



**LAYER LINETYPE LEGEND**

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE		
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV		
ELECTRIC		
FIBER OPTIC		
GAS MAIN		
IRRIGATION MAIN		
OIL/PETRO. MAIN		
OVERHEAD UTILITY		
SANITARY SEWER		
STORM DRAIN		
TELEPHONE		
WATER MAIN		
RAW WATER LINE		
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR		
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)		
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		
SILT FENCE		
100 YEAR FLOODPLAIN		
500 YEAR FLOODPLAIN		
FLOODWAY		
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

**LANDSCAPE LEGEND**

	EXISTING	PROPOSED
TREE - CONIFEROUS		
TREE - DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE		

**UTILITIES LEGEND**

	EXISTING	PROPOSED
<b>STORM SEWER</b>		
MANHOLE		
STORM INLET		
AREA INLET - SQUARE		
AREA INLET - ROUND		
FLARED END SECTION		
RIPRAP		
<b>SANITARY SEWER</b>		
LINE MARKER	Mkr San <sup>o</sup>	
SERVICE MARKER		
CLEAN-OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
<b>WATER LINE</b>		
LINE MARKER	Mkr W <sup>o</sup>	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW-OFF VALVE		
WELL		
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW-OFF ASSEMBLY		
<b>GAS LINE</b>		
MARKER	Mkr G <sup>o</sup>	
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
<b>DRY UTILITIES</b>		
CABLE TV MARKER	Mkr TV <sup>o</sup>	
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER	Mkr E <sup>o</sup>	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER-OPTIC MARKER	Mkr FO <sup>o</sup>	
IRRIGATION PEDESTAL		
TELEPHONE MARKER	Mkr T <sup>o</sup>	
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
<b>MISC. UTILITIES</b>		
VENT PIPE	VP <sup>o</sup> VP	
TEST HOLE DESIGNATOR	FIRM AGENCY	

**MONUMENTATION LEGEND**

ALUMINUM CAP - FOUND	•AC
BRASS CAP - FOUND	•BC
BENCHMARK - FOUND	
CROSS - FOUND	
MONUMENT - SET	○
MONUMENT - FOUND (DEFAULT)	●
MONUMENT - FOUND (ALTERNATE 1)	■
MONUMENT - FOUND (ALTERNATE 2)	□
MONUMENT - FOUND (ALTERNATE 3)	▲
MONUMENT - FOUND (ALTERNATE 4)	△
MONUMENT - FOUND (ALTERNATE 5)	◆
MONUMENT - FOUND (ALTERNATE 6)	●
MONUMENT - FOUND (ALTERNATE 7)	●
NAIL & WASHER - FOUND	● NAIL & WASHER
PANEL - FOUND	
PK NAIL - FOUND	● PK NAIL
ROW MONUMENT - FOUND	
ROW MARKER - FOUND	
SECTION CORNER - FOUND	
SECTION CORNER - SET	
QUARTER-SECTION CORNER - FOUND	
QUARTER-SECTION CORNER - SET	
SECTION CENTER - FOUND	◎
SECTION CENTER - FOUND	◎
CONTROL/TRVERSE POINT - SET	△

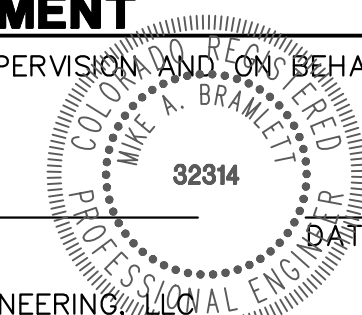
**STORM WATER MANAGEMENT**

KEY	SYMBOL
CHECK DAM	
CONSTRUCTION ROAD STABILIZATION	
CURB SOCK INLET PROTECTION	
CONCRETE WASHOUT AREA	
DIVERSION DITCH AND DIKE, TEMPORARY	
DIVERSION CHANNEL, TEMPORARY	
DEWATERING	
EROSION CONTROL BLANKET	
INLET FILTER	
INLET PROTECTION	
MULCHING	
OUTLET PROTECTION	
PAVED FLUME	
PERMANENT SEEDING	
REINFORCED CONCRETE DAM	
ROUGH CUT STREET CONTROL	
SEDIMENT BASIN	
SEDIMENT CONTROL LOG	
SILT FENCE	
SURFACE ROUGHENING	
STABILIZED STAGING AREA	
SEDIMENT TRAP	
STRAW BALE BARRIER	
TERRACING	
TEMPORARY SEEDING	
TEMPORARY STREAM CROSSING CULVERT/BRIDGE	
TEMPORARY STREAM CROSSING FORD TYPE	
TEMPORARY SLOPE DRAIN	
VEHICLE TRACKING CONTROL	

PREPARED FOR <b>RHETORIC, LLC</b> 20 BOULDER CRESCENT, STE 200 COLORADO SPRINGS, CO ERIC HOWARD EHOWARDPC@GMAIL.COM (719) 964-0064	UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE AS DESIGNATED BY WRITTEN AUTHORIZATION.
	BY DATE No. REVISION H-SCALE N/A V-SCALE N/A DATE 08/01/23 DESIGNED BY PAL DRAWN BY PAL CHECKED BY
	<b>J.R. ENGINEERING</b> A Westman Company  Central 303-740-9888 • Colorado Springs 719-583-2583 Fort Collins 970-491-9888 • www.jrengineering.com
	STERLING RECYCLING FACILITY LEGEND
	SHEET 2 OF 19 JOB NO. 25188.14

**ENGINEER'S STATEMENT**

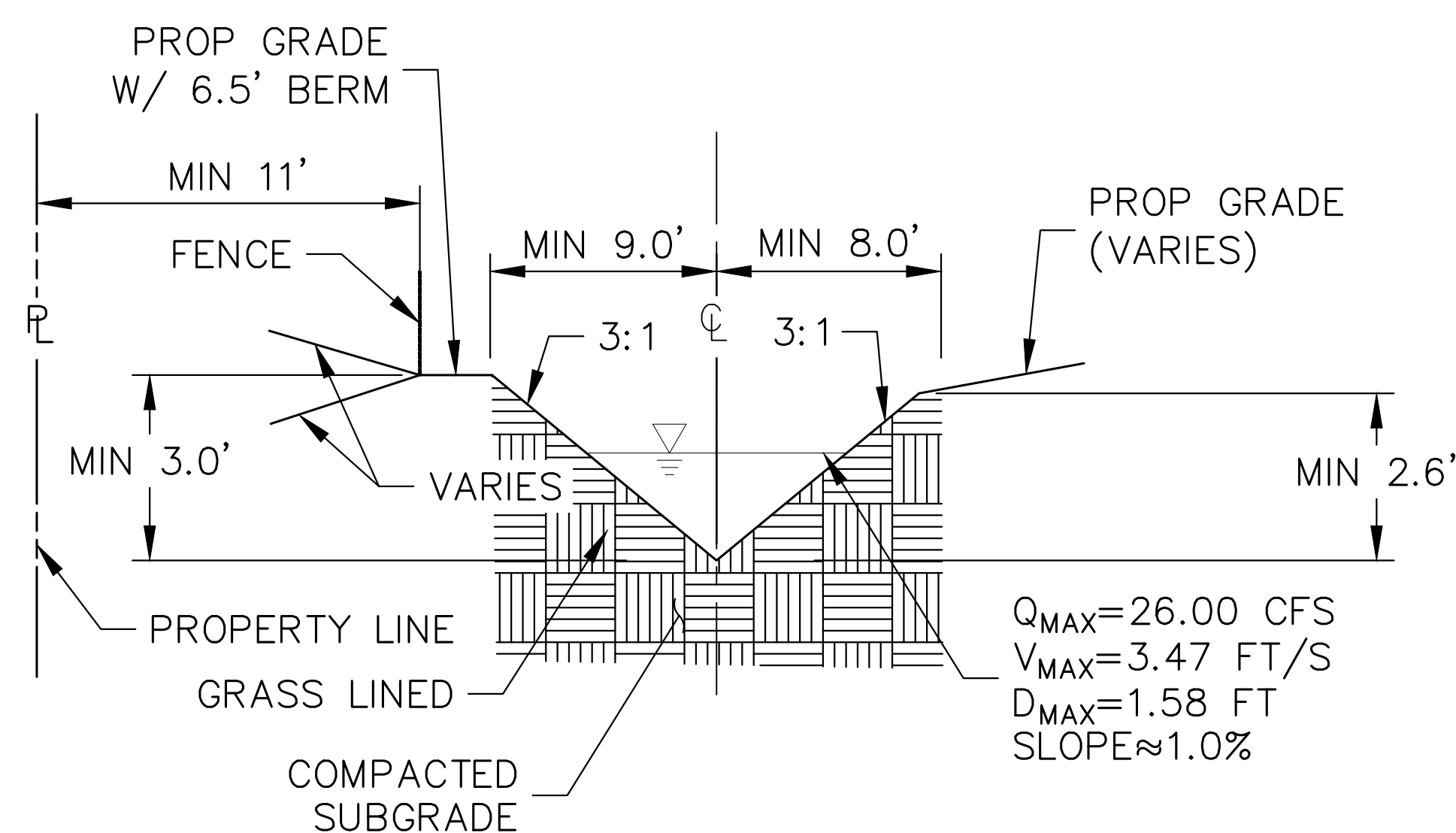
PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING



MIKE A. BRAMLETT, P.E.  
 COLORADO P.E. 32314  
 FOR AND ON BEHALF OF JR ENGINEERING

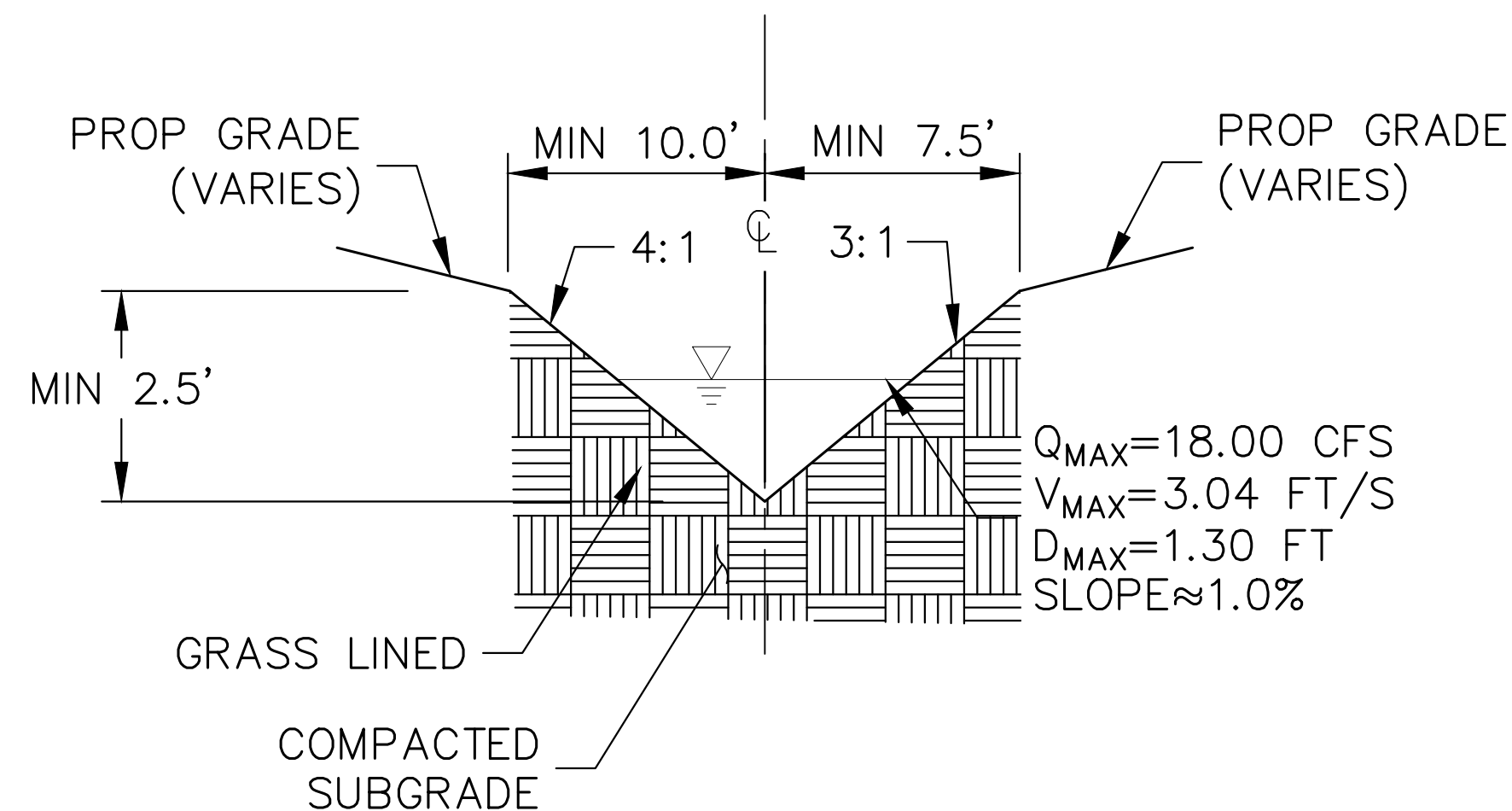


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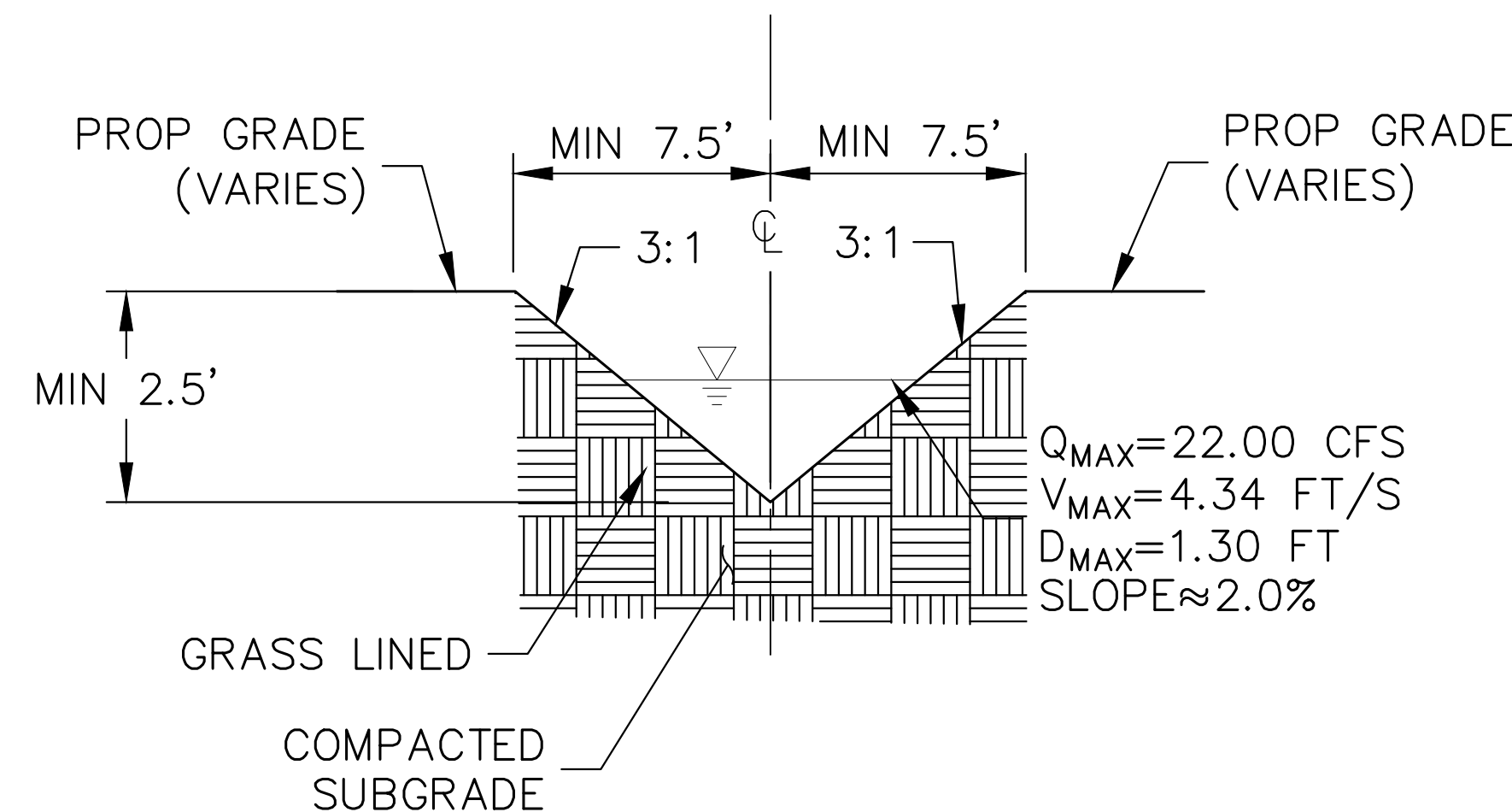
SWALE SECTION DP2  
TYPICAL DETAIL

SCALE: N.T.S.



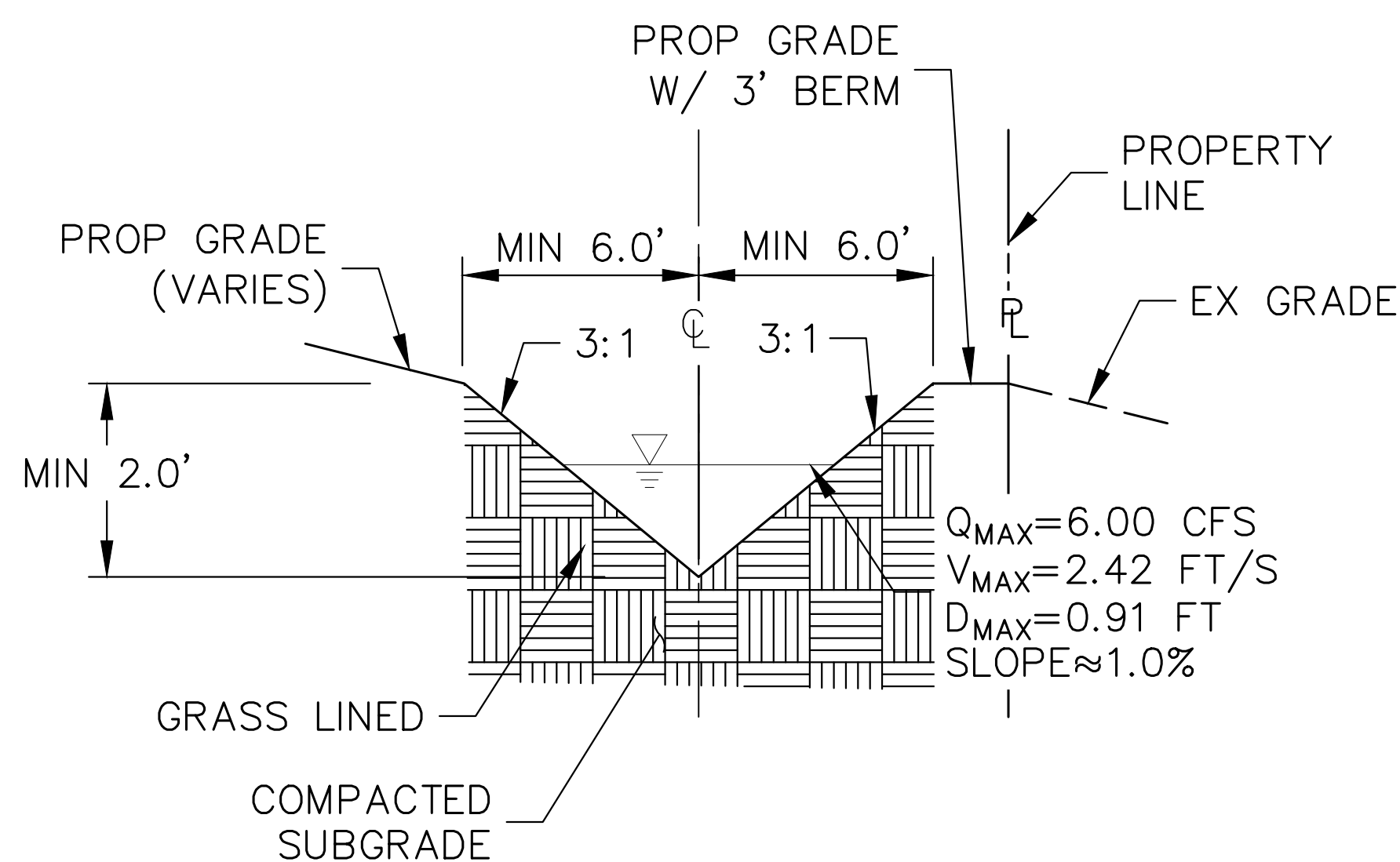
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TYPICAL DETAIL

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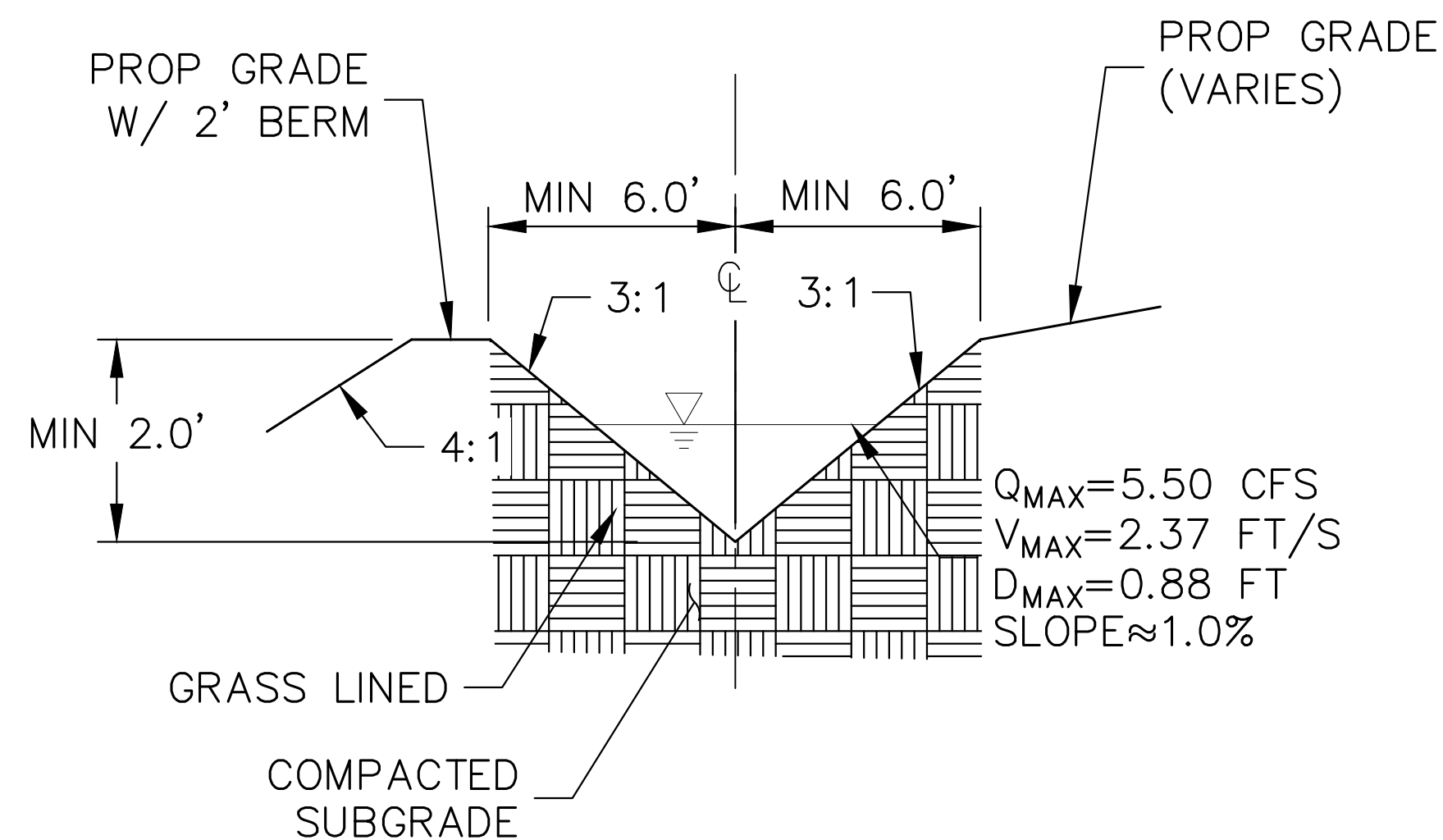
SWALE SECTION DP4.1  
TYPICAL DETAIL

SCALE: N.T.S.



SWALE SECTION DP5  
TYPICAL DETAIL

SCALE: N.T.S.




SWALE SECTION DP6  
TYPICAL DETAIL

SCALE: N.T.S.

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PREPARED FOR  
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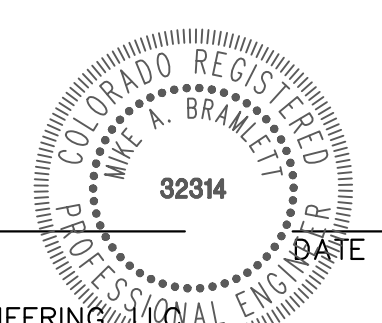


BY		DATE	
No.	REVISION	DESIGNED BY	DATE
H-SCALE	N/A	DESIGNED BY	PAL
V-SCALE	N/A	DRAWN BY	PAL
DATE	08/01/23	CHECKED BY	

STERLING RECYCLING FACILITY	TYPICAL SECTION
SHEET 3 OF 19	JOB NO. 25188.14

**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. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

MIKE A. BRAMLETT, P.E.  
COLORADO P.E. 32314  
FOR AND ON BEHALF OF JR ENGINEERING




**BMP PHASING**

**INITIAL (WINTER 2023):**

1. INSTALL VTC
2. INSTALL CWA
3. ESTABLISH SSA
4. INSTALL CONSTRUCTION FENCE
5. INSTALL SILT FENCE
6. INSTALL SEDIMENT BASINS
7. INSTALL TEMPORARY SWALES
8. INSTALL CHECK DAMS

