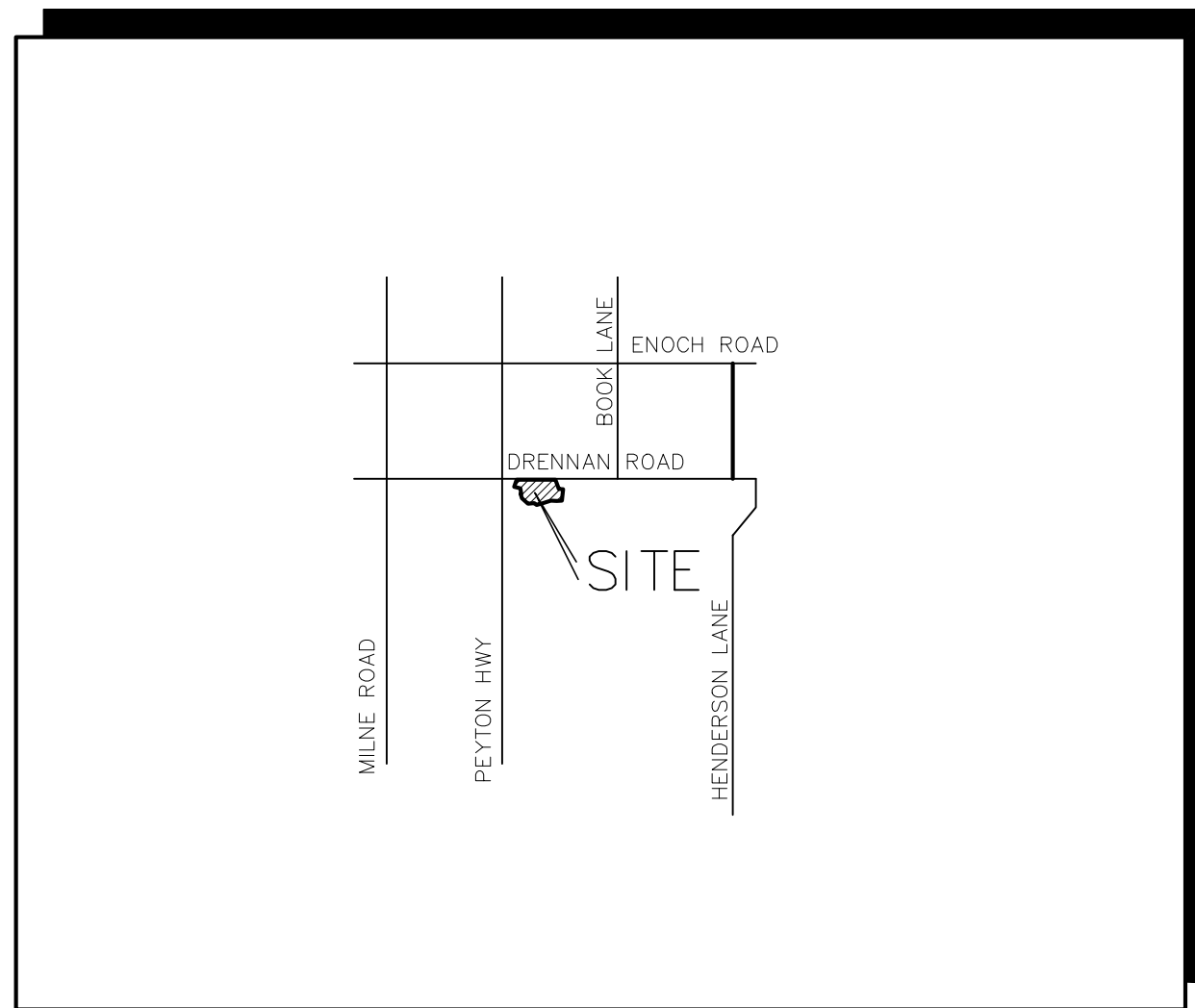


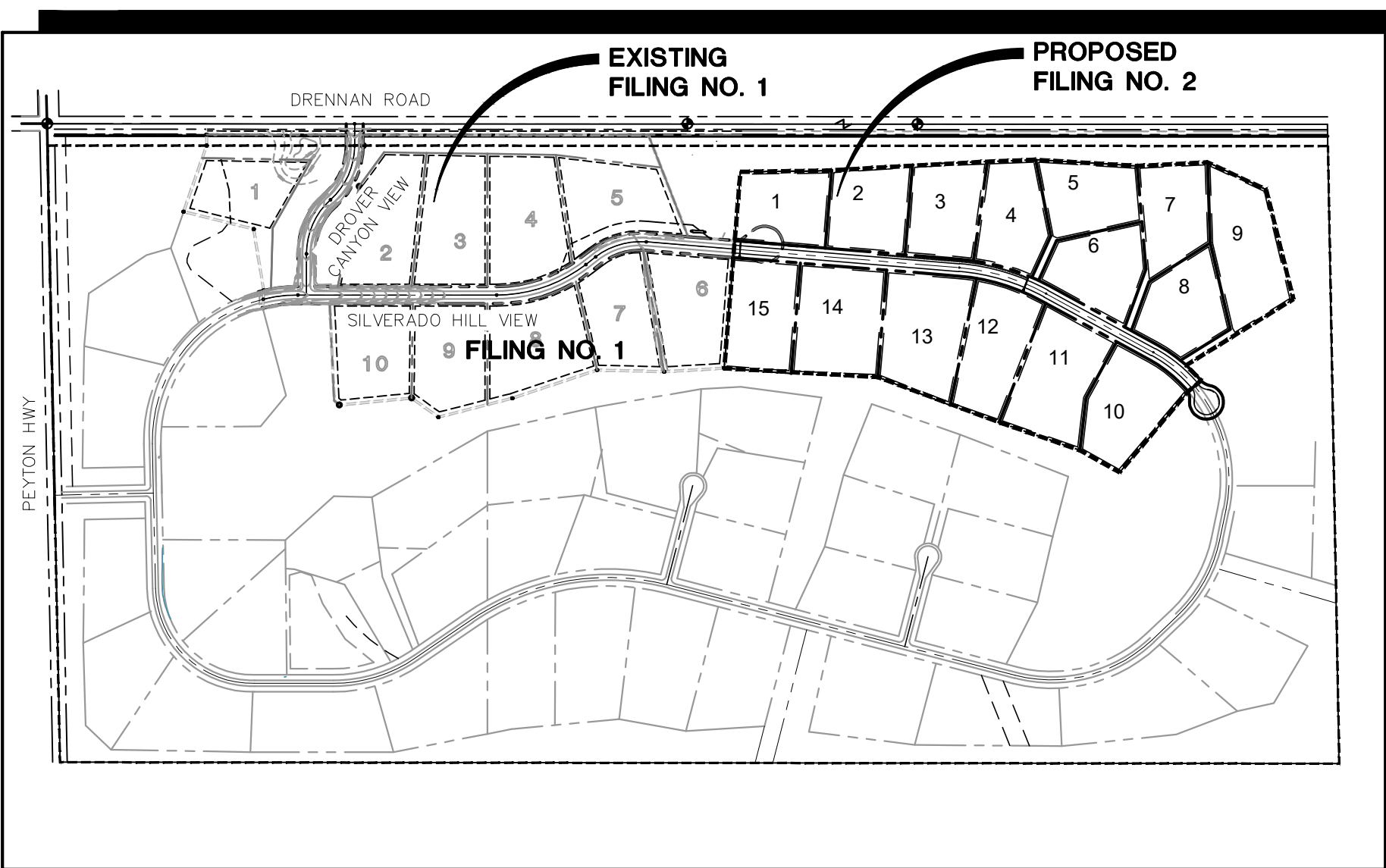
SILVERADO RANCH FILING NO. 2

Grading & Erosion Control Plans

El Paso County, Colorado



VICINITY MAP
NOT TO SCALE



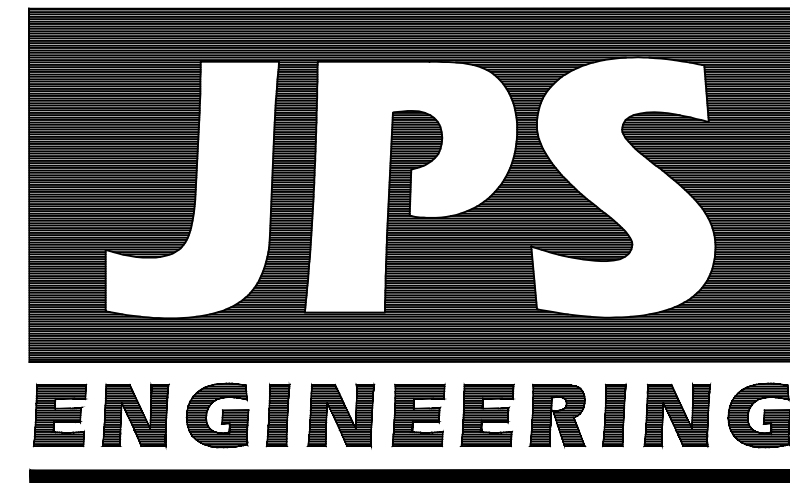
SITE MAP
NOT TO SCALE

Please update the GEC plan to match the FDR whenever changes are made to the FDR. This comment stays unresolved until no changes being made on the drainage report.

PREPARED FOR:

SILVERADO RANCH, INC.
18911 Cherry Springs Ranch Drive
Monument, Colorado 80132

PREPARED BY:



19 East Willamette Avenue
Colorado Springs, Colorado 80903
October, 2024

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 LIABILITY CAUSED BY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATING THIS PLAN.

JOHN P. SCHWAB, P.E. #29891 _____ DATE _____

OWNER / DEVELOPER'S STATEMENT:

I, THE OWNER / DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

SILVERADO RANCH, INC. _____ DATE _____
18911 CHERRY SPRINGS RANCH DRIVE
MONUMENT, COLORADO 80132

EL PASO COUNTY:

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

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPEMENT DIRECTORS DISCRETION.

JOSHUA PALMER, P.E. _____ DATE _____
COUNTY ENGINEER / ECM ADMINISTRATOR

SHEET INDEX

CO.1	GEC TITLE SHEET
TY1	TYPICAL SECTIONS & DETAILS
C1	OVERALL SITE PLAN
C1.1	GRADING & EROSION CONTROL PLAN
C2.1	EROSION CONTROL NOTES & DETAILS
C2.2	EROSION CONTROL DETAILS

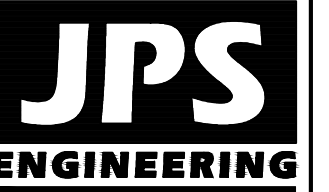
AGENCIES/CONTACTS

DEVELOPER:	SILVERADO RANCH, INC. 18911 CHERRY SPRINGS RANCH DRIVE MONUMENT, CO 80132 MR. STAN SEARLE (719) 481-3735	GAS DEPARTMENT:	BLACK HILLS ENERGY MR. SEBASTIAN SCHWENDER (719) 359-3176
CIVIL ENGINEER:	JPS ENGINEERING, INC. 19 E. WILLAMETTE AVENUE COLORADO SPRINGS, CO 80903 MR. JOHN P. SCHWAB, P.E. (719) 477-9429	ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC ASSOCIATION 11140 E. WOODMEN ROAD COLORADO SPRINGS, CO 80908 MR. DAVE WALDNER (719) 495-2283
LOCAL ROADS & DRAINAGE:	EL PASO COUNTY PCO 2880 INTERNATIONAL CIRCLE COLORADO SPRINGS, CO 80910 (719) 520-7877	TELEPHONE COMPANY:	QWEST COMMUNICATIONS (LOCATORS) (800) 922-1987 A.T. & T. (LOCATORS) (719) 635-3674
		FIRE DEPARTMENT:	ELLCOTT FIRE DISTRICT FIRE MARSHAL (719) 683-7323

NOTE: 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 TO BE ACCEPTABLE.

BASIS OF BEARING:
THE BASIS OF BEARING FOR THIS SUBDIVISION IS THE NORTH LINE OF SECTION 16, S89°58'39"E 5277.00' FROM THE NORTHWEST CORNER SECTION 16 TO THE NORTHEAST CORNER OF SECTION 16.

