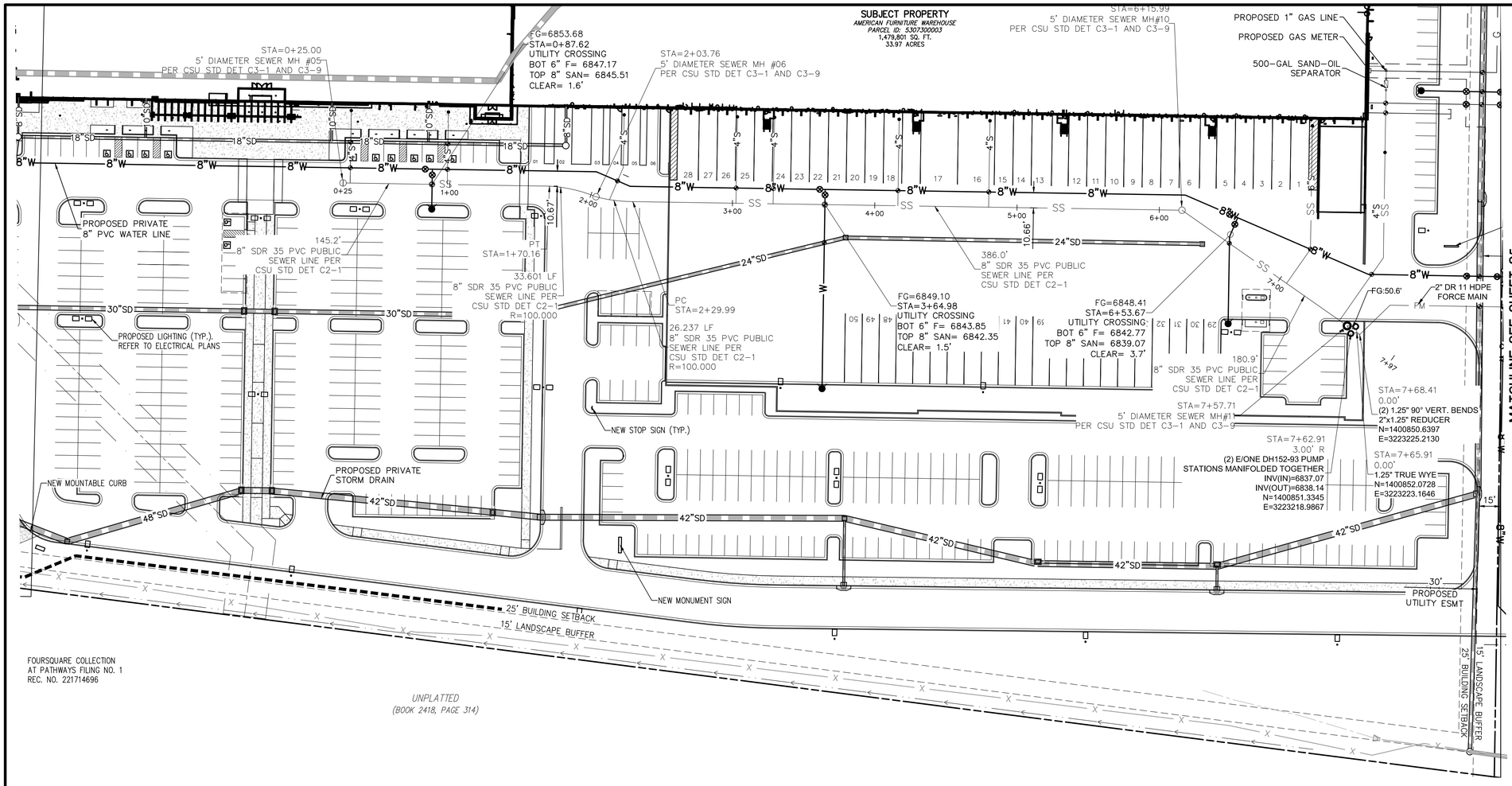
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HE	VH	HE

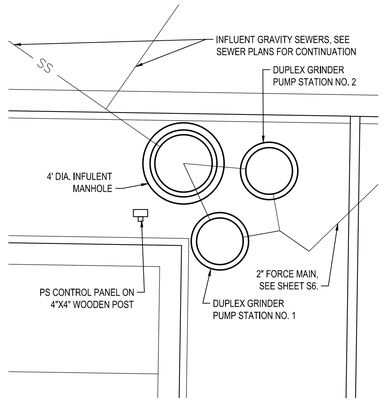
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V: N/A

JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
S3



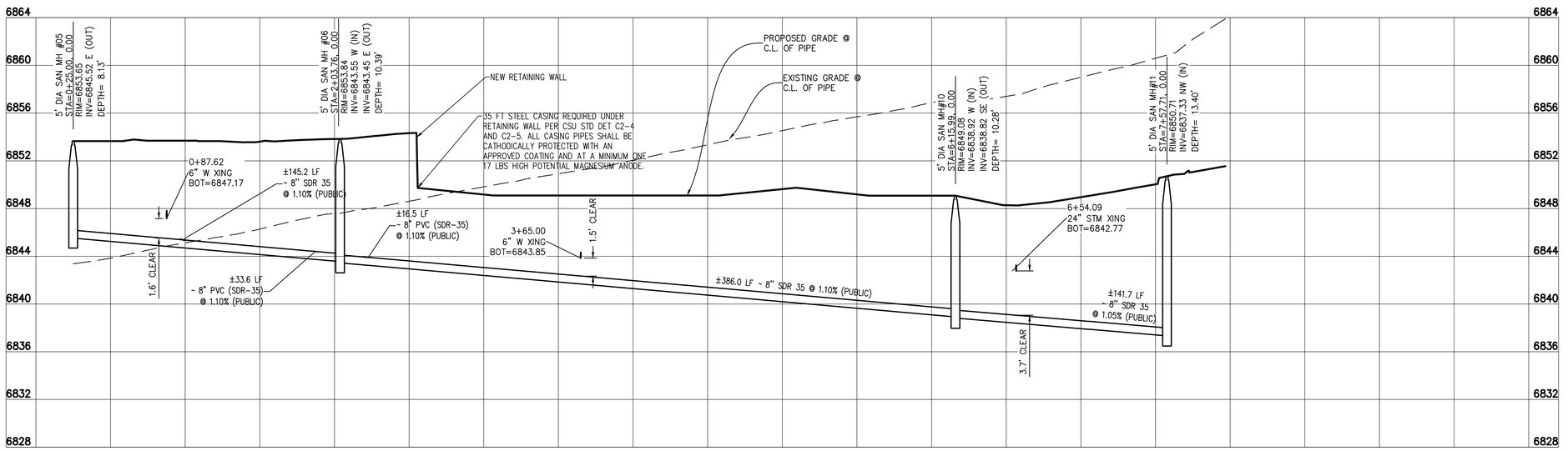


PUMP STATION PLAN

SCALE: 1" =5'

SERVICE LINE CROSSING NOTE

CAUTION: SYMBOL DENOTES UTILITY CROSSING.
CONTRACTOR TO MAINTAIN FOLLOWING VERTICAL CLEARANCES FOR CROSSINGS WITH WATER SERVICE LINES:
WASTEWATER: 1.5'
STORM SEWER: 1.5'
NATURAL GAS: 1'
ELECTRIC: 1'



SL03 PROFILE VIEW
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=5'

COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

PROJECT NUMBER: 2023-S033
WORK ORDER NUMBER: 3993273
CSU SHEET 2 OF 3

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

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Know what's **below.** **Call** before you dig.

WASTEWATER SERVICE PLAN AND PROFILES

AFW - COLORADO SPRINGS
SANITARY SEWER PLANS

CITY OF COLORADO SPRINGS COLORADO

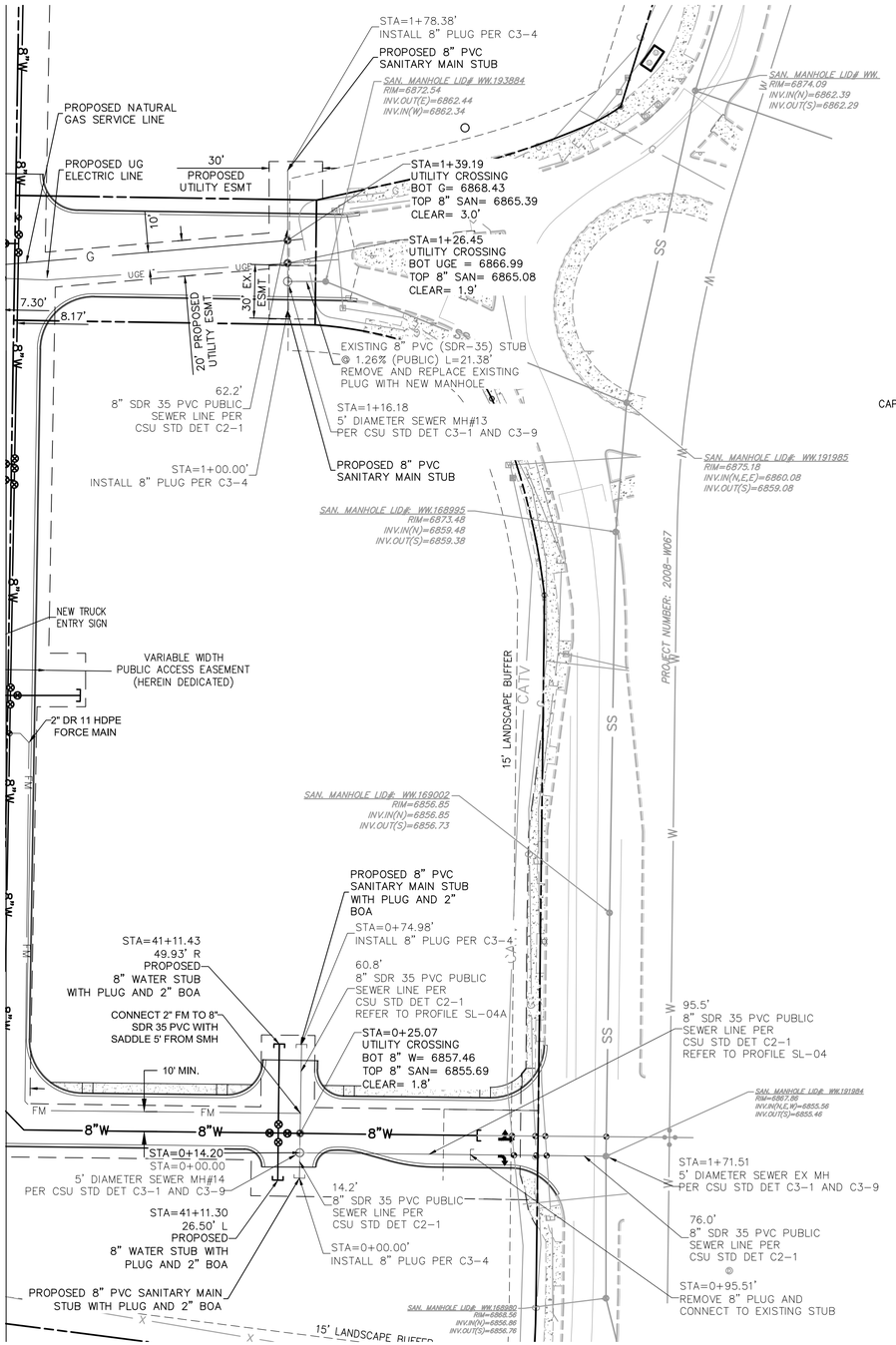
SEAL

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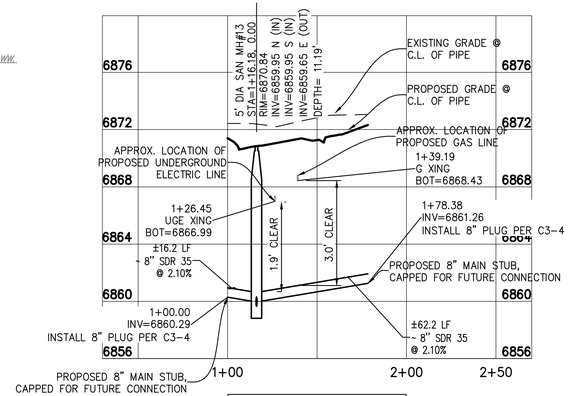
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: 1" = 40' V: 1" = 5'
JOB No. 050895-01-001
DATE : 04/12/2023
SHEET S4

MATCHLINE SEE SHEET S4



PLAN VIEW
SCALE: 1' = 40'



SL-05 PROFILE VIEW
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=5'

COLORADO SPRINGS UTILITIES
WASTEWATER MAIN DESIGN APPROVAL

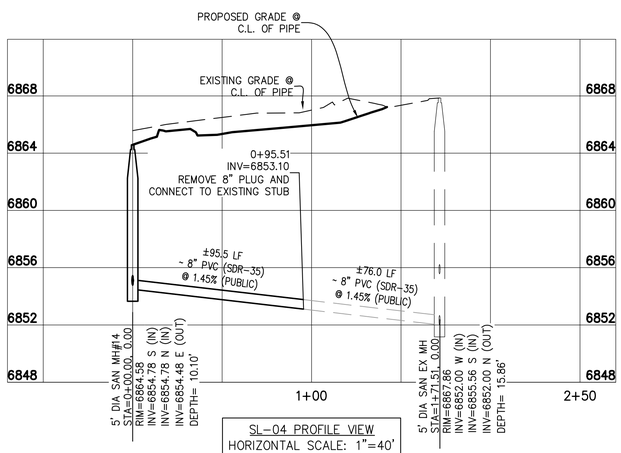
PROJECT NUMBER: 2023-S033
WORK ORDER NUMBER: 3993273
CSU SHEET 3 OF 3

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

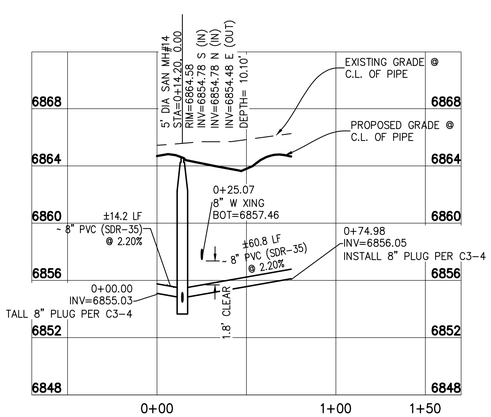
SERVICE LINE CROSSING NOTE

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STORM SEWER: 1.5'
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ELECTRIC: 1'

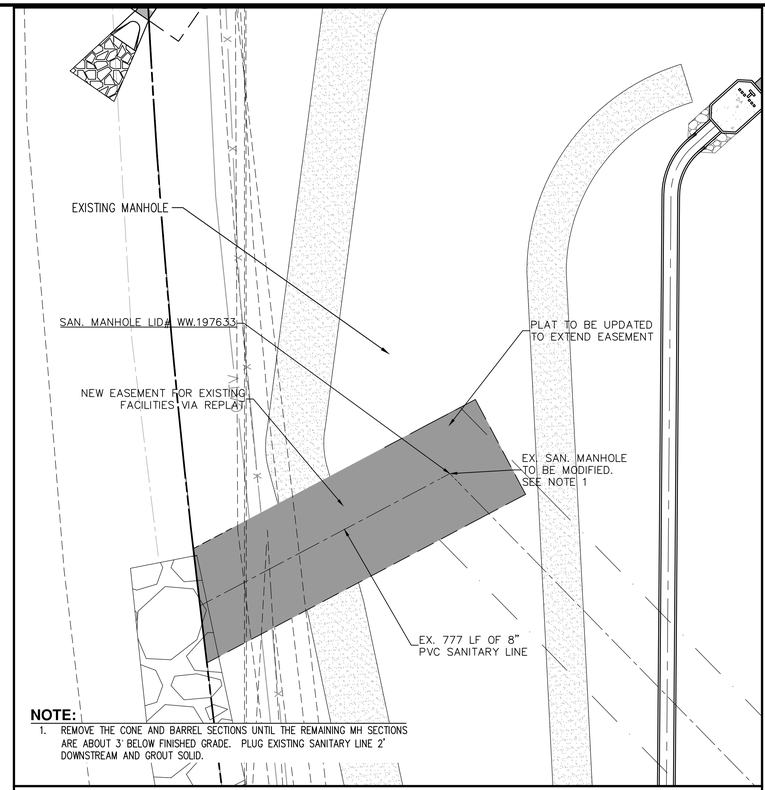
811 Know what's **below.** **Call** before you dig.



SL-04 PROFILE VIEW
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=5'



SL-04A PROFILE VIEW
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=5'



NOTE:
1. REMOVE THE CONE AND BARREL SECTIONS UNTIL THE REMAINING MH SECTIONS ARE ABOUT 3' BELOW FINISHED GRADE. PLUG EXISTING SANITARY LINE 2' DOWNSTREAM AND GROUT SOLID.

EXISTING MANHOLE INSET
SCALE: 1' = 20'

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WASTEWATER SERVICE PLAN AND PROFILES

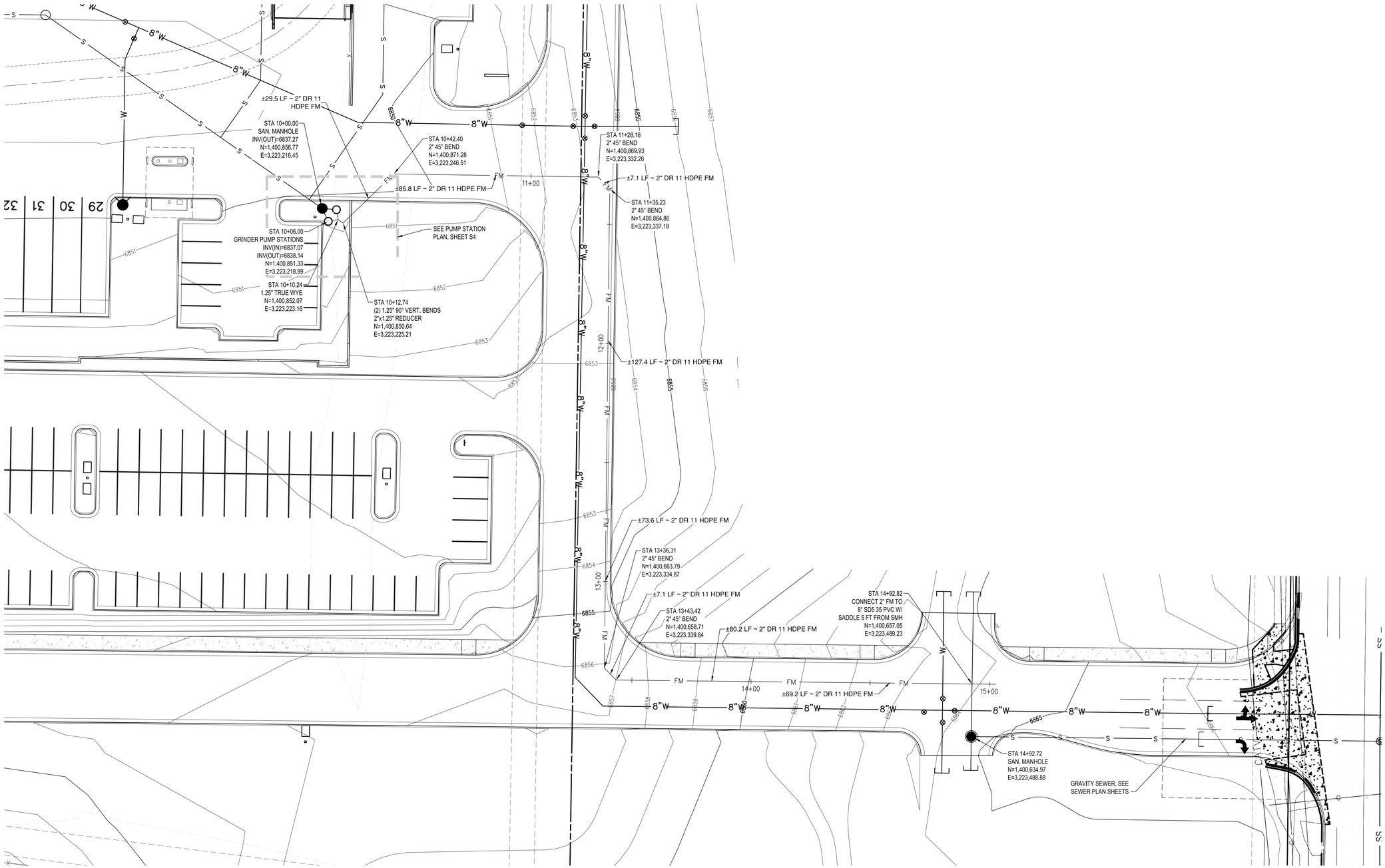
AFW - COLORADO SPRINGS
SANITARY SEWER PLANS

CITY OF COLORADO SPRINGS
COLORADO

SEAL
NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE: H: 1" = 40' V: 1" = 5'
JOB No. 050895-01-001
DATE : 04/12/2023
SHEET S5



FORCE MAIN PLAN

SCALE: 1" = 20'

N

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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FORCE MAIN AND PUMP STATION PLAN

AFW - COLORADO SPRINGS
SANITARY SEWER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
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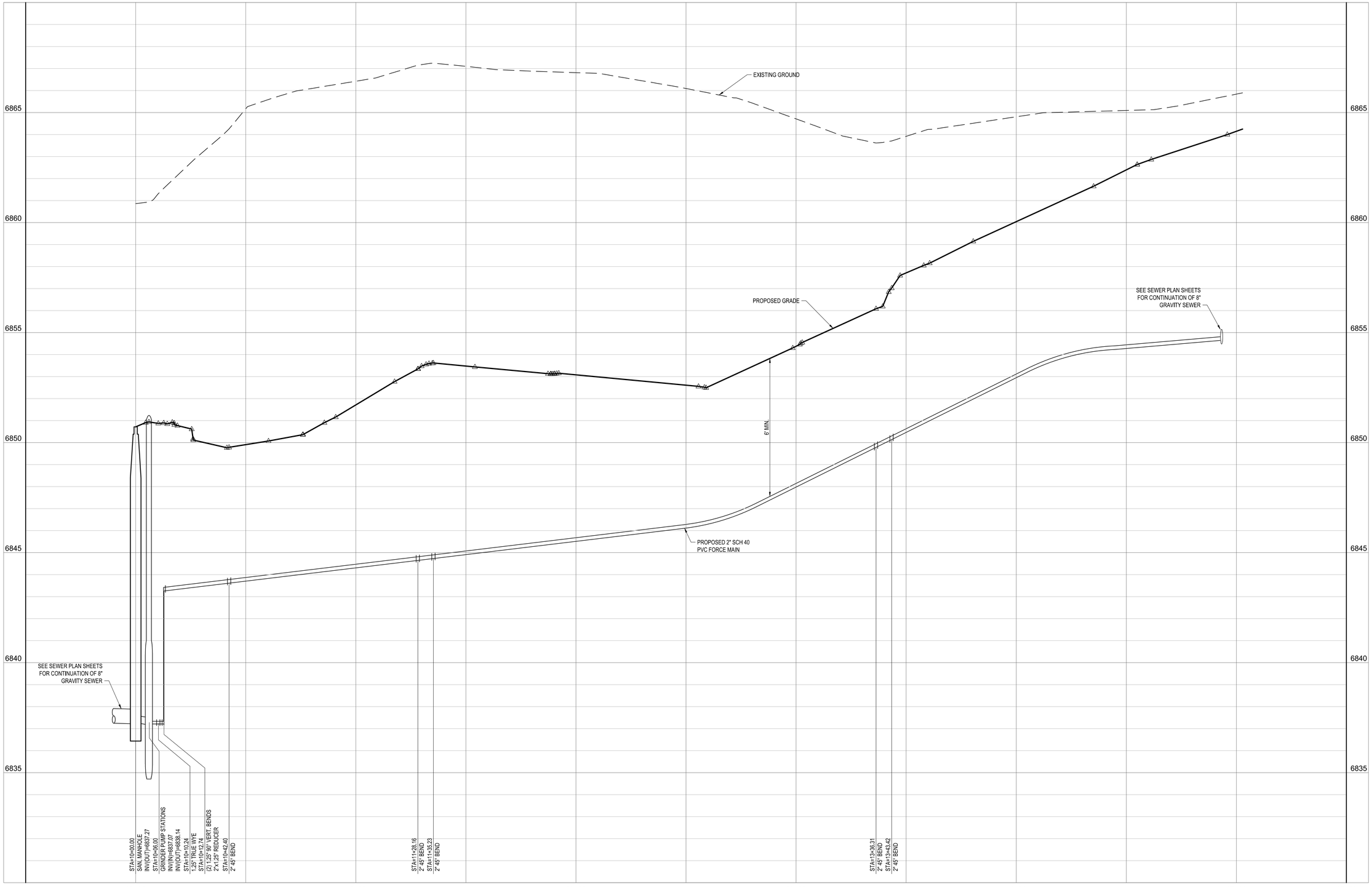
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JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
S6

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GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

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REVISIONS

REVISION	DESCRIPTION	DATE
A	1ST SEWER COMMENTS	10/30/23
B	2ND SEWER COMMENTS	01/26/24
C	3RD SEWER COMMENTS	04/12/24
D	4TH SEWER COMMENTS	05/01/24
E	5TH SEWER PLAN COMMENTS	10/10/24

FORCE MAIN AND PUMP STATION PROFILE

AFW - COLORADO SPRINGS
SANITARY SEWER PLANS

CITY OF COLORADO SPRINGS
COLORADO

SEAL
NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
HE	VH	HE

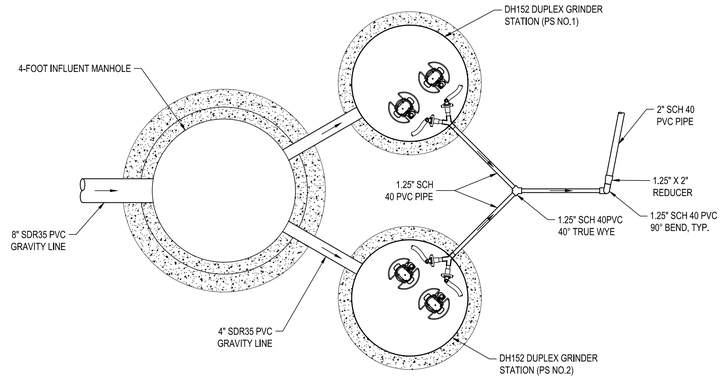
SCALE H: 1"=20'
V: 1"=2'