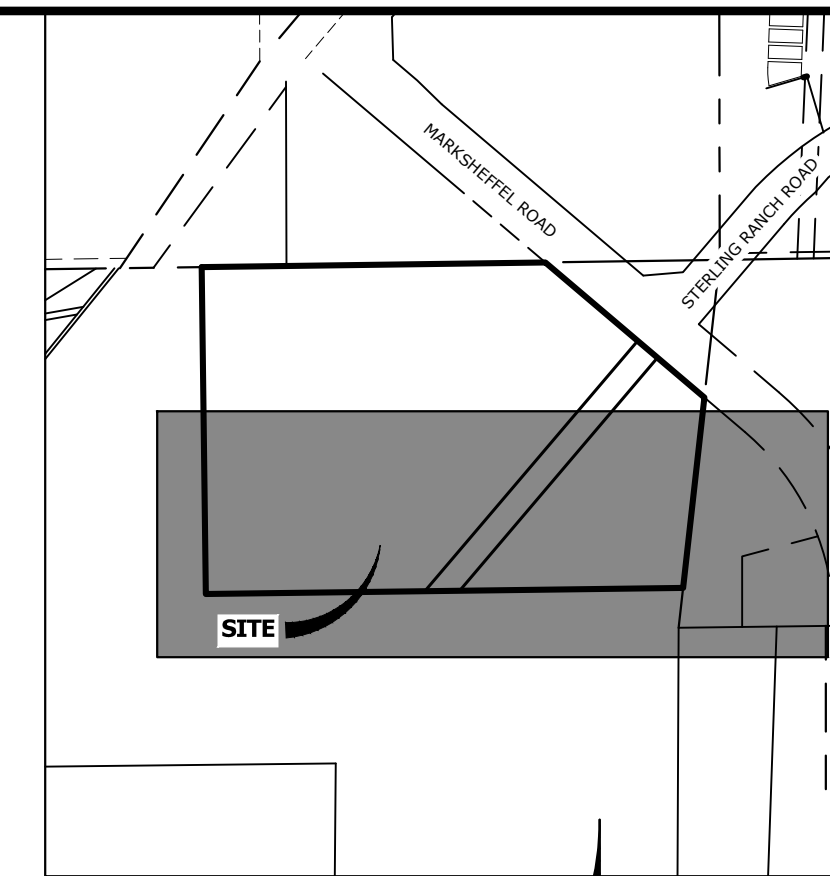
**INTERIM (WINTER 2023-SPRING 2024):**

1. MAINTAIN ALL BMP'S
2. INSTALL INLET AND OUTLET PROTECTION
3. INSTALL EROSION CONTROL BLANKETS

**FINAL (SUMMER 2024):**

1. INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
2. REMOVE ALL TEMPORARY BMP'S AFTER FINAL STABILIZATION

FINAL STABILIZATION ANTICIPATED SUMMER 2024

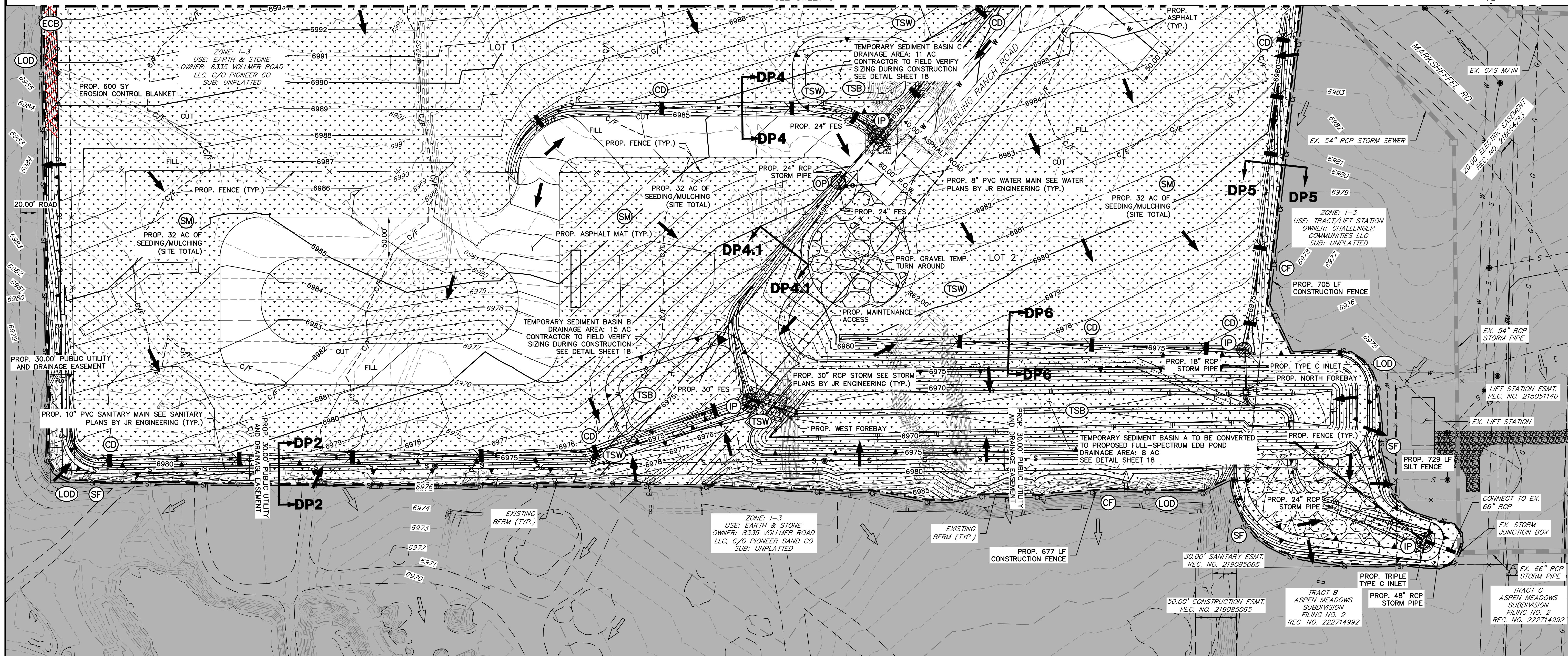


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PREPARED FOR  
**RHETORIC, LLC**  
 20 BOULDER CRESCENT, STE 200  
 COLORADO SPRINGS, CO  
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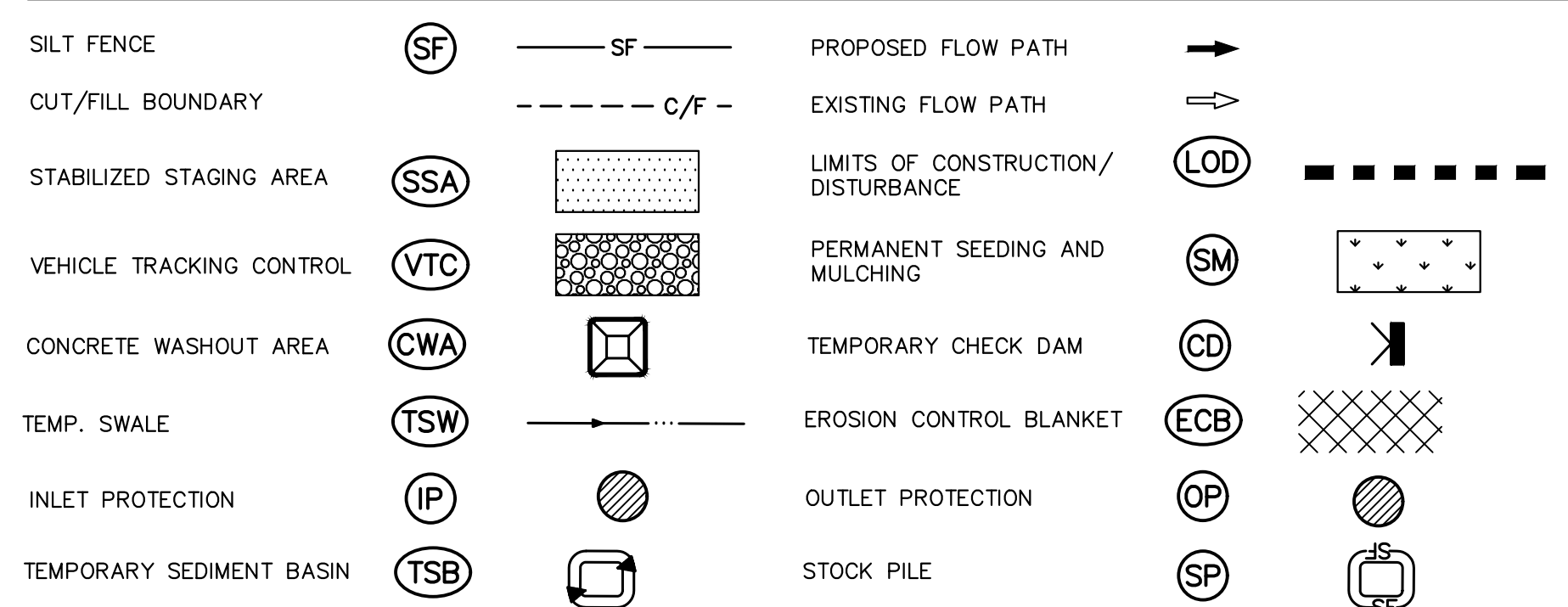
SEE SHEET 5



No.	REVISION	BY	DATE

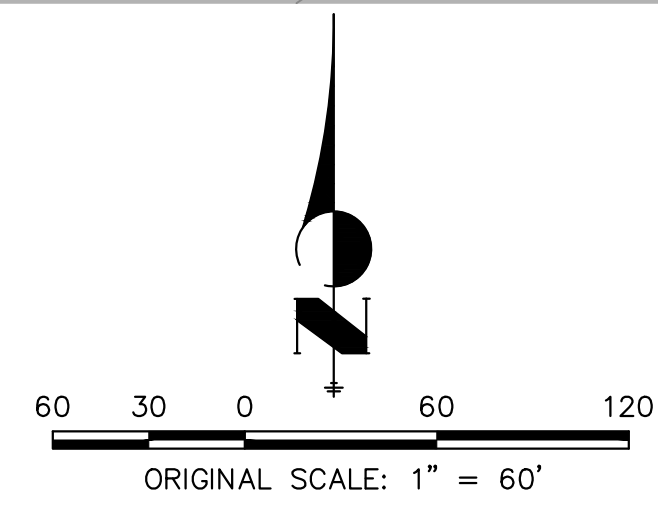
H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=60'	N/A	08/01/23	PAL	PAL	

**LEGEND**



**GRADING, EROSION, AND STORMWATER QUALITY CONTROL NOTES:**

- EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF SPARSE GRASS.
- THERE ARE NO DEDICATED ASPHALT OR CONCRETE BATCH PLANTS PROPOSED AS PART OF THIS PROJECT.
- DEWATERING OPERATIONS ARE NOT ANTICIPATED FOR THIS PROJECT.
- ALL PROPOSED OFF-SITE STORMWATER CONTROL MEASURES ARE UNDER THE DIRECT CONTROL OR OWNERSHIP OF THE OWNER OR OPERATOR FOR THIS DEVELOPMENT.
- ALL SLOPES 3:1 OR GREATER REQUIRE EROSION CONTROL BLANKET.

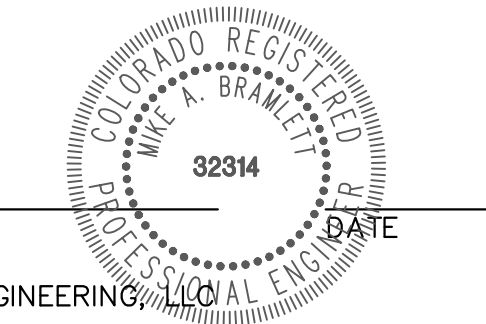


THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

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 FOR AND ON BEHALF OF JR ENGINEERING



**BMP PHASING**

**INITIAL (WINTER 2023):**

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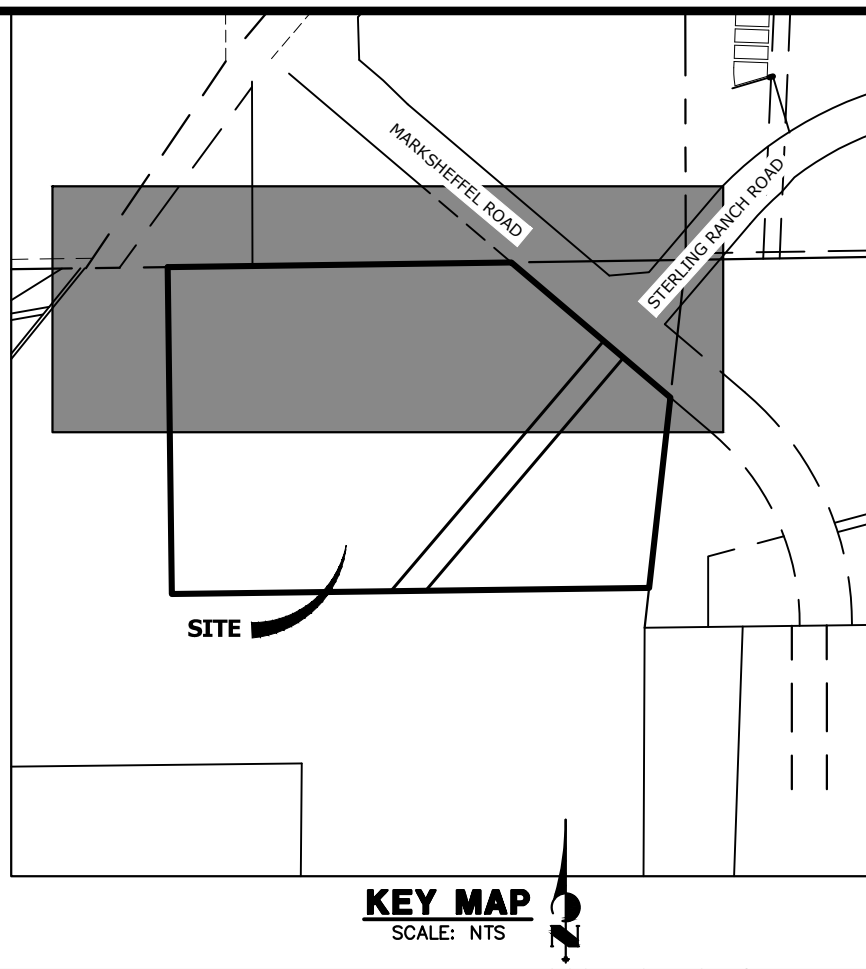
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3. INSTALL EROSION CONTROL BLANKETS

**FINAL (SUMMER 2024):**

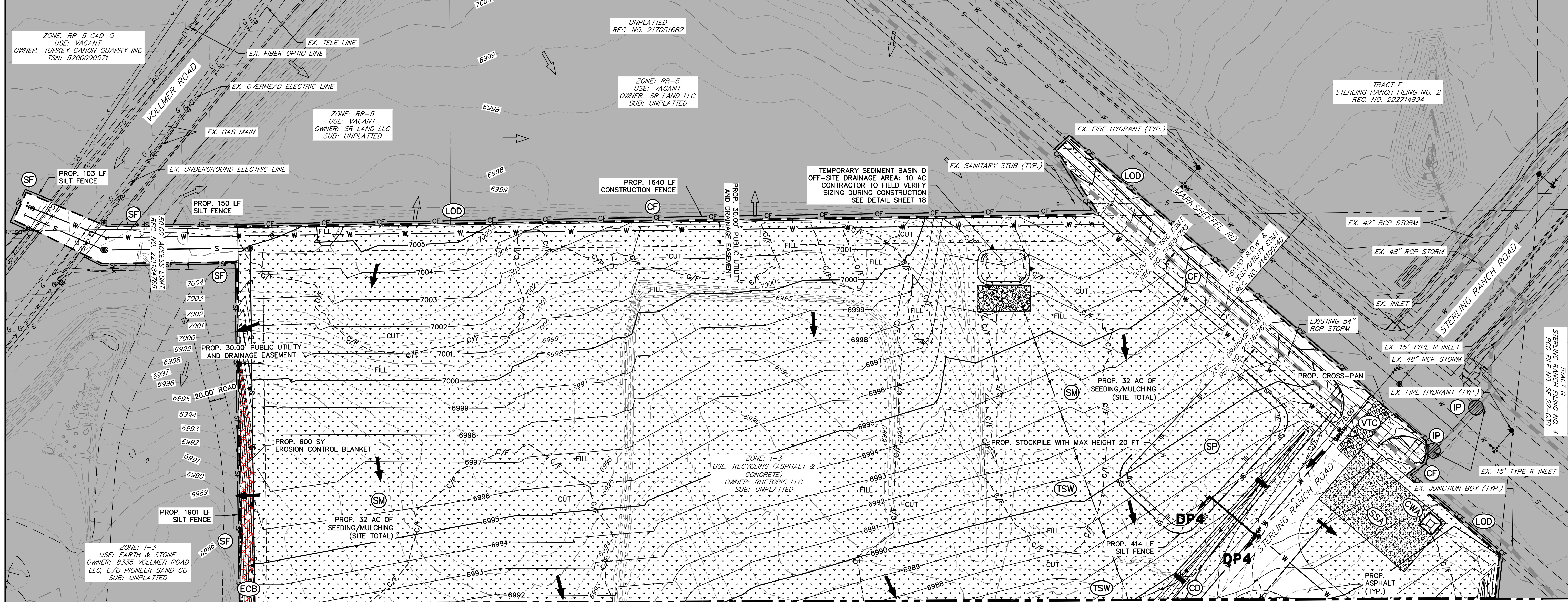
1. INSTALL MULCH AND PERMANENT SEEDING IN ALL DISTURBED AREAS
2. REMOVE ALL TEMPORARY BMP'S AFTER FINAL STABILIZATION

FINAL STABILIZATION ANTICIPATED SUMMER 2024



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NO.	REVISION	DATE

H-SCALE	1" = 60'
V-SCALE	N/A
DATE	08/01/23
DESIGNED BY	PAL
DRAWN BY	PAL
CHECKED BY	

**LEGEND**

SILT FENCE	(SF)	— SF —	PROPOSED FLOW PATH	→
CUT/FILL BOUNDARY		- - - C/F - - -	EXISTING FLOW PATH	⇨
STABILIZED STAGING AREA	(SSA)	[Pattern]	LIMITS OF CONSTRUCTION/DISTURBANCE	(LOD) - - - - -
VEHICLE TRACKING CONTROL	(VTC)	[Pattern]	PERMANENT SEEDING AND MULCHING	(SM) [Pattern]
CONCRETE WASHOUT AREA	(CWA)	[Symbol]	TEMPORARY CHECK DAM	(CD) [Symbol]
TEMP. SWALE	(TSW)	— TSW —	EROSION CONTROL BLANKET	(ECB) [Pattern]
INLET PROTECTION	(IP)	[Symbol]	OUTLET PROTECTION	(OP) [Symbol]
TEMPORARY SEDIMENT BASIN	(TSB)	[Symbol]	STOCK PILE	(SP) [Symbol]

**GRADING, EROSION, AND STORMWATER QUALITY CONTROL NOTES:**

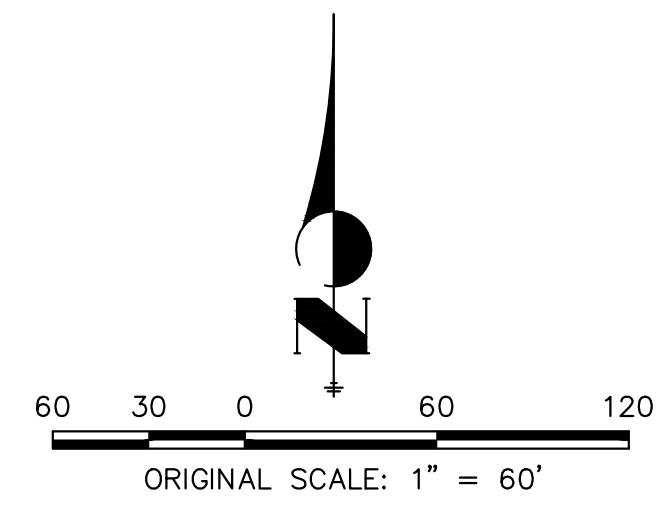
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ALL SLOPES 3:1 OR GREATER REQUIRE EROSION CONTROL BLANKET.

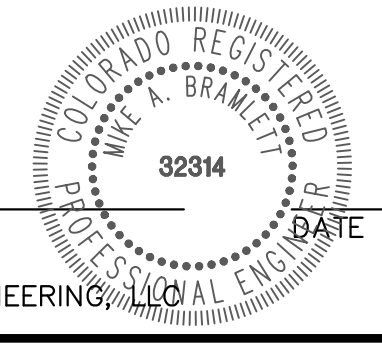


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**ENGINEER'S STATEMENT**

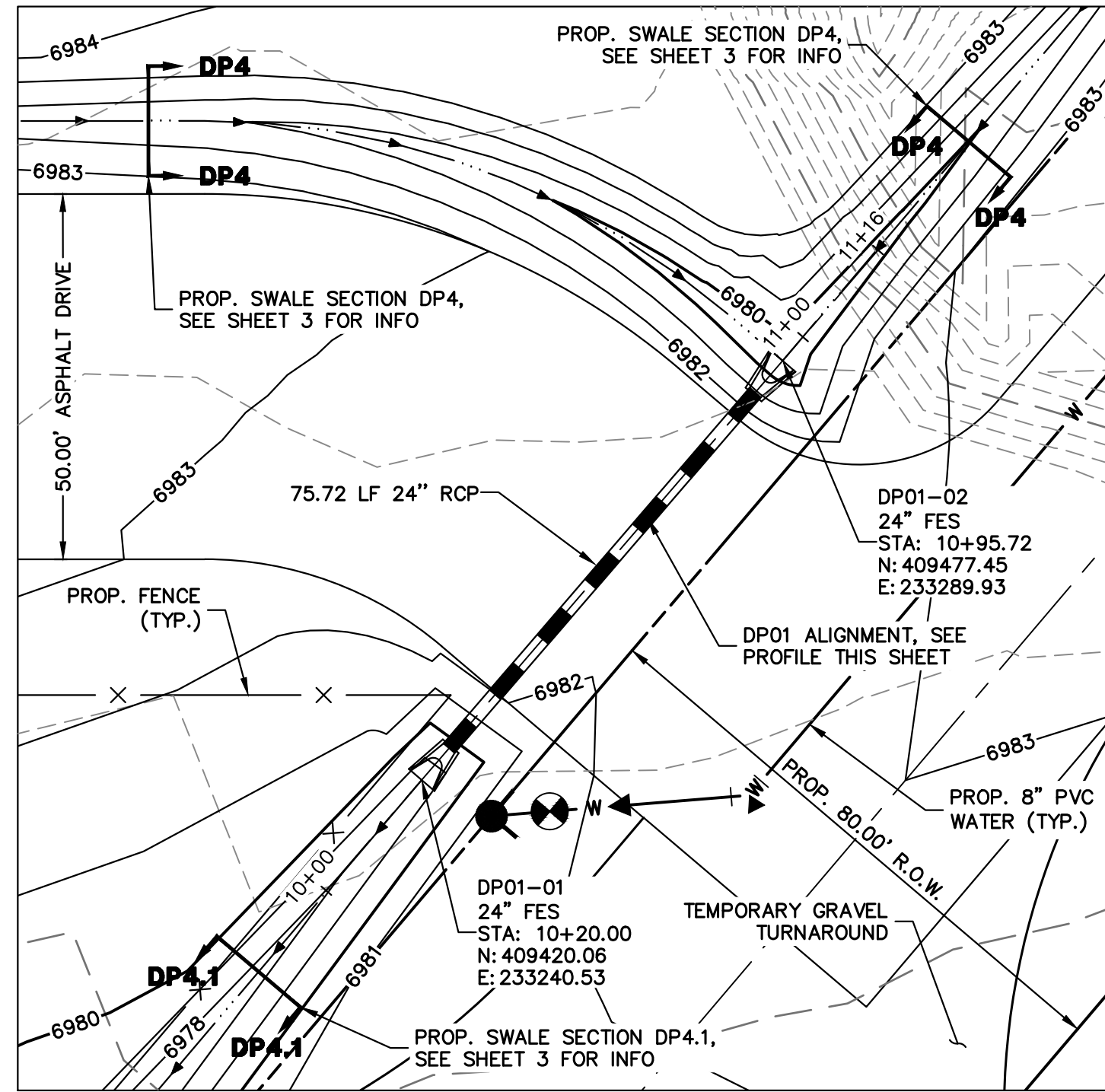
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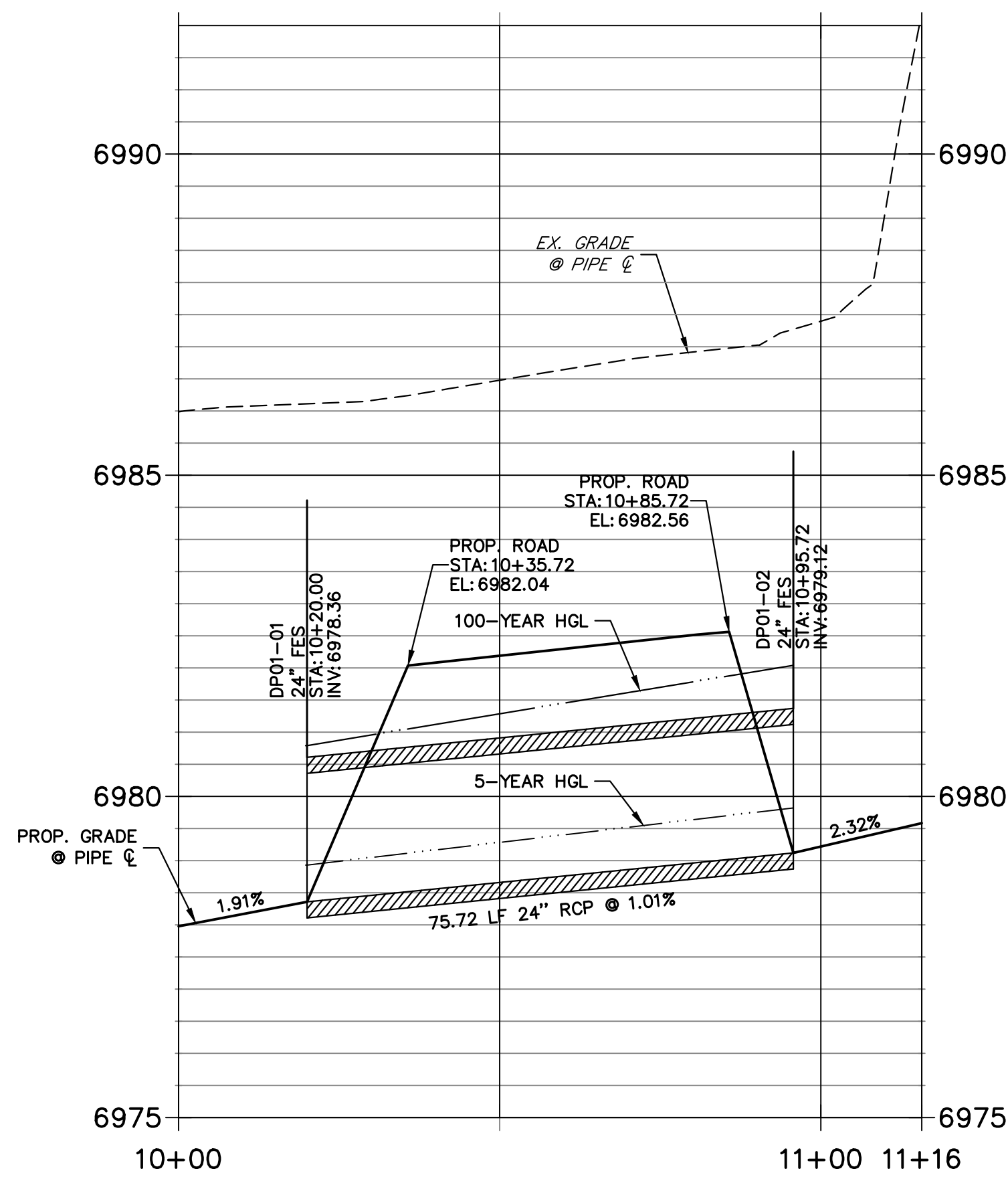
STERLING RECYCLING FACILITY  
EROSION CONTROL PLAN

