

**EROSION CONTROL LEGEND**

- SF** SILT FENCE (INITIAL/INTERIM)
- RS** CURB ROCK SOCKS (INITIAL/INTERIM)
- CF** CONSTRUCTION FENCE (INITIAL)
- SCL** SEDIMENT CONTROL LOG (INITIAL, INTERIM)
- PS** PERMANENT SEEDING (INITIAL, INTERIM)
- TSB** TEMPORARY SEDIMENT BASIN (INITIAL)
- SSA** STABILIZED STAGING AREA (INITIAL)
- CWA** CONCRETE WASHOUT AREA (INTERIM)
- SP** STOCKPILE AREA (INTERIM)
- VTC** VEHICLE TRACKING CONTROL (INITIAL)
- IP-1** ON-GRADE INLET PROTECTION (INITIAL/INTERIM)

- LEGEND**
- PROPERTY LINE
  - EASEMENT LINE
  - SETBACK LINE
  - LIMITS OF DISTURBANCE/CONSTRUCTION
  - PROPERTY CORNER/MONUMENT, BENCHMARK OR TEMPORARY BENCHMARK
  - BM
  - SHEET FLOW/DRAINAGE DIRECTION
  - PROPOSED MINOR CONTOUR
  - PROPOSED MAJOR CONTOUR
  - EXISTING MINOR CONTOUR
  - EXISTING MAJOR CONTOUR
  - SPOT ELEVATION

- SITE HATCHING**
- AREAS OF CUT **CUT**
  - AREAS OF FILL **FILL**
  - PROP. STRUCTURE/BUILDING

**FEMA FLOODPLAIN STATEMENT:**  
 ACCORDING TO FEMA FLOODPLAIN MAP 0804100752G DATED 12/07/2018, THE PROPERTY FALLS WITHIN ZONE X, AREA OF MINIMAL FLOOD HAZARD.

**BATCH PLANT STATEMENT**  
 NO BATCH PLANTS ARE TO BE USED ON SITE

EXISTING VEGETATION COVERS APPROXIMATELY 98.5% OF THE SITE AND CONSISTS OF NATIVE GRASS WITH EXISTING IMPERVIOUSNESS OF APPROXIMATELY 1.5%.

\*CONTRACTOR TO HAUL DIRT/SOIL OFF-SITE DURING CONSTRUCTION. NO OVERNIGHT STOCKPILING OF MATERIALS TO BE DONE ON-SITE.

**BMP COST ESTIMATE:**

BID ITEM	UNIT	EST. \$/UNIT	TOTAL COST
SILT FENCE	0 LF	\$2.50/LF	\$ 0.00
SEDIMENT CONTROL LOGS	894 LF	\$2.75/LF	\$ 2,458.50
ROCK SOCKS (PAIR)	2 EA	\$110/EA	\$ 220.00
VEHICLE TRACKING CONTROL	3 EA	\$1,325/EA	\$ 3,975.00
EROSION CONTROL BLANKET	0 SF	\$0.37/SF	\$ 0.00
CONCRETE WASHOUT	1 EA	\$760/EA	\$ 760.00
SURFACE ROUGHENING	3.25 AC.	\$225/AC.	\$ 731.25
RESEEDING	21,780 SF	\$0.09/SF	\$ 1,960.20

NET: \$10,104.45  
 MAINTENANCE (40%): \$4,041.78  
 TOTAL: \$14,146.23  
 RESEEDING INCLUDES HYDRO MULCH, HYDRO SEED

- NOTES:**
- ALL UNIT PRICES REFLECT INSTALLED PRICES UNLESS OTHERWISE NOTED.
  - REFER TO CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL VOLUME I FOR DETAILS REGARDING ITEM DESCRIPTION.
  - ALL UNIT PRICES PROVIDED BY CITY OF COLORADO SPRINGS ENGINEERING DEPARTMENT AS TABLE ENTITLED "EROSION CONTROL MEASURE 2012 UNIT PRICING".

**OWNER'S STATEMENT:**  
 I, THE OWNER/DEVELOPER, HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

OWNER SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**ENGINEER'S STATEMENT:**  
 THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

ENGINEER OF RECORD SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**EL PASO COUNTY 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 DISTURBANCES SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY SOIL-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 DEVIATION FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERIOD (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 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 SLOPED, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT 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 EFFECT 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 THE 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 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 FOR INFILTRATION AND VEGETATIVE 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 WASH WATER 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, UNCONTAMINATED GROUNDWATER 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 IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL PLASTICS 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, ROCK, TRASH, 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 ON-SITE 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 ON-SITE 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 (DOA, 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 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 THE EARTHWORK EQUIPMENT AND MND.
- THE SOILS REPORT FOR THE SITE HAS BEEN PREPARED BY RMG-ROCKY MOUNTAIN GROUP AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- 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 (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OF APPLICATION MATERIALS CONTACT: COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION WOOD-PERMITS 4300 CHERRY CREEK DRIVE SOUTH DENVER, CO 80246-1530 ATTN: PERMITS UNIT

add Jennifer Irvine, PE

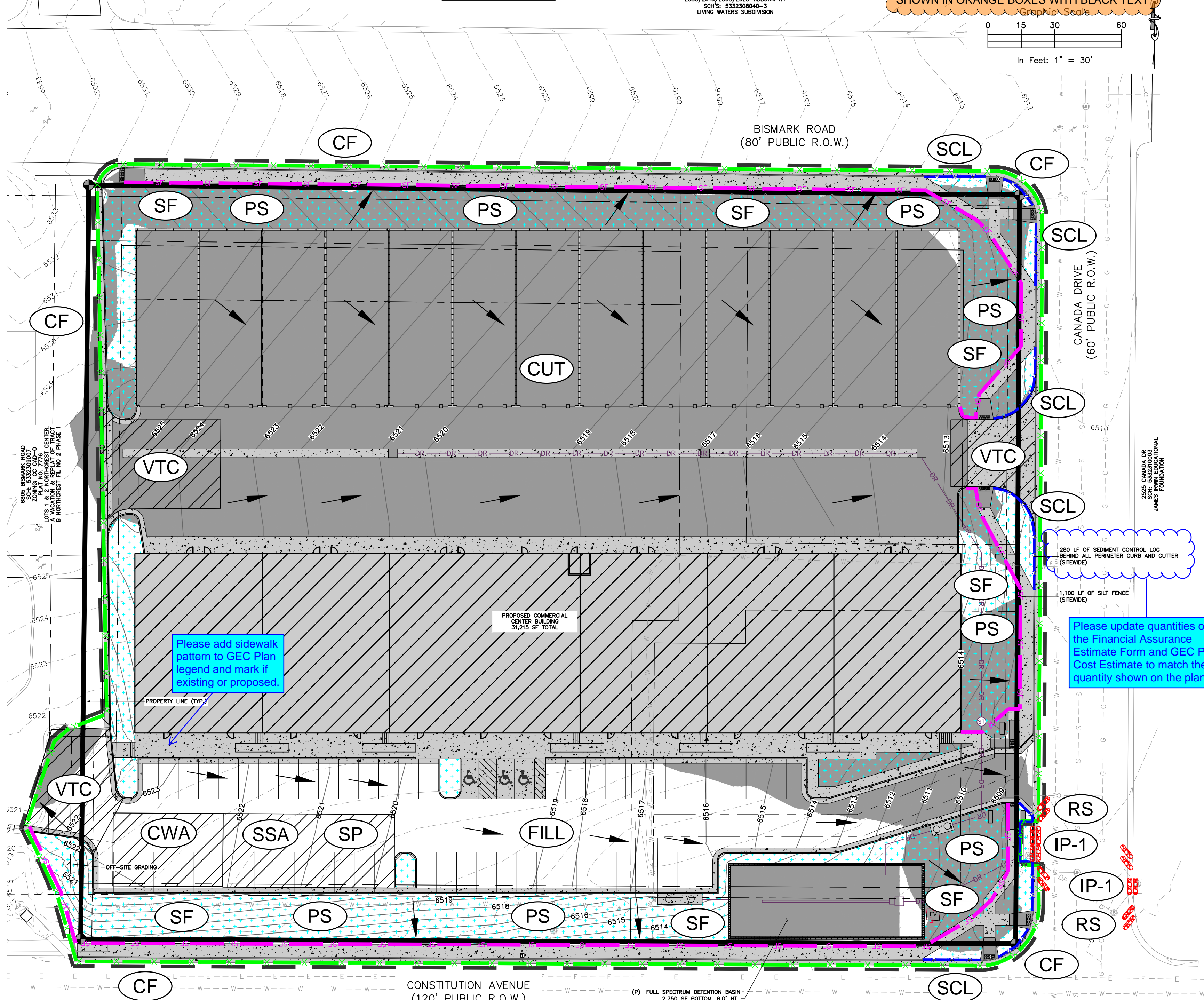
**EL PASO COUNTY:**  
 COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT 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 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 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.

