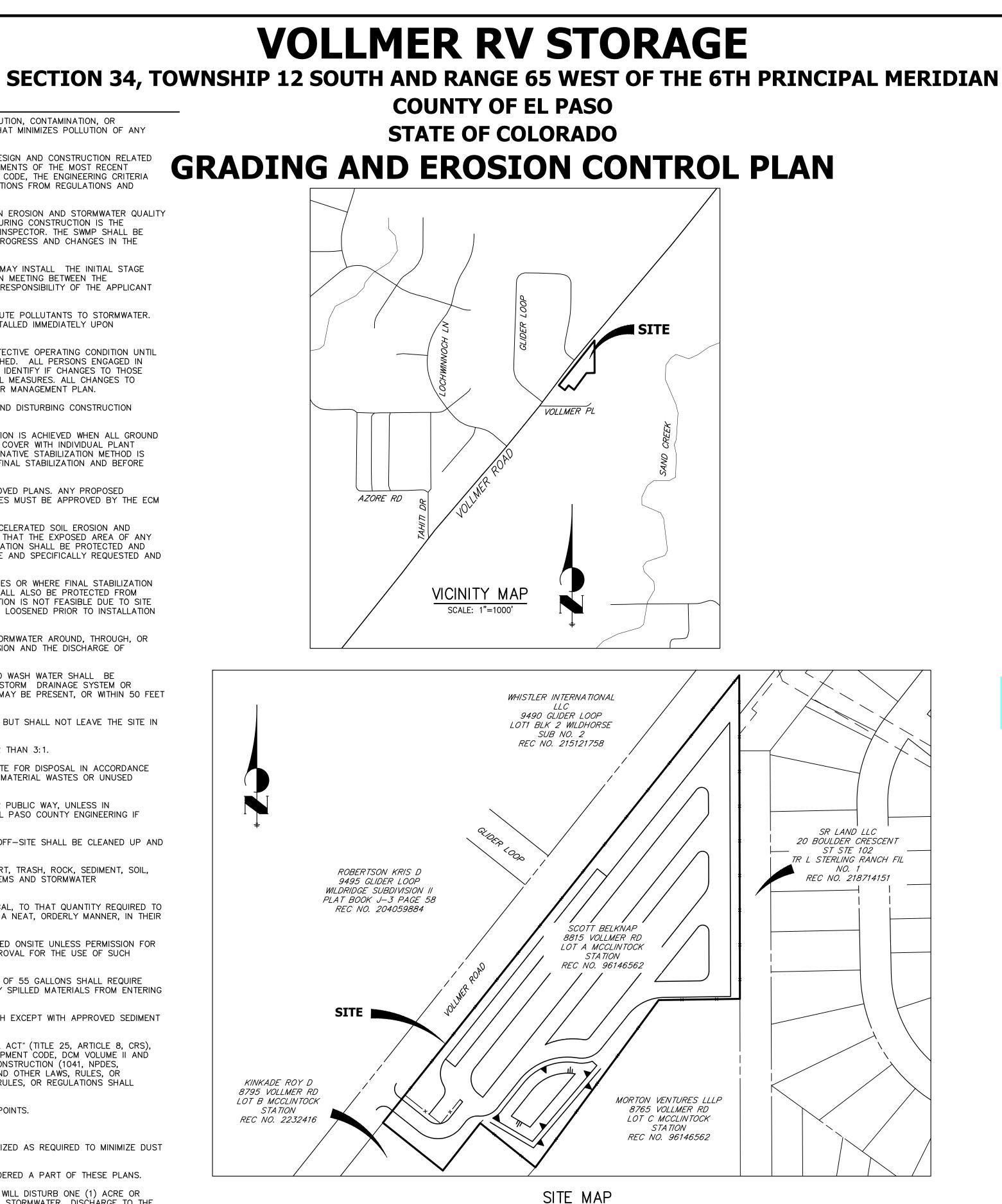
GRADING AND EROSION CONTROL STANDARD NOTES

- .STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- 2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- 3.A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESOCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIFI D
- 4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- 5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES. CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- 6.ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- B.FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- 9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- 0. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- I. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- 2. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- 3. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT. OR WITHIN 50 FEET OF A SURFACE WATER BODY. CREEK OR STREAM.
- 14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- 15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- 16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- 7. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- 18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- 19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- 20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- 21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- 22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- 23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- 24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES. OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- 25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- 26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- 27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- 28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY NRCS SOIL SURVEY AND SHALL BE CONSIDERED A PART OF THESE PLANS. 29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR
- MORE, THE OWNER OF OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:
- COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION
- WQCD PERMITS 4300 CHERRY CREEK DRIVE SOUTH
- DENVER, CO 80246-1530 ATTN: PERMITS UNIT





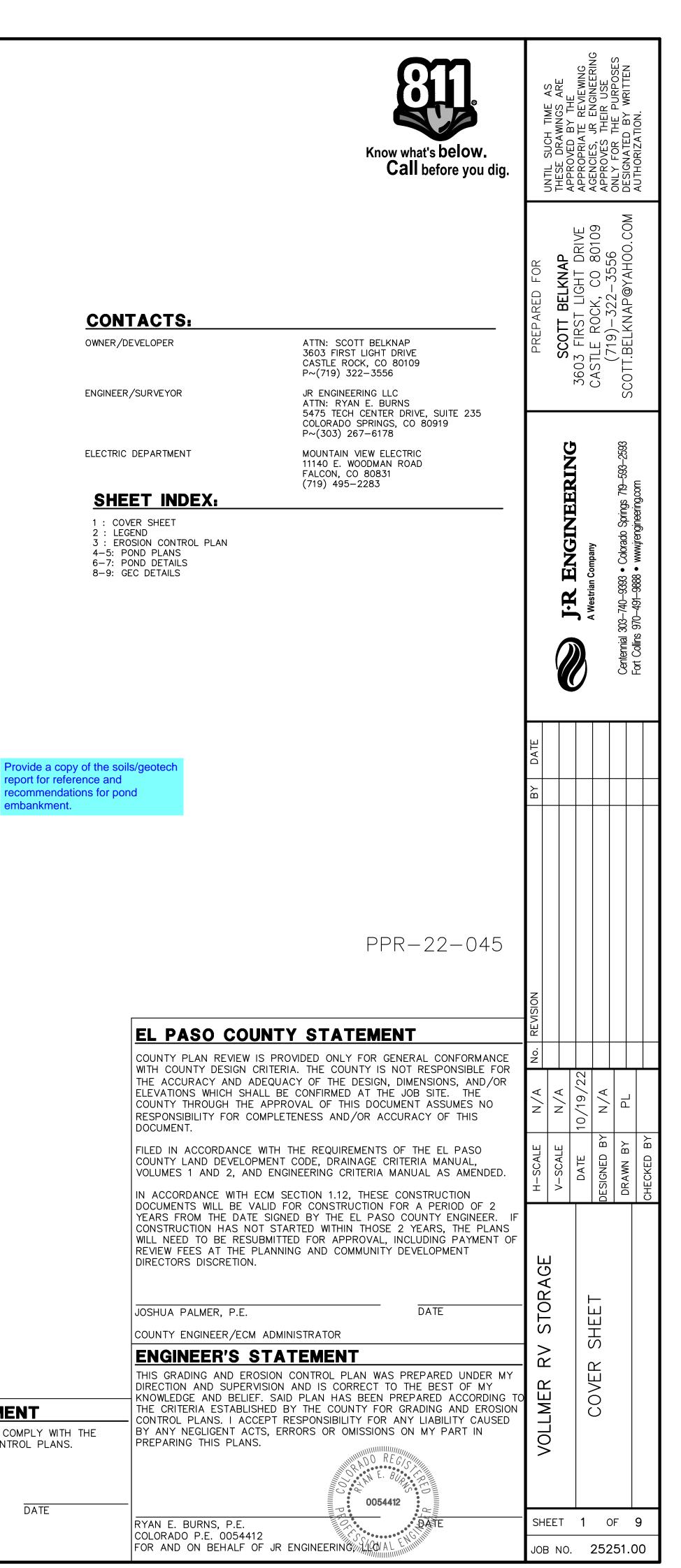
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OWNER/DEVELOPER STATEMENT

THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENT OF THE GRADING AND EROSION CONTROL PLANS.

SCOTT BELKNAP

3603 FIRST LIGHT DRIVE CASTLE ROCK. CO 80109



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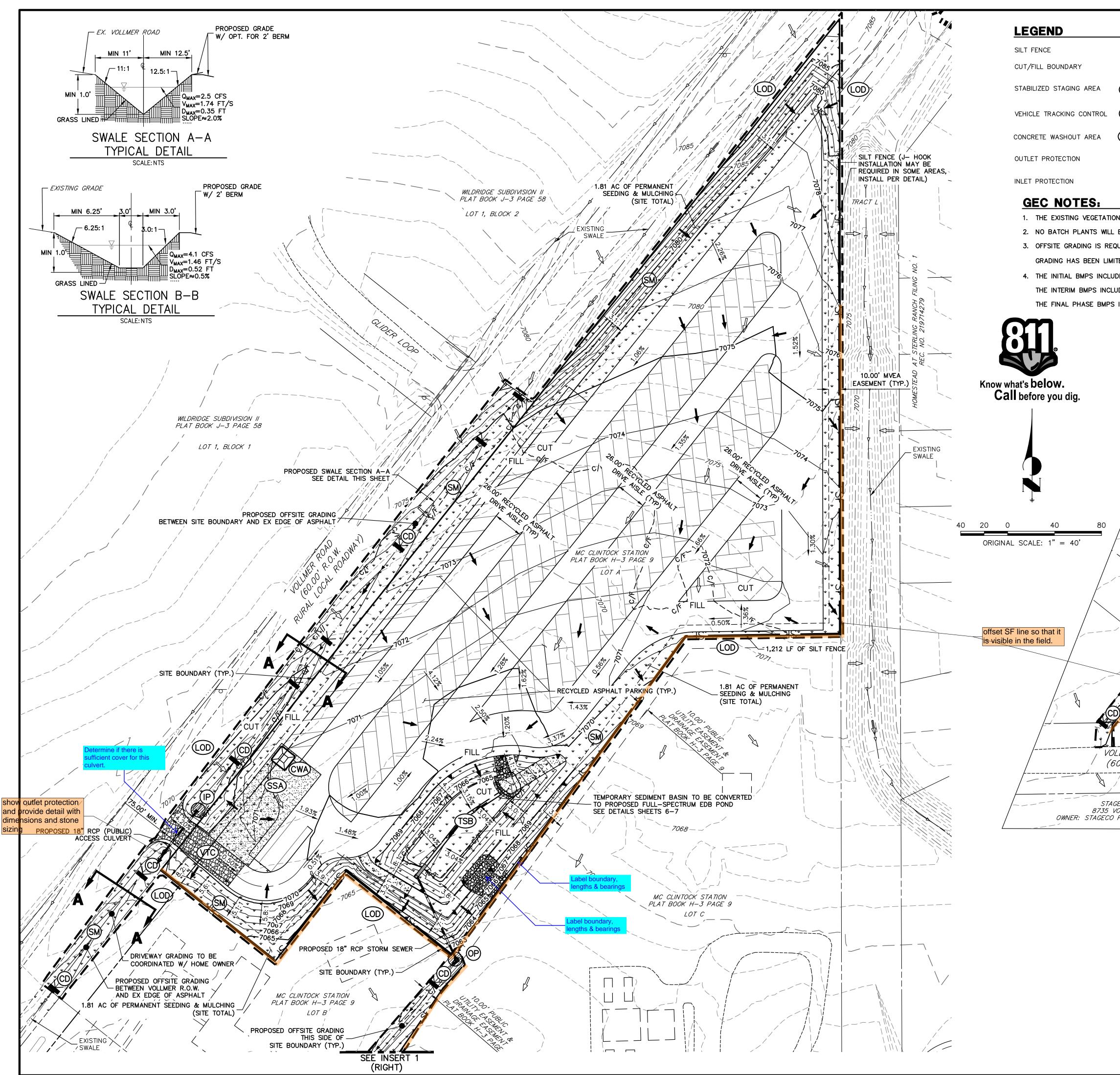
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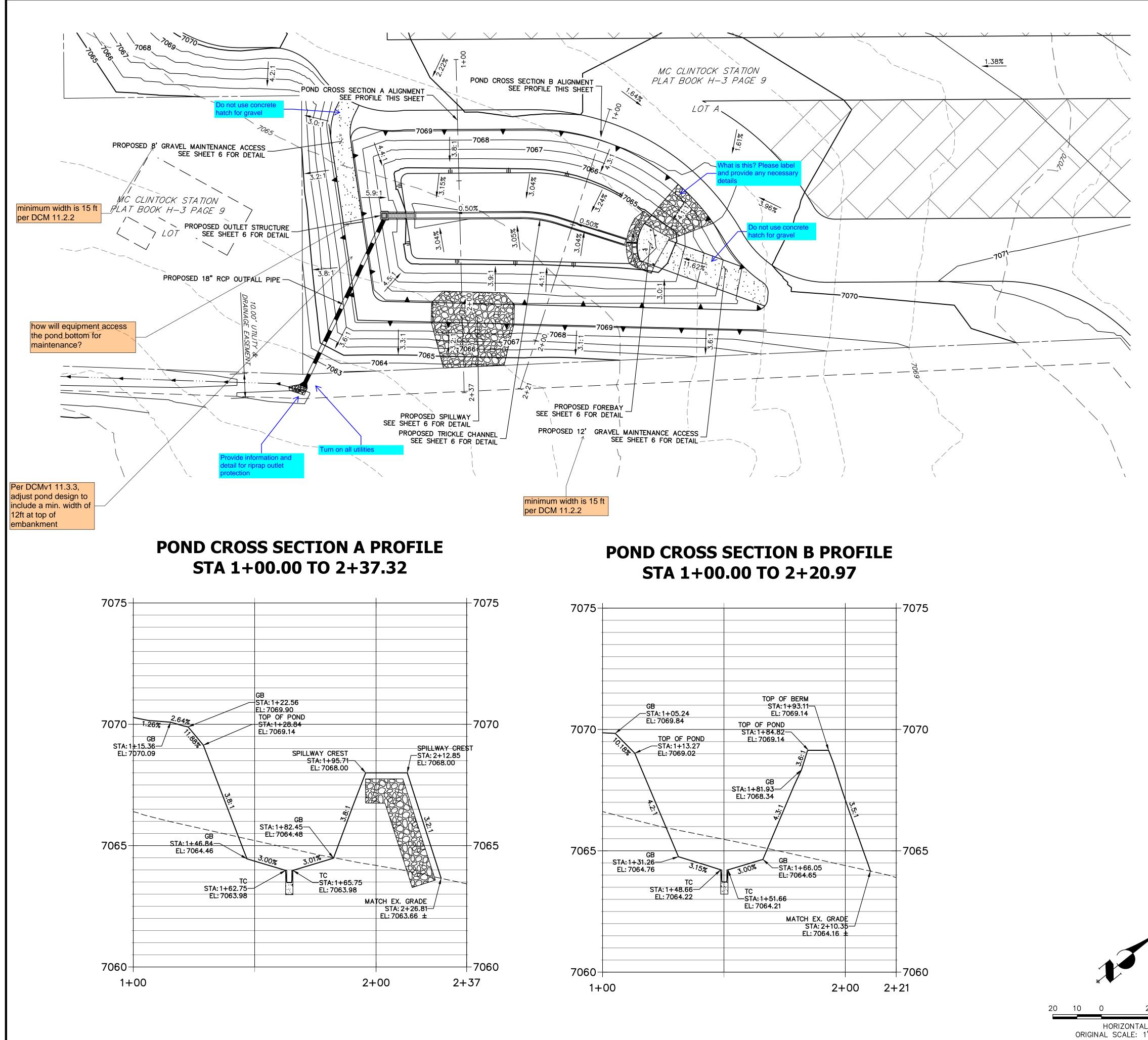