SHEET 5 OF 19  
JOB NO. 25188.14

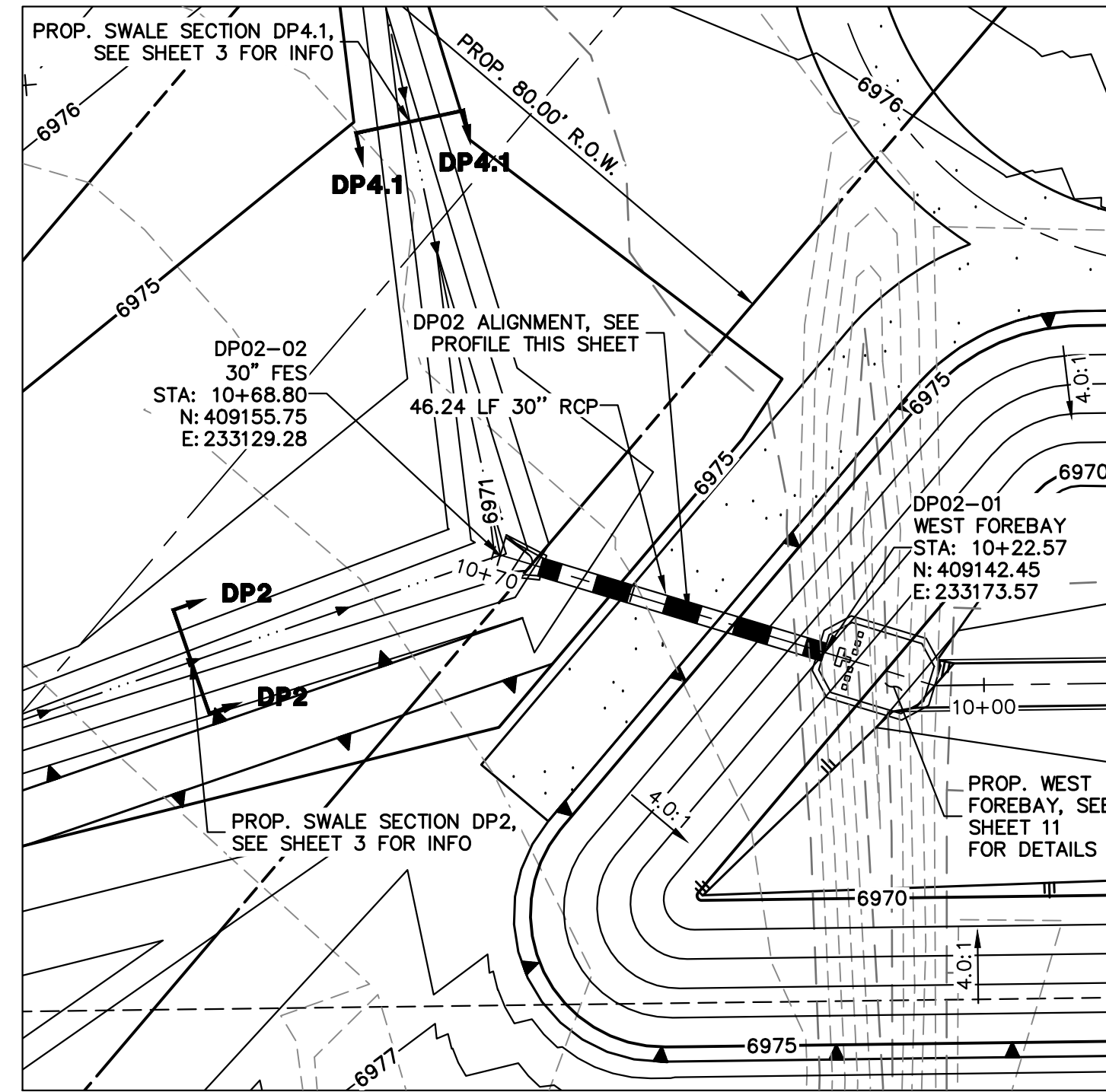


**DP01-PLAN**

**DP01 PROFILE  
STA 10+00.00 TO 11+15.72**

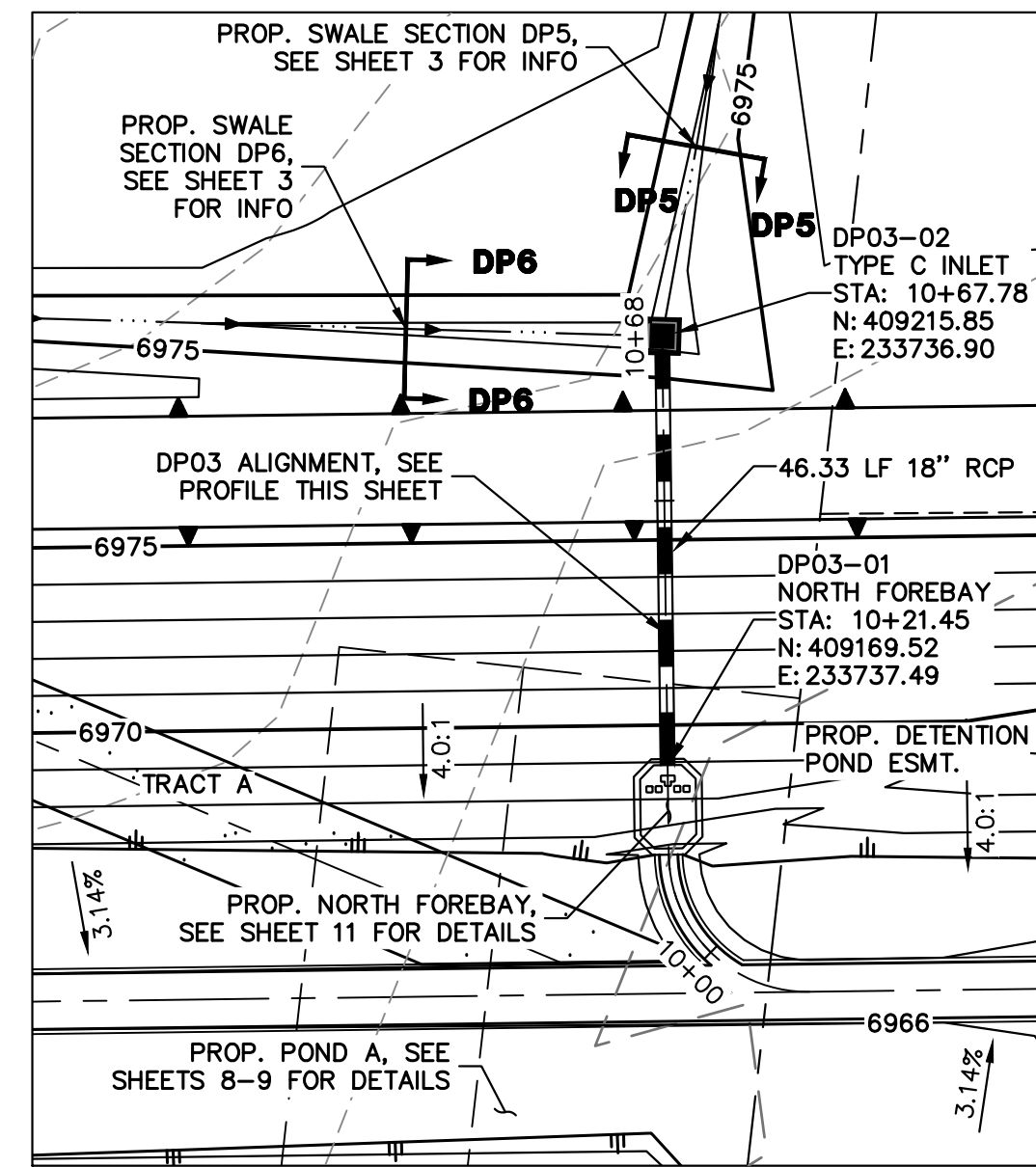
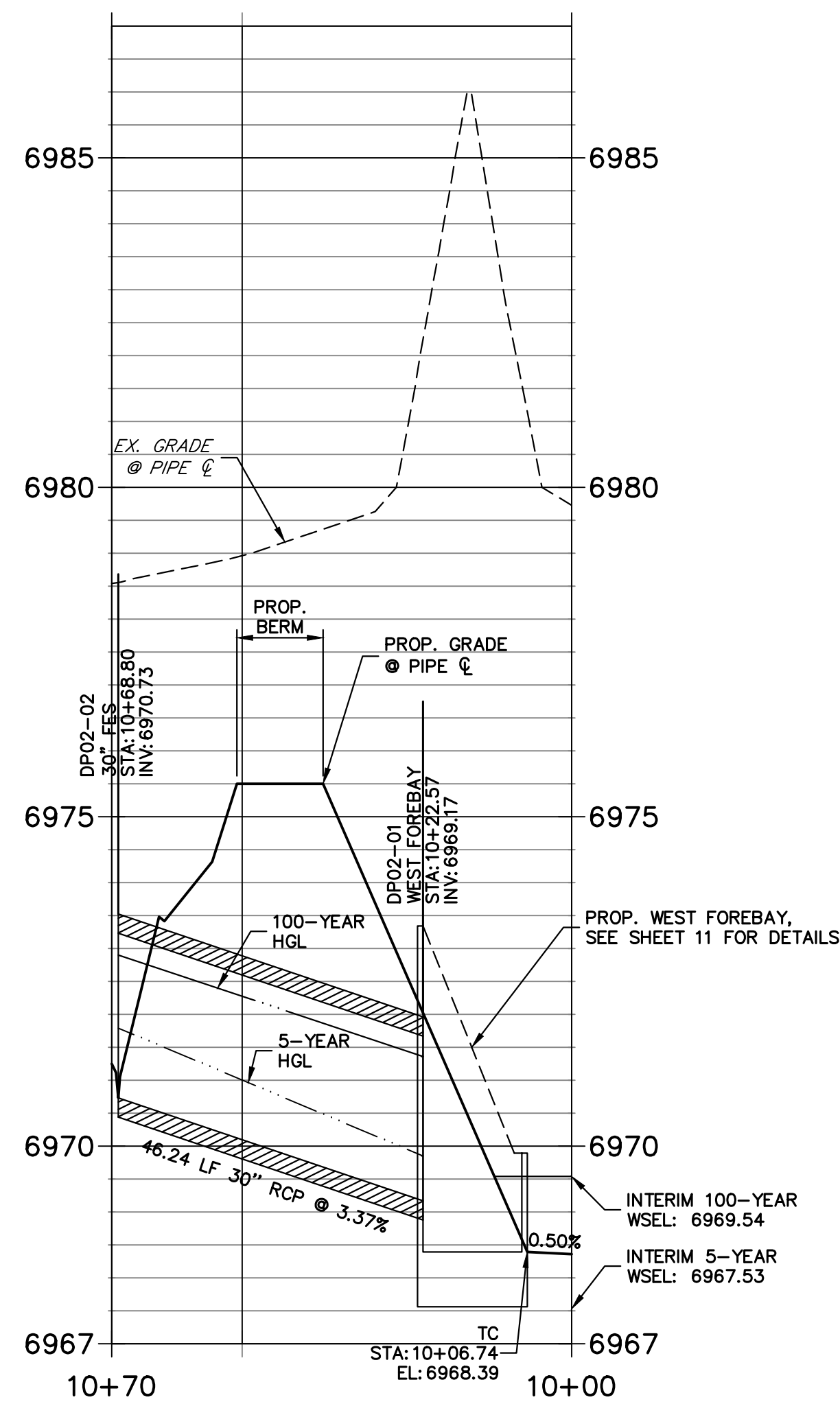


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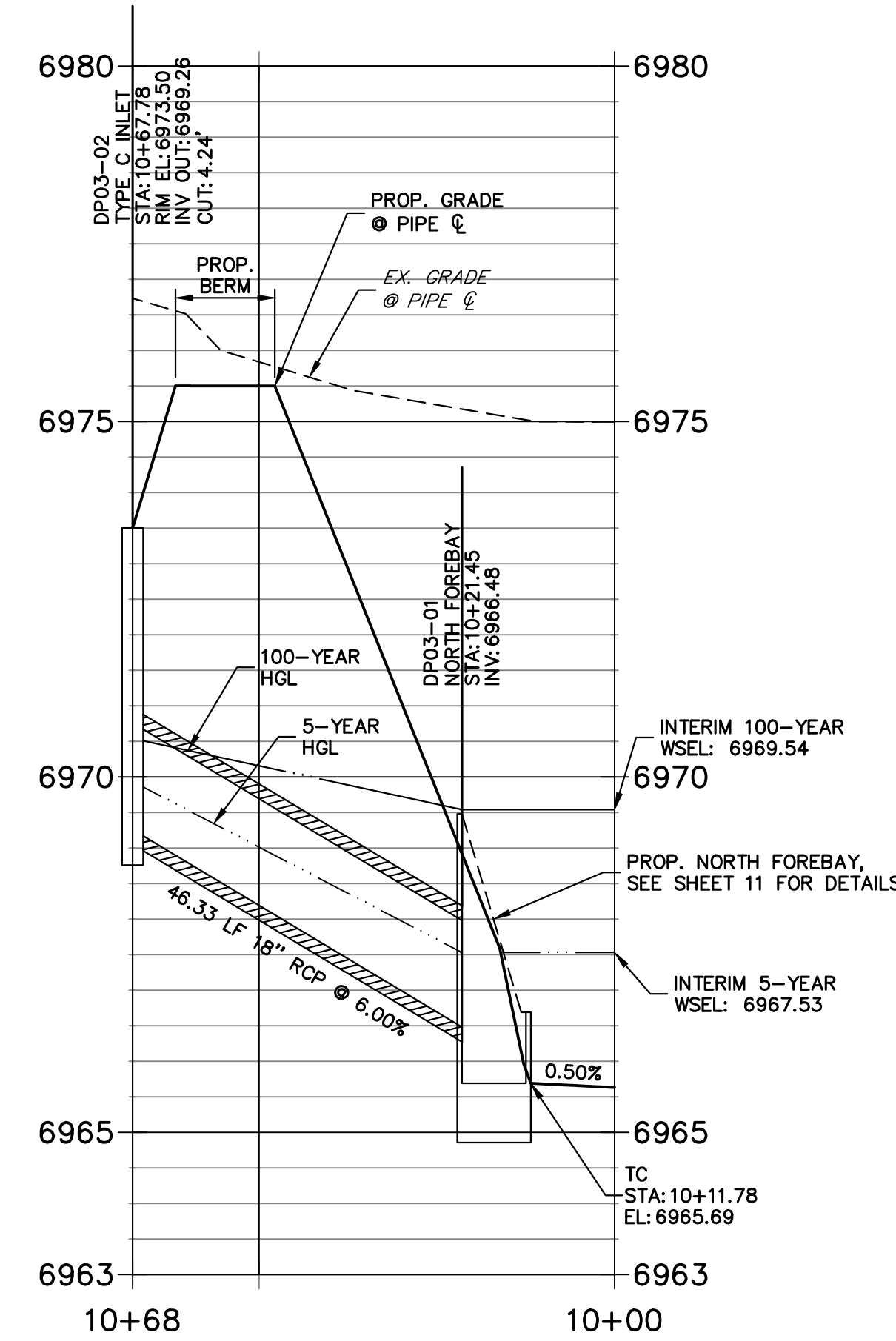
**DP02-PLAN**

**DP02 PROFILE  
STA 10+00.00 TO 10+69.80**



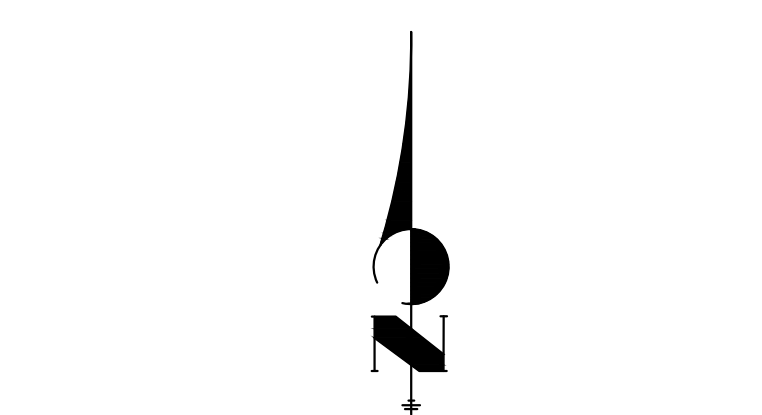
**DP03-PLAN**

**DP03 PROFILE  
STA 10+00.00 TO 10+67.78**



**STORM SEWER NOTES**

- SEE SHEET 1 FOR BENCHMARK. SEE SHEET # FOR LEGEND.
- ALL STORM SEWER PIPES, INLETS, MANHOLES, AND APPURTENANCES WITHIN THE R.O.W. ARE PUBLIC. STORM FACILITIES OUTSIDE OF THE PUBLIC R.O.W. ARE PRIVATE, UNLESS OTHERWISE NOTED.
- ALL STATIONING IS PIPE CENTERLINE UNLESS OTHERWISE NOTED.
- ALL PROPOSED RCP STORM SEWER PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.
- PIPE LENGTHS ARE FROM INSIDE INLET WALL TO INSIDE INLET WALL, FROM CENTER OF MANHOLE TO INSIDE INLET WALL, OR FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. PIPE LENGTHS INCLUDE FES OR HEADWALL.
- WHERE PIPES ENTER STRUCTURES, THE CENTERLINE STATION CALLED OUT ON THE PLANS IS TO THE CENTER OF STRUCTURE. WHERE PIPES ENTER STRUCTURES ON A SKEW, CONTRACTOR IS REQUIRED TO EXTEND PIPE TO ENSURE THAT BOTH EDGES OF THE PIPE EXTEND INTO THE STRUCTURE. CONTRACTOR WILL THEN BE REQUIRED TO CUT PIPE FLUSH WITH THE INSIDE FACE OF THE STRUCTURE AND GROUT IN PLACE.
- PIPES SHALL HAVE JOINT RESTRAINTS ON LAST 3 JOINTS AT PIPE OUTFALL.
- PIPES WITH PRESSURE HEAD SHALL USE WATER TIGHT JOINTS WITH A 100-YEAR SERVICE LIFE.
- PIPE BEDDING SHALL CONFORM TO EL PASO COUNTY CONSTRUCTION STANDARDS AND SPECIFICATIONS. BEDDING FOR RCP SHALL BE A37122 NO. 57/67 CRUSHED ROCK. SQUEEGEE OR MIXTURES CONTAINING SQUEEGEE SHALL NOT BE USED. BEDDING SHALL BE 6 TO 8 INCHES DEEP UNDER THE PIPE AND BACKFILLED TO THE SPRING LINE.
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH MANUFACTURERS SPECIFICATIONS AND EL PASO COUNTY STANDARDS AND SPECIFICATION.
- WATER LINE AND SANITARY SEWER LINE SHOWN FOR GRAPHICAL PURPOSES ONLY. SEE WATER, WASTEWATER, UTILITY, GRADING AND EROSION CONTROL, AND STREET IMPROVEMENT PLANS FOR CONSTRUCTION USE.
- SEE SHEETS 8-12 FOR PROPOSED POND DESIGN.
- SEE DETAIL SHEET 14 FOR APPLICABLE DETAILS.

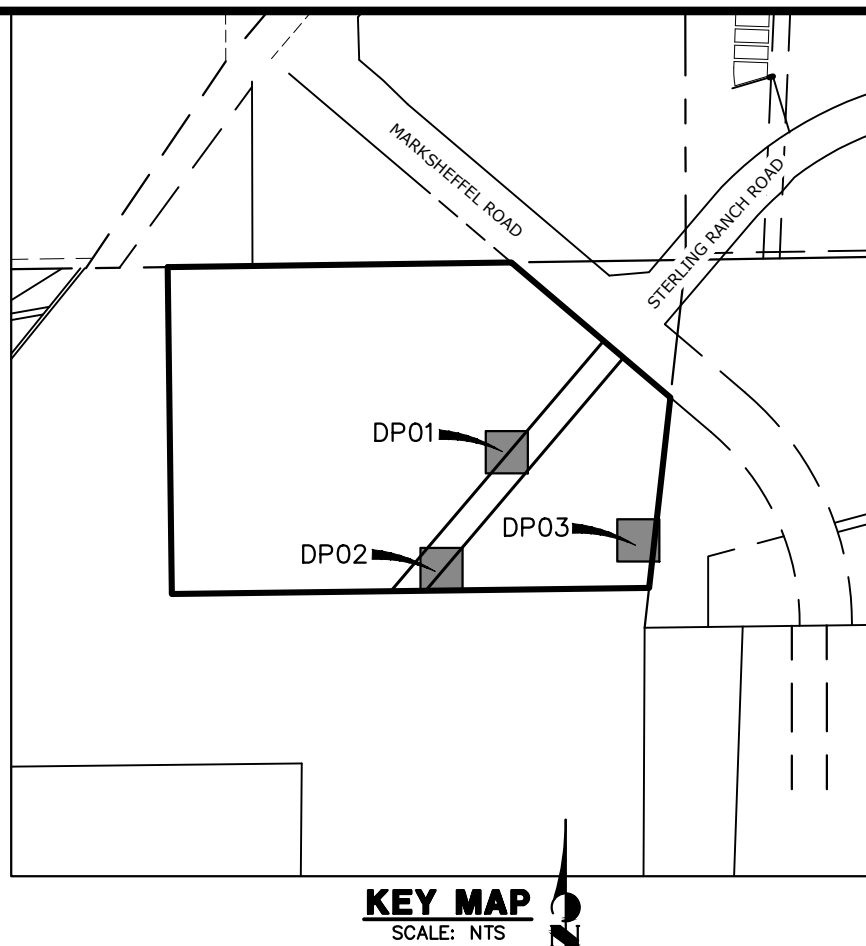
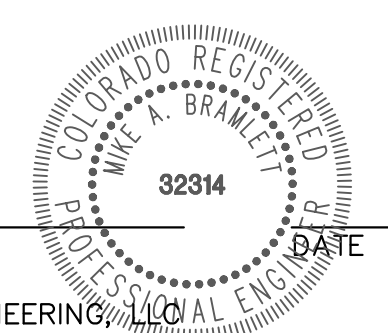


**ENGINEER'S STATEMENT**

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MIKE A. BRAMLETT, P.E.  
COLORADO P.E. 32314  
FOR AND ON BEHALF OF JR ENGINEERING



**KEY MAP**  
SCALE: NTS

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**RHETORIC, LLC**  
20 BOULDER CRESCENT, STE 200  
COLORADO SPRINGS, CO  
ERIC HOWARD  
EHOWARDPC@GMAIL.COM  
(719) 964-0064

**J.R. ENGINEERING**  
A Westman Company  
Central 303-740-9888 • Colorado Springs 719-588-2583  
Fort Collins 970-491-9888 • www.jrengineering.com

BY	DATE	No.	REVISION

H-SCALE 1" = 20'  
V-SCALE 1" = 2'  
DATE 08/01/23  
DESIGNED BY GAG  
DRAWN BY GAG  
CHECKED BY

**STERLING RECYCLING FACILITY**  
**STORM SEWER PLAN AND PROFILE**

SHEET 6 OF 19  
JOB NO. 25188.14

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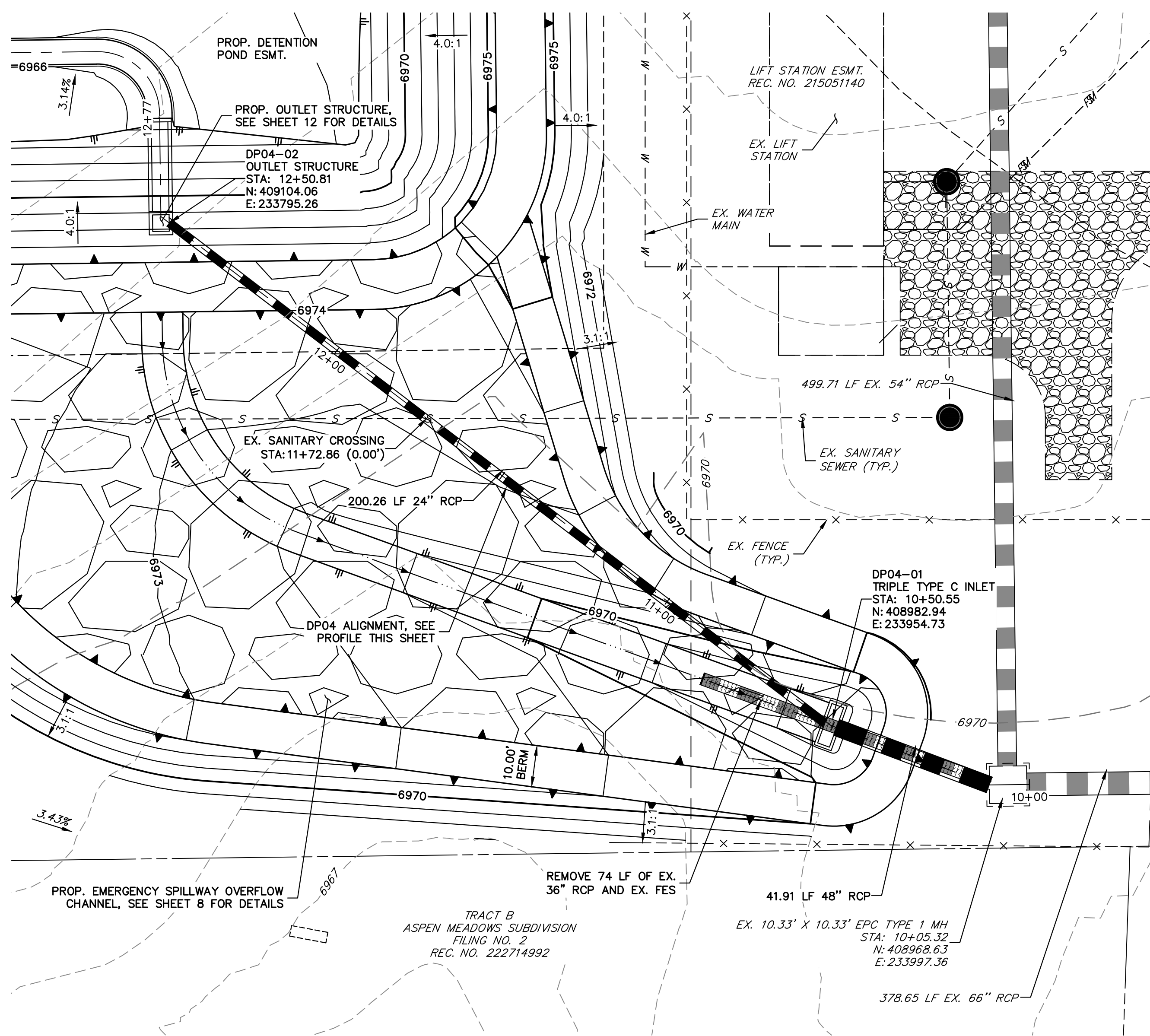
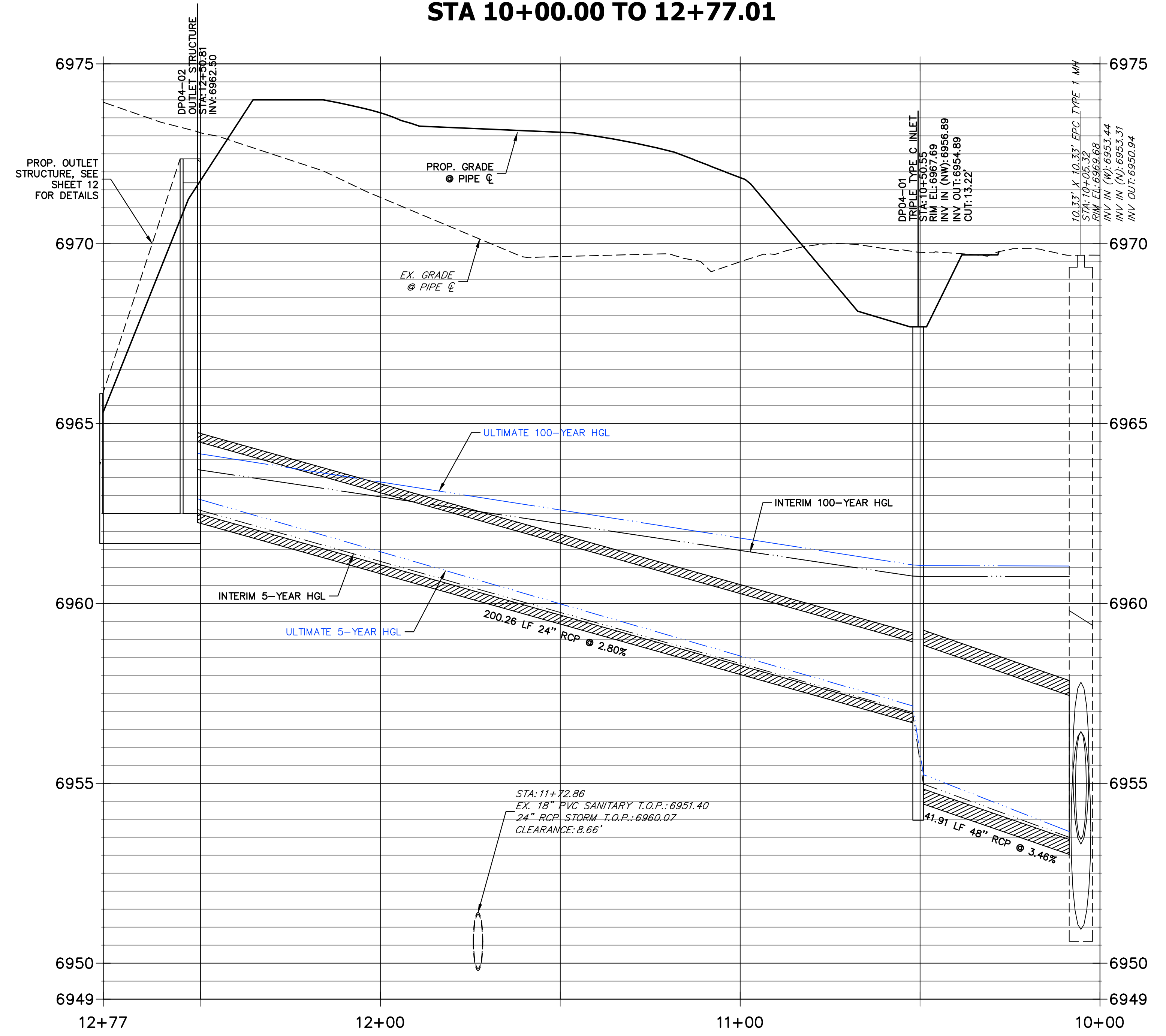
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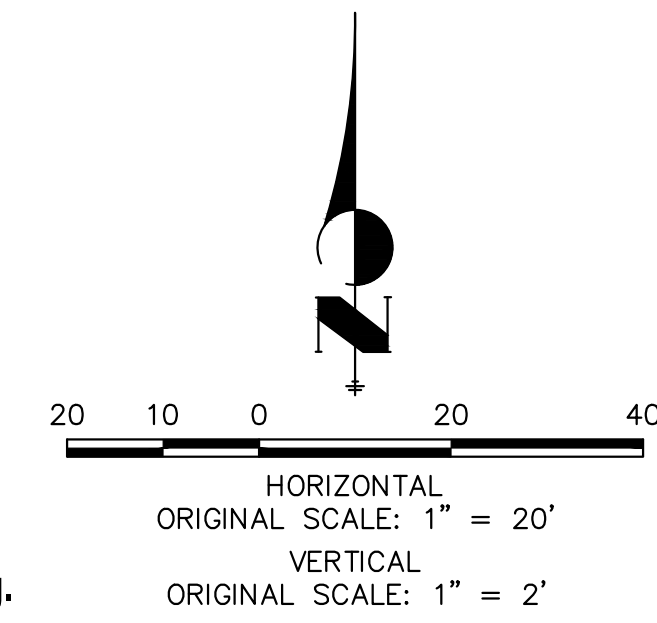
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1"=20'	1"=2'	08/01/23	GAG	GAG	

**DP04 PROFILE**  
**STA 10+00.00 TO 12+77.01**



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**NOTES**  
 1. SEE SHEET 6 FOR JR STORM SEWER NOTES.

