

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		
STORAGE/EQUIPMENT AREAS		
EDGE OF WETLANDS		
STONE WALL		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET - SQUARE		
AREA INLET - ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER		
SERVICE MARKER		
CLEAN-OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER		
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		
GAS LINE		
MARKER		
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER		
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER		
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER-OPTIC MARKER		
IRRIGATION PEDESTAL		
TELEPHONE MARKER		
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE		
TEST HOLE DESIGNATOR		

MONUMENTATION LEGEND

ALUMINUM CAP - FOUND	
BRASS CAP - FOUND	
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	
PANEL - FOUND	
PK NAIL - FOUND	
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/TRaverse POINT - SET	

TRAFFIC LEGEND

	EXISTING	PROPOSED
PARKING METER		
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
TRAFFIC SIGNAL		
BARRICADE		
GUARD RAIL POST		
IMPACT ATTENUATOR		
BRIDGE STYLE HIGHWAY SIGN POST		
CANTILEVER STYLE HIGHWAY SIGN POST		
SIGN		
RAILROAD MARKER/SIGN		
STREET LIGHT		
STREET LIGHT - SINGLE		
STREET LIGHT - DOUBLE		
LUMINAIRE		
ALTERNATE LUMINAIRE		
SIGNAL MAST ARM W/ LUMINAIRE		
PEDESTAL POLE FOUNDATION		
TRAFFIC SIGNAL POLE		
ROUND PULL BOX		
MEDIUM PULL BOX		
LARGE PULL BOX (20X33X15)		
SIGNAL HEAD WITHOUT BACK PLATE		
SIGNAL HEAD WITH BACK PLATE		
PEDESTRIAN SIGNAL HEAD		
VIDEO IMAGE DETECTOR		
OPTICOM DETECTOR		
VEHICLE DETECTION ZONE		

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		
VEHICLE TRACKING CONTROL WITH WASH RACK		

DRAINAGE REPORT PLANS

	KEY
BASIN DESIGNATION (NO COEFFICIENT)	
BASIN DESIGNATION (1 COEFFICIENT)	
BASIN DESIGNATION (2 COEFFICIENTS)	
ANALYSIS POINT IDENTIFIER	
BASIN DESIGNATION (HISTORIC)	
BASIN DESIGNATION (DEVELOPED)	
SUB-BASIN DESIGNATION (DEVELOPED)	
DRAINAGE PIPE IDENTIFIER	
DRAINAGE POINT IDENTIFIER (HEXAGONAL)	
DRAINAGE POINT IDENTIFIER (TRIANGULAR)	
SWM DESIGNATION 1	
SWM DESIGNATION 2	
SWM DESIGNATION 3	
SWM DESIGNATION 4	

LANDSCAPE LEGEND

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

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

PREPARED FOR

ACR SITE DEVELOPMENT

705 CRESTFIELD GROVE

COLORADO SPRINGS, CO 80906

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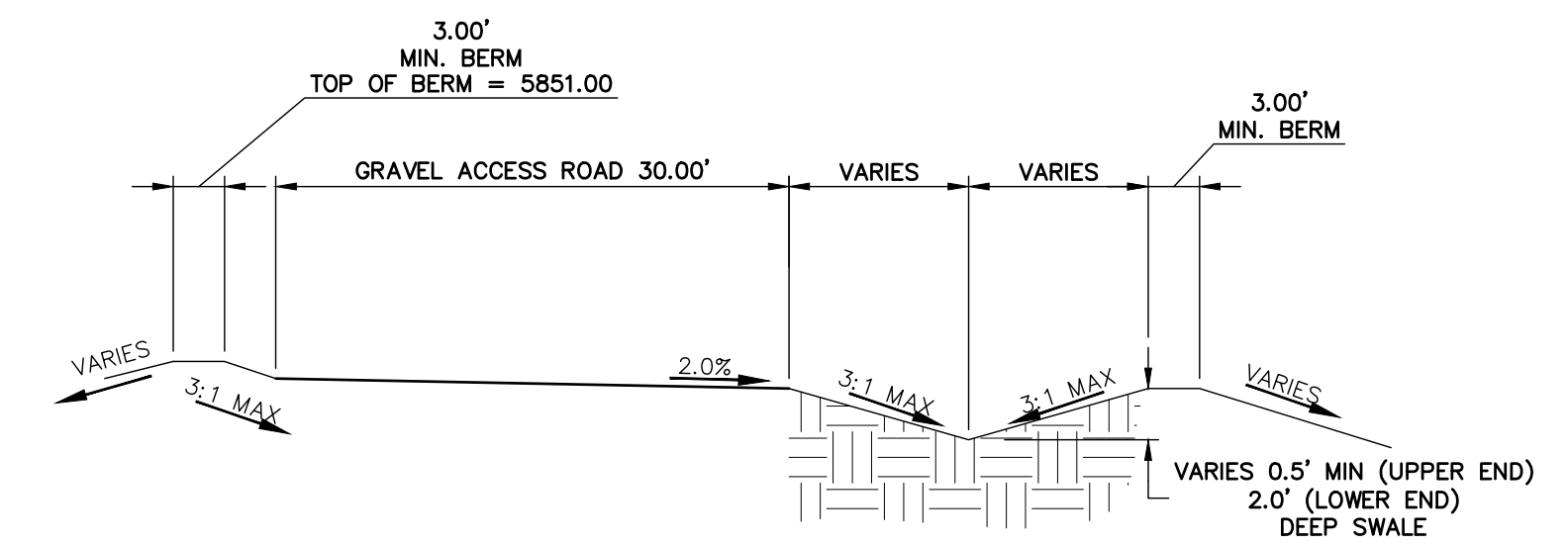
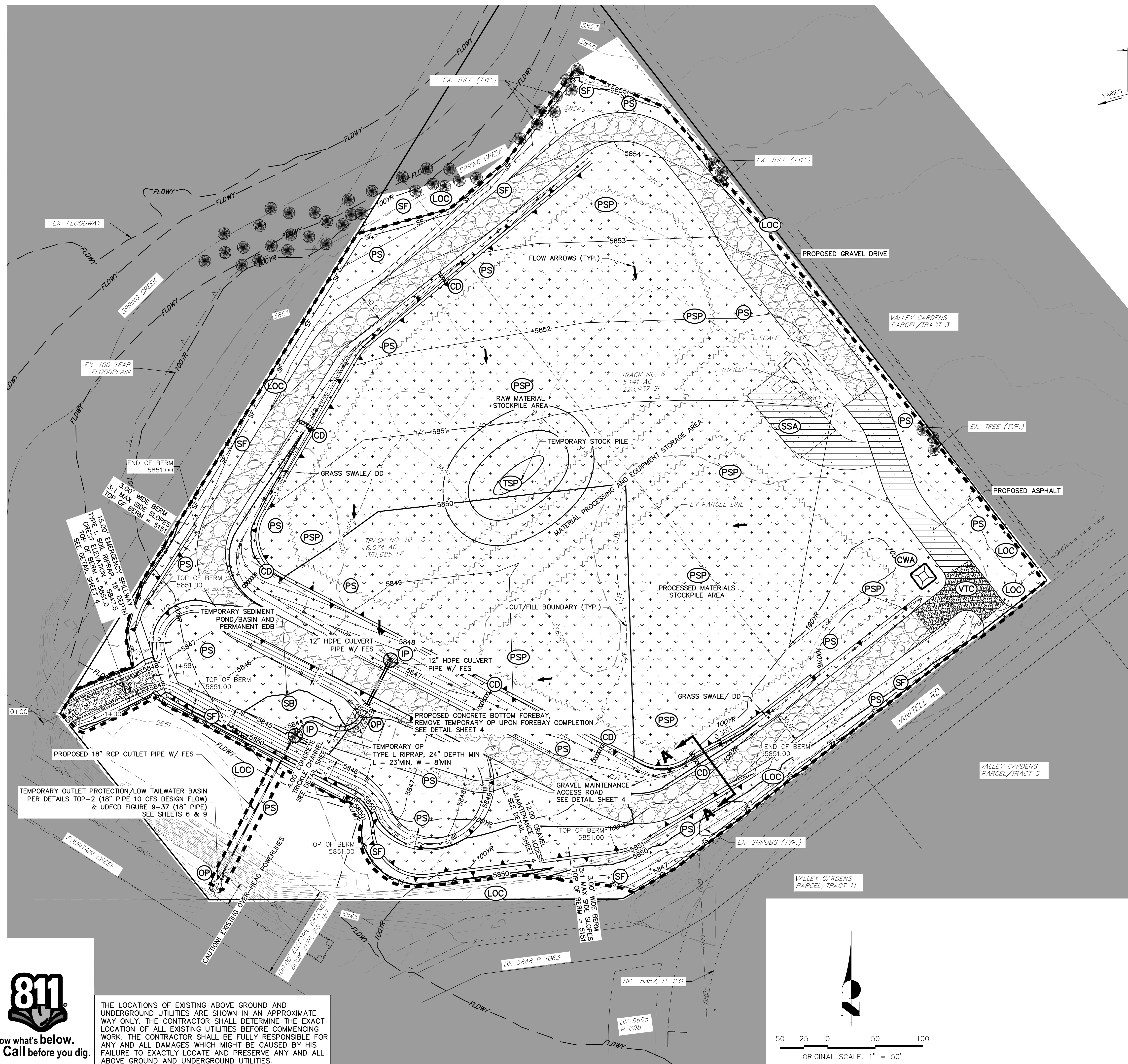
BY	DATE	REVISION	No.	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
						03/27/20	RB	JEA	