JOB No. 050895-01-001

DATE : 04/12/2023

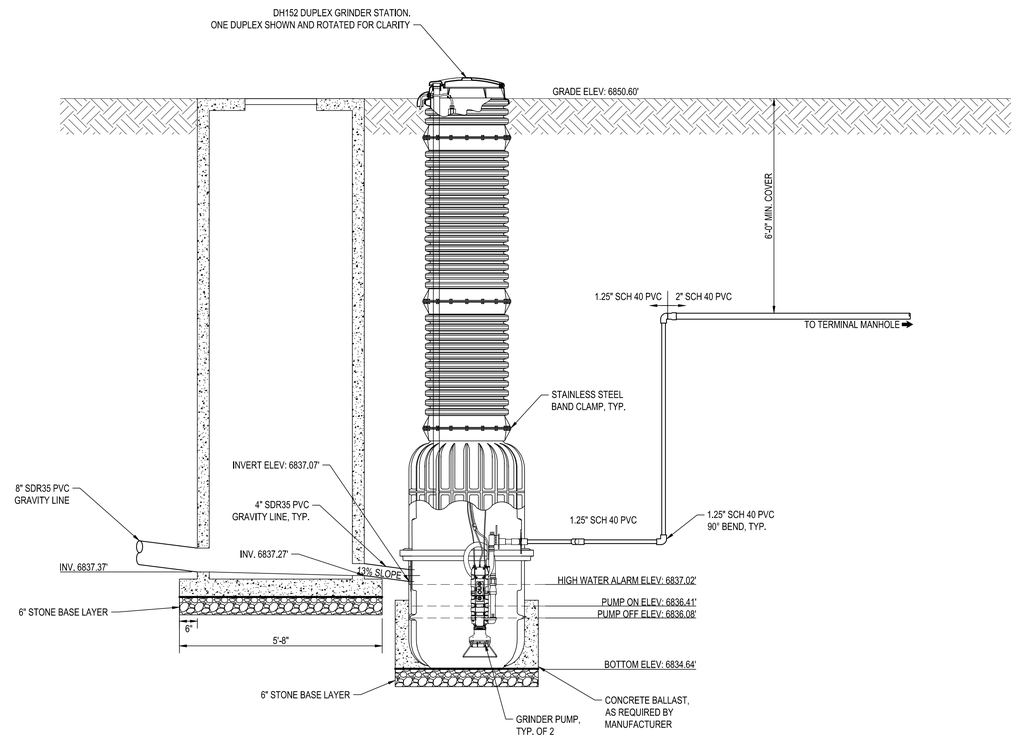
SHEET
S6.1

V:\050895 - AFW - Colorado Springs\050895-01-001 (ENG)\Engineering\Engineering Plans\Sewer Plans\050895-01-001-SIT.dwg



AFW GRINDER STATIONS - PLAN VIEW

SCALE: 1/2" = 1' - 0"



AFW GRINDER STATIONS - SECTION VIEW

SCALE: 1/2" = 1' - 0"

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PUMP STATION PLAN AND SECTION VIEWS

AFW - COLORADO SPRINGS
SANITARY SEWER PLANS

CITY OF COLORADO SPRINGS
COLORADO

SEAL

NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
S7

FLOW INFORMATION

Description	Size (SF)	Avg. Demand Factor (gpd/KSF)	Avg. Daily Flow (gpd)	Peak Demand Factor (gpd/KSF)*	Peak Daily Flow (gpd)	Flow Duration (hours)	Peak Daily Flow (gpm)
COS (Proposed)	332,500	6.23	2,070	7.88	2,621	24	1.82
Total for Full Build Out			**2,070**		**2,621**		**1.82**

PIPE SIZING CALCULATIONS

Force Main Pipe Size (in.)	Force Main Pipe Material	Actual Force Main Pipe I.D.	Minimum Flow Rate to Maintain 2.0 fps	Maximum Flow Rate to Maintain 8.0 fps
1 1/4	PVC (Sch 40)	1.36	9.06	36.22
2	PVC (Sch 40)	2.047	20.52	82.06

STATIC HEAD

TERMINAL MANHOLE INVERT: 6854.58'
PUMP OFF ELEVATION: 6836.08'
STATIC HEAD: 18.50'

EQUIVALENT LENGTHS

Discharge Piping Equivalent Lengths

Qty.	Material	Size	Description	Length, (FT)	Eq. Length (FT)
1	PVC	1 1/4"	Straight Pipe	20.00	20.00
1	PVC	1 1/4"	45° Elbow	1.84	1.84
2	PVC	1 1/4"	90° Elbow	4.35	8.70
			Total Piping Equivalent Length		30.54

Force Main Equivalent Lengths

Qty.	Material	Size	Description	Length, (FT)	Eq. Length (FT)
1	PVC	2	Straight Pipe	520.00	520.00
5	PVC	2	45° Elbow	2.76	13.80
			Total Piping Equivalent Length		533.80

TDH CALCULATIONS

C-Factor (PVC (Sch 40)) =	130	C-Factor (PVC (Sch 40)) =	130
PVC (Sch 40) I.D. (in.) =	1.36	PVC (Sch 40) I.D. (in.) =	2.047
Static Head (ft.) (h_s) =	18.50	Eq. Pipe Length, PVC (Sch 40) (ft.) =	30.54
Discharge Pressure =	0.00	Eq. Pipe Length, PVC (Sch 40) (ft.) =	533.80

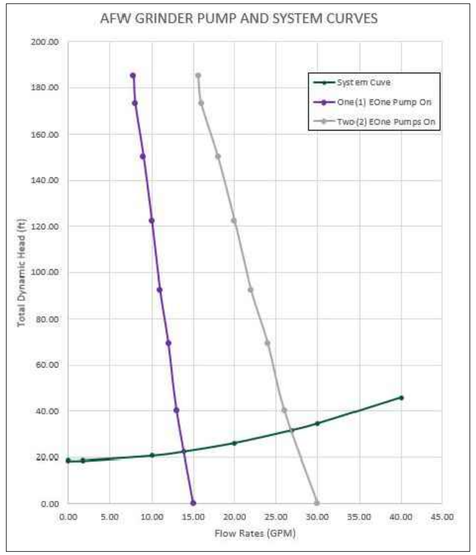
Flow Rates		1.25" PVC (Sch 40) Discharge Piping		2" PVC (Sch 40) Force Main		TDH hs+hp+hf		Velocity 2" FM
Q (GPM)	Q(CFS)	HL/100'	HL	HL/100'	HL	FT	psi	FT/SEC
0.00	0.00	0.00	0.00	0.00	0.00	18.50	8.01	0.00
1.82	0.00	0.09	0.03	0.01	0.06	18.59	8.05	0.18
10.00	0.02	2.03	0.62	0.28	1.48	20.60	8.92	0.97
13.80	0.03	3.68	1.12	0.50	2.69	22.31	9.66	1.35
20.00	0.04	7.32	2.23	1.00	5.34	26.08	11.29	1.95
26.90	0.06	12.66	3.87	1.73	9.24	31.61	13.68	2.62
30.00	0.07	15.49	4.73	2.12	11.31	34.54	14.95	2.92
40.00	0.09	26.37	8.05	3.61	19.25	45.81	19.83	3.90

CALCULATED DESIGN AND OPERATING POINTS

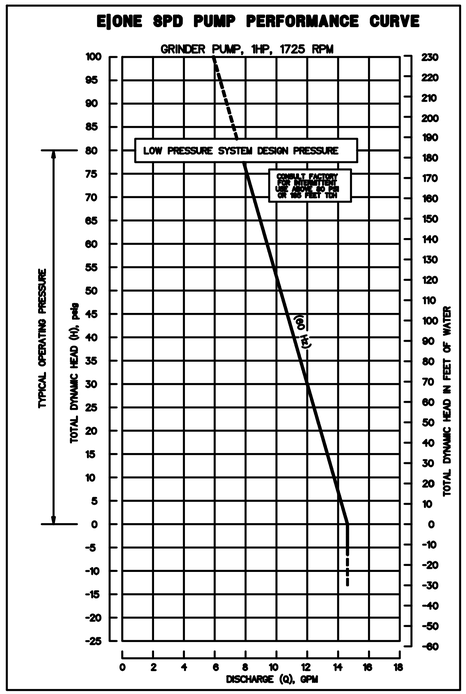
ONE EONE PUMP ON
DESIGN POINT: 1.82 GPM @ 18.59'
OPERATING POINT: 13.80 GPM @ 22.31'

TWO EONE PUMPS ON
DESIGN POINT: 1.82 GPM @ 18.59'
OPERATING POINT: 26.90 GPM @ 31.61'

PUMP AND SYSTEM CURVES

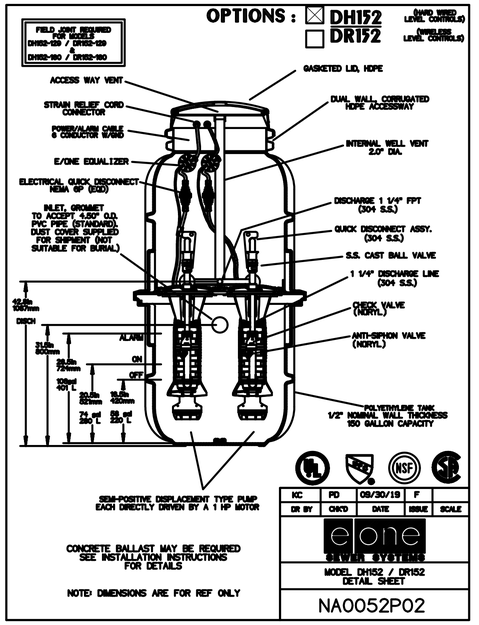


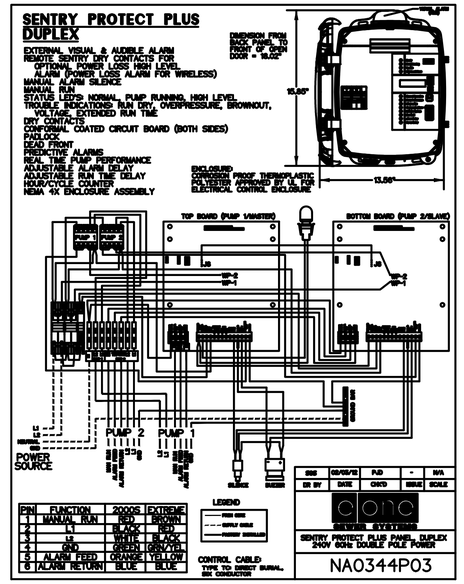
PUMP MANUFACTURER CURVE



ESD 08-0022 REV. 2, 6/08

GRINDER STATION INFORMATION





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PUMP STATION DETAILS

AFW - COLORADO SPRINGS
SANITARY SEWER PLANS

CITY OF COLORADO SPRINGS
COLORADO

SEAL

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DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
S7.1

V:\050895 - AFW - Colorado Springs\050895-01-001 (ENG)\Engineering\Engineering Plans\Sewer Plans\050895-01-001-MCH.dwg

FLOODPLAIN STATEMENT

THIS PROPERTY IS LOCATED WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN) AS ESTABLISHED BY FEMA FIRM PANEL 08041C0537G, EFFECTIVE DECEMBER 7, 2021, AND FEMA FIRM PANEL 08041C0536G, EFFECTIVE DECEMBER 7, 2021.

UTILITY SERVICE PLAN
FOR
AFW - COLORADO SPRINGS

A PORTION OF A TRACT OF LAND RECORDED AT RECEPTION NO. 208068886 AND RECEPTION NO. 206028177
A PART OF THE WEST HALF OF SECTION 7, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH P.M.
CITY OF COLORADO SPRINGS, EL PASO COUNTY, COLORADO

UTILITY SERVICE PLAN NOTES

THE CONTRACTOR SHALL NOTIFY COLORADO SPRINGS UTILITIES' INSPECTIONS OFFICE 719-668-4658 A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

GENERAL:

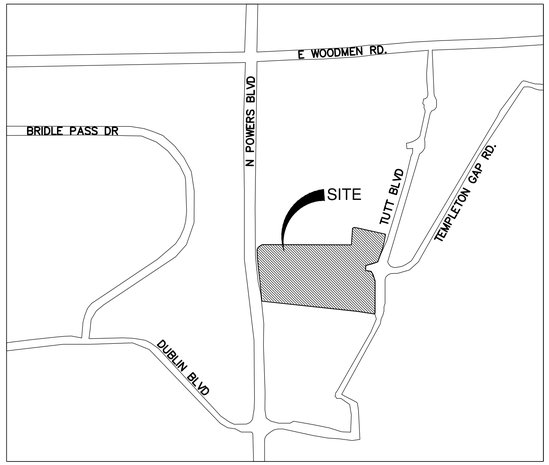
1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET *COLORADO SPRINGS UTILITIES' WASTEWATER AND WATER LINE EXTENSION AND SERVICE STANDARDS (WATER/WASTEWATER LESS).*
2. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF LOCATIONS OF EXISTING PIPELINES, MANHOLES, HYDRANTS, VALVES AND SERVICE LINES. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AND THE DESIGN ENGINEER IMMEDIATELY.
3. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY FACILITIES AS A RESULT OF HIS ACTIONS. THE CONTRACTOR SHALL MAKE ALL THE REQUIRED REPAIRS IMMEDIATELY TO THE SATISFACTION OF COLORADO SPRINGS UTILITIES.
4. ALL FIELD STAKING SHALL COMPLY WITH THE *WATER/WASTEWATER LESS.*
5. CORROSION PROTECTION MEASURES SHALL COMPLY WITH THE *WATER/WASTEWATER LESS.*
6. FINAL LOCATION OF ALL WASTEWATER AND WATER SERVICES SHALL BE APPROVED IN THE FIELD BY THE COLORADO SPRINGS UTILITIES INSPECTOR.
7. ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE *CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS MANUAL AND SECTION 5.18 OF THE WATER LESS.*

WASTEWATER:

1. SERVICE STUBS SHALL BE INSTALLED A MINIMUM OF SEVEN FEET (7') INTO THE PROPERTY, UNLESS OTHERWISE SHOWN, AND THE END OF THE STUB SHALL BE MARKED WITH A 2'X4'X12' STEEL OR WOODEN POST.
2. SERVICES SHALL BE CONNECTED A MINIMUM OF FIVE FEET (5') FROM THE OUTSIDE EDGE OF ANY MANHOLE ON THE MAIN LINE AND SHALL MAINTAIN TWO FEET (2') OF SEPARATION BETWEEN TAPS CENTER TO CENTER.
3. ALL CLEANOUTS SHALL BE THE SAME SIZE AS THE SERVICE LINE.
4. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT WHEN ANY SEPTIC TANK IS TO BE ABANDONED AND PAY ALL FEES NECESSARY TO OBTAIN A PERMIT.

WATER:

1. SERVICE STUBS SHALL BE INSTALLED WITH THE CURB STOP AT OR NEAR PROPERTY LINE AND SHALL NOT BE INSTALLED WITHIN DRIVEWAYS OR SIDEWALKS (SEE DETAIL DRAWING B2-3).
2. SERVICE TAPS SHALL BE MADE A MINIMUM OF THREE FEET (3') FROM THE BELL OR APPURTENANCE ON THE WATER MAIN. TAPS SHALL BE A MINIMUM OF THREE FEET (3') APART ON THE SAME SIDE OF THE WATER MAIN AND A MINIMUM OF ONE-AND-A-HALF FEET (1.5') WHEN TAPS ARE MADE ON OPPOSITE SIDES OF THE WATER MAIN.
3. ALL SERVICES FOR COMMERCIAL USE AND SOME RESIDENTIAL USES REQUIRE INSTALLATION OF A BACKFLOW PREVENTION ASSEMBLY IMMEDIATELY AFTER THE METER. THE BACKFLOW PREVENTION ASSEMBLY SHALL BE APPROVED BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH OF THE UNIVERSITY OF SOUTHERN CALIFORNIA (USC-FCCCHR) AND INSTALLED IN ACCORDANCE WITH THIS LISTING. PLEASE REFERENCE THE WATER LINE EXTENSION STANDARDS FOR ADDITIONAL REQUIREMENTS.
4. ALL TAPS ON COLORADO SPRINGS UTILITIES WATER MAINS SHALL BE PERFORMED BY COLORADO SPRINGS UTILITIES. ALL OTHER TAPS SHALL BE PERFORMED BY THE CONTRACTOR.
5. ANY ABANDONED SERVICES MUST BE PHYSICALLY DISCONNECTED AT THE MAIN. ANY NECESSARY REPAIRS TO THE MAIN AND/OR SHUT DOWN OF THE TAPPING VALVE SHALL BE AS DIRECTED BY COLORADO SPRINGS UTILITIES.
6. ALL WATER SERVICE LINES SHOULD ENTER THE BUILDING WITHIN 3 FEET OF AN EXTERIOR WALL. EXPOSED WATER PLUMBING SHALL BE MINIMIZED INSIDE THE BUILDING PRIOR TO THE WATER METER AND/OR APPROVED BACKFLOW PREVENTION ASSEMBLY OR METHOD.
7. ALL HDPE WATER SERVICE LINES MUST EXTEND A MINIMUM OF 6 INCHES ABOVE THE FLOOR AND BE 90 DEGREES FROM THE FLOOR PLAN TO ALLOW FOR BRACING AND TRANSITION TO THE METER LOOP ASSEMBLY.



VICINITY MAP
SCALE 1" = 1000'

Sheet List Table	
SHEET NUMBER	SHEET TITLE
U1	COVER SHEET
U2	GENERAL NOTES
U3	KEY MAP
U4	UTILITY SERVICE PLAN
U5	UTILITY SERVICE PLAN
U6	UTILITY SERVICE PLAN

FIMS MAP NUMBER: O-22
TAX SCHEDULE NO.: 5307300003
PRESSURE ZONE: BRIARGATE
MAX STATIC PRESSURE: 119 PSI
UTILITY DESIGN CAD FILE NO.: CF20233275
UAP FILE NO:
DEVELOPMENT PLAN NO.: DEPN-22-0046
APPROVAL DATE: 5/22/2023
PLAT REC. NO.: (IN PROGRESS)
PUBLIC UTILITY EASEMENT REC. NO:
NOTICE OF PRIVATE WASTEWATER SYSTEM REC. NO.:
NOTICE OF PRIVATE WATER SYSTEM REC. NO.: (REPLAT IN PROGRESS)

COLORADO SPRINGS UTILITIES
COMMERCIAL UTILITY SERVICE DESIGN APPROVAL

PROJECT NUMBER: 2023-C061
WORK ORDER: 3993272
CSU SHEET 1 OF 3

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

LEGAL DESCRIPTION

A TRACT LOCATED IN THE SE1/4NW1/4 SECTION 15, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH P.M., AKA MOST OF LOT 2, F & K SUBDIVISION, MORE OR LESS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 15;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION 15, A DISTANCE OF 785.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY RIGHT OF WAY LINE OF A COUNTY ROAD;
THENCE ON AN ANGLE TO THE RIGHT OF 85°58'00" AND ALONG SAID EASTERLY RIGHT OF WAY LINE A DISTANCE OF 1,643.58 FEET;

THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 799.22 FEET TO A POINT, SAID POINT BEING 358.5 FEET WEST OF THE WESTERLY RIGHT OF WAY LINE OF COLORADO STATE HIGHWAY 83, AND 358.5 FEET BEING MEASURED AT RIGHT ANGLES THERETO;

THENCE ON AN ANGLE TO THE RIGHT OF 87°15'03" AND ALONG A LINE PARALLEL TO SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 256.13 FEET TO THE TRUE POINT OF BEGINNING;
THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 358.50 FEET TO A POINT ON SAID WESTERLY RIGHT OF WAY LINE;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG SAID RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" A DISTANCE OF 358.50 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG A LINE PARALLEL TO THE SAID WESTERLY RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET TO THE TRUE POINT OF BEGINNING;

COUNTY OF EL PASO, STATE OF COLORADO

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE CITY OF COLORADO SPRINGS AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

HOWARD EHRSAM P.E. DATE

OWNER/DEVELOPER PLAN APPROVAL

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THEY SHALL, AT THEIR EXPENSE, BE SOLELY RESPONSIBLE FOR 1) THE INSTALLATION OF THE PROPOSED UTILITY INFRASTRUCTURE IN ACCORDANCE WITH THESE PLANS, AND 2) ALL DAMAGES AND DEFECTS ARISING FROM, OR RELATED TO, THE INSTALLATION, MAINTENANCE OR OPERATION OF THE PUBLIC UTILITY INFRASTRUCTURE FROM THE DATE OF PRELIMINARY ACCEPTANCE FOR A PERIOD OF TWO YEARS, OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LATER.

THE UNDERSIGNED UNDERSTANDS THAT ALL PRIVATE UTILITY INFRASTRUCTURE, AS INDICATED ON THESE PLANS, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER, AS REQUIRED BY *COLORADO SPRINGS UTILITIES' LINE EXTENSION AND SERVICE STANDARDS.*

☐ PUBLIC WATER MAIN PROPOSED ☐ PUBLIC WASTEWATER MAIN PROPOSED ☒ PRIVATE WATER SERVICE LINE (<4") AND/OR PRIVATE WASTEWATER SERVICE LINE (<8")
☐ PRIVATE WATER MAIN PROPOSED ☐ PRIVATE WASTEWATER MAIN PROPOSED

SIGNED: _____ DATE: 10/11/2024
OWNER/DEVELOPER
NOLAN MORRISON
OWNER/DEVELOPER (PRINT NAME)
DBA: AMERICAN FURNITURE WAREHOUSE CO
ADDRESS: 8820 AMERICAN WAY, ENGLEWOOD, COLORADO 80112
PHONE: 303-489-3333
EMAIL: nmorrison@afw.net

BENCHMARK

FIMS BENCHMARK TG24. ELEVATION=6838.24 (NVGD 1929)

BID SET
10-11-24

Know what's **below.**
Call before you dig.

CURRENT OWNER

AMERICAN FURNITURE WAREHOUSE
8820 AMERICAN WAY
ENGLEWOOD, CO 80112
CONTACT: NOLAN MORRISON
PHONE: (303) 489-3333

ARCHITECT

BUTLER DESIGN GROUP, INC.
5017 EAST WASHINGTON STREET, SUITE 107
PHOENIX, AZ 85034
CONTACT: TOBY ROGERS
PHONE: (602) 218-4785

CIVIL ENGINEER

BOWMAN CONSULTING
1526 COLE BLVD, SUITE 100
LAKEWOOD, CO 80401
PHONE: (303) 801-2900
CONTACT: HOWARD EHRSAM P.E.
EMAIL: HEHRSAM@BOWMAN.COM
PHONE: (303) 801-2900

LANDSCAPE ARCHITECT

LASKIN & ASSOCIATES, INC.
67 WELDON AVENUE, SUITE 230
PHOENIX, AZ 85012
CONTACT: DANIEL DODSON
EMAIL: DANIEL@LASKINDESIGN.COM
PHONE: (602) 840-7771

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COLORADO

COVER SHEET

AFW - COLORADO SPRINGS
UTILITY SERVICE PLAN

CITY OF COLORADO SPRINGS

SEAL

NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: N/A V: N/A
JOB No. 050895-01-001
DATE : 03/31/2023
SHEET U1

AR PUD 21-00460

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
	LOT LINE	
	RIGHT OF WAY	
	CENTERLINE	
	FLOOD PLAIN	
	LIMITS OF CONSTRUCTION	
	LIMITS OF DISTURBANCE	
	SWALE / STREAM FLOWLINE	
	OVERFLOW RELIEF PATH	
X	FENCE LINE	X
	EASEMENT	
	EDGE OF PAVEMENT	
	VERTICAL CURB AND GUTTER	
	MOUNTABLE CURB AND GUTTER	
	CONCRETE SIDEWALK	
	ASPHALT SIDEWALK	
	HANDICAP PARKING	
	SIGHT TRIANGLE	
	SIGN(S)	
	PARKING COUNT INDICATOR	
255 VPD	VEHICLES PER DAY INDICATOR	255 VPD
TP	TEST PIT	TP
MW	MONITORING WELL	MW
350	MAJOR CONTOUR	350
350	MINOR CONTOUR	350
	GRADE BREAK	
	RIDGELINE	
52 22 FG / 5236 22 FG	SPOT ELEVATION	52 22 FG / 5236 22 FG
	RIP RAP	
W	WATER LINE	W
M	WATER METER	M
	WATER VALVE	
	WATER REDUCER	
	WATER FITTINGS	
	FIRE HYDRANT	
SS	SANITARY LINE	SS
	SANITARY MANHOLE	
	SANITARY CLEANOUT	
	STORM SEWER PIPE	
	STORM SEWER MANHOLE	
	STORM SEWER INLET	
	STORM SEWER FLARED END SECTION	
	STORM SEWER HEADWALL	
OU	OVERHEAD UTILITY	OU
E	UNDERGROUND ELECTRIC	E
OHE	OVERHEAD ELECTRIC	OHE
	UTILITY POLE	
	STREET LIGHT	
CATV	CABLE TV SERVICE	CATV
T	TELECOM SERVICE	T
FO	FIBER OPTIC SERVICE	FO
G	NATURAL GAS SERVICE	G
	TREE	
	TREE LINE	
	WETLANDS	

LEGEND NOTES

1. THIS IS A STANDARD SHEET, THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PROJECT.
2. ADDITIONAL LEGENDS AND NOTES MAY BE FOUND ON OTHER SHEETS ASSOCIATED WITH THIS PLAN. THESE LEGENDS AND NOTES ARE TO BE REFERENCED IN ADDITION TO THIS STANDARD SHEET.