◆ **BENCHMARK:**
USGS BRASS CAP 11 AJK 5752
LOCATED IN THE N.W. CORNER OF
THE INTERSECTION OF ELLICOTT
HIGHWAY AND DRENNAN ROAD
ELEV = 5755.00-NAVD 88



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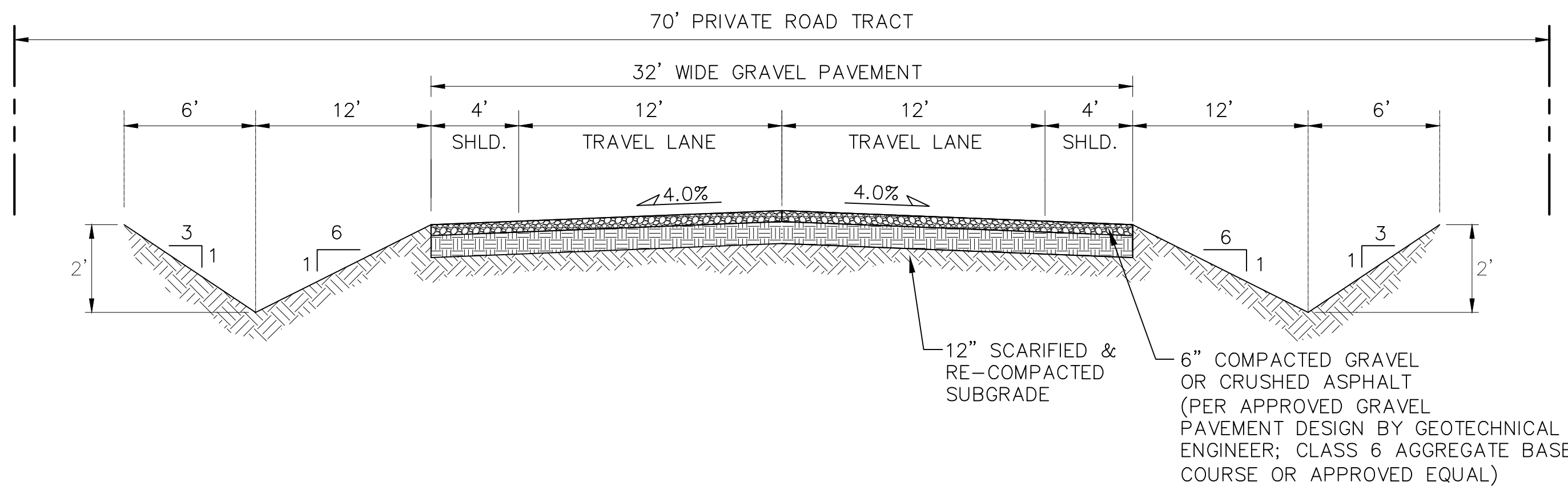
SILVERADO RANCH FILING NO. 2

GEC TITLE SHEET

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VERT. SCALE:	NA	DESIGNED:	JPS
SURVEYED:	LWA	CHECKED:	JPS
CREATED:	9/21/22	LAST MODIFIED:	10/04/24
PROJECT NO:	080603	MODIFIED BY:	PV

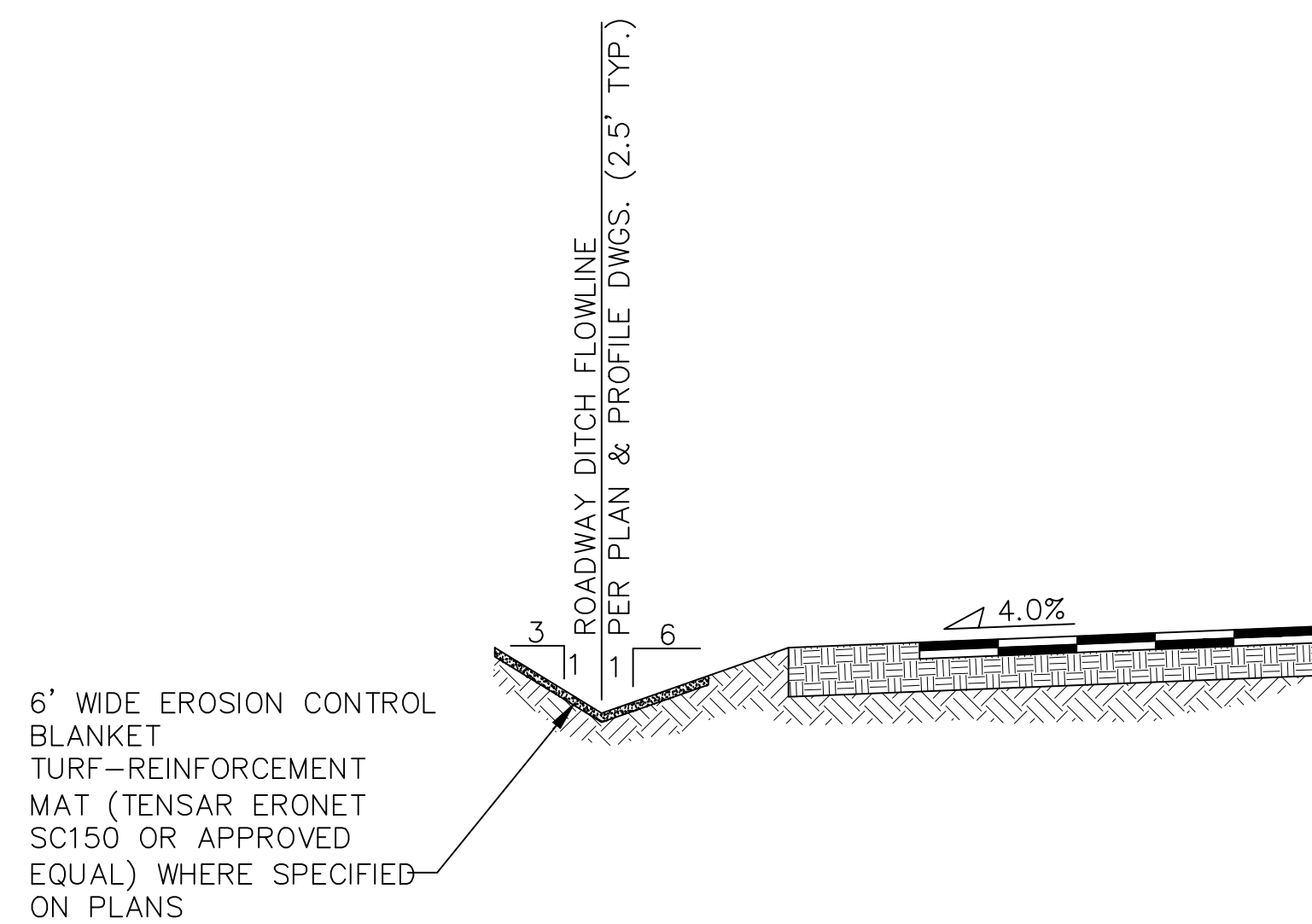
PCD FILE NO. SF-246

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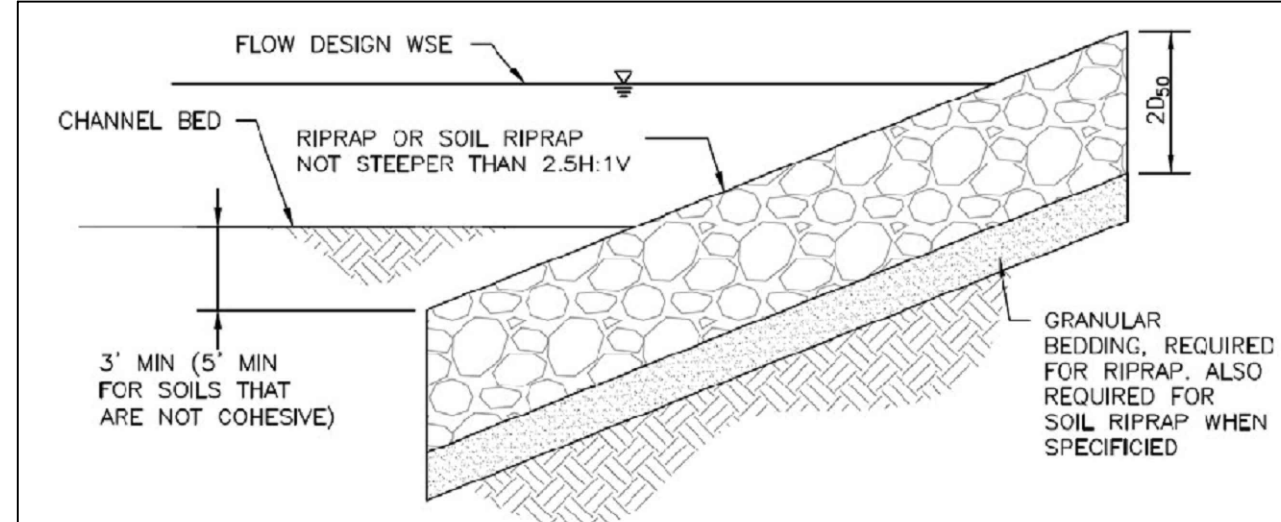
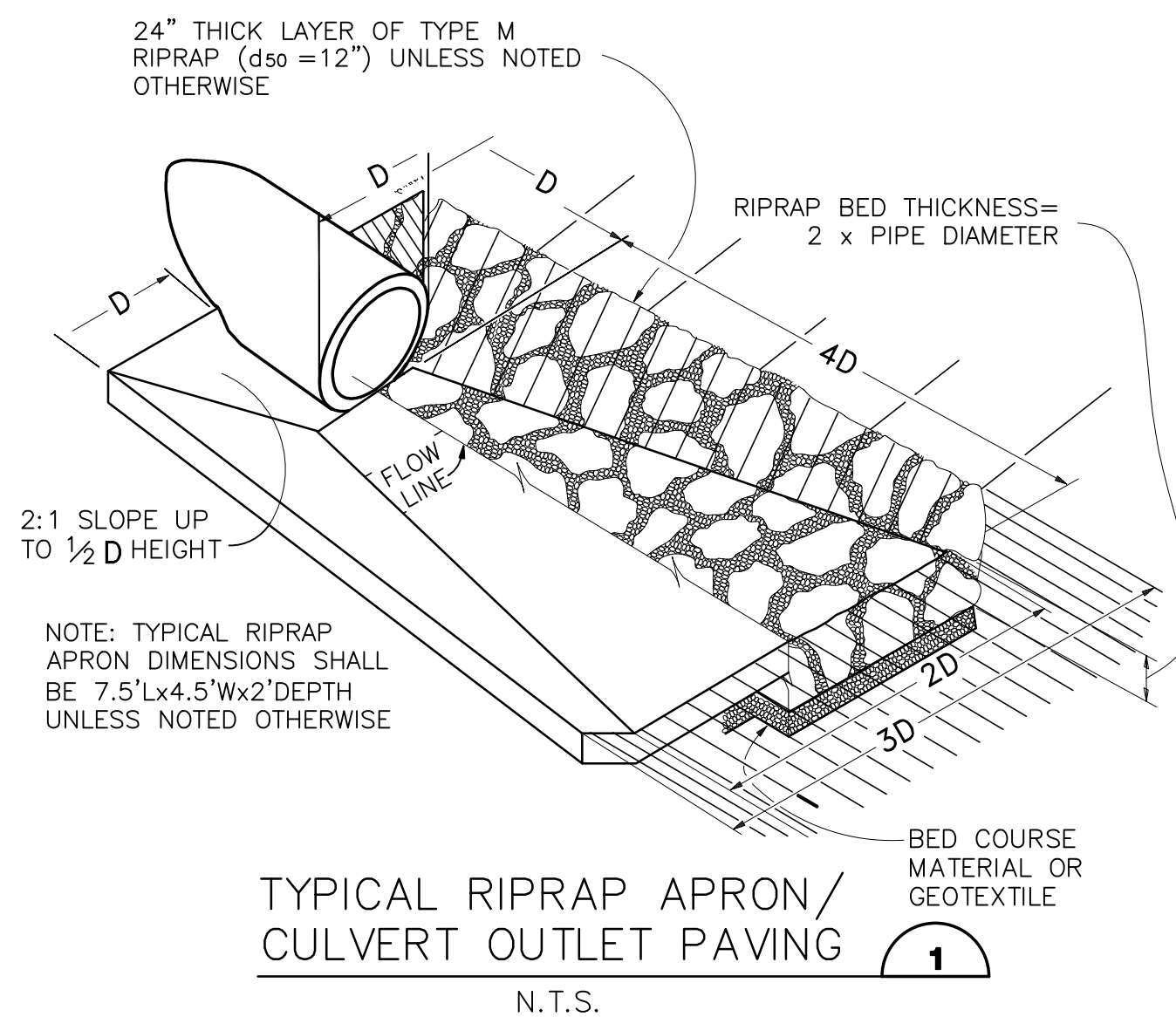
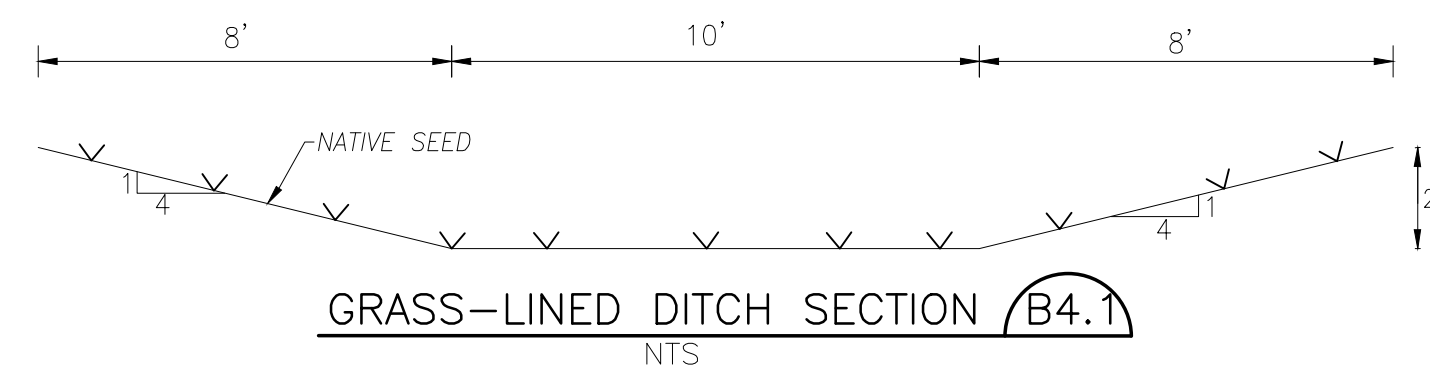
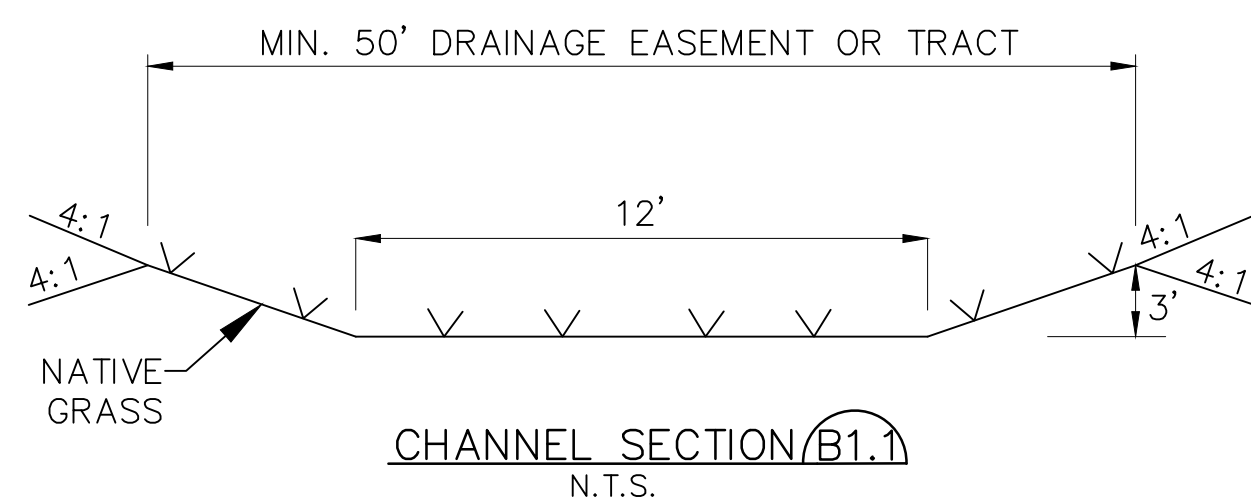
TYPICAL RURAL GRAVEL LOCAL ROADWAY SECTION (PRIVATE) (A)

