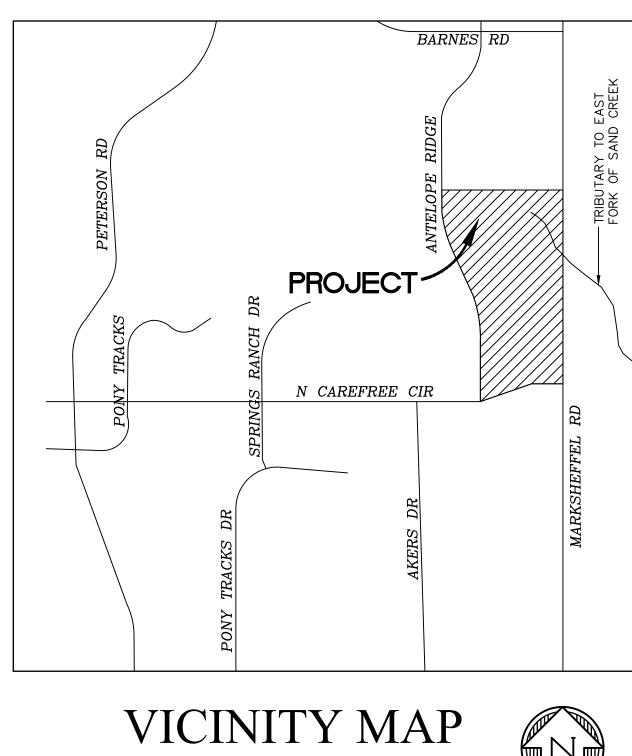
PREPARED B WINDERMERE EROSION CONTROL AND STORMWATER QUALITY PLAN DREXEL, BARRELL & C E 1/2 OF SECTION 29,Engineers • Surveyors 3 SOUTH 7TH STREET OLORADO SPGS, COLORADO 8 T13S, R65W OF THE 6TH P.M. CONTACT: TIM D. McCONNELL, I (719)260-0887 BOULDER • COLORADO SPRINGS • GREELF EL PASO COUNTY, COLORADO CLIENT: BARNES R SHEET INDEX **EC01** COVER SHEET EC02 NOTES EC03 EROSION CONTROL AND STORMWATER QUALITY PLAN 4164 AUSTIN BLUFFS PKWY. #36 COLORADO SPRINGS, CO 80918 EC04 EROSION CONTROL DETAILS (719) 200-9594 EC05 EROSION CONTROL DETAILS CONTACT: JAMES TODD STEVEN EC06 EROSION CONTROL DETAILS ЧŔ NORTH POND OUTLET STRUCTURE DETAILS PD-1 PD-2 SOUTH POND OUTLET STRUCTURE DETAILS NOTES 1. IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF PROJEC 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. 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 DEVELOPMENT DIRECTOR'S DISCRETION. AT LEAST 10 DAYS PRIOR TO THE ANTICIPATED STASRT OF CNSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE Z THE OWNER OR OPERATOR OF THE CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE \square TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION. THE APPLICATION AD CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP). OF WHICH THIS GRADING AND EROSION N CAREFREE CIR WINDERMERE ELIMINARY PL CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT: O 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 ELECTRIC ASSOCIATION EN ROAD **DESIGN ENGINEER'S STATEMENT** GS UTILITIES Ζſ THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND XPRESSWAY SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO CRITERIA ESTABLISHED BY THE COUNTY FOR THE DETAILED ROADWAY, DRAINAGE, IGS, CO 80947 \sim GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS. AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS. VICINITY MAP) 597-8418 $\langle \! \langle \! \rangle \rangle \rangle$ To a Maulle 3–19–21) 635–3674 NOT TO SCALE TIM D. MCCONNELL DATE P.E.# 33797 ISSUE DATE IGS, CO 80909 **OWNER'S STATEMENT** INITIAL ISSUE 2/21/19 (719) 442-4733 LATEST ISSUE THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL 3/19/21 PLAN. 3–19–21 STRUCTURAL FILL JEFF MARK DATE DURING EARTHWORK BALANCING ACROSS THE SITE, AREAS TO RECEIVE STRUCTURAL FILL SHOULD HAVE TOPSOIL, ORGANIC MATERIAL, OR DEBRIS REMOVED. LOOSE, WET SOILS, ESPECIALLY THOSE FROM NOTED DRAINAGE AREAS, SHOULD BE EXCAVATED TO DRY SOLID MATERIAL, STOCKPILED EL PASO COUNTY AND EVALUATED FOR SUITABILITY OF RE-USE AS STRUCTURAL FILL. IF SOIL IS FOUND TO BE UNSUITABLE AS STRUCTURAL FILL, IT MAY STILL BE SUITABLE AS BACKFILL IN NON-STRUCTURAL APPLICATIONS. DESIGNED BY: SBN COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN STRUCTURAL FILL COMPOSED OF ON-SITE SOILS SHOULD CONSIST OF GRANULAR, NIL TO LOW-EXPANSIVE MATERIAL. IF CLAYSTONE IS ELECTED TO Construction) DRAWN BY: SBN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE BE RE-USED IT SHOULD BE THOROUGHLY PROCESSED, MOISTURE CONDITIONED AND BLENDED WITH SAND SOIL. FILL SHOULD BE SPREAD ACROSS Remaining CHECKED BY: TDM DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE SITE AND PLACED IN EVEN LOOSE LIFTS NOT EXCEEDING 10-INCHES, MOISTURE CONDITIONED TO FACILITATE COMPACTION (USUALLY WITHIN 2 THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR PERCENT OF THE OPTIMUM MOISTURE CONTENT), AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED FILE NAME: 21187-01ECCV THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT. BY THE STANDARD PROTOR TEST, ASTM D-698. THE MATERIALS SHOULD BE SPREAD AND COMPACTED BY MECHANICAL MEANS. PREPARED UNDER MY DIRECT FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND SUPERVISION FOR AND ON STRUCTURAL FILL PLACED ON SLOPES SHOULD BE BENCHED INTO THE SLOPE. MAXIMUM BENCH HEIGHTS SHOULD NOT EXCEED 4 FEET, AND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, AND ENGINEERING CRITERIA MANUAL AS BENCH WIDTHS SHOULD BE WIDE ENOUGH TO ACCOMMODATE COMPACTION EQUIPMENT. MATERIALS USED FOR STRUCTURAL FILL SHOULD BE BEHALF OF AMENDED. IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL DREXEL, BARRELL & CO. APPROVED BY RMG PRIOR TO USE. STRUCTURAL FILL SHOULD NOT BE PLACED ON FROZEN SUBGRADE OR ALLOWED TO FREEZE DURING MOISTURE BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEAR FROM THE DATE SIGNED BY THE EL CONDITIONING AND PLACEMENT. PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE 350,000.00 PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES BENCHMARK AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION. ELEVATIONS ARE BASED ON COLORADO SPRINGS UTILITIES FACILITIES INFORMATION SYSTEM (FIMS), A 2" ALUMINUM CAP STAMPED "BLT100" IN SE CORNER OF CATCH BASIN ON EAST SIDE OF ANTELOPE RIDGE DRIVE 1500'± NORTH OF NORTH CAREFREE CIR., WITH AN ELEVATION OF 6607.03 3-19-21 * APPROVED (NGVD 29). Engineering Department JENNIFER IRVINE. P.E. LEGAL DESCRIPTION 04/01/2021 1:40:35 PM COUNTY ENGINEER 30,000.00 THE EAST HALF OF SECTION 29, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF See conditions below. **EPC Planning & Con** DRAWING SCALE: COLORADO. 24,000.00 Development De ENGINEER OF RECORD HORIZONTAL: N/A -FLOODPLAIN STATEMENT VERTICAL: N/A THE STORMWATER MANAGEMENT PLAN WAS PREPARED UNDER MY DIRECTION AND -ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) PANEL #08041C0543 G (DECEMBER SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN 4,740.00 HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY AND 7, 2018) THE PROJECT SITE IS WITHIN A DESIGNATED ZONE X AREA DESCRIBED AS "AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN". 8,675.00 STATE FOR STORMWATER MANAGEMENT PLANS. TIMING 32,656.00 COVER SHEET 3–19–21 Jos OM will 39,000.00 ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING: WINTER/SPRING 2021-SUMMER/FALL 2021 ENGINEER OF RECORD SIGNATURE 2,250.00 DATE AREAS TOTAL AREA OF THE SITE TO BE CLEARED, EXCAVATED OR GRADED: APPROXIMATELY 54.9 ACRES PROJECT NO. 21187-01CSCV * Construction or demolition of any detention pond outlet structures shall 501.00 RECEIVING WATERS DRAWING NO. not commence until the Private Detention Basin/Permanent BMP 5,286.00 Agreement and Easement has been approved and signed. 900.00 <u>SOILS</u> **EC01** 10,000.00 HYDROLOGIC TYPE A: TRUCKTON SANDY LOAM 36,402.80 VEGETATION EXISTING SITE IS UNDEVELOPED AND COVERED WITH NATIVE GRASSES 544,410.80 COUNTY FILE NO.: SP-19-003 SHEET: 1 OF 8