CONSTRUCTION STATEMENT:

WORK SHALL BE CONSTRUCTED TO CITY OF COLORADO SPRINGS STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE TO THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

ABBREVIATIONS

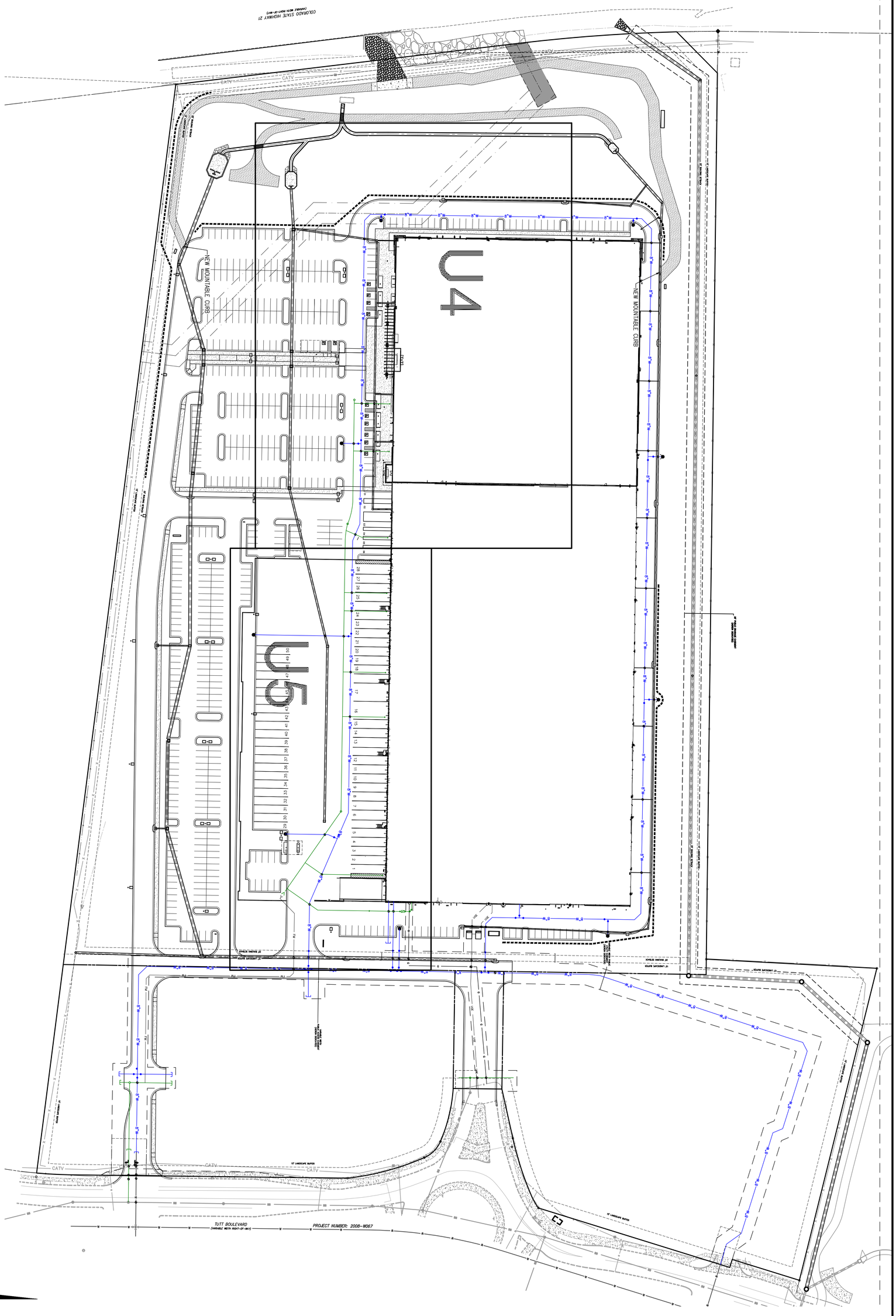
A	AREA OF ARC	K	SIGHT DISTANCE COEFFICIENT OR
AASHTO	AMERICAN ASSOCIATION OF STATE HWY & TRANS. OFFICIALS	Ke	RATE OF VERTICAL CURVATURE CULVERT ENTRANCE LOSS COEFFICIENT
AB	AS-BUILT		
AC	ACRE	L	LENGTH
AD	ALGEBRAIC DIFFERENCE IN GRADE	LAT	LATERAL
AE	ACCESS EASEMENT	LCG	LIMITS OF CLEARING & GRADING
ADJ	ADJACENT	LF	LINEAR FEET
AGGR	AGGREGATE	LIP	LIP OF PAN
AHD	AHEAD	LL	LOWER LEVEL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	LOS	LINE OF SIGHT
APT	ANGLE POINT APPROXIMATE	LP	LOW POINT
APPROX	ARCHITECTURAL	LS	LOADING SPACE
ARCH	ASPHALT	LT	LEFT
ASPH	AMERICAN SOCIETY FOR TESTING AND MATERIALS	M	MONUMENT FOUND
ASTM	AMERICAN WATER WORKS ASSOCIATION	MAX	MAXIMUM
		ME	MATCH EXISTING
AWWA	BREADTH	MECH	MECHANICAL
	BACK OF CURB	MH	MANHOLE
B	BASEMENT FLOOR	MI	MILE
BOC	BUILDING	MIN	MINIMUM
BF	BENCHMARK	MISC	MISCELLANEOUS
BLDG	BEST MANAGEMENT PRACTICES	MPH	MILES PER HOUR
BM	(WATER QUALITY)	MS	MEDIAN STRIP
BMP	BLOW OFF VALVE	MSL	MEAN SEA LEVEL
	BEARING		
BOV	BUILDING RESTRICTION LINE	N	NORTHING/NORTH
BRG	BEGINNING VERTICAL CURVE ELEVATION	N/A	NOT APPLICABLE
BRL	BEGINNING VERTICAL CURVE STATION	NBL	NORTH BOUND LANE
BVCE	BOTTOM OF WALL	N/F	NOW OR FORMERLY
BVCS		NFA	NET FLOOR AREA
BW	CENTER CORRECTION ON VERTICAL CURVE	NO. & #	NUMBER
	RUNOFF COEFFICIENT	NTS	NOT TO SCALE
c.e	CABLE TELEMISION		
C	CURB AND GUTTER	OC	ON CENTER
CATV	CATCH BASIN	OBJ	OBJECT
C&G	CALIFORNIA BEARING RATIO	OD	OUTSIDE DIAMETER
CB	CENTER TO CENTER	OH	OVERHANG
CBR	COLORADO DEPT. OF TRANSPORTATION	O/H	OVERHEAD
CC	CUBIC FEET	OHC	OVERHEAD CABLE
CDOT	CUBIC FEET PER SECOND	OHE	OVERHEAD ELECTRIC
CF	CURB AND GUTTER (REVERSE SLOPE)	OHT	OVERHEAD TELEPHONE
CFS	CHORD		
CG(R)	CHORD BEARING	P	PERIMETER
CH	CAST IRON PIPE	PL	PROPERTY LINE
CHBRG	CENTERLINE	P&P	PLAN AND PROFILE
CIP	CLEAR	PC	POINT OF CURVATURE
CL	CUBIC METERS	PCC	POINT OF COMPOUND CURVATURE
CLR	CORRUGATED METAL PIPE	PCR	POINT OF CURB RETURN
CM	CUBIC METERS PER SECOND	PCEP	POINT OF CURVE EDGE OF PAVEMENT
CMP	RUNOFF CURVE NUMBER	PCTC	POINT OF CURVATURE TOP OF CURB
CMS	CONTINUOUS	PI	POINT OF INTERSECTION
CN	CLEAN OUT	PG	PAGE
CONT	CONCRETE	PGL	POINT OF GRADE LINE
CO	CURB STOP	PRC	POINT OF REVERSE CURVATURE
CONC	COURT	PRELIM	PRELIMINARY
CS	CENTER	PROP	PROPOSED
CT	CONTROL LINE	PT	POINT OF TANGENCY
CTR	CUBIC YARD	PUE	PUBLIC UTILITY EASEMENT
CTRL		PVC	POLYVINYL CHLORIDE PIPE OR
CY	DEPTH		POINT OF VERTICAL CURVATURE
	DRAINAGE AREA	PVI	POINT OF VERTICAL INTERSECTION
D	DEED BOOK	PVT	POINT OF VERTICAL TANGENCY
DA	DETAIL	PVMT	PAVEMENT
DB	DIAMETER	PVRC	POINT OF VERTICAL REVERSE CURVE
DET	DUCTILE IRON PIPE		
DIA	DROP INLET	Q (cfs)	AMOUNT OF RUNOFF (FLOW RATE)
DIP	DISTANCE		
DI	DOMESTIC LINE	R	RADIUS
DIST	DROP MANHOLE	RCP	REINFORCED CONCRETE PIPE
DL	DOMESTIC	RDCR	REDUCER
DM	DRIVE DRAIN	RD	ROAD OR ROOF DRAIN
DOM	DRAINAGE	REINF	REINFORCED
DR	DRAINAGE AREA	REQD	REQUIRED
DRN	DOWN SPOUT	RET	RETAINING
DRNG	DWELLING UNITS	REV	REVISION
DS	DRAWING	RGP	ROUGH GRADING PLAN
DU	DRIVEWAY	RMA	RESOURCE MANAGEMENT AREA
DWG	DELTA	ROM	REMOTE OUTSIDE MONITOR
D/W		RPA	RESOURCE PROTECTION AREA
	EASTING/EAST	RR	RAILROAD
	EACH	RT	RIGHT
E	EAST BOUND LANE	RTE	ROUTE
EA	EROSION CONTROL	R/W & ROW	RIGHT OF WAY
EBL	EDGE OF GUTTER		
EC	ENERGY GRADIENT LINE	S	SPEED OR SLOPE
EG	ELEVATION	SAN	SANITARY SEWER
EGL	ELECTRIC	SANMH	SANITARY SEWER MANHOLE
EL	ELEVATION	SBL	SOUTH BOUND LANE
ELEC	ENGINEER	SCH	SCHEDULE
ELEV	ENTRANCE	SD	SIGHT DISTANCE
ENGR	EDGE OF ASPHALT	SEC	SECTION
ENT	EDGE OF CONCRETE	SEW	SEWER
EOA	EDGE OF PAVEMENT	SF	SQUARE FEET
EOC	EQUIPMENT	SH	SHOULDER
EOP	EASEMENT	SP	SPACE OR SITE PLAN
EQUIP	EXISTING TO BE DEMOUSHED	SPEC	SPECIFICATIONS
ESMT	EXISTING TO REMAIN	STA	STATION
ETD	EXISTING TO BE RELOCATED	STD	STANDARD
ETR	EXISTING TO BE REPLACED	STK	STACK
ETRL	ENDING VERTICAL CURVE ELEVATION	STM	STORM SEWER
ETRP	ENDING VERTICAL CURVE STATION	STMMH	STORM SEWER MANHOLE
EVCE	END WALL	STR	STRUCTURE
EVCS	EXISTING	SVC	SERVICE
EW	ENVIRONMENTAL QUALITY CORRIDOR	S/W	SIDEWALK
EX		SWM	STORM WATER MANAGEMENT
EQC	FIRE LINE	Sx	CROSS SLOPE
	FLOOR AREA RATIO	SY	SQUARE YARD
F	FACE OF CURB		
FAR	FLOOR DRAIN	T	TANGENT
FOC	FLARED END SECTION	TB	TOP OF BANK OR TEST BORING
FD	FIRST FLOOR OR FINISH FLOOR	TBR	TO BE REMOVED
FES	FINISH GRADE	TOC	TOP OF CURB
FF	FIRE HYDRANT	Tc	TIME OF CONCENTRATION
FG	FLOW LINE	TEL	TELEPHONE
FH	FOUNDATION	TEMP	TEMPORARY
FL	FOYER	TH	TEST HOLE
FND	FLOOD PLAIN	TOF	TOP OF FOUNDATION
FOY	FEET PER SECOND	TOP	TOP OF PIPE
FP	FIRE SERVICE OR FACTOR OF SAFETY	TP	TEST PIT OR TREE PROTECTION
FPS	FOOT OR FEET	TW	TOP OF WALL OR TAILWATER
FS		TYP	TYPICAL
FT	GAS		
	GARAGE	UE	UTILITY EASEMENT
G	GRADE BREAK	UG	UNDERGROUND
GAR	GROSS FLOOR AREA	UGE	UNDERGROUND ELECTRIC
GB	GUARD RAIL OR GRATE INLET	UGT	UNDERGROUND TELEPHONE
GFA	GATE VALVE	UGC	UNDERGROUND CABLE
GR		UD	UNDERDRAIN
GV	HEAD	UL	UPPER LEVEL
	HANDICAP	UP	UTILITY POLE
H	HORIZONTAL BEND	USGS	US GEOLOGICAL SURVEY
HC	HOT BITUMINOUS PAVEMENT	UTIL	UTILITY
HB	HYDRAULIC GRADE LINE		
HBP	HORIZONTAL	V OR VOL	VOLUME
HGL	HIGH POINT	V OR VEL	VELOCITY
HORZ	HAND RAIL	VAN	HANDICAPPED VAN PARKING SPACE
HP	HEIGHT	VB	VERTICAL BEND
HR	HEADWATER	VC	VERTICAL CURVE
HT		VF	VERTICAL FOOT
HW	RAINFALL INTENSITY		
	INSIDE DIAMETER OR IDENTIFICATION	W	WEIGHT OR WIDTH
I	INVERT ELEVATION	WBL	WEST BOUND LANE
ID	INCH	WL	WATER LINE
IE	INVERT	WM	WATER METER
IN	IRON PIPE	W/M OR WM	WATER MAIN
INV	IRON PIPE FOUND	W/TB	WITH THRUST BLOCK
IP	IRON PIPE SET	WSEL	WATER SURFACE ELEVATION
IPF	IRRIGATION	WV	WATER VALVE
IPS			
IRR	JUNCTION BOX	XING	CROSSING
	JOINT	XF	TRANSFORMER
JB			
JNT		YI	YARD INLET
		YR	YEAR

GENERAL NOTES

1. UTILITY CONFLICTS: ALL EXISTING UTILITIES SHOWN WERE COMPILED USING THE BEST AVAILABLE INFORMATION AND FIELD OBSERVATION. BOWMAN CONSULTING INC. DOES NOT GUARANTEE THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON. CONTRACTOR TO BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION OF AND PROTECTING ALL EXISTING UTILITIES, INCLUDING THOSE NOT SHOWN OR SHOWN INCORRECTLY ON THE PLANS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IN A TIMELY FASHION TO THE SATISFACTION OF THE APPROPRIATE GOVERNING AGENCY AND THE OWNER OF THE IMPACTED UTILITY AT THE CONTRACTOR'S EXPENSE.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS FOR THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT THE JOB SITE AT ALL TIMES THE APPROPRIATE GOVERNING AGENCY'S PUBLIC WORKS MANUAL, ALL APPROVED EASEMENT AGREEMENTS, AND ONE (1) SIGNED COPY OF THE PLANS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY FOR ANY VARIANCE TO THE ABOVE DOCUMENTS.
3. CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE CODES, LICENSES, STANDARDS, SPECIFICATIONS, PERMITS, BONDS, ETC., WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
4. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND MUST COMPLY WITH OSHA REGULATIONS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER AND ENGINEER OF ANY PROBLEM CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
6. THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY HIS/HER CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAY AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
8. THE CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION. THE APPROPRIATE FIRE DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSURES AND IN THE EVENT THAT ANY FIRE HYDRANTS ARE TO BE TEMPORARILY REMOVED FROM SERVICE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING AT LEAST 48 HOURS ADVANCED NOTICE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING WATER SYSTEM AND FOR OBSERVATIONS AND/OR INSPECTIONS REQUIRED.
9. THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS OR OTHER DEVICES NECESSARY FOR SAFE TRAFFIC CONTROL IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AS MODIFIED BY THE COLORADO SUPPLEMENT TO THE MUTCD. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE APPROPRIATE GOVERNING AGENCY PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT FOR WORK WITHIN THE RIGHT-OF-WAY.
10. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ANY AFFECTED UTILITY COMPANY.
11. THE CONTRACTOR SHALL OBTAIN COPIES OF THE "SOILS AND INVESTIGATION" REPORT FROM GEOTECHNICAL ENGINEER ALONG WITH THE "PAVEMENT THICKNESS DESIGN REPORT". THE CONTRACTOR MUST HAVE COPIES OF SAME ON THE SITE AT ALL TIMES.
12. THE CONTRACTOR IS REQUIRED TO PROVIDE AS-CONSTRUCTED HORIZONTAL AND VERTICAL CONSTRUCTION INFORMATION, INCLUDING THE LOCATIONS OF ALL SANITARY LINES AND SERVICES, WATER LINES AND SERVICES, AND OTHER UTILITY LINES AND SERVICES TO THE ENGINEER FOR PREPARATION OF AS-BUILT DOCUMENTS.
13. LIMITS OF CONSTRUCTION EASEMENTS AND RIGHTS-OF-WAY SHALL BE DELINEATED WITH TEMPORARY STAKING BY THE CONTRACTOR. SAFETY FENCING SHALL BE PER APPROPRIATE GOVERNING AGENCY.
14. WHERE EXCAVATION IS REQUIRED UNDER EXISTING ASPHALT OR CONCRETE PAVEMENT, THE EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO EFFECT A SMOOTH, STRAIGHT-CUT EDGE. ASPHALT PATCH SHALL BE PER APPROPRIATE GOVERNING AGENCY STANDARDS.
15. REFER TO FINAL RECORDED PLAT FOR ACTUAL LOT, TRACT, PARCEL, AND EASEMENT LOCATIONS AND DESIGNATIONS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAYS AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
17. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY TO THE PROJECT WORK SITE (SEE THE EROSION CONTROL PLAN). THE CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY (IF APPLICABLE) TO COMPLETE THE CONSTRUCTION AND SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
18. WATER WILL BE PROVIDED BY THE CONTRACTOR TO KEEP WIND EROSION IN CHECK. USE OF WATER AS A DUST PREVENTATIVE SHALL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF THE WORK.
19. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE PROPERTY LIMITS DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR.
20. ANY CONSTRUCTION DEBRIS OR MUD TRACKING IN THE PUBLIC RIGHT-OF-WAY RESULTING FROM THIS DEVELOPMENT SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY THE DEVELOPMENT AND SHALL PROPERLY BARRICADE THE SITE UNTIL CLEAN UP OR REPAIR IS COMPLETE.
21. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO GRADE STREET CORES, RIGHT-OF-WAY TEMPLATES, AND LOTS ACCORDING TO GRADING INSTRUCTIONS SHOWN ON PLANS.
22. STREET CONTOURS SHOWN AT PROPOSED STREET LOCATIONS REPRESENT FINISHED GRADE ELEVATION TO TOP OF ASPHALT.
23. COMPACTION FILL MATERIAL SHALL BE COMPACTED ACCORDING TO THE APPROPRIATE GOVERNING AGENCY REGULATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
24. TOLERANCE ROUGH GRADING: TOLERANCE SHALL BE +/- 0.1 FEET.
25. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE ALL APPROPRIATE PERMITS FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAVE BEEN OBTAINED PRIOR TO GRADING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL TEMPORARY WATER DIVERSION/CONTROL DEVICES AND EROSION CONTROL DEVICES NECESSARY TO PROTECT ADJACENT PROPERTIES, WATERWAYS AND PUBLIC RIGHT-OF-WAY. CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF SAID DEVICES THROUGHOUT CONSTRUCTION AND UNTIL THE PERMANENT PROTECTION NECESSARY HAS BEEN COMPLETED.
26. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE MOST CURRENT APPROVED ARCHITECTURAL/ MECHANICAL/ELECTRICAL/PLUMBING/STRUCTURAL PLANS AND COORDINATE SAME WITH THE SITE PLAN, PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
27. WHEN DURING THE COURSE OF CONSTRUCTION, ANY OBJECT OF AN UNUSUAL NATURE IS ENCOUNTERED, THE CONTRACTOR SHALL CEASE WORK IN THAT AREA AND IMMEDIATELY NOTIFY THE OWNER, APPROPRIATE GOVERNING AGENCY, AND/OR THE ARCHITECT/ENGINEER.
28. THE EXISTING UNDERGROUND UTILITIES SHOW HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN IN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.
29. ALL STEPS WITH THREE OR MORE RISERS SHALL HAVE HAND RAILS, PER LOCAL CODE.
30. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF EXISTING ROAD TO PROPOSED CURB AND GUTTER AND/OR PROPOSED EDGE OF PAVEMENT TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY. REMOVE AND RECONSTRUCT EXISTING PAVEMENT AND/OR CURB AS DICTATED BY FIELD CONDITIONS TO PROVIDE POSITIVE DRAINAGE AT TIE-IN-POINTS.
31. OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1 1/2 INCH DEPTH; ANY COST ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE CONTRACTOR.
32. ALL RIGHT-OF-WAY DEDICATED FOR PUBLIC USE SHALL BE CLEAR AND UNENCUMBERED.
33. AN AIR QUALITY PERMIT SHALL BE OBTAINED IF REQUIRED.
34. ANY LIGHTING SHOWN HEREON IS AS SPECIFIED BY THE CLIENT AND IS INCLUDED FOR INFORMATION PURPOSES ONLY, AS DIRECTED BY THE OWNER AND/OR PUBLIC AGENCY REQUIREMENTS. BOWMAN CONSULTING GROUP, LTD. HAS NOT PERFORMED THE LIGHTING DESIGN, AND THEREFORE DOES NOT WARRANT AND IS NOT RESPONSIBLE FOR THE DEGREE AND/OR ADEQUACY OF ILLUMINATION ON THIS PROJECT.
35. THE CONTRACTOR WILL BE REQUIRED TO NOTIFY ALL RESIDENCES WITHIN VICINITY OF THE PROPERTY BOUNDARY TEN (10) DAYS PRIOR TO ANY BLASTING IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY REQUIREMENTS.
36. NO BLASTING SHALL BE PERMITTED WITHIN 25' OF EXISTING UTILITY LINES OR STRUCTURES. BLASTING TO BE EXTENDED 25' BEYOND PROPOSED STRUCTURES IF CONDITIONS WARRANT FUTURE EXTENSIONS.
37. ALL RETAINING WALLS 2' IN HEIGHT AND OVER REQUIRE A SEPARATE BUILDING PERMIT.
38. THE APPROVAL OF THIS PLAN DOES NOT CONSTITUTE THE APPROVAL OF FUTURE WORK.
39. ALL HANDICAPPED SPACES SHALL HAVE AN ABOVE GRADE IDENTIFICATION SIGN MEETING APPROPRIATE GOVERNING AGENCY STANDARDS.
40. WHERE A PROPOSED PIPE CROSSES OR PARALLELS A STREET OR DRIVE AISLE, THE ASPHALT SHALL BE NEATLY SAWCUT TO FULL DEPTH. AFTER INSTALLATION OF THE PIPE, THE ROADWAY SHALL BE PATCHED IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY STANDARDS.

GENERAL NOTES (CONT.)

41. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, CONDITIONS, AND CONFIRMATION AND CONDITION OF EXISTING GROUND SURFACE AND THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING EXECUTION OF THE WORK. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUANTITY AND QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED. ANY INACCURACIES OR DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS MUST BE BOUGHT TO THE OWNER'S ATTENTION IN ORDER TO CLARIFY THE EXACT NATURE OF THE WORK TO BE PERFORMED PRIOR TO THE COMMENCEMENT OF ANY WORK.
42. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING ROADS AND UTILITIES WHICH OCCURS AS A RESULT OF THE PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY.
43. ALL STREET CUT AND PATCH WORK IN PUBLIC RIGHT-OF-WAY REQUIRED FOR UTILITIES INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CITY, COUNTY, AND/OR APPROPRIATE GOVERNING AGENCY STANDARDS AND SPECIFICATIONS.
44. THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION FOR THE CONTRACTOR TO TRESPASS ON OFF-SITE PROPERTIES.
45. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
46. THESE PLANS MAKE NO REPRESENTATION AS TO THE SUBSURFACE CONDITIONS AND THE PRESENCE OF SUBSURFACE WATER OR THE NEED FOR SUBSURFACE DRAINAGE FACILITIES.
47. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING ALL NECESSARY INSPECTIONS.
48. EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
49. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER.
50. THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
51. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF TEST HOLES PRIOR TO BEGINNING OF ANY CONSTRUCTION ON THE PROJECT. IF CONFLICTS ARE DISCOVERED AS A RESULT OF TEST HOLE FINDINGS, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY.
52. EXCAVATION SUPPORT SYSTEMS SHALL CONFORM TO THE PROVISIONS OF OSHA CONSTRUCTION STANDARD 29 CFR PART 1926 SUBPART P, OR CURRENT EDITION.
53. AT LOCATIONS WHERE THE FINAL SURFACE COURSE OF ASPHALT PAVEMENT IS TO BE FEATHERED INTO THE EXISTING SURFACE COURSE, THE EXISTING SURFACE COURSE IS TO BE SCABBLED TO A MINIMUM DEPTH OF 1" AND A TACK COAT APPLIED PRIOR TO FINAL PAVING TO INSURE A SMOOTH, WELL BONDED JOINT.
54. ANY NEW PAVEMENT OPENED TO TRAFFIC SHALL RECEIVE A TACK COAT PRIOR TO PLACEMENT OF ANY OVERLYING ASPHALT COURSE.
55. ALL SIDEWALKS TO BE 4" THICK CONCRETE UNLESS OTHERWISE SHOWN ON THE PLAN.
56. ALL DEMOLITION SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE APPROPRIATE GOVERNING AGENCY.
57. ALL APPLICABLE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING DEMOLITION.
58. ITEMS SHOWN TO BE RELOCATED SHALL BE CAREFULLY REMOVED AND STORED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY CAN BE PLACED IN THEIR NEW LOCATION. CONTRACTOR SHALL VERIFY THESE ITEMS WITH THE OWNER, PRIOR TO CONSTRUCTION.
59. CONTRACTOR SHALL COORDINATE REMOVAL OR RELOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD ELECTRICAL, TELEPHONE AND CABLE TV LINES AND REMOVAL OF UTILITY POLES, PEDESTALS AND TRANSFORMERS WITH UTILITY COMPANIES AND WITH DEVELOPER PRIOR TO DEMOLITION.
60. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENTS AND/OR RECONSTRUCTION OF ALL UTILITY COVER (MANHOLE FRAMES AND COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
61. THE CONTRACTOR MUST HAVE THE APPROVED CONSTRUCTION DRAWINGS IN POSSESSION PRIOR TO THE START OF CONSTRUCTION. AT LEAST ONE (1) COPY OF THE APPROVED PLANS, WITH REVISIONS, MUST BE KEPT ON-SITE AT ALL TIMES.
62. ALL HANDICAP RAMPS SHALL BE BUILT IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE APPROPRIATE GOVERNING AGENCY STANDARDS, CDOT STANDARDS, AND CURRENT ADA REQUIREMENTS.
63. THE STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES MUST BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY ARE NOT ONLY 100% COMPLETE, BUT ALSO THAT 100% OF THE DRAINAGE AREA TO EACH FACILITY IS PERMANENTLY STABILIZED. SEED AND MULCH DOES NOT CONSTITUTE STABILIZATION IN TERMS OF THE CONTRACTOR MAINTENANCE OF THE STORM DRAIN, STORMWATER MANAGEMENT, AND WATER QUALITY FACILITIES. ALL STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES SHALL BE TURNED OVER TO THE OWNER COMPLETELY CLEAN AND FREE FROM ANY CONSTRUCTION RELATED SEDIMENT OR DEBRIS.
64. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT ALL ADA ACCESSIBLE SIDEWALKS MAINTAIN SLOPES NOT TO EXCEED 5% LONGITUDINALLY AND 2% CROSS SLOPES. SLOPES AT ACCESSIBLE PARKING SPAC



KEY MAP

AFW - COLORADO SPRINGS
UTILITY SERVICE PLAN

CITY OF COLORADO SPRINGS COLORADO

NOT FOR CONSTRUCTION

SEAL

DESIGN	HE
DRAWN	VH
CHKD	HE

SCALE H: N/A V: N/A

JOB No. 050895-01-001

DATE : 03/31/2023

SHEET U3

AR PUD 21-00460

REVISIONS

REVISION	DESCRIPTION	DATE
A	1ST USP COMMENTS	10/30/23
B	2ND USP COMMENTS	04/12/24
C	3RD USP COMMENTS	04/30/24
D	4TH USP COMMENTS	05/01/24
E	5TH USP COMMENTS	10/11/24

Bowman

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Know what's below.
Call before you dig.

GRAPHIC SCALE
1" = 20'

NOTE

SIZES OF SANITARY LINES EXITING BUILDING TO BE 4" OR 6" ONLY. ANY REDUCERS NEEDED TO UPSIZE TO MEET 4" OR 6" LATERAL SIZE ARE TO BE INSIDE BUILDING FOOTPRINT. SITE CONTRACTOR TO VERIFY WITH PLUMBING CONTRACTOR TO ENSURE PROPER COORDINATION

PROVIDE TWO-WAY CLEANOUTS AT THE BUILDING.

SERVICE LINE CROSSING NOTE

CAUTION: SYMBOL DENOTES UTILITY CROSSING. CONTRACTOR TO MAINTAIN FOLLOWING VERTICAL CLEARANCES FOR CROSSINGS WITH WATER SERVICE LINES:
WASTEWATER: 1.5'
STORM SEWER: 1.5'
NATURAL GAS: 1'
ELECTRIC: 1'

REFER TO SANITARY AND STORM PROFILES FOR SPECIFIC SEPARATION DISTANCES.

COLORADO SPRINGS UTILITIES
COMMERCIAL UTILITY SERVICE DESIGN APPROVAL

PROJECT NUMBER: 2023-C061
WORK ORDER: 3993272
CSU SHEET 2 OF 3

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

SHOWROOM

FF=6855.28

30' EX. ESMT TO BE VACATED

TWO WAY CO#02
C/L STA=1+50.97 0.00R
RIM=6854.75
(Rim to Sump)=5.47'
INV=6851.28 S

4" SDR 35 @ 2.10%
L=30.98'
2.78' (MIN. CVR.)
3.27' (MAX CVR.)

FG=6853.98
STA=1+28.79
UTILITY CROSSING
TOP 18" STM= 6848.48
BOT 4" SAN= 6850.81
CLEAR= 2.3'

45 DEGREE VERTICAL BEND
INV=6850.63 N
INV=6850.63 S

4" SDR 35 @ 100.00%
L=4.42'
2.91' (MIN. CVR.)
7.28' (MAX CVR.)