COUNTY ENGINEER/ECM ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_

**GEC PLAN**

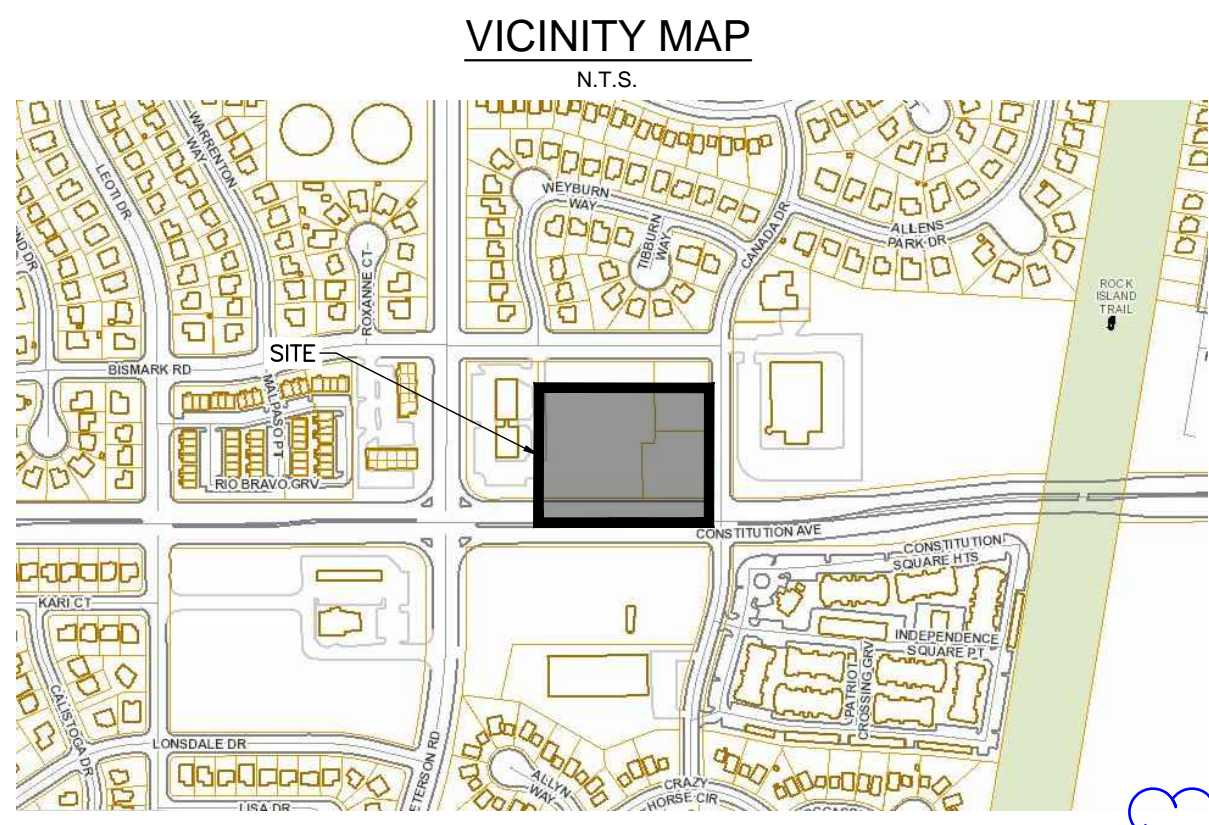


Please add sidewalk pattern to GEC Plan legend and mark if existing or proposed.

add date of report

Please remove all references to City of Colorado Springs standard details and replace with El Paso County Standard Details.

- RESTORATION NOTES:**
- FURTHER DETAIL AND NOTES PROVIDED IN THE DRAINAGE CRITERIA MANUAL VOLUME III, CHAPTER 14.
  - SEE SEED MIX TABLES 14-9 THROUGH 14-14 FOR GIVEN GEOGRAPHIC AND GEOLOGIC CONDITIONS IN THE DRAINAGE CRITERIA MANUAL VOLUME III, CHAPTER 14.
  - UNLINED DRAINAGE FACILITIES AND AREAS DISTURBED DURING CONSTRUCTION SHOULD BE ACTIVELY REVEGETATED. SEED MIXES SHOULD BE SELECTED TO MATCH THE CONDITIONS WHERE THEY WILL BE USED. RECOMMENDED SEED MIXES FOR THE BOTTOM (WET SOILS) AND SIDE SLOPES OF DRAINAGE FACILITIES ARE INCLUDED IN TABLES 14-9 AND 14-10, RESPECTIVELY. SEED MIXES FOR ALKALI SOILS AND ALL OTHER SOIL CONDITIONS IN UPLAND AREAS ARE PROVIDED IN TABLES 14-11 AND 14-12, RESPECTIVELY. WILDFLOWER MIXES ARE PROVIDED IN TABLE 14-13. THE SEEDING RATES IN THESE MIXES ARE RECOMMENDED MINIMUM RATES FOR DRILL SEEDING. THESE RATES SHOULD BE DOUBLED FOR BROADCAST SEEDING AND HYDRO-SEEDING IN SMALL AREAS OR STEEP CONDITIONS WITH SLOPES GREATER THAN 3 TO 1.
- THE RECOMMENDED SEED MIXES ARE SUITABLE FOR THE COLORADO FRONT RANGE FOR SITES FROM 4,500 TO 7,000 FT IN ELEVATION. APPLICATIONS OUTSIDE THESE RANGES SHOULD BE MADE AFTER CONSULTATION WITH A QUALIFIED REVEGETATION SPECIALIST.
- FALL IS THE PREFERRED TIME FOR NON-IRRIGATED SEEDING. LATE SUMMER SEEDBED PREPARATION FOLLOWED BY INSTALLATION OF THE SEED IN THE FALL (OCTOBER) ALLOWS WINTER MONTHS FOR ADDITIONAL FIRING OF THE SEEDBED BEFORE SPRING AND GERMINATION. FALL SEEDING BENEFITS FROM WINTER, SPRING MOISTURE, AND USUALLY ASSURES MAXIMUM SOIL MOISTURE AVAILABILITY FOR ESTABLISHMENT.
- LATE WINTER TO EARLY SPRING (FEBRUARY TO EARLY APRIL) IS TYPICALLY THE NEXT MOST FAVORABLE TIME PERIOD FOR SEEDING. WINTER AND EARLY SPRING SEEDING SHOULD NOT BE CONDUCTED IF THE SOIL IS FROZEN, SNOW COVERED, OR WET (MUDDY). WHILE OF GREATER RISK, SPRING SEEDING (MID-APRIL INTO EARLY JUNE) CAN BE SUCCESSFUL, ESPECIALLY DURING MOST YEARS. MID- TO LATE SUMMER SEEDING CAN BE SUCCESSFUL, WITH ADEQUATE PRECIPITATION.
- CHAPTER 14 REVEGETATION MAY 2014 CITY OF COLORADO SPRINGS 14-21 DRAINAGE CRITERIA MANUAL, VOLUME I OR IRRIGATION TO WET AND SETTLE THE SEED BED. FIRING OF THE SEEDBED FOLLOWING SEEDING WILL IMPROVE RESULTS DURING DRY OR WARM SEEDING TIMES.
- CONTRACTOR SHALL BE FAMILIAR WITH THE CUT/FILL OF THE PROPOSED CONDITIONS IN ORDER TO MINIMIZE STOCKPILING OF EXCAVATED DIRT. SITE IS NET CUT AND STOCKPILING OVERNIGHT IS NOT PERMITTED WITHOUT PERMISSION FROM THE CITY OF COLORADO SPRINGS.



Please correct to 'File'

EPC STORMWATER REVIEW COMMENTS ARE SHOWN IN ORANGE BOXES WITH BLACK TEXT



**ROCKY MOUNTAIN GROUP**  
 ARCHITECTS  
 ENGINEERS  
 CIVIL ENGINEERS

2910 ALBERTA BLVD. SUITE 1000 DENVER, CO 80202  
 2910 ALBERTA BLVD. SUITE 1000 DENVER, CO 80202  
 2910 ALBERTA BLVD. SUITE 1000 DENVER, CO 80202

NOT FOR CONSTRUCTION FOR CIVIL ONLY

**NORTHCREST PEMB DEVELOPMENT**  
 2510 & 2522 CANADA DRIVE  
 COLORADO SPRINGS, COLORADO

**LEISURE CONSTRUCTION**

**COVER**

DATE: 11/08/2021

#	REVISION	DATE

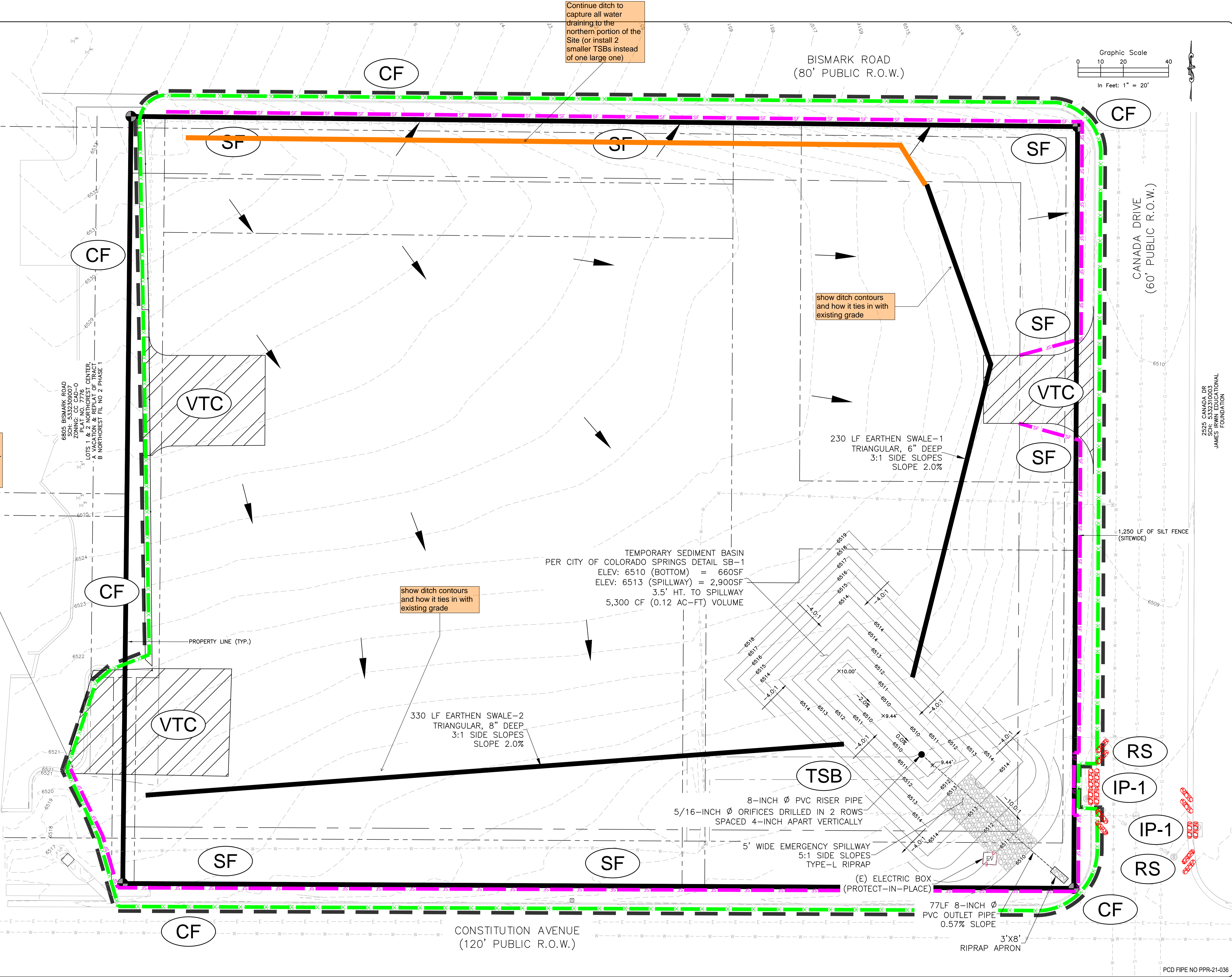
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 SHEET NO: C-01  
 OF 8