ACR SITE DEVELOPMENT PLAN LEGEND






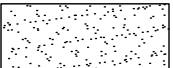















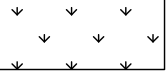



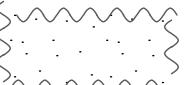
SHEET 2 OF 9

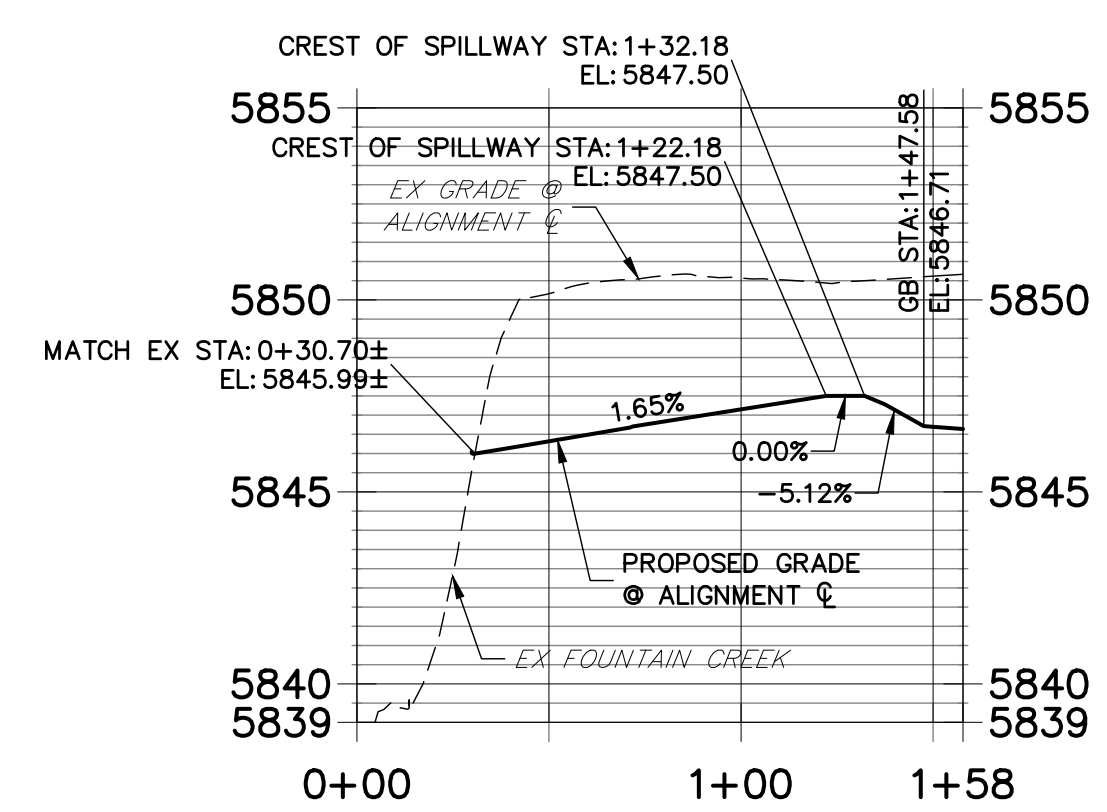
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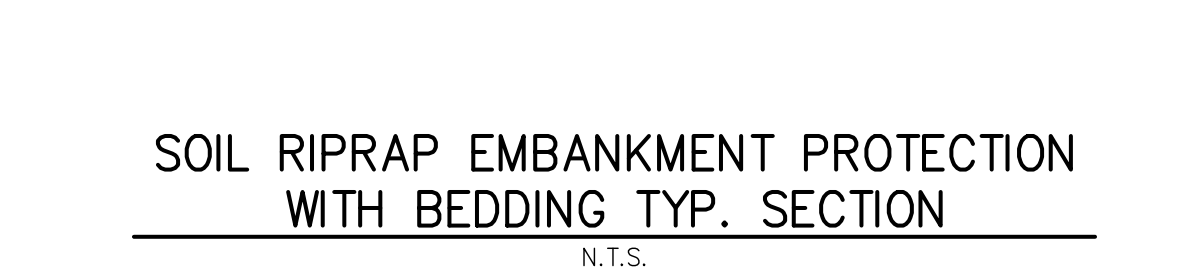