SCALE: 1"=5'H
1"=2.5'V



TYPICAL DITCH SECTION WITH EROSION CONTROL BLANKET LINING (B)

SCALE: NTS



RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	NTRMFD/ATF ROCK DIMENSION (IN. ES)	D_{50} * (INCHES)
TYPE VL	70 - 100	12	6
	50 - 70	9	
	35 - 50 2 - 10	6 2	
TYPE L	70 - 100	15	9
	50 - 70	12	
	35 - 50 2 - 10	9 3	
TYPE M	70 - 100	21	12
	50 - 70	18	
	35 - 50 2 - 10	12 4	
TYPE H	70 - 100	30	18
	50 - 70	24	
	35 - 50 2 - 10	18 6	

* D_{50} = MEAN ROCK SIZE

Figure 8-34. Riprap and soil riprap placement and gradation (part 1 of 3)

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 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	GRADATION FOR GRANULAR BEDDING	
	PERCENT PASSING BY WEIGHT	
	TYPE I CDOT SECT. 703.01	TYPE II CDOT SECT. 703.09 CLASS A
3 INCHES	-	90 - 100
1 1/2 INCHES	-	-
3/4 INCHES	-	20 - 90
3/8 INCHES	100	-
#4	95 - 100	0 - 20
#16	45 - 80	-
#50	10 - 30	-
#100	2 - 10	-
#200	0 - 2	0 - 3

RIPRAP BEDDING

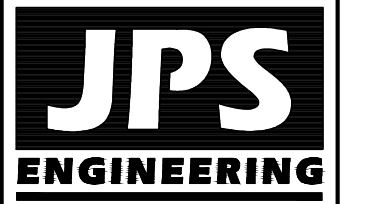
RIPRAP DESIGNATION	THICKNESS REQUIREMENTS FOR GRANULAR BEDDING		
	MINIMUM BEDDING THICKNESS (INCHES)		
	FINE-GRAINED SOILS ¹		COARSE-GRAINED SOILS ²
	TYPE I (LOWER LAYER)	TYPE II (UPPER LAYER)	TYPE II
VL ($D_{50} = 6$ IN)	4	4	6
L ($D_{50} = 9$ IN)	4	4	6
M ($D_{50} = 12$ IN)	4	4	6
H ($D_{50} = 18$ IN)	4	6	8
VH ($D_{50} = 24$ IN)	4	6	8

- NOTES:
- 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.
 - FIFTY PERCENT OR MORE BY WEIGHT RETAINED ON THE #40 SIEVE.

Figure 8-34. Riprap and soil riprap placement and gradation (part 3 of 3)

RIPRAP DETAILS (D)

REFER TO GENERAL NOTES ON CD SH. G2



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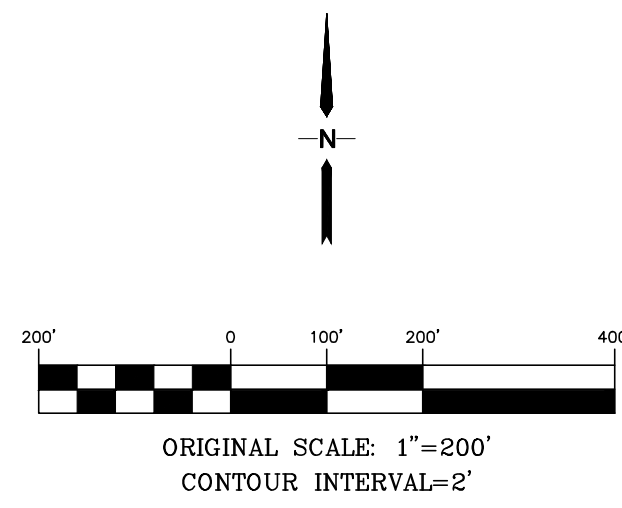
CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE HAZARDOUS UTILITIES.

SILVERADO RANCH FILING NO. 2

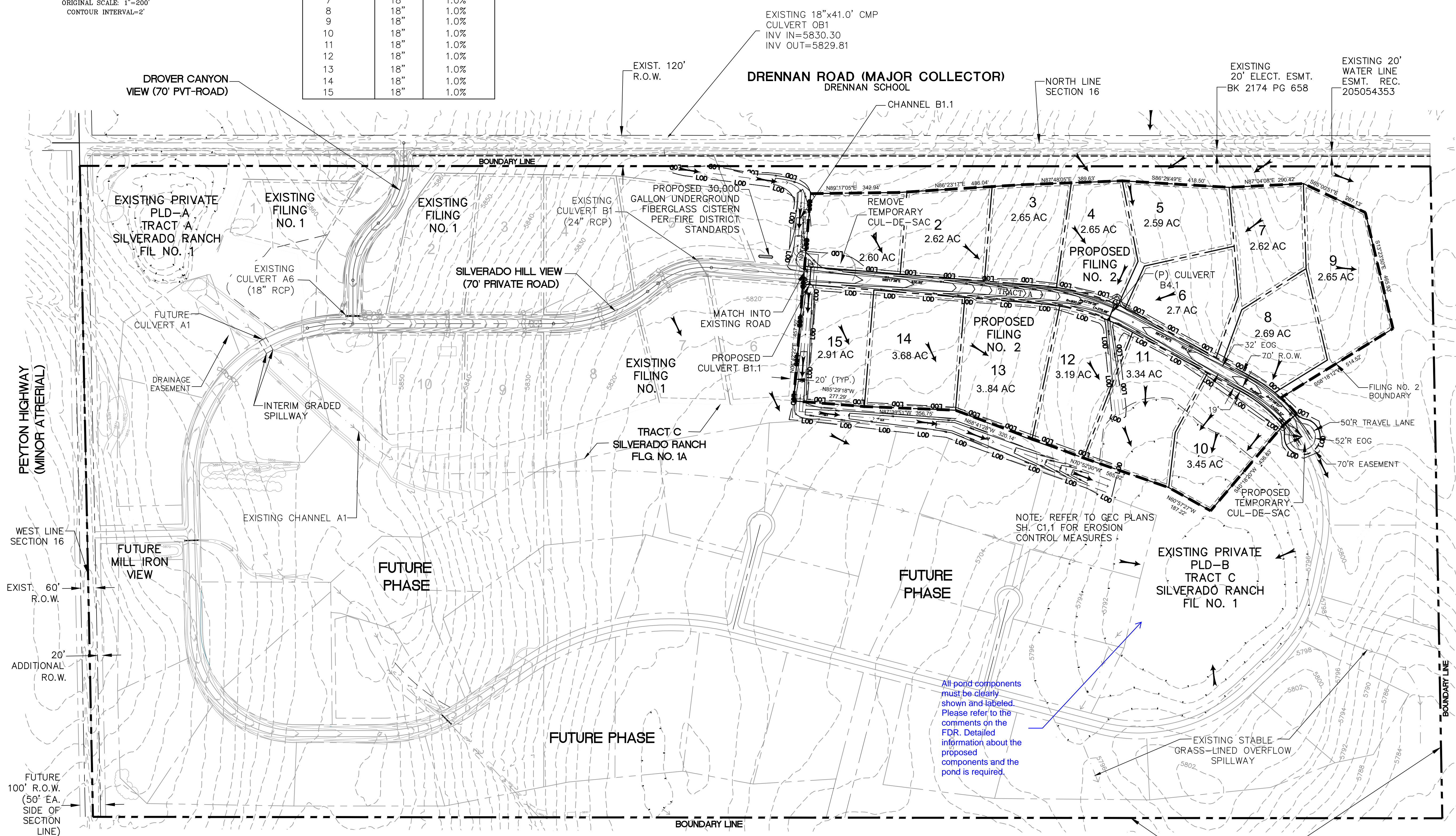
TYPICAL SECTIONS AND DETAILS

HORIZ. SCALE: AS SHOWN	DRAWN: PV
VERT. SCALE: AS SHOWN	DESIGNED: JPS
SURVEYED: LWA	CHECKED: JPS
CREATED: 9/16/20	LAST MODIFIED: 05/28/24
PROJECT NO: 180603	MODIFIED BY: PV

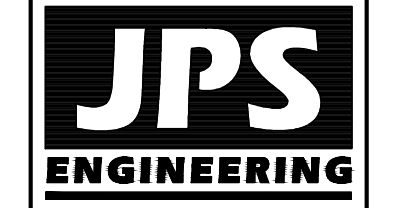
SHEET: TY1



DRIVEWAY CULVERT TABLE		
LOT NO.	SIZE (DIA.)	MIN. SLOPE
1	18"	1.0%
2	18"	1.0%
3	18"	1.0%
4	18"	1.0%
5	18"	1.0%
6	18"	1.0%
7	18"	1.0%
8	18"	1.0%
9	18"	1.0%
10	18"	1.0%
11	18"	1.0%
12	18"	1.0%
13	18"	1.0%
14	18"	1.0%
15	18"	1.0%



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CALL UTILITY NOTIFICATION CENTER OF COLORADO
 1-800-922-1987
 CALL 2-BUSINESS DAYS IN ADVANCE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

No.	REVISION	DATE	BY
A	FINAL PLAT SUBMITTAL	02/01/24	JPS
B	EPC COMMENTS	06/10/24	JPS
C	EPC COMMENTS	08/22/24	JPS

OVERALL SITE PLAN

HORIZ. SCALE: 1"=200'	DRAWN: MSP
VERT. SCALE: N/A	DESIGNED: JPS
SURVEYED: LWA	CHECKED: JPS
CREATED: 9/21/22	LAST MODIFIED: 08/22/24
PROJECT NO: 080603	MODIFIED BY: PV
SHEET:	

PCD File No. SF 246

01

All pond components must be clearly shown and labeled. Please refer to the comments on the FDR. Detailed information about the proposed components and the pond is required.

NOTE: REFER TO GEC PLANS SH. C1.1 FOR EROSION CONTROL MEASURES

CONTROL MEASURE LEGEND:

- 6490 EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED SPOT ELEVATION (FLOWLINE)
- VTC VEHICLE TRACKING CONTROL PAD
- SM SEED AND MULCH
- SSA STABILIZED STAGING AREA
- RCD ROCK CHECK DAM
- PLD POROUS LANDSCAPE DETENTION
- RR RIPRAP APRON
- ECB EROSION CONTROL BLANKETS (REFER TO P&P SHEETS)
- LOD LIMITS OF DISTURBANCE/ LIMIT OF CONSTRUCTION
- CIP CULVERT INLET PROTECTION
- SCL SEDIMENT CONTROL LOGS
- ST SEDIMENT TRAP

ESTIMATED EARTHWORK QUANTITY:

UNCLASSIFIED EXCAVATION (TOTAL CUT) = 18,005 CY
 * EMBANKMENT FILL = 6,593 CY
 NET (CUT) = 10,423 CY
 *(ASSUMES 15% COMPACTION FACTOR)

NOTE: THIS ESTIMATE IS PROVIDED FOR INFORMATION ONLY, REPRESENTING THE CALCULATED BULK EARTHWORK VOLUME NOT INCLUDING ANY ADJUSTMENTS FOR PAVEMENT DEPTHS. CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF EARTHWORK QUANTITIES AS BASIS FOR BID PRICING AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

GENERAL DRAINAGE NOTES:

- INDIVIDUAL BUILDERS SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND ACCOUNT FOR POTENTIAL CROSS-LOT DRAINAGE IMPACTS WITHIN EACH LOT.
- BUILDERS AND PROPERTY OWNERS SHALL IMPLEMENT & MAINTAIN EROSION CONTROL BEST MANAGEMENT PRACTICES FOR PROTECTION OF DOWNSTREAM PROPERTIES AND FACILITIES INCLUDING PROTECTION OF EXISTING GRASS BUFFER STRIPS ALONG THE DOWNSTREAM PROPERTY BOUNDARIES.