AGENCY CONTACTS

<u>COUNTY</u>	EL PASO COUNTY PLANNING & COMMUNITY DEVELOPMENT KARI PARSONS, PROJECT MANAGER/PLANNER II 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 (719) 520–6300	ELECTRIC	MOUNTAIN VIEW EL LES ULFERS 11140 E. WOODMEN FALCON, CO 80831 (719) 495–2283
<u>FIRE</u>	CIMARRON HILLS FIRE DEPARTMENT STEVE CONNER, FIRE CHIEF 1835 TUSKEGEE PL COLORADO SPRINGS, CO 80915 (719)591–0960	<u>GAS</u>	COLORADO SPRING TODD STURTEVANT 1521 HANCOCK EXF COLORADO SPRING (719) 668–3556
<u>WATER</u>	CHEROKEE METROPOLITAN DISTRICT JONATHON SMITH, SUPERINTENDENT OF WATER & WASTEWATER 6250 PALMER PARK BLVD COLORADO SPRINGS, CO 80915 (719) 597–5080	TELEPHONE	CENTURY LINK PATTY MOORE (719) 636–6096 (LOCATORS) (719) AT&T
<u>WASTEWATER</u>	CHEROKEE METROPOLITAN DISTRICT JONATHON SMITH, SUPERINTENDENT OF WATER & WASTEWATER 6250 PALMER PARK BLVD COLORADO SPRINGS, CO 80915 (719) 597–5080	<u>CABLE</u>	(LOCATORS) (719) COMCAST DALE STEWART 213 N. UNION BLVI COLORADO SPRINGS

ESTIMATED COST OF TEMPORARY + PERMANENT BMPs INCLUDING INSTALLATION AND MAINTENANCE UNTIL FINAL STABILIZATION (FINAL + INTERIM STAGE)

				Unit			(with Pre-P	'lat C
Description	Quantity	Units		Cost		Total	% Complete	
SECTION 1 - GRADING AND EROSION CON	TROL (Constru	ction and Po	erma	nent BMPs)				
* Earthwork								
less than 1,000; \$5,300 min		CY	\$	8.00	=	\$ -		\$
1,000-5,000; \$8,000 min		CY	\$	6.00	=	\$ -		\$
5,001-20,000; \$30,000 min		CY	\$	5.00	=	\$ -		\$
20,001-50,000; \$100,000 min		CY	\$	3.50	=	\$ -		\$
50,001-200,000; \$175,000 min	140,000	CY	\$	2.50	=	\$ 350,000.00		\$
greater than 200,000; \$500,000 min		CY	\$	2.00	=	\$ -		\$
* Permanent Seeding (inc. noxious weed mgmnt.)		AC	\$	800.00	=	\$ -		\$
* Mulching		AC	\$	750.00	=	\$ -		\$
* Permanent Erosion Control Blanket		SY	\$	6.00	=	\$ -		\$
* Permanent Pond/BMP Construction		CY	\$	20.00	=	\$ -		\$
* Permanent Pond/BMP (Spillway)	2	EA	\$	15,000.00	=	\$ 30,000.00		\$
* Permanent Pond/BMP (Outlet Structure)	2	EA	\$	12,000.00	=	\$ 24,000.00		\$
Safety Fence		LF	\$	3.00	=	\$ -		\$
Temporary Erosion Control Blanket		SY	\$	3.00	=	\$ -		\$
Vehicle Tracking Control	2	EA	\$	2,370.00	=	\$ 4,740.00		\$
Silt Fence	3,470	LF	\$	2.50	=	\$ 8,675.00		\$
Temporary Seeding	52	AC	\$	628.00	=	\$ 32,656.00		\$
Temporary Mulch	52	AC	\$	750.00	=	\$ 39,000.00		\$
Erosion Bales	90	EA	\$	25.00	=	\$ 2,250.00		\$
Erosion Logs/Straw Waddle		LF	\$	5.00	=	\$ -		\$
Rock Check Dams		EA	\$	500.00	=	\$ -		\$
Inlet Protection	3	EA	\$	167.00	=	\$ 501.00		\$
Sediment Basin	3	EA	\$	1,762.00	=	\$ 5,286.00		\$
Concrete Washout Basin	1	EA	\$	900.00	=	\$ 900.00		\$
Riprap rundown	1	EA	\$	10,000.00	=	\$ 10,000.00		\$
[insert items not listed but part of construction plans]					=	\$ -		\$
	MA INTENA NCE (3	85% of Cons	struc	tion BMPs)	=	\$ 36,402.80		\$
* - Subject to defect w arranty financial assurance. A minimum of 20% shall be retained until final acceptance (MAXIMUM OF 80% COMPLETE ALLOWED)		Sect	ion	1 Subtotal	=	\$544,410.80		\$ 5





STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

- WRITING.