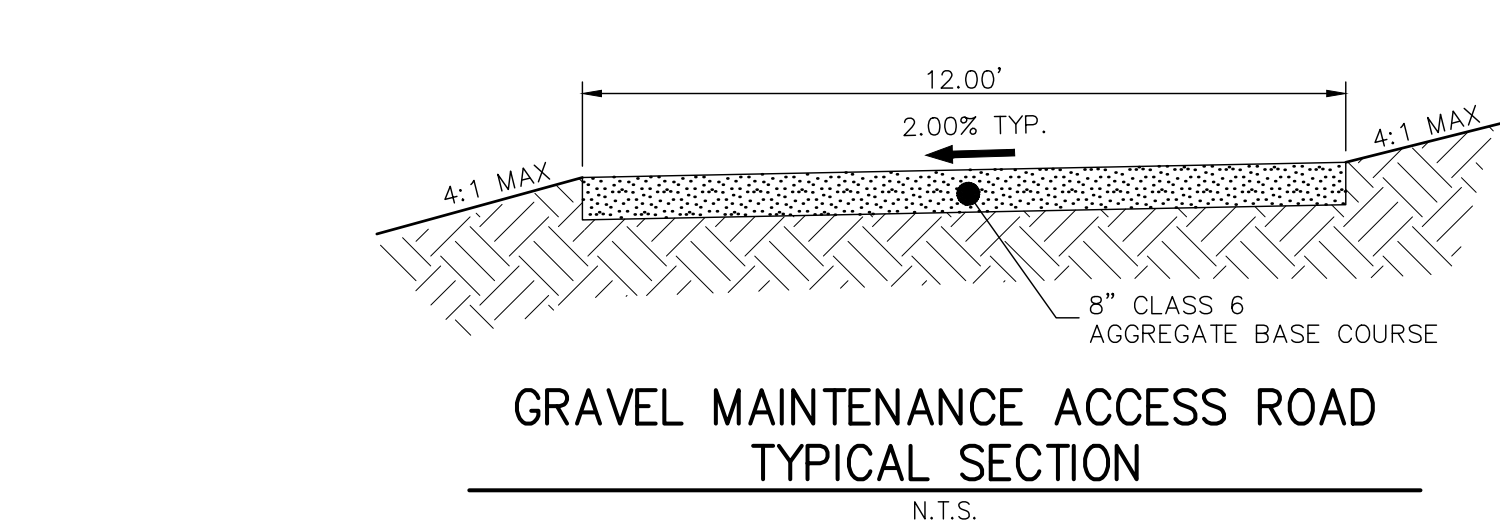
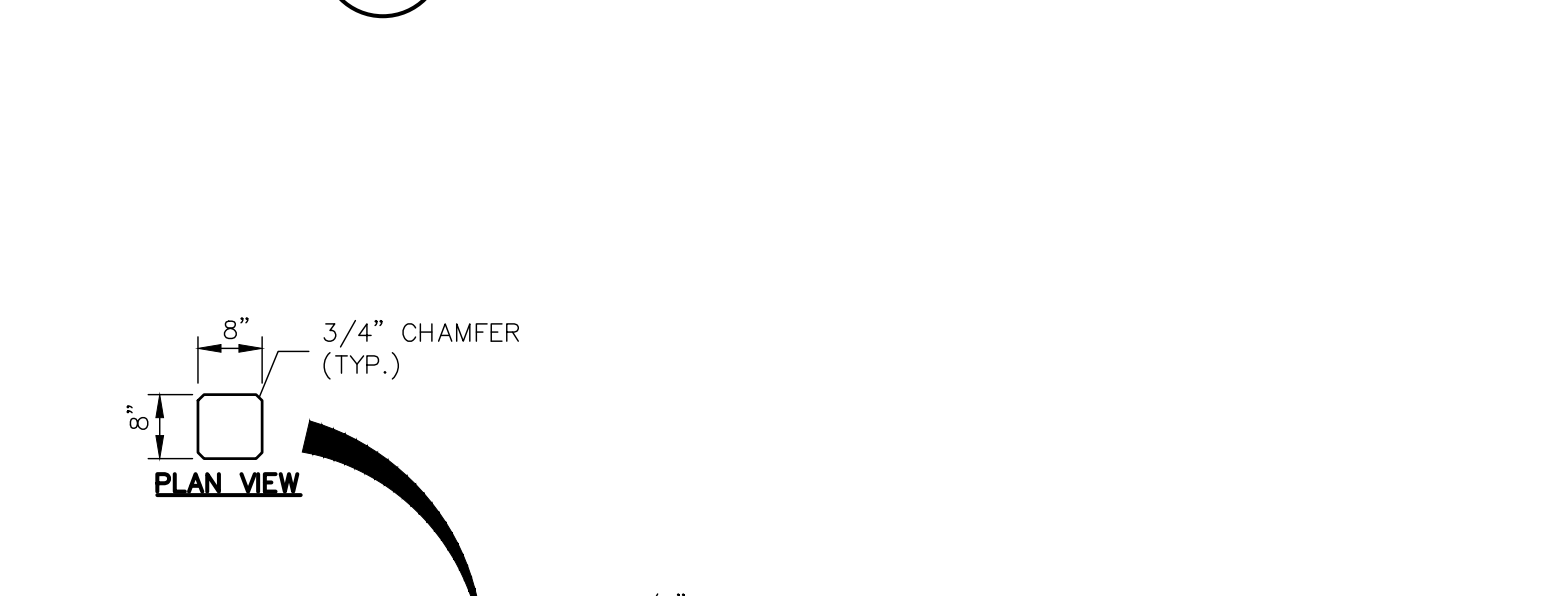
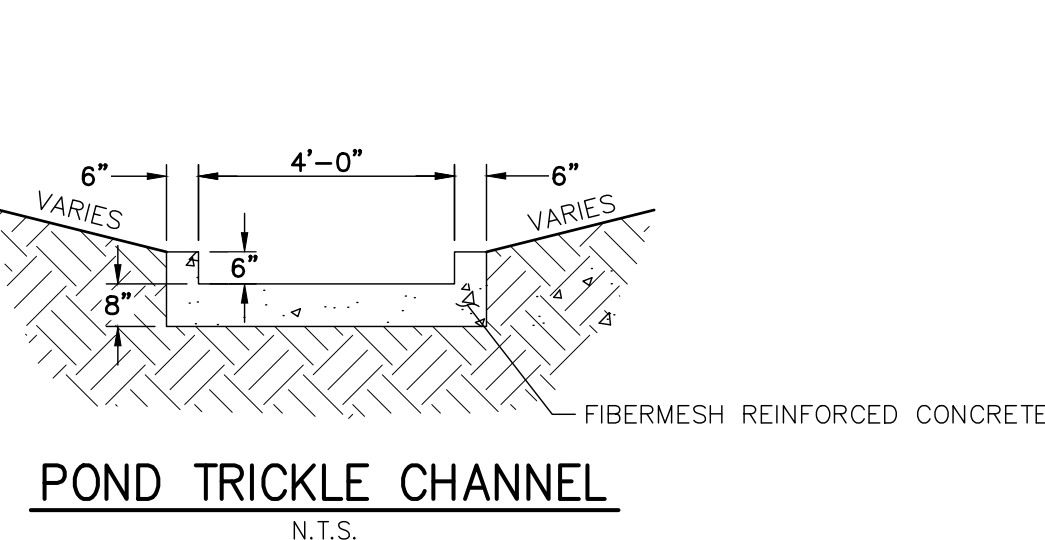
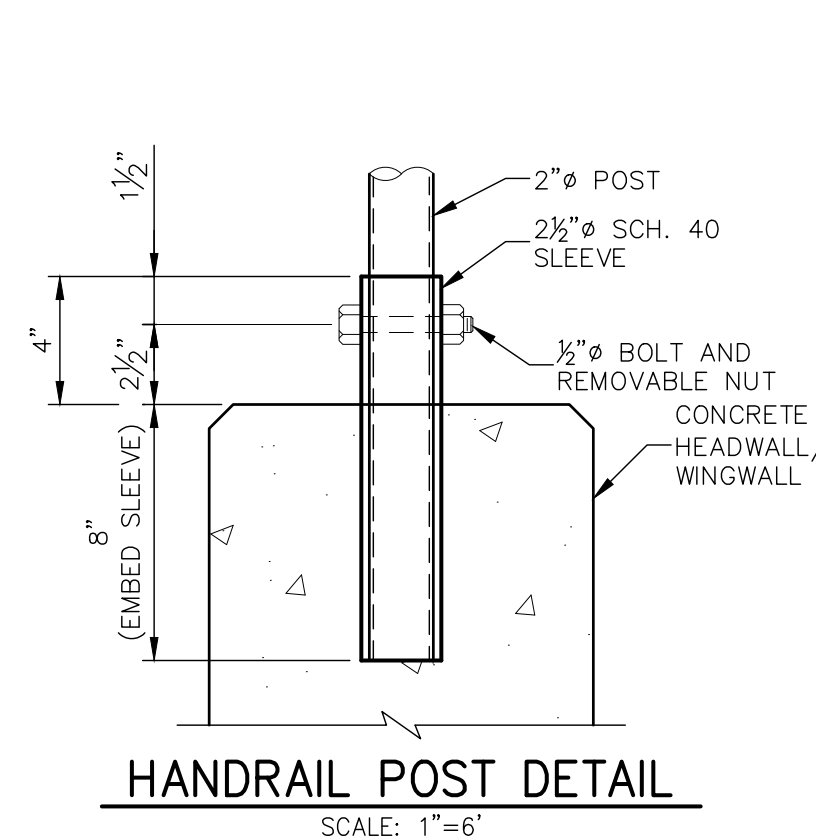
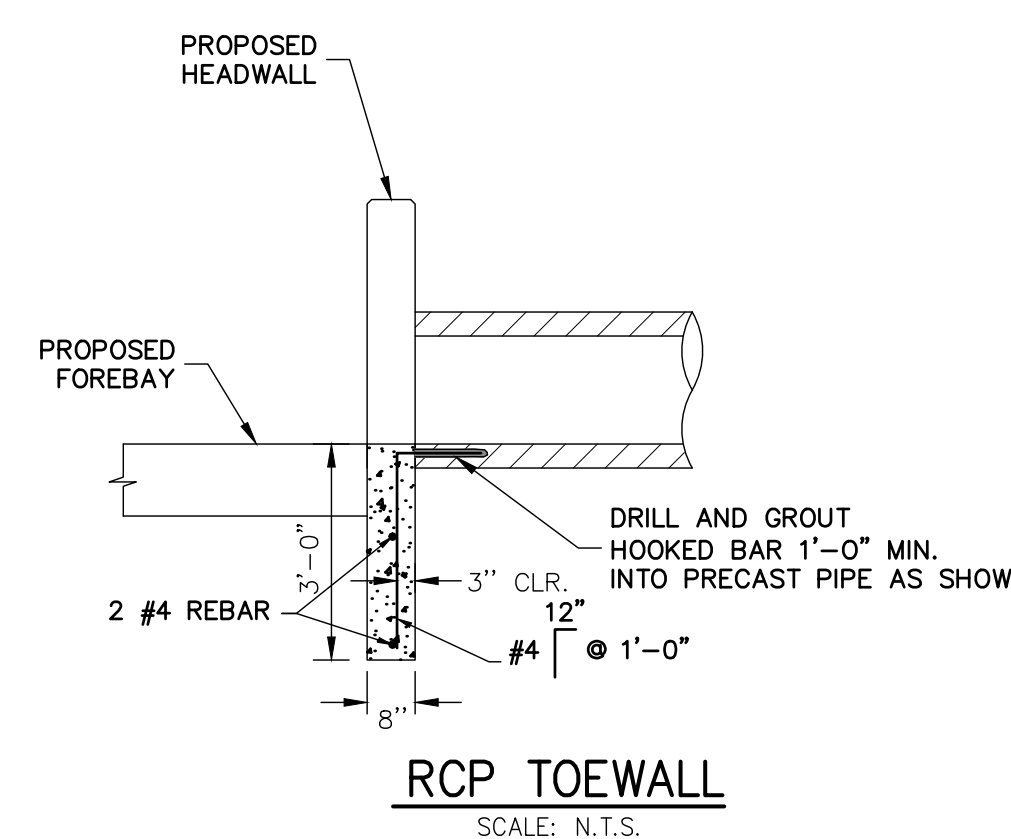
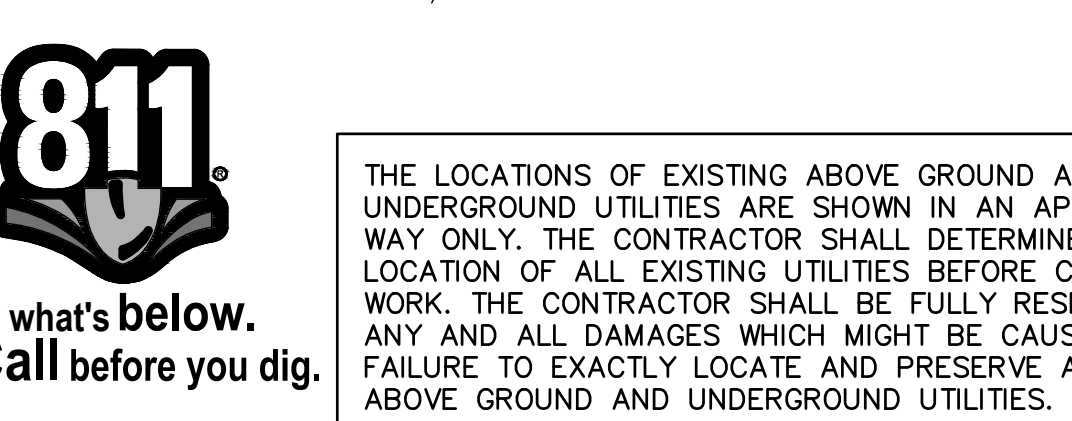
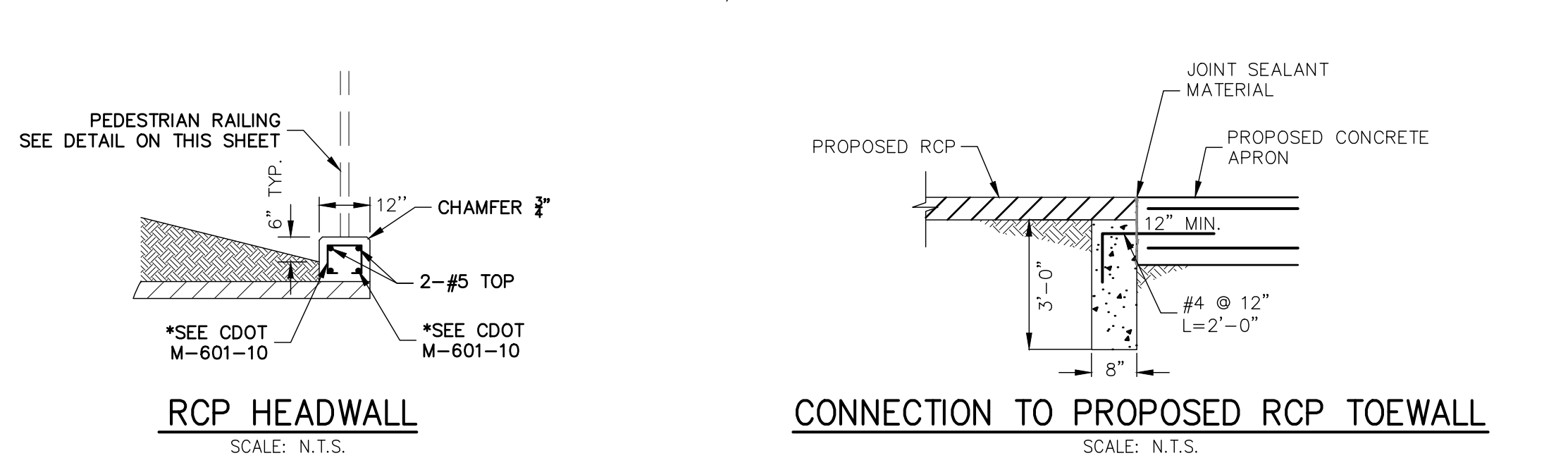
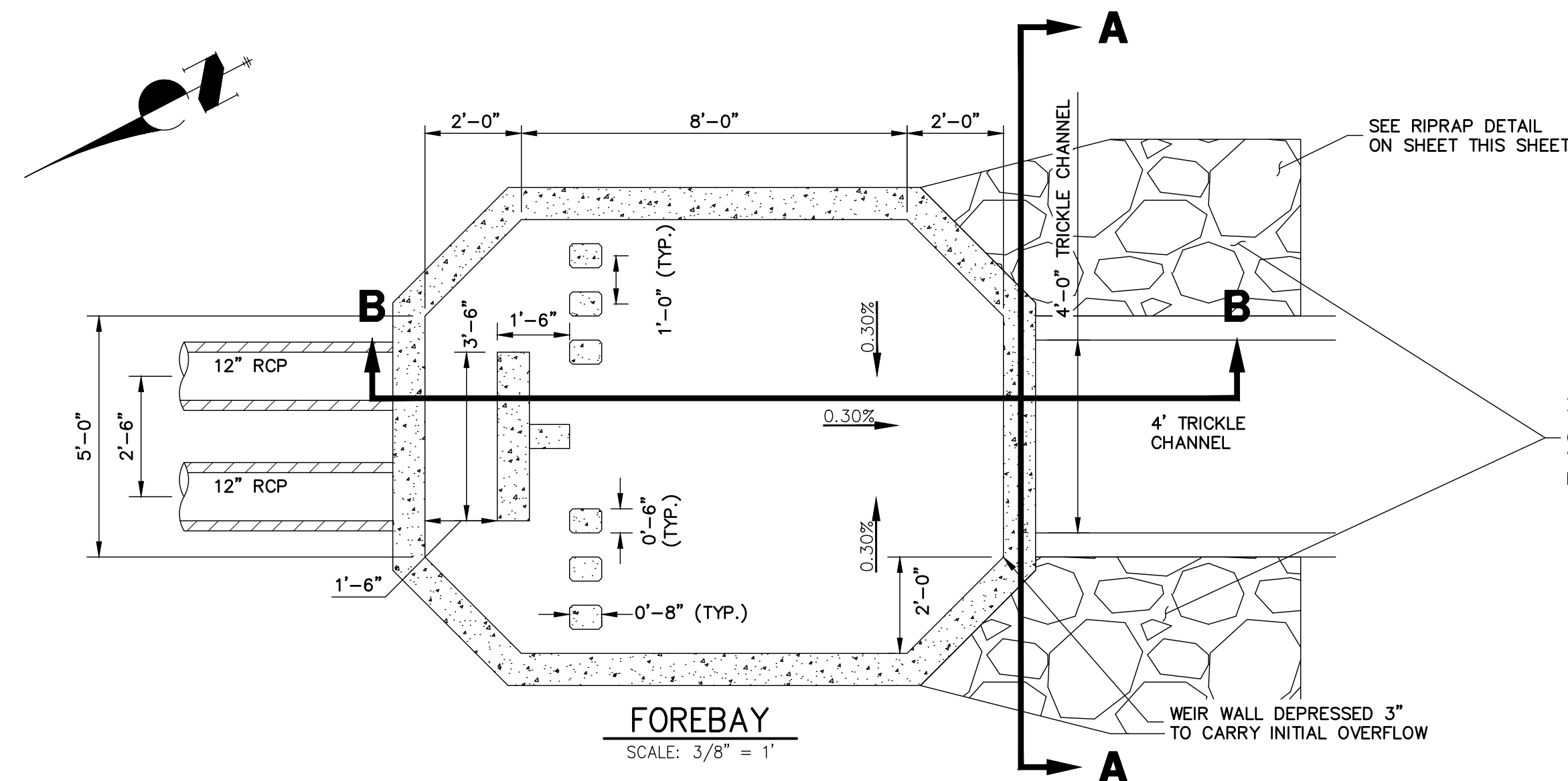