GENERAL GEC NOTE: ALL AREAS TO BE VEGETATED WITH SEEDING SHOULD ALSO BE TEMPORARILY STABILIZED VIA SURFACE ROUGHENING OR SOME OTHER MEANS.

KEYED NOTES:

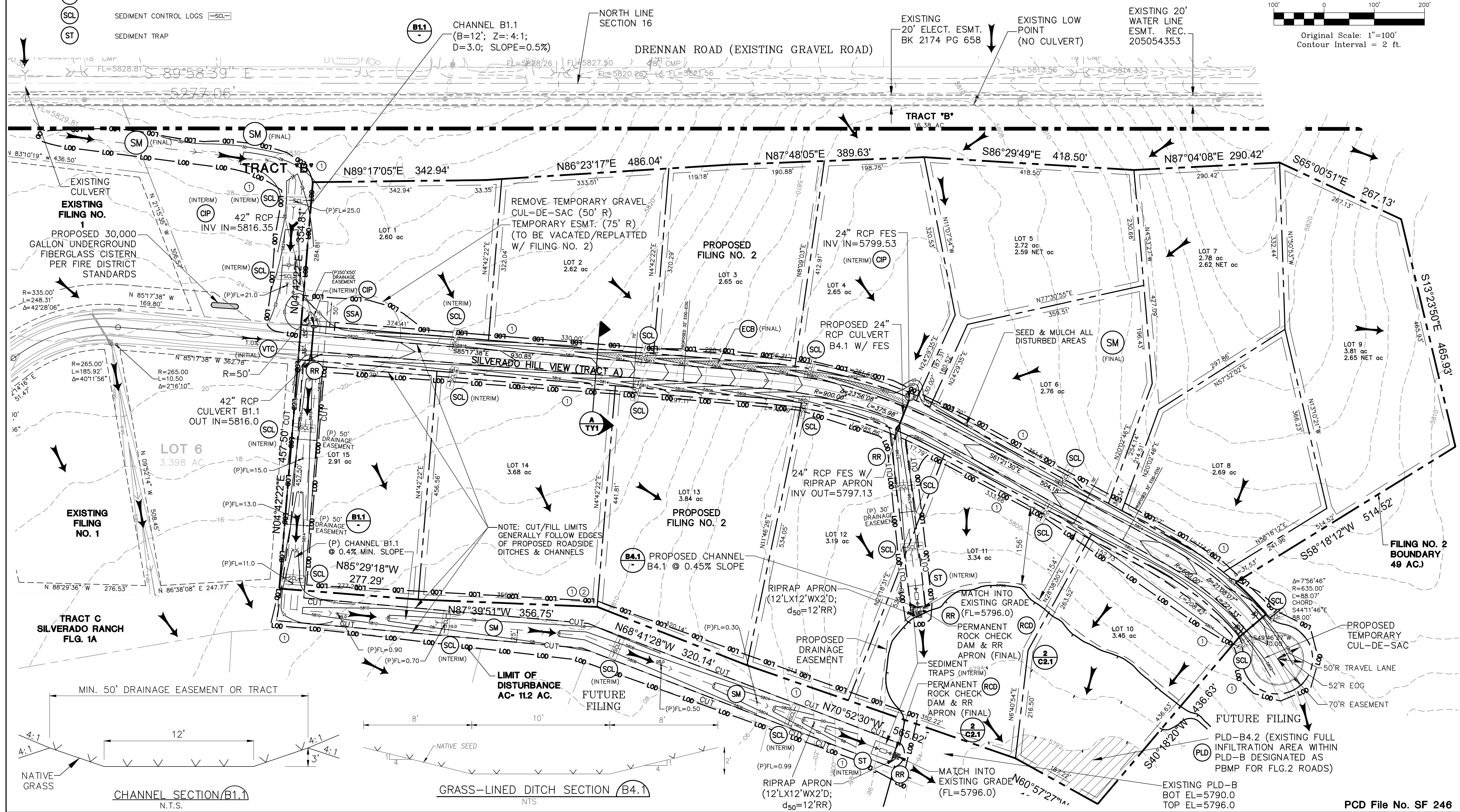
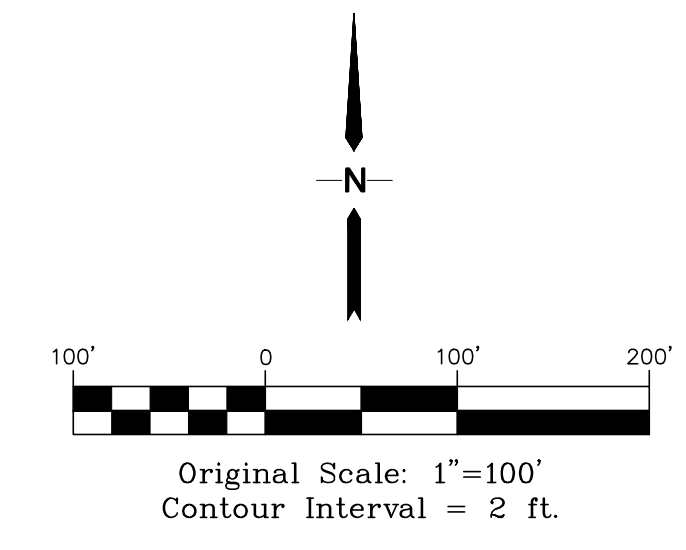
- CONTRACTOR MAY WASTE EXCESS CUT MATERIAL OR BORROW SUITABLE FILL MATERIAL FROM THIS AREA. MATCH INTO EXISTING GRADES WITH 3:1 MAX CUT AND FILL SLOPES AND MAINTAIN POSITIVE DRAINAGE IN ALL AREAS.
- TOPSOIL STOCKPILE AREA

CONTROL MEASURE NOTES:

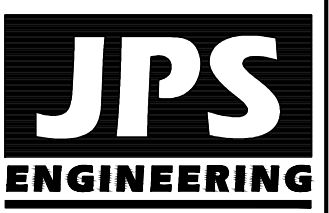
- EXISTING VEGETATION CONSISTS OF NATIVE GRASSES
- NO DEDICATED ASPHALT OR CONCRETE BATCH PLANTS ARE PLANNED ON SITE
- CONTRACTOR SHALL UPDATE AND ANNOTATE THE SWMP MAPS TO SHOW THE LOCATION OF THE CONSTRUCTION TRAILER, STABILIZED STAGING AREA, CWA AND OTHER ITEMS AS THESE LOCATIONS ARE DETERMINED ON SITE.

CONTROL MEASURE (CM) PHASING

- INITIAL CM'S
 - INSTALL VTC
 - SSA
- INTERIM CM'S
 - SCL
 - CIP
- FINAL CM'S
 - RIPRAP APRONS
 - SEEDING
 - ECB
 - RCD



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 CALL 3-BUSINESS DAYS IN ADVANCE
 BEFORE YOU DIG, GRADE, OR EXCAVATE
 FOR THE MARKING OF UNDERGROUND
 MEMBER UTILITIES.

NO.	REVISION	DATE	BY
1	FINAL PLAT SUBMITTAL	02/01/24	JPS
2	EPC COMMENTS	06/10/24	JPS
3	EPC COMMENTS	10/04/24	JPS

GRADING AND EROSION CONTROL PLAN

HORIZ. SCALE: 1"=100'	DRAWN: MSP
VERT. SCALE: AS SHOWN	DESIGNED: JPS
SURVEYED: LWA	CHECKED: JPS
CREATED: 9/25/22	LAST MODIFIED: 10/04/24
PROJECT NO: 080603	MODIFIED BY: PV
SHEET:	

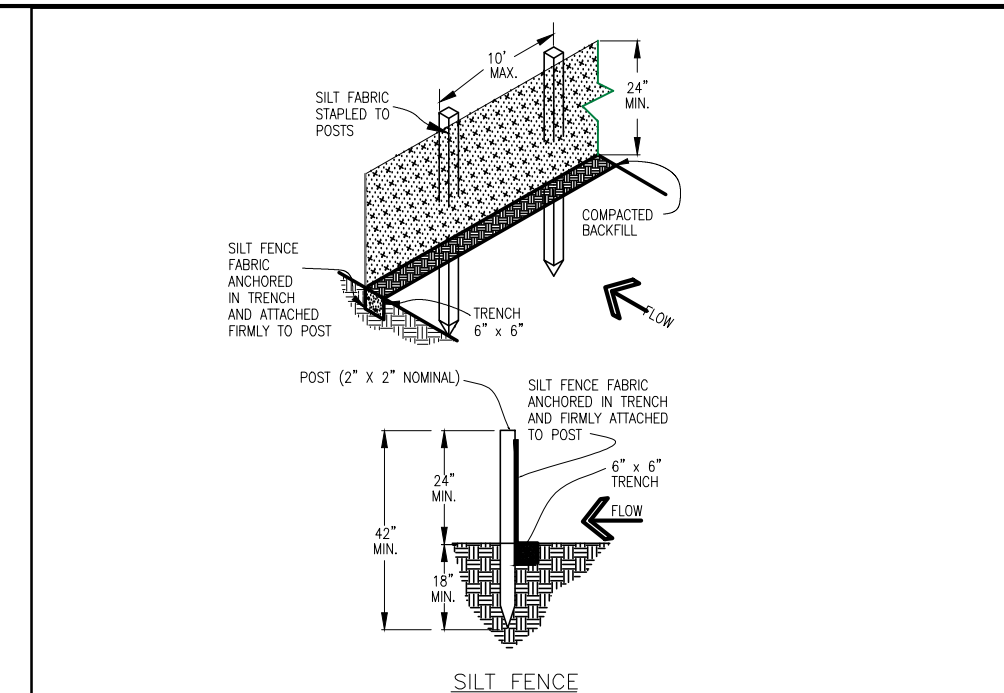
C1.1

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS.

- REVISED 7/02/19
- 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.
 - 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.
 - A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) 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 FIELD.
 - 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.
 - 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.
 - 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.
 - 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.
 - 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.
 - 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.
 - 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).
 - 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.
 - 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.
 - 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.
 - EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
 - 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.
 - 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.
 - TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
 - 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.
 - 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.
 - 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.
 - 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.
 - NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
 - 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.
 - ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
 - PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
 - 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.
 - THE SOILS REPORT FOR THIS SITE SHALL BE CONSIDERED A PART OF THESE PLANS. ("PRELIMINARY GEOLOGY AND SURFACE SOILS EVALUATION AND SEWAGE DISPOSAL EVALUATION," FRONT RANGE GEOTECHNICAL INC, OCTOBER 5, 2006)
 - AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR 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 (SMWP), 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

NOTE:
 NOTWITHSTANDING ANY DETAILS, NOTES OR PLANS SHOWN ON THESE DRAWINGS, ALL EROSION CONTROL DESIGNS AND INSTALLATIONS SHALL CONFORM TO EL PASO COUNTY STANDARDS AND POLICIES UNLESS OTHERWISE APPROVED IN WRITING.



SILT FENCE NOTES

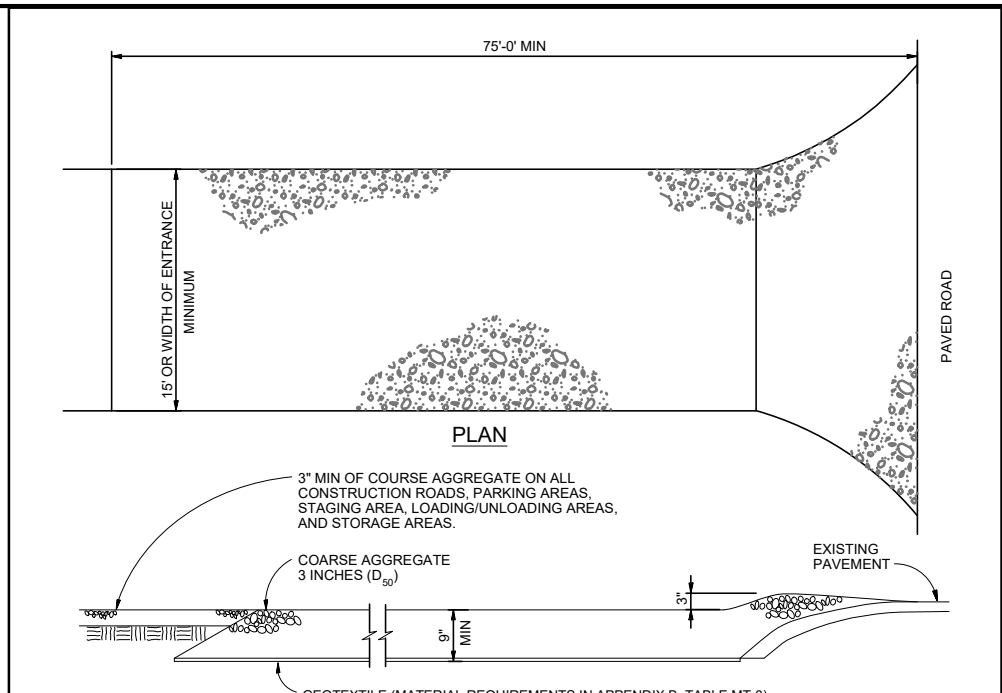
INSTALLATION REQUIREMENTS

- SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SEWED TOGETHER ONLY AT SUPPORT POSTS AND SECURELY SEALED.
- METAL POSTS SHALL BE "ROUND BIT" OR "Y" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
- IF NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSIDE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 3/4" LONG. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 3" ABOVE THE ORIGINAL GROUND SURFACE.
- ALONG THE TOP OF FILL, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POOL AND SEDIMENT TO SETTLE. A MINIMUM DISTANCE OF 5 FEET FROM THE TOP OF THE FILL IS RECOMMENDED.
- THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 36 INCHES. HIGHER FENCES MAY INFLUENCE VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