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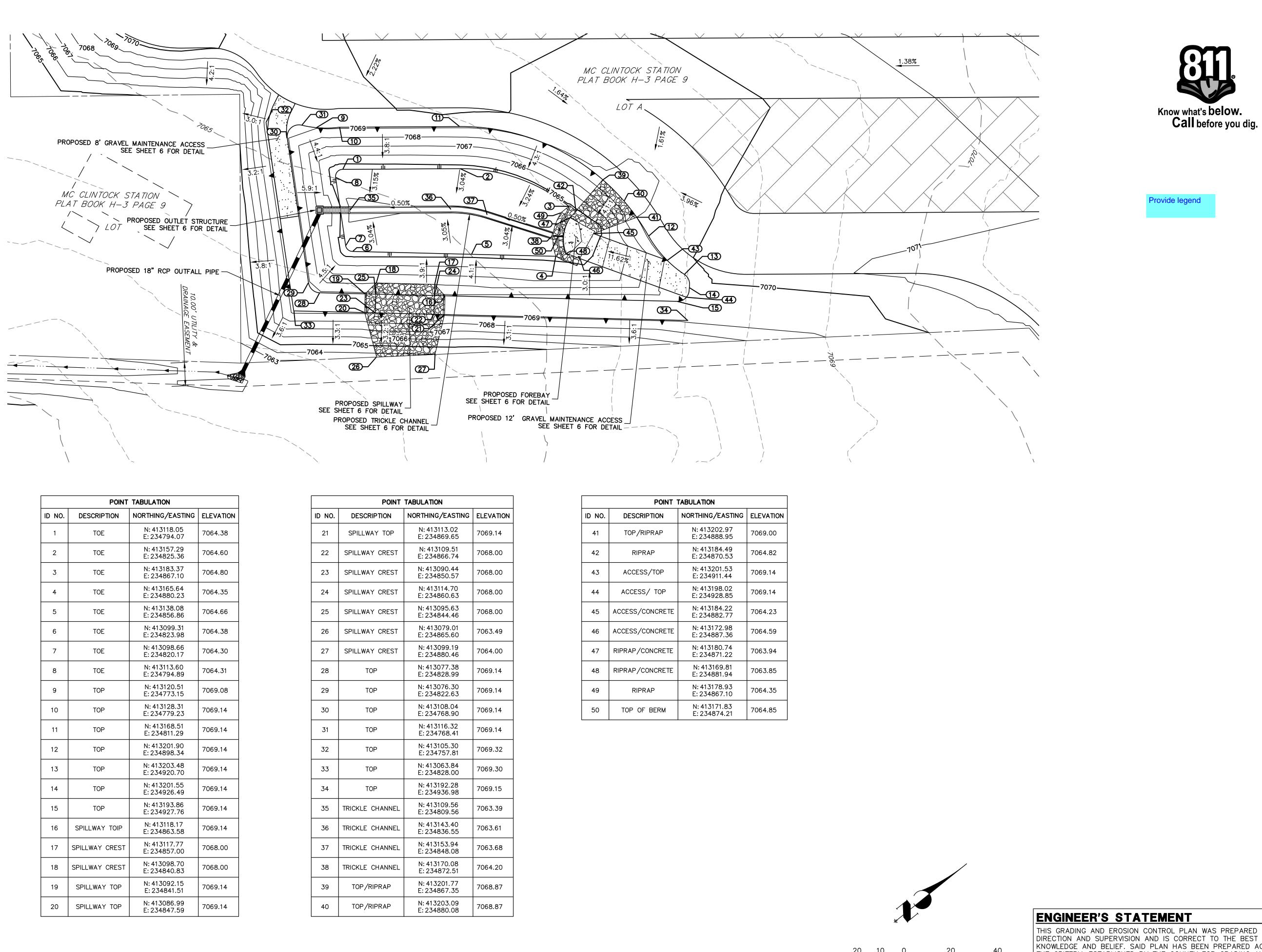




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ENGINEER'S STATEMENT
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RYAN E. BURNS, P.E. COLORADO P.E. 0054412 FOR AND ON BEHALF OF JI	R ENGINEERING	SUNT (OCVAL ENIN	DATE