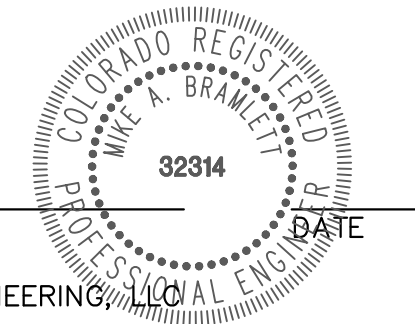


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MIKE A. BRAMLETT, P.E.  
 COLORADO P.E. 32314  
 FOR AND ON BEHALF OF JR ENGINEERING

DATE: 08/01/23



X:\251888\14\Drawings\Sheet\Drawings\Sheet\DP04.DWG, DP04, 08/01/2023 2:41:20 PM, CS

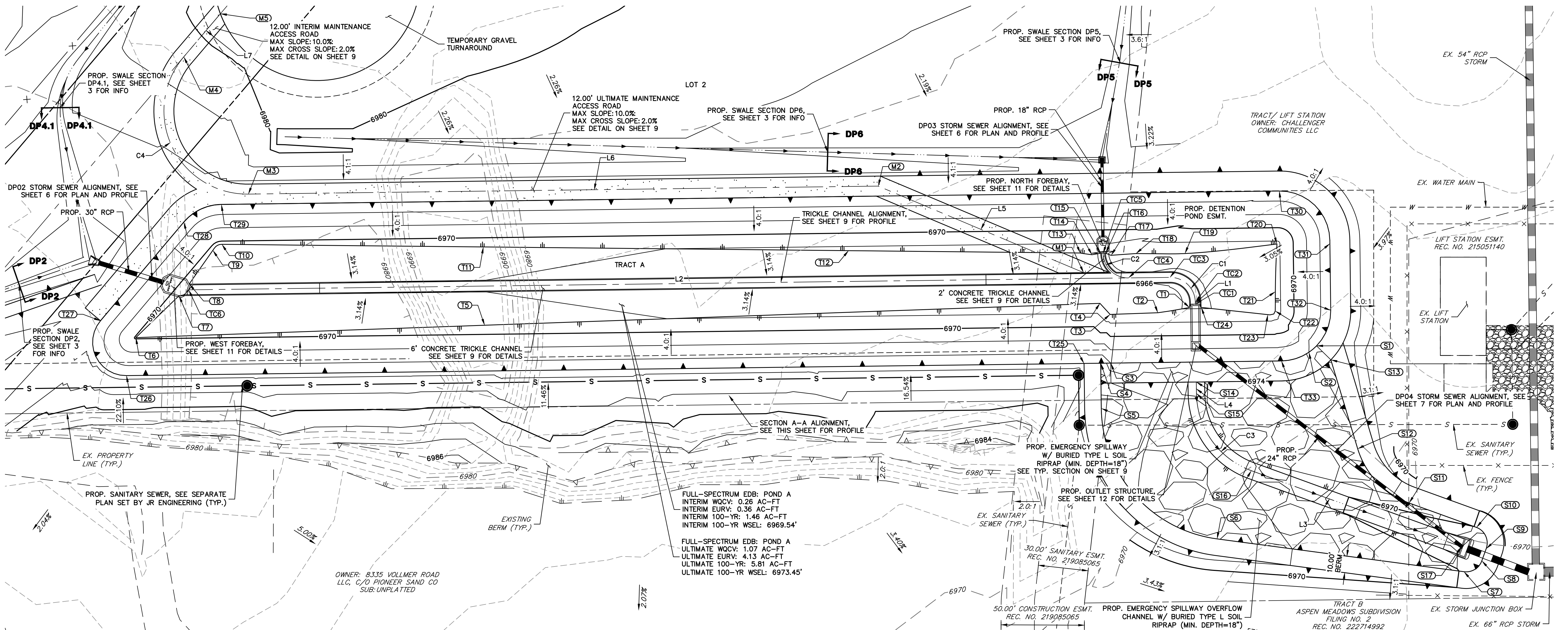
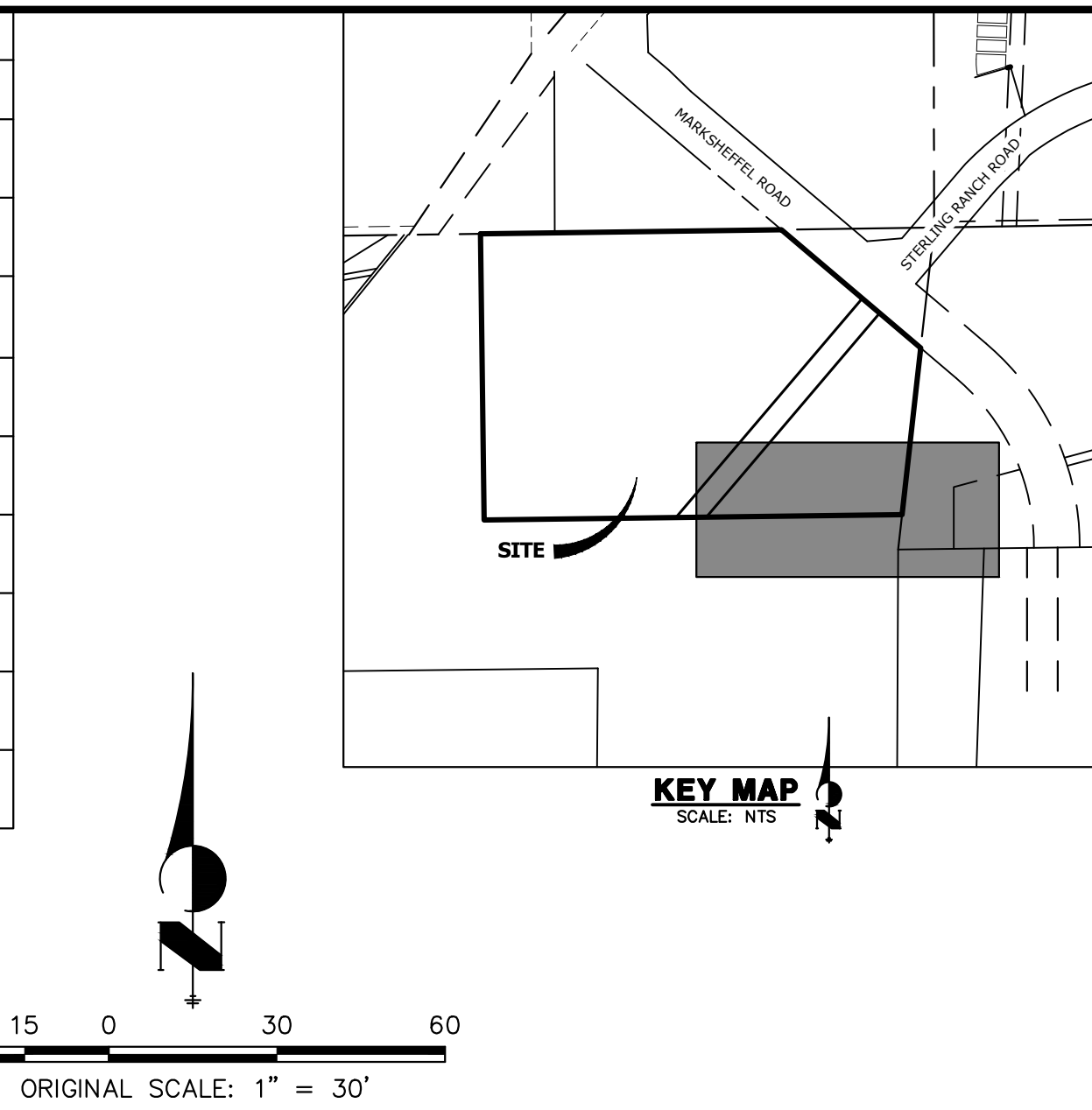
POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
M1	MAINTENANCE ACCESS CL	N: 409148.21 E: 233725.92	6966.20
M2	MAINTENANCE ACCESS CL	N: 409200.15 E: 233602.64	6975.50
M3	MAINTENANCE ACCESS CL	N: 409195.35 E: 233224.55	6975.50
M4	MAINTENANCE ACCESS CL	N: 409277.72 E: 233185.82	6979.12
M5	MAINTENANCE ACCESS CL	N: 409303.58 E: 233207.80	6980.80
S1	SPILLWAY/TOP	N: 409104.27 E: 233865.69	6975.50
S2	SPILLWAY/CREST	N: 409100.41 E: 233861.10	6974.00
S3	SPILLWAY/CREST	N: 409093.91 E: 233742.16	6974.00
S4	SPILLWAY/TOP	N: 409093.83 E: 233736.16	6975.50
S5	SPILLWAY OVERFLOW CHANNEL BERM	N: 409066.70 E: 233736.51	6975.20
S6	SPILLWAY OVERFLOW CHANNEL BERM	N: 408988.41 E: 233805.96	6972.90
S7	SPILLWAY OVERFLOW CHANNEL BERM	N: 408968.72 E: 233954.16	6969.94
S8	SPILLWAY OVERFLOW CHANNEL BERM	N: 408975.22 E: 233964.88	6969.69

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
S9	SPILLWAY OVERFLOW CHANNEL BERM	N: 408982.56 E: 233967.53	6969.69
S10	SPILLWAY OVERFLOW CHANNEL BERM	N: 408995.31 E: 233961.69	6969.94
S11	SPILLWAY OVERFLOW CHANNEL BERM	N: 409009.96 E: 233921.23	6971.59
S12	SPILLWAY OVERFLOW CHANNEL BERM	N: 409042.53 E: 233890.39	6973.37
S13	SPILLWAY OVERFLOW CHANNEL BERM	N: 409095.89 E: 233874.29	6975.50
S14	SPILLWAY OVERFLOW CHANNEL FLOWLINE	N: 409082.56 E: 233793.53	6974.00
S15	SPILLWAY OVERFLOW CHANNEL FLOWLINE	N: 409075.72 E: 233793.62	6973.79
S16	SPILLWAY OVERFLOW CHANNEL FLOWLINE	N: 409029.34 E: 233826.59	6971.89
S17	SPILLWAY OVERFLOW CHANNEL FLOWLINE	N: 408983.68 E: 233952.69	6967.69
T1	TOE	N: 409127.26 E: 233789.46	6965.81
T2	TOE	N: 409124.15 E: 233770.51	6966.53
T3	TOE	N: 409123.13 E: 233741.79	6966.70
T4	TOE	N: 409129.77 E: 233735.71	6966.52

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
T5	TOE	N: 409116.64 E: 233366.44	6968.63
T6	TOE	N: 409109.20 E: 233157.02	6969.82
T7	TOE	N: 409134.32 E: 233182.94	6968.92
T8	TOE	N: 409141.39 E: 233189.08	6968.89
T9	TOE	N: 409161.58 E: 233203.26	6969.44
T10	TOE	N: 409165.23 E: 233208.66	6969.52
T11	TOE	N: 409163.64 E: 233365.70	6968.62
T12	TOE	N: 409161.41 E: 233584.86	6967.37
T13	TOE	N: 409159.99 E: 233723.95	6966.58
T14	TOE	N: 409158.97 E: 233730.89	6966.30
T15	TOE	N: 409159.84 E: 233736.11	6965.69
T16	TOE	N: 409159.88 E: 233739.11	6965.69
T17	TOE	N: 409158.63 E: 233742.42	6966.18

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
T18	TOE	N: 409159.68 E: 233757.32	6966.39
T19	TOE	N: 409159.68 E: 233786.68	6966.30
T20	TOE	N: 409165.43 E: 233841.94	6967.56
T21	TOE	N: 409136.76 E: 233840.97	6967.23
T22	TOE	N: 409125.17 E: 233840.91	6967.18
T23	TOE	N: 409122.99 E: 233836.52	6967.03
T24	TOE	N: 409127.35 E: 233796.46	6965.81
T25	TOP	N: 409093.71 E: 233726.16	6975.50
T26	TOP	N: 409086.41 E: 233151.37	6975.50
T27	TOP	N: 409119.31 E: 233135.83	6975.50
T28	TOP	N: 409178.50 E: 233185.82	6975.50
T29	TOP	N: 409189.14 E: 233208.36	6975.50
T30	TOP	N: 409197.20 E: 233843.30	6975.50

POINT TABULATION			
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION
T31	TOP	N: 409165.59 E: 233873.70	6975.50
T32	TOP	N: 409125.59 E: 233874.21	6975.50
T33	TOP/SPILLWAY CREST	N: 409095.21 E: 233844.59	6974.00
TC1	TRICKLE CHANNEL	N: 409129.26 E: 233792.94	6965.32
TC2	TRICKLE CHANNEL	N: 409130.56 E: 233792.92	6965.33
TC3	TRICKLE CHANNEL	N: 409145.37 E: 233777.73	6965.45
TC4	TRICKLE CHANNEL	N: 409145.05 E: 233752.80	6965.57
TC5	TRICKLE CHANNEL	N: 409159.86 E: 233737.61	6965.69
TC6	TRICKLE CHANNEL	N: 409137.89 E: 233188.75	6968.39



FULL-SPECTRUM EDB: POND A  
 INTERIM WQCV: 0.26 AC-FT  
 INTERIM EURV: 0.36 AC-FT  
 INTERIM 100-YR: 1.46 AC-FT  
 INTERIM 100-YR WSEL: 6969.54'

FULL-SPECTRUM EDB: POND A  
 ULTIMATE WQCV: 1.07 AC-FT  
 ULTIMATE EURV: 4.13 AC-FT  
 ULTIMATE 100-YR: 5.81 AC-FT  
 ULTIMATE 100-YR WSEL: 6973.45'

**POND NOTES**

1. ALL PROPOSED POND IMPROVEMENTS ARE PRIVATE UNLESS OTHERWISE NOTED.
2. SEE SHEETS 6-7 FOR PROPOSED STORM SEWER DESIGN.
3. SEE STREET IMPROVEMENT PLANS BY JR ENGINEERING FOR PROPOSED STREET DESIGN.
4. SEE SHEETS 4-5 FOR PROPOSED GRADING AND EROSION CONTROL PLAN BY JR ENGINEERING.
5. SEE WATER AND WASTEWATER PLANS BY JR ENGINEERING FOR PROPOSED DESIGN OF SRMD-OWNED WATER AND SANITARY UTILITIES.

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LINE TABLE		
LINE	BEARING	DISTANCE
L1	S00°43'38"E	1.29'
L2	N89°16'22"E	589.03'
L3	S70°05'44"E	134.11'
L4	S00°43'38"E	6.85'
L5	S67°09'16"E	133.78'
L6	N89°16'22"E	378.12'
L7	S40°21'31"W	33.94'

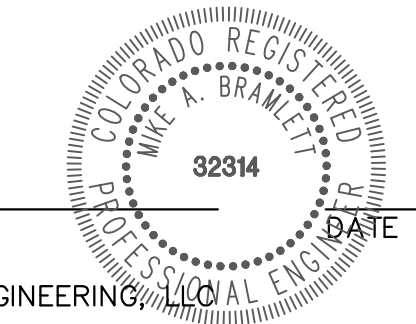
CURVE TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	90°00'00"	15.00'	23.56'
C2	90°00'00"	15.00'	23.56'
C3	69°22'06"	50.00'	60.54'
C4	131°05'09"	50.00'	114.39'



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 COLORADO P.E. 32314  
 FOR AND ON BEHALF OF JR ENGINEERING



UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE DESIGNATED BY PARTISES AUTHORIZATION.

PREPARED FOR  
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No.	REVISION	BY	DATE

H-SCALE 1"=30'  
 V-SCALE 1"=3'

DESIGNED BY GAG  
 DRAWN BY GAG  
 CHECKED BY

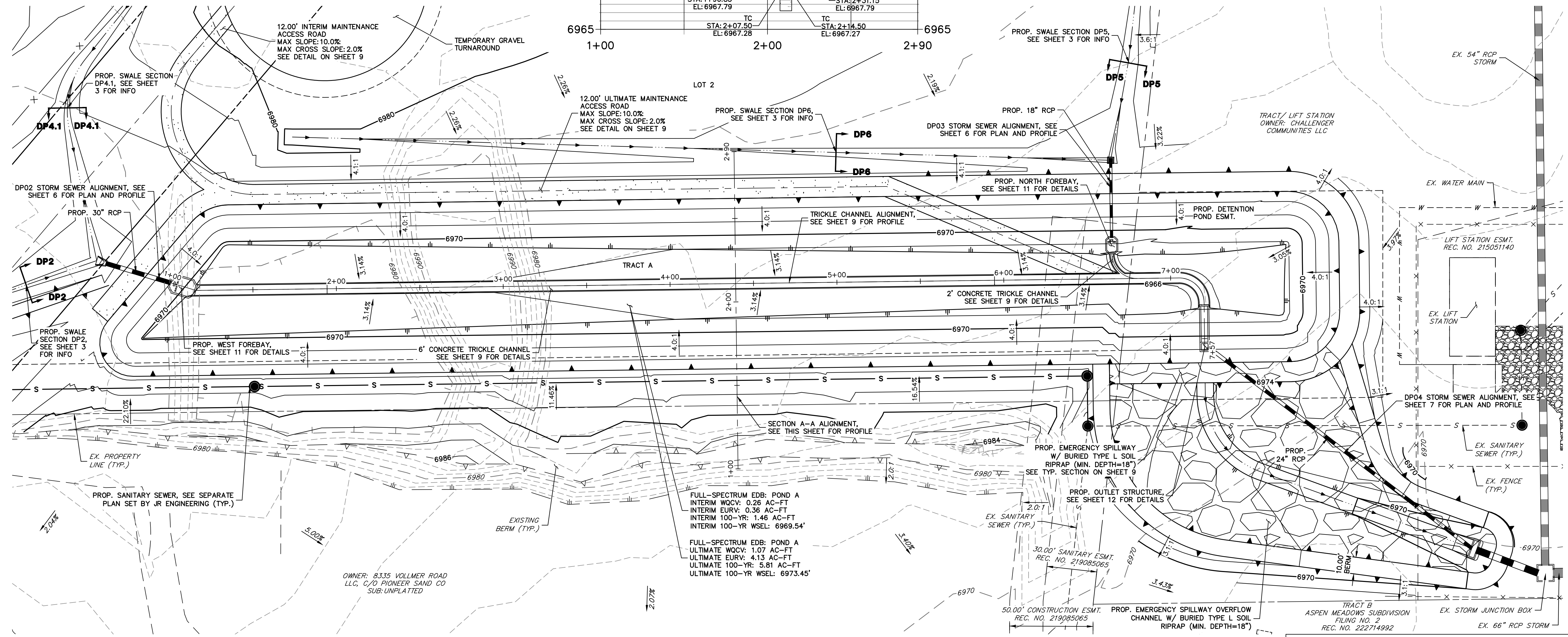
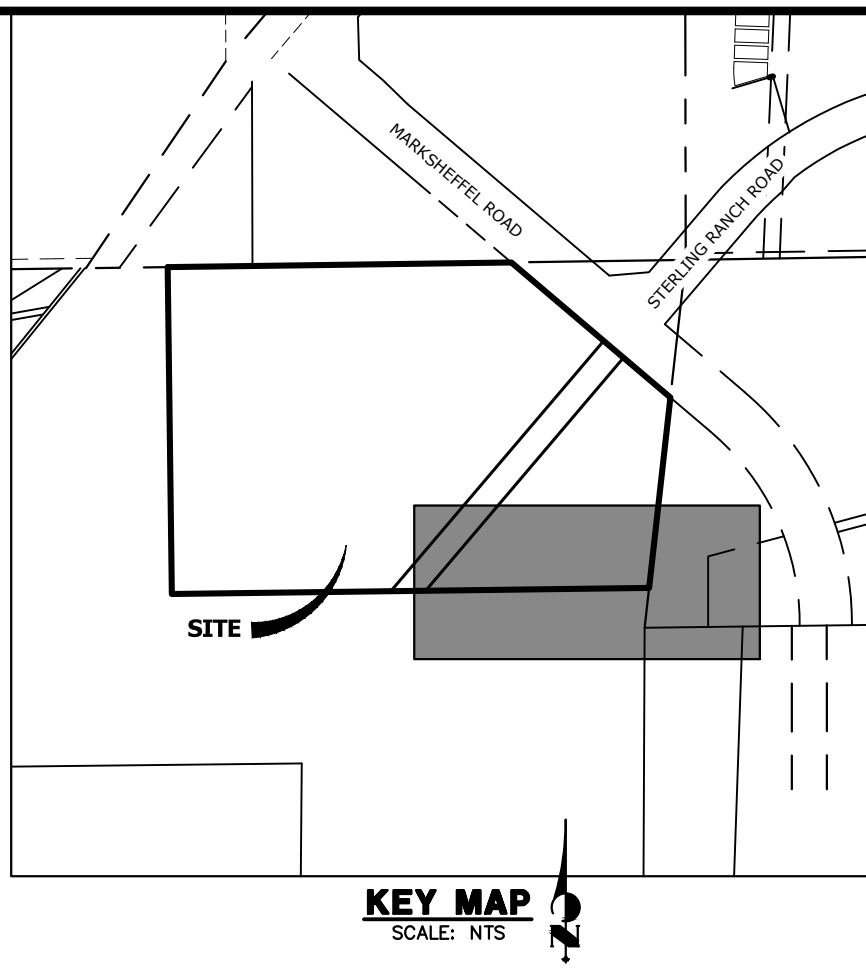
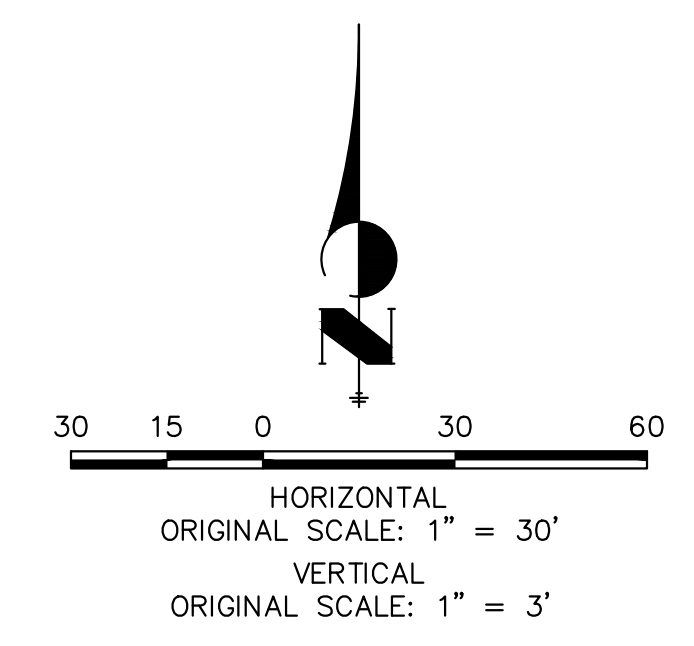
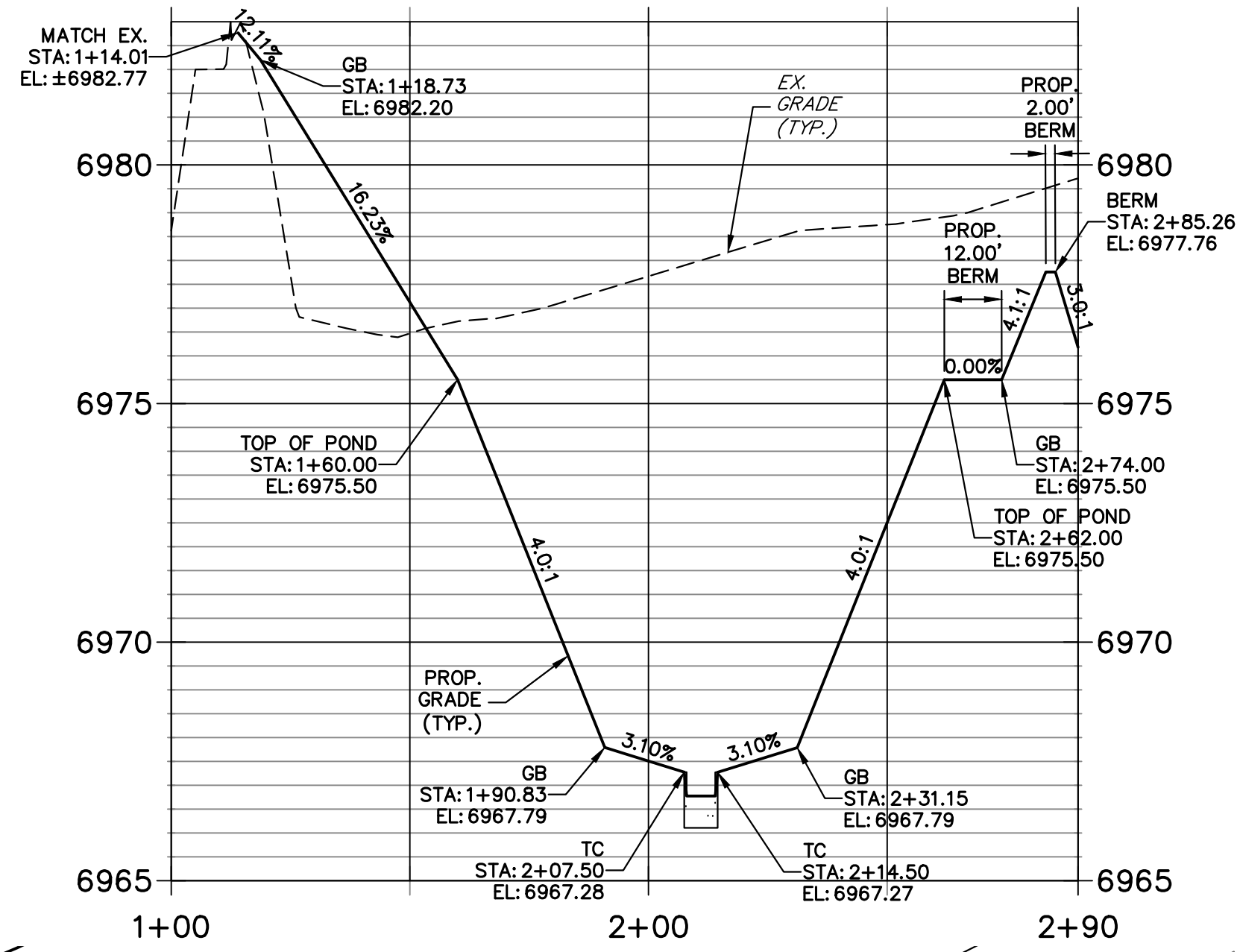
DATE 08/01/23

**STERLING RECYCLING FACILITY**  
**POND PLANS**

SHEET 8 OF 19  
 JOB NO. 25188.14



## SECTION A-A PROFILE STA 1+00.00 TO 2+90.00



FULL-SPECTRUM EDB: POND A  
 INTERIM WQCV: 0.26 AC-FT  
 INTERIM EURV: 0.36 AC-FT  
 INTERIM 100-YR: 1.46 AC-FT  
 INTERIM 100-YR WSEL: 6969.54'  
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### POND NOTES

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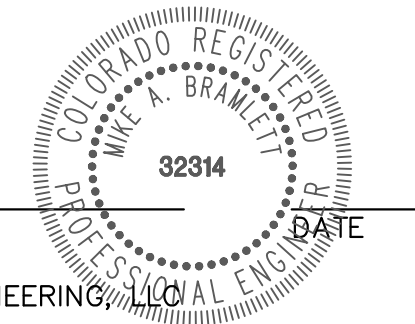
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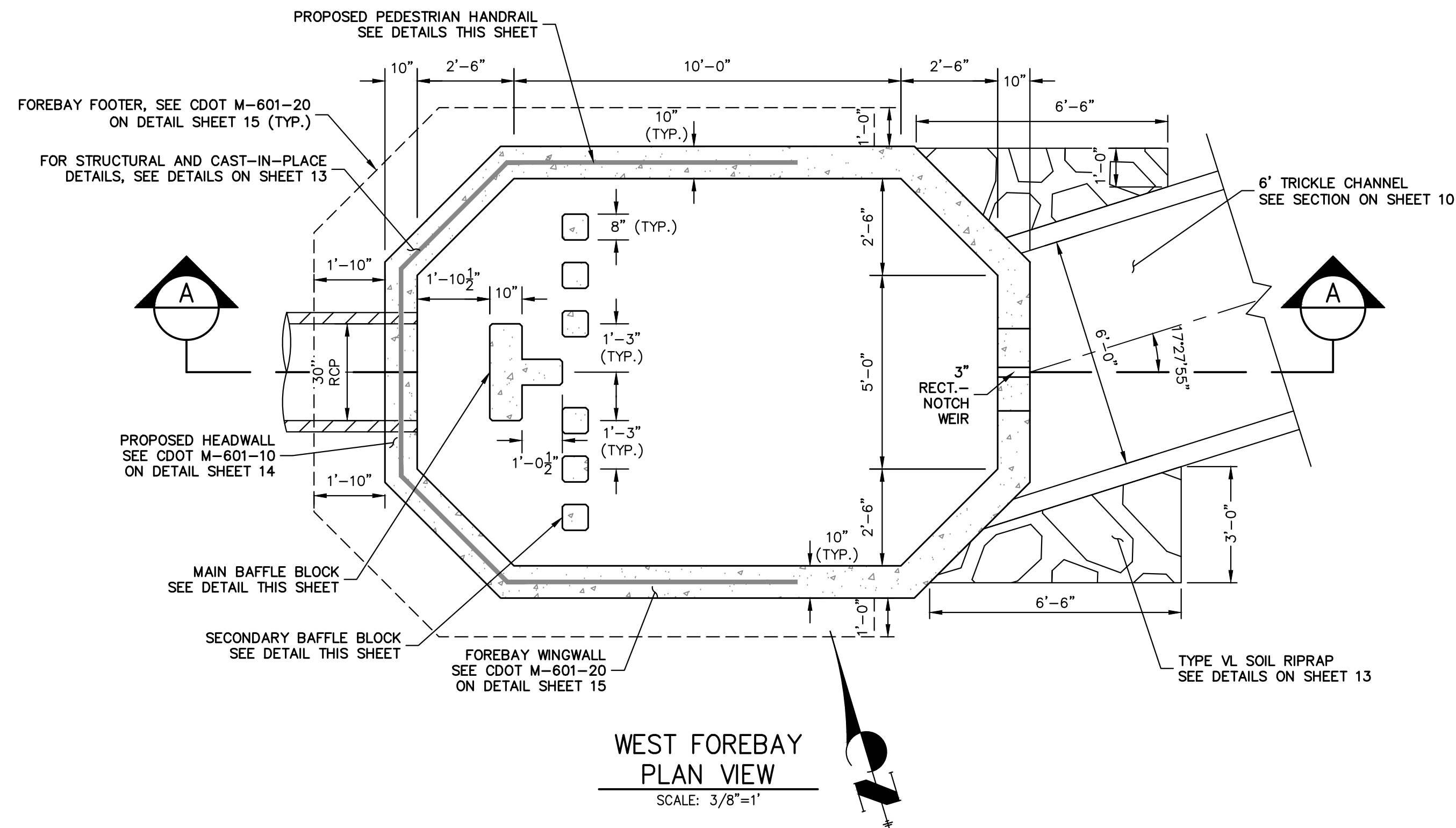
No.	REVISION	BY	DATE