- UNLESS INFEASIBLE.

- THE FORM OF SURFACE RUNOFF.
- CIRCUMSTANCES.

- THE DITCH FLOW LINE.
- SHALL APPLY.

- PART OF THESE PLANS.
- WATER QUALITY CONTROL DIVISION WQCD – PERMITS 4300 CHERRY CREEK DRIVE SOUTH DENVER, CO 80246-1530 ATTN: PERMITS UNIT

1. 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 TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN

3. 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. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED STORMWATER MANAGER, 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.

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 MAY CONTRIBUTE POLLUTANTS TO STORMWATER. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED 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 IS 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 PRIOR TO IMPLEMENTATION.

7. 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. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE STABILIZED.

8. 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 PLAN 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 DEFINED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE HYDROLOGY OR HYDRAULICS OF A PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.

10. ANY EARTH DISTURBANCE 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,

11. 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 SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED.

12. 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.

13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUT SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY.

14. DEWATERING OPERATIONS: UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT MAY NOT LEAVE THE SITE IN

15. EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.

16. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER 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. BMP'S MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND

17. VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.

18. 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.

19. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS. DIRT. TRASH. ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM 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 CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.

22. BULK STORAGE OF PETROLEUM PRODUCTS OR OTHER LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL HAVE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.

23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN

24. INDIVIDUALS 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 INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS

25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

26. PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.

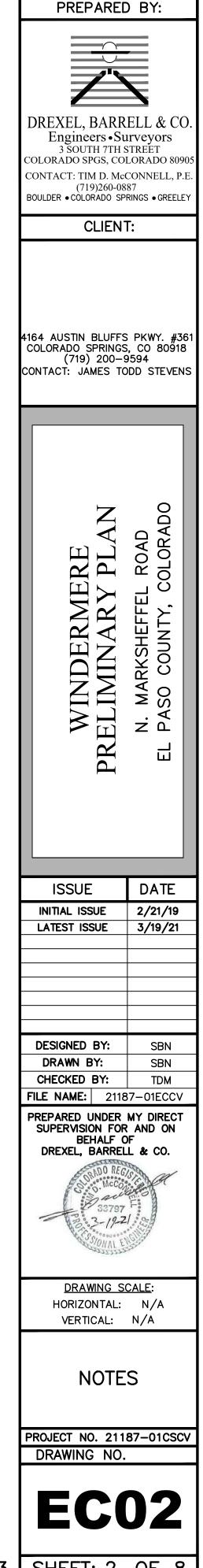
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.

28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY RMG ENGINEERS, (10-26-2020) AND SHALL BE CONSIDERED A

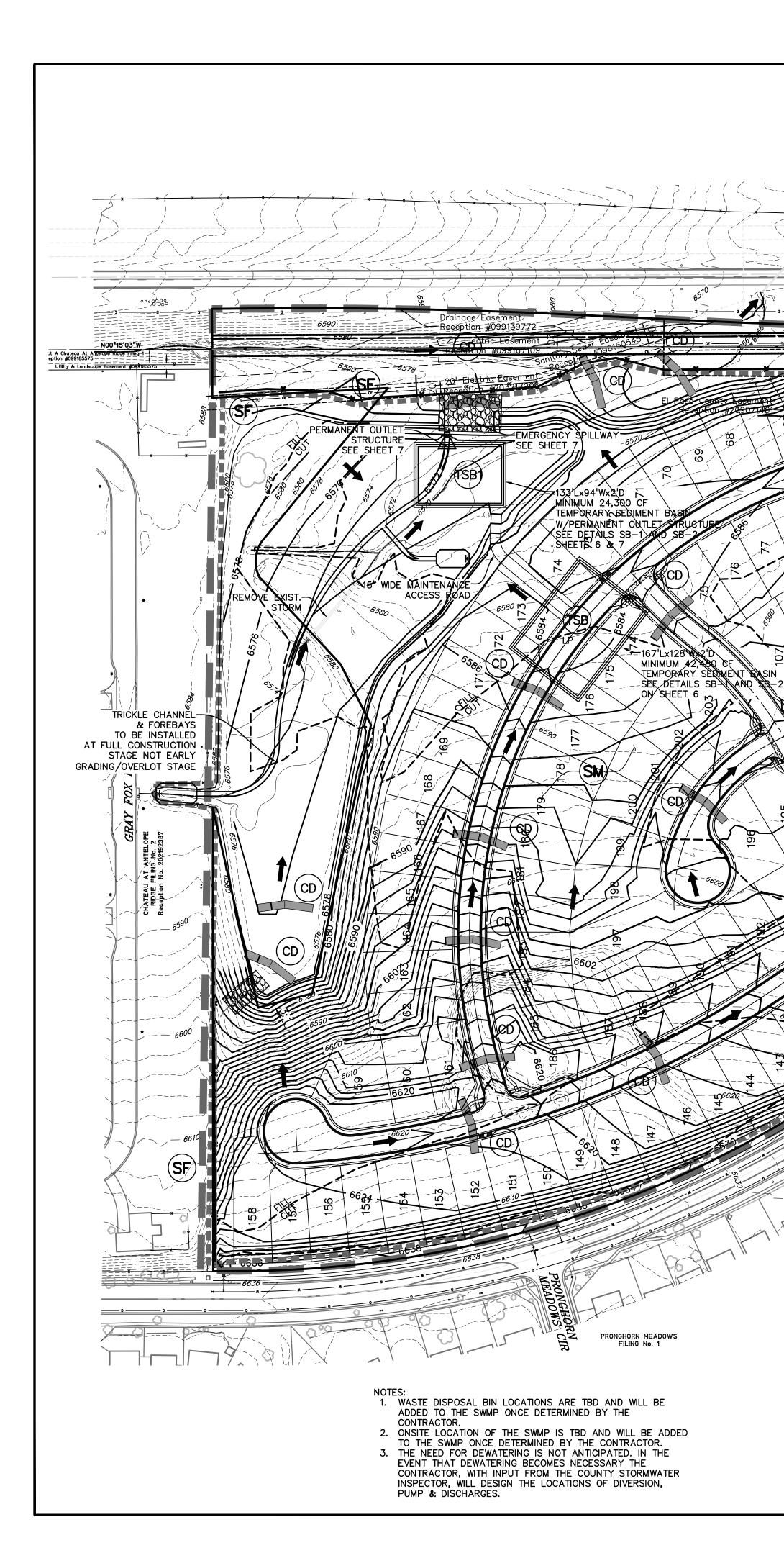
29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