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1	TOE	N: 413118.05 E: 234794.07	7064.38				
2	TOE	N: 413157.29 E: 234825.36	7064.60				
3	TOE	N: 413183.37 E: 234867.10	7064.80				
4	TOE	N: 413165.64 E: 234880.23	7064.35				
5	TOE	N: 413138.08 E: 234856.86	7064.66				
6	TOE	N: 413099.31 E: 234823.98	7064.38				
7	TOE	N: 413098.66 E: 234820.17	7064.30				
8	TOE	N: 413113.60 E: 234794.89	7064.31				
9	TOP	N: 413120.51 E: 234773.15	7069.08				
10	TOP	N: 413128.31 E: 234779.23	7069.14				
11	TOP	N: 413168.51 E: 234811.29	7069.14				
12	TOP	N: 413201.90 E: 234898.34	7069.14				
13	TOP	N: 413203.48 E: 234920.70	7069.14				
14	TOP	N: 413201.55 E: 234926.49	7069.14				
15	TOP	N: 413193.86 E: 234927.76	7069.14				
16	SPILLWAY TOIP	N: 413118.17 E: 234863.58	7069.14				
17	SPILLWAY CREST	N: 413117.77 E: 234857.00	7068.00				
18	SPILLWAY CREST	N: 413098.70 E: 234840.83	7068.00				
19	SPILLWAY TOP	N: 413092.15 E: 234841.51	7069.14				
20	SPILLWAY TOP	N: 413086.99 E: 234847.59	7069.14				

	POINT TABULATION					
).	DESCRIPTION	NORTHING/EASTING	ELEVATION			
	SPILLWAY TOP	N: 413113.02 E: 234869.65	7069.14			
	SPILLWAY CREST	N: 413109.51 E: 234866.74	7068.00			
	SPILLWAY CREST	N: 413090.44 E: 234850.57	7068.00			
	SPILLWAY CREST	N: 413114.70 E: 234860.63	7068.00			
	SPILLWAY CREST	N: 413095.63 E: 234844.46	7068.00			
	SPILLWAY CREST	N: 413079.01 E: 234865.60	7063.49			
	SPILLWAY CREST	N: 413099.19 E: 234880.46	7064.00			
	TOP	N: 413077.38 E: 234828.99	7069.14			
	TOP	N: 413076.30 E: 234822.63	7069.14			
	TOP	N: 413108.04 E: 234768.90	7069.14			
	TOP	N: 413116.32 E: 234768.41	7069.14			
	TOP	N: 413105.30 E: 234757.81	7069.32			
	TOP	N: 413063.84 E: 234828.00	7069.30			
	TOP	N: 413192.28 E: 234936.98	7069.15			
	TRICKLE CHANNEL	N: 413109.56 E: 234809.56	7063.39			
	TRICKLE CHANNEL	N: 413143.40 E: 234836.55	7063.61			
	TRICKLE CHANNEL	N: 413153.94 E: 234848.08	7063.68			
	TRICKLE CHANNEL	N: 413170.08 E: 234872.51	7064.20			
	TOP/RIPRAP	N: 413201.77 E: 234867.35	7068.87			
	TOP/RIPRAP	N: 413203.09 E: 234880.08	7068.87			

	POINT TABULATION							
ID NO.	DESCRIPTION	NORTHING/EASTING	ELEVATION					
41	TOP/RIPRAP	N: 413202.97 E: 234888.95	7069.00					
42	RIPRAP	N: 413184.49 E: 234870.53	7064.82					
43	ACCESS/TOP	N: 413201.53 E: 234911.44	7069.14					
44	ACCESS/ TOP	N: 413198.02 E: 234928.85	7069.14					
45	ACCESS/CONCRETE	N: 413184.22 E: 234882.77	7064.23					
46	ACCESS/CONCRETE	N: 413172.98 E: 234887.36	7064.59					
47	RIPRAP/CONCRETE	N: 413180.74 E: 234871.22	7063.94					
48	RIPRAP/CONCRETE	N: 413169.81 E: 234881.94	7063.85					
49	RIPRAP	N: 413178.93 E: 234867.10	7064.35					
50	TOP OF BERM	N: 413171.83 E: 234874.21	7064.85					



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	PREPARED FOR SCOTT BELKNAP 3603 FIRST LIGHT DRIVE CASTLE ROCK, C0 80109 (719)-322-3556 SCOTT.BELKNAP@YAHOO.COM BRENCES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN ADPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN						
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	BY DATE						
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	H-SCALE 1"=20			те 10/19/22	ED BY APL		ED BY
				DATE	PUND PLANS DESIGNED BY		CHECKED BY
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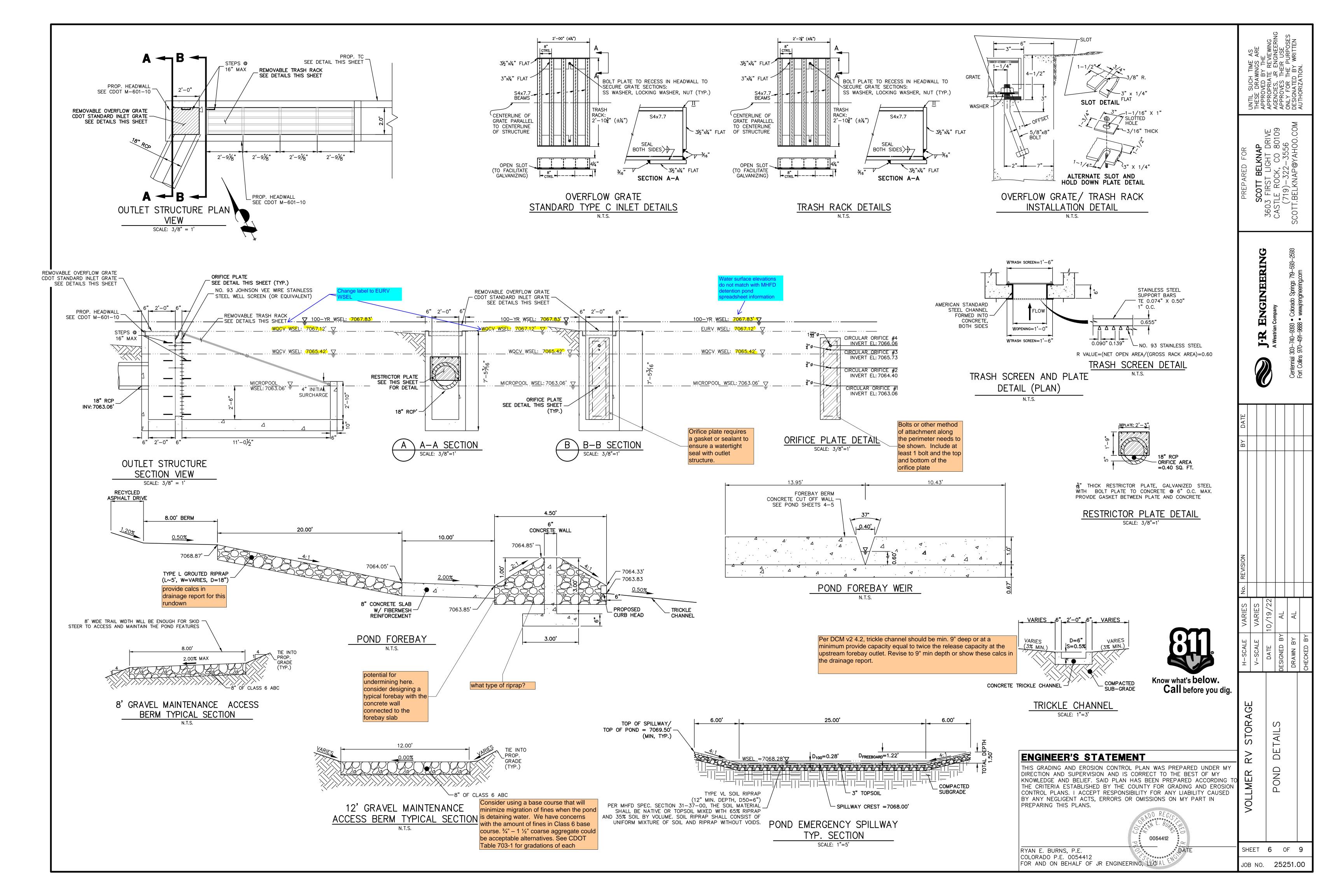
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SCALE:	1" = 20'	