LEGEND

TEMPORARY SEDIMENT BASIN			TOE
SILT FENCE			SF
STABILIZED STAGING AREA			
VEHICLE TRACKING CONTROL			
TEMPORARY STOCK PILE			
EROSION CONTROL BLANKET			
INLET PROTECTION			
OUTLET PROTECTION			
LIMITS OF CONSTRUCTION			
CONCRETE WASHOUT AREA			
PERMANENT SEEDING			
CHECK DAM			
PERMANENT STOCK PILE			





*TYPE M RIPRAP D₅₀=12".
D₅₀ = MEAN PARTICLE SIZE
(INTERMEDIATE DIMENSION) BY WEIGHT

1. SOIL RIPRAP DETAILS ARE APPLICABLE TO SLOPED AREAS. REFER TO THE SITE PLAN FOR ACTUAL LOCATION AND LIMITS.
2. MIX UNIFORMLY 65% RIPRAP BY VOLUME WITH 35% OF APPROVED SOIL BY VOLUME PRIOR TO PLACEMENT.
3. PLACE STONE LAYER TO RESULT IN SECURELY INTERLOCKED ROCK AT THE DESIRED THICKNESS, AND GRADE, COMPACT AND LEVEL TO ELIMINATE ALL VOIDS AND ROCKS PROJECTING ABOVE DESIGN RIPRAP TOP GRADE.
4. CRIMP OR TACKIFY MULCH OR USE APPROVED HYDROMULCH AS CALLED FOR IN THE PLANS AND SPECIFICATIONS.
5. ROCK SHALL BE HARD, DURABLE, ANGUULAR IN SHAPE, AND FREE FROM CRACKS, OVERHANGS, SPLIT, AND ORGANIC MATTER.
6. NEITHER BREADTH NOR THICKNESS OF A SINGLE STONE SHOULD BE LESS THAN ONE-THIRD ITS LENGTH, AND ROUNDED STONE SHOULD BE AVOIDED.
7. THE ROCK SHOULD SUSTAIN A LOSS OF NOT MORE THAN 40% AFTER 500 REVOLUTIONS IN AN ABRASION TEST (LOS ANGELES MACHINE ASTM C-535-69) AND SHOULD SUSTAIN A LOSS OF NOT MORE THAN 10% AFTER 12 CYCLES OF TUMBLING AND TUMBING (ASTM TEST 103 FOR LEDGE ROCK PROCEDURE A).
8. ROCK HAVING A MINIMUM SPECIFIC GRAVITY OF 2.65 IS PREFERRED, HOWEVER, IN NO CASE SHOULD ROCK HAVE A SPECIFIC GRAVITY LESS THAN 2.50.

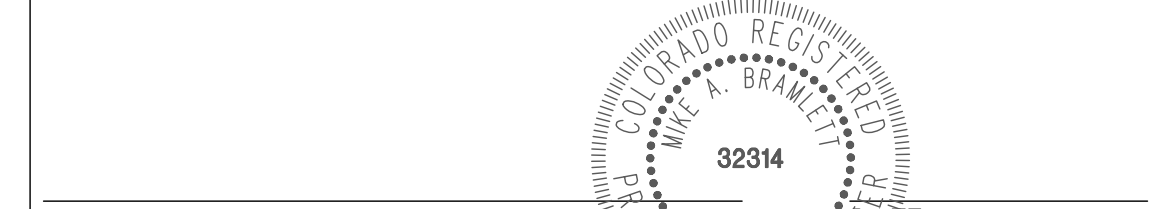
1. ALL CONCRETE SHALL BE CLASS D IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
3. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
5. STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT STD. M-206-1.
6. ALL FILL MATERIAL SHALL BE CONCRETE OF RICHES DESIGN STRENGTH, F.C.
7. GRADE 60 REINFORCING STEEL AND EPOXY COATED ARE REQUIRED.
8. THE MINIMUM LAP SPICE LENGTH FOR EPOXY COATED REINFORCING BARS SHALL BE:

THE MINIMUM LAP SPLICE LENGTH FOR BLACK REINFORCING BARS SHALL BE

REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A MINIMUM OF 2
ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED $\frac{3}{4}$ ".
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCAL

10. REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A MINIMUM OF 2" CLEARANCE.
11. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF EXISTING STRUCTURES AND EXISTING UTILITIES, PRIOR TO CONSTRUCTION OF THE CAST-IN-PLACE STRUCTURES. FIELD MODIFICATIONS OF PRECAST UNITS TO ACCOMMODATE CAST-IN-PLACE STRUCTURES WILL ONLY BE ACCEPTABLE WITH THE ENGINEER'S APPROVAL.
13. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

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, LLC

ACR SITE DEVELOPMENT
705 CRESTFIELD GROVE
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AS SHOWN	
03/27/20	
RB	
JEA	

V-S	D	DESIGN	DRAW	CHECK
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DEVELOPMENT
N