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
1"=30'	1"=3'	08/01/23	GAG	GAG	

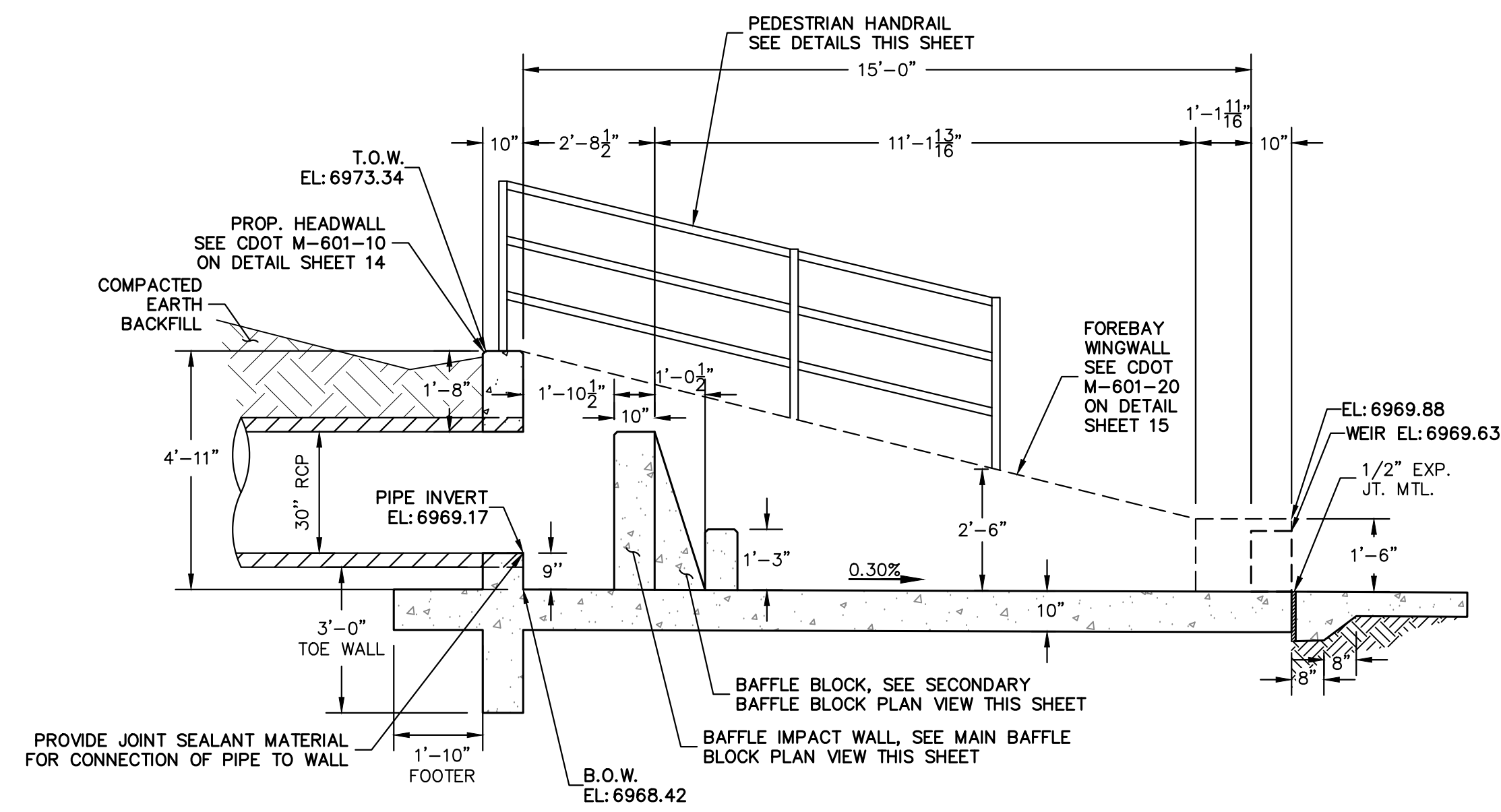
STERLING RECYCLING FACILITY  
 POND PLANS

SHEET 9 OF 19  
 JOB NO. 25188.14

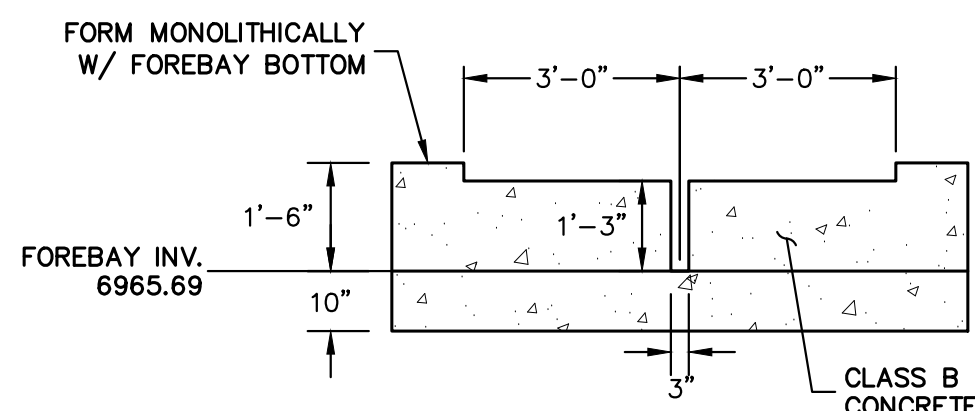




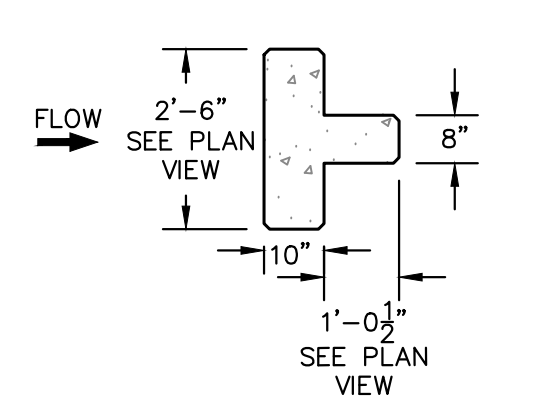
WEST FOREBAY  
PLAN VIEW  
SCALE: 3/8"=1'



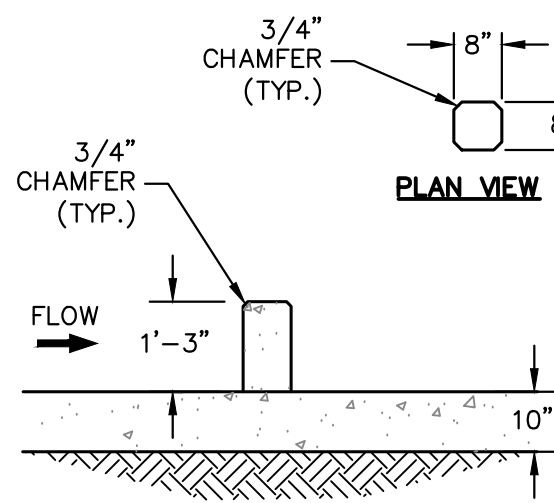
WEST FOREBAY  
CROSS SECTION A-A  
SCALE: 3/8"=1'



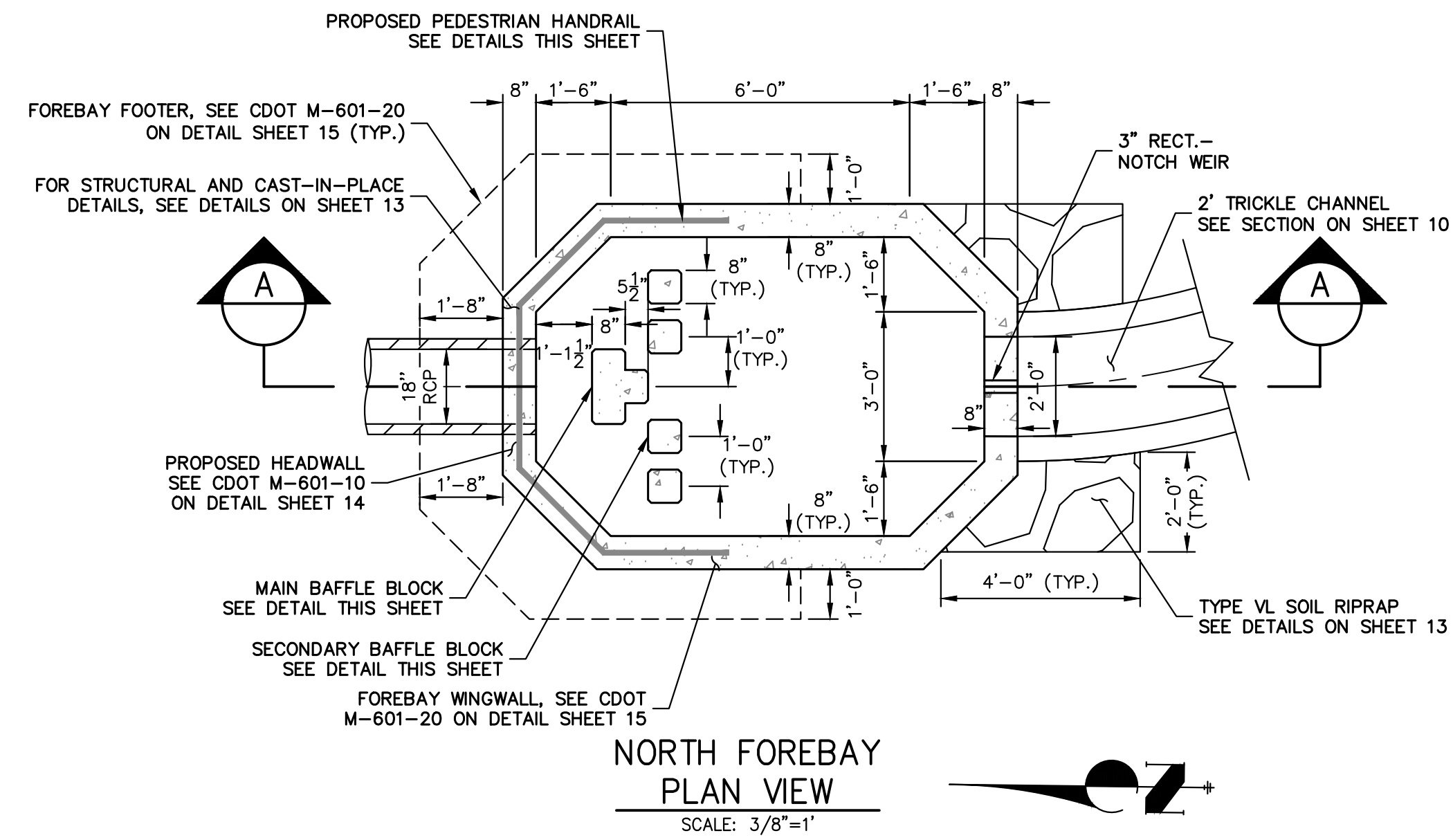
WEST FOREBAY  
SECTION AT WEIR  
SCALE: 3/8"=1'



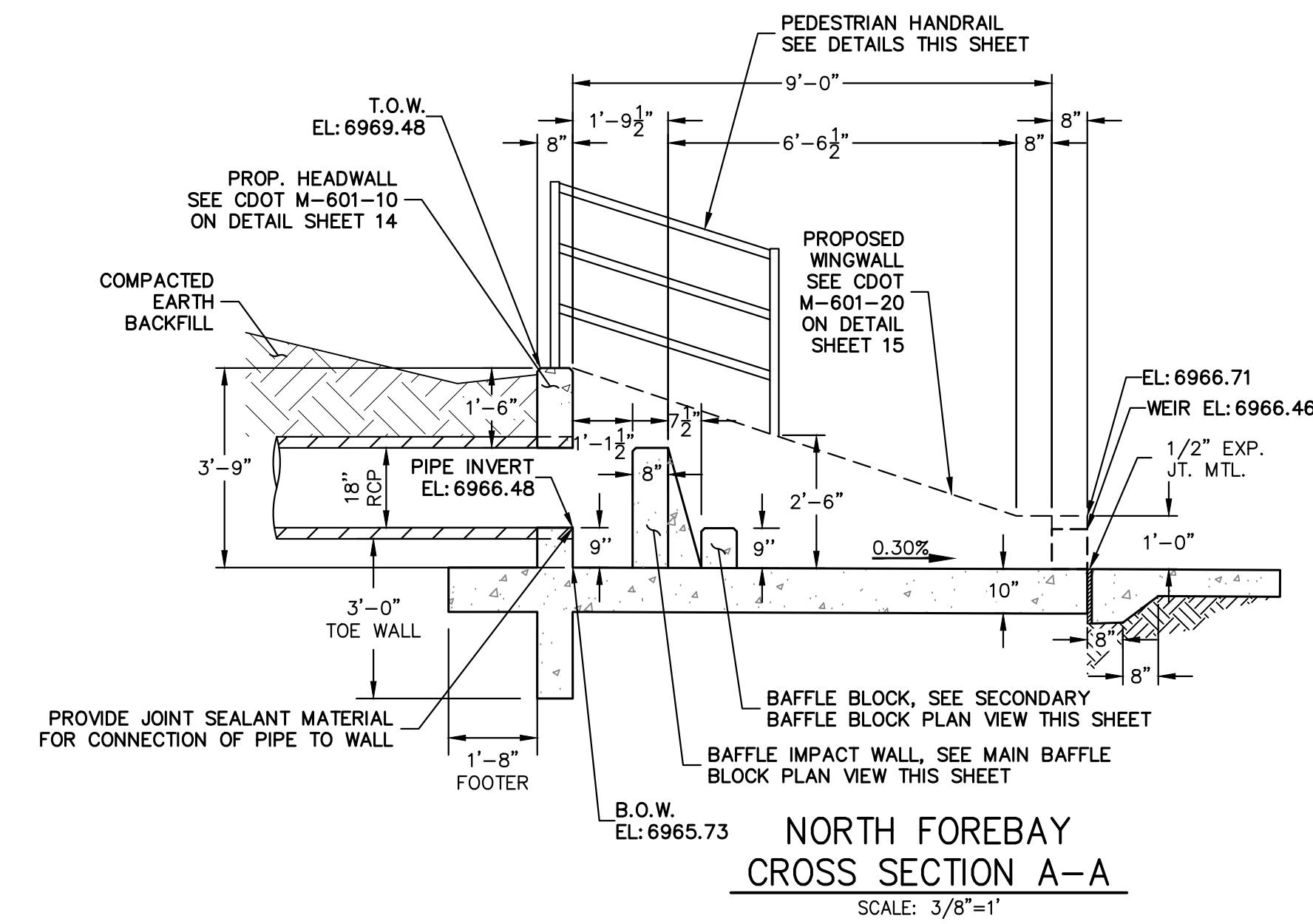
WEST FOREBAY MAIN  
BAFFLE BLOCK PLAN  
SCALE: 3/8"=1'



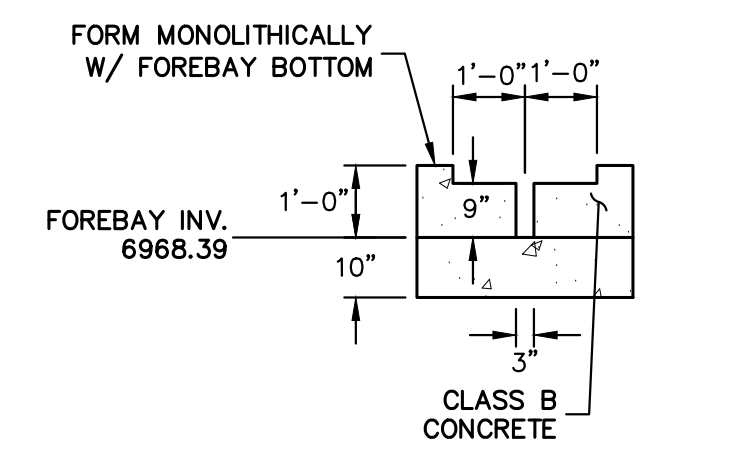
WEST FOREBAY SECONDARY  
BAFFLE BLOCK DETAILS  
SCALE: 3/8"=1'



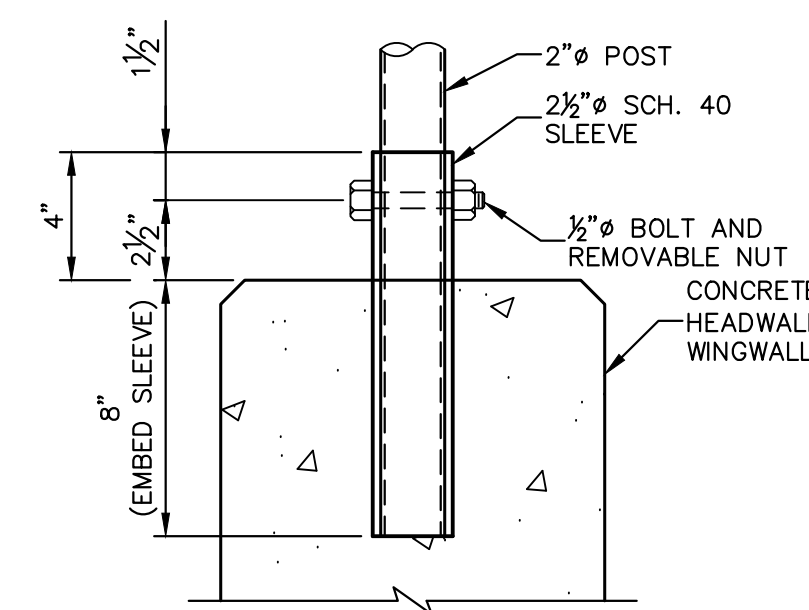
NORTH FOREBAY  
PLAN VIEW  
SCALE: 3/8"=1'



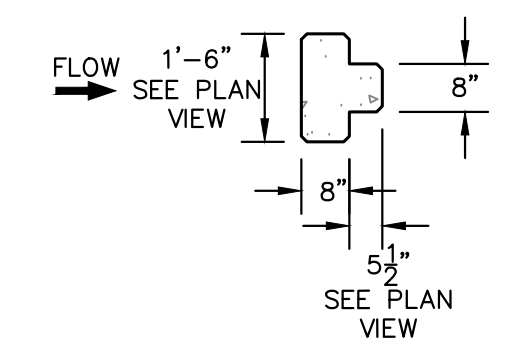
NORTH FOREBAY  
CROSS SECTION A-A  
SCALE: 3/8"=1'



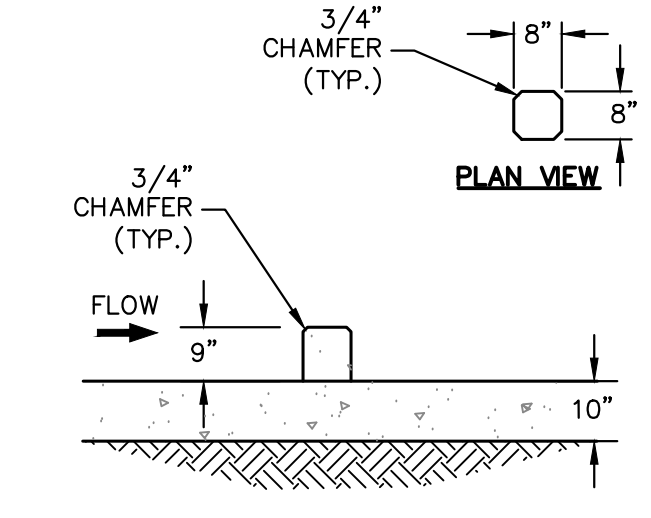
NORTH FOREBAY  
SECTION AT WEIR  
SCALE: 3/8"=1'



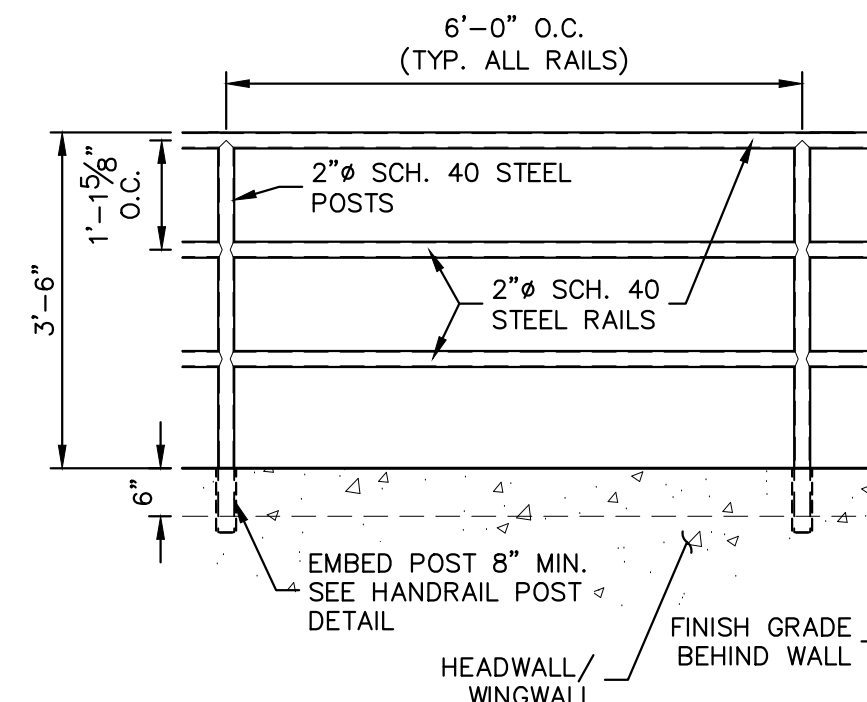
PEDESTRIAN RAILING  
POST DETAIL  
SCALE: 1"=6"



NORTH FOREBAY MAIN  
BAFFLE BLOCK PLAN  
SCALE: 3/8"=1'



NORTH FOREBAY SECONDARY  
BAFFLE BLOCK DETAILS  
SCALE: 3/8"=1'

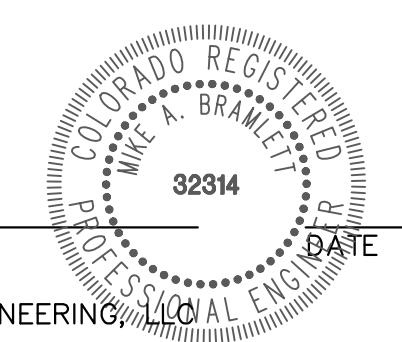


PEDESTRIAN RAILING DETAIL  
SCALE: 1/2"=1'