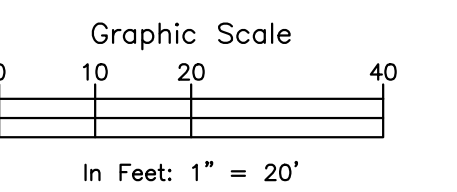
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Continue ditch to capture all water draining to the northern portion of the Site (or install 2 smaller TSBs instead of one large one)

Need owner permission to grade offsite. Provide copy of owner permission to EPC. Per Item O on GEC Checklist. unresolved.



BISMARK ROAD (80' PUBLIC R.O.W.)



CANADA DRIVE (60' PUBLIC R.O.W.)

CONSTITUTION AVENUE (120' PUBLIC R.O.W.)

6805 BISMARK ROAD  
COLORADO SPRINGS, CO 80918  
ZONING: CC CAD-O  
PLAT NO. 7776  
LOTS 1 & 2 NORTHCREST CENTER  
PLAT NO. 1000  
B NORTHCREST FIL NO. 2 PHASE 1

TEMPORARY SEDIMENT BASIN  
PER CITY OF COLORADO SPRINGS DETAIL SB-1  
ELEV: 6510 (BOTTOM) = 660SF  
ELEV: 6513 (SPILLWAY) = 2,900SF  
3.5' HT. TO SPILLWAY  
5,300 CF (0.12 AC-FT) VOLUME

230 LF EARTHEN SWALE-1  
TRIANGULAR, 6" DEEP  
3:1 SIDE SLOPES  
SLOPE 2.0%

330 LF EARTHEN SWALE-2  
TRIANGULAR, 8" DEEP  
3:1 SIDE SLOPES  
SLOPE 2.0%

8-INCH Ø PVC RISER PIPE  
5/16-INCH Ø ORIFICES DRILLED IN 2 ROWS  
SPACED 4-INCH APART VERTICALLY

5' WIDE EMERGENCY SPILLWAY  
5:1 SIDE SLOPES  
TYPE-L RIPRAP

(E) ELECTRIC BOX  
(PROTECT-IN-PLACE)

77LF 8-INCH Ø  
PVC OUTLET PIPE  
0.57% SLOPE

3'x8'  
RIPRAP APRON

1,250 LF OF SILT FENCE  
(SITEWIDE)

2525 CANADA DR  
SCH: 5332310003  
JAMES IRWIN EDUCATIONAL  
FOUNDATION

ROCKY MOUNTAIN GROUP

ARCHITECTS  
ENGINEERS

Geotechnical  
Materials Testing  
Civil Planning

Architectural  
Structural  
Forensics

SOUTHERN COLORADO  
2910 ALSTON BLUFFS PARKWAY, COLORADO SPRINGS, CO 80918  
719.576.8000 WWW.ROCKYMOUNTAINENGINEERS.COM  
Sedimentation, Drainage, Erosion Control, Riprap, Structures

NOT FOR CONSTRUCTION  
FOR CIVIL ONLY

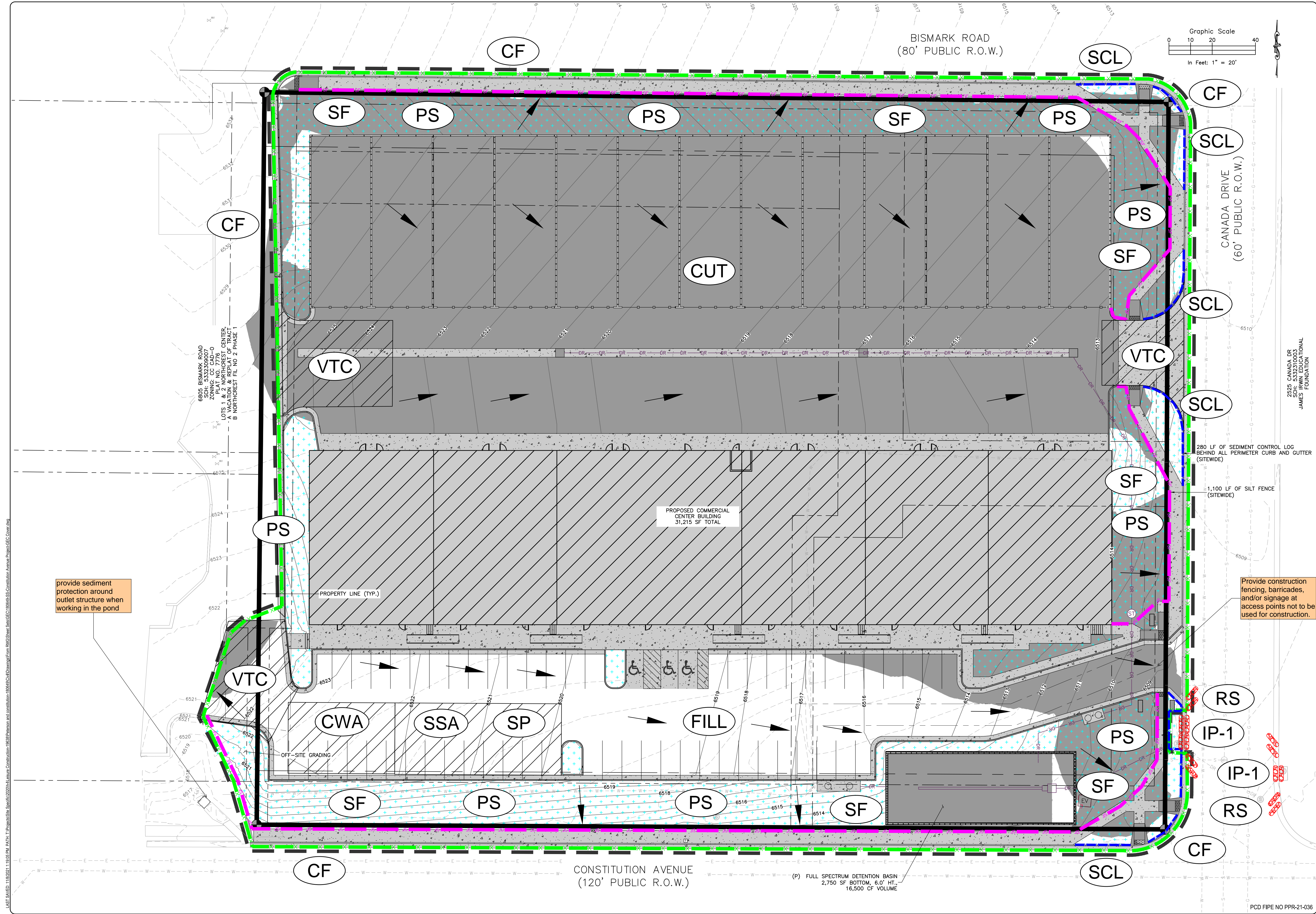
NORTHCREST PEMB DEVELOPMENT  
2510 & 2522 CANADA DRIVE  
COLORADO SPRINGS, COLORADO  
LEISURE CONSTRUCTION

EROSION CONTROL PLAN -  
INITIAL

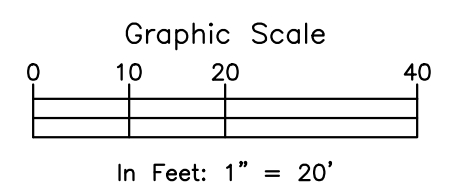
PROJECT STATUS  
DESIGN DEVELOPMENT

ENG:	SAM	
DRAWN:	ASP	
CHECKED:	SAM	
DATE:	11/08/2021	
#	REVISION	DATE
JOB NO.:	180649	
SHEET NO.:	C-02	
	of 8	





BISMARK ROAD  
(80' PUBLIC R.O.W.)



CANADA DRIVE  
(60' PUBLIC R.O.W.)

CONSTITUTION AVENUE  
(120' PUBLIC R.O.W.)