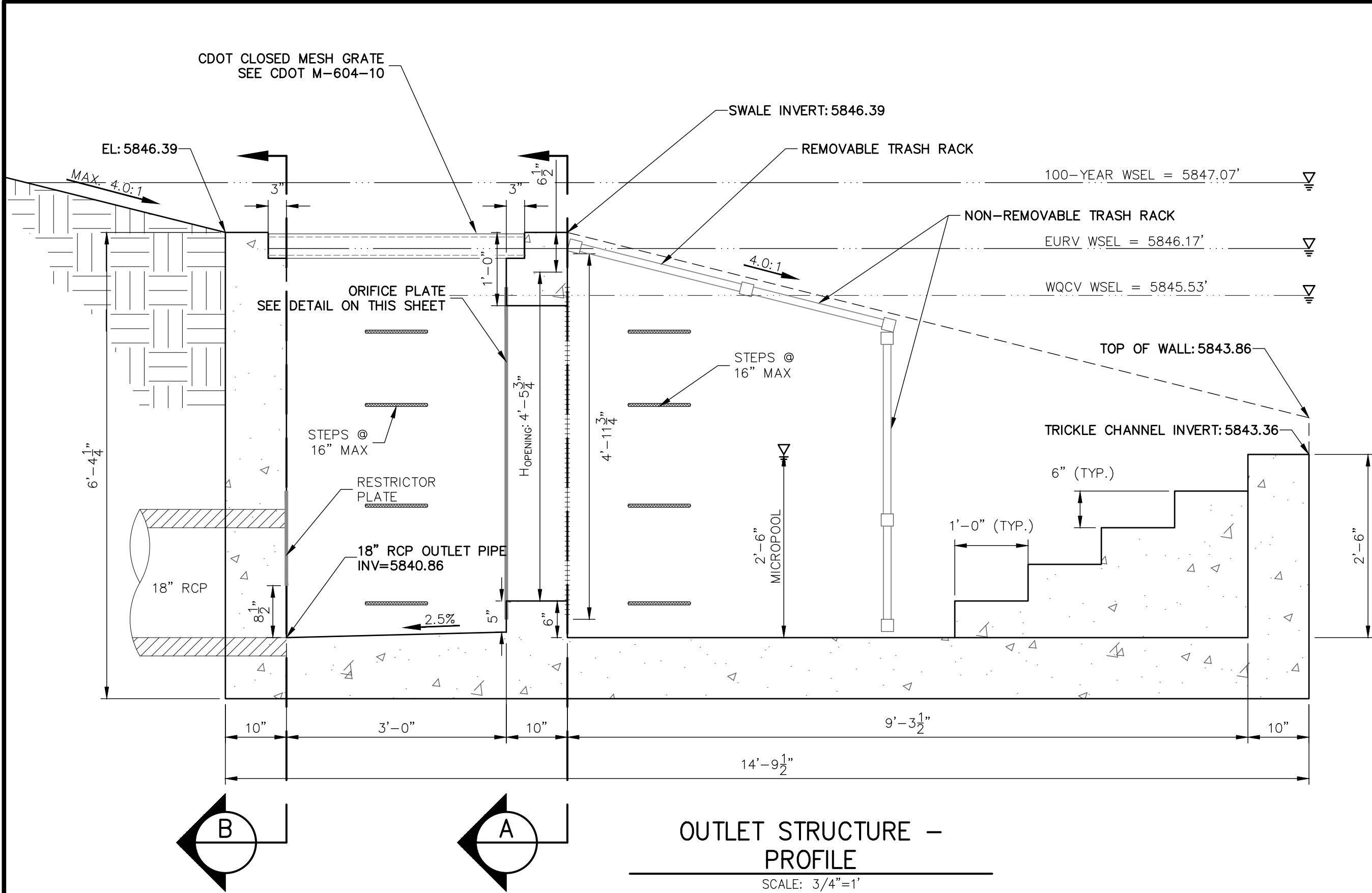
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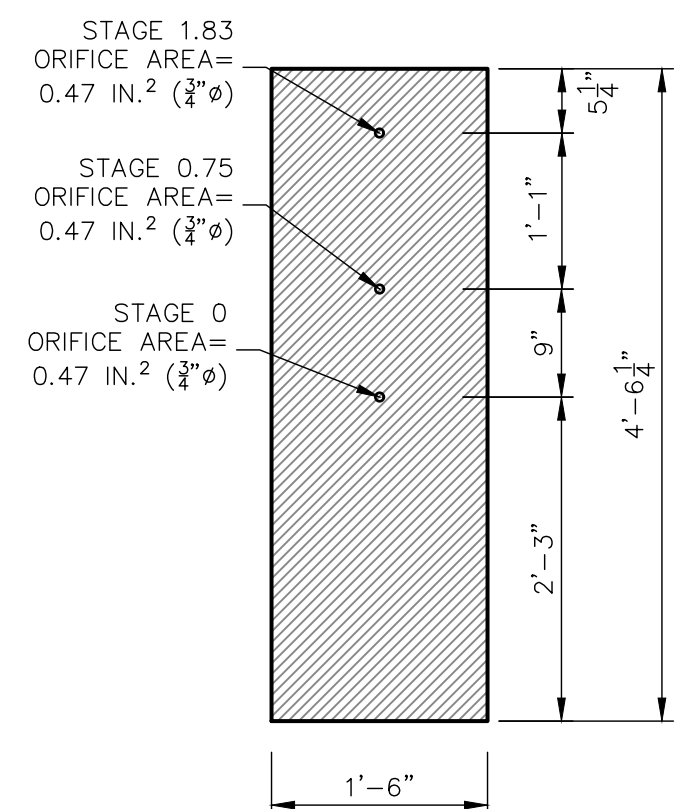
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SHEET	4	OF	9
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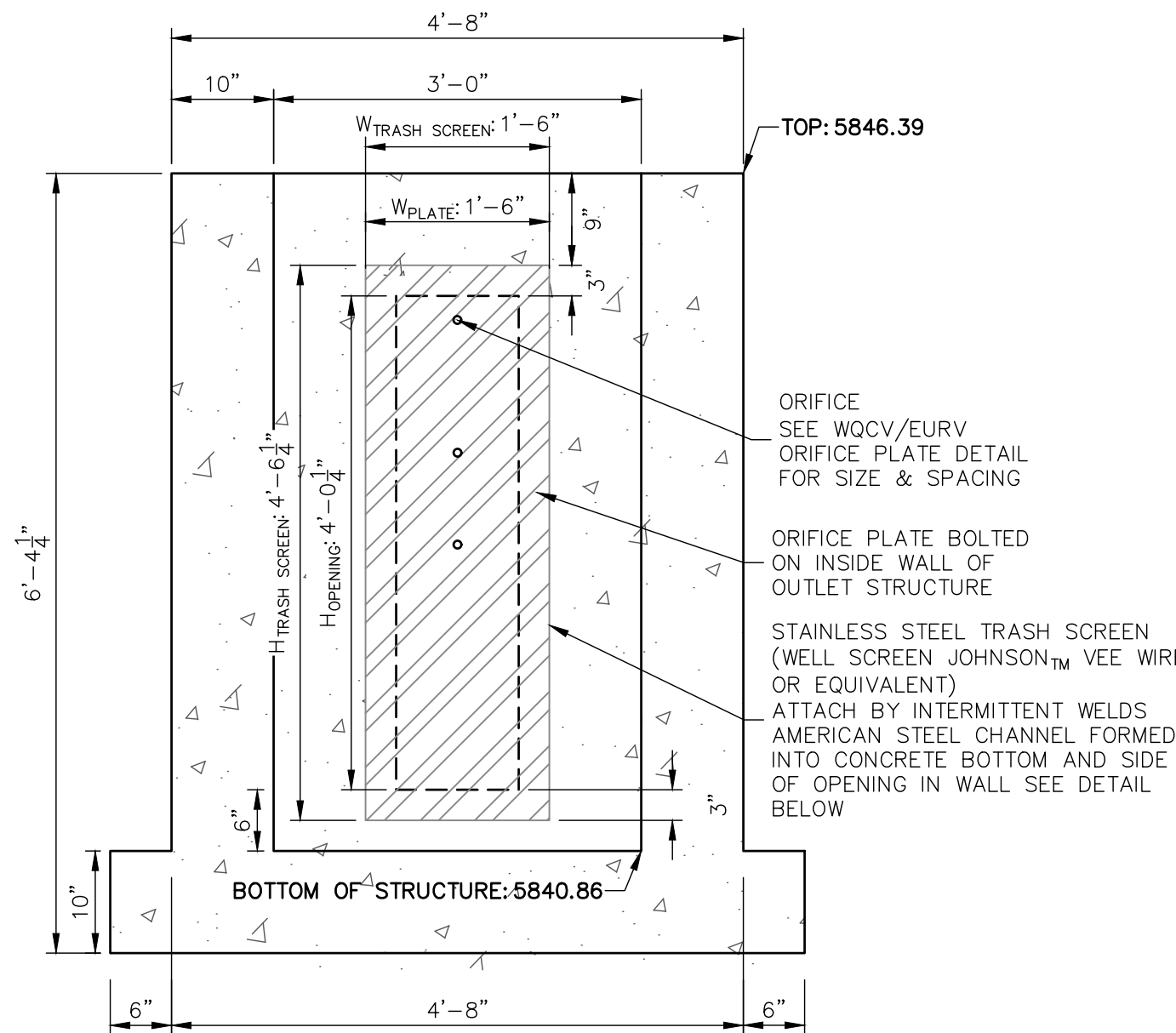
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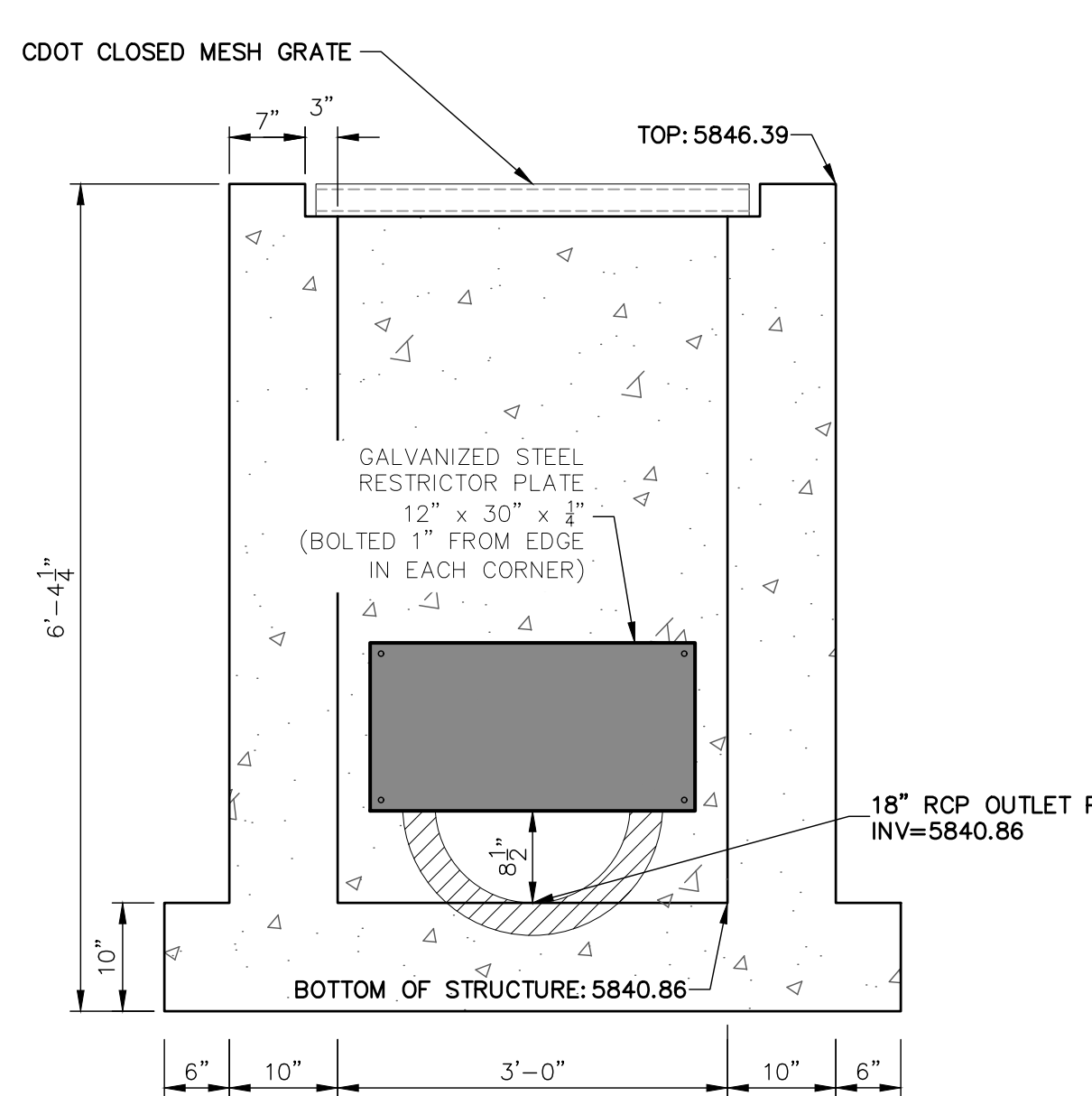
EURV/WQCV ORIFICE PLATE:
4'-6 1/4" x 1'-6" x 1/2" THICK FLOW
GALVANIZED STEEL FLOW CONTROL PLATE.
PROVIDE CONTINUOUS NEOPRENE GASKET
MATERIAL BETWEEN THE ORIFICE PLATE AND
CONCRETE. BOLT PLATE TO CONCRETE @
12" MAX O.C., 1 1/2" FROM PLATE EDGE.



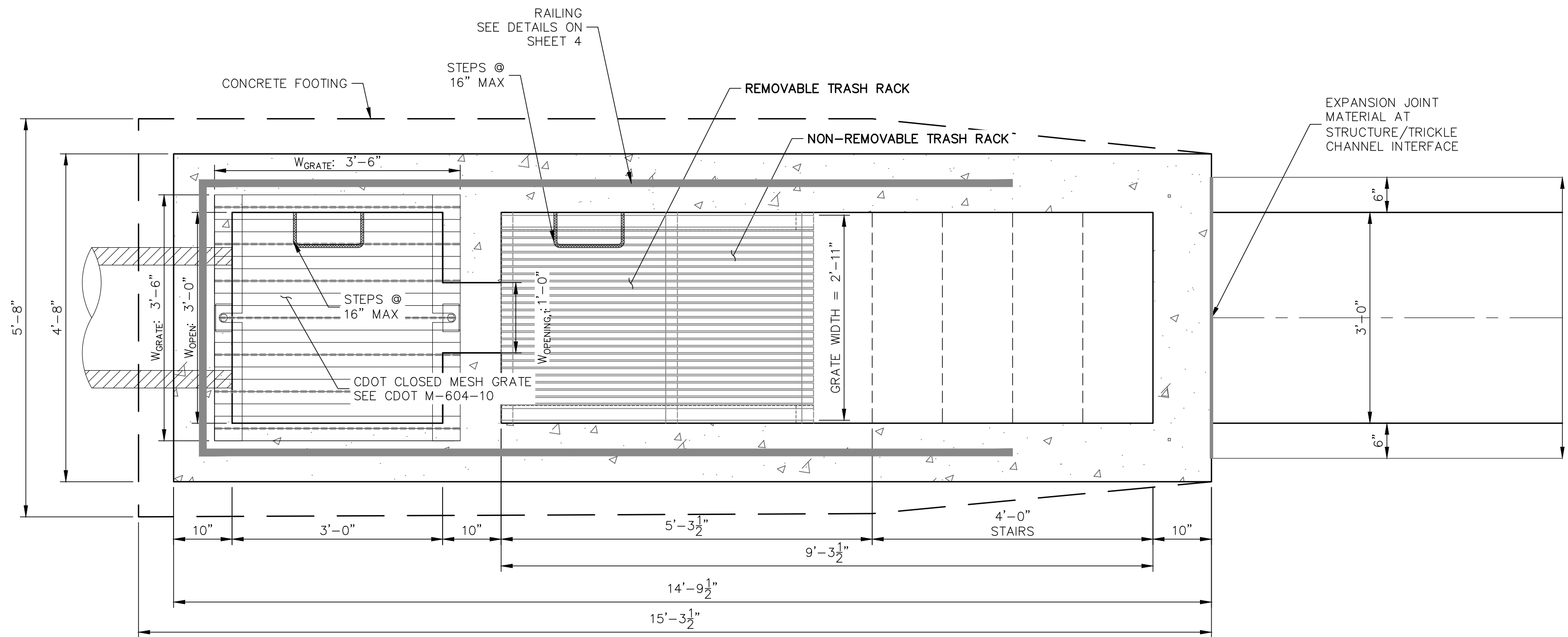
WQCV/EURV ORIFICE
PLATE DETAIL
SCALE: 3/4"=1'