45 DEGREE VERTICAL BEND
INV=6846.21 N
INV=6846.21 S

4" SDR 35 @ 2.27%
L=12.78'
7.28' (MIN. CVR.)
7.42' (MAX CVR.)

45 DEGREE VERTICAL BEND
INV=6845.92 N
INV=6845.92 S

4" SDR 35 @ 100.00%
L=2.40'
7.42' (MIN. CVR.)
9.79' (MAX CVR.)

8"x4" TAPPING SADDLE
INV=6843.52 N

FG=6853.78
STA=1+10.66
UTILITY CROSSING
BOT 8" W= 6848.03
TOP 4" SAN= 6846.43
CLEAR= 1.6'

8"X4" TAPPING SADDLE
INV=6844.71 W
INV=6844.71 E
INV=6845.05 N

TWO WAY CO #04
C/L STA=1+50.98 0.00
RIM=6854.76
(Rim to Sump)=3.48'
INV=6851.28 S

4" SDR 35 @ 2.10%
L=30.98'
2.79' (MIN. CVR.)
3.18' (MAX CVR.)

FG=6853.98
STA=1+28.64
UTILITY CROSSING
TOP 18" STM= 6849.17
BOT 4" SAN= 6850.85
CLEAR= 1.7'

45 DEGREE VERTICAL BEND
INV=6850.63 S
INV=6850.63 N

4" PVC (SDR-35) @ 100.00%
L=4.34'
2.91' (MIN. CVR.)
7.21' (MAX CVR.)

45 DEGREE VERTICAL BEND
INV=6846.29 S
INV=6846.29 N

FG=6853.79
STA=1+10.67
UTILITY CROSSING
BOT 8" W= 6848.03
TOP 4" SAN= 6846.51
CLEAR= 1.5'

4" PVC (SDR-35) @ 2.31%
L=14.74'
7.20' (MIN. CVR.)
7.40' (MAX CVR.)

45 DEGREE VERTICAL BEND
INV=6845.95 S
INV=6845.95 N

4" PVC (SDR-35) @ 100.00%
L=0.90'
7.40' (MIN. CVR.)
8.29' (MAX CVR.)

8"X4" TAPPING SADDLE
INV=6843.34 E
INV=6843.34 W
INV=6843.68 NE

4" SDR 35 @ 100.00%
L=2.34'
7.56' (MIN. CVR.)
9.88' (MAX CVR.)

TWO WAY CO#06
C/L STA=1+61.49 0.00
RIM=6854.66
(Rim to Sump)=9.38'
INV=6847.28 S

4" SDR 35 @ 2.10%
L=37.01'
7.01' (MIN. CVR.)
7.39' (MAX CVR.)

STA=1+24.47
PROPOSED 22.5° BEND

4" SDR 35 @ 2.17%
L=22.13'
7.39' (MIN. CVR.)
7.55' (MAX CVR.)

FG=6854.09
STA=1+14.33
UTILITY CROSSING
BOT 8" W= 6848.13
TOP 4" SAN=6846.62
CLEAR= 1.5'

45 DEGREE VERTICAL BEND
INV=6846.02 NE
INV=6846.02 SW

PROPOSED LIGHTING (TYP.).
REFER TO ELECTRICAL PLANS

MATCHLINE SEE SHEET U5 - STA 5+28.96

AR PUD 21-00460

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REVISIONS

REVISION	DESCRIPTION	DATE
A	1ST USP COMMENTS	10/30/23
B	2ND USP COMMENTS	04/12/24
C	3RD USP COMMENTS	04/30/24
D	4TH USP COMMENTS	05/01/24
E	5TH USP COMMENTS	10/11/24

UTILITY SERVICE PLAN

AFW - COLORADO SPRINGS
UTILITY SERVICE PLAN

CITY OF COLORADO SPRINGS

COLORADO

SEAL

NOT FOR CONSTRUCTION

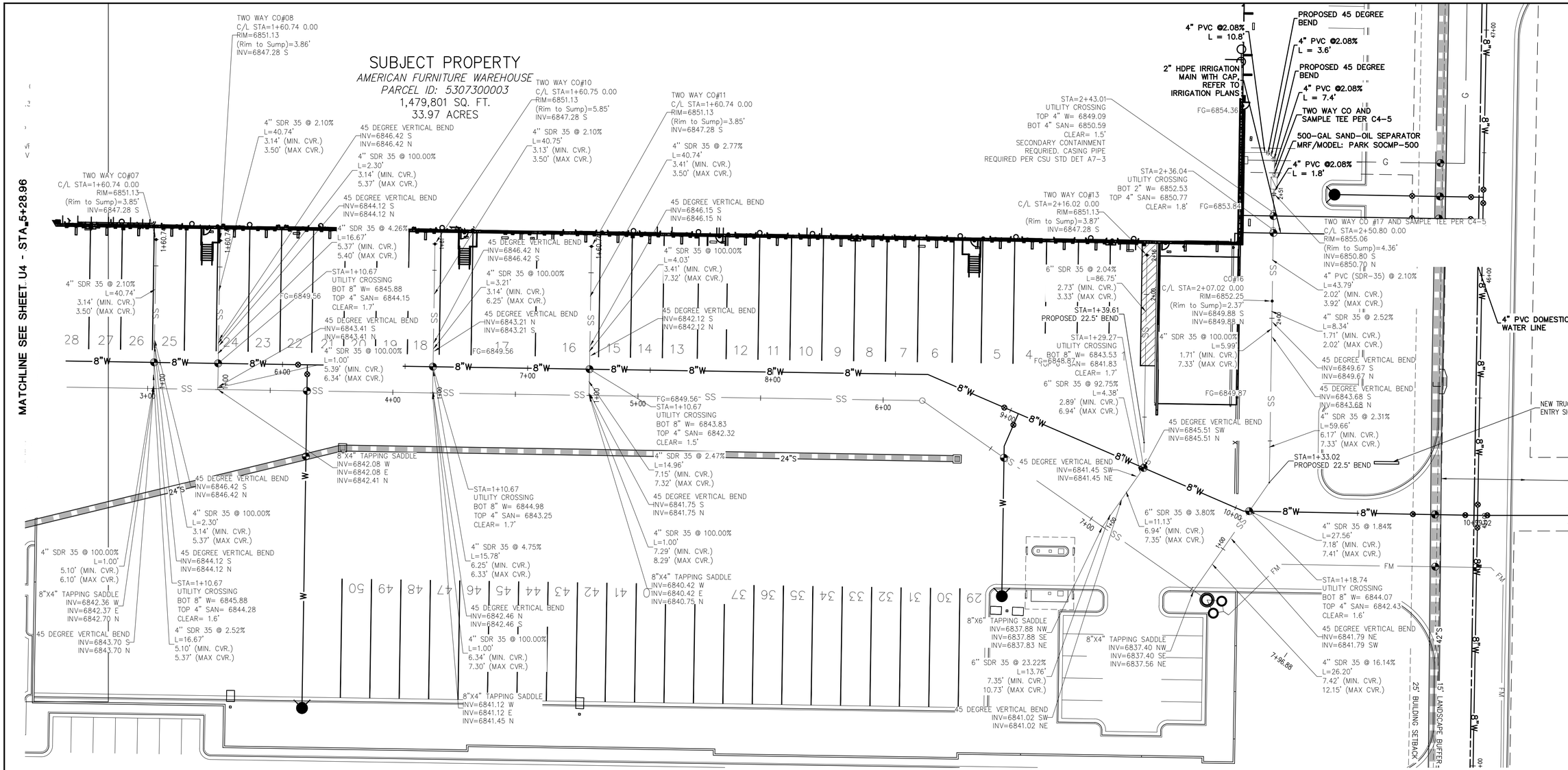
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: 1" = 20'
V: N/A

JOB No. 050895-01-001

DATE : 03/31/2023

SHEET
U4



COLORADO SPRINGS UTILITIES
COMMERCIAL UTILITY SERVICE DESIGN APPROVAL

PROJECT NUMBER: 2023-C061

WORK ORDER: 3993272

CSU SHEET 3 OF 3

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

NOTE

SIZES OF SANITARY LINES EXITING BUILDING TO BE 4" OR 6" ONLY. ANY REDUCERS NEEDED TO UPSIZE TO MEET 4" OR 6" LATERAL SIZE ARE TO BE INSIDE BUILDING FOOTPRINT. SITE CONTRACTOR TO VERIFY WITH PLUMBING CONTRACTOR TO ENSURE PROPER COORDINATION.

PROVIDE TWO-WAY CLEANOUTS AT THE BUILDING AND SINGLE WAY CLEANOUTS AT THE EASEMENT LINES.

SERVICE LINE CROSSING NOTE

CAUTION: SYMBOL DENOTES UTILITY CROSSING. CONTRACTOR TO MAINTAIN FOLLOWING VERTICAL CLEARANCES FOR CROSSINGS WITH WATER SERVICE LINES:
WASTEWATER: 1.5'
STORM SEWER: 1.5'
NATURAL GAS: 1'
ELECTRIC: 1'

REFER TO SANITARY AND STORM PROFILES FOR SPECIFIC SEPARATION DISTANCES.

811 Know what's **below.** **Call** before you dig.

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

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REVISIONS

REVISION	DESCRIPTION	DATE
A	1ST USP COMMENTS	10/30/23
B	2ND USP COMMENTS	04/12/24
C	3RD USP COMMENTS	04/30/24
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E	5TH USP COMMENTS	10/11/24

UTILITY SERVICE PLAN

AFW - COLORADO SPRINGS
UTILITY SERVICE PLAN

CITY OF COLORADO SPRINGS
COLORADO

SEAL
NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: 1" = 20'
V: N/A

JOB No. 050895-01-001

DATE : 03/31/2023

SHEET
U5

AR PUD 21-00460

FLOODPLAIN STATEMENT

THIS PROPERTY IS LOCATED WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN) AS ESTABLISHED BY FEMA FIRM PANEL 08041C0537G, EFFECTIVE DECEMBER 7, 2021, AND FEMA FIRM PANEL 08041C0536G, EFFECTIVE DECEMBER 7, 2021.

WATER PLANS
FOR
AFW - COLORADO SPRINGS

A PORTION OF A TRACT OF LAND RECORDED AT RECEPTION NO. 208068886 AND RECEPTION NO. 206028177
A PART OF THE WEST HALF OF SECTION 7, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH P.M.
CITY OF COLORADO SPRINGS, EL PASO COUNTY, COLORADO

Sheet List Table	
Sheet Number	Sheet Title
W1	COVER SHEET
W2	GENERAL NOTES
W3	KEY MAP
W4	WATER PLAN
W5	WATER PLAN
W6	WATER PLAN
W7	WATER MAIN EAST PLAN & PROFILE (1 OF 2)
W7.1	WATER MAIN EAST PLAN & PROFILE (2 OF 2)
W7.2	WATER MAIN WEST PLAN & PROFILE (1 OF 4)
W7.3	WATER MAIN WEST PLAN & PROFILE (2 OF 4)
W7.4	WATER MAIN WEST PLAN & PROFILE (3 OF 4)
W7.5	WATER MAIN WEST PLAN & PROFILE (4 OF 4)
W7.6	WATER SERV PLAN & PRO (1 OF 5)
W7.7	WATER SERV PLAN & PRO (2 OF 5)
W7.8	WATER SERV PLAN & PRO (3 OF 5)
W7.9	WATER SERV PLAN & PRO (4 OF 5)
W7.10	WATER SERV PLAN & PRO (5 OF 5)

WATER PLAN NOTES

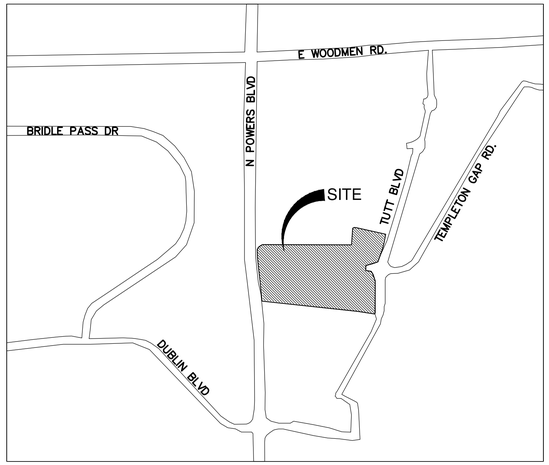
THE CONTRACTOR SHALL NOTIFY COLORADO SPRINGS UTILITIES' INSPECTIONS OFFICE 719-668-4658 A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

GENERAL:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET *COLORADO SPRINGS UTILITIES' WATER LINE EXTENSION AND SERVICE STANDARDS* (*WATER LESS*) 2023.
2. THE CONTRACTOR SHALL OBTAIN LOCATES PRIOR TO ANY EXCAVATION.
3. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF LOCATIONS OF EXISTING PIPELINES, HYDRANTS, VALVES AND SERVICE LINES. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE INSPECTOR AND THE ENGINEER OF RECORD IMMEDIATELY.
4. NO TREES OR STRUCTURES ARE PERMITTED WITHIN FIFTEEN FEET (15') OF A WATER MAIN.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY FACILITIES AS A RESULT OF HIS ACTIONS. THE CONTRACTOR SHALL MAKE ALL THE REQUIRED REPAIRS IMMEDIATELY TO THE SATISFACTION OF COLORADO SPRINGS UTILITIES.
6. ALL FIELD STAKING SHALL COMPLY WITH THE *WATER LESS*.
7. THE CONTRACTOR SHALL MAKE THEIR BEST EFFORT TO ENSURE THAT WATER SERVICE TO ADJACENT PROPERTIES IS MAINTAINED DURING CONSTRUCTION.
8. CORROSION PROTECTION MEASURES SHALL COMPLY WITH THE *WATER LESS*.
9. NO SERVICE TAPS WILL BE ALLOWED UNTIL THE MAIN IS EXTENDED TO THE NEXT MAIN-LINE VALVE.
10. NO SERVICE TAPS SHALL BE MADE UNTIL AUTHORIZATION HAS BEEN GRANTED BY THE COLORADO SPRINGS UTILITIES' INSPECTOR.
11. ALL BENDS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION AND THE STATIONING ON THE FIELD STAKES SHALL MATCH THE STATIONING ON THE PLANS.
12. FIELD MODIFICATIONS TO A FIRE SERVICE LINE OR FIRE HYDRANT DESIGN OR LOCATION MAY NEED TO BE APPROVED BY THE DESIGN ENGINEER, COLORADO SPRINGS FIRE DEPARTMENT AND COLORADO SPRINGS UTILITIES, AS REQUIRED BY THE INSPECTOR.
13. REUSE OR SALVAGE OF ANY MATERIAL IS LEFT TO THE DISCRETION OF THE COLORADO SPRINGS UTILITIES INSPECTOR.
14. ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE *CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS MANUAL*.
15. ALL WATER SERVICE LINES SHOULD ENTER THE BUILDING WITHIN 3 FEET OF AN EXTERIOR WALL. EXPOSED WATER PLUMBING SHALL BE MINIMIZED INSIDE THE BUILDING PRIOR TO THE WATER METER AND/OR APPROVED BACKFLOW PREVENTION ASSEMBLY OR METHOD.

WATER PROJECT - SPECIFIC NOTES

	APPLICABLE	NOT-APPLICABLE	
1.	☐	☒	ANY EXISTING STUBS AND APPURTENANCES THAT WILL NOT BE USED SHALL BE REMOVED AND REPLACED WITH AN ACCEPTABLE SECTION OF MAIN AT THE EXPENSE OF THE CONTRACTOR.
2.	☒	☐	A CONNECTION TO AN EXISTING STUB IS PROPOSED. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THE ACCURACY OF THE DEPTHS OR LOCATIONS OF EXISTING STUBS SHOWN ON ANY 'AS-BUILT' DRAWINGS.
3.	☒	☐	A WATER STUB-OUT(S) IS/ARE PROPOSED. COLORADO SPRINGS UTILITIES DOES NOT GUARANTEE THAT THE DESIGN OR INSTALLATION OF THE PROPOSED WATER STUB-OUT WILL MEET FUTURE DEVELOPMENT NEEDS.
4.	☐	☒	A WATER QUALITY PLAN HAS BEEN APPROVED FOR THIS PROJECT



VICINITY MAP
SCALE 1" = 1000'

LEGAL DESCRIPTION

A TRACT LOCATED IN THE SE1/4NW1/4 SECTION 15, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH P.M., AKA MOST OF LOT 2, F & K SUBDIVISION, MORE OR LESS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION 15;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION 15, A DISTANCE OF 785.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY RIGHT OF WAY LINE OF A COUNTY ROAD;
THENCE ON AN ANGLE TO THE RIGHT OF 85°58'00" AND ALONG SAID EASTERLY RIGHT OF WAY LINE A DISTANCE OF 1,643.58 FEET;

THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 799.22 FEET TO A POINT, SAID POINT BEING 358.5 FEET WEST OF THE WESTERLY RIGHT OF WAY LINE OF COLORADO STATE HIGHWAY 83, AND 358.5 FEET BEING MEASURED AT RIGHT ANGLES THERETO;

THENCE ON AN ANGLE TO THE RIGHT OF 87°15'03" AND ALONG A LINE PARALLEL TO SAID WESTERLY RIGHT OF WAY LINE, A DISTANCE OF 256.13 FEET TO THE TRUE POINT OF BEGINNING;
THENCE ON AN ANGLE TO THE LEFT OF 90°00'00", A DISTANCE OF 358.50 FEET TO A POINT ON SAID WESTERLY RIGHT OF WAY LINE;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG SAID RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" A DISTANCE OF 358.50 FEET;

THENCE ON AN ANGLE TO THE RIGHT OF 90°00'00" AND ALONG A LINE PARALLEL TO THE SAID WESTERLY RIGHT OF WAY LINE A DISTANCE OF 135.66 FEET TO THE TRUE POINT OF BEGINNING;

COUNTY OF EL PASO, STATE OF COLORADO

CURRENT OWNER
AMERICAN FURNITURE WAREHOUSE
8820 AMERICAN WAY
ENGLEWOOD, CO 80112
CONTACT: NOLAN MORRISON
PHONE: (303) 489-3333

ARCHITECT
BUTLER DESIGN GROUP, INC.
5017 EAST WASHINGTON STREET, SUITE 107
PHOENIX, AZ 85034
CONTACT: TOBY ROGERS
PHONE: (602) 218-4785

CIVIL ENGINEER
BOWMAN CONSULTING
1526 COLE BLVD, SUITE 100
LAKEWOOD, CO 80401
PHONE: (303) 801-2900
CONTACT: HOWARD EHRSAM P.E.
EMAIL: HEHRSAM@BOWMAN.COM
PHONE: (303) 801-2900

LANDSCAPE ARCHITECT
LASKIN & ASSOCIATES, INC.
67 WELDON AVENUE, SUITE 230
PHOENIX, AZ 85012
CONTACT: DANIEL DODSON
EMAIL: DANIEL@LASKINDESIGN.COM
PHONE: (602) 840-7771

FIMS MAP NUMBER: O-22
TAX SCHEDULE NO.: 5307300003
PRESSURE ZONE: BRIARGATE
MAX STATIC PRESSURE: 127 PSI
UTILITY DESIGN CAD FILE NO.: CF20233275
UAP FILE NO:
DEVELOPMENT PLAN NO.: DEPN-22-0046
APPROVAL DATE: 5/22/2023
PLAT REC. NO.: (IN PROGRESS)
PUBLIC UTILITY EASEMENT REC. NO:
NOTICE OF PRIVATE WASTEWATER SYSTEM REC. NO.:
NOTICE OF PRIVATE WATER SYSTEM REC. NO.: (REPLAT IN PROGRESS)

FIRE FLOW

ACCORDING TO CALCULATIONS REVIEWED BY COLORADO SPRINGS UTILITIES, THE THEORETICAL AVAILABLE FIRE FLOW AT EACH FIRE HYDRANT NODE UNDER MAXIMUM DAY DEMAND CONDITIONS WITH A 20 PSI RESIDUAL AND THE MAXIMUM STATIC PRESSURE AT BURY DEPTH (9') IS AS FOLLOWS (ACTUAL FIRE FLOW MAY VARY DUE TO VARIOUS PARAMETERS):

NODE	FIRE FLOW (GPM)	STATIC PRESSURE @ MDD[1] (PSI)	MAX STATIC PRESSURE @ BURY DEPTH[1,2] (PSI)
FH-A	3200	119	125
FH-B	3200	119	125
FH-C	3000	119	125
FH-D	2900	118	124
FH-E	3000	119	125
FH-F	3000	119	125
FH-G	3000	119	125
FH-H	2600	120	126
FH-I	3000	121	127

[1] THE MAXIMUM PRESSURE LISTED FOR EACH NODE DEFINES THE MAXIMUM DESIGN WORKING PRESSURE FOR MATERIAL SELECTION IN WATER LESS TABLE 2-2. IF THE MAXIMUM DESIGN WORKING PRESSURE IS GREATER THAN 177 PSI, PVC SHALL NOT BE USED.
[2] BURY DEPTH IS ASSUMED TO BE 9 FEET BELOW THE HYDRANT FLANGE ELEVATION.

BUILDING DATA

BUILDING SIZE (gross square footage): 369,050
TYPE OF CONSTRUCTION: IIB
LARGEST BUILDING SQUARE FOOTAGE: 210,000
REQ GPM FIRE FLOW:
REQ. MIN NUMBER HYDRANTS: 3
AVG. DIST. BETWEEN HYD: 324'
MAX. HOSE LAY DIST.: 200'
BUILDING SPRINKLED: YES

NOTICE OF FIRE SERVICE LINE INTEGRITY TEST:

PRIOR TO ACCEPTANCE OF ANY FIRE SERVICE LINE BY THE COLORADO SPRINGS FIRE DEPARTMENT:

- ALL FIRE SERVICE LINES SHALL BE HYDROSTATICALLY TESTED AND FLUSHED PER COLORADO SPRINGS FIRE DEPARTMENT REQUIREMENTS
- ALL ACCEPTANCE TESTING OF WATER SUPPLY SYSTEMS FOR FIRE PROTECTION SHALL BE WITNESSED BY AN APPROVED COLORADO SPRINGS FIRE DEPARTMENT REPRESENTATIVE

PRESSURE TEST
PRESSURIZE THE FIRE SERVICE LINE FROM THE POINT OF CONNECTION AT THE MAIN TO THE POINT OF CONNECTION TO THE SPRINKLER SYSTEM AT 200 PSI, OR 50 PSI ABOVE STATIC PRESSURE FOR A MINIMUM OF 2 HOURS. THIS TEST IS BEST PERFORMED BEFORE COMPLETELY BACKFILLING SO THAT ALL JOINTS ARE EXPOSED.

FLUSH TEST
THE FIRE SERVICE LINE SHALL BE FLUSHED AT PER NFPA 24 "STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES"

CSFD ACCEPTANCE

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO COLORADO SPRINGS UTILITIES' WATER LINE EXTENSION AND SERVICE STANDARDS.

THE NUMBER OF HYDRANTS AND HYDRANT LOCATIONS AS SHOWN ON THIS WATER PLAN ARE CORRECT AND ADEQUATE TO SATISFY THE FIRE PROTECTION REQUIREMENTS AS SPECIFIED BY THE CITY OF COLORADO SPRINGS FIRE DEPARTMENT.

SIGNED: _____
CSFD, DIVISION OF THE FIRE MARSHAL

CSFD PLAN REVIEW NO.: _____

COLORADO SPRINGS UTILITIES WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073
WORK ORDER NUMBER: 3993272
CSU SHEET 1 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE CITY OF COLORADO SPRINGS AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

HOWARD EHRSAM P.E. DATE

OWNER/DEVELOPER PLAN APPROVAL

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THEY SHALL, AT THEIR EXPENSE, BE SOLELY RESPONSIBLE FOR 1) THE INSTALLATION OF THE PROPOSED UTILITY INFRASTRUCTURE IN ACCORDANCE WITH THESE PLANS, AND 2) ALL DAMAGES AND DEFECTS ARISING FROM, OR RELATED TO, THE INSTALLATION, MAINTENANCE OR OPERATION OF THE PUBLIC UTILITY INFRASTRUCTURE FROM THE DATE OF PRELIMINARY ACCEPTANCE FOR A PERIOD OF TWO YEARS, OR UNTIL FINAL ACCEPTANCE, WHICHEVER IS LATER.

THE UNDERSIGNED UNDERSTANDS THAT ALL PRIVATE UTILITY INFRASTRUCTURE, AS INDICATED ON THESE PLANS, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER, AS REQUIRED BY *COLORADO SPRINGS UTILITIES' LINE EXTENSION AND SERVICE STANDARDS.*

☒ PUBLIC WATER MAIN PROPOSED ☐ PUBLIC WASTEWATER MAIN PROPOSED ☐ PRIVATE WATER SERVICE LINE (<4") AND/OR PRIVATE WASTEWATER SERVICE LINE (<8")
☒ PRIVATE WATER MAIN PROPOSED ☐ PRIVATE WASTEWATER MAIN PROPOSED

SIGNED: _____ DATE: 10/11/2024
OWNER/DEVELOPER
NOLAN MORRISON
OWNER/DEVELOPER (PRINT NAME)
DBA: AMERICAN FURNITURE WAREHOUSE CO
ADDRESS: 8820 AMERICAN WAY, ENGLEWOOD, COLORADO 80112
PHONE: 303-489-3333
EMAIL: nmorrison@afw.net

BENCHMARK
FIMS BENCHMARK TG24. ELEVATION=6838.24 (NVGD 1929)

BID SET
10-10-24

Know what's **below.** **Call** before you dig.

REVISIONS

REVISION	DESCRIPTION	DATE
A	1ST WATER PLAN COMMENTS	10/30/23
B	2ND WATER PLAN COMMENTS	01/26/24
C	3RD WATER PLAN COMMENTS	04/11/24
D	4TH WATER PLAN COMMENTS	05/01/24
E	5TH WATER PLAN COMMENTS	10/10/24

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COLORADO

COVER SHEET

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS

SEAL
NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: V:
JOB No. 050895-01-001
DATE : 04/12/2023
SHEET W1

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	PROPERTY LINE	
	ADJACENT PROPERTY LINE	
	LOT LINE	
	RIGHT OF WAY	
	CENTERLINE	
	FLOOD PLAIN	
	LIMITS OF CONSTRUCTION	
	LIMITS OF DISTURBANCE	
	SWALE / STREAM FLOWLINE	
	OVERFLOW RELIEF PATH	
X	FENCE LINE	X
	EASEMENT	
	EDGE OF PAVEMENT	
	VERTICAL CURB AND GUTTER	
	MOUNTABLE CURB AND GUTTER	
	CONCRETE SIDEWALK	
	ASPHALT SIDEWALK	
	HANDICAP PARKING	
	SIGHT TRIANGLE	
	SIGN(S)	
	PARKING COUNT INDICATOR	
255 VPD	VEHICLES PER DAY INDICATOR	255 VPD
TP	TEST PIT	TP
MW	MONITORING WELL	MW
350	MAJOR CONTOUR	350
350	MINOR CONTOUR	350
	GRADE BREAK	
	RIDGELINE	
52 22 FG 5236 22 FG	SPOT ELEVATION	52 22 FG 5236 22 FG
	RIP RAP	
W	WATER LINE	W
M	WATER METER	M
	WATER VALVE	
	WATER REDUCER	
	WATER FITTINGS	
	FIRE HYDRANT	
SS	SANITARY LINE	SS
	SANITARY MANHOLE	
	SANITARY CLEANOUT	
	STORM SEWER PIPE	
	STORM SEWER MANHOLE	
	STORM SEWER INLET	
	STORM SEWER FLARED END SECTION	
	STORM SEWER HEADWALL	
OU	OVERHEAD UTILITY	OU
E	UNDERGROUND ELECTRIC	E
OHE	OVERHEAD ELECTRIC	OHE
	UTILITY POLE	
	STREET LIGHT	
CATV	CABLE TV SERVICE	CATV
T	TELECOM SERVICE	T
FO	FIBER OPTIC SERVICE	FO
G	NATURAL GAS SERVICE	G
	TREE	
	TREE LINE	
	WETLANDS	

LEGEND NOTES

1. THIS IS A STANDARD SHEET, THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PROJECT.
2. ADDITIONAL LEGENDS AND NOTES MAY BE FOUND ON OTHER SHEETS ASSOCIATED WITH THIS PLAN. THESE LEGENDS AND NOTES ARE TO BE REFERENCED IN ADDITION TO THIS STANDARD SHEET.