ROCKY MOUNTAIN GROUP  
ARCHITECTS  
Structural  
Foundations

SOUTHERN COLORADO  
2910 ALSTON BLUFFS PARKWAY, COLORADO SPRINGS, CO 80918  
719.526.6600 WWW.ROCKYMOUNTAINENGINEERS.COM  
Structural Foundations, Driveway Retention, Retention Structures

NOT FOR CONSTRUCTION  
FOR CIVIL ONLY

2525 CANADA DR  
SCH: 5332310003  
JAMES IRWIN EDUCATIONAL  
FOUNDATION

NORTHCHEST PEMB DEVELOPMENT  
2510 & 2522 CANADA DRIVE  
COLORADO SPRINGS, COLORADO  
LEISURE CONSTRUCTION

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SHEET NAME  
EROSION CONTROL PLAN -  
INTERIM

PROJECT STATUS  
DESIGN DEVELOPMENT

ENG: SAM  
DRAWN: ARP  
CHECKED: SAM  
DATE  
11/08/2021

#	REVISION	DATE

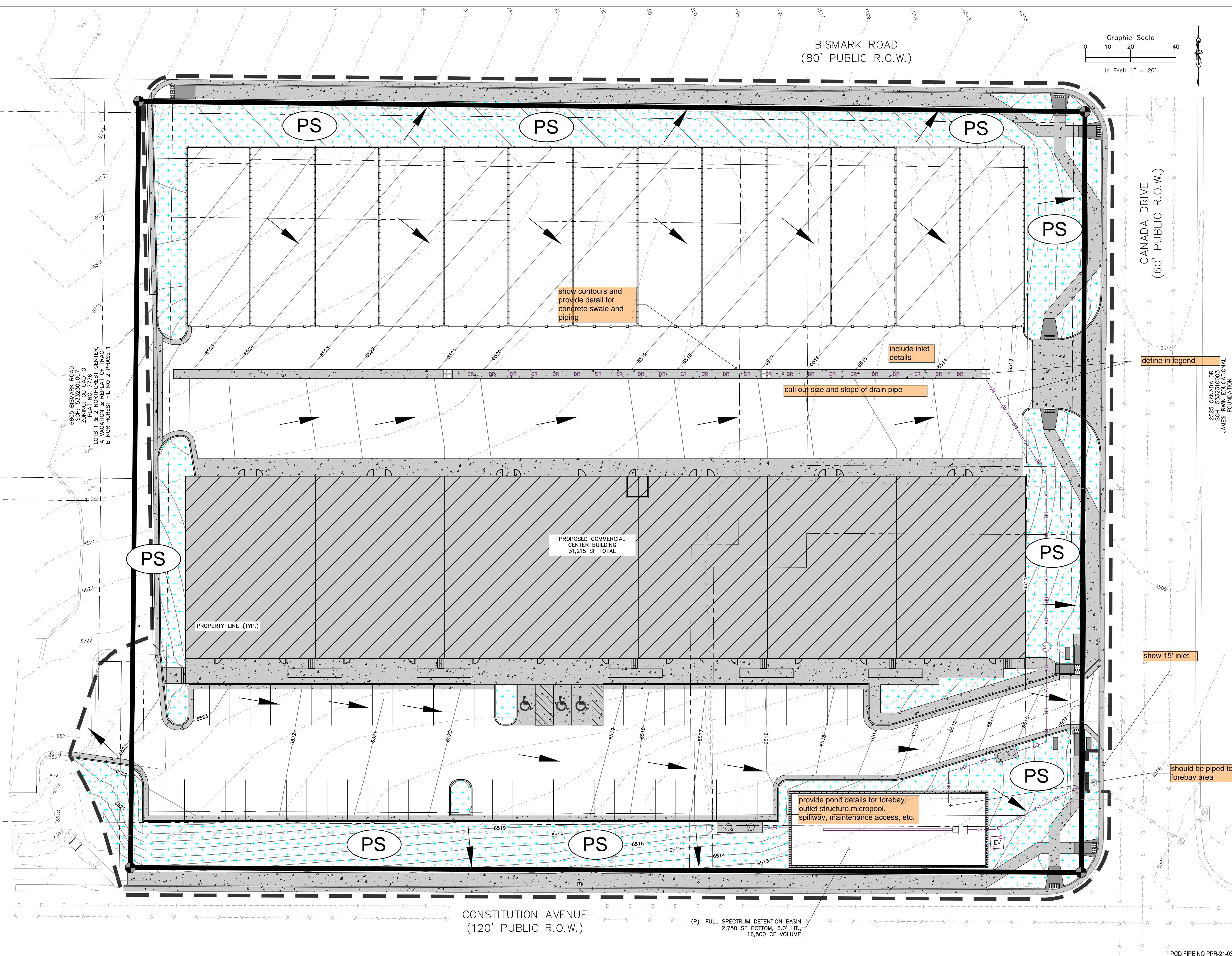
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SHEET NO.  
C-03  
of 8

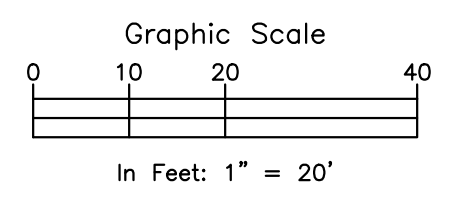
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PLAT NO. 7776  
LOT 1 & 2 NORTHCREST CENTER  
PLAT NO. 7776  
B NORTHCREST FIL NO. 2 PHASE 1

PROPOSED COMMERCIAL  
CENTER BUILDING  
31,215 SF TOTAL

PROPERTY LINE (TYP.)

show contours and  
provide detail for  
concrete swale and  
piping

include inlet  
details

call out size and slope of drain pipe

define in legend

show 15' inlet

provide pond details for forebay,  
outlet structure, micropool,  
spillway, maintenance access, etc.

should be piped to  
forebay area

(P) FULL SPECTRUM DETENTION BASIN  
2,750 SF BOTTOM, 6.0' HT.  
16,500 CF VOLUME

2525 CANADA DR  
SCH: 5.332310003  
JAMES IRWIN EDUCATIONAL  
FOUNDATION

**ROCKY MOUNTAIN GROUP**  
ARCHITECTS  
Structural  
Forensics

SOUTHERN COLORADO  
2910 AUSTIN BLUFFS PARKWAY, COLORADO SPRINGS, CO 80918  
719.578.8800 WWW.ROCKYMOUNTAINENGINEERS.COM  
Structural, Geotechnical, Drainage, Surveying, Right-of-Way, Construction

NOT FOR CONSTRUCTION  
FOR CIVIL ONLY

NORTHCREST PEMB DEVELOPMENT  
2510 & 2522 CANADA DRIVE  
COLORADO SPRINGS, COLORADO  
LEISURE CONSTRUCTION

SHEET NAME  
**EROSION CONTROL PLAN - FINAL**

PROJECT STATUS  
**DESIGN DEVELOPMENT**

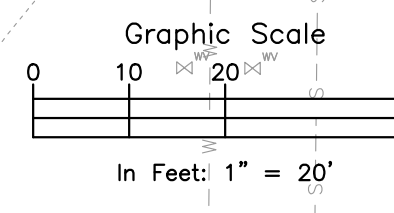
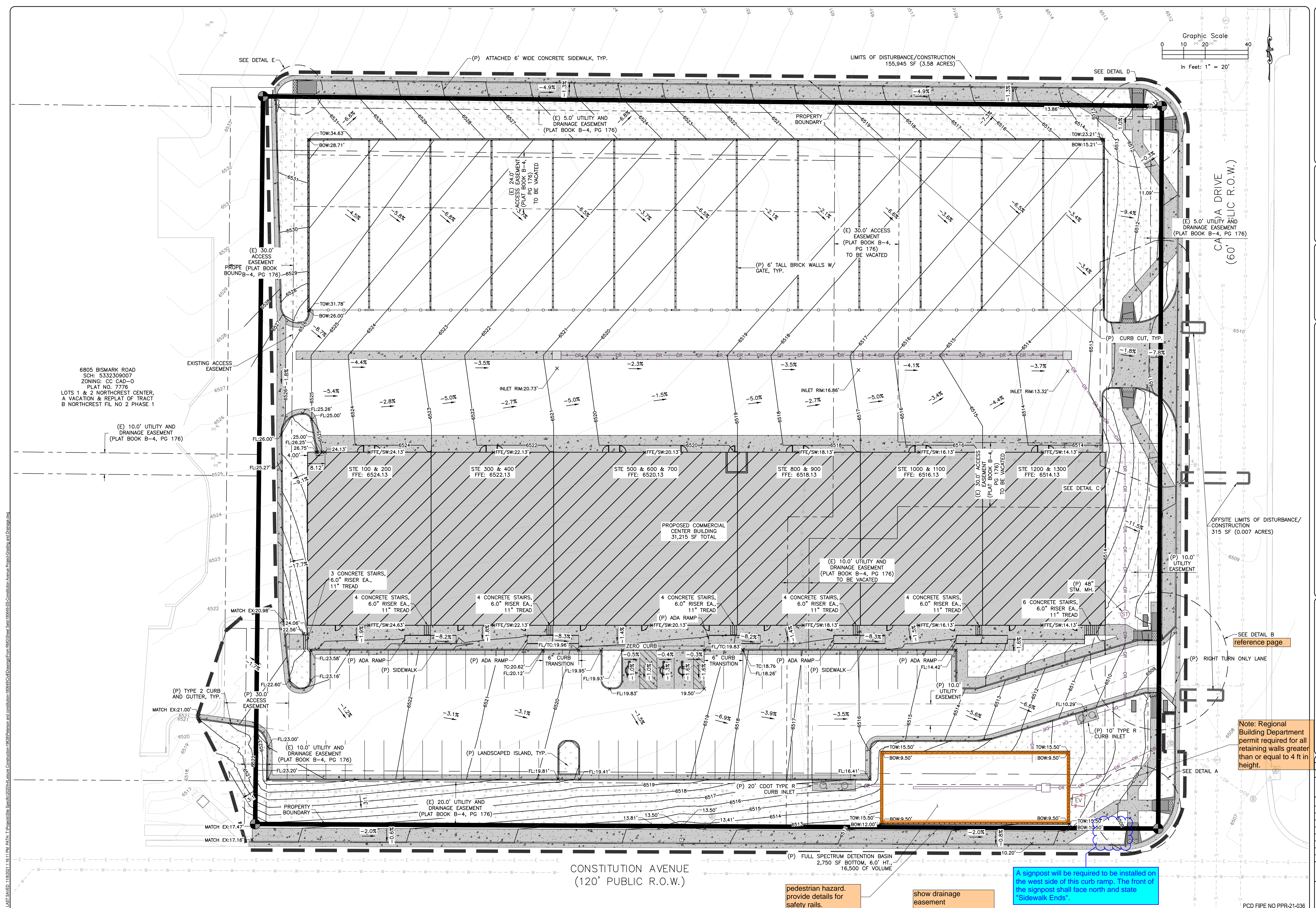
ENG: SAM  
DRAWN: ARP  
CHECKED: SAM  
DATE: 11/08/2021

#	REVISION	DATE

JOB NO. 180649  
SHEET NO. C-04  
of 8

PCD PIPE NO PPR-21-036





NOT FOR CONSTRUCTION FOR CIVIL ONLY

**NORTHEAST PEMB DEVELOPMENT**  
 2510 & 2522 CANADA DRIVE  
 COLORADO SPRINGS, COLORADO  
 LEISURE CONSTRUCTION

SHEET NAME: **PRELIMINARY GRADING & DRAINAGE 1**

PROJECT STATUS: **DESIGN DEVELOPMENT**

ENG:	SAM	
DRAWN:	ASP	
CHECKED:	SAM	
DATE:	11/08/2021	
#	REVISION	DATE
JOB NO.:	180649	
SHEET NO.:	C-05	
	of 8	

Note: Regional Building Department permit required for all retaining walls greater than or equal to 4 ft in height.