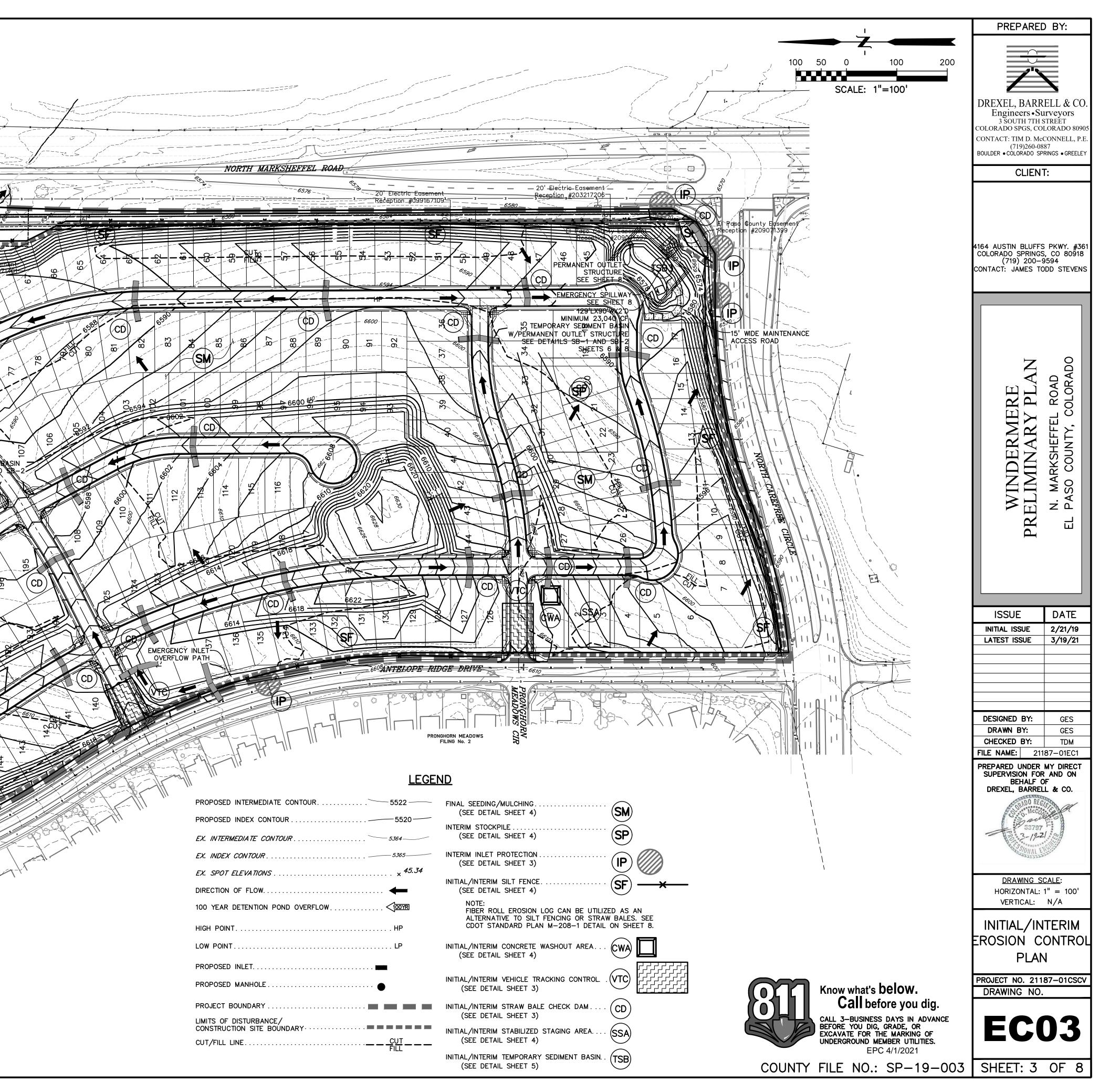
COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

EPC 4/1/2021



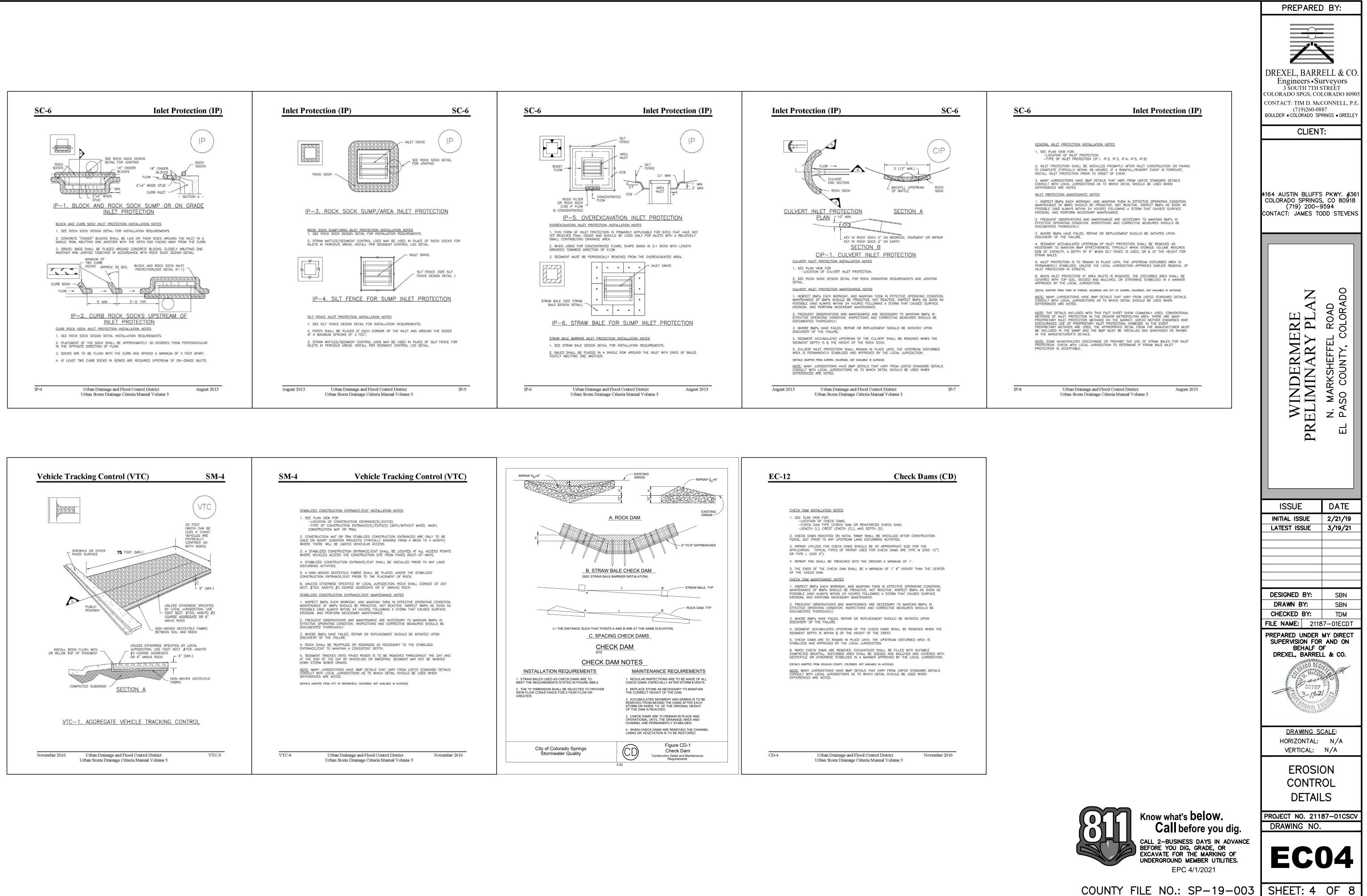
COUNTY FILE NO.: SP-19-003 SHEET: 2 OF 8