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KNOWLEDGE AND BELIEF. SA		
THE CRITERIA ESTABLISHED		
CONTROL PLANS. I ACCEPT		
BY ANY NEGLIGENT ACTS, EI		
PREPARING THIS PLANS.		

RYAN E. BURNS, P.E. COLORADO P.E. 0054412 FOR AND ON BEHALF OF JR ENGINEERING

0054412



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 THERETO. 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 fy=60,000 psi **REINFORCING STEEL:**

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 PLACE 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 FXIST. THE INCREASES ABOVE FOR #6 THRU #11 BARS MAY BE 25%, 13%, AND 42% RESPECTIVELY.

		INCINEASES	ADOVL	I UK	#U	THIND	# I L	ANS
#4	1'—3"					# 5	ິ 1'	-7"
# 6	2'-5"					# 7	2'	-10"
 #8	3'-8"					" #9	4'	-8"
<i></i> #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.

E.F. =	EACH FACE	0.F.	=	OUTSIDE FACE
F.E. =	FAR FACE	Т.&В.	=	TOP AND BOTTOM

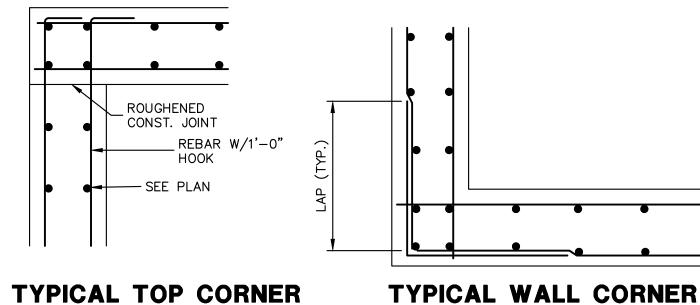
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

		.		
F.E. =	FAR FACE	Т.&В.	=	TOP AND BOTTO
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
		•		

TYPE VL RIPRAP INTERMEDIA ROCK DIMENS

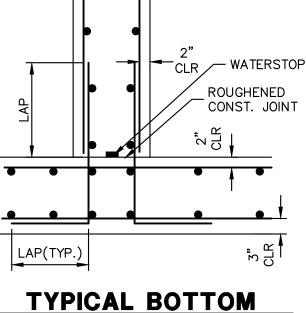
*TYPE VL RIPRAP D50=6". $D_{50} = MEAN PARTICLE SIZE$ (INTERMEDIATE DIMENSION) BY WEIGHT.



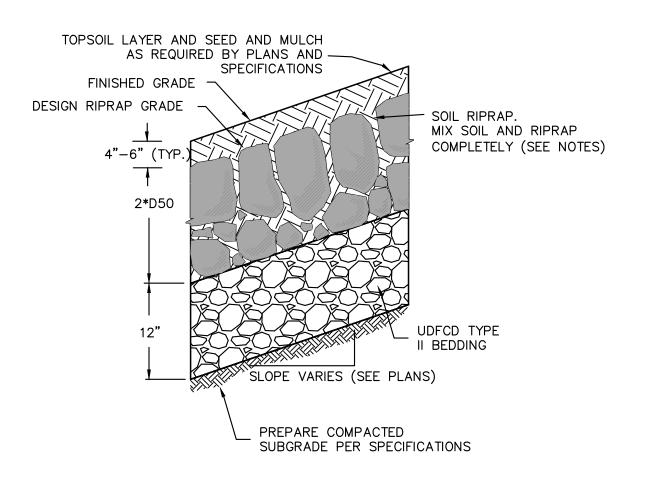


WALL SECTION DETAIL





CORNER WALL SECTION DETAIL



SOIL RIPRAP EMBANKMENT PROTECTION WITH BEDDING TYP. SECTION

N.T.S.

ATE	PERCENT
SION	PASSING
(IN.)	(%)
12	70–100
9	50–70
6	35–50
2	2–10

TYPE L RIPRAP

INTERMEDIATE	PERCENT
ROCK DIMENSION	PASSING
(IN.)	(%)
15	70–100
12	50–70
9	35–50
3	2–10

*TYPE L RIPRAP D50=9". $D_{50} = MEAN PARTICLE SIZE$ (INTERMEDIATE DIMENSION) BY WEIGHT.

RIPRAP NOTES:

- 1. SOIL RIPRAP DETAILS ARE APPLICABLE TO SLOPED AREAS. REFER TO THE SITE PLAN ACTUAL LOCATION AND LIMITS. MIX UNIFORMLY 65% RIPRAP BY VOLUME WITH 35% OF APPROVED SOIL BY
- VOLUME PRIOR TO PLACEMENT. PLACE STONE-SOIL MIX TO RESULT IN SECURELY INTERLOCKED ROCK AT THE DESIGN 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.
- ROCK SHALL BE HARD, DURABLE, ANGULAR IN SHAPE, AND FREE FROM CRACKS, OVERBURDEN, SHALE, AND ORGANIC MATTER. NEITHER BREADTH NOR THICKNESS OF A SINGLE STONE SHOULD BE LESS
- THAN ONE-THIRD ITS LENGTH, AND ROUNDED STONE SHOULD BE AVOIDED. . 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
- FREEZING AND THAWING (AASHTO 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.

IME IME VGS A. Y THE REVIEWI. FURPC WRIT ╶╧┢╚╝ 4. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c. -NKKZKX MOODOO . HEADWALLS FOR PIPES SHALL BE CONSTRUCTED PER CDOT M-601-10. 8. WINGWALLS SHALL BE CONSTRUCTED PER CDOT M-601-20. VЕ 09 BELKNA SCOTT 5 FIRST 719)-7 719)-7 BELKN \sim -360. CAS⁻ EER ENG J·R Б \triangleleft TOR. ()Ś ENGINEER'S STATEMENT > \Box С THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY \Box Υ DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY NO KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING Ш THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION Ω CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLANS.