MAINTENANCE REQUIREMENTS

- CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATES TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
- SEDIMENT SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality Figure SF-2 Silt Fence Construction Detail and Maintenance Requirements



VEHICLE TRACKING NOTES

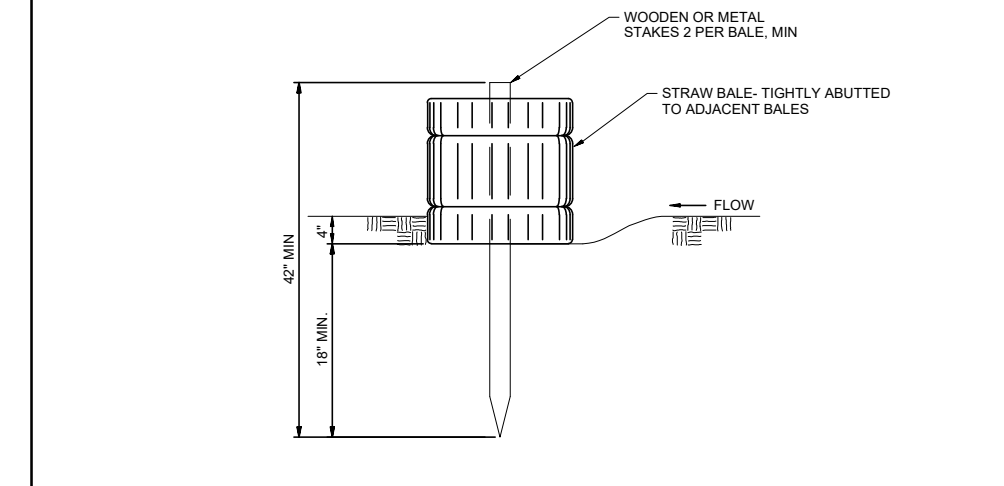
INSTALLATION REQUIREMENTS

- ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION.
- CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLOTTED OVERLAP.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
- CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE BUILT TO CONFORM TO SITE GRADATIONS, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADATIONS THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- STONES ARE TO BE REPLACED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
- SEDIMENT TRACKED ONTO PAVED SURFACES IS TO BE REMOVED ONLY BY SHOULDER OR OVERLAP. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER GRABES.
- STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
- OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs Stormwater Quality Figure VT-2 Vehicle Tracking Application Examples



STRAW BALE BARRIER NOTES

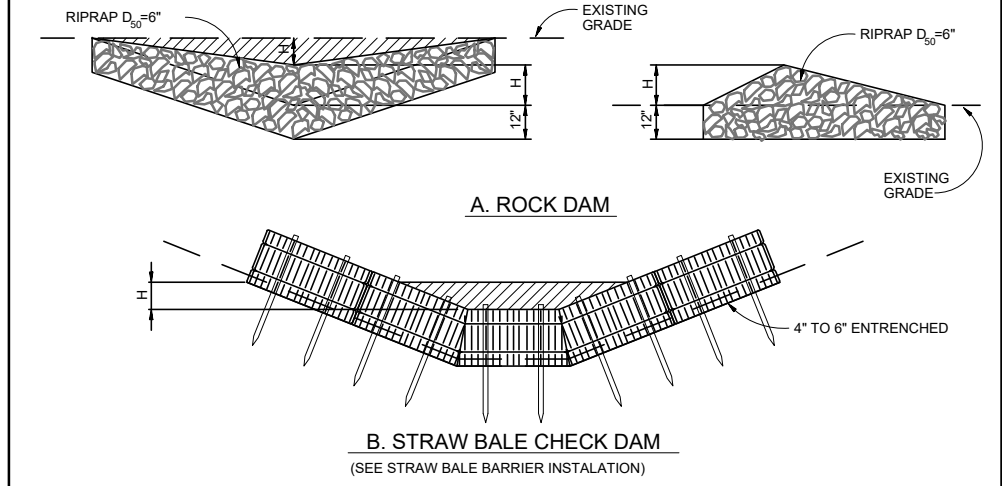
INSTALLATION REQUIREMENTS

- STRAW BALE BARRIERS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF CLEANER HAY FREE FROM STRAW AND MESH NOT LESS THAN 35 POUNDS.
- BALES ARE TO BE PLACED IN A SINGLE ROW WITH THE END OF THE BALES TIGHTLY BUTTING ONE ANOTHER.
- EACH BALE IS TO BE SECURELY ANCHORED WITH AT LEAST TWO STAPLES AND THE FIRST STAPLE IS TO BE OPENED TOWARD THE PREVIOUSLY Laid BALE TO FORCE THE BALES TOGETHER.
- STAPLES ARE TO BE A MINIMUM OF 40 INCHES LONG. METAL STAPLES SHALL BE STANDARD "Y" OR "C" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD STAPLES SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
- BALES ARE TO BE BOUND WITH EITHER WIRE OR STRIP AND ORIENTED SUCH THAT THE BINDING ARE AROUND THE SIDES AND NOT ALONG THE TOPS AND BOTTOMS OF THE BALE.
- GAPS BETWEEN BALES ARE TO BE CLOSED (FILLED BY SEDIMENT) WITH STRAW OR THE SAME MATERIAL OF THE BALE.
- END BALES ARE TO EXTEND UPSTREAM SO THE TRAPPED RUNOFF CANNOT FLOW AROUND THE ENDS OF THE BARRIER.

MAINTENANCE REQUIREMENTS

- CONTRACTOR SHALL INSPECT STRAW BALE BARRIERS IMMEDIATELY AFTER EACH RAINFALL AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL.
- DAMAGED OR INEFFECTIVE BARRIERS SHALL PROMPTLY BE REPAIRED. REPLACED BALES IF NECESSARY, AND UNREINFORCED BALES NEED TO BE REPAIRED WITH COMPACTED BRICKLAYER MATERIAL ONE ANOTHER.
- SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALE BARRIERS IMMEDIATELY AFTER EACH RAINFALL TO APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
- STRAW BALE BARRIERS SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality Figure SBB-2 Straw Bale Barrier Construction Detail and Maintenance Requirements



ROCK DAM NOTES

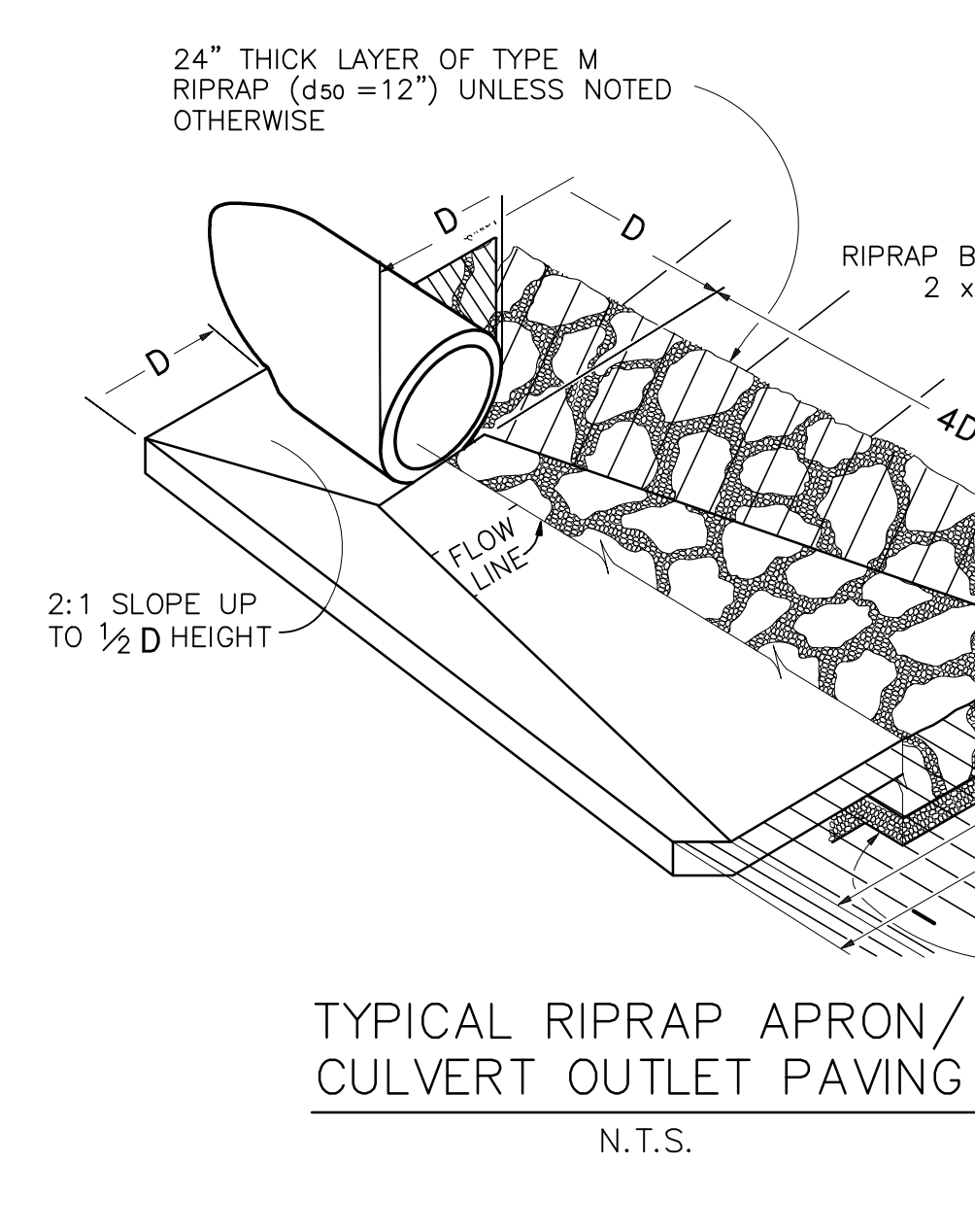
INSTALLATION REQUIREMENTS

- STRAW BALES USED AS CHECK DAMS ARE TO MEET THE REQUIREMENTS STATED IN FIGURE SBB-2.
- THE 1/2" MINIMUM SHALL BE SELECTED TO PROVIDE MINOR FLOW CONVEYANCE FOR 2-YEAR FLOW OR GREATER.