A SECTION A AT ORIFICE (FRONT) WALL
SCALE: 3/4"=1'

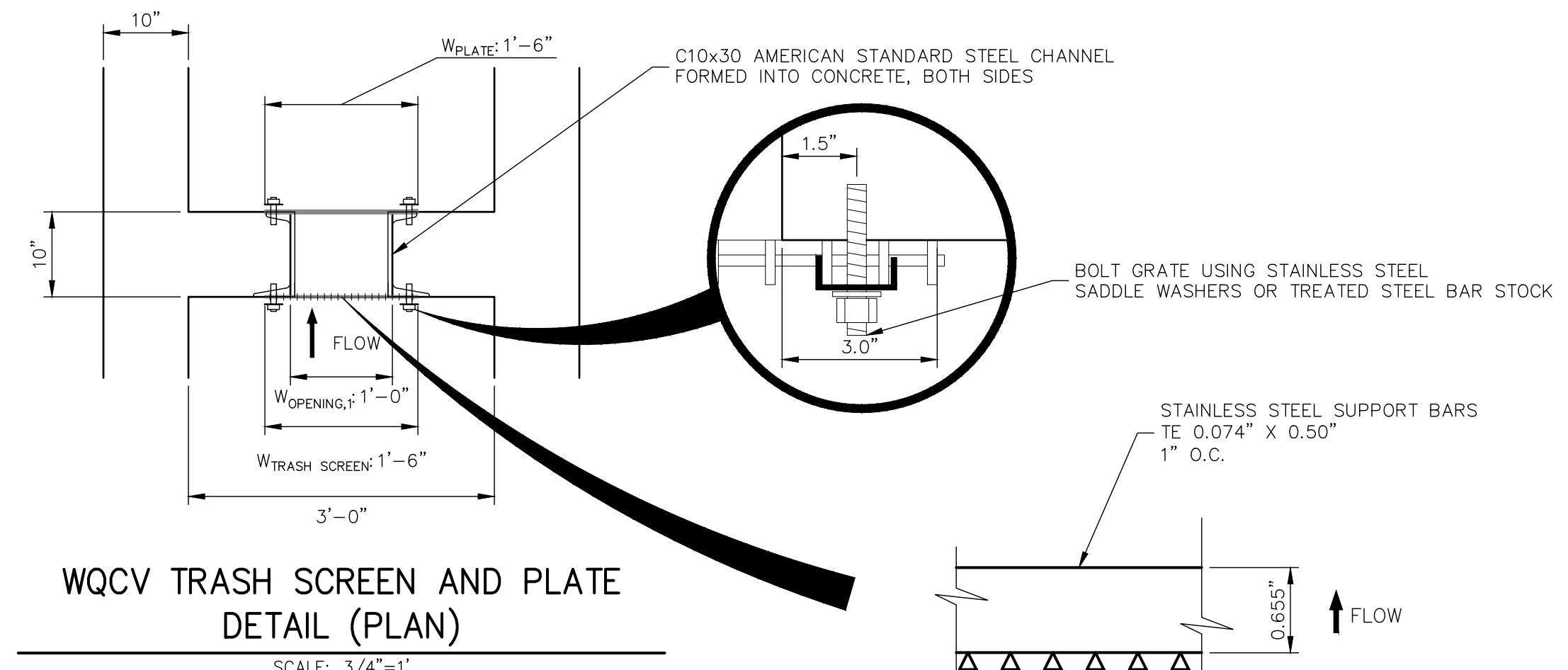


B SECTION B AT OUTLET (REAR) WALL
SCALE: 3/4"=1'

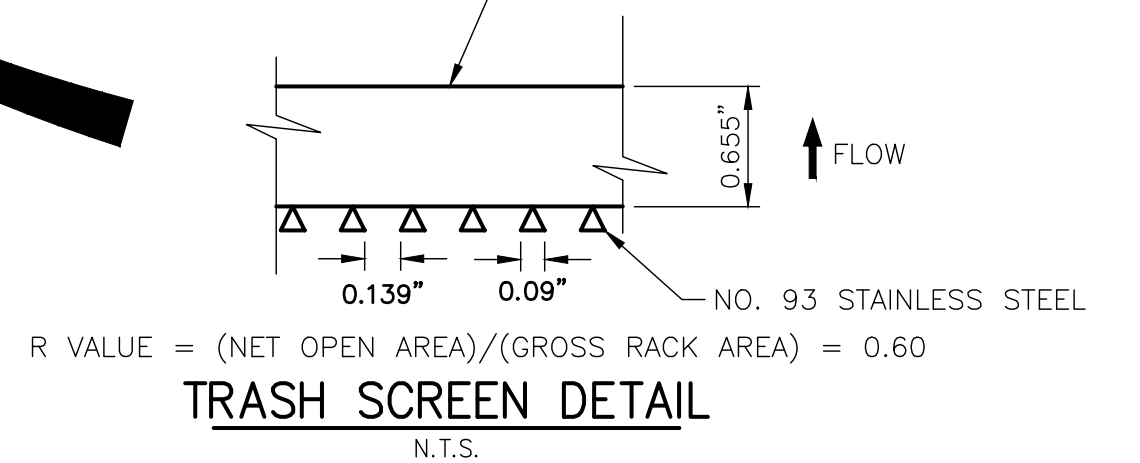


OUTLET STRUCTURE -
PLAN
SCALE: 3/4"=1'

TRICKLE CHANNEL
(TAPERED FROM 5.0';
SEE GESC PLAN)



WQCV TRASH SCREEN AND PLATE
DETAIL (PLAN)
SCALE: 3/4"=1'

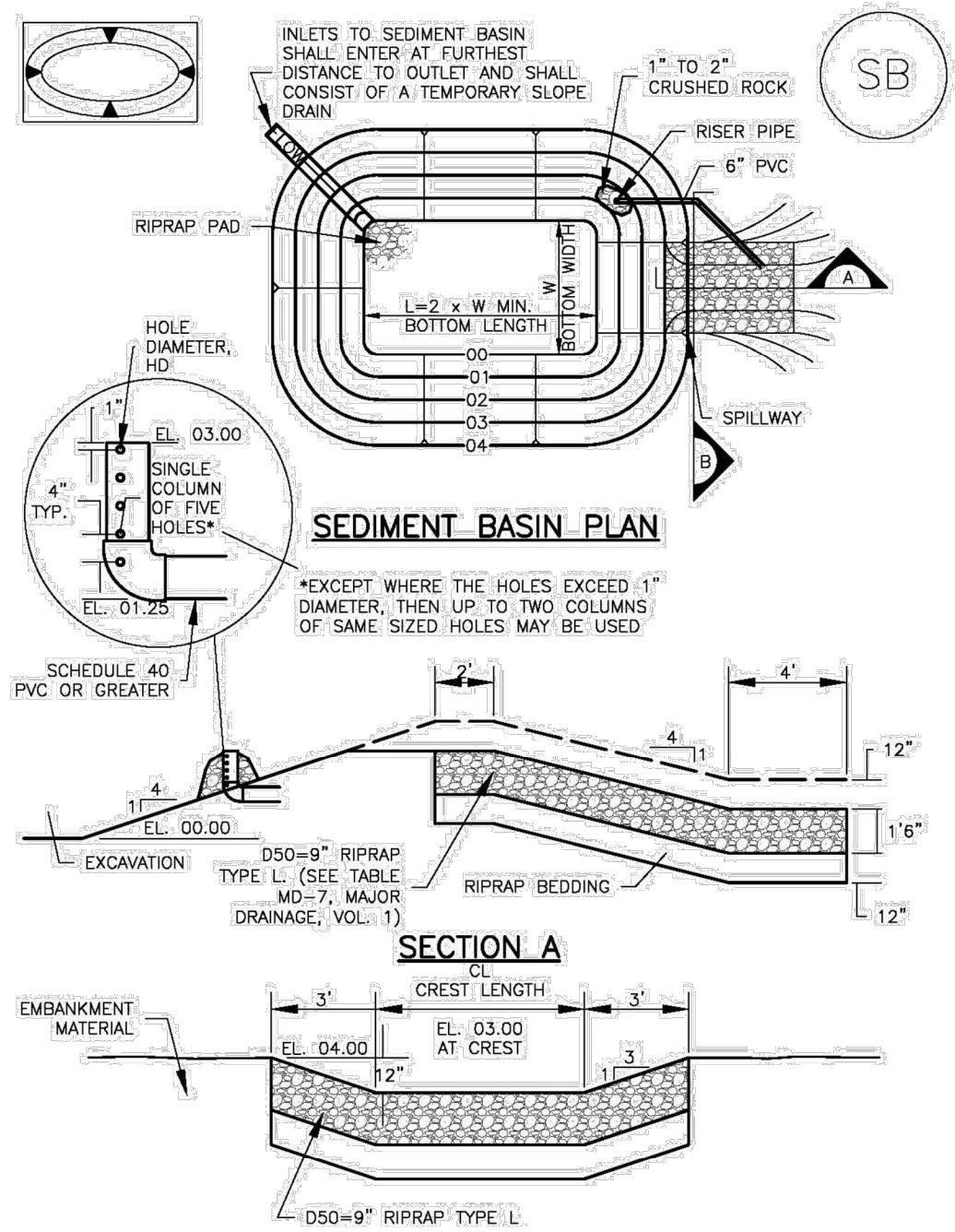


TRASH SCREEN DETAIL
N.T.S.