0054412

RYAN E. BURNS, P.E. COLORADO P.E. 0054412

FOR AND ON BEHALF OF JR ENGINEERING

CAST-IN-PLACE STRUCTURAL NOTES:

- ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED. 2. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
- 5. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED $\frac{3}{4}$ ".
- 6. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

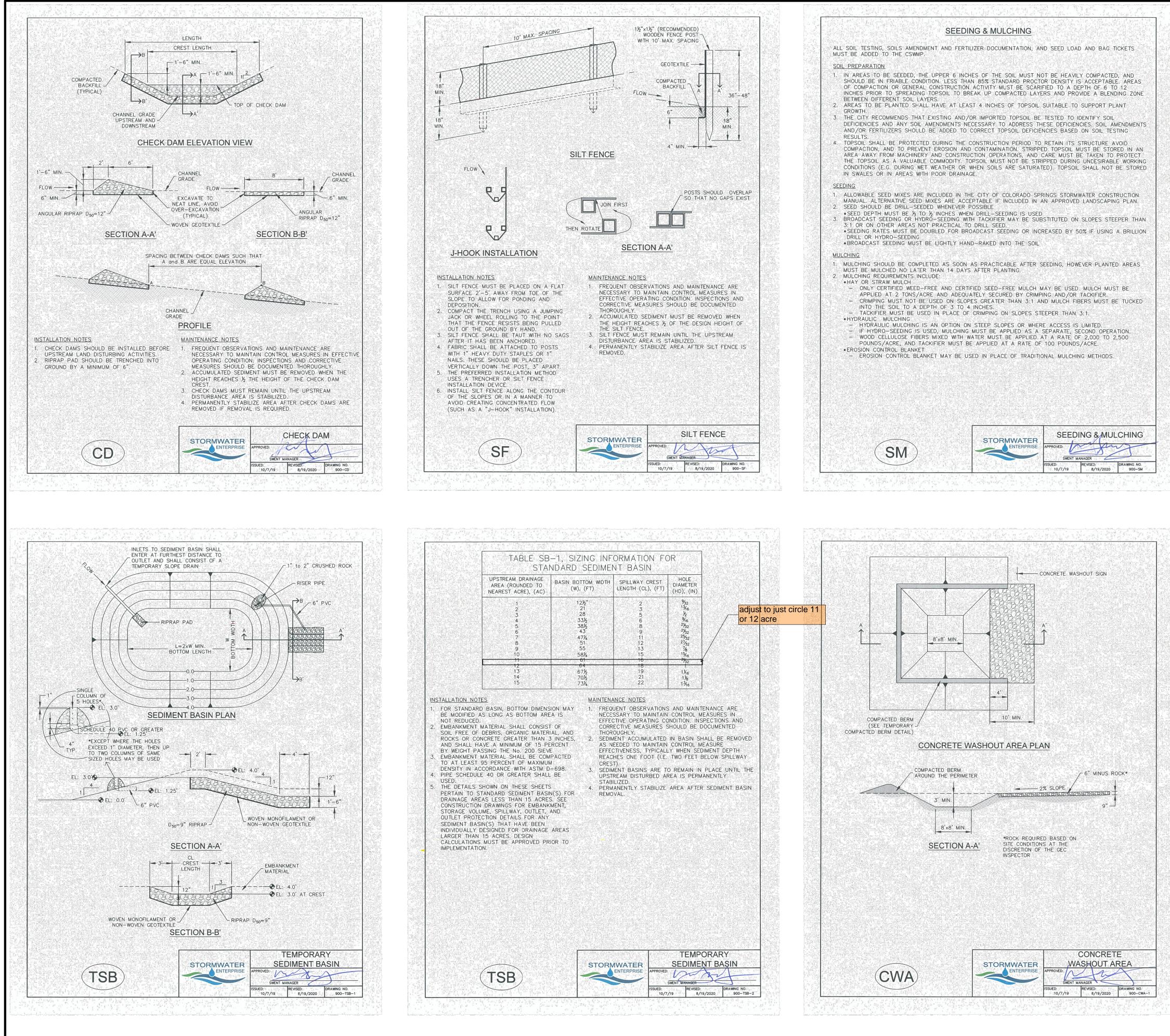
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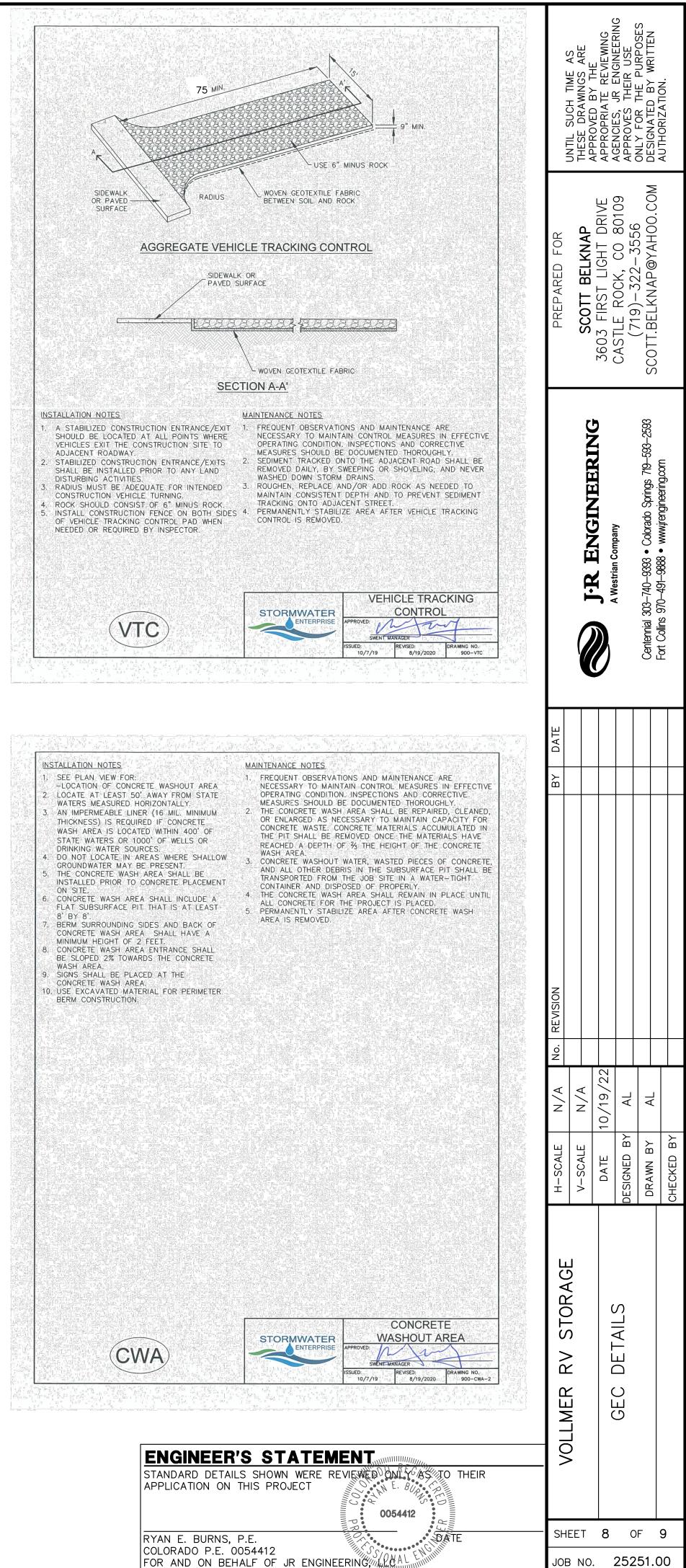
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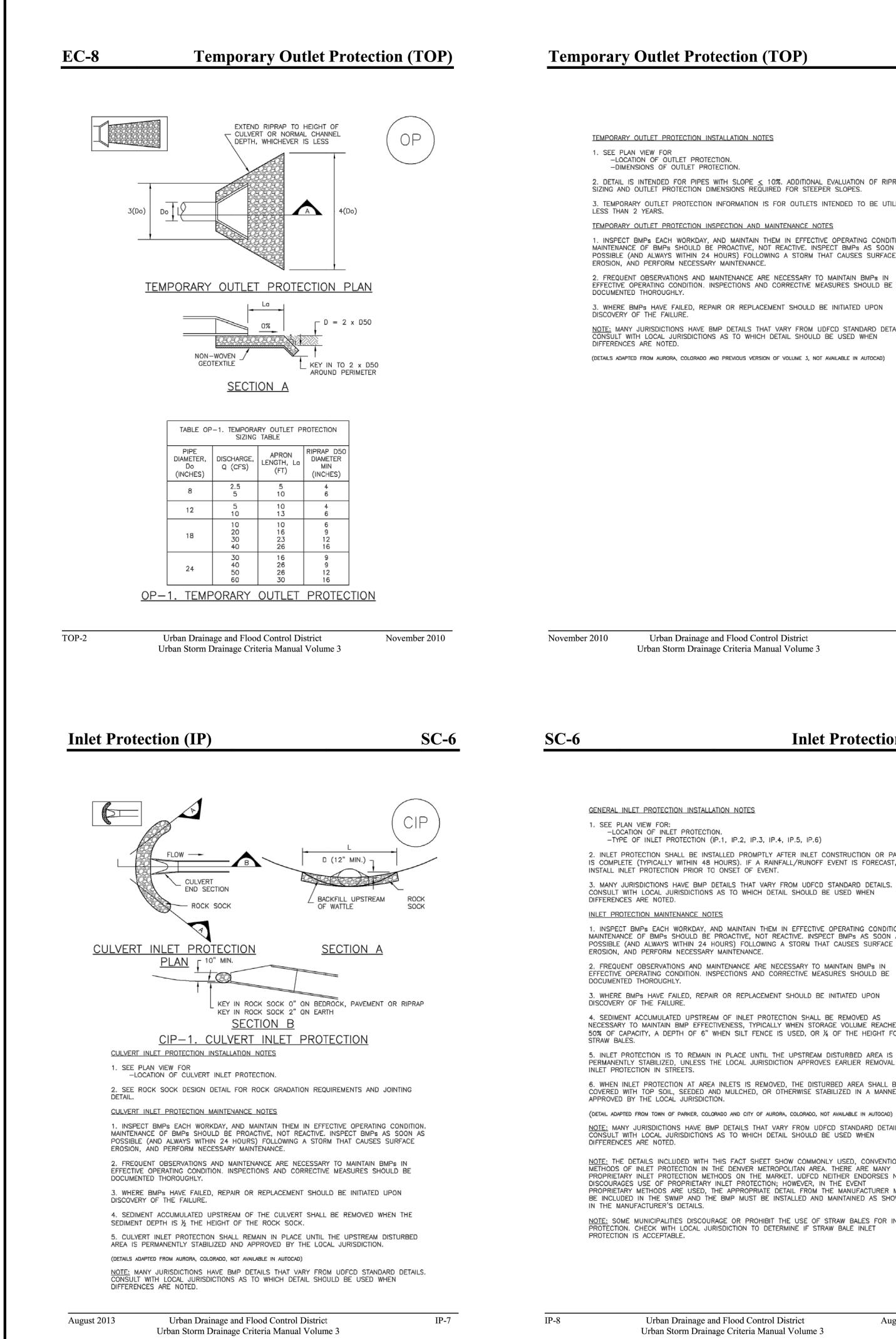
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	 WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE I DISCOVERY OF THE FAILURE. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTI 	