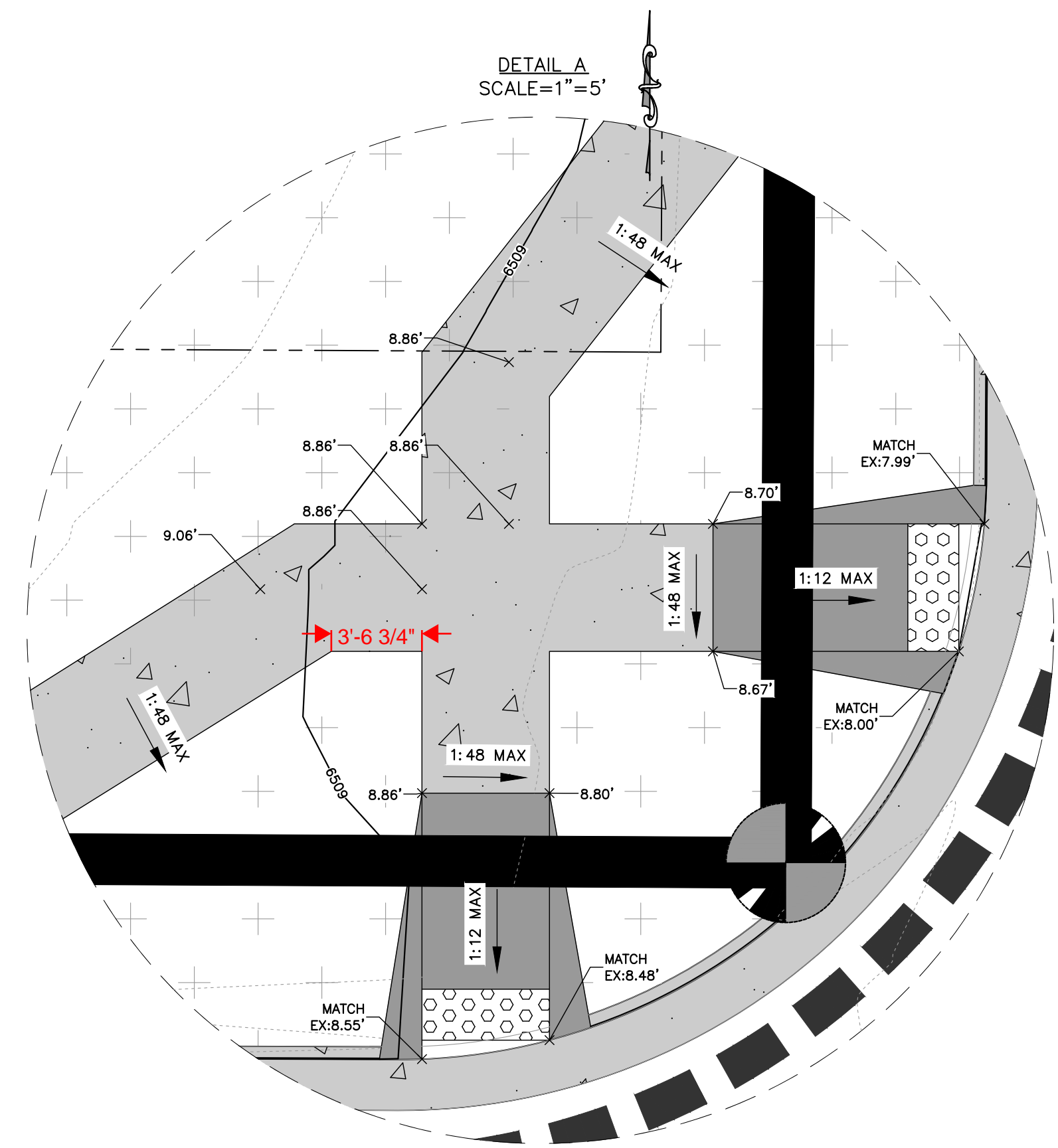
A signpost will be required to be installed on the west side of this curb ramp. The front of the signpost shall face north and state "Sidewalk Ends".

pedestrian handrail, provide details for safety rails.