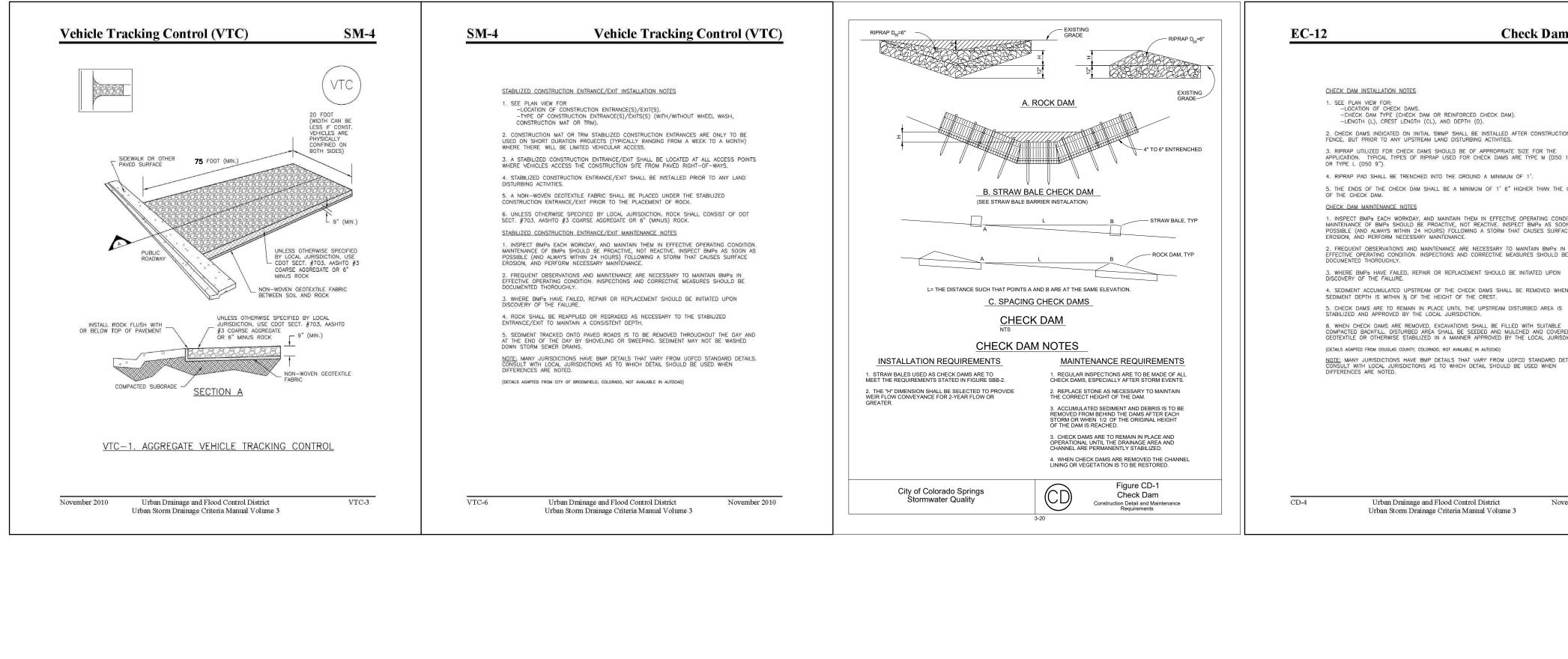


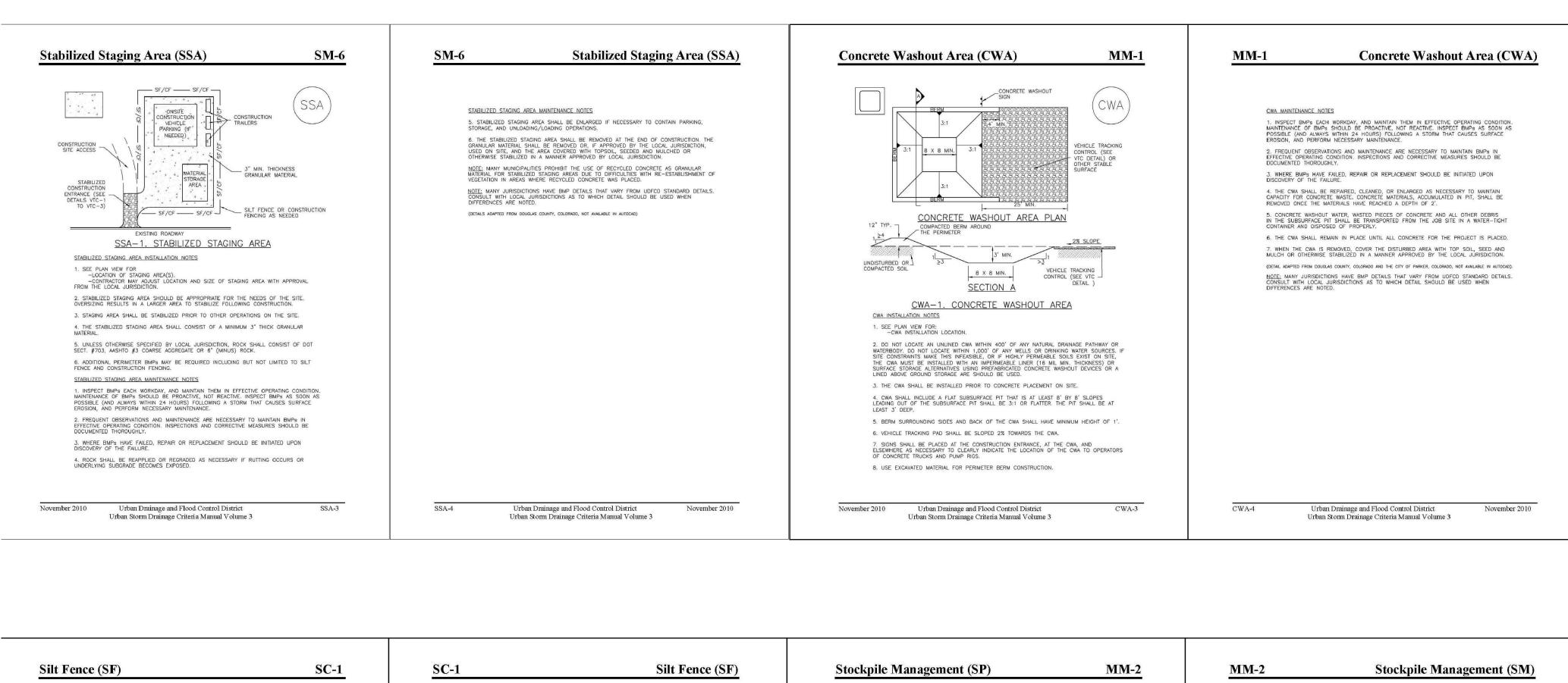


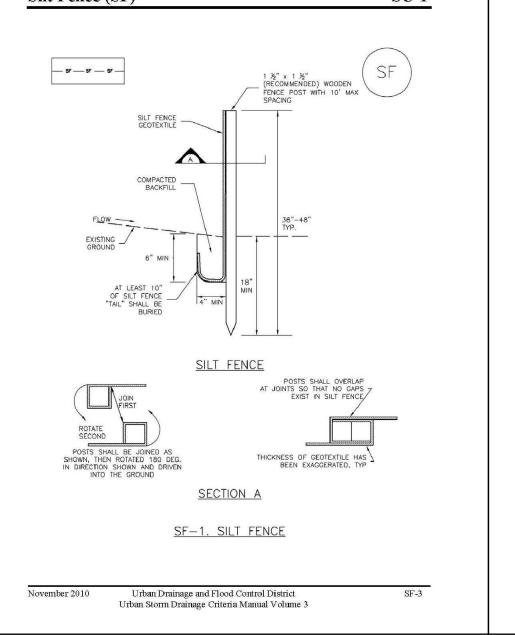
PROPOSED INTERMEDIATE CONTOUR	- 5522
PROPOSED INDEX CONTOUR	— 5520 —
EX. INTERMEDIATE CONTOUR	- 5364
EX. INDEX CONTOUR	— 5365———
EX. SPOT ELEVATIONS	··· × ^{45.34}
DIRECTION OF FLOW	-
100 YEAR DETENTION POND OVERFLOW	
HIGH POINT	HP
LOW POINT	LP
PROPOSED INLET.	
PROPOSED MANHOLE	
PROJECT BOUNDARY	
LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY ·····	
CUT/FILL LINE	

FINAL SEEDING/MULCHING
INTERIM STOCKPILE
INTERIM INLET PROTECTION
INITIAL/INTERIM SILT FENCE
NOTE: FIBER ROLL EROSION LOG CAN BE UT ALTERNATIVE TO SILT FENCING OR ST CDOT STANDARD PLAN M-208-1 DET
INITIAL/INTERIM CONCRETE WASHOUT AREA (SEE DETAIL SHEET 4)
INITIAL/INTERIM VEHICLE TRACKING CONTRO (SEE DETAIL SHEET 3)
INITIAL/INTERIM STRAW BALE CHECK DAM. (SEE DETAIL SHEET 3)
INITIAL/INTERIM STABILIZED STAGING AREA. (SEE DETAIL SHEET 4)
INITIAL/INTERIM TEMPORARY SEDIMENT BAS (SEE DETAIL SHEET 5)

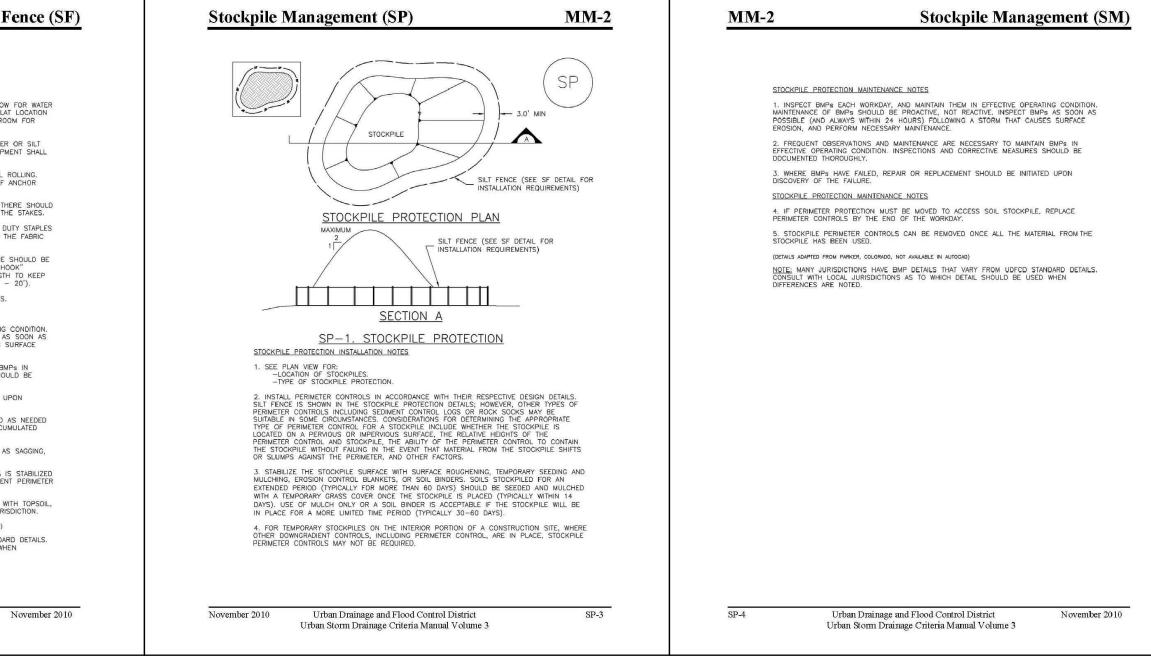








 SILT FENCE INSTALLATION NOTES 1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO PONDING, SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN AT LEAST SEVERAL FEET (2–5 FT) FROM THE TOE OF THE SLOPE TO ALL PONDING AND DEPOSITION. 2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRE FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR BE USED. 3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY V COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED ON TRENCH BY HAND. 4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAK BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED 5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HE OR NALS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" AL DOWN THE STAKE. 