ACR SITE DEVELOPMENT PLAN		H-SCALE 3/4" = 1'		No.		REVISION		BY		DATE		J-R ENGINEERING A Western Company Central 303-740-9393 • Colorado Springs 719-559-2583 Fort Collins 970-491-9888 • www.jrengineering.com	UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.				
POND STRUCTURE DETAILS		V-SCALE 3/4" = 1'		DATE		03/27/20		DESIGNED BY		REB							
SHEET 5 OF 9		JOB NO. 25176.00		J-R ENGINEERING		ACR SITE DEVELOPMENT		705 CRESTFIELD GROVE		COLORADO SPRINGS, CO 80906		DUANE HAYS		(719) 338-9902		DUANE@HAYSCOMPANY.NET	

Sediment Basin (SB)

SC-7

August 2013 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3 SB-5

SC-7

Sediment Basin (SB)

PER PROPOSED GRADING, CONTRACTOR TO FIELD VERIFY SIZING DURING CONSTRUCTION

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN			
Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 1/2	2	9 3/4
2	21	3	13 1/4
3	28	5	15
4	33 1/2	6	16 1/4
5	43	8	18 1/4
6	47 1/2	11	21 1/4
7	51	12	22 1/4
8	55	13	23 1/4
9	58 1/2	15	24 1/4
10	61	16	25 1/4
11	64	18	27 1/4
12	67 1/2	19	28 1/4
13	70 1/2	21	30 1/4
14	73 1/4	22	31 1/4
15			32 1/4

SEDIMENT BASIN INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
 - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
 - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON BASINS AS AS A STORMWATER CONTROL.
- 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.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.
- 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.

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Urban Storm Drainage Criteria Manual Volume 3 August 2013

Sediment Basin (SB)

SC-7

SEDIMENT BASIN MAINTENANCE NOTES

- 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.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS. TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
- SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
- WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

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.

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EC-8

Temporary Outlet Protection (TOP)

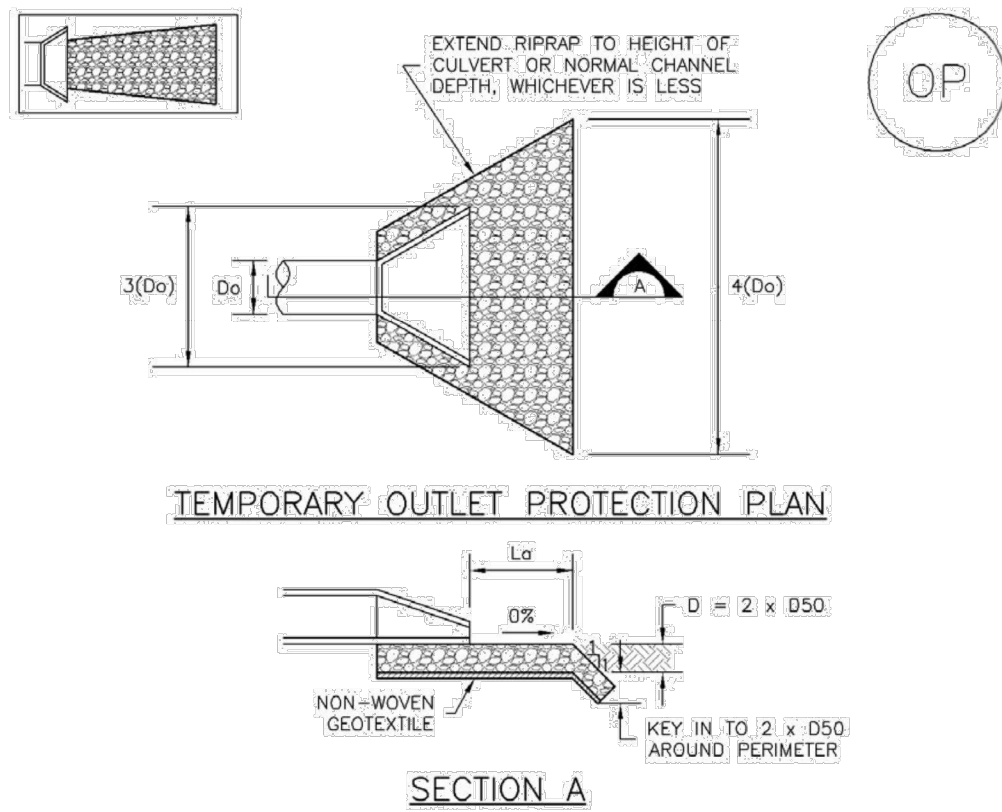


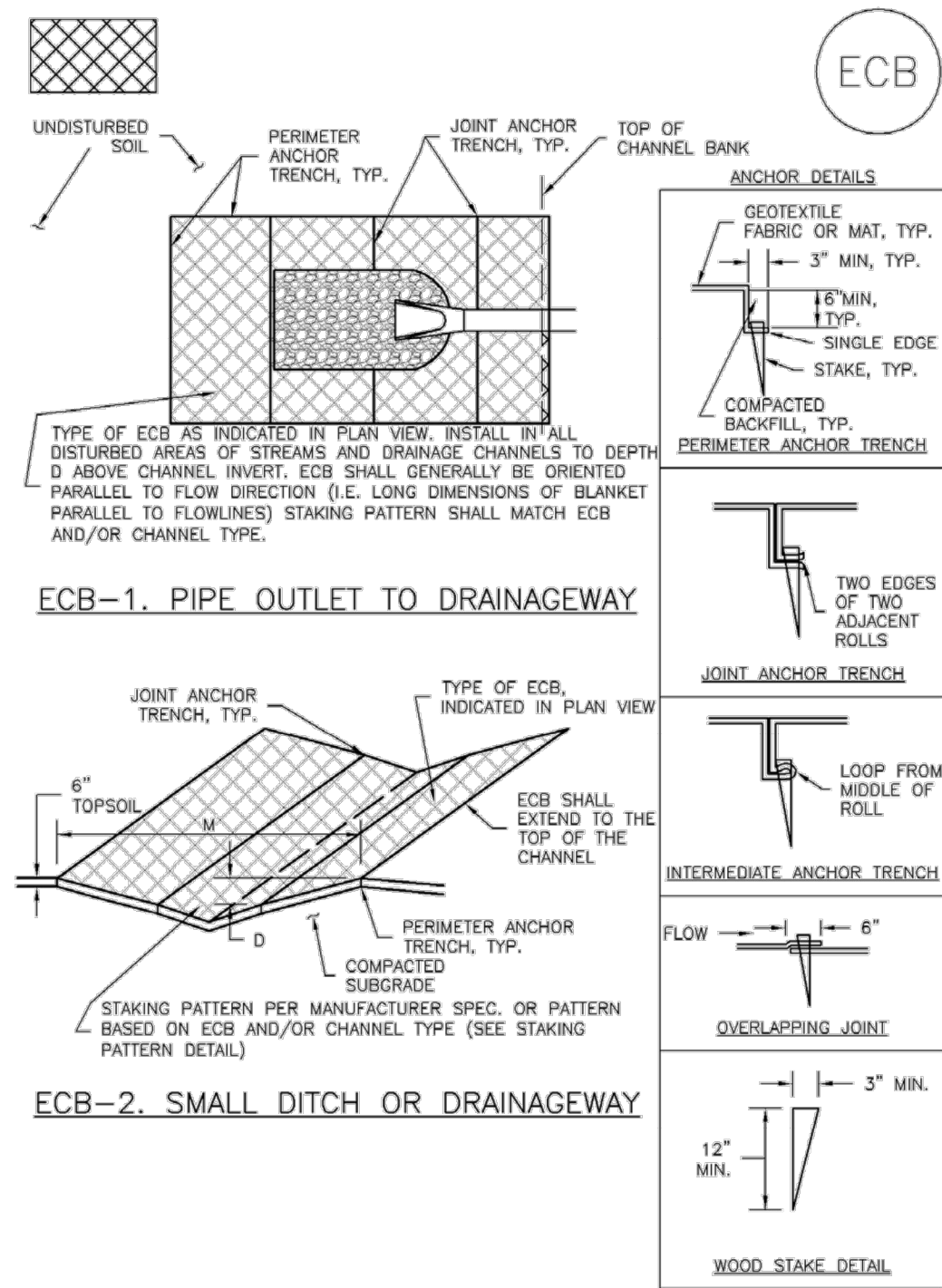
TABLE OP-1. TEMPORARY OUTLET PROTECTION SIZING TABLE

PIPE DIAMETER, Dp (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, Lp (FT)	RIPRAP D50 DIAMETER MIN (INCHES)
8	2.5	5	4
	5	10	6
12	5	10	4
	10	13	6
	10	10	6
18	20	16	9
	30	23	12
	40	26	16
24	30	16	9
	40	26	9
	50	26	12
	60	30	16

OP-1. TEMPORARY OUTLET PROTECTION

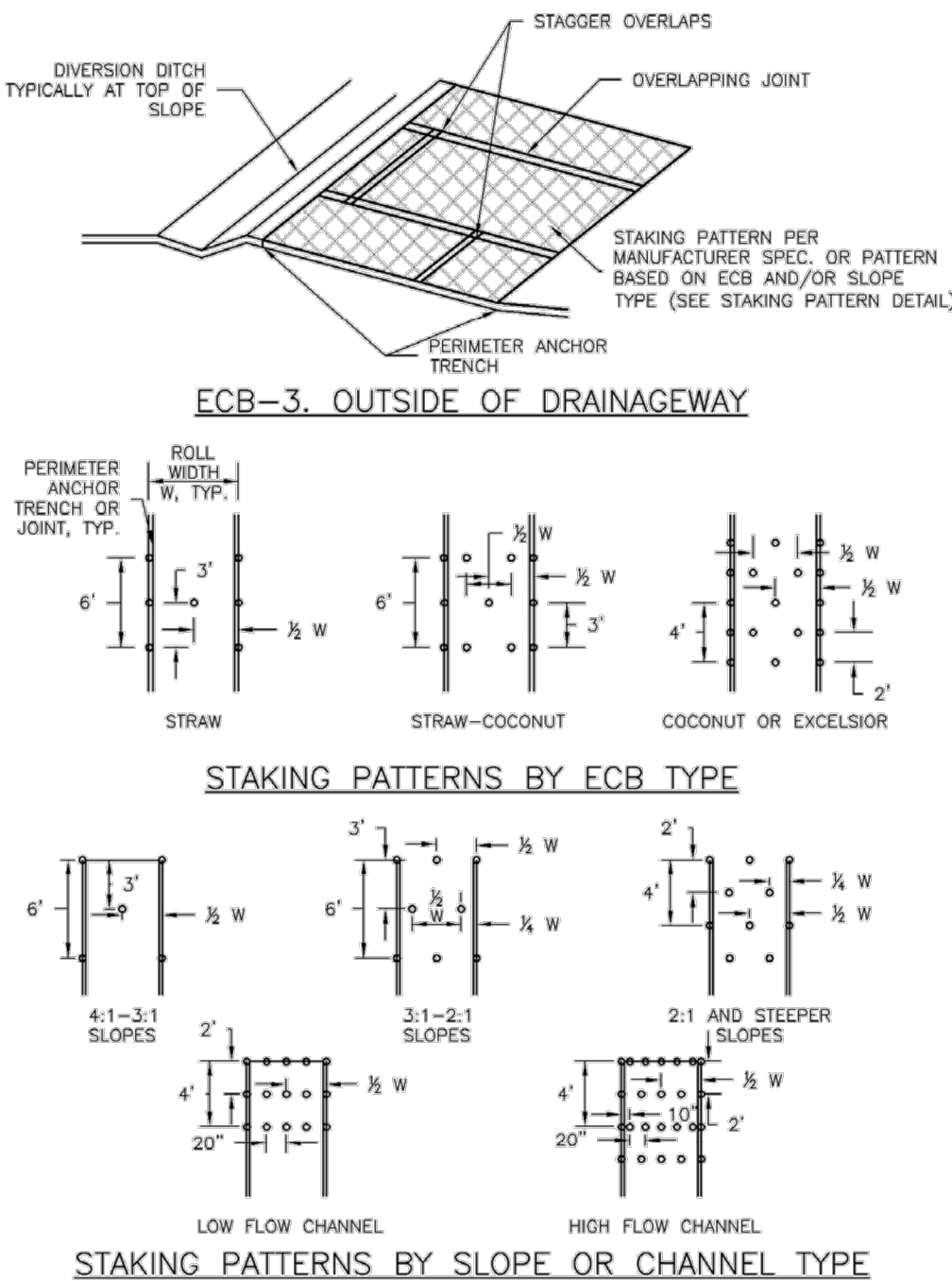
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EC-6 Rolled Erosion Control Products (RECP)