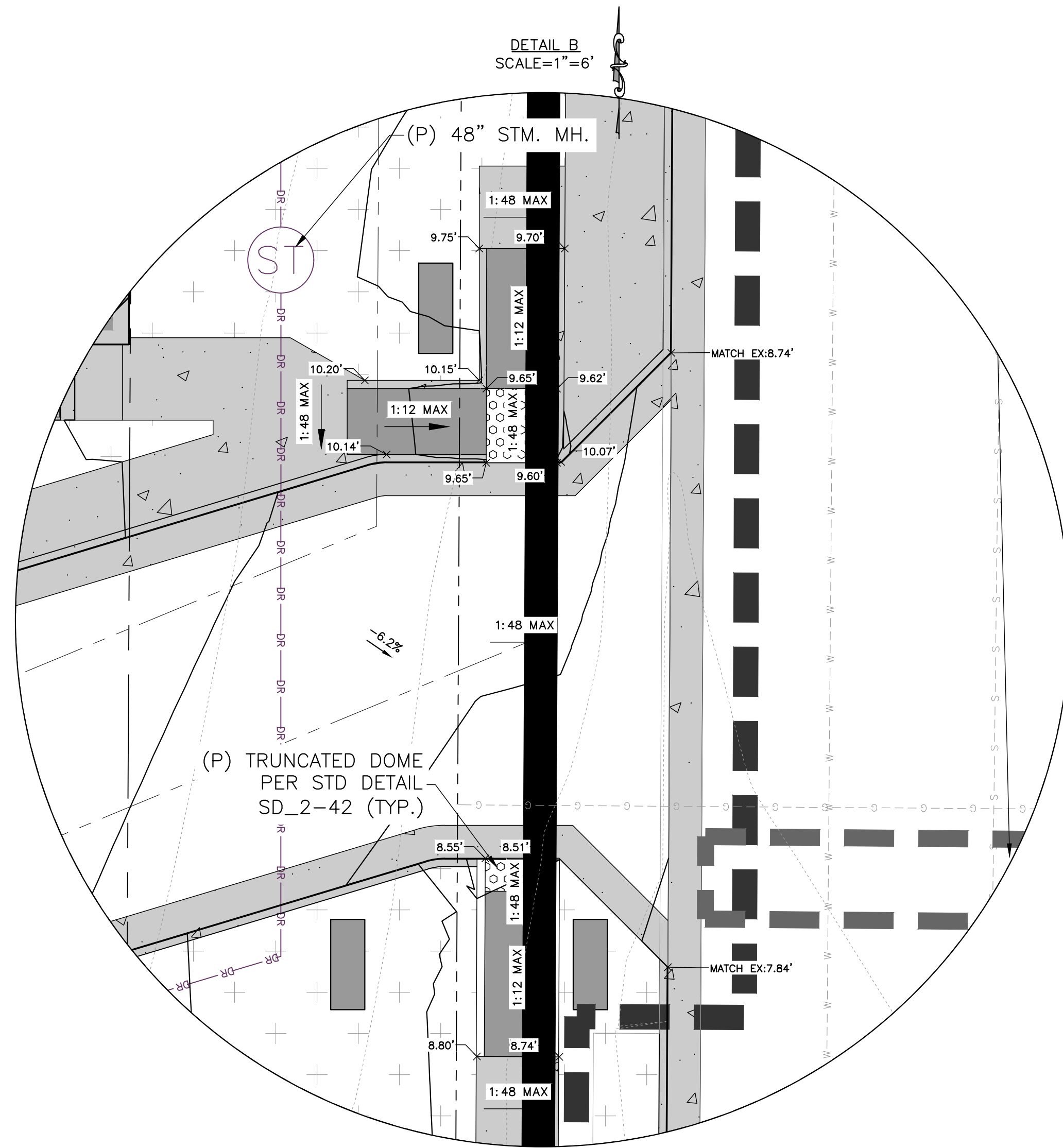
show drainage easement



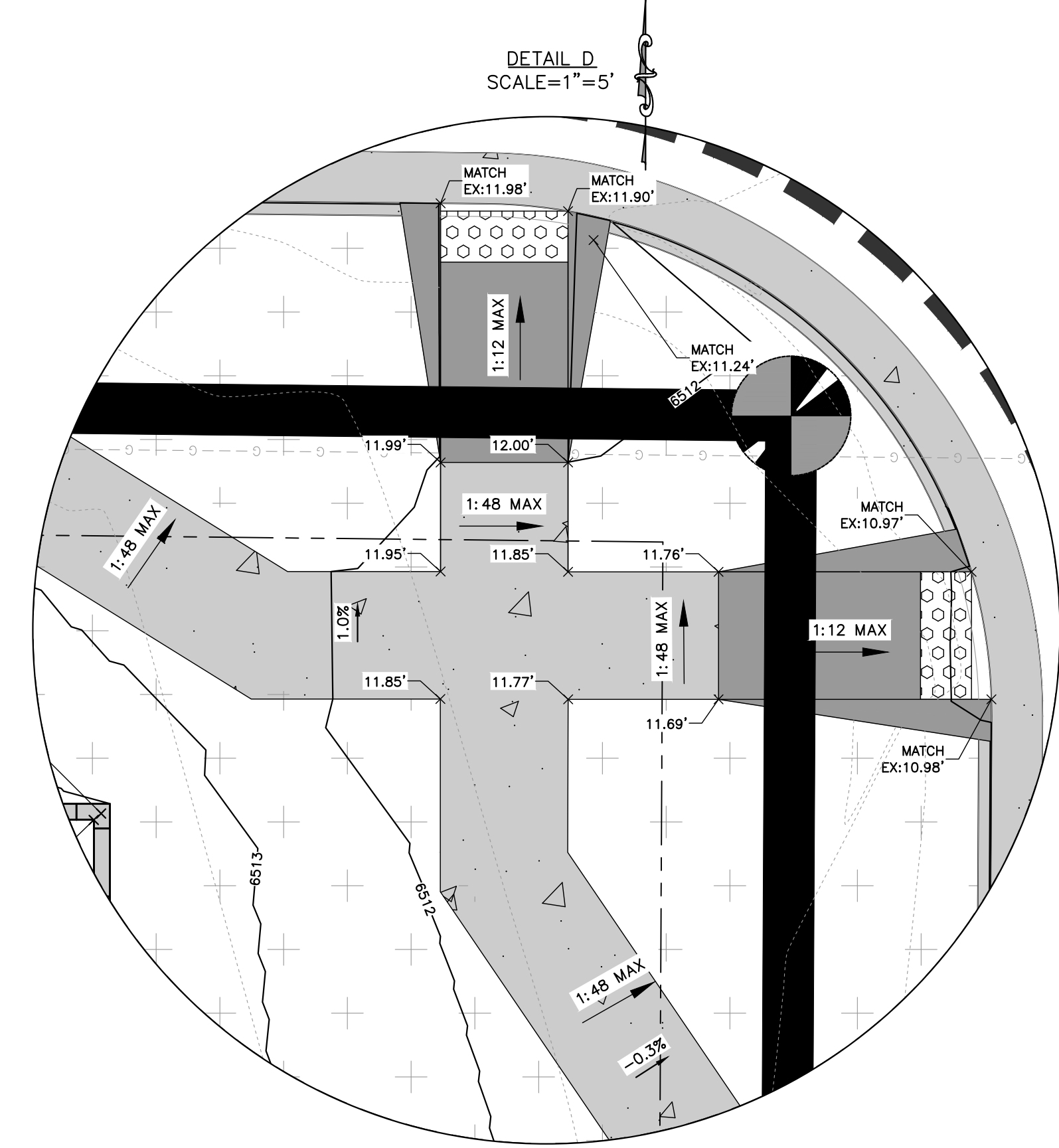
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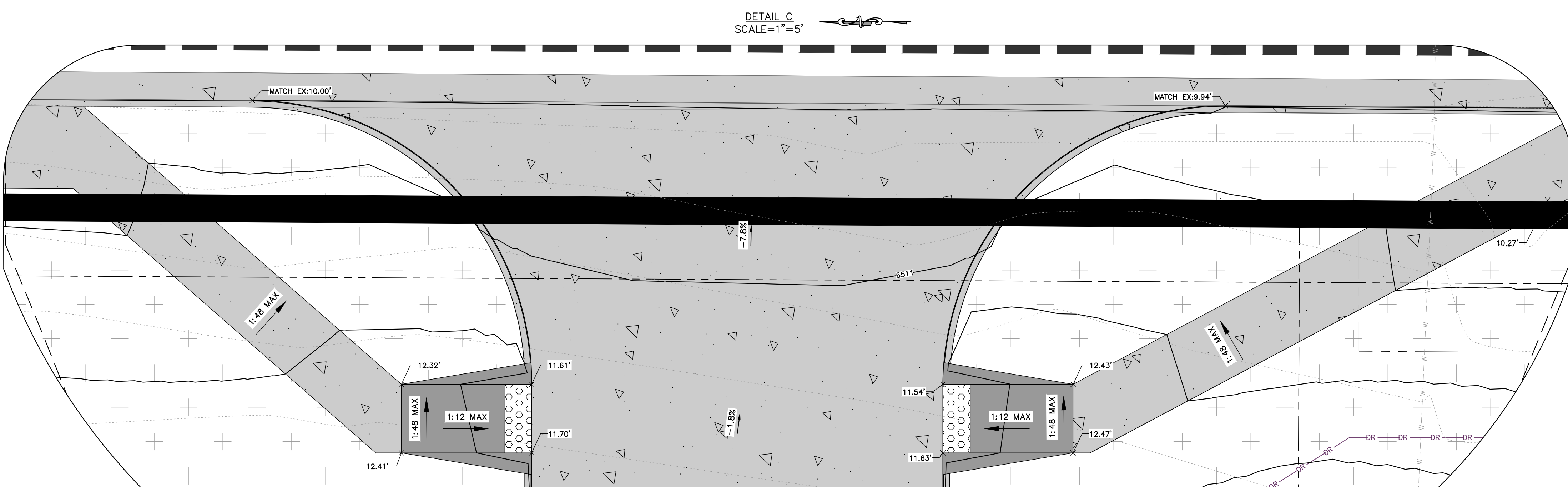
DETAIL A  
SCALE=1"=5'



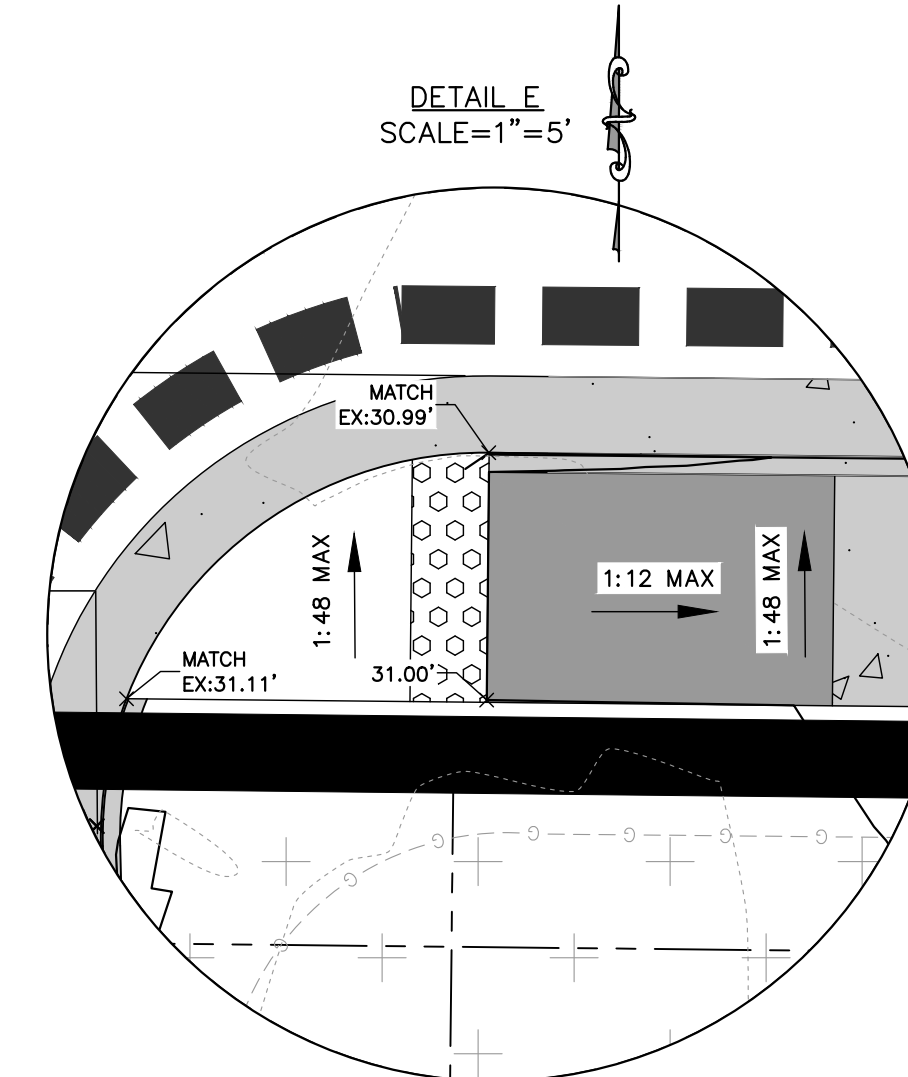
DETAIL B  
SCALE=1"=6'



DETAIL D  
SCALE=1"=5'



DETAIL C  
SCALE=1"=5'



DETAIL E  
SCALE=1"=5'

NOT FOR CONSTRUCTION  
FOR CIVIL ONLY

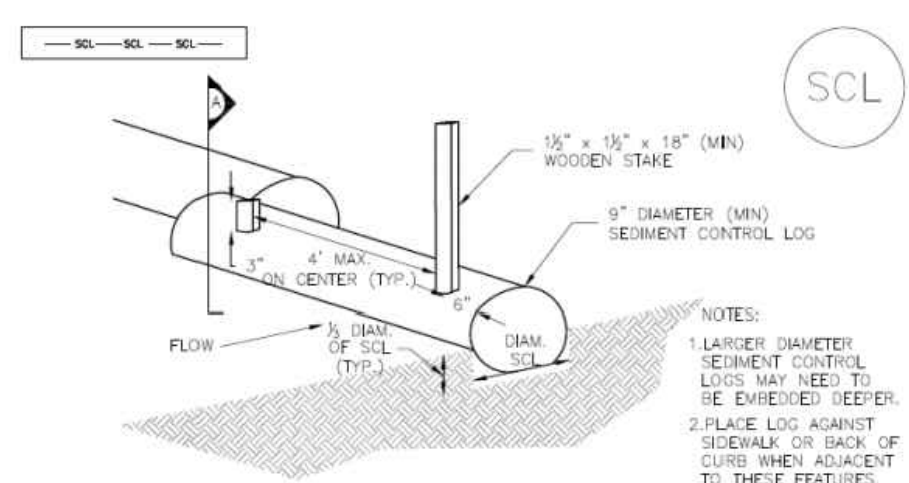
**NORTHCREST PEMB DEVELOPMENT**  
2510 & 2522 CANADA DRIVE  
COLORADO SPRINGS, COLORADO  
LEISURE CONSTRUCTION