6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT TURNED PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACT SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACT SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACT SILT FENCE GBMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT DAYS AND MORTHENANCE NOTES 1. INSPECT BMPS EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPER MAINTENANCE OF BMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT B POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAN EROSION, AND PERFORM NECESSARY MAINTENANCE. 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINT EFFECTIVE OPERATIONS CONDITION. INSPECTIONS AND CORRECTIVE MEASURES DOCUMENTED THOROUGHLY. 3. WHERE BMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITI DISCOVERY OF THE FAILURE. 4. SEDIMENTA COLULATED UPSTREAM OF THE SILT FENCE SHALL BE REM TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF SEDIMENTS IS APPROXIMATELY 6". 5. REPAIR OR RE	
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	SUCH AS
 SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQU SEDIMENT CONTROL BMP. 	AREA I QUIVALEN
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVE SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCA	ERED W
(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AU	
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD S CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE US DIFFERENCES ARE NOTED.	STANDAR



TEMPORARY SEEDING NOTES

1. SOIL IS TO BE CONDITIONED FOR PLANT GROWTH BY APPLYING TOPSOIL, FERTILIZER OR LIME. 2. SOIL IS TO BE TILLED IMMEDIATELY PRIOR TO APPLYING SEEDS. COMPACT SOILS ESPECIALLY NEED TO BE LOOSENED.