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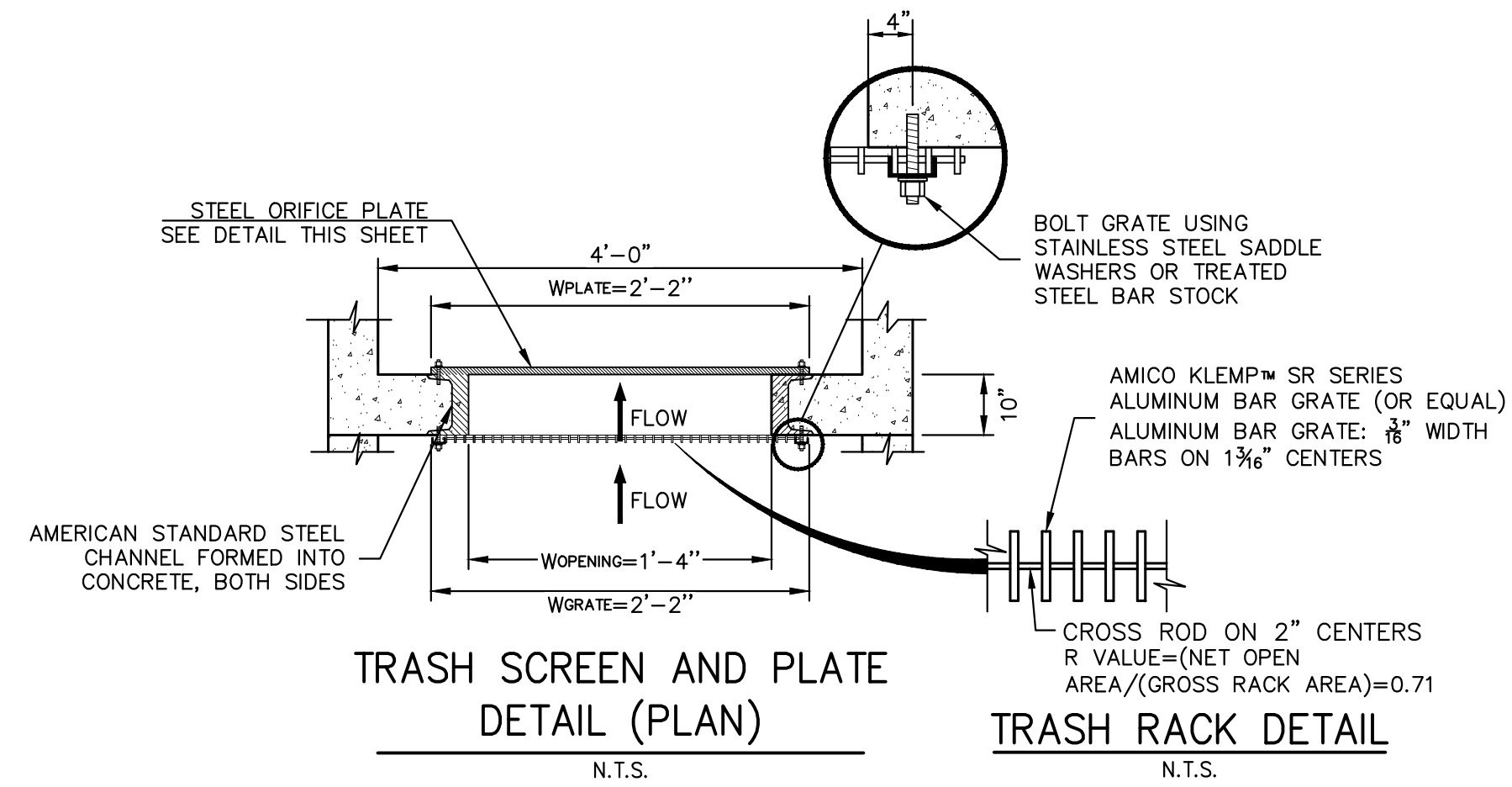
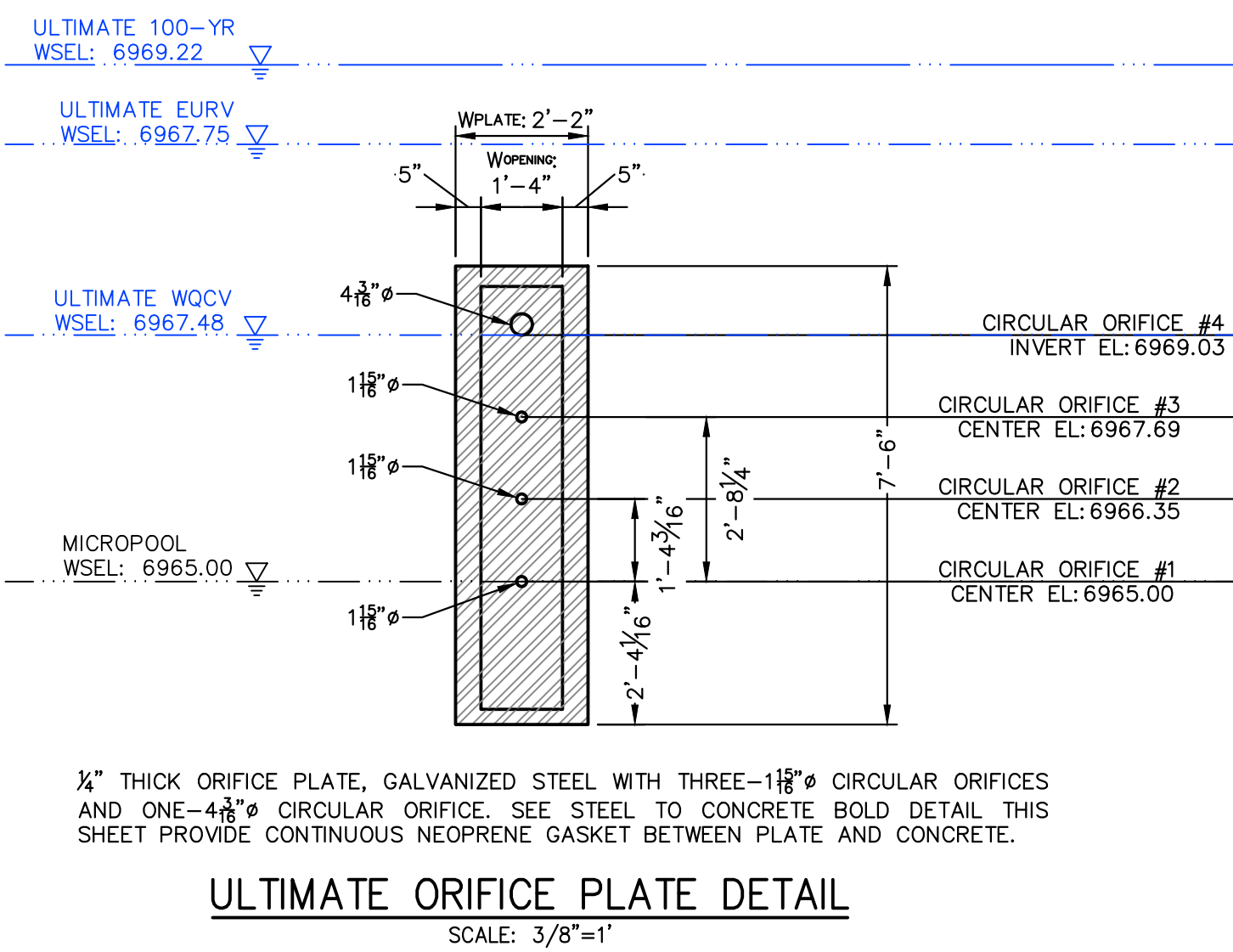
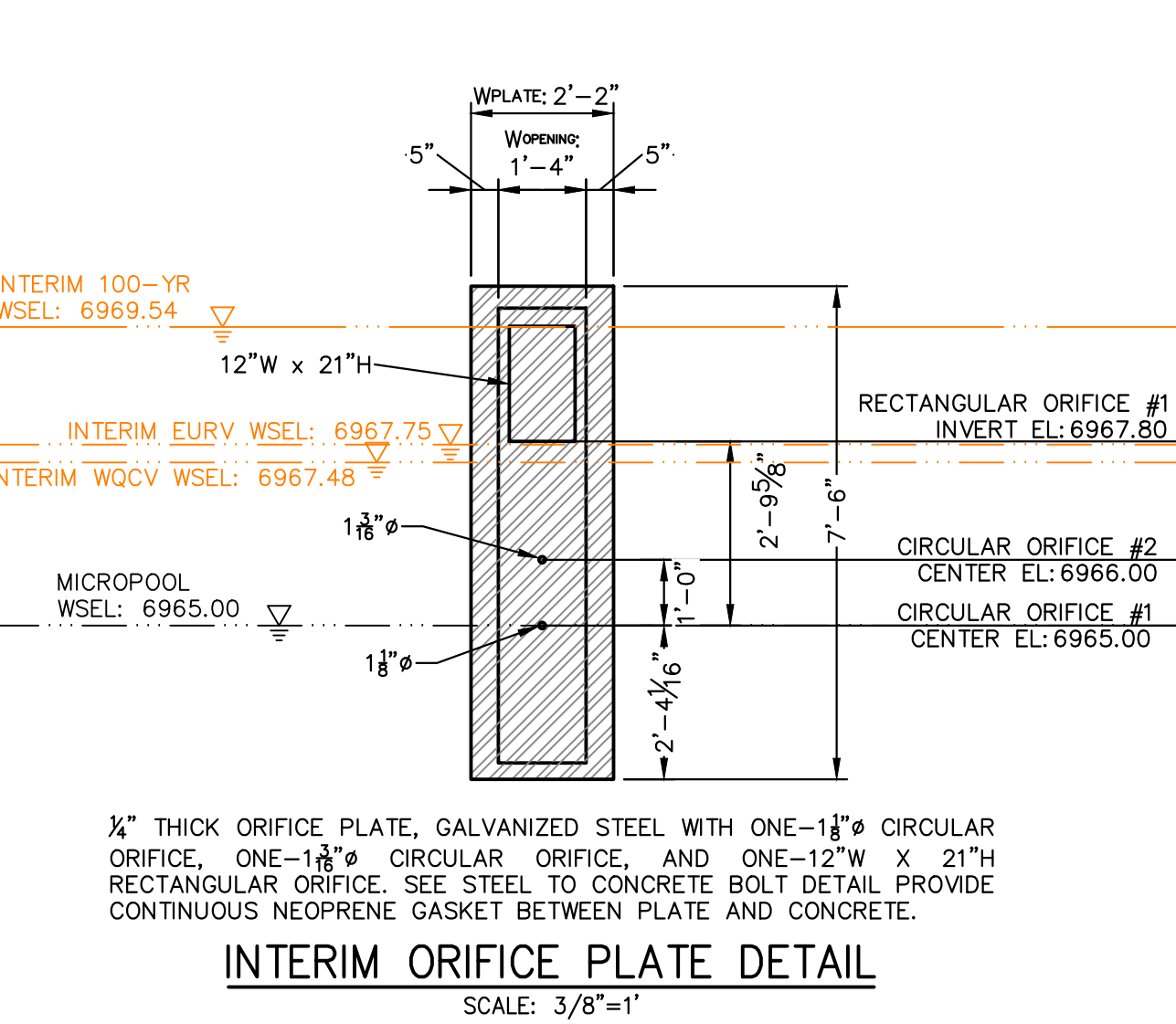
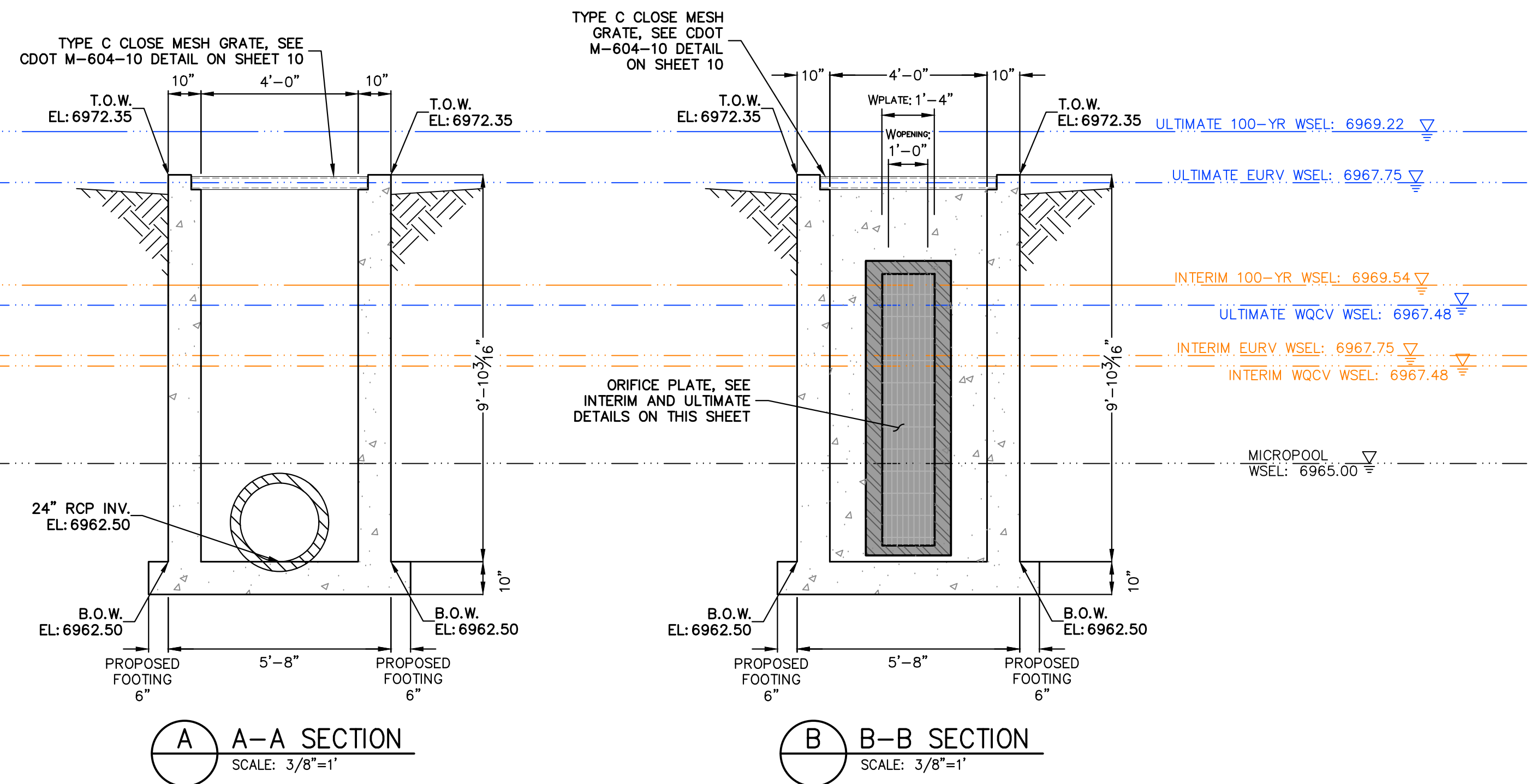
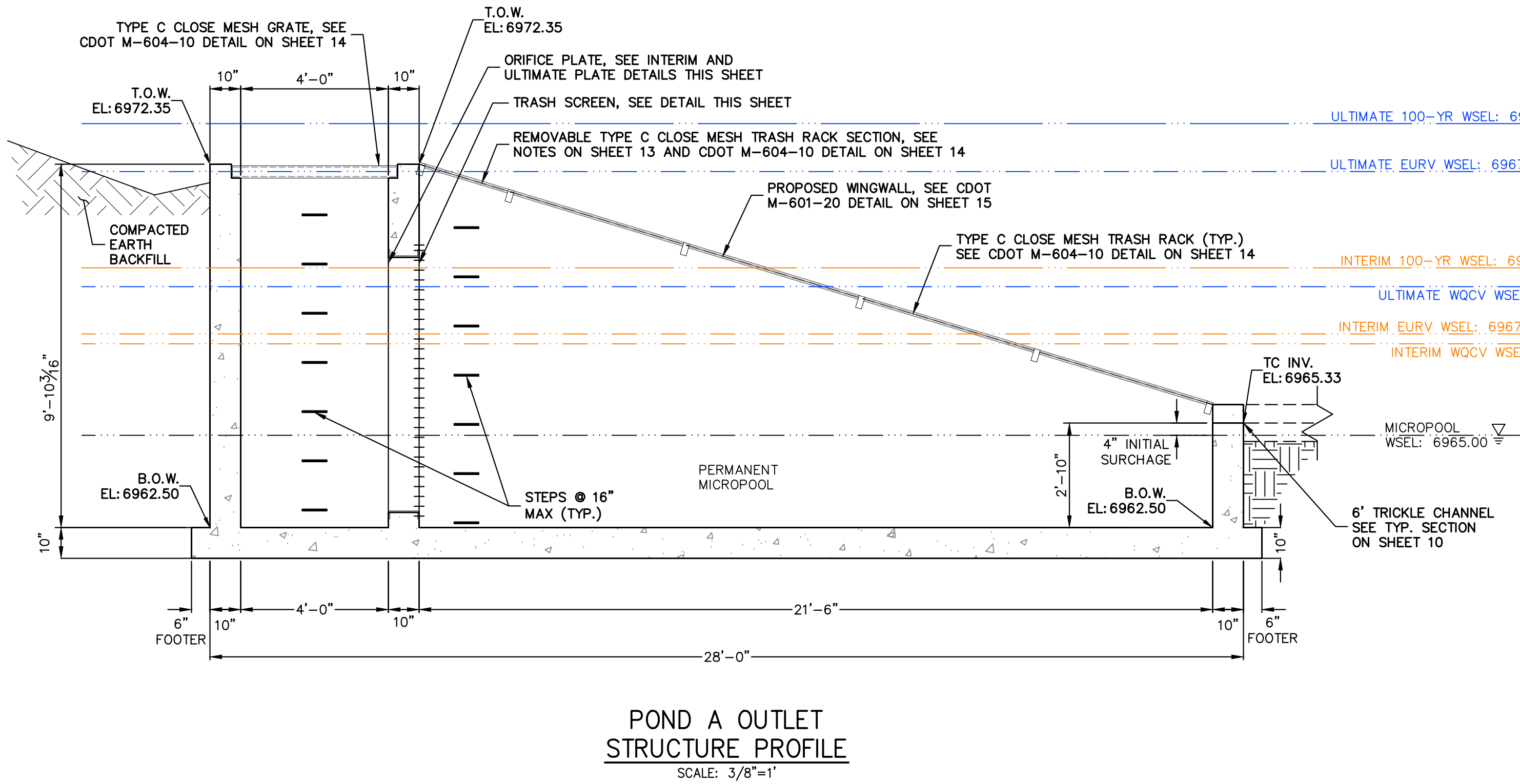
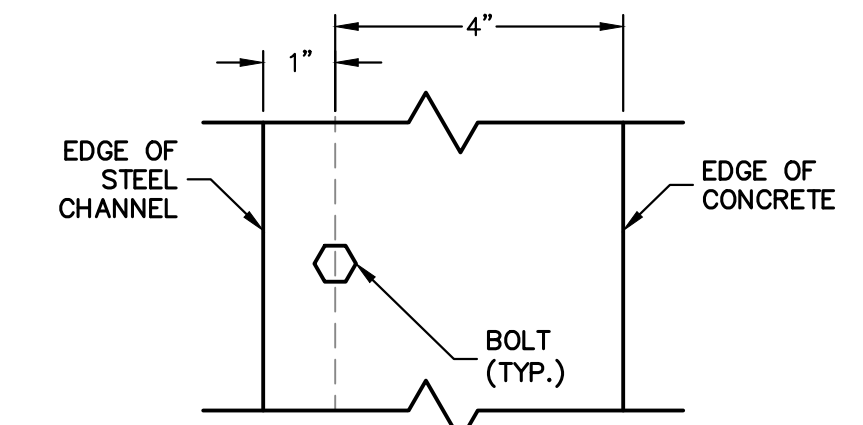
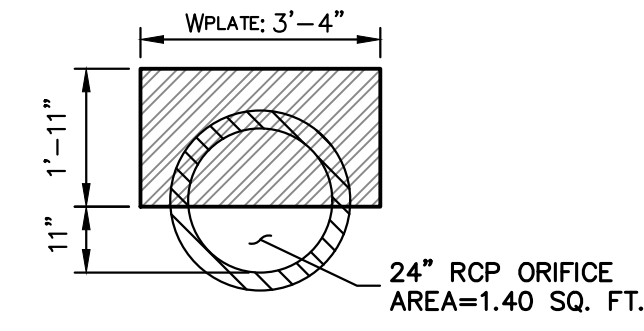
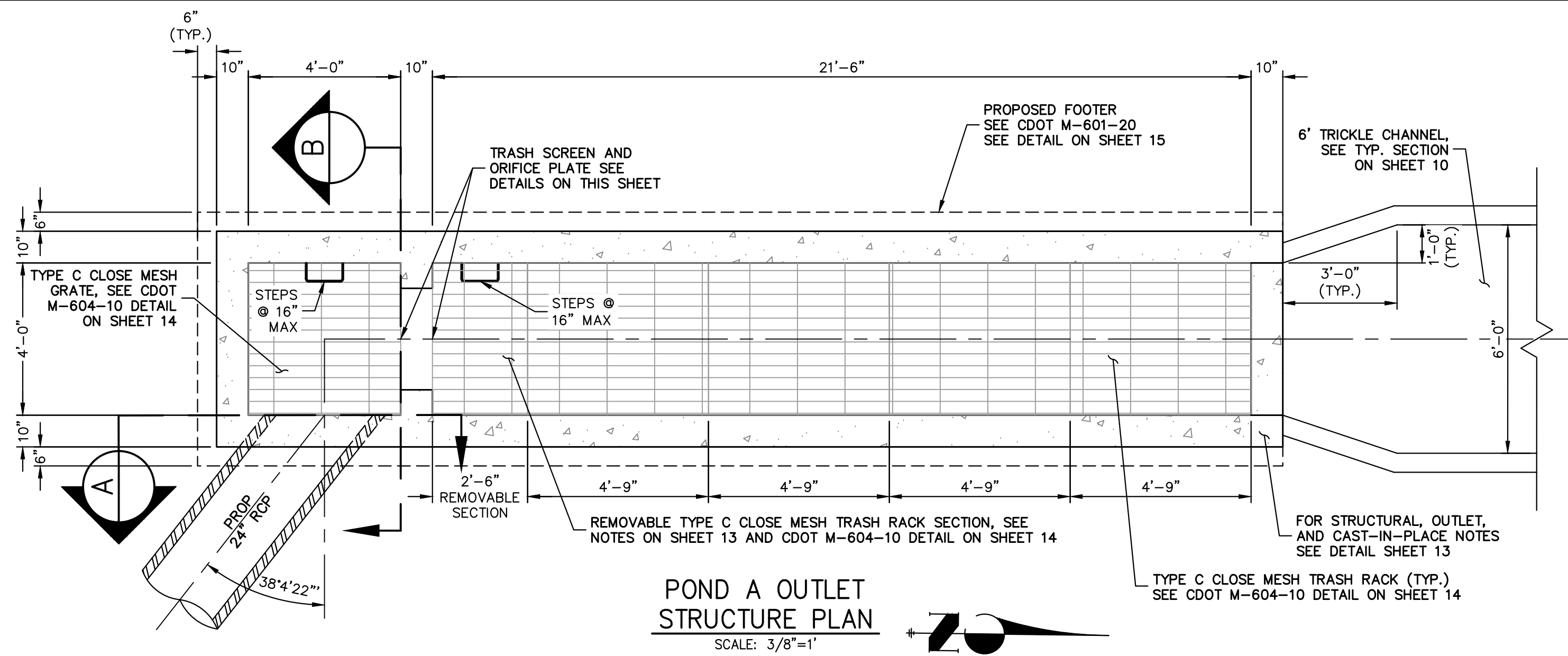
PREPARED FOR  
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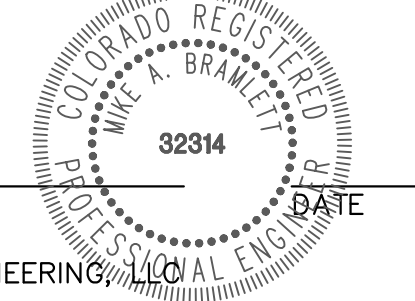
No.	REVISION	BY	DATE

H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
3/8"=1'	3/8"=1'	08/01/23	GAG	GAG	

STERLING RECYCLING FACILITY		POND DETAILS	
SHEET	11	OF	19
JOB NO.	25188.14		



**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. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.



MIKE A. BRAMLETT, P.E.  
 COLORADO P.E. 32314  
 FOR AND ON BEHALF OF JR ENGINEERING

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

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STERLING RECYCLING FACILITY  
 POND DETAILS

SHEET 12 OF 19  
 JOB NO. 25188.14

**GENERAL STRUCTURE NOTES:**

ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OR COUNTY STANDARD CONSTRUCTION SPECIFICATIONS. EXCEPT AS SHOWN IN THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT M-206-1, AND M-206-2 EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERE TO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO A 1-800-922-1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OF OTHER.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING AND PROVIDING ALL BRACING AND SHORING AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE EXCAVATION PROCEDURES INCLUDING ANY SHORING REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL METHODS AND MEANS OF CONSTRUCTION AS WELL AS ALL JOB SITE SAFETY & HEALTH PRECAUTIONS.

ALL SOILS WORK INCLUDING (BUT NOT LIMITED TO) PIER DRILLING AND CONSTRUCTION, SOILS EXCAVATION, FILL PLACEMENT, AND STRUCTURE BACKFILL SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT, UNLESS MORE STRINGENT REQUIREMENTS ARE PRINTED ON THE "IRRIGATION NOTES".

BACKFILL SHALL NOT BEGIN UNTIL CONCRETE WALLS REACH COMPRESSION STRENGTH AT LEAST 80 PERCENT OF THE REQUIRED 28 DAY STRENGTH, 0.8fc'.

REINFORCED CONCRETE:  
CLASS D CONCRETE: fc'=4,500 psi  
REINFORCING STEEL: fy=60,000 psi  
ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS D UNLESS NOTED OTHERWISE.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 U.N.O.  
REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.  
ALL REINFORCING, EXCEPT PIER REINFORCING, SHALL BE EPOXY COATED AND SHALL CONFORM TO ASTM A775.  
ALL REINFORCING SHALL HAVE 2" CONCRETE COVER, U.N.O. ON PLANS, 3" AGAINST GROUND (BOTTOM SLAB)  
ALL REINFORCING SHALL BE HOOKED AROUND CORNERS AND LAPPED, SEE DETAILS.  
ALL LAP SPLICE LOCATIONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

THE FOLLOWING TABLE GIVES THE MINIMUM CLASS B (STAGGERED) LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER, INCREASED BY 40% FOR HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW (TOP BARS), AND INCREASED BY 75% IF BOTH CONDITIONS EXIST. THE INCREASES ABOVE FOR #6 THRU #11 BARS MAY BE 25%, 13%, AND 42% RESPECTIVELY.

#4	1'-3"	#5	1'-7"
#6	2'-5"	#7	2'-10"
#8	3'-8"	#9	4'-6"
#10	5'-11"	#11	7'-3"

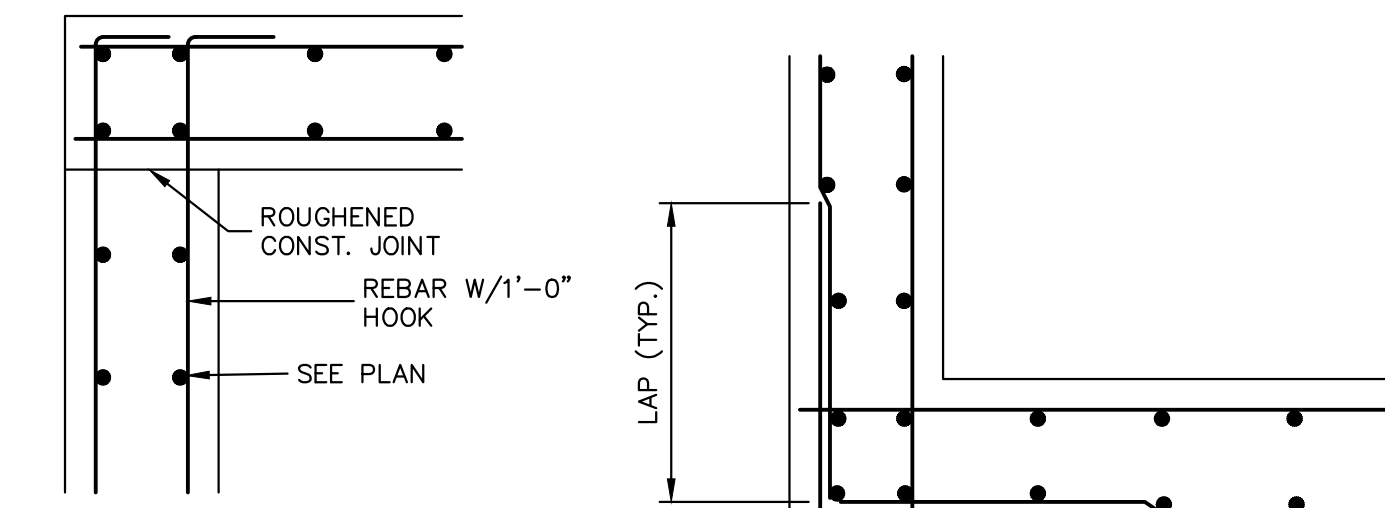
WHEN THE CONTRACTOR ELECTS TO SUBSTITUTE EPOXY COATED REINFORCEMENT FOR BLACK REINFORCING BARS. THE MINIMUM LAP SPLICE SHALL BE AS DESCRIBED ABOVE.

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

THE CONTRACTOR SHALL SUBMIT REINFORCING STEEL PLACING DRAWINGS (PRIOR TO CONSTRUCTION) TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE DESIGN DRAWINGS. THE DESIGN DRAWINGS SHALL GOVERN OVER PLACING DRAWINGS IN ALL CASES UNLESS MODIFICATIONS ARE APPROVED IN WRITING BY ENGINEER.

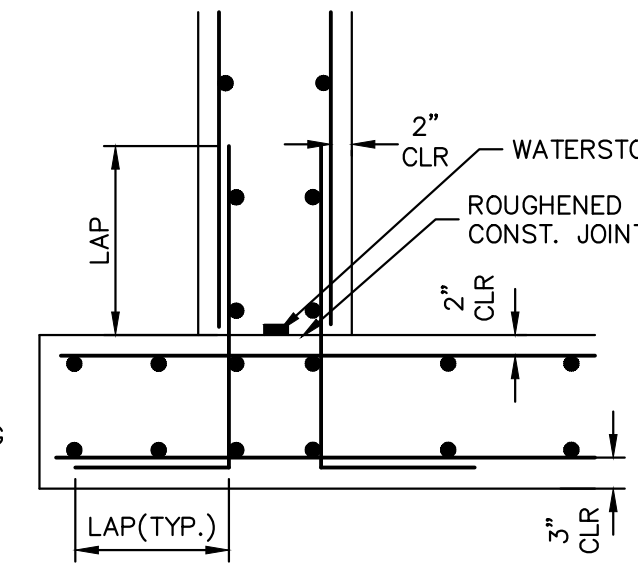
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

E.F. = EACH FACE	O.F. = OUTSIDE FACE
F.E. = FAR FACE	T.&B. = TOP AND BOTTOM
N.F. = NEAR FACE	T.F. = TOP FACE
I.F. = INSIDE FACE	B.F. = BOTTOM FACE
T.W. = TWO WAY	T.F. = TWO FACES
E.S. = EACH SIDE	Lp = LAP LENGTH

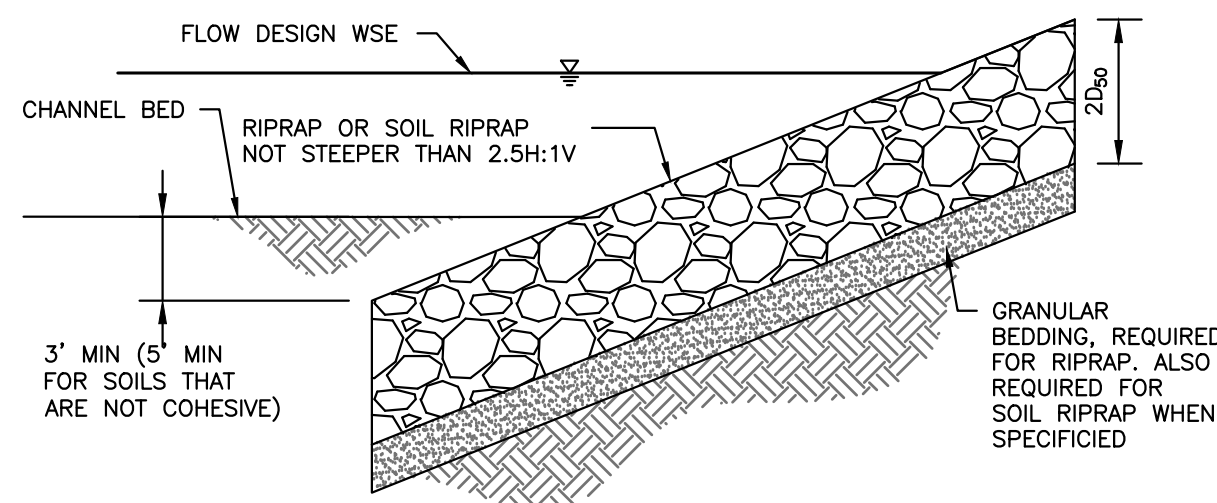


**TYPICAL TOP CORNER WALL SECTION DETAIL**

**TYPICAL WALL CORNER PLAN VIEW**



**TYPICAL BOTTOM CORNER WALL SECTION DETAIL**



**SOIL RIPRAP NOTES:**

- ELEVATION TOLERANCES FOR THE SOIL RIPRAP SHALL BE 0.10 FEET. THICKNESS OF SOIL RIPRAP SHALL BE NO LESS THAN THICKNESS SHOWN AND NO MORE THAN 2-INCHES GREATER THAN THE THICKNESS SHOWN.
- WHERE 'SOIL RIPRAP' IS DESIGNATED ON THE CONTRACT DRAWINGS, RIPRAP VOIDS ARE TO BE FILLED WITH NATIVE SOIL. THE RIPRAP SHALL BE PRE-MIXED WITH THE NATIVE SOIL AT THE FOLLOWING PROPORTIONS BY VOLUME: 65 PERCENT RIPRAP AND 35 PERCENT SOIL. THE SOIL USED FOR MIXING SHALL BE NATIVE TOPSOIL AND SHALL HAVE A MINIMUM FINES CONTENT OF 15 PERCENT. THE SOIL RIPRAP SHALL BE INSTALLED IN A MANNER THAT RESULTS IN A DENSE, INTERLOCKED LAYER OF RIPRAP WITH RIPRAP VOIDS FILLED COMPLETELY WITH SOIL. SEGREGATION OF MATERIALS SHALL BE AVOIDED AND IN NO CASE SHALL THE COMBINED MATERIAL CONSIST PRIMARILY OF SOIL; THE DENSITY AND INTERLOCKING NATURE OF RIPRAP IN THE MIXED MATERIAL SHALL ESSENTIALLY BE THE SAME AS IF THE RIPRAP WAS PLACED WITHOUT SOIL.
- WHERE SPECIFIED (TYPICALLY AS 'BURIED SOIL RIPRAP'), A SURFACE LAYER OF TOPSOIL SHALL BE PLACED OVER THE SOIL RIPRAP ACCORDING TO THE THICKNESS SPECIFIED ON THE CONTRACT DRAWINGS. THE TOPSOIL SURFACE LAYER SHALL BE COMPACTED TO APPROXIMATELY 85% OF MAXIMUM SURFACE DENSITY AND WITHIN TWO PERCENTAGE POINTS OF OPTIMUM MOISTURE IN ACCORDANCE WITH ASTM D698, TOPSOIL SHALL BE ADDED TO ANY AREAS THAT SETTLE.
- ALL SOIL RIPRAP THAT IS BURIED WITH TOPSOIL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY TOPSOIL PLACEMENT.