SHEET NAME  
**PRELIMINARY GRADING & DRAINAGE 2**

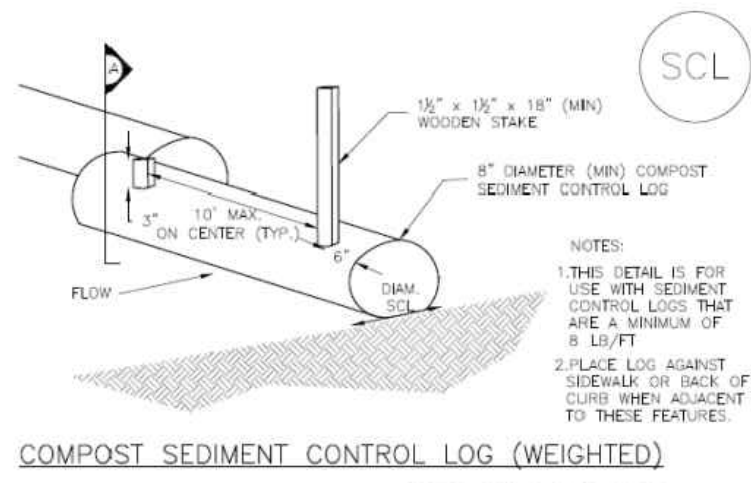
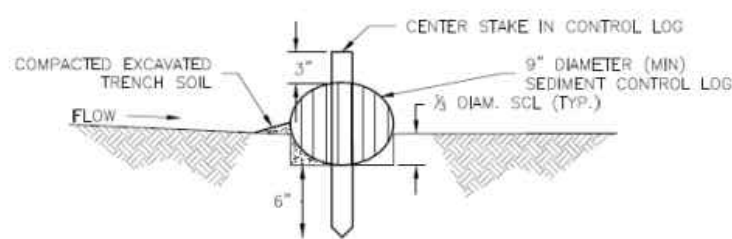
PROJECT STATUS  
**DESIGN DEVELOPMENT**

ENG:	SAM	
DRAWN:	ASP	
CHECKED:	SAM	
DATE	11/08/2021	
#	REVISION	DATE
JOB NO.	180649	
SHEET NO.	C-06	

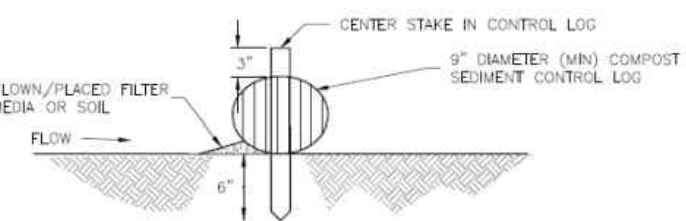




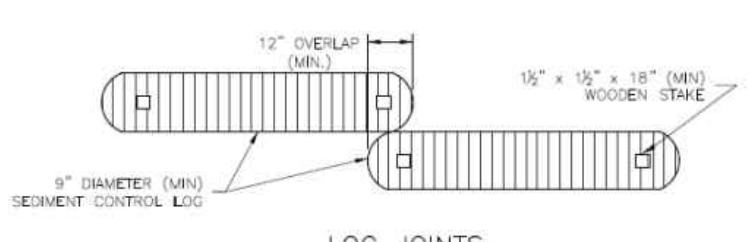
TRENCHED SEDIMENT CONTROL LOG



COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

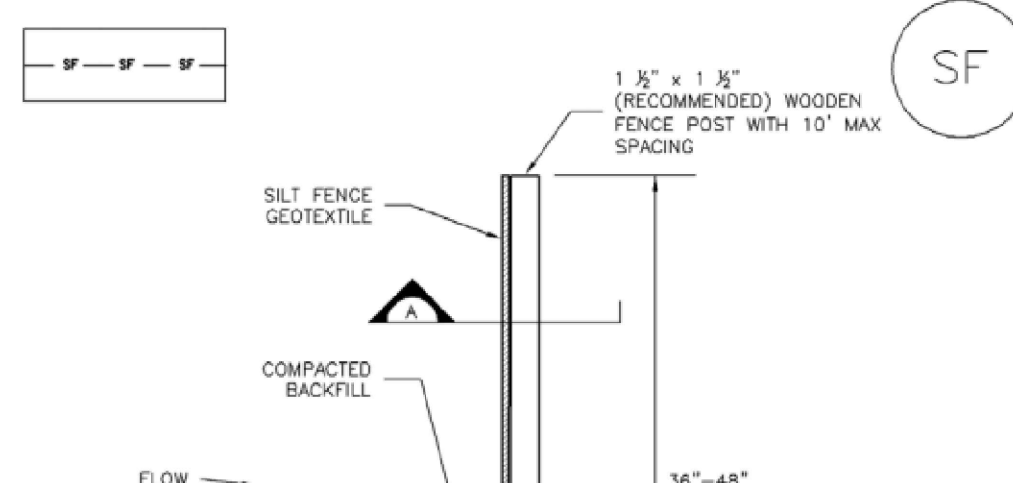


SECTION A  
COMPOST SEDIMENT CONTROL LOG

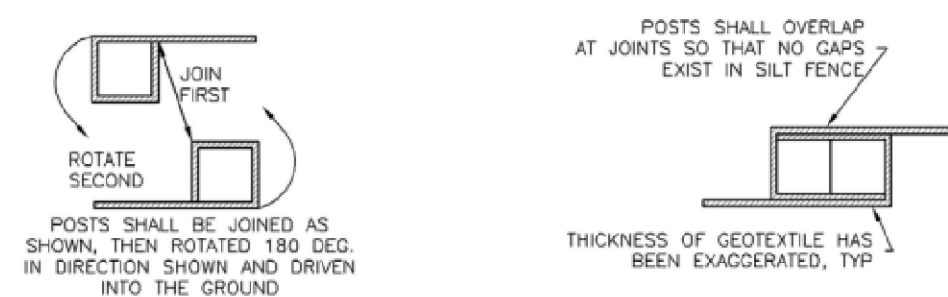


LOG JOINTS

SCL-2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)



SILT FENCE



SECTION A

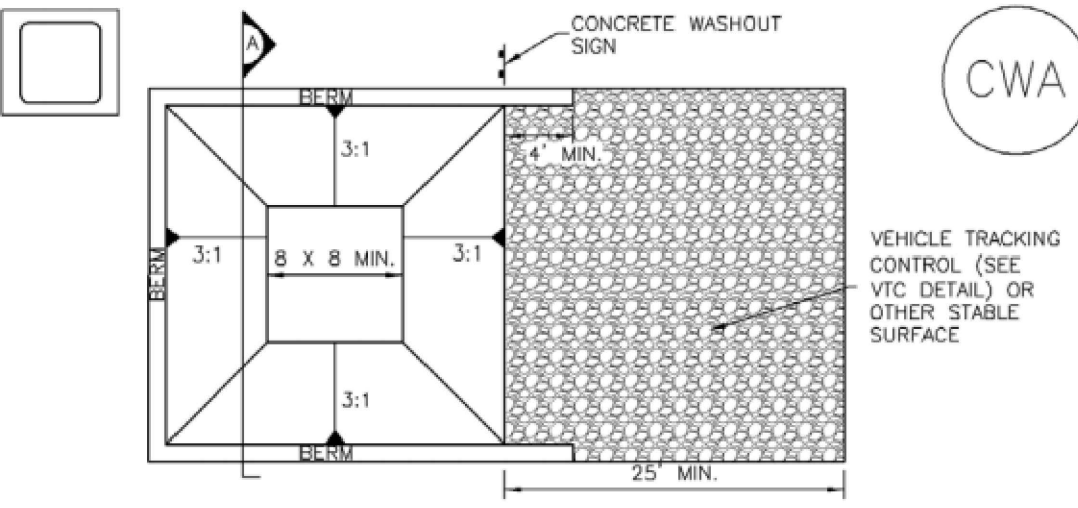
SF-1. SILT FENCE

SILT FENCE INSTALLATION NOTES

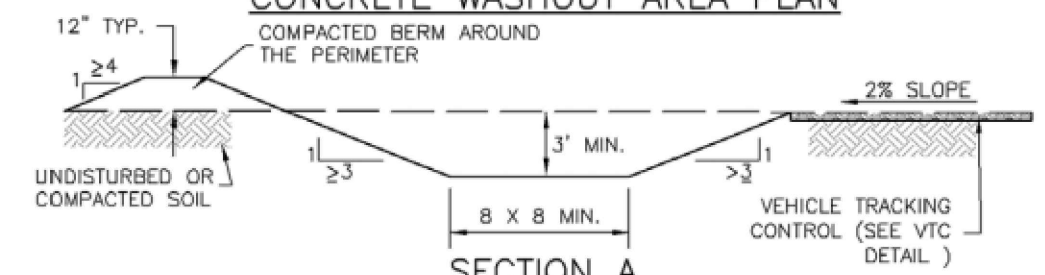
- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
- A UNIFORM 6" x 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
- COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
- SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
- AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK". THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
- REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
- SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
- WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDING AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.