3. SEEDBED DEPTH IS TO BE 4 INCHES FOR SLOPES FLATTER THAN 2:1 AND 1 INCH FOR SLOPES STEEPER THAN 2:1.

4. ANNUAL GRASSES LISTED IN THE TABLE BELOW ARE TO BE USED FOR TEMPORARY SEEDING. SEED MIXES ARE NOT TO CONTAIN ANY NOXIOUS WEED SEEDS INCLUDING RUSSIAN OR CANADIAN THISTLE, KNAPWEED, PURPLE LOOSESTRIFE, EUROPEAN BINDWEED, JOHNSON GRASS, AND LEAFY SPURGE.

5. THE TABLE BELOW ALSO PROVIDES REQUIREMENTS FOR SEEDING RATES, SEEDING DATES, AND PLANTING DEPTHS FOR THE APPROVED TYPES OF ANNUAL GRASSES.

6. SEEDING IS TO BE APPLIED USING MECHANICAL TYPE DRILLS EXCEPT WHERE SLOPES ARE STEEP OR ACCESS IS LIMITED THEN HYDRAULIC SEEDING MAY BE USED. 7. ALL SEEDED AREAS ARE TO BE MULCHED.

8. IF HYDRAULIC SEEDING IS USED THEN HYDRAULIC MULCHING SHALL BE DONE SEPARATELY TO AVOID SEEDS BECOMING ENCAPSULATED IN THE MULCH.

MULCHING NOTES

INSTALLATION REQUIREMENTS

1. MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED-AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.

2. HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL.

3. MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.

4. MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES) OR WITH A TACKIFIER. 5. HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FREE SURFACE WATER.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.

2. MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.

SEEDING PLAN

NATIVE SEEDING MIX

SOIL PREPARATION, FERTILIZER, SEEDING, MULCHING AND MULCH TACKIFIER WILL BE REQUIRED FOR DISTURBED AREAS EXCLUDING THE RIGHT-OF-WAYS.

THE FOLLOWING TYPES AND RATES SHALL BE USED:

COMMON NAME SAND BLUESTEM V. ELIDA	SCIENTIFIC NAME ANDROPOGON HALLII	LBS PLS/ACRE 2.0
WESTERN WHEATGRASS V. ARRIBA SIDEOATS GRAMA V. VAUGHN GALLETA V. VIVA (CARYOPSIS) LITTLE BLUESTEM V. PASTURA PRARIE SANDREED V. GASHEN SWITCHGRASS V. NEBR 28 BLANKETFLOWER PRARIE CONEFLOWER BLUE FLAX	PASCOPYRUM SMITHII BOUTELOUA CURTIPENDULA HILARIA JAMESII SCHIZACHYRIUM SCOPARIUM CALAMOVILFA LONGIFOLIA PANICUM VIRGATUM GAILLARDIA ARISTATA RATIBIDA COLUMINIFERA LINUM LEWISII	7.0 4.0 1.0 3.0 2.0 1.0 1.0 0.5 1.0 3.0
OATS WINTER WHEAT TOTAL/POUNDS/ACRE	AVENA SATIVA TRITICUM AESTIVUM	3.0 28.5

FERTILIZER	RATE PER ACRE
NITROGEN	27
PHOSPHORUS (P205)	69

Know what's **below**.

BEFORE YOU DIG, GRADE, OR

Call before you dig.

CALL 2-BUSINESS DAYS IN ADVANCE

SEEDING APPLICATION: DRILL SEED 0.25"-0.5" INTO TOPSOIL. AREA NOT ACCESSIBLE TO A DRILL SEEDER AND SLOPES STEEPER THAN 2:1 SHALL BE HAND BROADCAST AT DOUBLE THE ABOVE SEED RATE AND RAKED AT 1/4 TO 1/2 INTO THE TOPSOIL.

MULCHING APPLICATION: 1 1/2 TONS CERTIFIED WEED FREE NATIVE HAY PER ACRE MECHANICALLY CRIMED IN TOPSOIL IN COMBINATION WITH AN ORGANIC MULCH TACKIFIER.



PREPARED) BY:
DREXEL, BARR Engineers • Su 3 SOUTH 7TH S	rveyors TREET
COLORADO SPGS, COI CONTACT: TIM D. McC (719)260-08	CONNELL, P.E.
BOULDER • CÒLORADO SPI	RINGS • GREELEY
CLIEN	
4164 AUSTIN BLUFFS COLORADO SPRINGS	PKWY. #361 . CO 80918
COLORADO SPRINGS (719) 200-9 CONTACT: JAMES TO	DD STEVENS
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WINDERMERE PRELIMINARY PLAN	N. MARKSHEFFEL ROAD EL PASO COUNTY, COLORADO
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EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIESOUNTY FILE NO.: SP-19-003 SHEET: 5 OF 8