U.S. STANDARD SIEVE SIZE	PERCENT PASSING BY WEIGHT	
	TYPE I CDOT SECT. 703.01	TYPE II CDOT SECT. 703.09 CLASS A
3 INCHES	-	90 - 100
1½ INCHES	-	-
¾ INCHES	-	20 - 90
⅜ INCHES	100	-
#4	95 - 100	0 - 20
#16	45 - 80	-
#50	10 - 30	-
#100	2 - 10	-
#200	0 - 2	0 - 3

**RIPRAP BEDDING**

RIPRAP DESIGNATION	MINIMUM BEDDING THICKNESS (INCHES)		
	FINE-GRAINED SOILS 1		COARSE-GRAINED SOILS 2
	TYPE I (LOWER LAYER)	TYPE II (UPPER LAYER)	
VL (D50 = 6 IN)	4	4	6
L (D50 = 9 IN)	4	4	6
M (D50 = 12 IN)	4	4	6
H (D50 = 18 IN)	4	6	8
VH (D50 = 24 IN)	4	6	8

NOTES:  
1. MAY SUBSTITUTE ONE 12-INCH LAYER OF TYPE II BEDDING. THE SUBSTITUTION OF ONE LAYER OF TYPE II BEDDING SHALL NOT BE PERMITTED AT DROP STRUCTURES. THE USE OF A COMBINATION OF FILTER FABRIC AND TYPE II BEDDING AT DROP STRUCTURES IS ACCEPTABLE.  
2. FIFTY PERCENT OR MORE BY WEIGHT RETAINED ON THE #40 SIEVE.

RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	D50* (INCHES)
TYPE VL	70 - 100	12	6
	50 - 70	9	
	35 - 50	6	
TYPE L	70 - 100	15	9
	50 - 70	12	
	35 - 50	9	
TYPE M	70 - 100	21	12
	50 - 70	18	
	35 - 50	12	
TYPE H	70 - 100	30	18
	50 - 70	24	
	35 - 50	18	
	2 - 10	6	

\*D50 = MEAN ROCK SIZE

**OUTLET STRUCTURE PLATE AND GRADING NOTES:**

- ORIFICE PLATE:**  
1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE AND BETWEEN THE RESTRICTOR PLATE AND CONCRETE.  
2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.
- TRASH RACKS:**  
3. TRASH RACKS SHALL BE 1½" SCH.40 STEEL PIPE, GALVANIZED, @ 6" CENTERS. SUPPORT BARS SHALL BE ½"x2" STEEL RECTANGULAR BARS, GALVANIZED, @ 36". ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.  
4. REMOVABLE TRASH RACK SECTIONS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED & LOCKABLE OR BOLTABLE ACCESS PANELS AS SHOWN ON THE PLANS.  
5. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.  
6. STRUCTURAL STEEL FOR GRATES, ORIFICE PLATES, AND BARS SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS, SUBSECTION 712.06.  
7. ALL HARDWARE, BOLTS, AND FASTENERS SHALL BE STAINLESS STEEL.  
8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PLATES AND GRATING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

**CAST-IN-PLACE STRUCTURAL NOTES:**

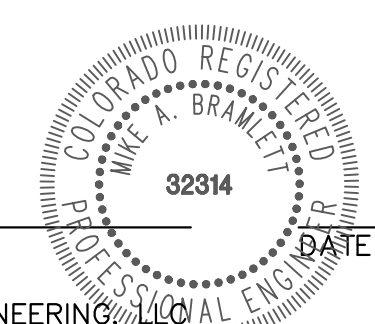
- ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
- ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
- DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F.C.
- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¼".
- CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.
- HEADWALLS FOR PIPES SHALL BE CONSTRUCTED PER CDOT M-601-10.
- WINGWALLS SHALL BE CONSTRUCTED PER CDOT M-601-20.

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Know what's below.  
Call before you dig.



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				08/01/23			

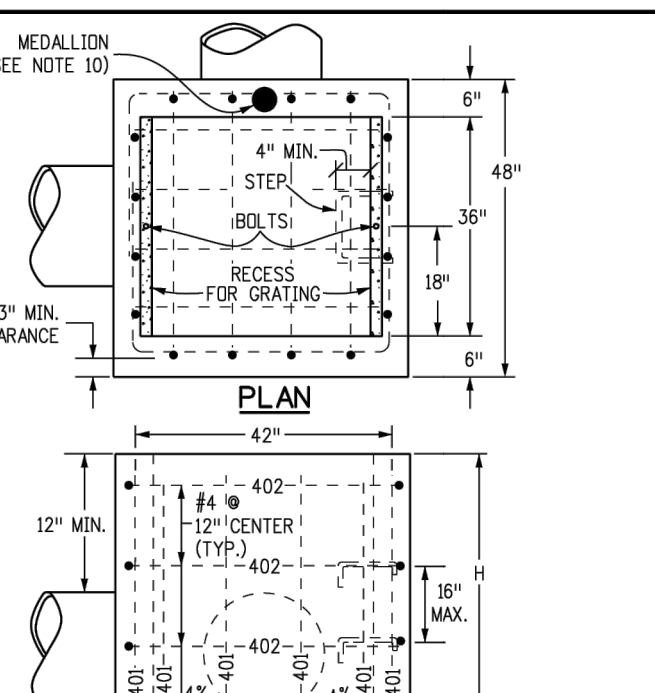
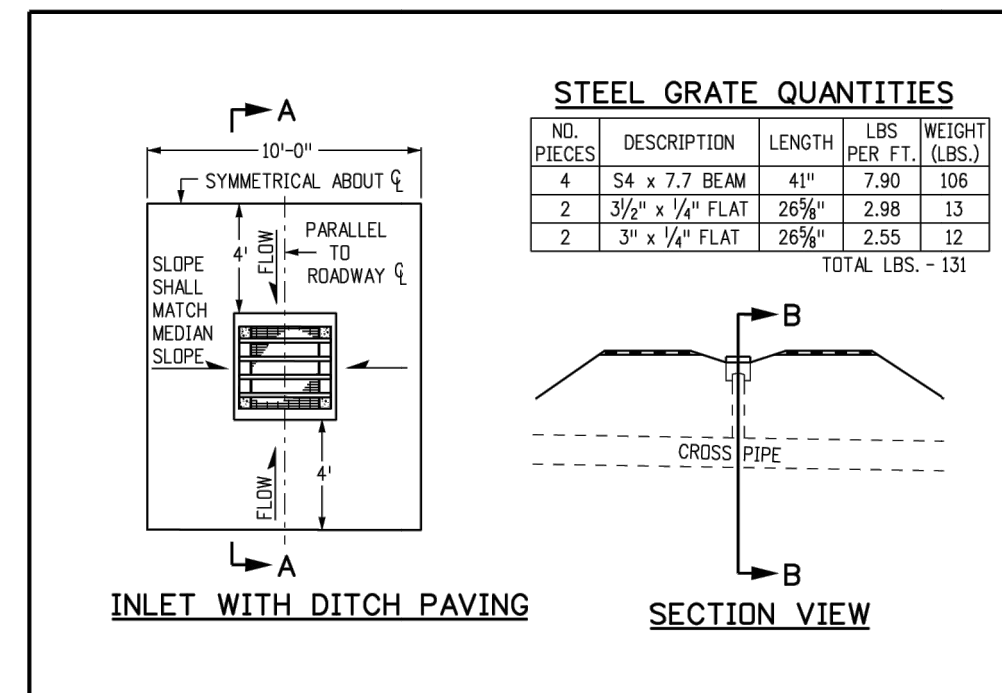
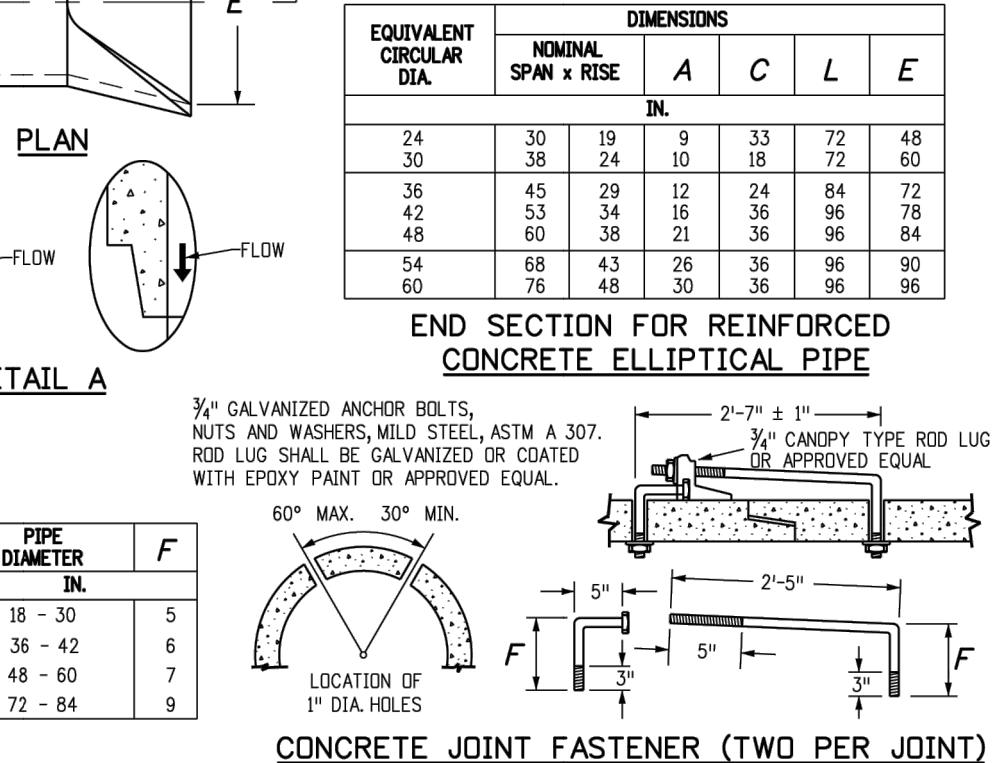
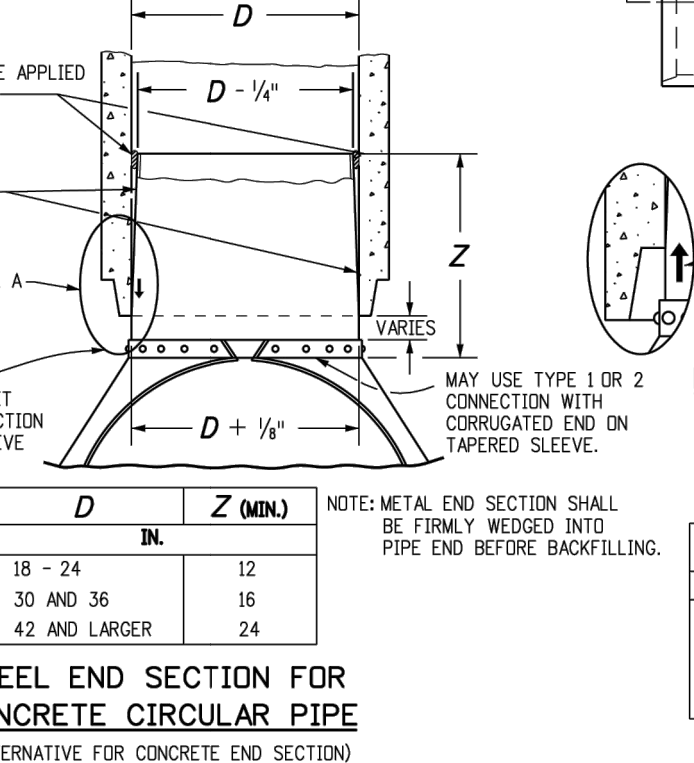
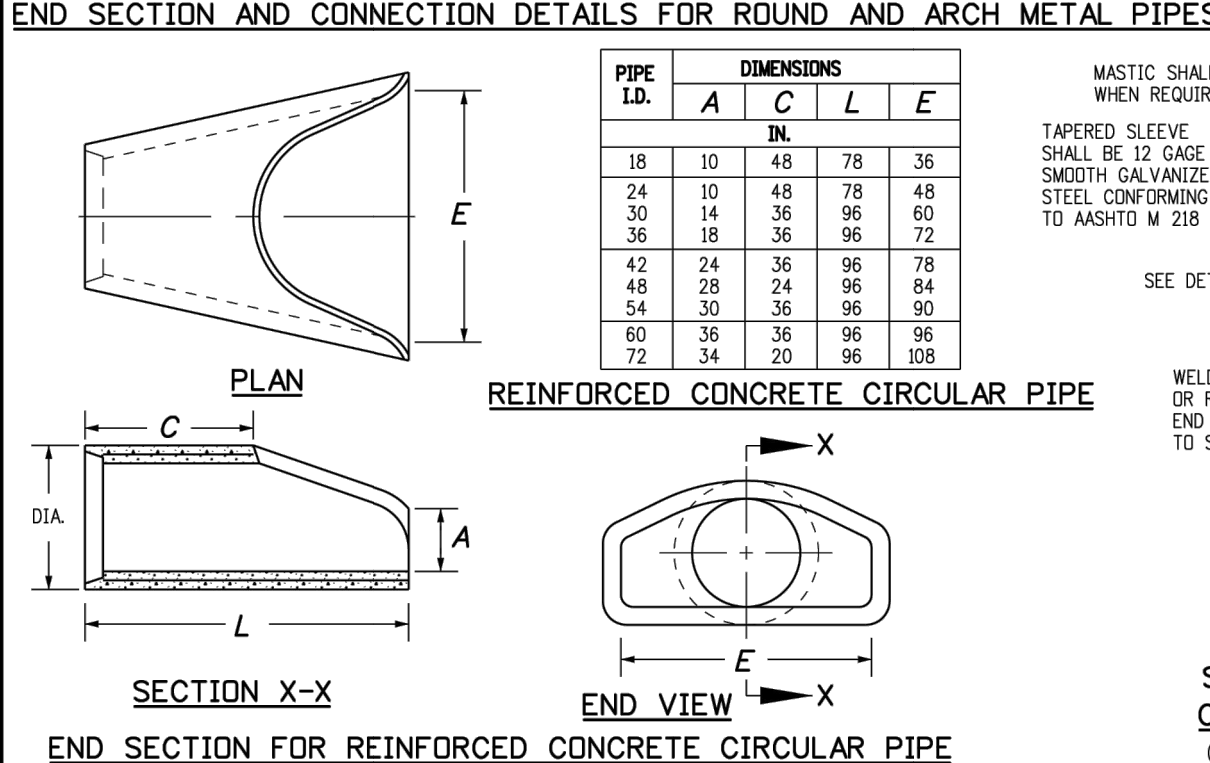
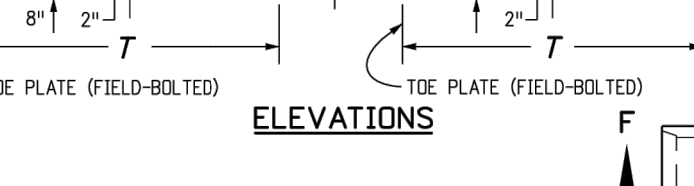
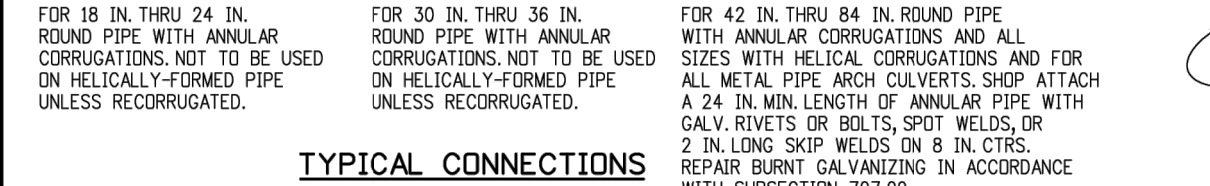
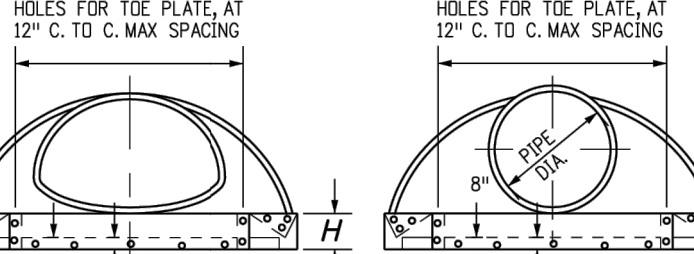
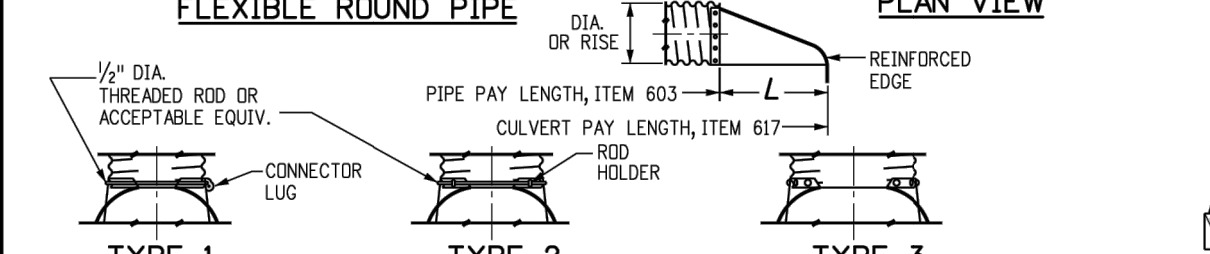
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POND DETAILS  
SHEET 13 OF 19  
JOB NO. 25188.14

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PIPE DIA.	THICKNESS	DIMENSIONS				
		A	B	H	L	W
12	0.064	6	6	6	21	34
18	0.064	8	10	6	31	46
24	0.064	10	12	6	41	58
30	0.079	12	16	6	51	70
36	0.079	14	19	9	60	84
42	0.109	16	22	11	69	106
48	0.109	18	27	12	78	112
54	0.109	18	30	12	84	124
60	0.109	18	33	12	87	136
66	0.109	18	36	12	87	142
72	0.109	18	39	12	87	148
78	0.109	18	42	12	87	154
84	0.109	18	45	12	87	160

PIPE ARCH	THICKNESS	DIMENSIONS				
		A	B	H	L	W
21 x 15	0.064	7	12	6	23	36
24 x 18	0.064	8	12	6	28	42
28 x 20	0.064	9	14	6	32	48
35 x 24	0.079	10	16	6	38	54
42 x 29	0.079	12	18	6	46	66
49 x 33	0.109	13	21	9	53	80
57 x 38	0.109	14	24	12	63	90
64 x 43	0.109	15	27	12	70	102
71 x 47	0.109	16	30	12	77	114

- GENERAL NOTES**
- DIMENSIONS OF END SECTIONS MAY VARY SLIGHTLY FROM THOSE SHOWN ON THE TABLES DUE TO DIFFERENT MANUFACTURERS' CONFIGURATIONS.
  - CONCRETE END SECTIONS SHALL BE FURNISHED WITH TONGUE OR GROOVE AS REQUIRED.
  - DESIGN LENGTH OF PIPE OR SIDE DRAIN IS BASED ON LENGTH OF END SECTION SHOWN IN TABLE. ANY ADDITIONAL PIPE REQUIRED TO PROVIDE THE DESIGN LENGTH SHALL BE FURNISHED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.
  - THE INSIDE CONFIGURATION AND THE JOINT OF CONCRETE END SECTION AND PIPE SHALL MATCH TOGETHER. END SECTION LENGTHS WHEN USED SHALL BE INCLUDED IN THE 15 LF REQUIREMENT.
  - END SECTIONS FOR CMP ARCH PIPE SHALL MATCH THE DIMENSIONS OF THE PIPE SHOWN ON THE PLANS.
  - GALVANIZED TIE PLATE AS SHOWN IS REQUIRED ON END SECTIONS FOR CORRUGATED STEEL PIPE AND SHALL BE THE SAME THICKNESS AS END SECTIONS. TIE PLATE SHALL BE FIELD-BOLTED TO END SECTION WITH 3/8" GALVANIZED BOLTS AND WASHERS.
  - GALVANIZED STEEL SHALL CONFORM TO ASTM A 111, M 218 OR M 232.
  - CONCRETE JOINT FASTENERS, WHEN SHOWN ON PLANS, SHALL BE INSTALLED SO THAT A MINIMUM OF 15 LINEAR FEET OF THE OUTLET END OF THE PIPE ARE MECHANICALLY LOCKED TOGETHER. END SECTIONS SHALL BE GALVANIZED OR COATED WITH APPROVED EQUAL.
  - CONNECTIONS OF METAL END SECTIONS TO PLASTIC PIPE SHALL BE APPROVED BY THE ENGINEER. PLASTIC END SECTIONS SHALL NOT BE USED.
  - THE END SECTION STYLE, EITHER REGULAR OR SAFETY, SHALL BE AS SHOWN ON THE PLANS.
  - AT THE OPTION OF THE CONTRACTOR AND APPROVAL OF THE CDDT PROJECT ENGINEER, REINFORCED CONCRETE END SECTIONS MAY BE MADE WITH SYNTHETIC FIBERS INSTEAD OF STEEL FOR PIPES 36 INCHES IN DIAMETER AND SMALLER, AND CONFORM TO ASTM M 66 AND SUBSECTION 603.03.



**QUANTITIES FOR ONE INLET**

H	CONCRETE (CU. YDS.)	STEEL (LBS.)	NO. STEPS REQ'D.
2'-6"	1.0	76	0
3'-0"	1.1	81	0
3'-6"	1.2	87	0
4'-0"	1.3	102	1
4'-6"	1.5	117	2
5'-0"	1.6	123	2
5'-6"	1.7	138	2
6'-0"	1.9	143	3
6'-6"	2.0	159	3
7'-0"	2.1	164	3
7'-6"	2.2	180	4
8'-0"	2.4	185	4
8'-6"	2.5	200	4
9'-0"	2.6	206	5
9'-6"	2.8	221	5
10'-0"	2.9	236	6
10'-6"	3.3	252	6

**BAR LIST FOR H = 2 FT.-6 IN. AND BENDING DIAGRAM**

MARK	NO.	HEIGHT	LENGTH
402	2	2'-2 1/2"	8'-0"
401	6	2'-7"	8'-8"
402	4	4'-0"	15'-4"

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 Last Modification Date: 07/31/19  
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 CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

**Sheet Revisions**

Date:	Comments:

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 Phone: 303-757-9021 FAX: 303-757-9868

**Project Development Branch** JBK

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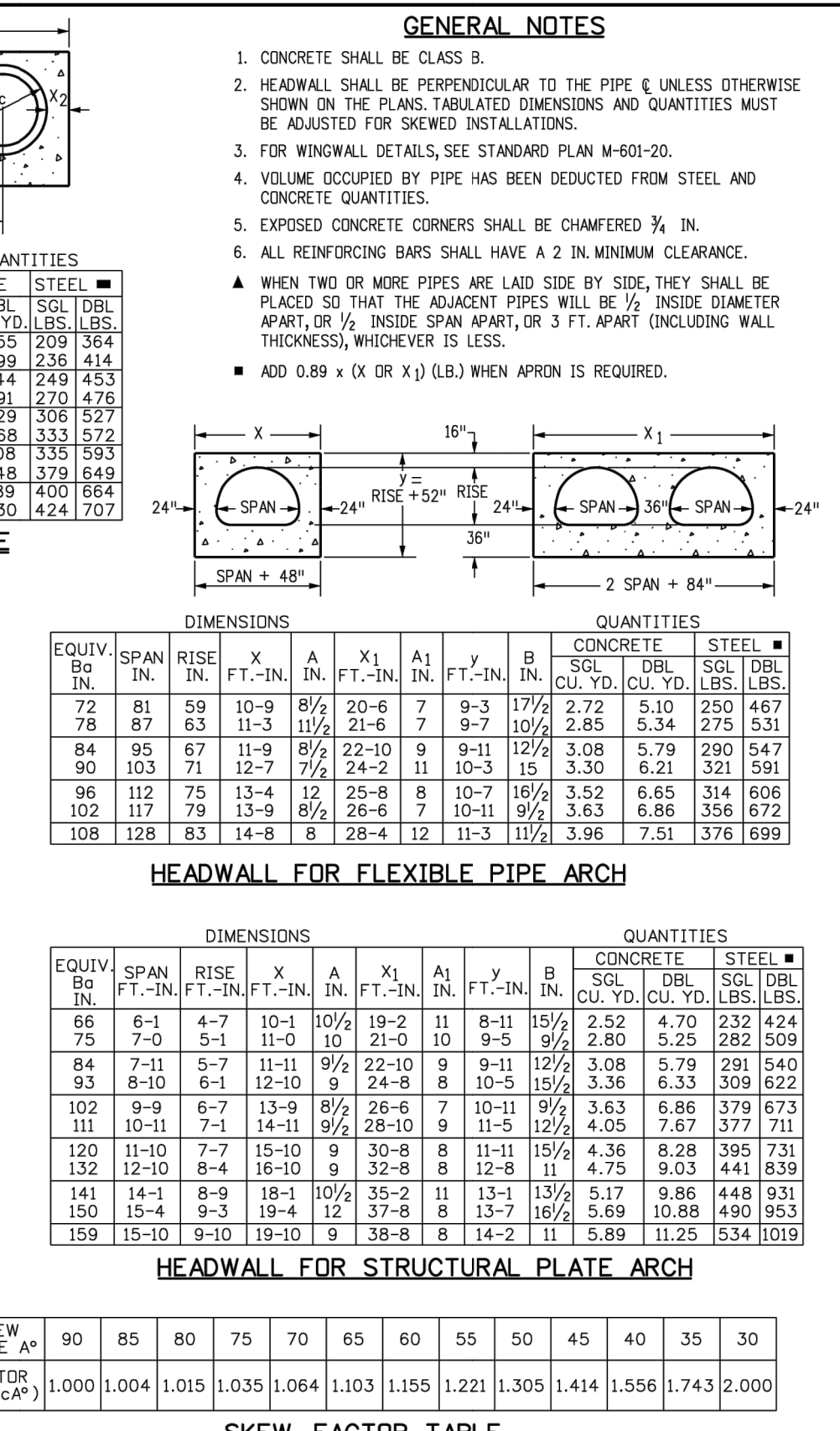
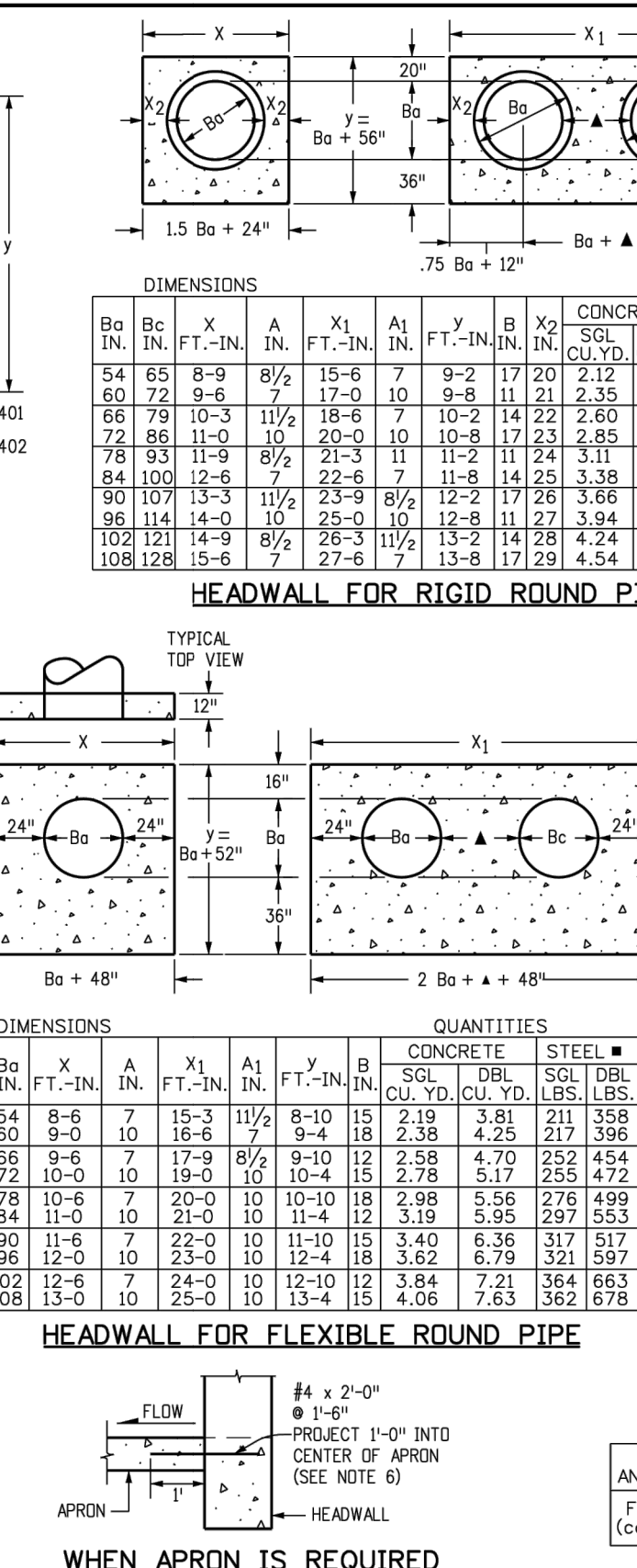
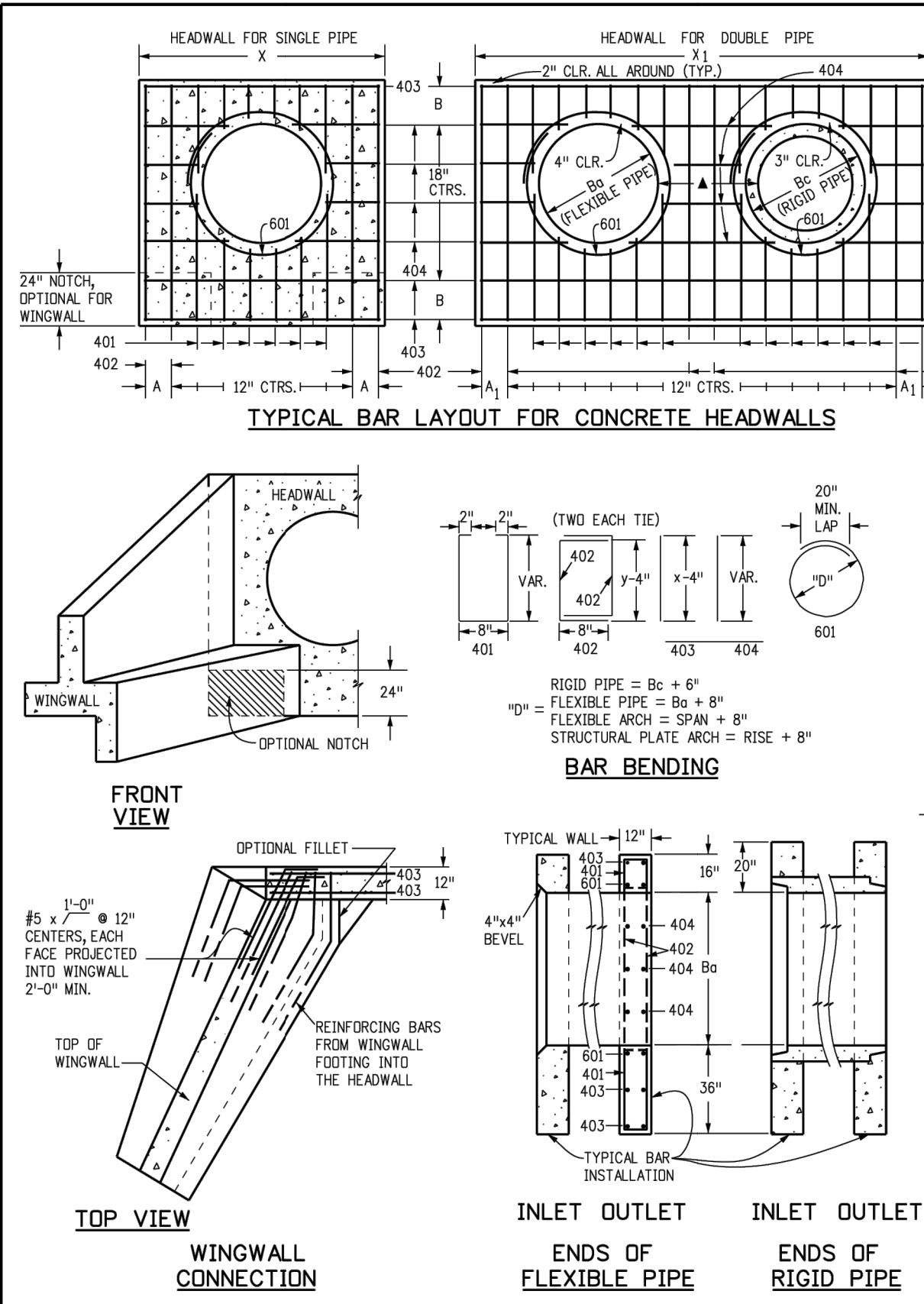
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 Last Modification Date: 07/31/19  
 Detailer: LTA  
 CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