CONSTRUCTION STATEMENT:

WORK SHALL BE CONSTRUCTED TO CITY OF COLORADO SPRINGS STANDARDS AND SPECIFICATIONS. THIS APPROVAL IS FOR CONFORMANCE TO THESE STANDARDS AND SPECIFICATIONS AND OTHER CITY REQUIREMENTS. THE DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER OR LANDSCAPE PROFESSIONAL.

ABBREVIATIONS

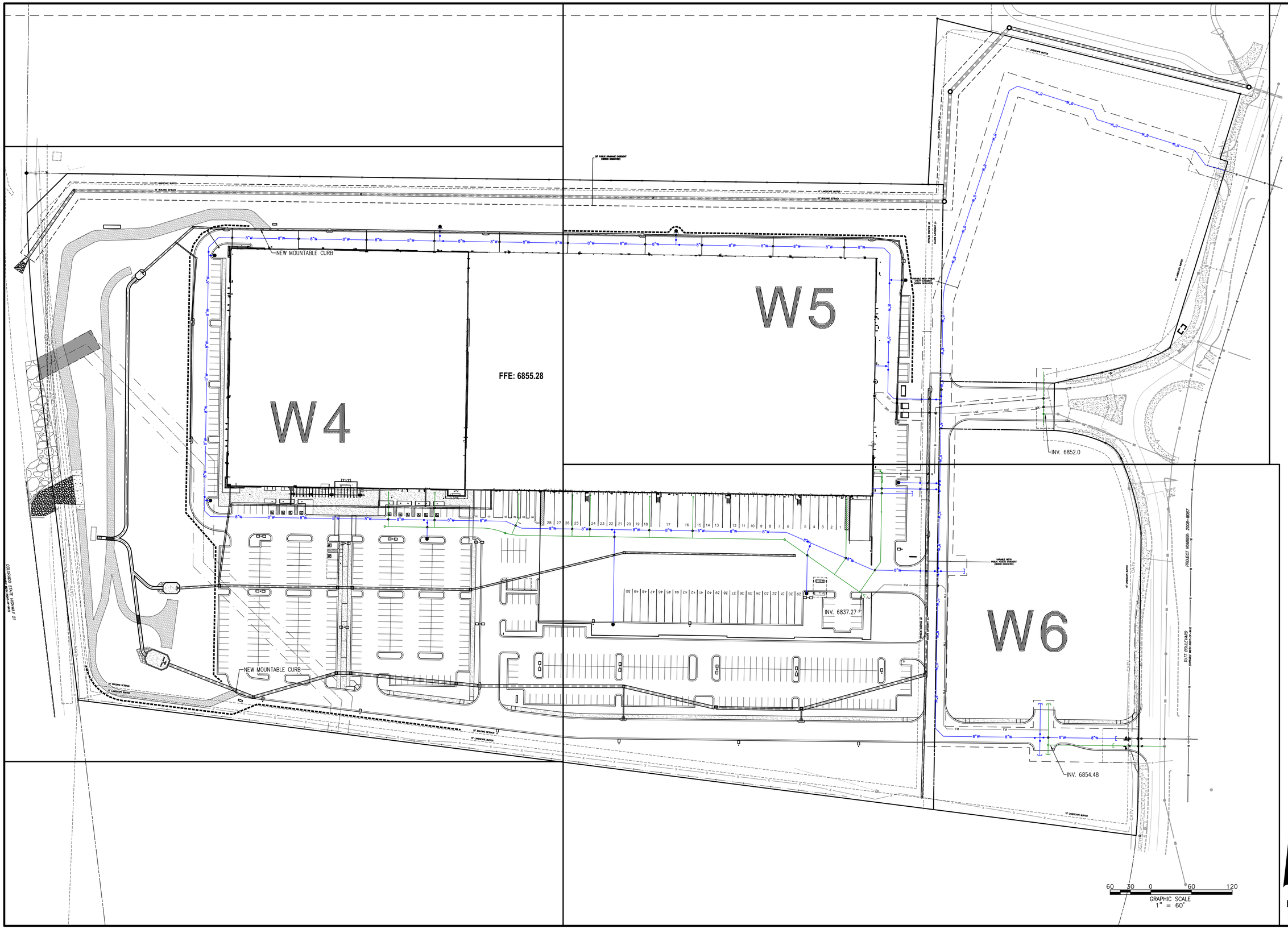
A	AREA OF ARC	K	SIGHT DISTANCE COEFFICIENT OR
AASHTO	AMERICAN ASSOCIATION OF STATE HWY & TRANS. OFFICIALS	Ke	RATE OF VERTICAL CURVATURE CULVERT ENTRANCE LOSS COEFFICIENT
AB	AS-BUILT		
AC	ACRE	L	LENGTH
AD	ALGEBRAIC DIFFERENCE IN GRADE	LAT	LATERAL
AE	ACCESS EASEMENT	LCG	LIMITS OF CLEARING & GRADING
ADJ	ADJACENT	LF	LINEAR FEET
AGGR	AGGREGATE	LIP	LIP OF PAN
AHD	AHEAD	LL	LOWER LEVEL
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	LOS	LINE OF SIGHT
	ANGLE POINT	LP	LOW POINT
APT	APPROXIMATE	LS	LOADING SPACE
APPROX	ARCHITECTURAL	LT	LEFT
ARCH	ASPHALT		
ASPH	AMERICAN SOCIETY FOR TESTING AND MATERIALS	M	MONUMENT FOUND
ASTM	AMERICAN WATER WORKS ASSOCIATION	MAX	MAXIMUM
		ME	MATCH EXISTING
AWWA	BREADTH	MECH	MECHANICAL
	BACK OF CURB	MH	MANHOLE
B	BASEMENT FLOOR	MI	MILE
BOC	BUILDING	MIN	MINIMUM
BF	BENCHMARK	MISC	MISCELLANEOUS
BLDG	BEST MANAGEMENT PRACTICES	MPH	MILES PER HOUR
BM	(WATER QUALITY)	MS	MEDIAN STRIP
BMP	BLOW OFF VALVE	MSL	MEAN SEA LEVEL
	BEARING		
BOV	BUILDING RESTRICTION LINE	N	NORTHING/NORTH
BRG	BEGINNING VERTICAL CURVE ELEVATION	N/A	NOT APPLICABLE
BRL	BEGINNING VERTICAL CURVE STATION	NBL	NORTH BOUND LANE
BVCE	BOTTOM OF WALL	N/F	NOW OR FORMERLY
BVCS		NFA	NET FLOOR AREA
BW	CENTER CORRECTION ON VERTICAL CURVE	NO. & #	NUMBER
	RUNOFF COEFFICIENT	NTS	NOT TO SCALE
c.e	CABLE TELEVISION		
C	CURB AND GUTTER	OC	ON CENTER
CATV	CATCH BASIN	OBJ	OBJECT
CAG	CALIFORNIA BEARING RATIO	OD	OUTSIDE DIAMETER
CB	CENTER TO CENTER	OH	OVERHANG
CBR	COLORADO DEPT. OF TRANSPORTATION	O/H	OVERHEAD
CC	CUBIC FEET	OHC	OVERHEAD CABLE
CDOT	CUBIC FEET PER SECOND	OHE	OVERHEAD ELECTRIC
CF	CURB AND GUTTER (REVERSE SLOPE)	OHT	OVERHEAD TELEPHONE
CFS	CHORD		
CG(R)	CHORD BEARING	P	PERIMETER
CH	CAST IRON PIPE	PL	PROPERTY LINE
CHBRG	CENTERLINE	P&P	PLAN AND PROFILE
CIP	CLEAR	PC	POINT OF CURVATURE
CL	CUBIC METERS	PCC	POINT OF COMPOUND CURVATURE
CLR	CORRUGATED METAL PIPE	PCR	POINT OF CURB RETURN
CM	CUBIC METERS PER SECOND	PCEP	POINT OF CURVE EDGE OF PAVEMENT
CMP	RUNOFF CURVE NUMBER	PCTC	POINT OF CURVATURE TOP OF CURB
CMS	CONTINUOUS	PI	POINT OF INTERSECTION
CN	CLEAN OUT	PG	PAGE
CONT	CONCRETE	PGL	POINT OF GRADE LINE
CO	CURB STOP	PRC	POINT OF REVERSE CURVATURE
CONC	COURT	PRELIM	PRELIMINARY
CS	CENTER	PROP	PROPOSED
CT	CONTROL LINE	PT	POINT OF TANGENCY
CTR	CUBIC YARD	PUE	PUBLIC UTILITY EASEMENT
CTRL		PVC	POLYVINYL CHLORIDE PIPE OR
CY	DEPTH		POINT OF VERTICAL CURVATURE
	DRAINAGE AREA	PVI	POINT OF VERTICAL INTERSECTION
D	DEED BOOK	PVT	POINT OF VERTICAL TANGENCY
DA	DETAIL	PVMT	PAVEMENT
DB	DIAMETER	PVRC	POINT OF VERTICAL REVERSE CURVE
DET	DUCTILE IRON PIPE		
DIA	DROP INLET	Q (cfs)	AMOUNT OF RUNOFF (FLOW RATE)
DIP	DISTANCE		
DI	DOMESTIC LINE	R	RADIUS
DIST	DROP MANHOLE	RCP	REINFORCED CONCRETE PIPE
DL	DOMESTIC	RDCR	REDUCER
DM	DRIVE DRAIN	RD	ROAD OR ROOF DRAIN
DOM	DRAINAGE	REINF	REINFORCED
DR	DRAINAGE AREA	REQD	REQUIRED
DRN	DOWN SPOUT	RET	RETAINING
DRNG	DWELLING UNITS	REV	REVISION
DS	DRAWING	RGP	ROUGH GRADING PLAN
DU	DRIVEWAY	RMA	RESOURCE MANAGEMENT AREA
DWG	DELTA	ROM	REMOTE OUTSIDE MONITOR
D/W		RPA	RESOURCE PROTECTION AREA
	EASTING/EAST	RR	RAILROAD
	EACH	RT	RIGHT
E	EAST BOUND LANE	RTE	ROUTE
EA	EROSION CONTROL	R/W & ROW	RIGHT OF WAY
EBL	EDGE OF GUTTER		
EC	ENERGY GRADIENT LINE	S	SPEED OR SLOPE
EG	ELEVATION	SAN	SANITARY SEWER
EGL	ELECTRIC	SANMH	SANITARY SEWER MANHOLE
EL	ELEVATION	SBL	SOUTH BOUND LANE
ELEC	ENGINEER	SCH	SCHEDULE
ELEV	ENTRANCE	SD	SIGHT DISTANCE
ENGR	EDGE OF ASPHALT	SEC	SECTION
ENT	EDGE OF CONCRETE	SEW	SEWER
EOA	EDGE OF PAVEMENT	SF	SQUARE FEET
EOC	EQUIPMENT	SH	SHOULDER
EOP	EASEMENT	SP	SPACE OR SITE PLAN
EQUIP	EXISTING TO BE DEMOLISHED	SPEC	SPECIFICATIONS
ESMT	EXISTING TO REMAIN	STA	STATION
ETD	EXISTING TO BE RELOCATED	STD	STANDARD
ETR	EXISTING TO BE REPLACED	STK	STACK
ETRL	ENDING VERTICAL CURVE ELEVATION	STM	STORM SEWER
ETRP	ENDING VERTICAL CURVE STATION	STMMH	STORM SEWER MANHOLE
EVCE	END WALL	STR	STRUCTURE
EVCS	EXISTING	SVC	SERVICE
EW	ENVIRONMENTAL QUALITY CORRIDOR	S/W	SIDEWALK
EX		SWM	STORM WATER MANAGEMENT
EQC	FIRE LINE	Sx	CROSS SLOPE
	FLOOR AREA RATIO	SY	SQUARE YARD
F	FACE OF CURB		
FAR	FLOOR DRAIN	T	TANGENT
FOC	FLARED END SECTION	TB	TOP OF BANK OR TEST BORING
FD	FIRST FLOOR OR FINISH FLOOR	TBR	TO BE REMOVED
FES	FINISH GRADE	TOC	TOP OF CURB
FF	FIRE HYDRANT	Tc	TIME OF CONCENTRATION
FG	FLOW LINE	TEL	TELEPHONE
FH	FOUNDATION	TEMP	TEMPORARY
FL	FOYER	TH	TEST HOLE
FND	FLOOD PLAIN	TOF	TOP OF FOUNDATION
FOY	FEET PER SECOND	TOP	TOP OF PIPE
FP	FIRE SERVICE OR FACTOR OF SAFETY	TP	TEST PIT OR TREE PROTECTION
FPS	FOOT OR FEET	TW	TOP OF WALL OR TAILWATER
FS		TYP	TYPICAL
FT	GAS		
	GARAGE	UE	UTILITY EASEMENT
G	GRADE BREAK	UG	UNDERGROUND
GAR	GROSS FLOOR AREA	UGE	UNDERGROUND ELECTRIC
GB	GUARD RAIL OR GRATE INLET	UGT	UNDERGROUND TELEPHONE
GFA	GATE VALVE	UGC	UNDERGROUND CABLE
GR		UD	UNDERDRAIN
GV	HEAD	UL	UPPER LEVEL
	HANDICAP	UP	UTILITY POLE
H	HORIZONTAL BEND	USGS	US GEOLOGICAL SURVEY
HC	HOT BITUMINOUS PAVEMENT	UTIL	UTILITY
HB	HYDRAULIC GRADE LINE		
HBP	HORIZONTAL	V OR VOL	VOLUME
HGL	HIGH POINT	V OR VEL	VELOCITY
HORZ	HAND RAIL	VAN	HANDICAPPED VAN PARKING SPACE
HP	HEIGHT	VB	VERTICAL BEND
HR	HEADWATER	VC	VERTICAL CURVE
HT		VF	VERTICAL FOOT
HW	RAINFALL INTENSITY		
	INSIDE DIAMETER OR IDENTIFICATION	W	WEIGHT OR WIDTH
I	INVERT ELEVATION	WBL	WEST BOUND LANE
ID	INCH	WL	WATER LINE
IE	INVERT	WM	WATER METER
IN	IRON PIPE	W/M OR WM	WATER MAIN
INV	IRON PIPE FOUND	W/TB	WITH THRUST BLOCK
IP	IRON PIPE SET	WSEL	WATER SURFACE ELEVATION
IPF	IRRIGATION	WV	WATER VALVE
IPS			
IRR	JUNCTION BOX	XING	CROSSING
	JOINT	XF	TRANSFORMER
JB			
JNT		YI	YARD INLET
		YR	YEAR

GENERAL NOTES

1. UTILITY CONFLICTS: ALL EXISTING UTILITIES SHOWN WERE COMPILED USING THE BEST AVAILABLE INFORMATION AND FIELD OBSERVATION. BOWMAN CONSULTING INC. DOES NOT GUARANTEE THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON. CONTRACTOR TO BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION OF AND PROTECTING ALL EXISTING UTILITIES, INCLUDING THOSE NOT SHOWN OR SHOWN INCORRECTLY ON THE PLANS. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IN A TIMELY FASHION TO THE SATISFACTION OF THE APPROPRIATE GOVERNING AGENCY AND THE OWNER OF THE IMPACTED UTILITY AT THE CONTRACTOR'S EXPENSE.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS FOR THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT THE JOB SITE AT ALL TIMES THE APPROPRIATE GOVERNING AGENCY'S PUBLIC WORKS MANUAL, ALL APPROVED EASEMENT AGREEMENTS, AND ONE (1) SIGNED COPY OF THE PLANS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY FOR ANY VARIANCE TO THE ABOVE DOCUMENTS.
3. CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE CODES, LICENSES, STANDARDS, SPECIFICATIONS, PERMITS, BONDS, ETC., WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
4. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND MUST COMPLY WITH OSHA REGULATIONS.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER AND ENGINEER OF ANY PROBLEM CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
6. THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY HIS/HER CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAY AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
8. THE CONTRACTOR SHALL NOTIFY THE LOCAL JURISDICTION AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION. THE APPROPRIATE FIRE DEPARTMENT SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY STREET CLOSURES AND IN THE EVENT THAT ANY FIRE HYDRANTS ARE TO BE TEMPORARILY REMOVED FROM SERVICE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING AT LEAST 48 HOURS ADVANCED NOTICE OF ANY NEED TO SHUT DOWN ANY PORTION OF THE EXISTING WATER SYSTEM AND FOR OBSERVATIONS AND/OR INSPECTIONS REQUIRED.
9. THE CONTRACTOR SHALL PROVIDE ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS OR OTHER DEVICES NECESSARY FOR SAFE TRAFFIC CONTROL IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AS MODIFIED BY THE COLORADO SUPPLEMENT TO THE MUTCD. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE APPROPRIATE GOVERNING AGENCY PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT FOR WORK WITHIN THE RIGHT-OF-WAY.
10. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987 AT LEAST 2 BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH ANY AFFECTED UTILITY COMPANY.
11. THE CONTRACTOR SHALL OBTAIN COPIES OF THE "SOILS AND INVESTIGATION" REPORT FROM GEOTECHNICAL ENGINEER ALONG WITH THE "PAVEMENT THICKNESS DESIGN REPORT". THE CONTRACTOR MUST HAVE COPIES OF SAME ON THE SITE AT ALL TIMES.
12. THE CONTRACTOR IS REQUIRED TO PROVIDE AS-CONSTRUCTED HORIZONTAL AND VERTICAL CONSTRUCTION INFORMATION, INCLUDING THE LOCATIONS OF ALL SANITARY LINES AND SERVICES, WATER LINES AND SERVICES, AND OTHER UTILITY LINES AND SERVICES TO THE ENGINEER FOR PREPARATION OF AS-BUILT DOCUMENTS.
13. LIMITS OF CONSTRUCTION EASEMENTS AND RIGHTS-OF-WAY SHALL BE DELINEATED WITH TEMPORARY STAKING BY THE CONTRACTOR. SAFETY FENCING SHALL BE PER APPROPRIATE GOVERNING AGENCY.
14. WHERE EXCAVATION IS REQUIRED UNDER EXISTING ASPHALT OR CONCRETE PAVEMENT, THE EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO EFFECT A SMOOTH, STRAIGHT-CUT EDGE. ASPHALT PATCH SHALL BE PER APPROPRIATE GOVERNING AGENCY STANDARDS.
15. REFER TO FINAL RECORDED PLAT FOR ACTUAL LOT, TRACT, PARCEL, AND EASEMENT LOCATIONS AND DESIGNATIONS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL MATERIALS WITHIN DEDICATED RIGHT-OF-WAYS AND ALL MATERIALS AND WORKMANSHIP SHALL MEET THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS OF THE APPROPRIATE GOVERNING AGENCY.
17. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY TO THE PROJECT WORK SITE (SEE THE EROSION CONTROL PLAN). THE CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY (IF APPLICABLE) TO COMPLETE THE CONSTRUCTION AND SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
18. WATER WILL BE PROVIDED BY THE CONTRACTOR TO KEEP WIND EROSION IN CHECK. USE OF WATER AS A DUST PREVENTATIVE SHALL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF THE WORK.
19. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE PROPERTY LIMITS DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR.
20. ANY CONSTRUCTION DEBRIS OR MUD TRACKING IN THE PUBLIC RIGHT-OF-WAY RESULTING FROM THIS DEVELOPMENT SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY THE DEVELOPMENT AND SHALL PROPERLY BARRICADE THE SITE UNTIL CLEAN UP OR REPAIR IS COMPLETE.
21. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO GRADE STREET CORES, RIGHT-OF-WAY TEMPLATES, AND LOTS ACCORDING TO GRADING INSTRUCTIONS SHOWN ON PLANS.
22. STREET CONTOURS SHOWN AT PROPOSED STREET LOCATIONS REPRESENT FINISHED GRADE ELEVATION TO TOP OF ASPHALT.
23. COMPACTION FILL MATERIAL SHALL BE COMPACTED ACCORDING TO THE APPROPRIATE GOVERNING AGENCY REGULATIONS AND THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
24. TOLERANCE ROUGH GRADING: TOLERANCE SHALL BE +/- 0.1 FEET.
25. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE ALL APPROPRIATE PERMITS FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAVE BEEN OBTAINED PRIOR TO GRADING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL TEMPORARY WATER DIVERSION/CONTROL DEVICES AND EROSION CONTROL DEVICES NECESSARY TO PROTECT ADJACENT PROPERTIES, WATERWAYS AND PUBLIC RIGHT-OF-WAY. CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF SAID DEVICES THROUGHOUT CONSTRUCTION AND UNTIL THE PERMANENT PROTECTION NECESSARY HAS BEEN COMPLETED.
26. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE MOST CURRENT APPROVED ARCHITECTURAL/ MECHANICAL/ELECTRICAL/PLUMBING/STRUCTURAL PLANS AND COORDINATE SAME WITH THE SITE PLAN, PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
27. WHEN DURING THE COURSE OF CONSTRUCTION, ANY OBJECT OF AN UNUSUAL NATURE IS ENCOUNTERED, THE CONTRACTOR SHALL CEASE WORK IN THAT AREA AND IMMEDIATELY NOTIFY THE OWNER, APPROPRIATE GOVERNING AGENCY, AND/OR THE ARCHITECT/ENGINEER.
28. THE EXISTING UNDERGROUND UTILITIES SHOW HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN IN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.
29. ALL STEPS WITH THREE OR MORE RISERS SHALL HAVE HAND RAILS, PER LOCAL CODE.
30. A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF EXISTING ROAD TO PROPOSED CURB AND GUTTER AND/OR PROPOSED EDGE OF PAVEMENT TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY. REMOVE AND RECONSTRUCT EXISTING PAVEMENT AND/OR CURB AS DICTATED BY FIELD CONDITIONS TO PROVIDE POSITIVE DRAINAGE AT TIE-IN-POINTS.
31. OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1 1/2 INCH DEPTH; ANY COST ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE CONTRACTOR.
32. ALL RIGHT-OF-WAY DEDICATED FOR PUBLIC USE SHALL BE CLEAR AND UNENCUMBERED.
33. AN AIR QUALITY PERMIT SHALL BE OBTAINED IF REQUIRED.
34. ANY LIGHTING SHOWN HEREON IS AS SPECIFIED BY THE CLIENT AND IS INCLUDED FOR INFORMATION PURPOSES ONLY, AS DIRECTED BY THE OWNER AND/OR PUBLIC AGENCY REQUIREMENTS. BOWMAN CONSULTING GROUP, LTD. HAS NOT PERFORMED THE LIGHTING DESIGN, AND THEREFORE DOES NOT WARRANT AND IS NOT RESPONSIBLE FOR THE DEGREE AND/OR ADEQUACY OF ILLUMINATION ON THIS PROJECT.
35. THE CONTRACTOR WILL BE REQUIRED TO NOTIFY ALL RESIDENCES WITHIN VICINITY OF THE PROPERTY BOUNDARY TEN (10) DAYS PRIOR TO ANY BLASTING IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY REQUIREMENTS.
36. NO BLASTING SHALL BE PERMITTED WITHIN 25' OF EXISTING UTILITY LINES OR STRUCTURES. BLASTING TO BE EXTENDED 25' BEYOND PROPOSED STRUCTURES IF CONDITIONS WARRANT FUTURE EXTENSIONS.
37. ALL RETAINING WALLS 2' IN HEIGHT AND OVER REQUIRE A SEPARATE BUILDING PERMIT.
38. THE APPROVAL OF THIS PLAN DOES NOT CONSTITUTE THE APPROVAL OF FUTURE WORK.
39. ALL HANDICAPPED SPACES SHALL HAVE AN ABOVE GRADE IDENTIFICATION SIGN MEETING APPROPRIATE GOVERNING AGENCY STANDARDS.
40. WHERE A PROPOSED PIPE CROSSES OR PARALLELS A STREET OR DRIVE AISLE, THE ASPHALT SHALL BE NEATLY SAWCUT TO FULL DEPTH. AFTER INSTALLATION OF THE PIPE, THE ROADWAY SHALL BE PATCHED IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY STANDARDS.

GENERAL NOTES (CONT.)

41. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND MAKE ALL INSPECTIONS NECESSARY IN ORDER TO DETERMINE THE FULL EXTENT OF THE WORK REQUIRED TO MAKE THE PROPOSED WORK CONFORM TO THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE NATURE AND LOCATION OF THE WORK, CONDITIONS, AND CONFIRMATION AND CONDITION OF EXISTING GROUND SURFACE AND THE CHARACTER OF THE EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING EXECUTION OF THE WORK. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE CHARACTER, QUANTITY AND QUALITY OF SURFACE AND SUBSURFACE MATERIALS OR OBSTACLES TO BE ENCOUNTERED. ANY INACCURACIES OR DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS MUST BE BOUGHT TO THE OWNER'S ATTENTION IN ORDER TO CLARIFY THE EXACT NATURE OF THE WORK TO BE PERFORMED PRIOR TO THE COMMENCEMENT OF ANY WORK.
42. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING ROADS AND UTILITIES WHICH OCCURS AS A RESULT OF THE PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY.
43. ALL STREET CUT AND PATCH WORK IN PUBLIC RIGHT-OF-WAY REQUIRED FOR UTILITIES INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH CITY, COUNTY, AND/OR APPROPRIATE GOVERNING AGENCY STANDARDS AND SPECIFICATIONS.
44. THE APPROVAL OF THIS PLAN SHALL IN NO WAY GRANT PERMISSION FOR THE CONTRACTOR TO TRESPASS ON OFF-SITE PROPERTIES.
45. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF COMPLYING WITH OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
46. THESE PLANS MAKE NO REPRESENTATION AS TO THE SUBSURFACE CONDITIONS AND THE PRESENCE OF SUBSURFACE WATER OR THE NEED FOR SUBSURFACE DRAINAGE FACILITIES.
47. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING ALL NECESSARY INSPECTIONS.
48. EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
49. ALL FINISHED GRADING, SEEDING, SODDING OR PAVING SHALL BE DONE IN SUCH A MANNER TO PRECLUDE THE PONDING OF WATER.
50. THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.
51. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF TEST HOLES PRIOR TO BEGINNING OF ANY CONSTRUCTION ON THE PROJECT. IF CONFLICTS ARE DISCOVERED AS A RESULT OF TEST HOLE FINDINGS, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY.
52. EXCAVATION SUPPORT SYSTEMS SHALL CONFORM TO THE PROVISIONS OF OSHA CONSTRUCTION STANDARD 29 CFR PART 1926 SUBPART P, OR CURRENT EDITION.
53. AT LOCATIONS WHERE THE FINAL SURFACE COURSE OF ASPHALT PAVEMENT IS TO BE FEATHERED INTO THE EXISTING SURFACE COURSE, THE EXISTING SURFACE COURSE IS TO BE SCABBLED TO A MINIMUM DEPTH OF 1" AND A TACK COAT APPLIED PRIOR TO FINAL PAVING TO INSURE A SMOOTH, WELL BONDED JOINT.
54. ANY NEW PAVEMENT OPENED TO TRAFFIC SHALL RECEIVE A TACK COAT PRIOR TO PLACEMENT OF ANY OVERLYING ASPHALT COURSE.
55. ALL SIDEWALKS TO BE 4" THICK CONCRETE UNLESS OTHERWISE SHOWN ON THE PLAN.
56. ALL DEMOLITION SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE APPROPRIATE GOVERNING AGENCY.
57. ALL APPLICABLE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCING DEMOLITION.
58. ITEMS SHOWN TO BE RELOCATED SHALL BE CAREFULLY REMOVED AND STORED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY CAN BE PLACED IN THEIR NEW LOCATION. CONTRACTOR SHALL VERIFY THESE ITEMS WITH THE OWNER, PRIOR TO CONSTRUCTION.
59. CONTRACTOR SHALL COORDINATE REMOVAL OR RELOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD ELECTRICAL, TELEPHONE AND CABLE TV LINES AND REMOVAL OF UTILITY POLES, PEDESTALS AND TRANSFORMERS WITH UTILITY COMPANIES AND WITH DEVELOPER PRIOR TO DEMOLITION.
60. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENTS AND/OR RECONSTRUCTION OF ALL UTILITY COVER (MANHOLE FRAMES AND COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
61. THE CONTRACTOR MUST HAVE THE APPROVED CONSTRUCTION DRAWINGS IN POSSESSION PRIOR TO THE START OF CONSTRUCTION. AT LEAST ONE (1) COPY OF THE APPROVED PLANS, WITH REVISIONS, MUST BE KEPT ON-SITE AT ALL TIMES.
62. ALL HANDICAP RAMPS SHALL BE BUILT IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE APPROPRIATE GOVERNING AGENCY STANDARDS, CDOT STANDARDS, AND CURRENT ADA REQUIREMENTS.
63. THE STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES MUST BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS THEY ARE NOT ONLY 100% COMPLETE, BUT ALSO THAT 100% OF THE DRAINAGE AREA TO EACH FACILITY IS PERMANENTLY STABILIZED. SEED AND MULCH DOES NOT CONSTITUTE STABILIZATION IN TERMS OF THE CONTRACTOR MAINTENANCE OF THE STORM DRAIN, STORMWATER MANAGEMENT, AND WATER QUALITY FACILITIES. ALL STORM DRAIN, STORMWATER MANAGEMENT AND WATER QUALITY FACILITIES SHALL BE TURNED OVER TO THE OWNER COMPLETELY CLEAN AND FREE FROM ANY CONSTRUCTION RELATED SEDIMENT OR DEBRIS.
64. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT ALL ADA ACCESSIBLE SIDEWALKS MAINTAIN SLOPES NOT TO EXCEED 5% LONGITUDINALLY AND 2% CROSS SLOPES. SLOPES AT ACCESSIBLE



Bowman

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REVISIONS

REVISION	DESCRIPTION	DATE
A	1ST WATER PLAN COMMENTS	10/30/23
B	2ND WATER PLAN COMMENTS	01/26/24
C	3RD WATER PLAN COMMENTS	04/11/24
D	4TH WATER PLAN COMMENTS	05/01/24
E	5TH WATER PLAN COMMENTS	10/10/24

KEY MAP

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

NOT FOR CONSTRUCTION

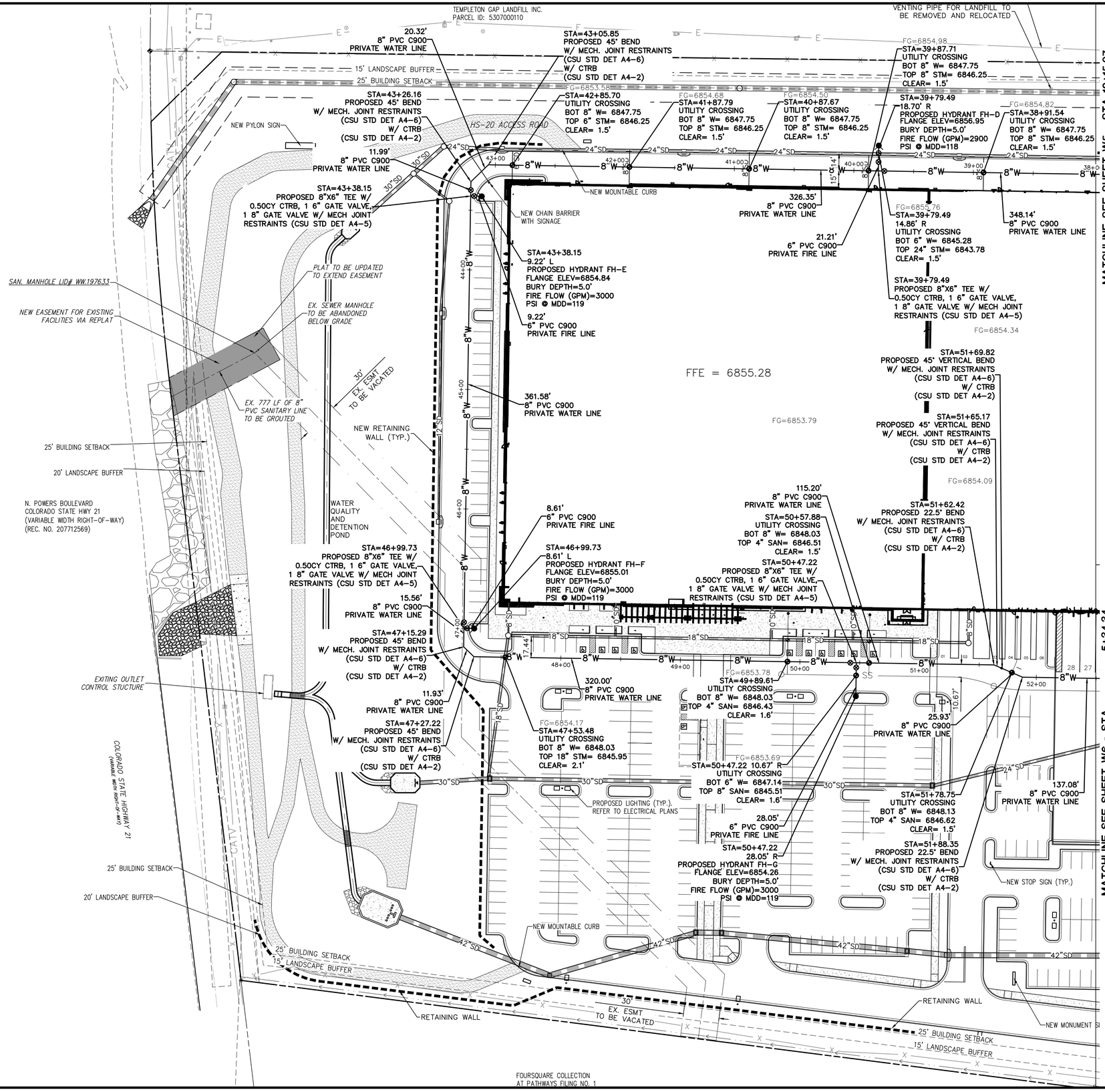
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
W3



SERVICE LINE CROSSING NOTE

CAUTION: SYMBOL DENOTES UTILITY CROSSING. CONTRACTOR TO MAINTAIN FOLLOWING VERTICAL CLEARANCES FOR CROSSINGS WITH WATER SERVICE LINES:
WASTEWATER: 1.5'
STORM SEWER: 1.5'
NATURAL GAS: 1'
ELECTRIC: 1'

COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073
WORK ORDER NUMBER: 3993272
CSU SHEET 2 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

Know what's **below.** **Call** before you dig.

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

Bowman
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C	3RD WATER PLAN COMMENTS	04/11/24
D	4TH WATER PLAN COMMENTS	05/01/24
E	5TH WATER PLAN COMMENTS	10/10/24

WATER PLAN

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS
COLORADO

SEAL
NOT FOR CONSTRUCTION

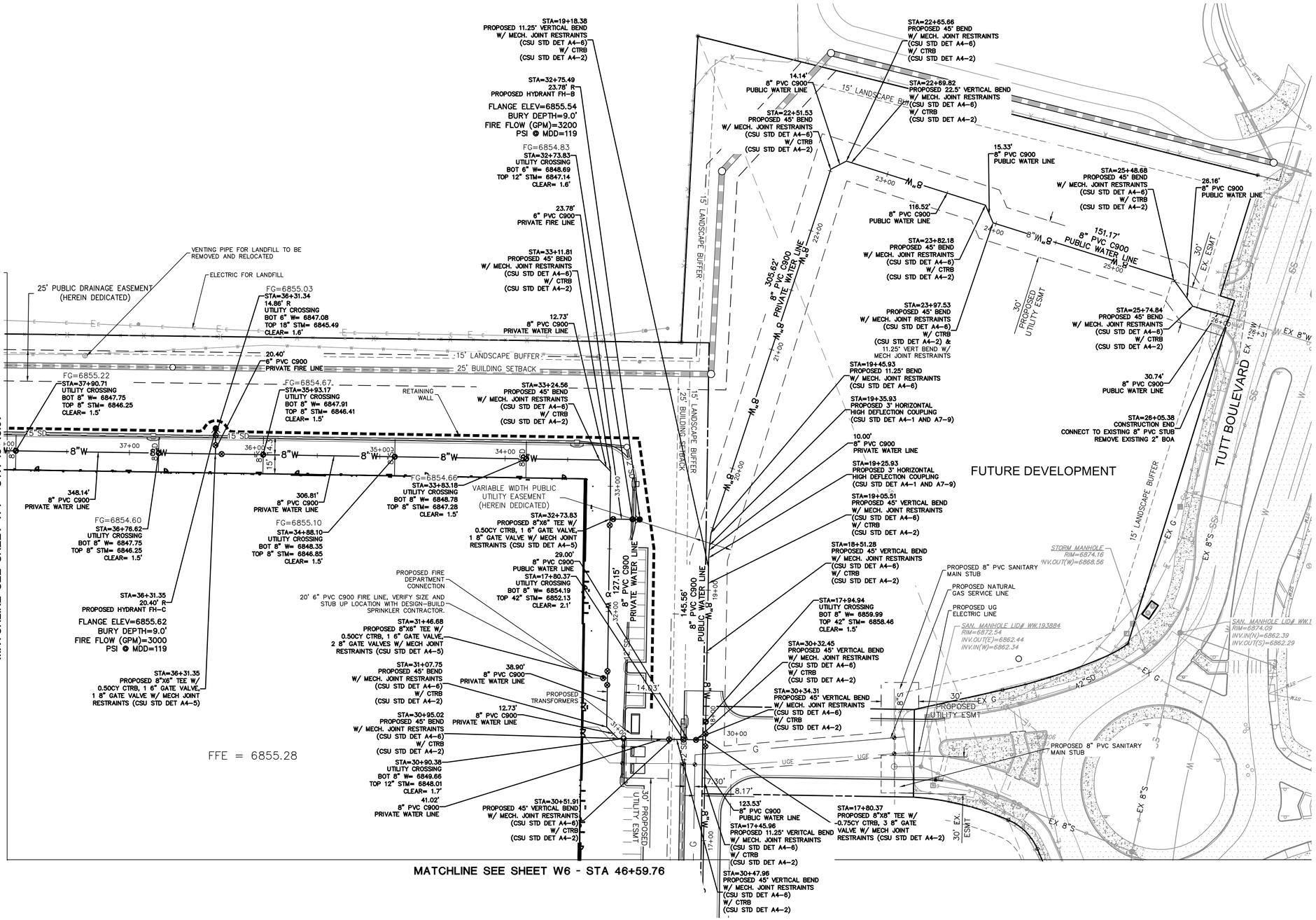
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
W4



SERVICE LINE CROSSING NOTE

CAUTION: SYMBOL DENOTES UTILITY CROSSING. CONTRACTOR TO MAINTAIN FOLLOWING VERTICAL CLEARANCES FOR CROSSINGS WITH WATER SERVICE LINES:
WASTEWATER: 1.5'
STORM SEWER: 1.5'
NATURAL GAS: 1'
ELECTRIC: 1'

COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073
WORK ORDER NUMBER: 3993272
CSU SHEET 3 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

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GRAPHIC SCALE 1" = 40'

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REVISIONS

REVISION	DESCRIPTION	DATE
A	1ST WATER PLAN COMMENTS	10/30/23
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C	3RD WATER PLAN COMMENTS	04/11/24
D	4TH WATER PLAN COMMENTS	05/01/24
E	5TH WATER PLAN COMMENTS	10/10/24

WATER PLAN

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

NOT FOR CONSTRUCTION

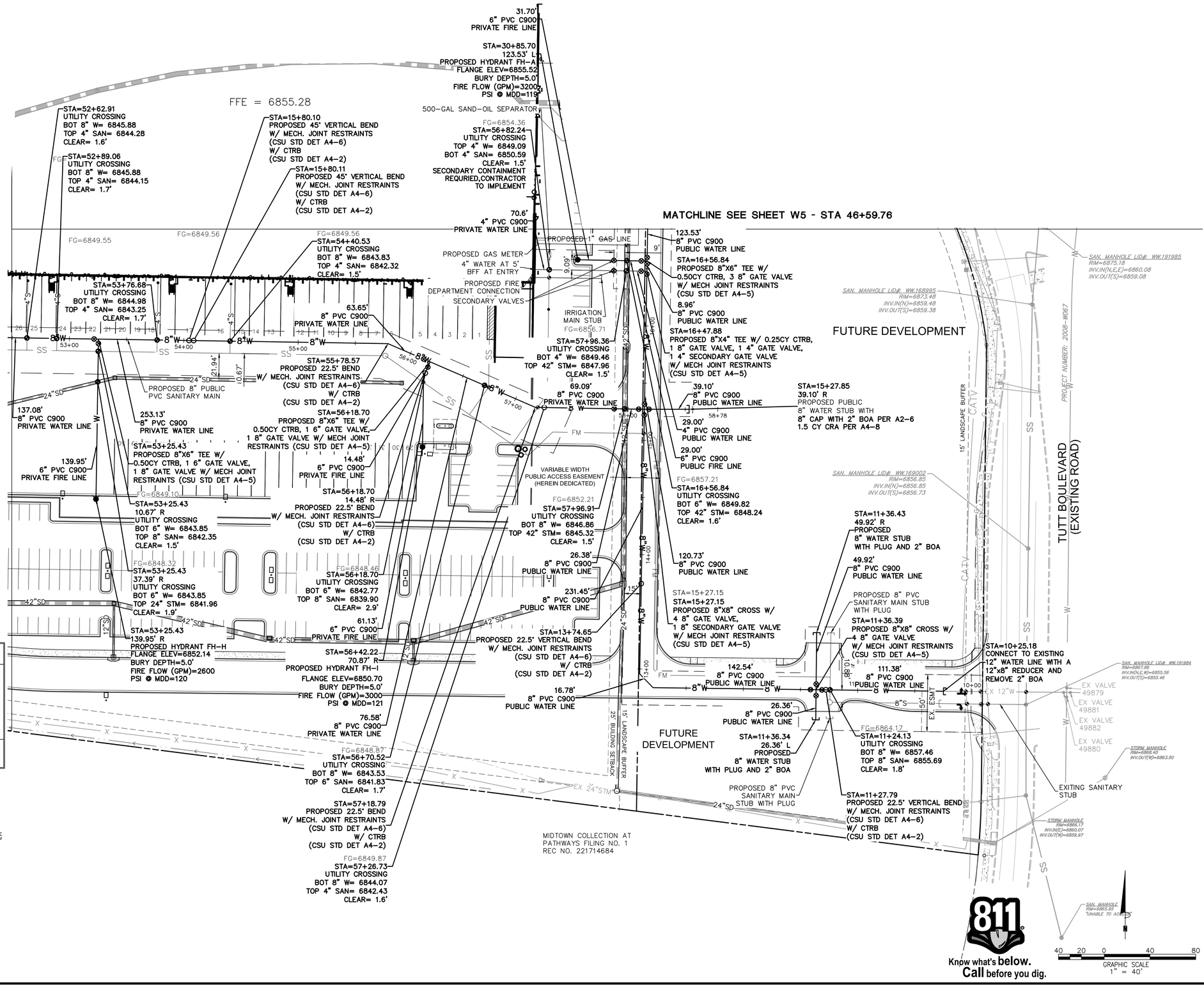
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H: V:

JOB No. 050895-01-001

DATE : 04/12/2023

SHEET W5



COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073

WORK ORDER NUMBER: 3993272

CSU SHEET 4 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

SERVICE LINE CROSSING NOTE

CAUTION: SYMBOL DENOTES UTILITY CROSSING. CONTRACTOR TO MAINTAIN FOLLOWING VERTICAL CLEARANCES FOR CROSSINGS WITH WATER SERVICE LINES:
WASTEWATER: 1.5'
STORM SEWER: 1.5'
NATURAL GAS: 1'
ELECTRIC: 1'

811 Know what's **below.** **Call** before you dig.

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

REVISIONS

REVISION	DESCRIPTION	DATE
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WATER PLAN

AFW - COLORADO SPRINGS WATER PLANS

CITY OF COLORADO SPRINGS COLORADO

SEAL

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DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
W6

STA=24+53.88
PROPOSED 45° BEND
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-6)
W/ CTRB
(CSU STD DET A4-2)

STA=24+39.11
PROPOSED 45° BEND
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-6)
W/ CTRB
(CSU STD DET A4-2)

STA=57+96.36
UTILITY CROSSING
BOT 4" W= 6849.46
TOP 42" STM= 6847.96
CLEAR= 1.5'

STA=56+82.24
UTILITY CROSSING
TOP 4" W= 6849.09
BOT 4" SAN= 6850.59
CLEAR= 1.5'
SECONDARY CONTAINMENT
REQURIED,CONTRACTOR
TO IMPLEMENT

STA=30+85.70
123.53' L
PROPOSED HYDRANT FH-A

STA=16+56.84
UTILITY CROSSING
BOT 6" W= 6849.82
TOP 42" STM= 6848.24
CLEAR= 1.6'

STA=11+36.39
PROPOSED 8"X8" CROSS W/
4 8" GATE VALVE
W/ MECH JOINT RESTRAINTS
(CSU STD DET A4-5)

STA=11+36.34
26.36' L
PROPOSED
8" WATER STUB
WITH PLUG AND 2" BOA

STA=11+27.79
PROPOSED 22.5° VERT BEND
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-6)
W/ CTRB
(CSU STD DET A4-2)

STA=11+36.43
49.92' R
PROPOSED
8" WATER STUB
WITH PLUG AND 2" BOA

STA=15+27.15

STA=13+74.65
PROPOSED 22.5° VERT BEND
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-6)
W/ CTRB
(CSU STD DET A4-2)

STA=15+27.15
PROPOSED 8"X8" CROSS W/
4 8" GATE VALVE,
1 8" SECONDARY GATE VALVE
W/ MECH JOINT RESTRAINTS
(CSU STD DET A4-5)

STA=16+47.88
PROPOSED 8"X4" TEE W/ 0.25CY CTRB,
1 8" GATE VALVE, 1 4" GATE VALVE,
1 4" SECONDARY GATE VALVE
W/ MECH JOINT RESTRAINTS
(CSU STD DET A4-5)

STA=15+27.85
39.10' R
PROPOSED PUBLIC
8" WATER STUB WITH
8" CAP WITH 2" BOA PER A2-6
1.5 CY CRA PER A4-8

STA=16+56.84
PROPOSED 8"X6" TEE W/
0.50CY CTRB, 3 8" GATE VALVE
W/ MECH JOINT RESTRAINTS
(CSU STD DET A4-5)

STA=17+94.94
UTILITY CROSSING
BOT 8" W= 6859.99
TOP 42" STM= 6858.46
CLEAR= 1.5'

STA=17+80.37
PROPOSED 8"X8" TEE W/
0.75CY CTRB, 3 8" GATE
VALVE W/ MECH JOINT
RESTRAINTS (CSU STD DET A4-2)

STA=18+51.28
PROPOSED 11.25° VERITCAL BEND
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-6)
W/ CTRB
(CSU STD DET A4-2)

STA=11+24.13
UTILITY CROSSING
BOT 8" W= 6857.46
TOP 8" SAN= 6855.69
CLEAR= 1.8'

STA=10+25.18
CONNECT TO EXISTING
12" WATER LINE WITH A
12"x8" REDUCER AND
REMOVE 2" BOA

STA=15+27.15

MATCHLINE SEE SHEET W7.1 - STA 19+00

GRAPHIC SCALE
1" = 40'

Know what's below.
Call before you dig.

EXISTING GRADE

FINISHED GRADE

±102.8 LF ~ 8" PVC C900 @ 1.33%
±8.6 LF ~ 8" PVC C900 @ 4.77%
±142.5 LF ~ 8" PVC C900 @ 4.77%
±16.8 LF ~ 8" PVC C900 @ 4.78%
±79.0 LF ~ 8" PVC C900 @ 4.78%
±152.5 LF ~ 8" PVC C900 @ 1.05%
±120.7 LF ~ 8" PVC C900 @ 1.05%
±9.0 LF ~ 8" PVC C900 @ 1.21%
±116.4 LF ~ 8" PVC C900 @ 1.08%
±7.1 LF ~ 8" PVC C900 @ 1.09%
±70.9 LF ~ 8" PVC C900 @ 1.10%
±54.2 LF ~ 8" PVC C900 @ 0.11%

5.5'
2.0'
5.8'
5.0'
3.2'
7.0'

INSTALL: 12"x8" REDUCER
REMOVE 2" BOA
STA: 10+25.00
8" FL = 6856.05
FG GRADE
6867.81 6866.93 6866.88 6866.56 6866.16

INSTALL: 22.5° VERTICAL BEND
W/ MECH JOINT RESTRAINTS
STA: 11+27.79
8" FL = 6857.69
8" FL = 6857.69
6865.67

INSTALL: PROPOSED 8"x8" CROSS
W/ 4 8" GATE VALVES
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-5)
6865.10 6864.93 6864.81 6864.45 6864.13

INSTALL: 45° BEND W/ MECH
JOINT RESTRAINTS
STA: 12+78.90
8" FL = 6850.47
8" FL = 6850.47
6865.57

INSTALL: 45° BEND W/ MECH
JOINT RESTRAINTS
STA: 12+93.68
8" FL = 6849.67
8" FL = 6849.67
6863.22 6864.02

INSTALL: 22.5° VERT. BEND W/ MECH
JOINT RESTRAINTS
STA: 13+74.65
8" FL = 6849.38
8" FL = 6845.90
6864.92 6865.52 6866.02 6866.41 6866.53 6866.64 6866.91

INSTALL: PROPOSED 8"X6" CROSS
W/ (4) 8" GATE VALVES
W/ MECH. JOINT RESTRAINTS
STA: 15+27.15
8" FL = 6847.20
8" FL = 6847.49
8" FL = 6847.49
8" FL = 6847.20
6867.21 6867.48 6867.71

INSTALL: PROPOSED 8"X4" TEE
W/ 8" GATE VALE, 4" GATE VALVE
W/ SECONDARY GATE VALVE
W/ MECH. JOINT RESTRAINTS
STA: 16+47.88
8" FL = 6848.76
4" FL = 6848.76
6867.88 6868.04 6868.18

INSTALL: 8"x6" TEE W/ 6" GATE VALVE
& (2) 8" GATE VALVES W/ MECH
JOINT RESTRAINTS
STA: 16+56.84
8" FL = 6848.87
6" FL = 6848.87
6" FL = 6848.87
6868.32 6868.60 6868.81 6869.00

INSTALL: Null Structure
STA: 17+77.27
8" FL = 6850.13
8" FL = 6850.13
6" FL = 6850.13
6869.10

INSTALL: 8"x6" TEE W/ (3) 8"
GATE VALVES W/
MECH JOINT RESTRAINTS
STA: 17+80.37
8" FL = 6850.20
8" FL = 6850.20
8" FL = 6850.20
6" FL = 6850.20
6869.13 6869.32

INSTALL: 11.25° VERTICAL BEND
W/ MECH JOINT RESTRAINTS
STA: 18+51.28
8" FL = 6850.99
8" FL = 6850.99
6869.58 6870.21 6871.09

6870
6865
6860
6855
6850
6845

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00

WATERMAIN EAST LOOP PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073
WORK ORDER NUMBER: 3993272
CSU SHEET 2 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

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WATER MAIN EAST PLAN & PROFILE (1 OF 2)

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS COLORADO

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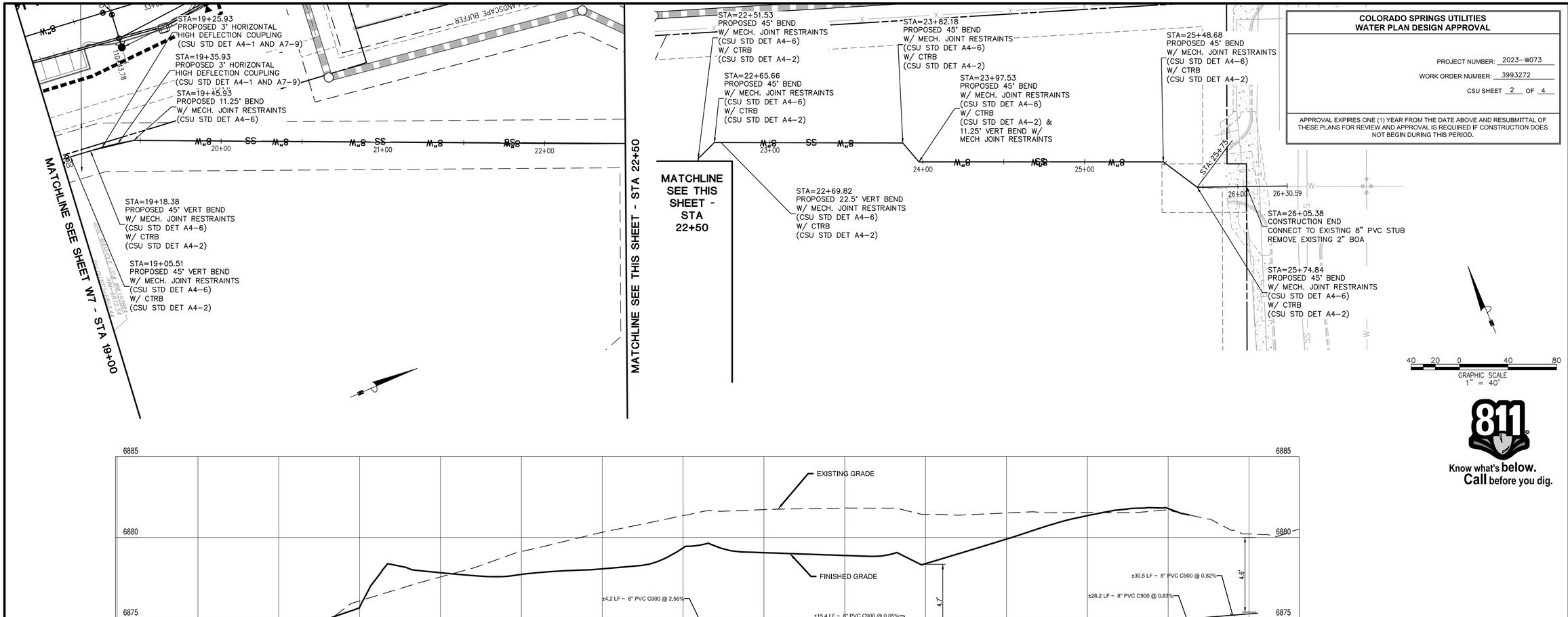
DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
W7



COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

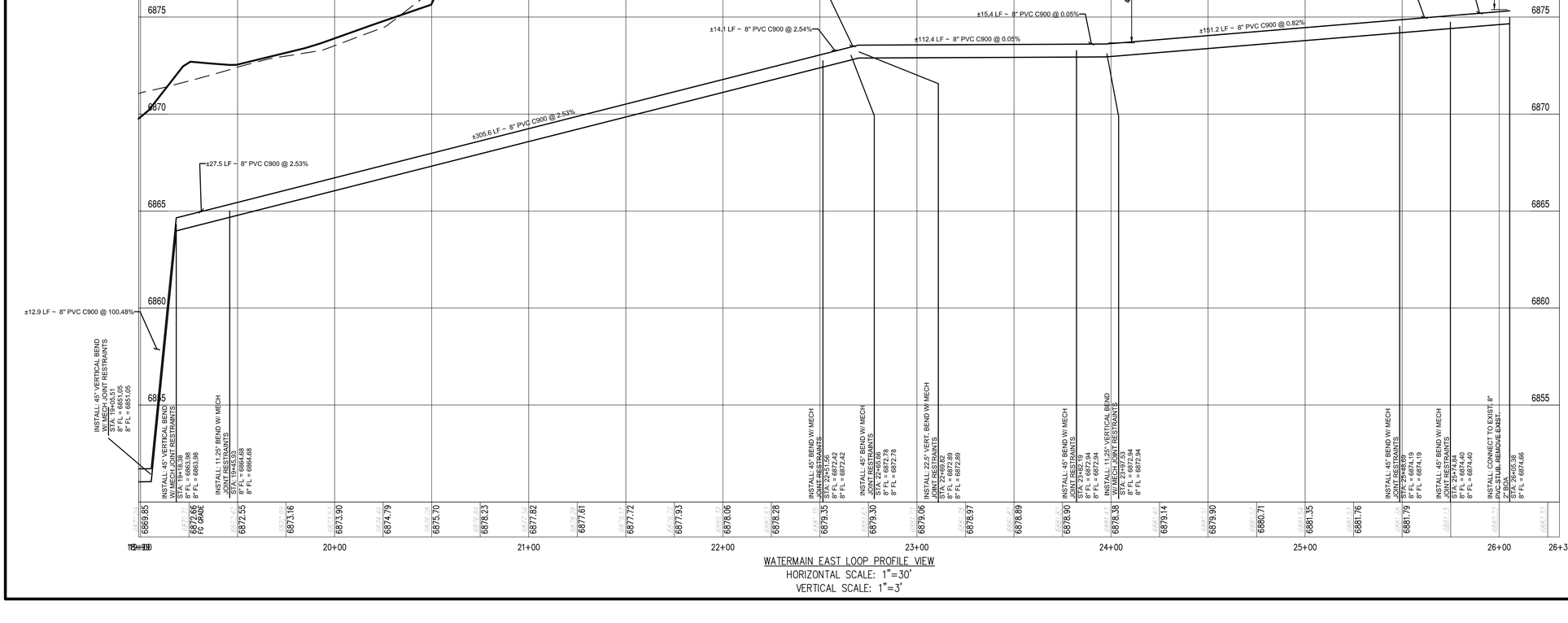
PROJECT NUMBER: 2023-W073

WORK ORDER NUMBER: 3993272

CSU SHEET 2 OF 4

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WATERMAIN EAST LOOP PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

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WATER MAIN EAST PLAN & PROFILE (2 OF 2)

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

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DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
W7.1

STA=30+25.00
PROPOSED 8"X8" TEE W/
0.75CY CTRB, 3 8" GATE
VALVE W/ MECH JOINT
RESTRAINTS (CSU STD DET A4-2)

STA=30+90.38
UTILITY CROSSING
BOT 8" W= 6849.66
TOP 12" STM= 6848.01
CLEAR= 1.7'

STA=30+95.02
PROPOSED 45° BEND
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-6)
W/ CTRB
(CSU STD DET A4-2)

STA=31+07.75
PROPOSED 45° BEND
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-6)
W/ CTRB
(CSU STD DET A4-2)

STA=31+46.68
PROPOSED 8"X6" TEE W/
0.50CY CTRB, 1 6" GATE VALVE,
1 8" GATE VALVE W/ MECH JOINT
RESTRAINTS (CSU STD DET A4-5)

STA=32+73.83
PROPOSED 8"X6" TEE W/
0.50CY CTRB, 1 6" GATE VALVE,
1 8" GATE VALVE W/ MECH JOINT
RESTRAINTS (CSU STD DET A4-5)

STA=32+75.49
23.78' R
PROPOSED HYDRANT FH-B

STA=33+11.81
PROPOSED 45° BEND
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-6)
W/ CTRB
(CSU STD DET A4-2)

STA=33+24.56
PROPOSED 45° BEND
W/ MECH. JOINT RESTRAINTS
(CSU STD DET A4-6)
W/ CTRB
(CSU STD DET A4-2)

STA=33+83.18
UTILITY CROSSING
BOT 8" W= 6848.78
TOP 8" STM= 6847.28
CLEAR= 1.5'

STA=34+88.10
UTILITY CROSSING
BOT 8" W= 6848.35
TOP 8" STM= 6846.85
CLEAR= 1.5'

STA=35+93.17
UTILITY CROSSING
BOT 8" W= 6847.91
TOP 8" STM= 6846.41
CLEAR= 1.5'

STA=36+31.35
PROPOSED 8"X6" TEE W/
0.50CY CTRB, 1 6" GATE VALVE,
1 8" GATE VALVE W/ MECH JOINT
RESTRAINTS (CSU STD DET A4-5)

STA=36+31.35
20.40' R
PROPOSED HYDRANT FH-C

STA=36+76.62
UTILITY CROSSING
BOT 8" W= 6847.75
TOP 8" STM= 6846.25
CLEAR= 1.5'

MATCHLINE SEE SHEET W5 - STA 10+15.97

GRAPHIC SCALE
1" = 40'

Know what's below.
Call before you dig.

EXISTING GRADE
FINISHED GRADE

±13.7 LF ~ 8" PVC C900 @ 0.00%
±1.9 LF ~ 8" PVC C900 @ 231.24%
±3.9 LF ~ 8" PVC C900 @ 68.27%
±12.7 LF ~ 8" PVC C900 @ 0.00%
±38.9 LF ~ 8" PVC C900 @ 0.00%
±43.1 LF ~ 8" PVC C900 @ 0.00%
±127.1 LF ~ 8" PVC C900 @ 0.00%
±12.7 LF ~ 8" PVC C900 @ 0.00%
±38.0 LF ~ 8" PVC C900 @ 0.00%
±306.8 LF ~ 8" PVC C900 @ 0.00%
±348.1 LF ~ 8" PVC C900 @ 0.00%

INSTALL 8"x6" TEE W/ GATE VALVE W/ MECH JOINT RESTRAINTS (3) 8" GATE VALVE W/ MECH JOINT STA: 30+25.00 8" FL = 6850.20 8" FL = 6850.20 8" FL = 6850.20 8" FL = 6850.20

INSTALL 45° VERTICAL BEND W/ MECH JOINT RESTRAINTS STA: 30+47.96 8" FL = 6845.69 8" FL = 6845.69

INSTALL 45° VERT BEND W/ MECH JOINT RESTRAINTS STA: 30+34.31 8" FL = 6845.80 8" FL = 6845.80

INSTALL 45°BEND W/ MECH. JOINT RESTRAINTS STA: 30+95.02 8" FL = 6848.58

INSTALL 45°BEND W/ MECH. JOINT RESTRAINTS STA: 31+07.75 8" FL = 6848.58 8" FL = 6848.58

INSTALL 8"x6" TEE W/ 6" GATE VALVE W/ MECH JOINT RESTRAINTS STA: 31+46.70 8" FL = 6848.58 8" FL = 6848.58 6" FL = 6848.58

INSTALL 8"x6" TEE W/ 6" GATE VALE & 8" GATE VALVE W/ MECHRESTRAINTS STA: 32+73.83 8" FL = 6848.58 8" FL = 6848.58 6" FL = 6848.58

INSTALL 45°BEND W/ MECH. JOINT RESTRAINTS STA: 33+11.81 8" FL = 6848.58 8" FL = 6848.58

INSTALL 45°BEND W/ MECH. JOINT RESTRAINTS STA: 33+24.54 8" FL = 6848.58 8" FL = 6848.58

INSTALL 8"x6" TEE W/ 6" GATE VALVE W/ MECH JOINT RESTRAINTS STA: 33+83.18 8" FL = 6848.58 8" FL = 6848.58 6" FL = 6848.58

INSTALL 8"x6" TEE W/ 6" GATE VALE W/ MECH RESTRAINTS STA: 34+88.10 8" FL = 6848.58 8" FL = 6848.58 6" FL = 6848.58

INSTALL 8"x6" TEE W/ 6" GATE VALE & 8" GATE VALVE W/ MECHRESTRAINTS STA: 36+31.35 8" FL = 6848.58 8" FL = 6848.58 6" FL = 6848.07

| | | |

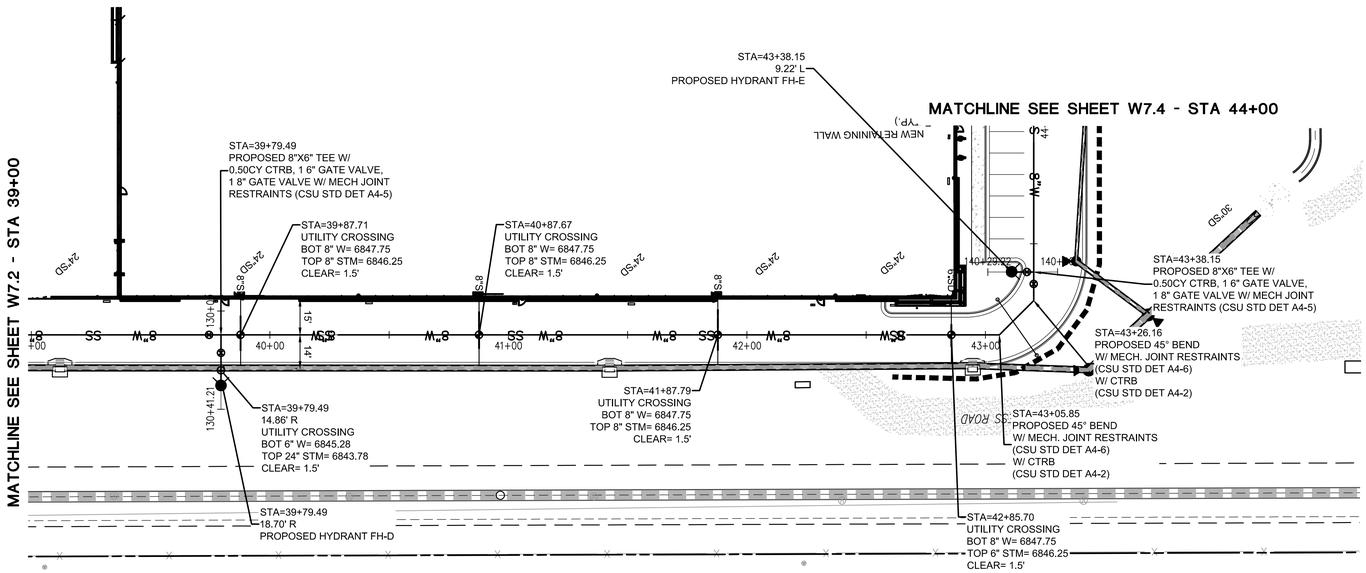
COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

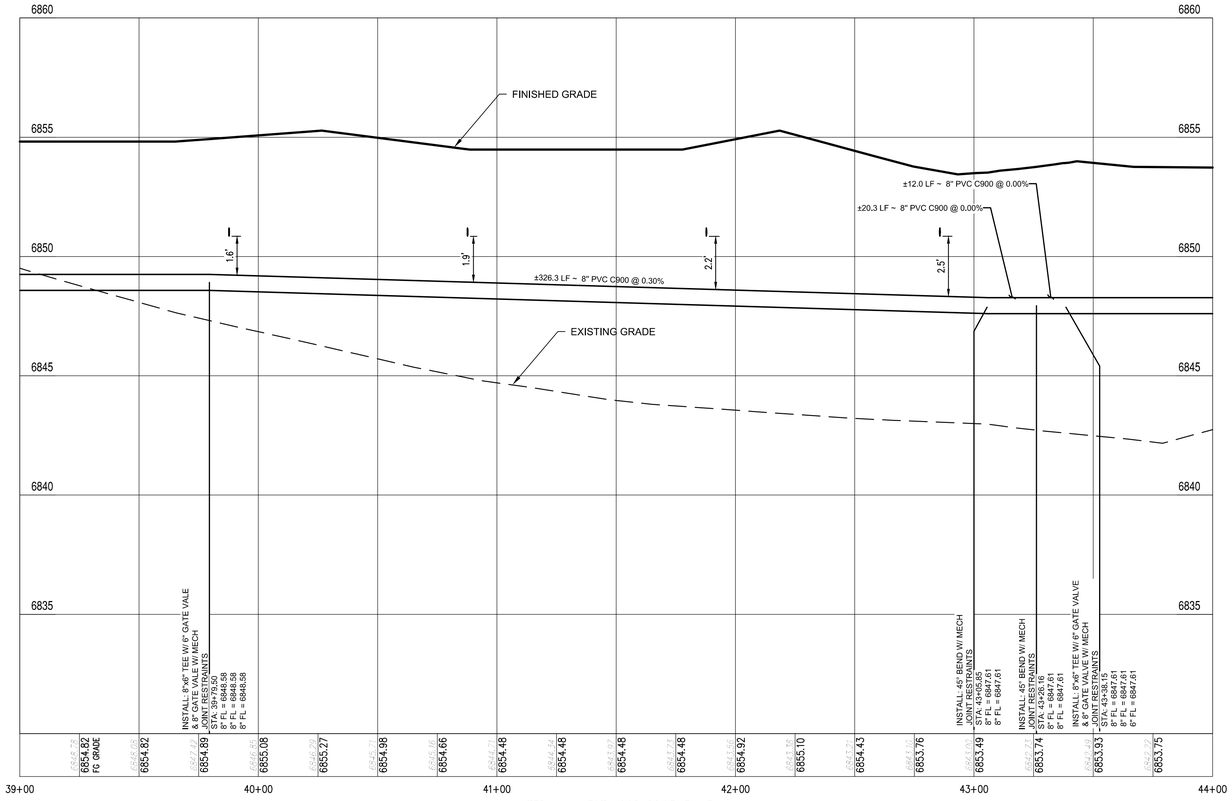
PROJECT NUMBER: 2023-W073

WORK ORDER NUMBER: 3993272

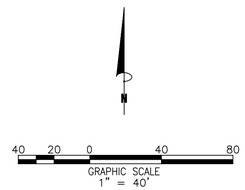
CSU SHEET 2 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.





WATERMAIN WEST LOOP PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



811
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REVISIONS

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E	5TH WATER PLAN COMMENTS	10/10/24

WATER MAIN WEST PLAN & PROFILE (2 OF 4)

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS COLORADO

SEAL

NOT FOR CONSTRUCTION

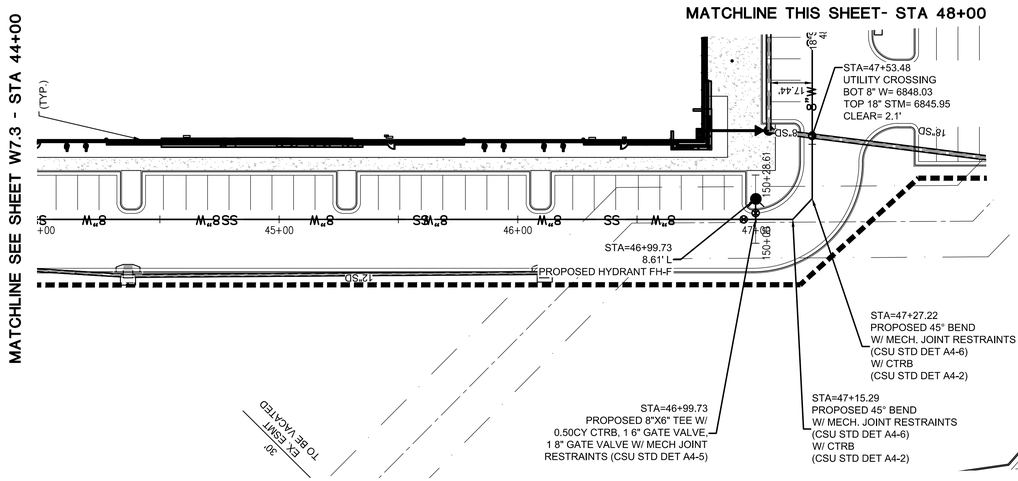
DESIGN	DRAWN	CHKD
HE	VH	HE

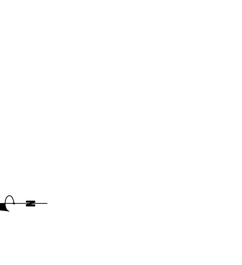
SCALE H:
V:

JOB No. 050895-01-001

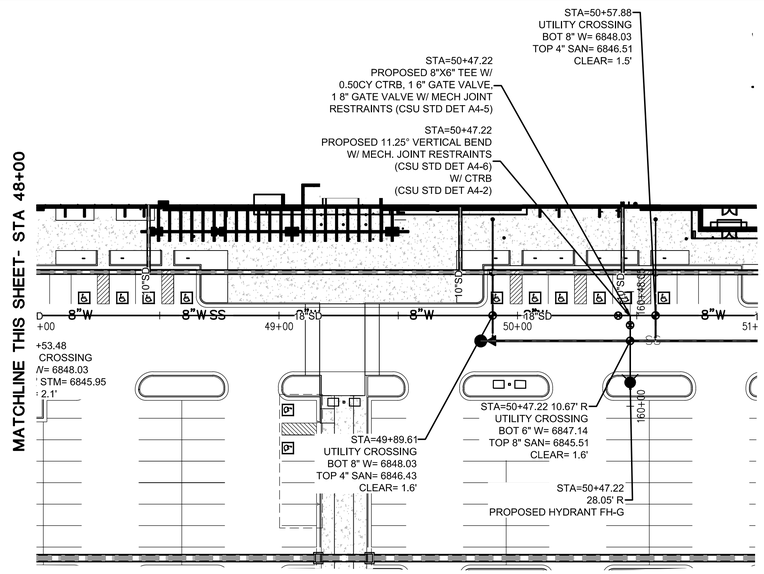
DATE : 04/12/2023

SHEET
W7.3





Know what's **below.**
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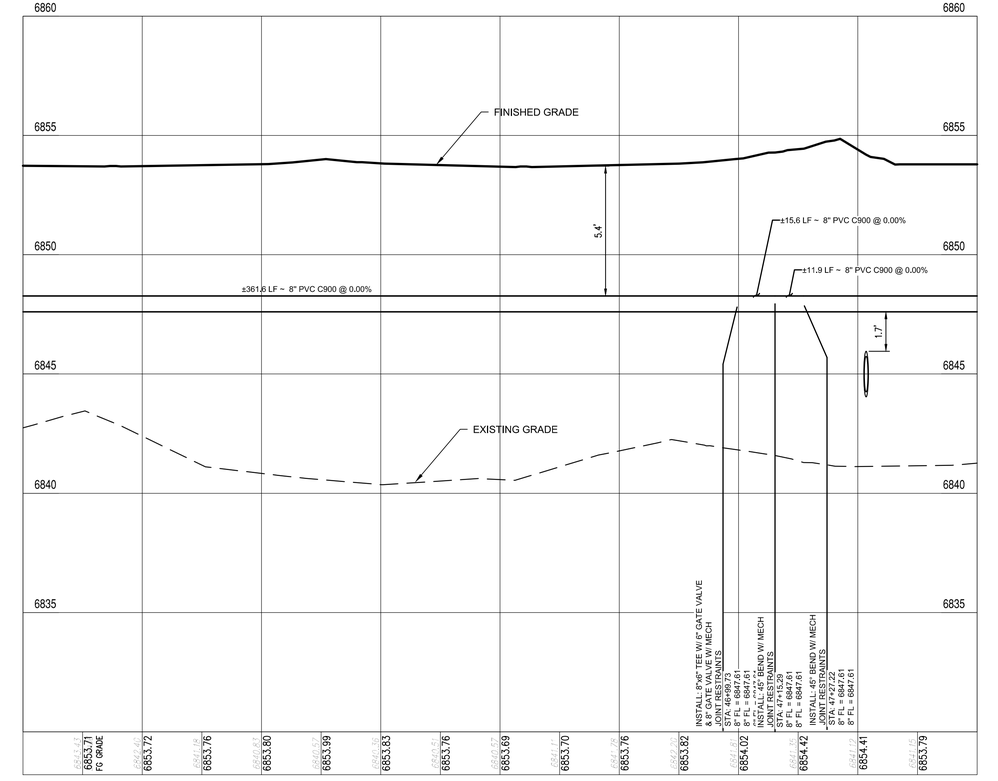
COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073

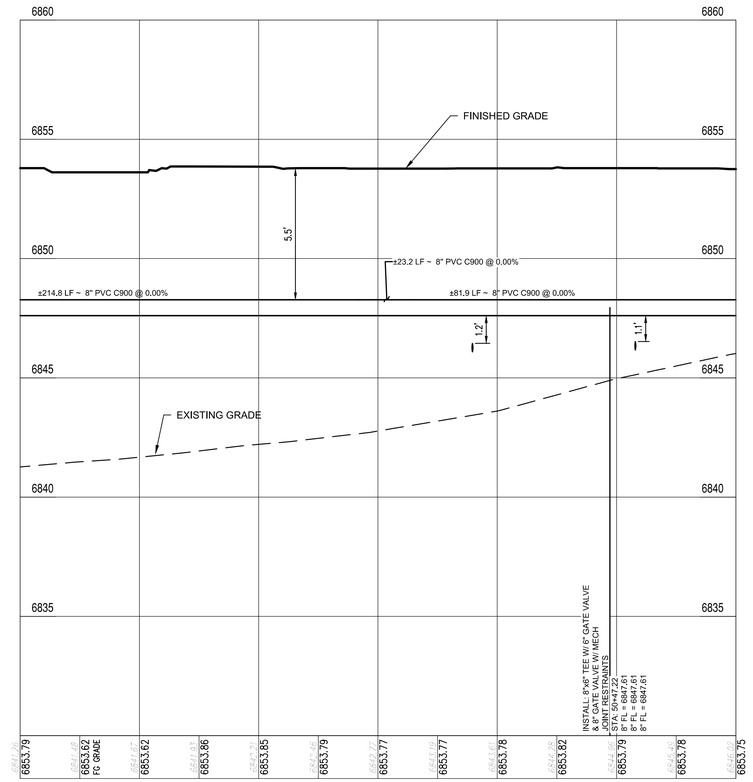
WORK ORDER NUMBER: 3993272

CSU SHEET 2 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.



WATERMAIN WEST LOOP PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



WATERMAIN WEST LOOP PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

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E	5TH WATER PLAN COMMENTS	10/10/24

WATER MAIN WEST PLAN & PROFILE (3 OF 4)

AFW - COLORADO SPRINGS WATER PLANS

CITY OF COLORADO SPRINGS COLORADO

SEAL

NOT FOR CONSTRUCTION

DESIGN	DRAWN	CHKD
HE	VH	HE

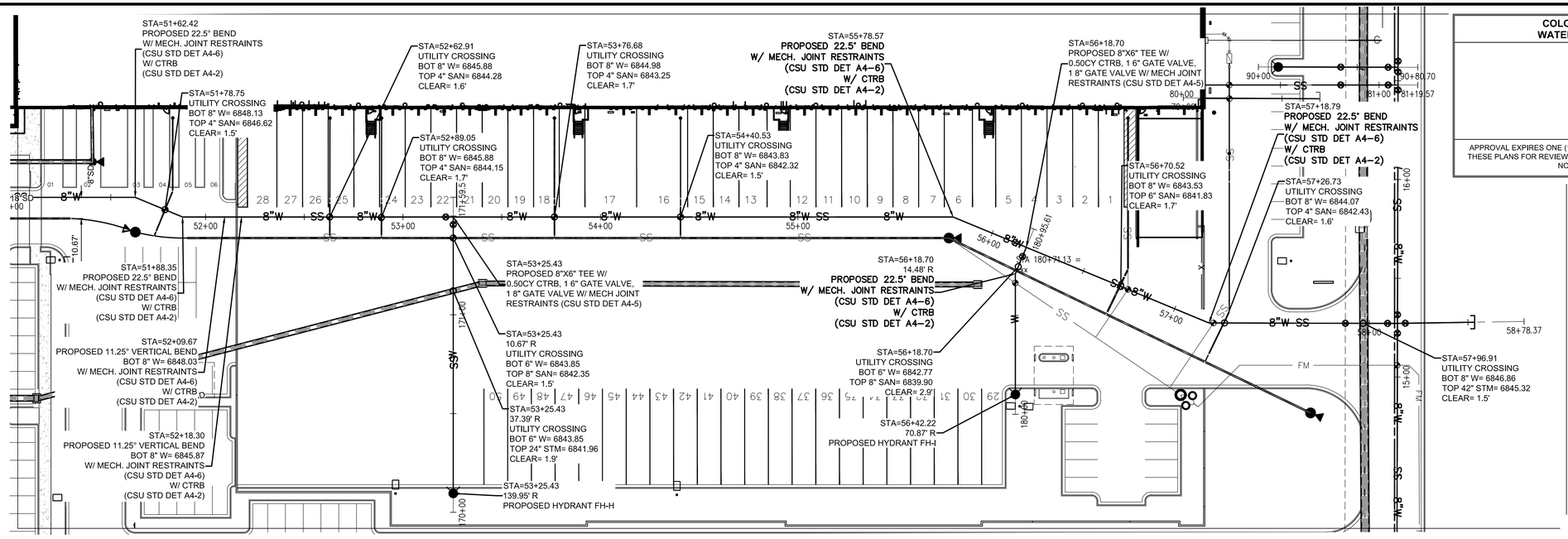
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V:

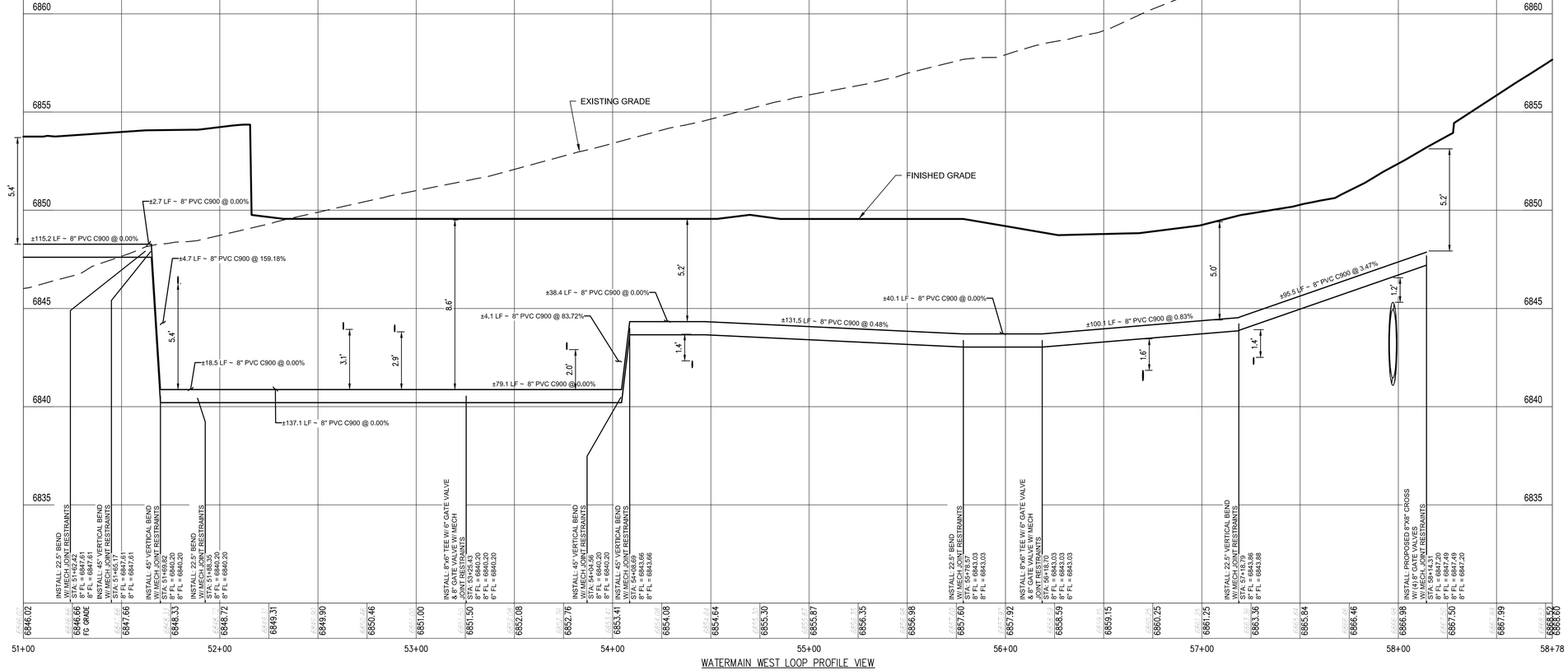
JOB No. 050895-01-001

DATE : 04/12/2023

SHEET
W7.4

MATCHLINE SEE SHEET W7.4 - STA 51+00





WATERMAIN WEST LOOP PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073

WORK ORDER NUMBER: 3993272

CSU SHEET 2 OF 4

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E	5TH WATER PLAN COMMENTS	10/10/24

GRAPHIC SCALE
1" = 40'

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WATER MAIN WEST PLAN & PROFILE (4 OF 4)

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS COLORADO

SEAL

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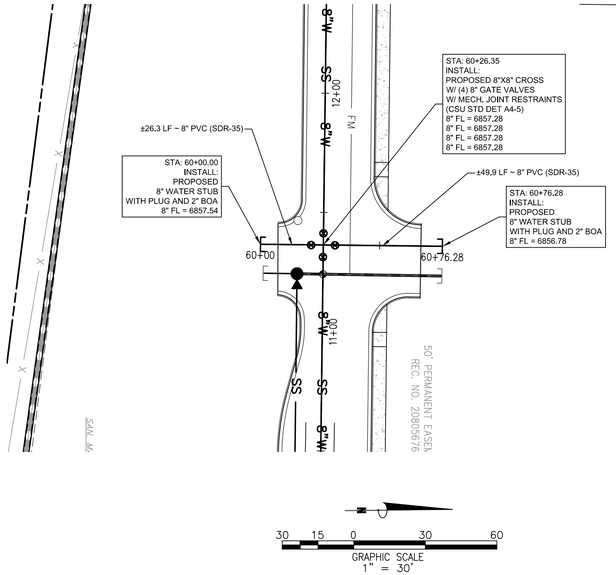
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HE	VH	HE

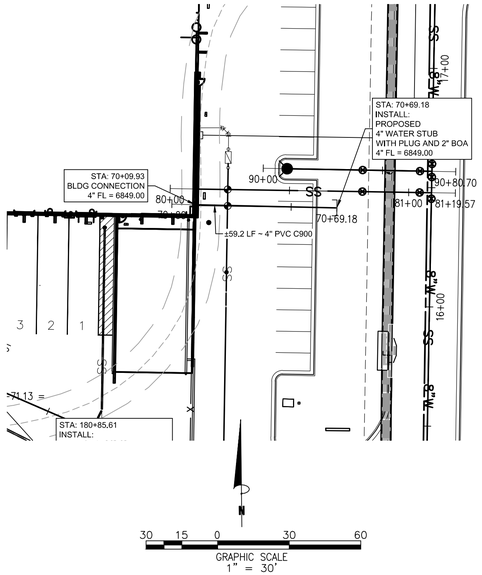
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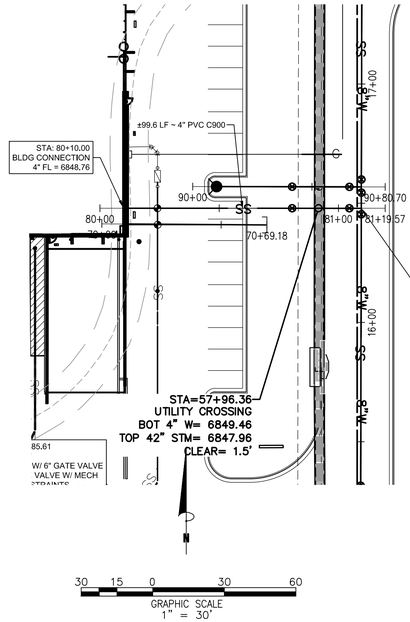
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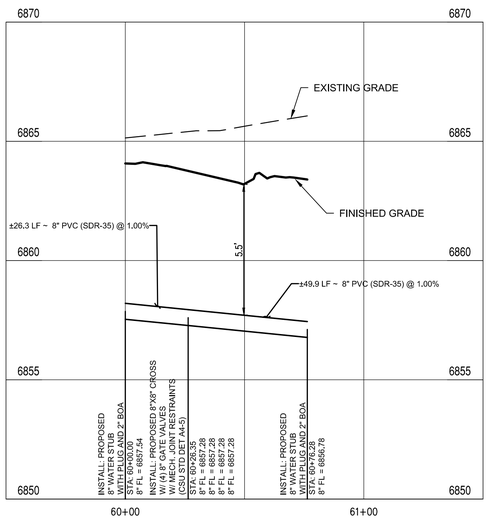
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SHEET
W7.5

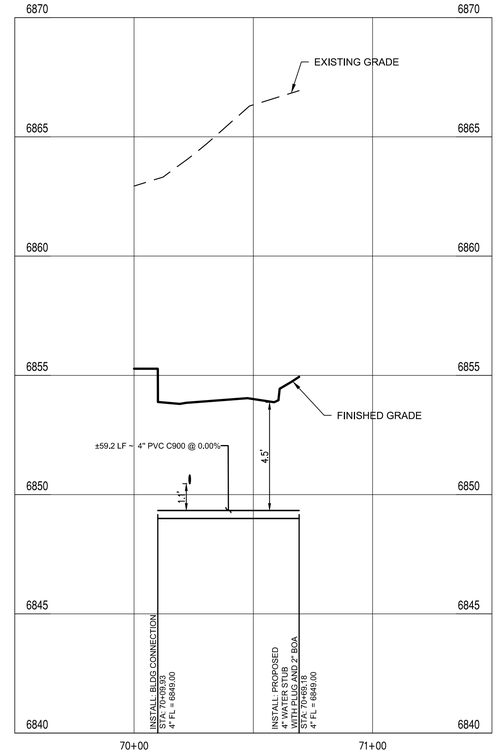




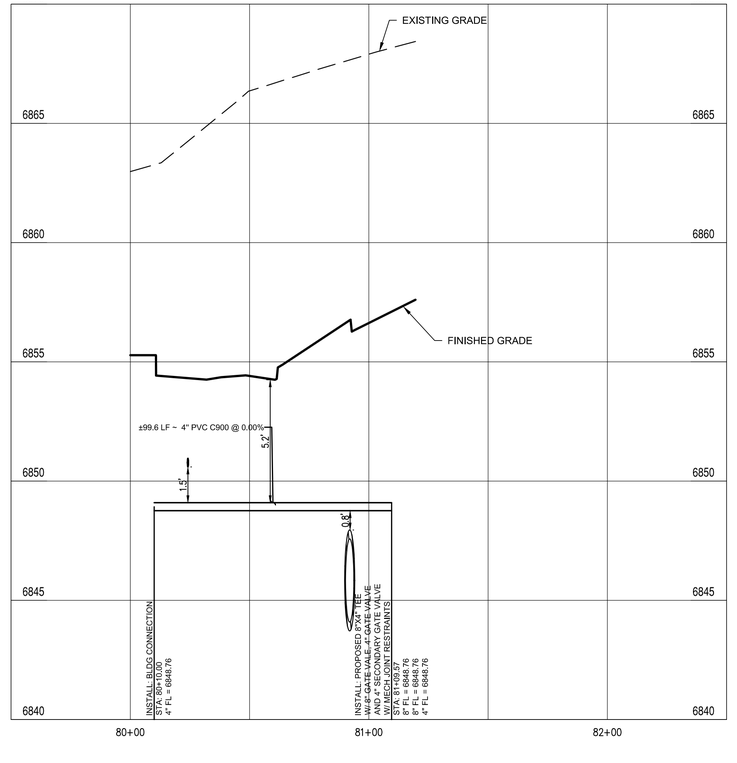




WATER SERVICE 1 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



WATER SERVICE 2 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



WATER SERVICE 3 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073

WORK ORDER NUMBER: 3993272

CSU SHEET 2 OF 4

APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

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E	5TH WATER PLAN COMMENTS	10/10/24

WATER SERV PLAN & PRO (1 OF 5)

AFW - COLORADO SPRINGS
WATER PLANS

COLORADO
CITY OF COLORADO SPRINGS

SEAL

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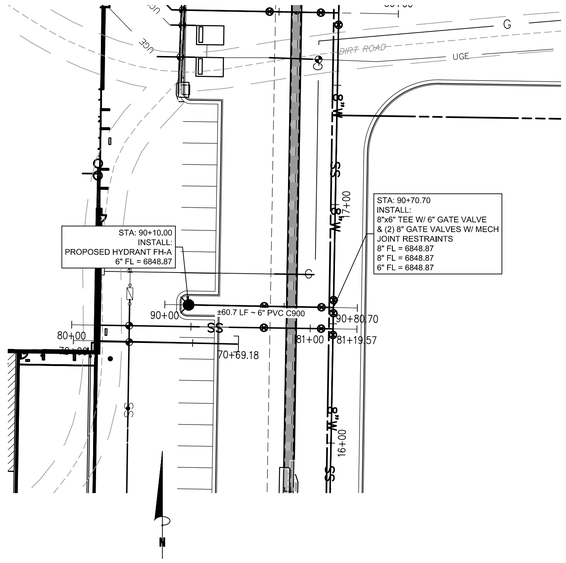
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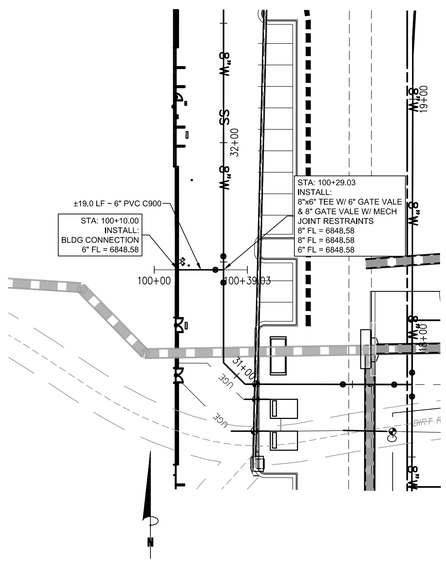
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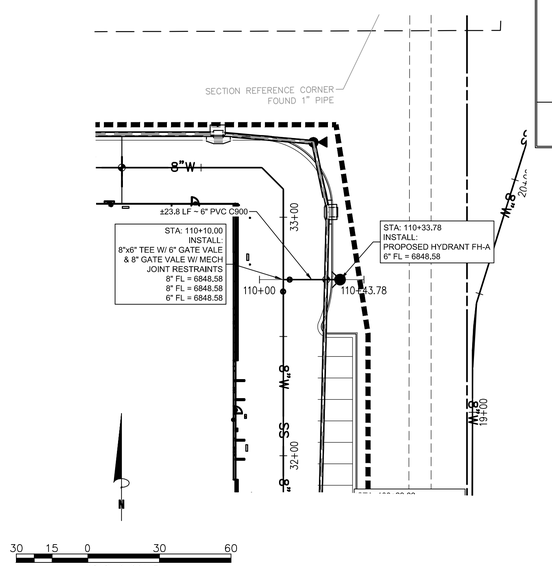
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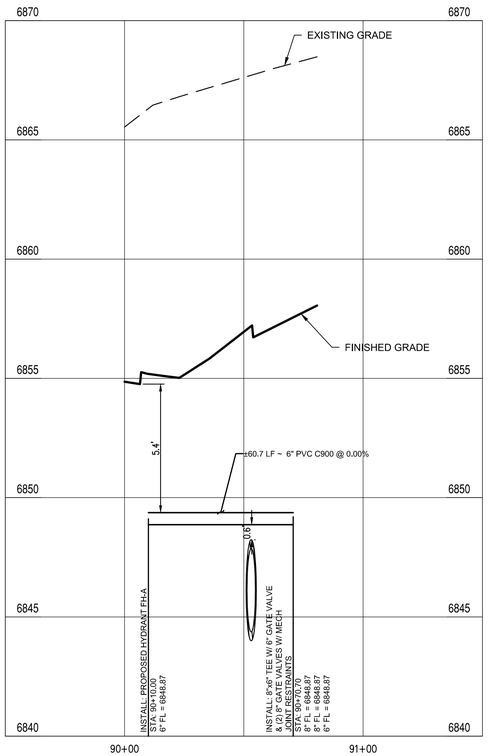
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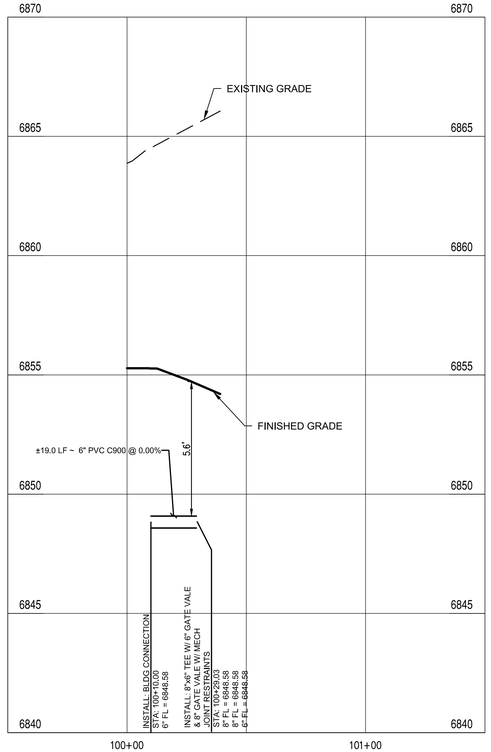




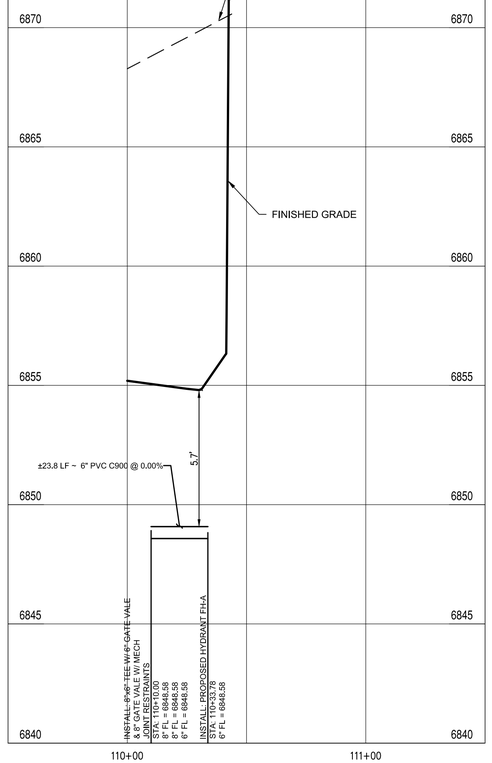




WATER SERVICE 4 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



WATER SERVICE 5 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



WATER SERVICE 6 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073
WORK ORDER NUMBER: 3993272
CSU SHEET 2 OF 4

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WATER SERV PLAN & PRO (2 OF 5)

AFW - COLORADO SPRINGS
WATER PLANS

COLORADO
CITY OF COLORADO SPRINGS

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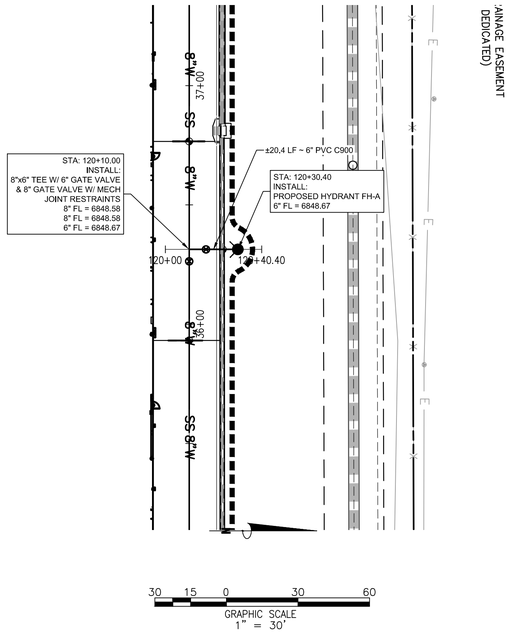
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HE	VH	HE

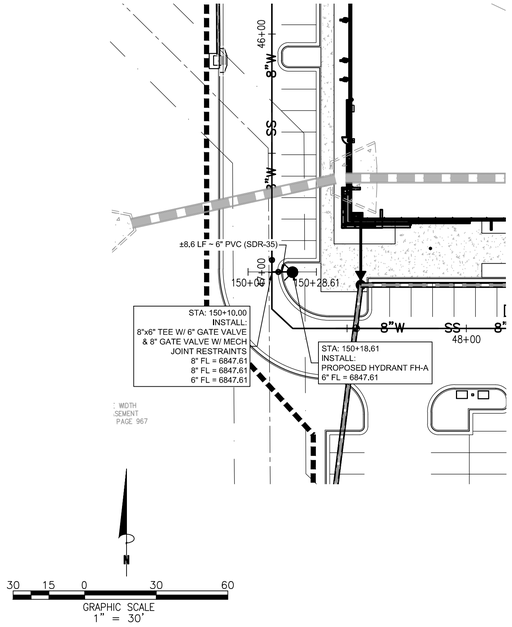
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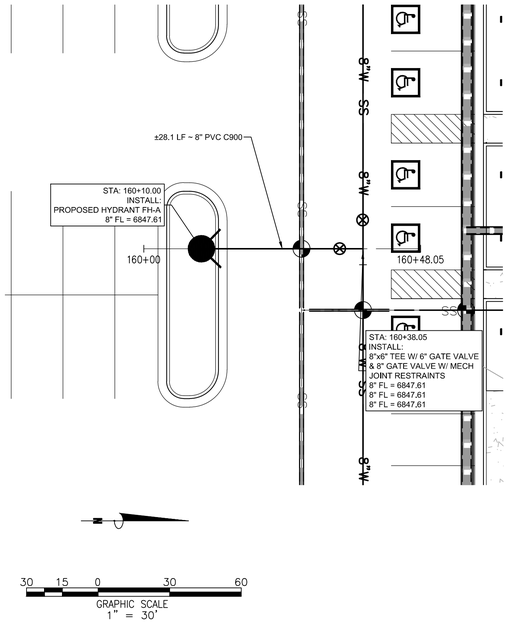
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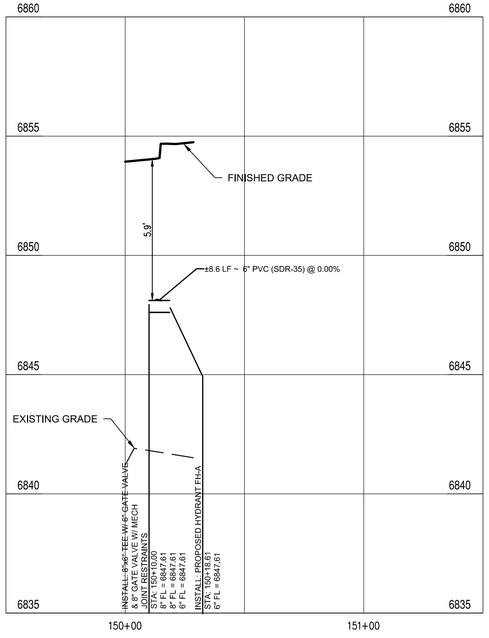
DATE : 04/12/2023

SHEET
W7.7

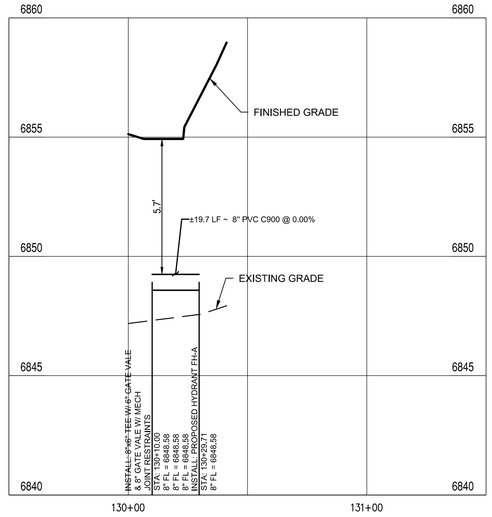

8"W
SS
37+00
36+00
120+00
121+40.40
±20.4 LF ~ 6" PVC C900
STA: 120+10.00
INSTALL:
8"x6" TEE W/ 6" GATE VALVE
& 8" GATE VALE W/ MECH
JOINT RESTRAINTS
8" FL = 6848.58
8" FL = 6848.58
6" FL = 6848.67
STA: 120+30.40
INSTALL:
PROPOSED HYDRANT FH-A
6" FL = 6848.67
E
E
E







WATER SERVICE 10 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



WATER SERVICE 8 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073

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CSU SHEET 2 OF 4

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WATER SERV PLAN & PRO (4 OF 5)

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS

COLORADO

SEAL

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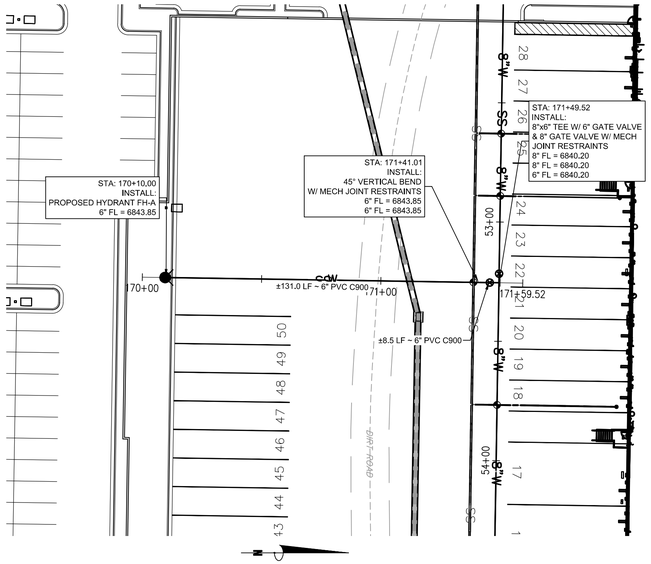
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HE	VH	HE

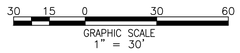
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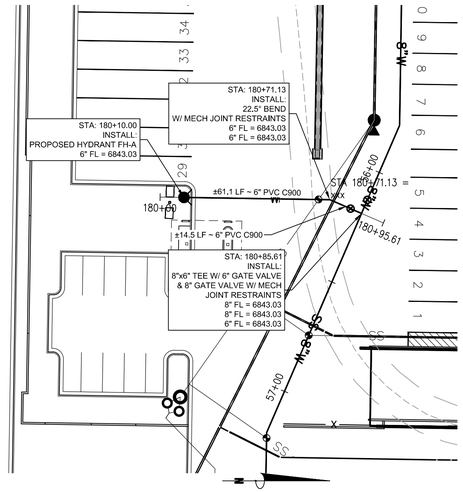
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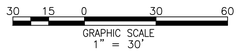
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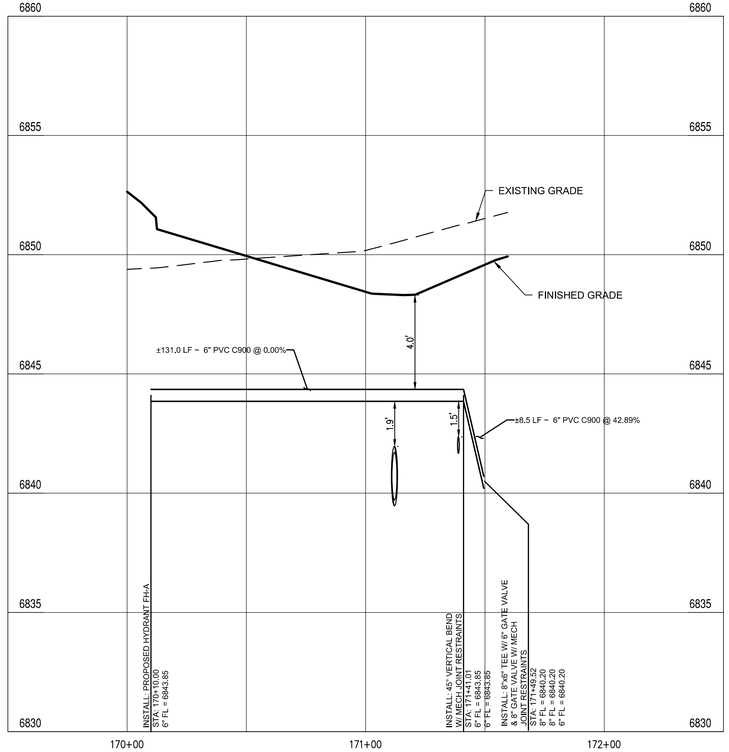
SHEET
W7.9



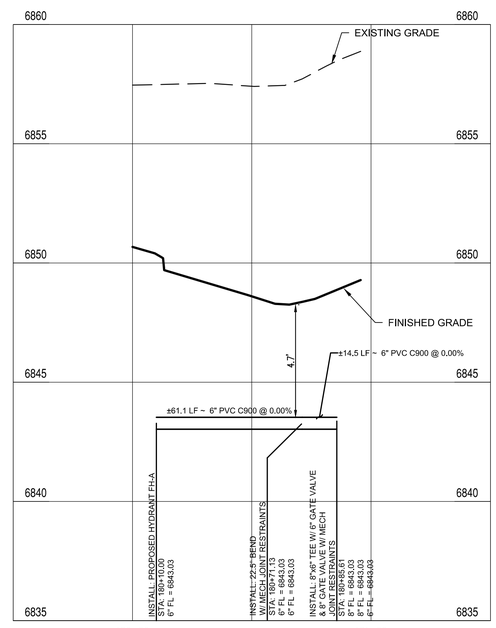








WATER SERVICE 12 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



WATER SERVICE 13 PROFILE VIEW
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

COLORADO SPRINGS UTILITIES
WATER PLAN DESIGN APPROVAL

PROJECT NUMBER: 2023-W073

WORK ORDER NUMBER: 3993272

CSU SHEET 2 OF 4

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WATER SERV PLAN & PRO (5 OF 5)

AFW - COLORADO SPRINGS
WATER PLANS

CITY OF COLORADO SPRINGS COLORADO

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DESIGN	DRAWN	CHKD
HE	VH	HE

SCALE H:
V:

JOB No. 050895-01-001

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SHEET
W7.10