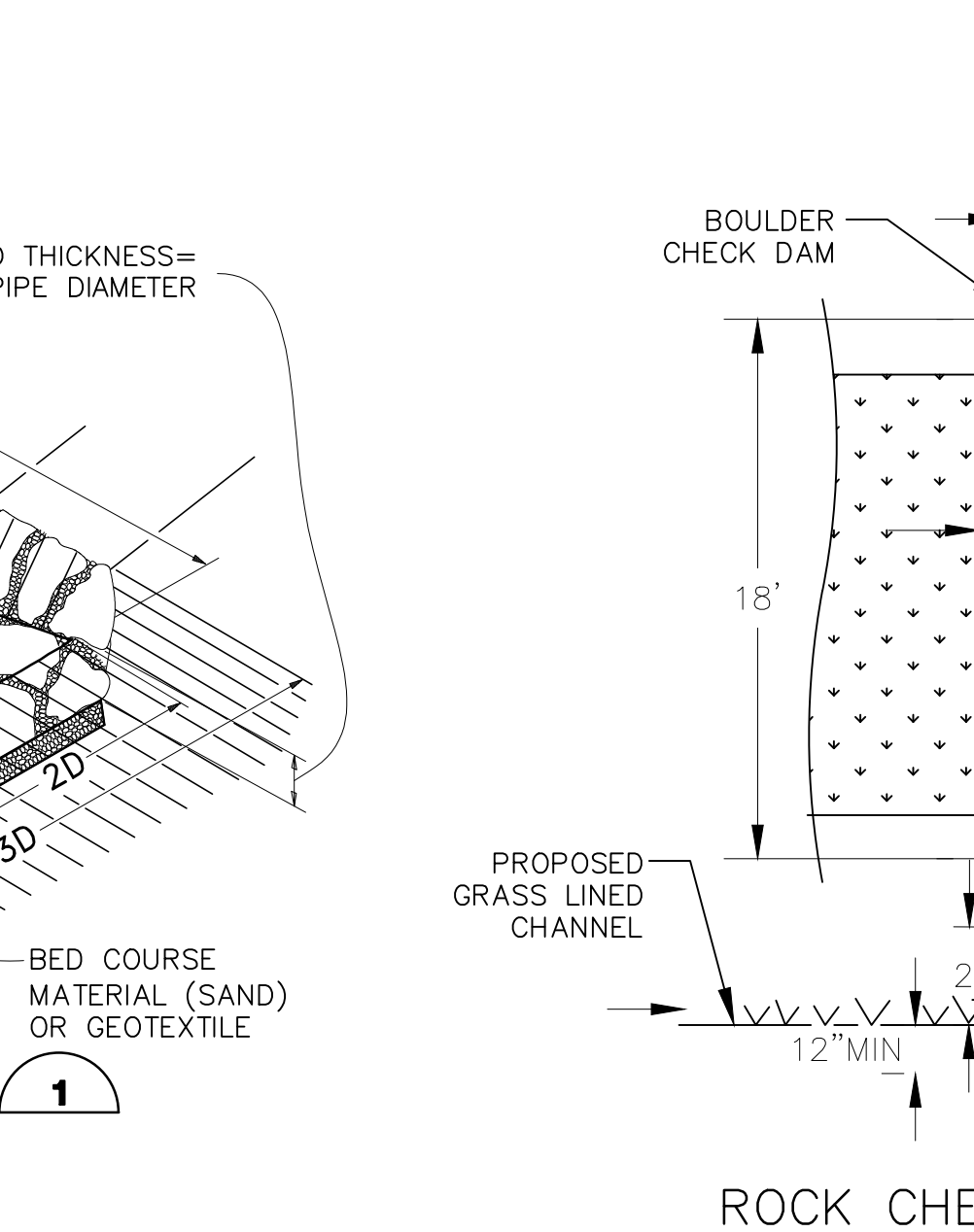
MAINTENANCE REQUIREMENTS

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL CHECK DAMS, ESPECIALLY AFTER STORM EVENTS.
- REPLACE STONE AS NECESSARY TO MAINTAIN THE CORRECT HEIGHT OF THE DAM.
- ACCUMULATED SEDIMENT AND DEBRIS IS TO BE REMOVED FROM BEHIND THE DAMS AFTER EACH LONG OR HEAVY 1/2 OF THE ORIGINAL HEIGHT OF THE DAM IS REACHED.
- CHECK DAMS ARE TO REMAIN IN PLACE AND OPERATIONAL UNTIL THE DRAINAGE AREA AND CHANNEL ARE PERMANENTLY STABILIZED.
- WHEN CHECK DAMS ARE REMOVED THE CHANNEL LINING OR VEGETATION IS TO BE RESTORED.

City of Colorado Springs Stormwater Quality Figure CD-1 Check Dam Construction Detail and Maintenance Requirements



TYPICAL RIPRAP APRON/
 CULVERT OUTLET PAVING
 N.T.S.



ROCK CHECK DAM & RIPRAP APRON DETAIL
 N.T.S.

SEEDING MIX:

GRASS	VARIETY	AMOUNT IN PLS LBS. PER ACRE
CRESTED WHEAT GRASS	EPHRAIM OR HYCREST	4.0 LBS.
PERENNIAL RYE	LINN	2.0 LBS.
WESTERN WHEATGRASS	SARTON	3.0 LBS.
SMOOTH BROME GRASS	LINCOLN OR MANCHAR	5.0 LBS.
SIDEOTS GRAMA	EPHRAIM	2.5 LBS.
TOTAL:		16.5 LBS.

SEEDING & FERTILIZER APPLICATION: DRILL SEED OR HYDRO-SEED PER CDOT SPEC. SECTION 212.

MULCHING APPLICATION: CONFORM TO CDOT SPEC-SECTION 213.

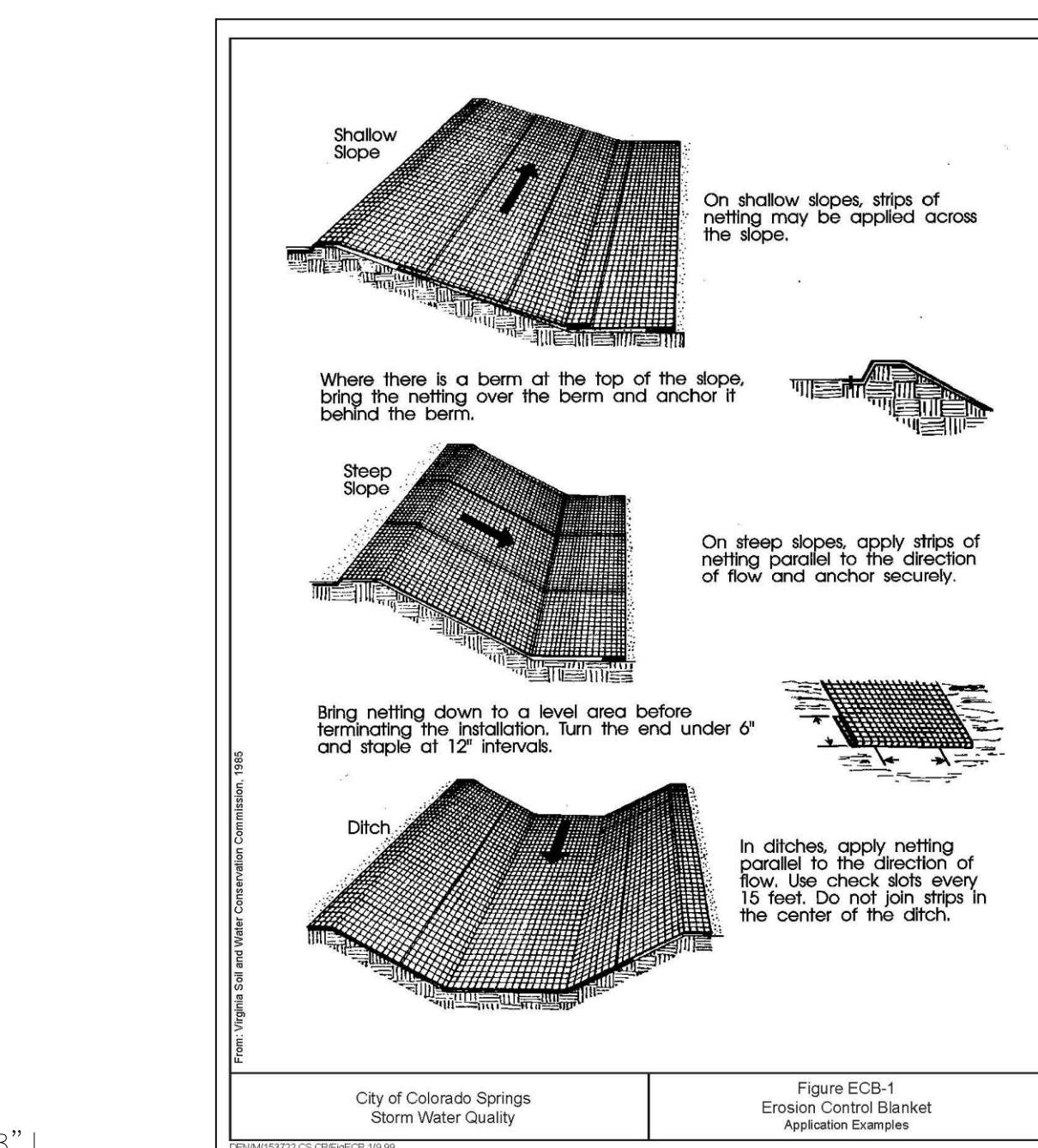
SEDIMENT CONTROL MAINTENANCE PROGRAM:

PERIODIC SITE INSPECTIONS BI-WEEKLY
 RE-VEGETATION OF EXPOSED SOILS WITHIN 21 DAYS OF GRADING
 SEDIMENT REMOVAL FROM BMP'S MONTHLY
 REMOVAL OF BMP'S AFTER STABILIZATION ACHIEVED

1 AND AFTER ANY PRECIPITATION OR SNOW MELT EVENT THAT CAUSES SURFACE EROSION.
 2 ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED WHEN THE SEDIMENT LEVEL REACHES ONE HALF THE HEIGHT OF THE BMP OR AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTION OF THE BMP.

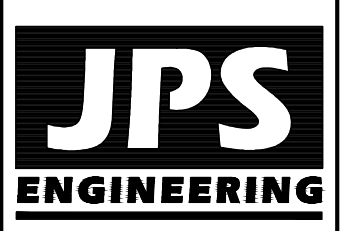
ESTIMATED TIME SCHEDULE:

INSTALL BMP'S	JANUARY 2025
ROADWAY GRADING	JANUARY 2025
SEEDING & MULCHING	AUGUST 2025
STABILIZATION	SEPTEMBER 2026



City of Colorado Springs Stormwater Quality Figure ECB-1 Erosion Control Blanket Application Examples