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 TOP-3

November 2010

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SSA-3

Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES

2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR

5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF

6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER

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

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET



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

Stabilized Staging Area (SSA)

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)

SSA-4

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

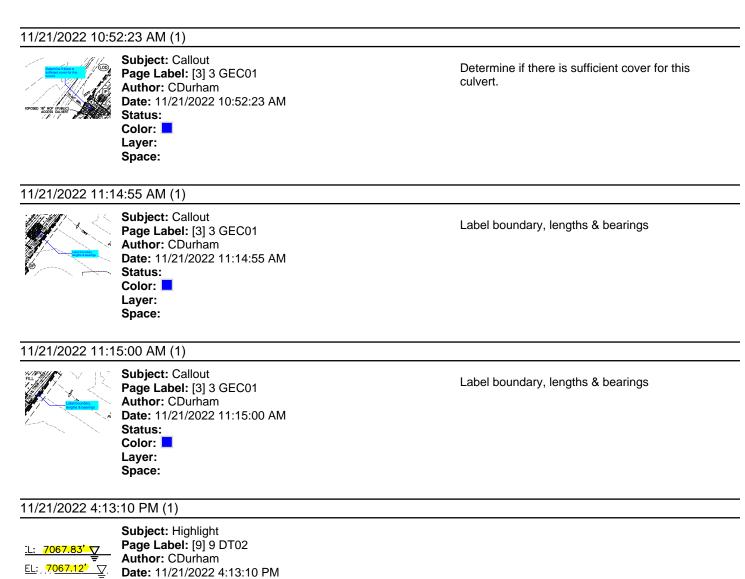
November 2010

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ENGINEER'S STATE	
STANDARD DETAILS SHOWN WERE APPLICATION ON THIS PROJECT	REVIEWED ONLY ASTO THEI
RYAN E. BURNS, P.E. COLORADO P.E. 0054412	DATE

FOR AND ON BEHALF OF JR ENGINEERING

Grading and Erosion Control Plan_V2.pdf Markup Summary



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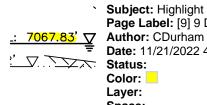
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Water surface elevations do not match with MHFD detention pond spreadsheet information

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Subject: Callout Page Label: [7] 7 Pond DT02 Author: CDurham Date: 11/21/2022 4:44:42 PM Status: Color: Layer: Space: Provide a copy of the soils/geotech report for reference and recommendations for pond embankment.