EPC 4/1/2021

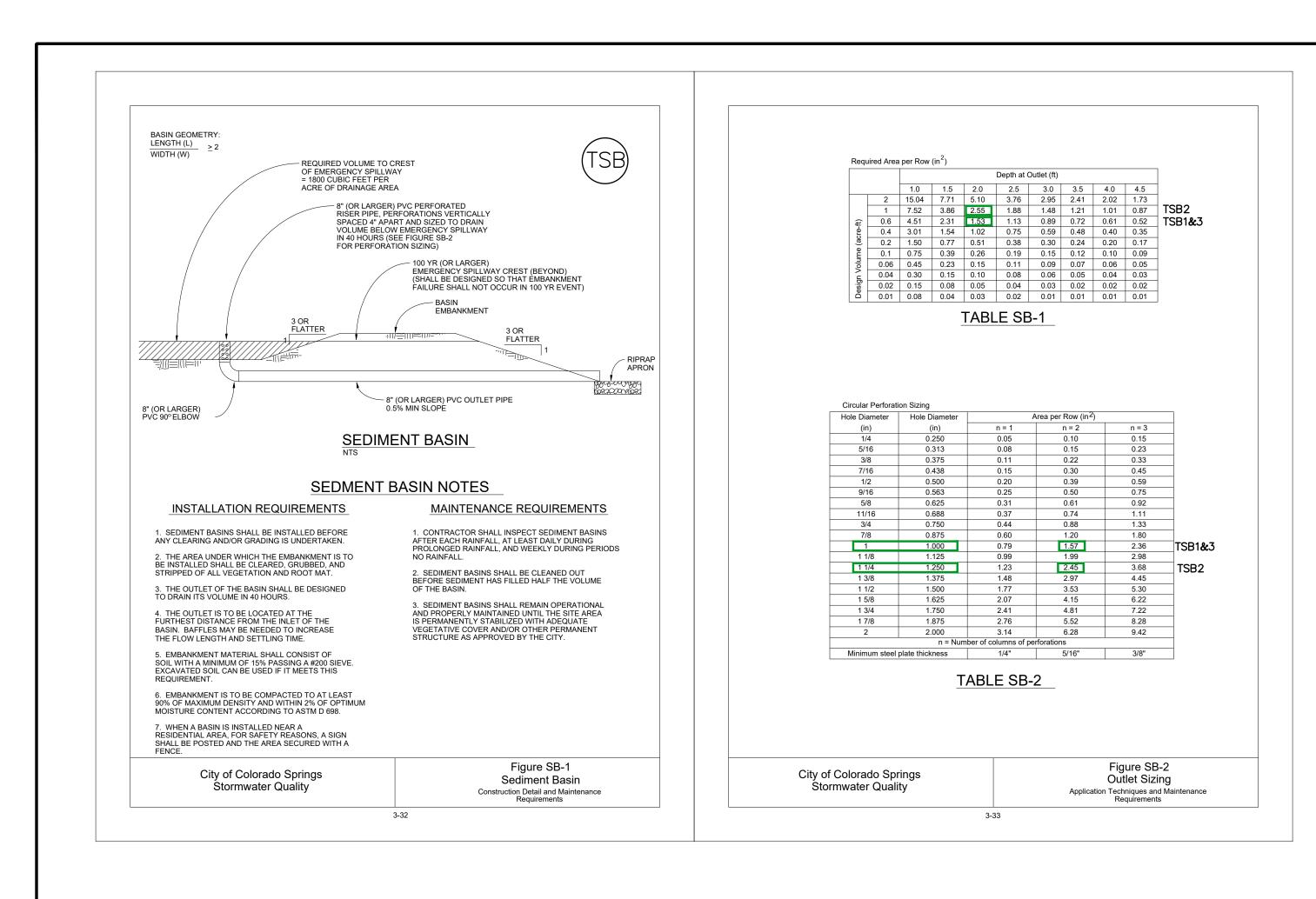
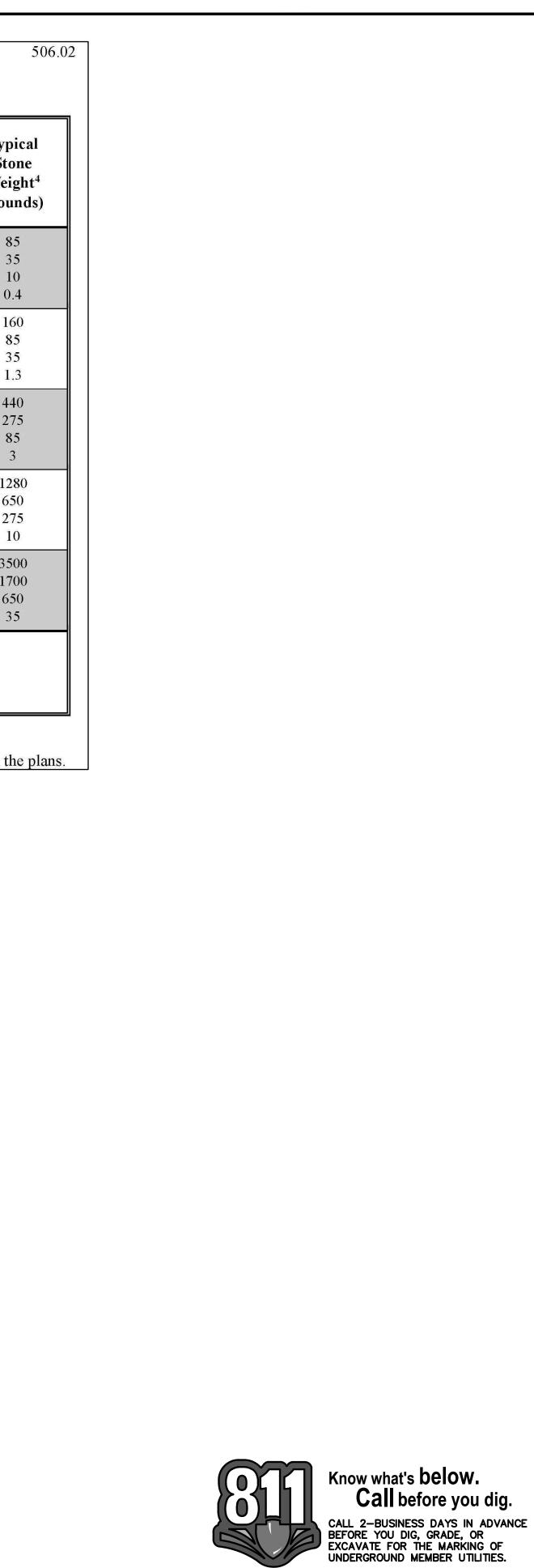


Table 506-2				
Pay Item Stone Size d50 ¹ (Inches)		Percent of Material Smaller Than Typical Stone ²	Typical Stone Dimensions ³ (Inches)	Typ Sto Wei (Pou
Riprap	6	70-100 50-70 35-50 2-10	12 9 6 2	8 3 1 0
Riprap	9	70-100 50-70 35-50 2-10	15 12 9 3	1 8 3 1
Riprap	12	70-100 50-70 35-50 2-10	21 18 12 4	4 2 8
Riprap	18	100 50-70 35-50 2-10	30 24 18 6	12 6 2 1
Riprap	24	100 50-70 35-50 2-10	42 33 24 9	35 17 6 3

³equivalent spherical diameter

⁴based on a specific gravity = 2.5

Nominal stone size and total thickness of the riprap shall be as shown on the plans. CDOT SECTION 506 REQUIREMENTS APPLY



	PREPAREI	D BY:
	A164 AUSTIN BLUFFS COLORADO SPRINGS (719) 200-9 CONTACT: JAMES TO	Arveyors STREET LORADO 80905 CONNELL, P.E. 87 PRINGS • GREELEY T: S PKWY. #361 5, CO 80918 9594
	WINDERMERE PRELIMINARY PLAN	N. MARKSHEFFEL ROAD EL PASO COUNTY, COLORADO
	ISSUE INITIAL ISSUE LATEST ISSUE	DATE 2/21/19 3/19/21
	DESIGNED BY: DRAWN BY: CHECKED BY: FILE NAME: 2118 PREPARED UNDER SUPERVISION FOF BEHALF C DREXEL, BARREL	R AND ON DF
	DRAWING S HORIZONTAL: VERTICAL: EROSI CONTR	N/A N/A ON
Know what's below. Call before you dig. CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.	DETAIL PROJECT NO. 211 DRAWING NO.	LS 87–01CSCV
EPC 4/1/2021 COUNTY FILE NO.: SP-19-003		