SILVERADO RANCH FILING NO. 2



19 E. Willamette Ave.
 Colorado Springs, CO
 80903
 PH: 719-477-9429
 FAX: 719-471-0766
 www.jpsengr.com

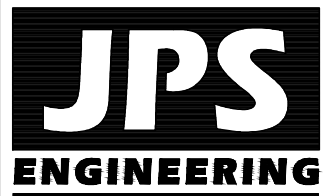
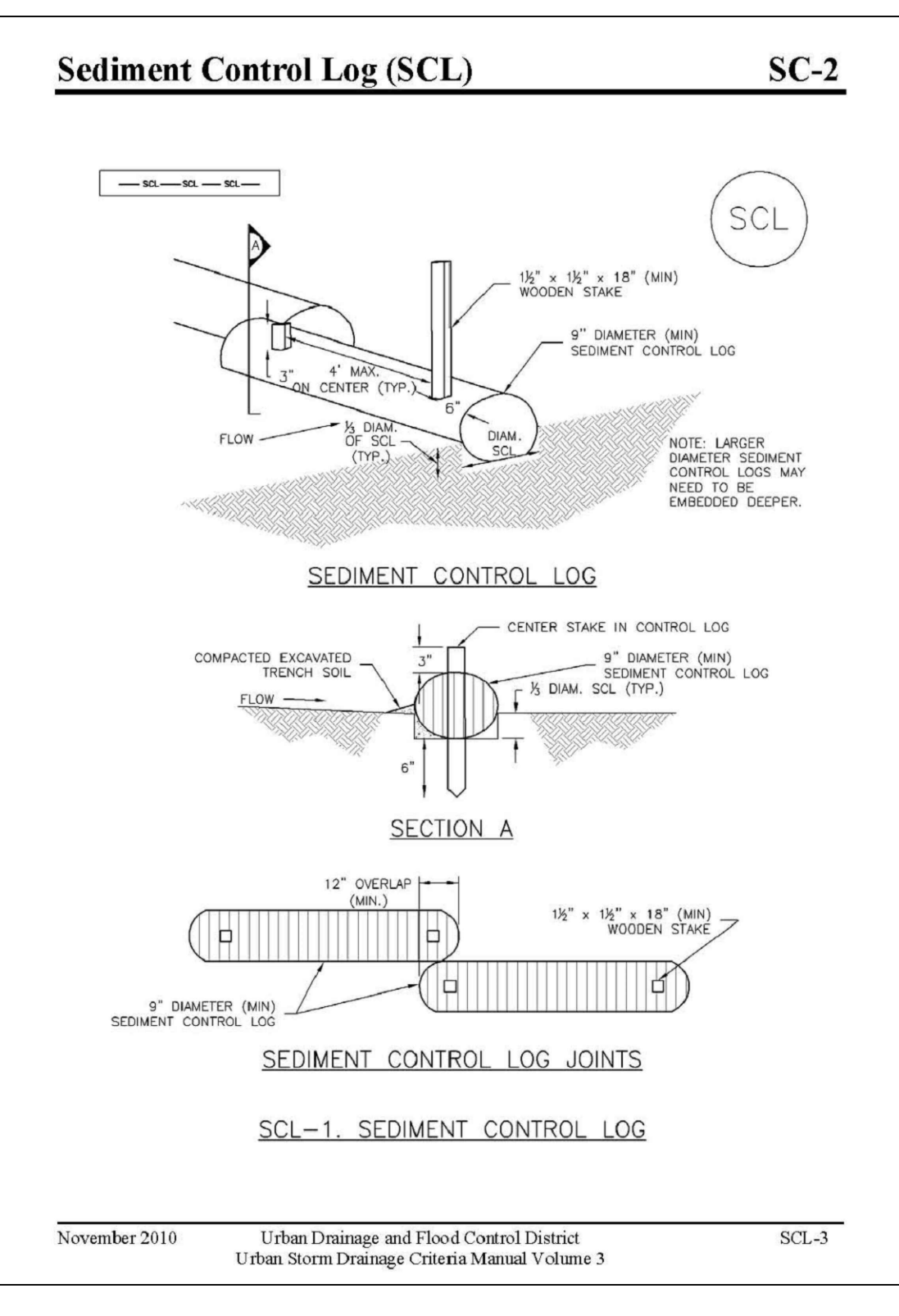
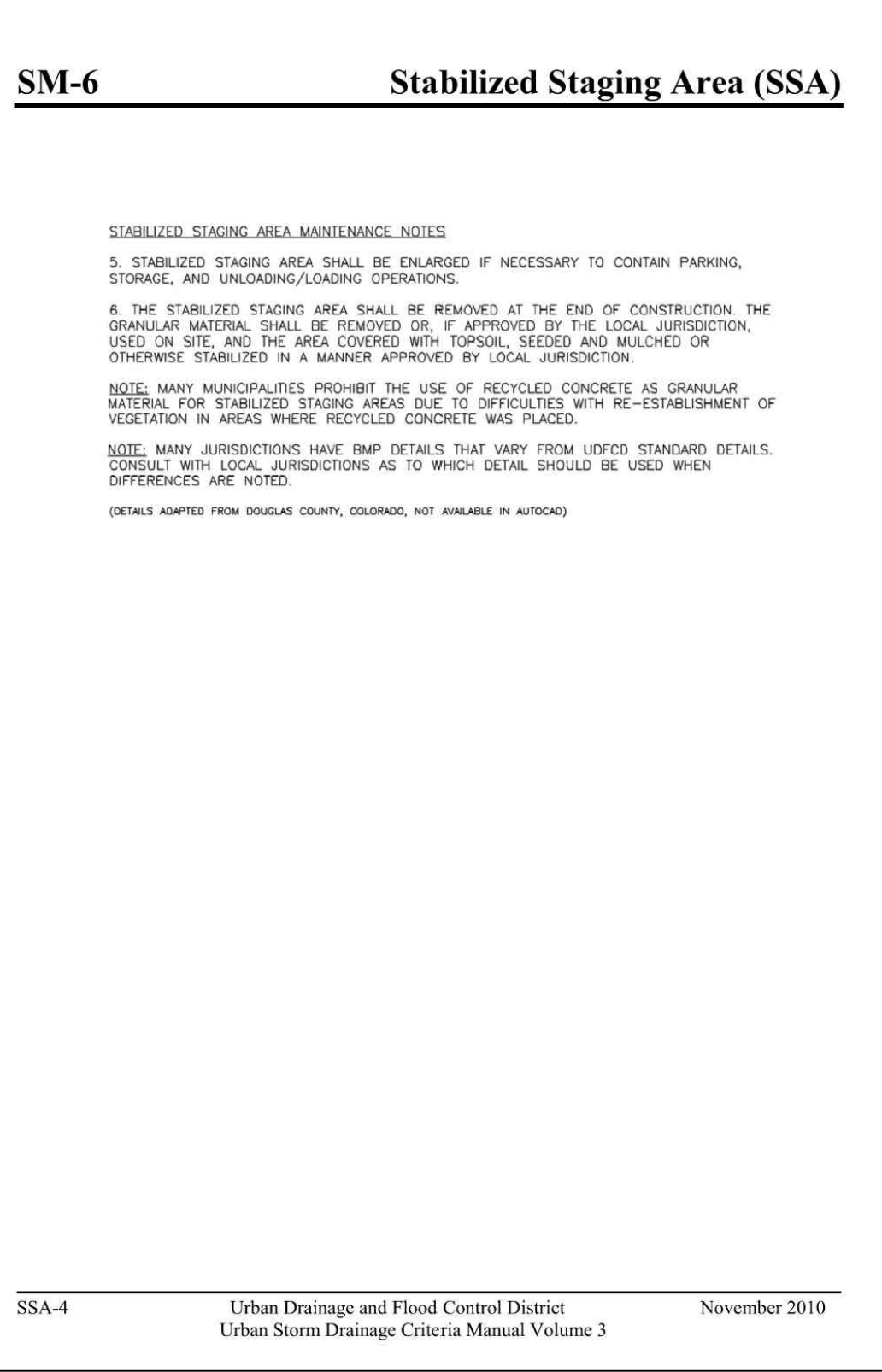
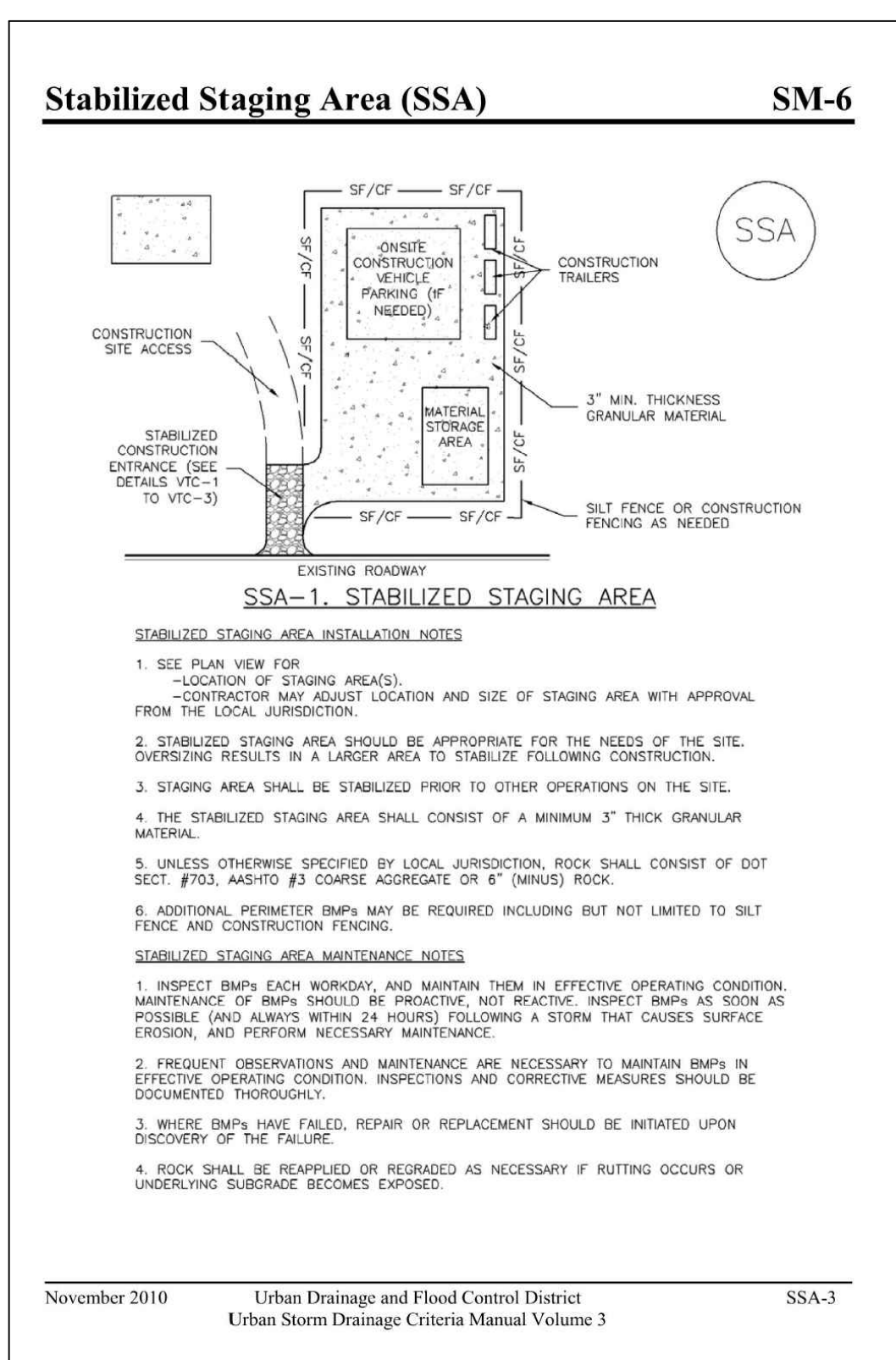
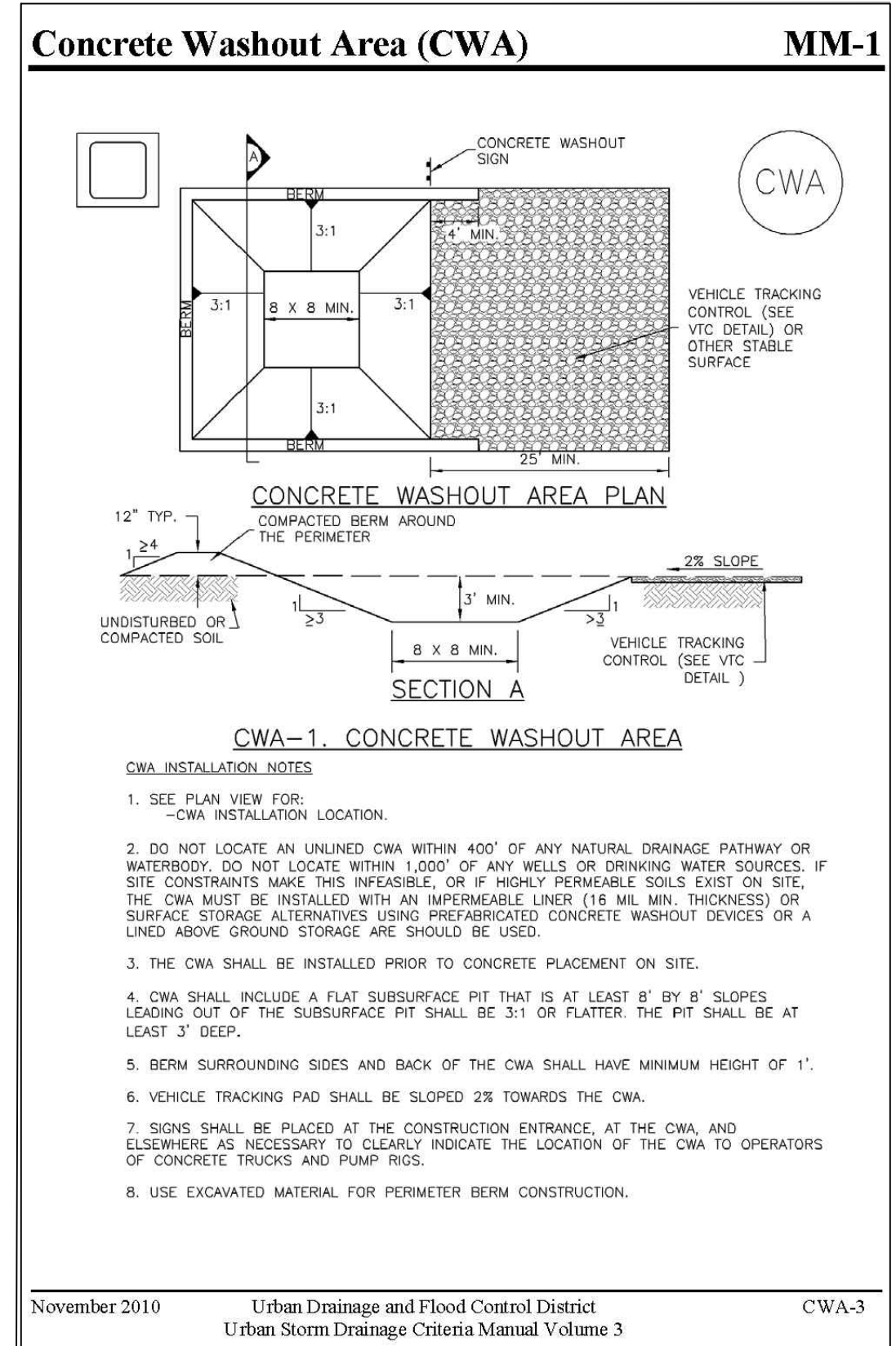
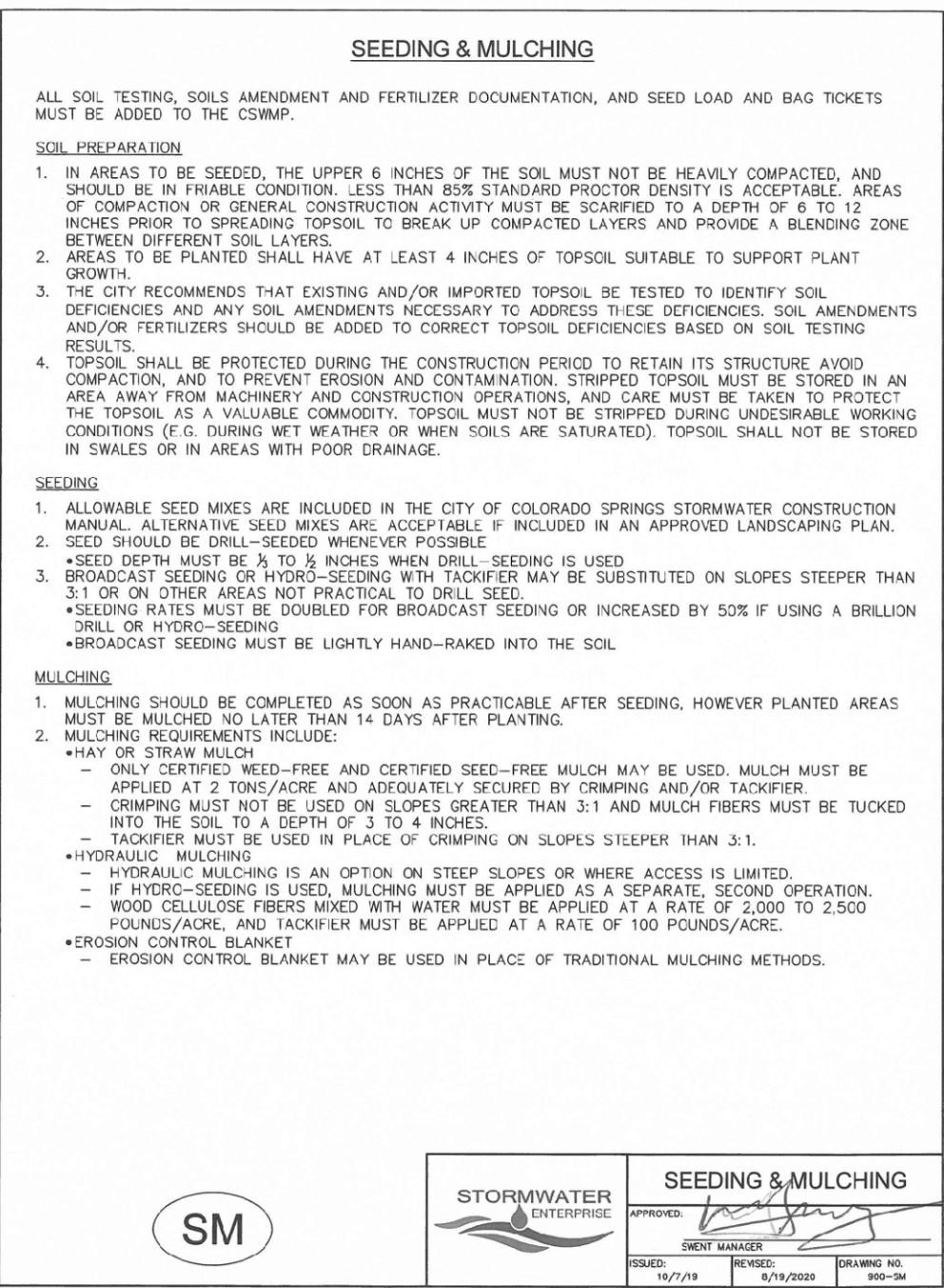
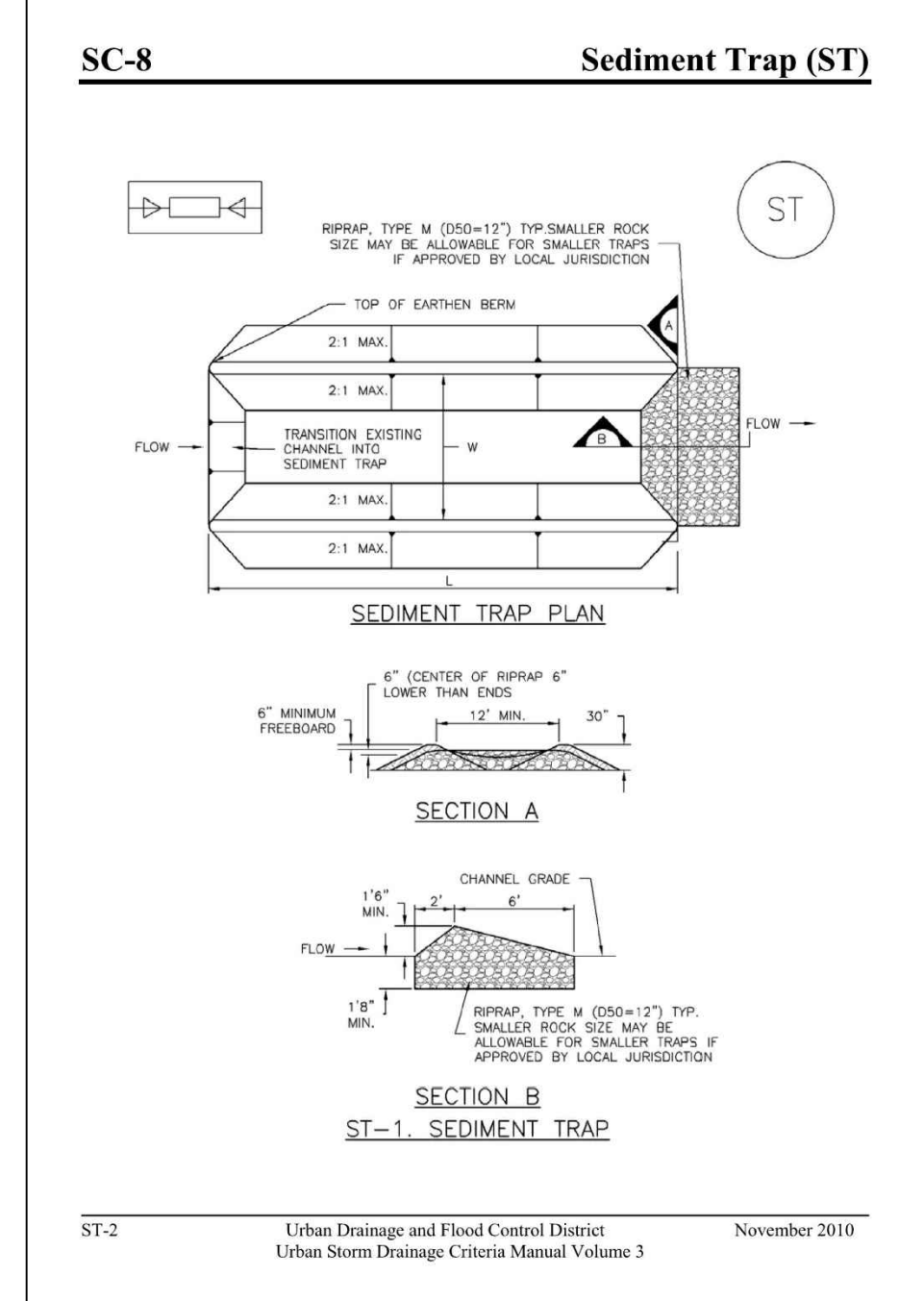
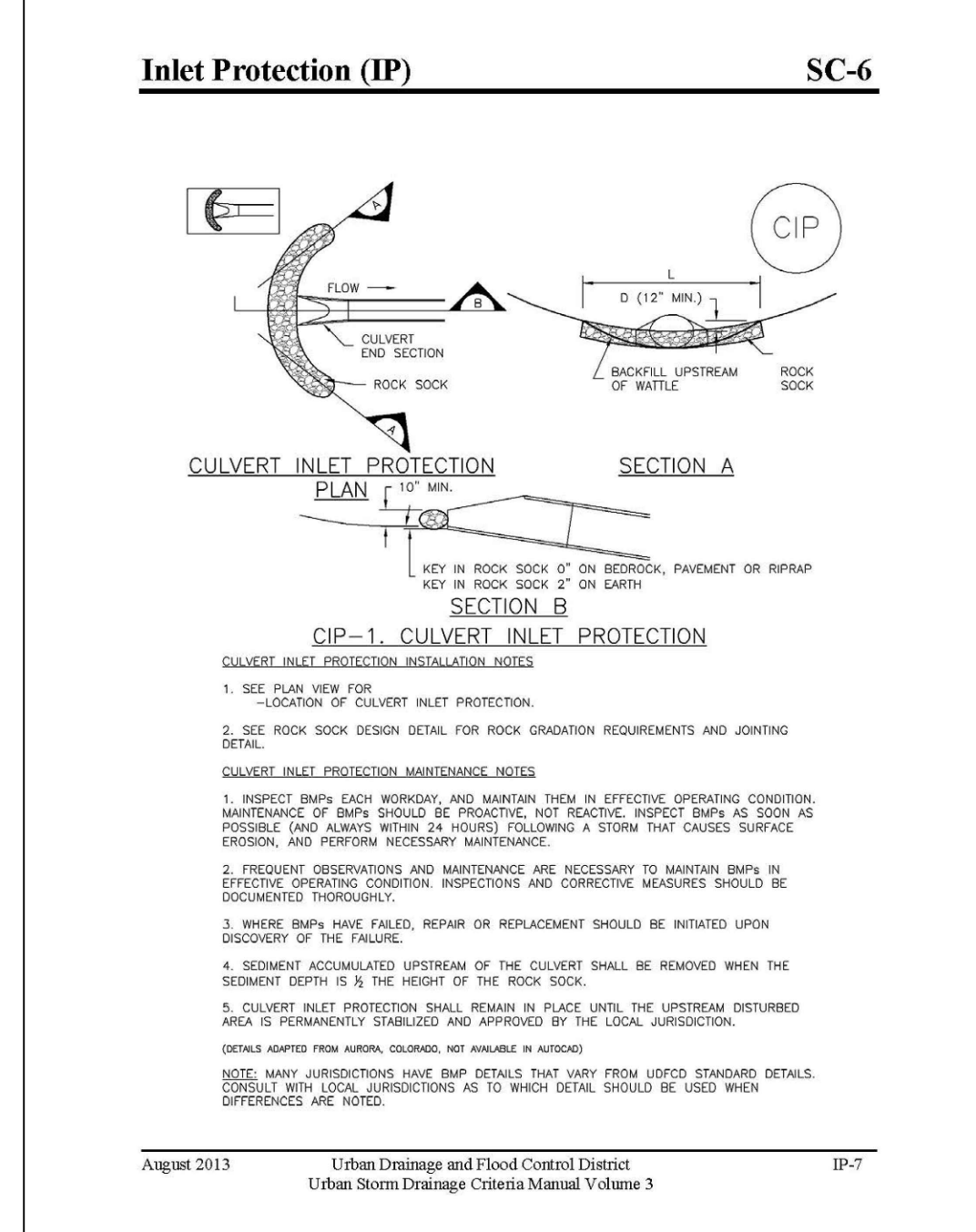
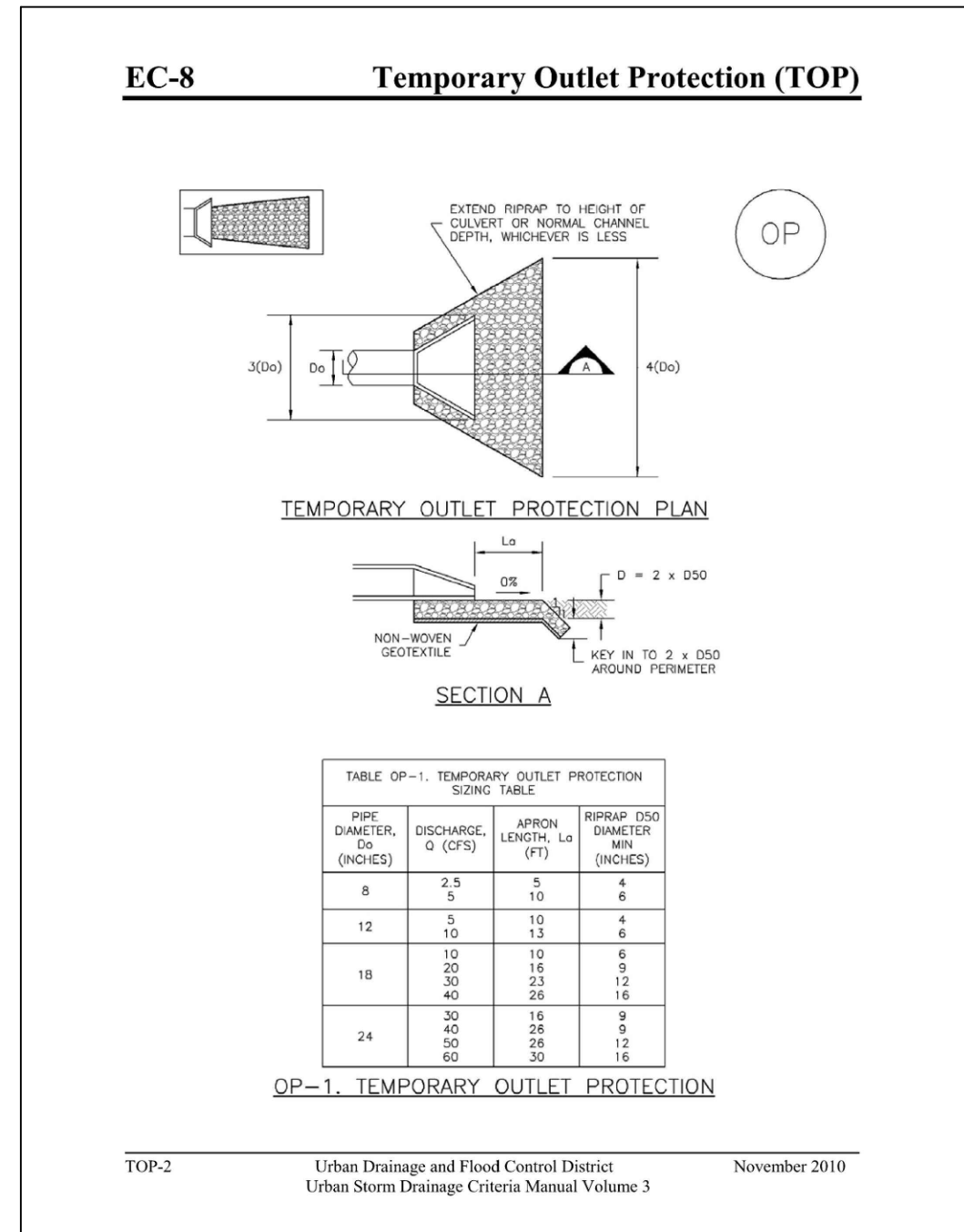
CALL UTILITY NOTIFICATION CENTER OF COLORADO
 1-800-922-1987
 CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MEMBER UTILITIES.

NO.	REVISION	DATE

EROSION CONTROL NOTES AND DETAILS

HORIZ. SCALE:	N/A	DRAWN:	MSP
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	N/A	CHECKED:	JPS
CREATED:	11/29/21	LAST MODIFIED:	08/30/24
PROJECT NO:	080603	MODIFIED BY:	PV
SHEET:			

C2.1



19 E. Willamette Ave.
Colorado Springs, CO
80903

PH: 719-477-9429
FAX: 719-471-0766
www.jsengr.com



CALL UTILITY NOTIFICATION
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1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

No.	REVISION	BY	DATE

EROSION CONTROL
DETAILS

HORIZ. SCALE:	N/A	DRAWN:	MSP
VERT. SCALE:	N/A	DESIGNED:	JPS
SURVEYED:	N/A	CHECKED:	JPS
CREATED:	11/29/21	LAST MODIFIED:	06/07/24
PROJECT NO:	080603	MODIFIED BY:	PV

C2.2

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