Provide information and detail for riprap outlet protection

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Do not use concrete hatch for gravel

11/21/2022 4:45:36 PM (1)



Subject: Callout Page Label: [7] 7 Pond DT02 Author: CDurham Date: 11/21/2022 4:45:36 PM Status: Color: Layer: Space:

11/21/2022 4:45:59 PM (1)



Subject: Callout Page Label: [7] 7 Pond DT02 Author: CDurham Date: 11/21/2022 4:45:59 PM Status: Color: Layer: Space:

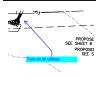
11/21/2022 4:46:16 PM (1)

rovide legend Subject: Text Box Page Label: [7] 7 Pond DT02 Author: CDurham Date: 11/21/2022 4:46:16 PM Status: Color: ■ Layer: Space:

11/21/2022 4:46:21 PM (1)

Subject: Text Box Page Label: [7] 7 Pond DT02 Author: CDurham Date: 11/21/2022 4:46:21 PM Status: Color: Color: Color: Space:

11/21/2022 4:46:44 PM (1)



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Subject: Callout Page Label: [7] 7 Pond DT02 Author: CDurham Date: 11/21/2022 4:46:44 PM Status: Color: Layer: Space:

11/22/2022 11:49:16 AM (1)



Subject: Engineer Page Label: [7] 7 Pond DT02 Author: dotprete Date: 11/22/2022 11:49:16 AM Status: Color: ■ Layer: Space: Do not use concrete hatch for gravel

What is this? Please label and provide any necessary details

Provide legend

Provide legend

Turn on all utilities

minimum width is 15 ft per DCM 11.2.2

11/22/2022 11:49:24 AM (1)



Subject: Engineer Page Label: [7] 7 Pond DT02 Author: dotprete Date: 11/22/2022 11:49:24 AM Status: Color: ■ Layer: Space:

11/22/2022 11:51:49 AM (1)



Subject: Engineer Page Label: [7] 7 Pond DT02 Author: dotprete Date: 11/22/2022 11:51:49 AM Status: Color: ■ Layer: Space:

11/22/2022 11:53:43 AM (1)



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Subject: Engineer Page Label: [9] 9 DT02 Author: dotprete Date: 11/22/2022 11:53:43 AM Status: Color: ■ Layer: Space:

11/22/2022 11:55:26 AM (1)

Subject: Page La Author: Date: 11 Status: Color: Layer: Space:

Subject: Engineer Page Label: [9] 9 DT02 Author: dotprete Date: 11/22/2022 11:55:26 AM Status: Color: ■ Layer: Space:

11/22/2022 11:56:07 AM (1)



Subject: Engineer Page Label: [9] 9 DT02 Author: dotprete Date: 11/22/2022 11:56:07 AM Status: Color: ■ Layer: Space:

potential for undermining here. consider designing a typical forebay with the concrete wall connected to the forebay slab

11/22/2022 11:58:59 AM (1)

CONC



Subject: Engineer Page Label: [9] 9 DT02 Author: dotprete Date: 11/22/2022 11:58:59 AM Status: Color: ■ Layer: Space: minimum width is 15 ft per DCM 11.2.2

how will equipment access the pond bottom for maintenance?

provide calcs in drainage report for this rundown

what type of riprap?

Orifice plate requires a gasket or sealant to ensure a watertight seal with outlet structure.

11/22/2022 12:04:24 PM (1)



Subject: Engineer Page Label: [9] 9 DT02 Author: dotprete Date: 11/22/2022 12:04:24 PM Status: Color: ■ Layer: Space:

11/22/2022 12:06:36 PM (1)



Subject: Engineer Page Label: [7] 7 Pond DT02 Author: dotprete Date: 11/22/2022 12:06:36 PM Status: Color: ■ Layer: Space:

11/22/2022 12:08:24 PM (1)



Subject: Engineer Page Label: [9] 9 DT02 Author: dotprete Date: 11/22/2022 12:08:24 PM Status: Color: ■ Layer: Space:

11/22/2022 12:11:40 PM (1)



Subject: Engineer Page Label: [9] 9 DT02 Author: dotprete Date: 11/22/2022 12:11:40 PM Status: Color: ■ Layer: Space:

11/22/2022 12:14:11 PM (1)



Subject: Engineer Page Label: [9] 9 DT02 Author: dotprete Date: 11/22/2022 12:14:11 PM Status: Color: ■ Layer: Space: Bolts or other method of attachment along the perimeter needs to be shown. Include at least 1 bolt and the top and bottom of the orifice plate

Per DCMv1 11.3.3, adjust pond design to include a min. width of 12ft at top of embankment

Consider using a base course that will minimize migration of fines when the pond is detaining water. We have concerns with the amount of fines in Class 6 base course. $\frac{3}{4}$ " - 1 $\frac{1}{2}$ " coarse aggregate could be acceptable alternatives. See CDOT Table 703-1 for gradations of each

Per DCM v2 4.2, trickle channel should be min. 9" deep or at a minimum provide capacity equal to twice the release capacity at the upstream forebay outlet. Revise to 9" min depth or show these calcs in the drainage report.

adjust to just circle 11 or 12 acre

11/22/2022 12:15:37 PM (1)



Subject: Engineer Page Label: [3] 3 GEC01 Author: dotprete Date: 11/22/2022 12:15:37 PM Status: Color: ■ Layer: Space:

show outlet protection and provide detail with dimensions and stone sizing

11/22/2022 12:17:30 PM (1)



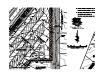
Subject: PolyLine Page Label: [3] 3 GEC01 Author: dotprete Date: 11/22/2022 12:17:30 PM Status: Color: Layer: Space:

11/22/2022 12:17:37 PM (1)



Subject: PolyLine Page Label: [3] 3 GEC01 Author: dotprete Date: 11/22/2022 12:17:37 PM Status: Color: Layer: Space:

11/22/2022 12:17:48 PM (1)



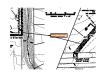
Subject: PolyLine Page Label: [3] 3 GEC01 Author: dotprete Date: 11/22/2022 12:17:48 PM Status: Color: Layer: Space:

11/22/2022 12:18:10 PM (1)



Subject: PolyLine Page Label: [3] 3 GEC01 Author: dotprete Date: 11/22/2022 12:18:10 PM Status: Color: Layer: Space:

11/22/2022 12:18:37 PM (1)



Subject: Engineer Page Label: [3] 3 GEC01 Author: dotprete Date: 11/22/2022 12:18:37 PM Status: Color: ■ Layer: Space:

offset SF line so that it is visible in the field.