RECP-6 Urban Drainage and Flood Control District
Urban Storm Drainage Criteria Manual Volume 3 November 2010

Rolled Erosion Control Products (RECP)

EC-6

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EC-6 Rolled Erosion Control Products (RECP)

EROSION CONTROL BLANKET INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF ECB.
 - TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
 - AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.
- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
- IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
- INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
- OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
- MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBs SHALL BE RESEEDED AND MULCHED.
- DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TABLE ECB-1. ECB MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING*
STRAW*	-	100%	-	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN	70% MAX	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELSIOR	-	-	100%	DOUBLE/NATURAL

*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNELS.

*ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS.

EROSION CONTROL BLANKET MAINTENANCE NOTES

- 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.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
- ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

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 AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

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ENGINEER'S STATEMENT

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

MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314
FOR AND ON BEHALF OF JR ENGINEERING32314
DATEACR SITE DEVELOPMENT
PLAN

DETAILS 2

SHEET 7 OF 9

JOB NO. 25176.00

PREPARED FOR

ACR SITE DEVELOPMENT

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BY DATE

No. REVISION

N/A

H-SCALE

V-SCALE

DATE

DESIGNED BY

DRAWN BY

CHECKED BY

J.E.A.

J.E.A.

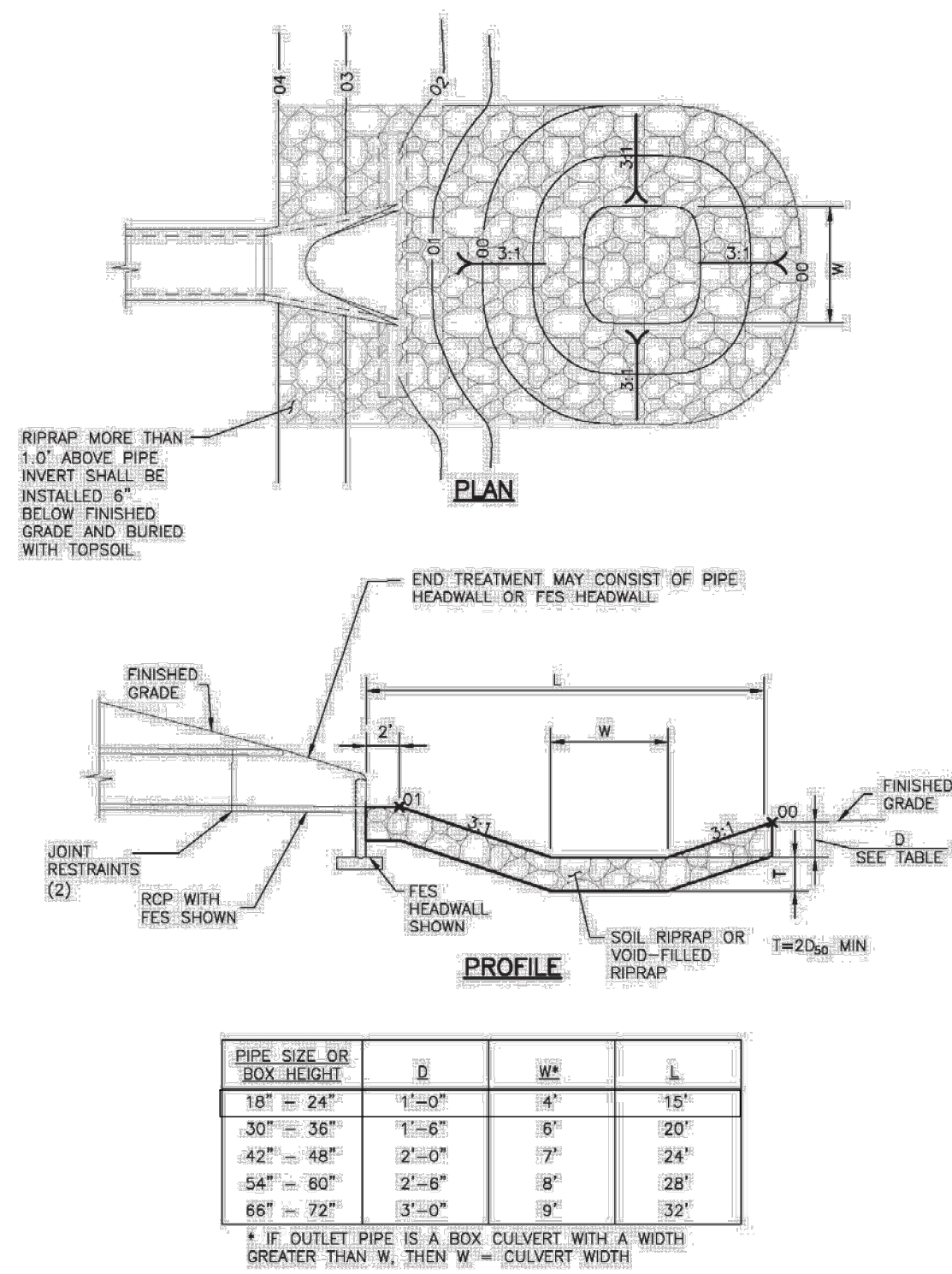
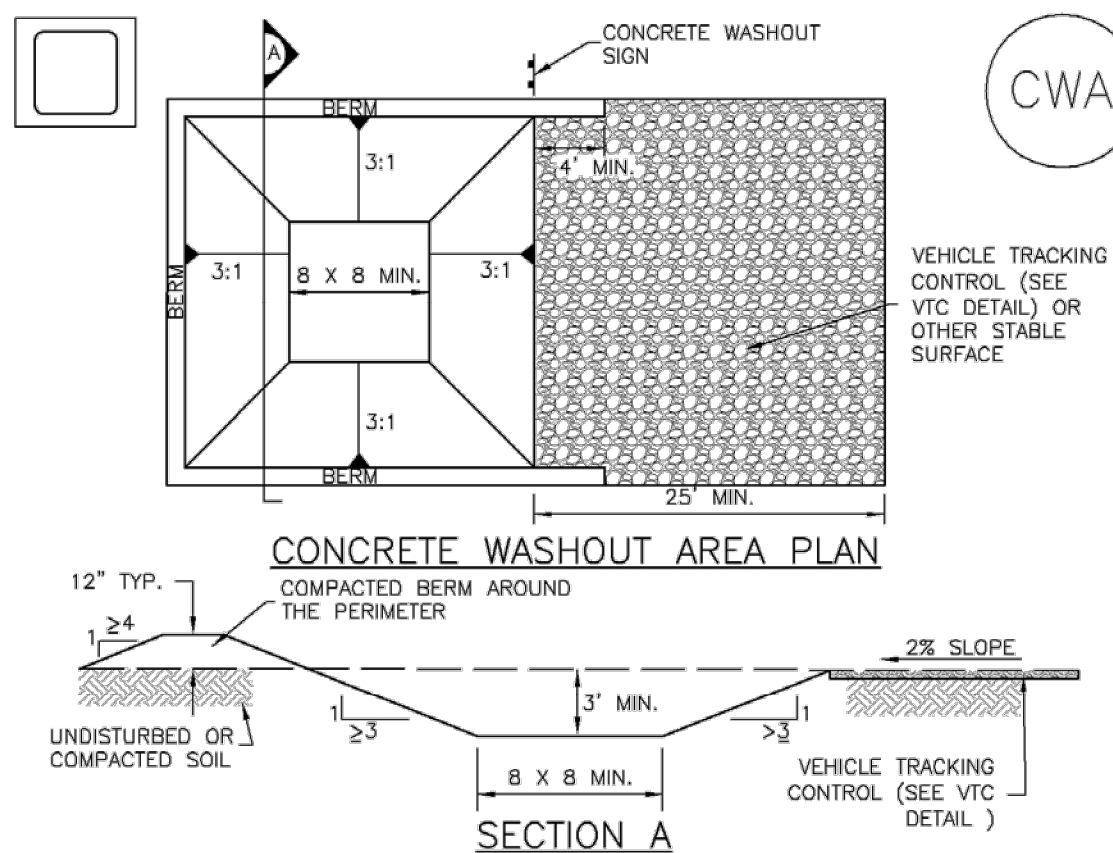


Figure 9-37. Low tailwater riprap basin

Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

- CWA INSTALLATION NOTES
- SEE PLAN VIEW FOR:
-CWA INSTALLATION LOCATION.
 - 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.
 - THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
 - 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.
 - BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
 - VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
 - 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.
 - USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MM-1 Concrete Washout Area (CWA)

- CWA MAINTENANCE NOTES
- 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.
 - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
 - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - 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'.
 - 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.
 - THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
 - 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.
- (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).
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.

ENGINEER'S STATEMENT

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

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FOR AND ON BEHALF OF JR ENGINEERING



ACR SITE DEVELOPMENT

PLAN
DETAILS 4

BY	DATE	REVISION	N/A	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
			N/A			03/27/20	RB	JE-A	

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UNTIL SUCH TIME AS
THESE DRAWINGS ARE
APPROVED BY THE
APPROPRIATE REVIEWING
AGENCIES, OR ENGINEERING
APPROVES THEIR USES
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DRAWINGS ARE NOT TO BE
DESIGNATED BY WRITTEN
AUTHORIZATION.