**Sheet Revisions**

Date:	Comments:

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**Project Development Branch** JBK



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DESIGNED BY: N/A  
 DRAWN BY: N/A  
 CHECKED BY: N/A

DATE: 08/01/23

SHEET 14 OF 19  
 JOB NO. 25188.14

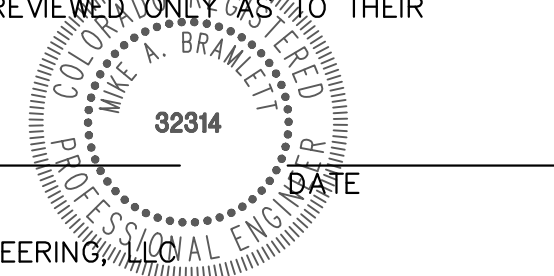


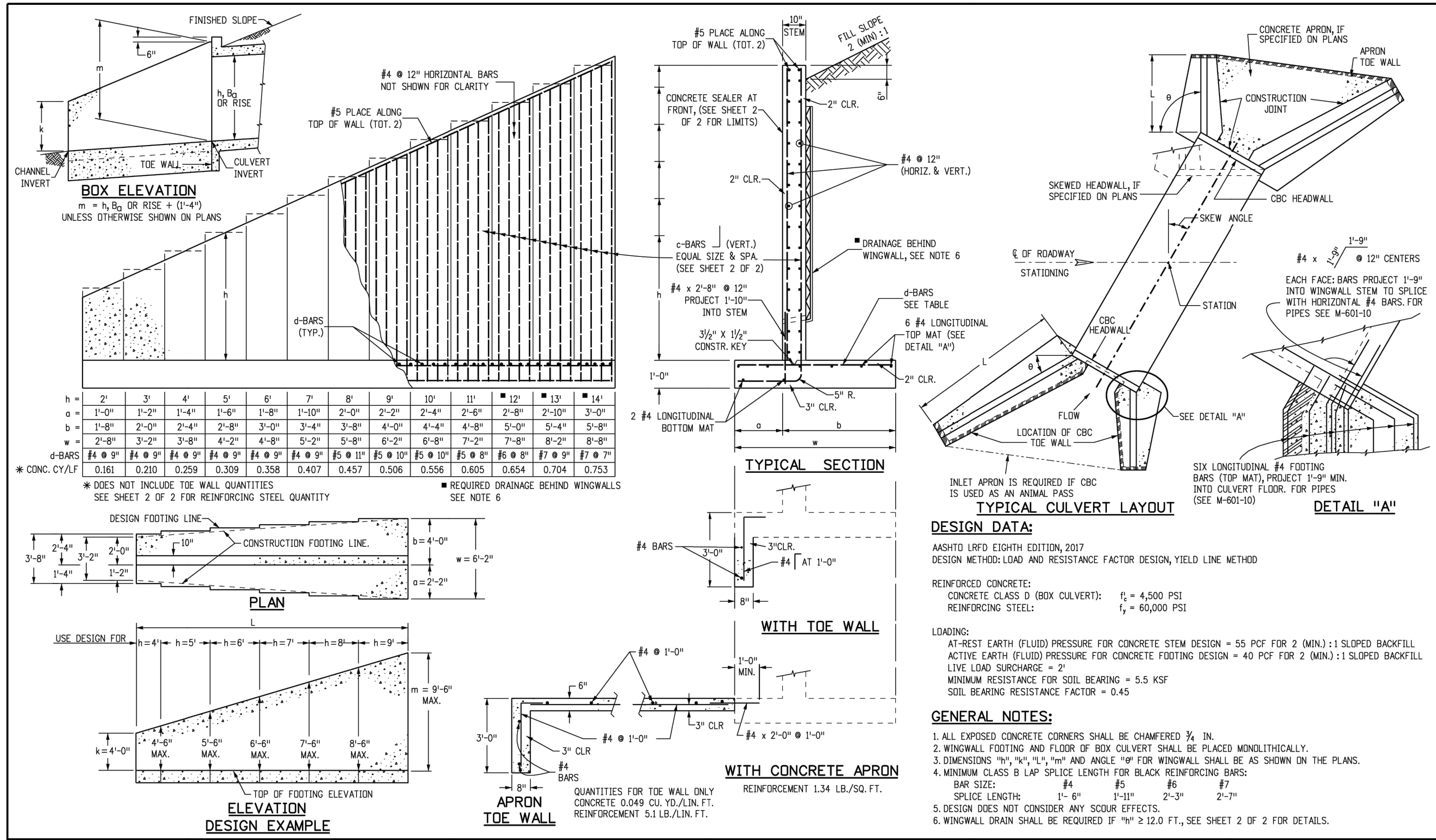
**ENGINEER'S STATEMENT**

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT.

MIKE A. BRAMLETT, P.E.  
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 FOR AND ON BEHALF OF JR ENGINEERING

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**WINGWALLS FOR PIPE OR BOX CULVERTS**  
 STANDARD PLAN NO. M-601-20  
 Standard Sheet No. 1 of 2  
 Issued by the Project Development Branch: July 31, 2019  
 Project Sheet Number:

**c-BARS AND REINFORCING STEEL QUANTITY (EXCLUDE TOE WALL)**

\* REINFORCING STEEL QUANTITY INCLUDES STEM AND FOOTING QUANTITIES, BUT DOES NOT INCLUDE TOE WALL QUANTITIES.

L (MULTIPLE OF m)	k (FT)	≤ (2.0 x m)		≤ (1.5 x m)		≤ (1.75 x m)		≤ (2.0 x m)		≤ (2.25 x m)		≤ (2.5 x m)		≤ (2.75 x m)		≤ (3.0 x m)		≤ (3.25 x m)		≤ (3.5 x m)			
		c-BARS	* REINFORCING STEEL LB./L.F.	c-BARS	* REINFORCING STEEL LB./L.F.	c-BARS	* REINFORCING STEEL LB./L.F.	c-BARS	* REINFORCING STEEL LB./L.F.	c-BARS	* REINFORCING STEEL LB./L.F.	c-BARS	* REINFORCING STEEL LB./L.F.	c-BARS	* REINFORCING STEEL LB./L.F.	c-BARS	* REINFORCING STEEL LB./L.F.	c-BARS	* REINFORCING STEEL LB./L.F.	c-BARS	* REINFORCING STEEL LB./L.F.		
14	4	#4 @ 10"	53.60	#5 @ 10"	57.55	#4 @ 10"	57.10	#5 @ 10"	60.22	#4 @ 10"	62.43	#5 @ 10"	62.09	#4 @ 10"	64.88	#5 @ 10"	64.88	#4 @ 10"	68.34	#5 @ 10"	68.34	#4 @ 10"	70.66

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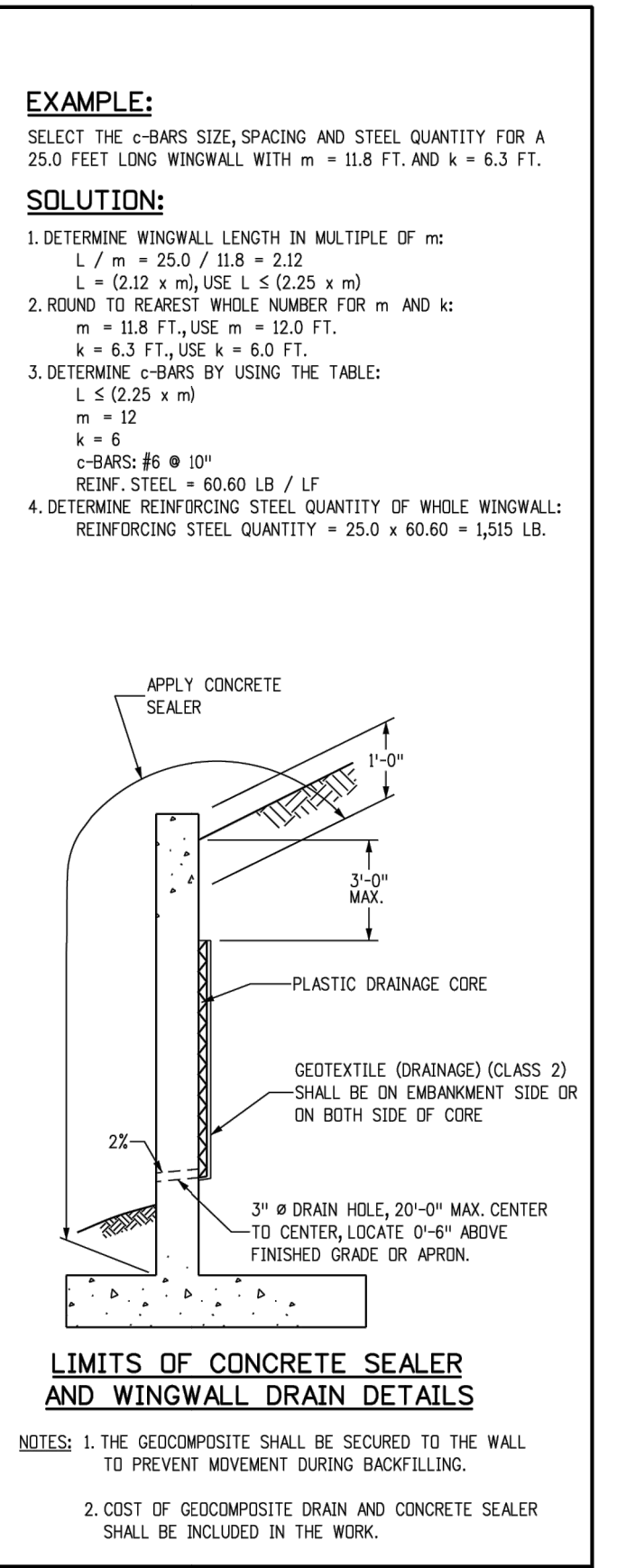
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 V-SCALE: N/A  
 DATE: 08/01/23  
 DESIGNED BY: N/A  
 DRAWN BY: N/A  
 CHECKED BY:

STERLING RECYCLING FACILITY  
 POND DETAILS

SHEET 15 OF 19  
 JOB NO. 25188.14



Know what's below.  
 Call before you dig.

**ENGINEER'S STATEMENT**

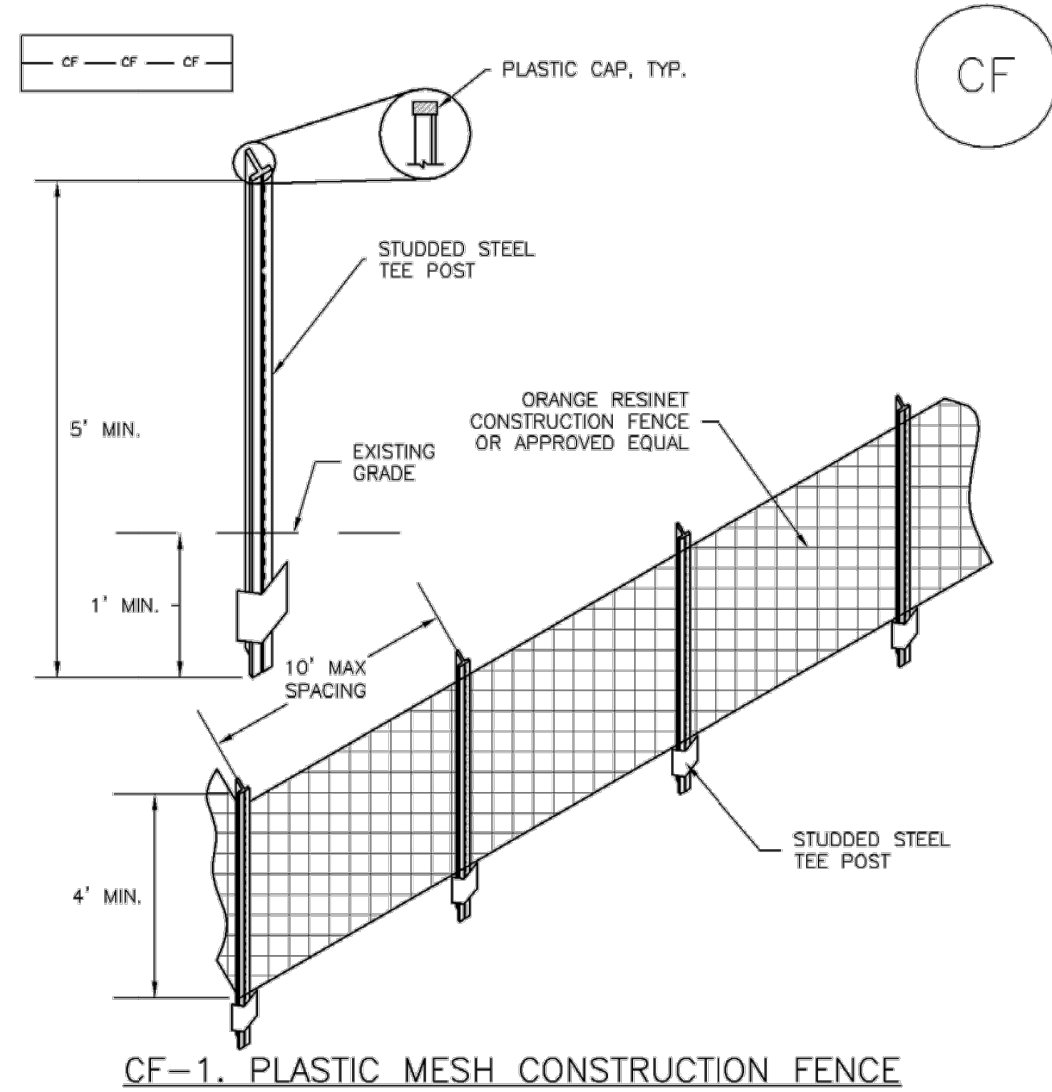
STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT



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DATE

SM-3 Construction Fence (CF)



CF-1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -LOCATION OF CONSTRUCTION FENCE.
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

CF-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Construction Fence (CF) SM-3

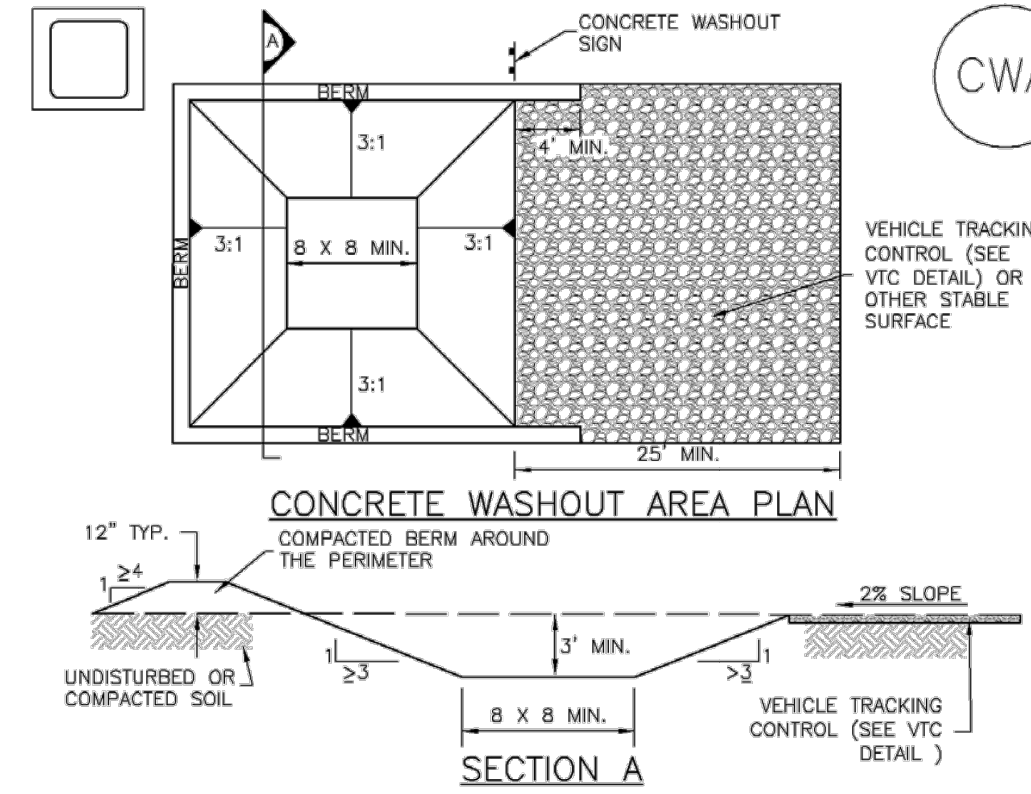
CONSTRUCTION FENCE MAINTENANCE NOTES

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. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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.  
(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CF-3

Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8" BY 8" SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

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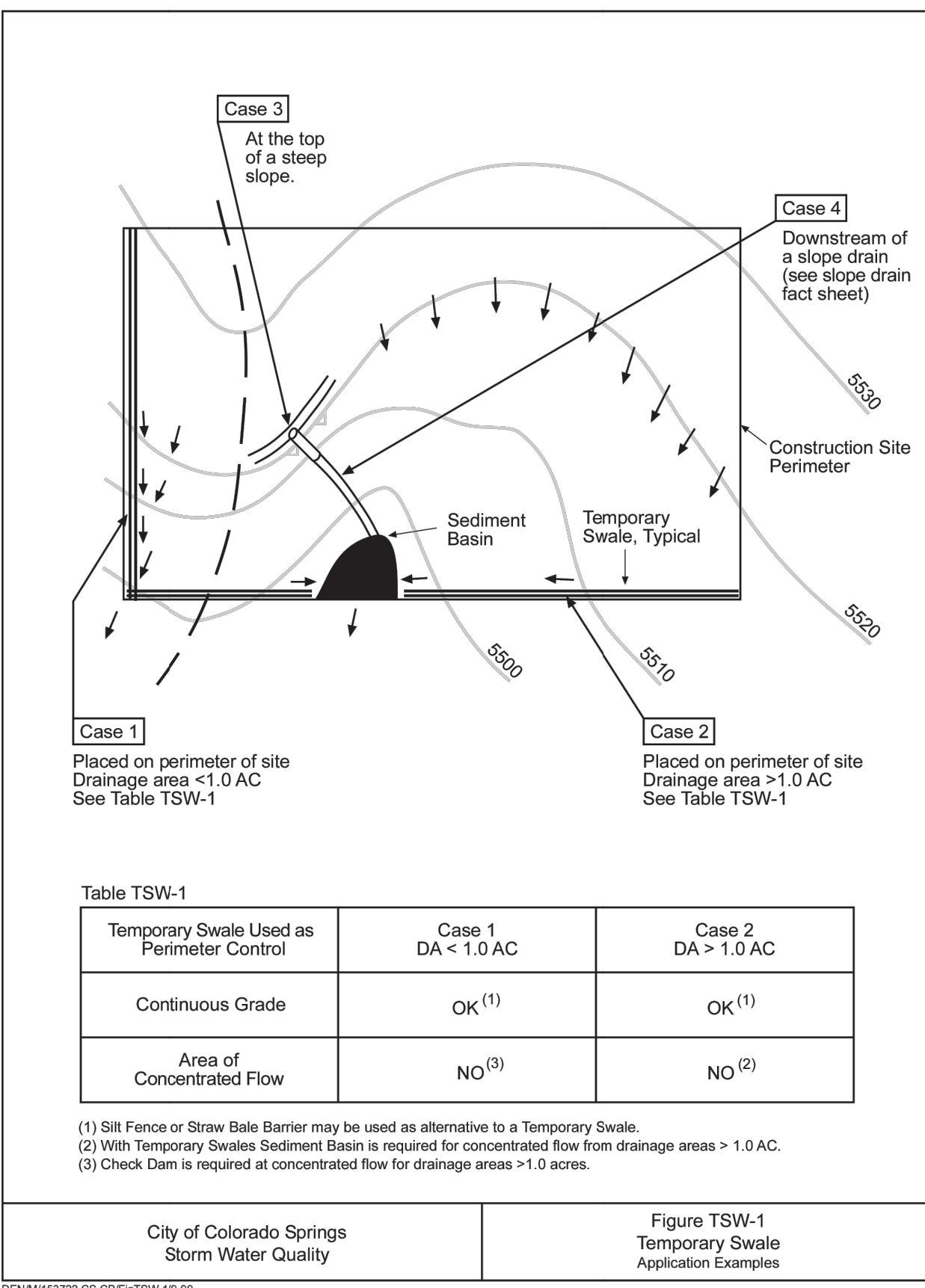
MM-1 Concrete Washout Area (CWA)

CWA 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. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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.  
(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

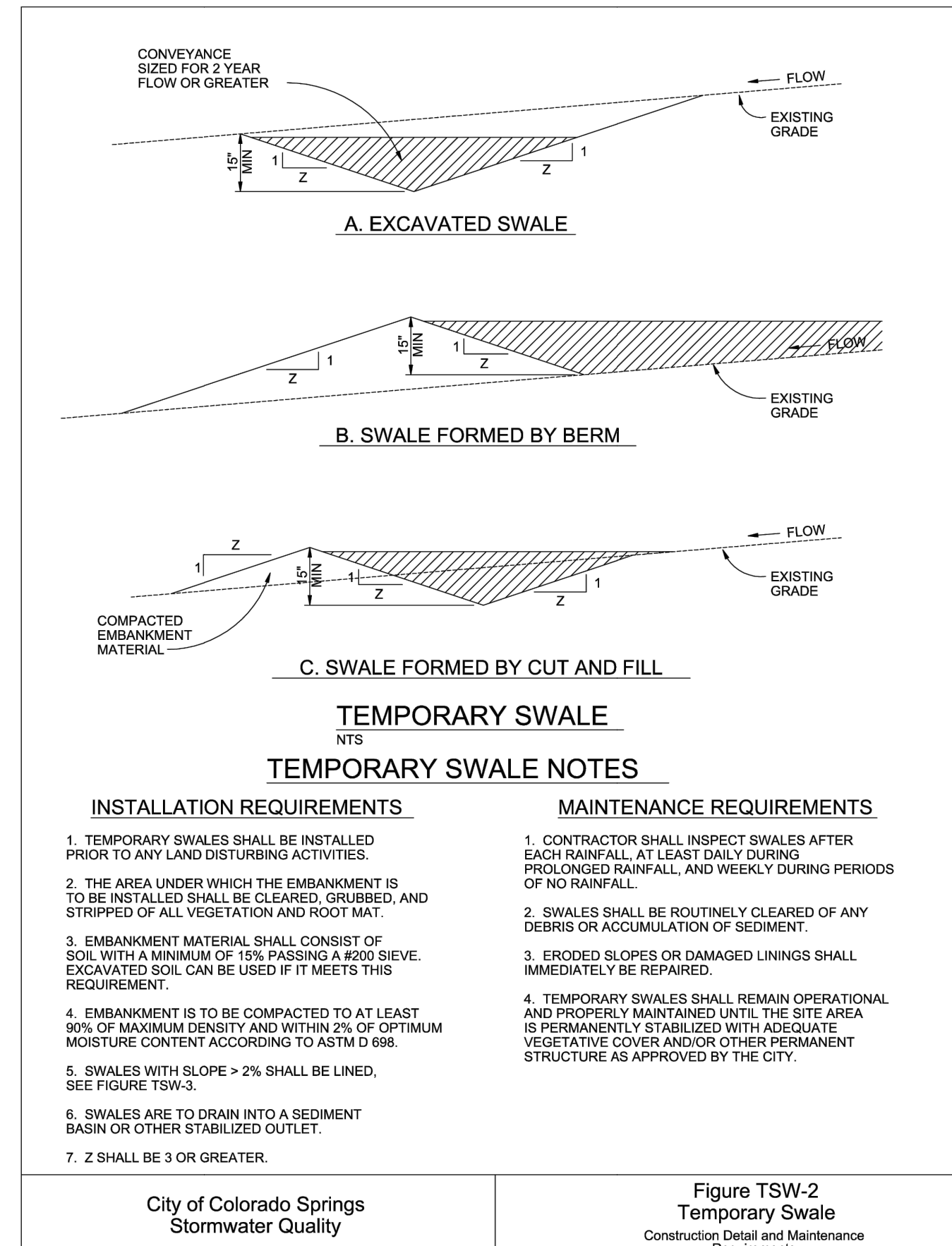
CWA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010



Temporary Swale Used as	Case 1 DA < 1.0 AC	Case 2 DA > 1.0 AC
Perimeter Control	OK <sup>(1)</sup>	OK <sup>(1)</sup>
Area of Concentrated Flow	NO <sup>(3)</sup>	NO <sup>(2)</sup>

(1) Silt Fence or Straw Bale Barrier may be used as alternative to a Temporary Swale.  
(2) With Temporary Swales Sediment Basins is required for concentrated flow from drainage areas > 1.0 AC.  
(3) Check Dam is required at concentrated flow for drainage areas > 1.0 acres.

City of Colorado Springs Storm Water Quality Figure TSW-1 Temporary Swale Application Examples 3-49



TEMPORARY SWALE NOTES

- INSTALLATION REQUIREMENTS
1. TEMPORARY SWALES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
  2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
  3. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 1% PASSING A #20 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
  4. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.
  5. SWALES WITH SLOPE > 2% SHALL BE LINED. SEE FIGURE TSW-2.
  6. SWALES ARE TO DRAIN INTO A SEDIMENT BASIN OR OTHER STABILIZED OUTLET.
  7. Z SHALL BE 3 OR GREATER.
- MAINTENANCE REQUIREMENTS
1. CONTRACTOR SHALL INSPECT SWALES AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
  2. SWALES SHALL BE ROUTINELY CLEARED OF ANY DEBRIS OR ACCUMULATION OF SEDIMENT.
  3. ERODED SLOPES OR DAMAGED LININGS SHALL IMMEDIATELY BE REPAIRED.
  4. TEMPORARY SWALES SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality Figure TSW-2 Temporary Swale Construction Detail and Maintenance Requirements 3-50

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BY	DATE	No.	REVISION

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				08/01/23	N/A	N/A	N/A

STERLING RECYCLING FACILITY  
GEC DETAILS



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