CONCRETE WASHOUT AREA PLAN



SECTION A

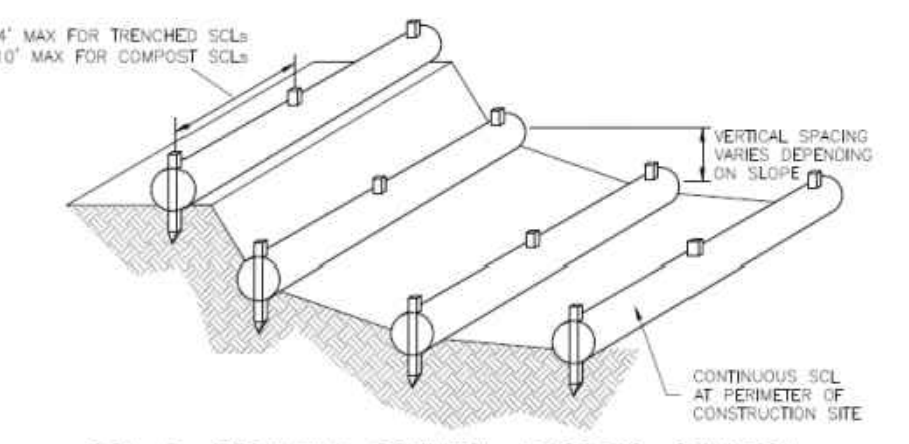
CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

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

CWA MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
- CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
- THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
- WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.



SCL-3. SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

SEDIMENT CONTROL LOG INSTALLATION NOTES

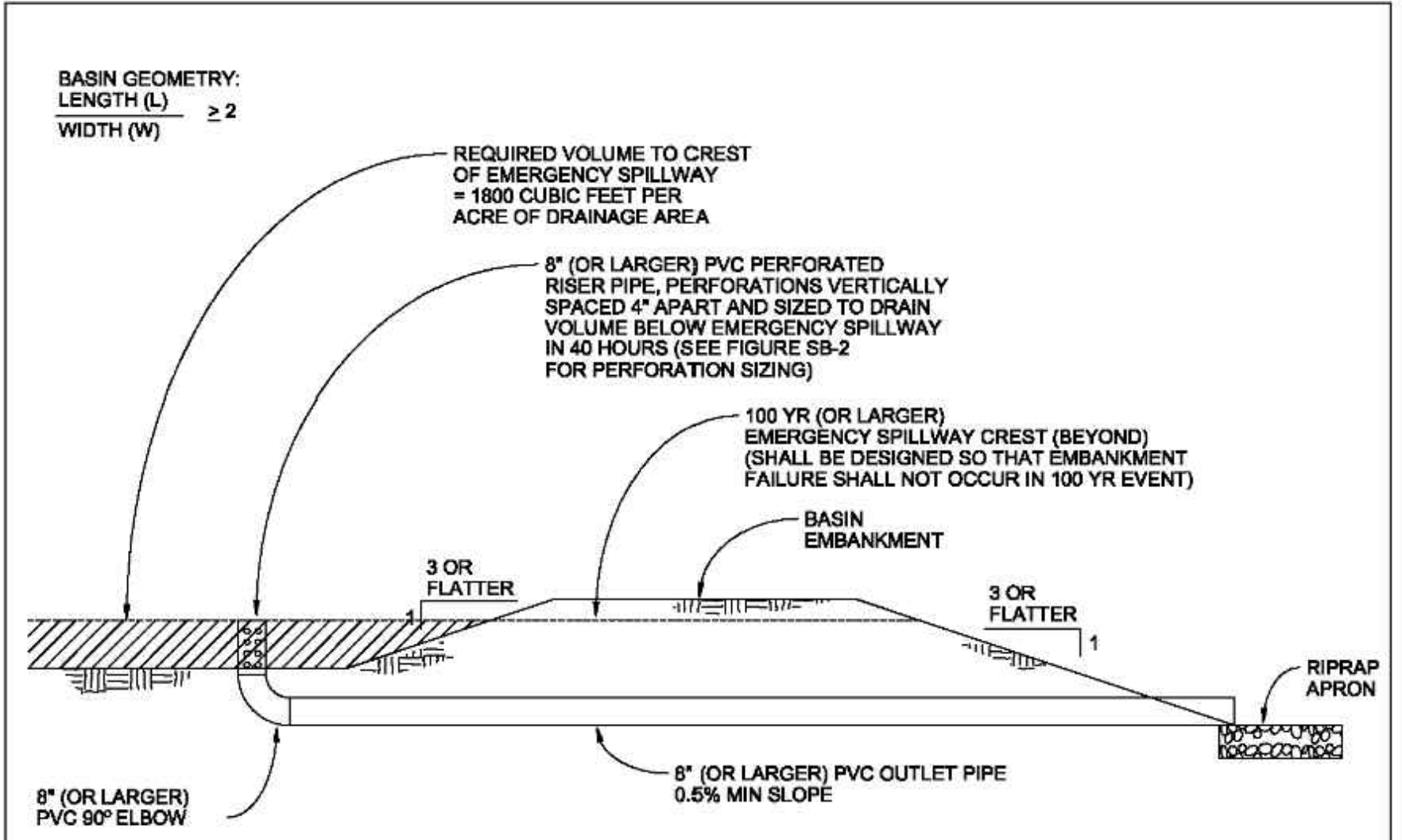
- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
- SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADING LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
- IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
- THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
- FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDING, IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDING AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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



SEDIMENT BASIN

SEDIMENT BASIN NOTES

INSTALLATION REQUIREMENTS

- SEDIMENT BASINS SHALL BE INSTALLED BEFORE ANY CLEARING AND/OR GRADING IS UNDERTAKEN.
- THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.
- THE OUTLET OF THE BASIN SHALL BE DESIGNED TO DRAIN ITS VOLUME IN 40 HOURS.
- THE OUTLET IS TO BE LOCATED AT THE FURTHEST DISTANCE FROM THE INLET OF THE BASIN. BAFFLES MAY BE NEEDED TO INCREASE THE FLOW LENGTH AND SETTLING TIME.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.
- EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 698.
- WHEN A BASIN IS INSTALLED NEAR A RESIDENTIAL AREA FOR SAFETY REASONS, A SIGN SHALL BE POSTED AND THE AREA SECURED WITH A FENCE.

MAINTENANCE REQUIREMENTS

- CONTRACTOR SHALL INSPECT SEDIMENT BASINS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS NO RAINFALL.
- SEDIMENT BASINS SHALL BE CLEANED OUT BEFORE SEDIMENT HAS FILLED HALF THE VOLUME OF THE BASIN.
- SEDIMENT BASINS SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY THE CITY.

City of Colorado Springs  
Stormwater Quality

Figure SB-1  
Sediment Basin  
Construction Detail and Maintenance  
Requirements

ROCKY MOUNTAIN GROUP  
ARCHITECTS  
ENGINEERS

Geotechnical  
Materials Testing  
Civil/Planning

Architectural  
Structural  
Forensics

2910 AUSTIN BLUFFS PARKWAY, COLORADO SPRINGS, CO 80918  
719.536.6600 WWW.RMENGINEERS.COM  
Boulder, Colorado, Denver, Fort Collins, North Platte, Nebraska

NORTHCREST PEMB DEVELOPMENT  
2510 & 2522 CANADA DRIVE  
COLORADO SPRINGS, COLORADO  
LEISURE CONSTRUCTION

EROSION CONTROL DETAILS 1  
DESIGN DEVELOPMENT

PROJECT STATUS

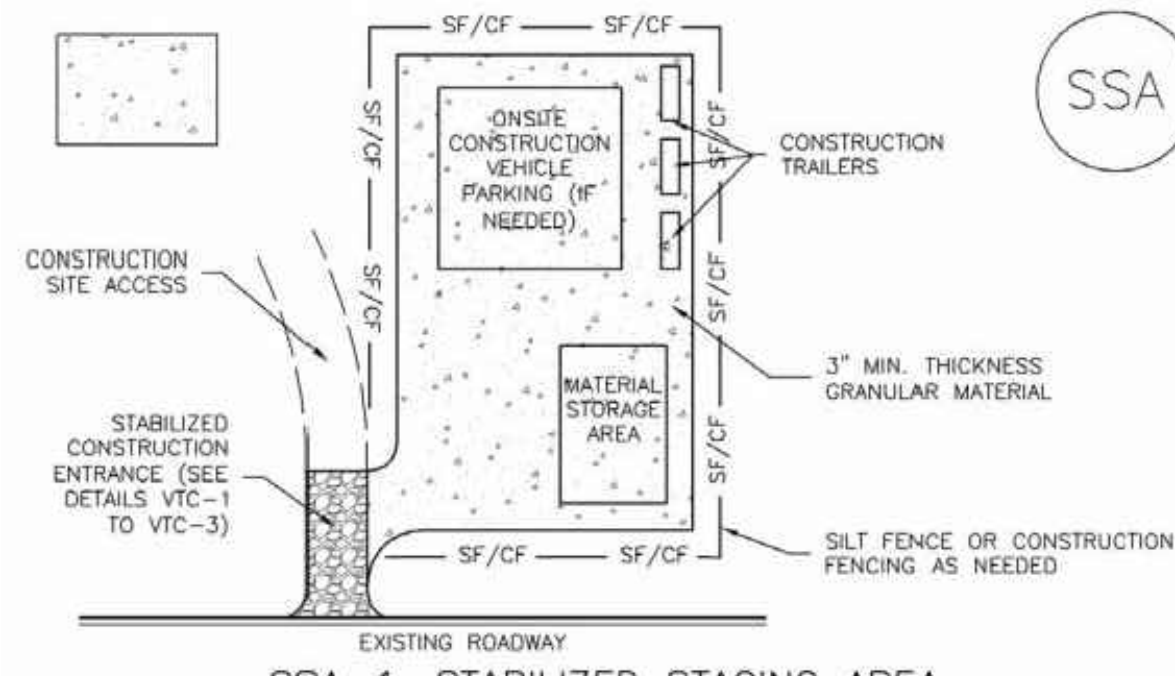
ENG: SAM  
DRAWN: ARP  
CHECKED: SAM  
DATE: 11/08/2021

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JOB NO: 180649  
SHEET NO: C-07  
of 8

City of Colorado Springs  
Stormwater Quality





SSA-1. STABILIZED STAGING AREA

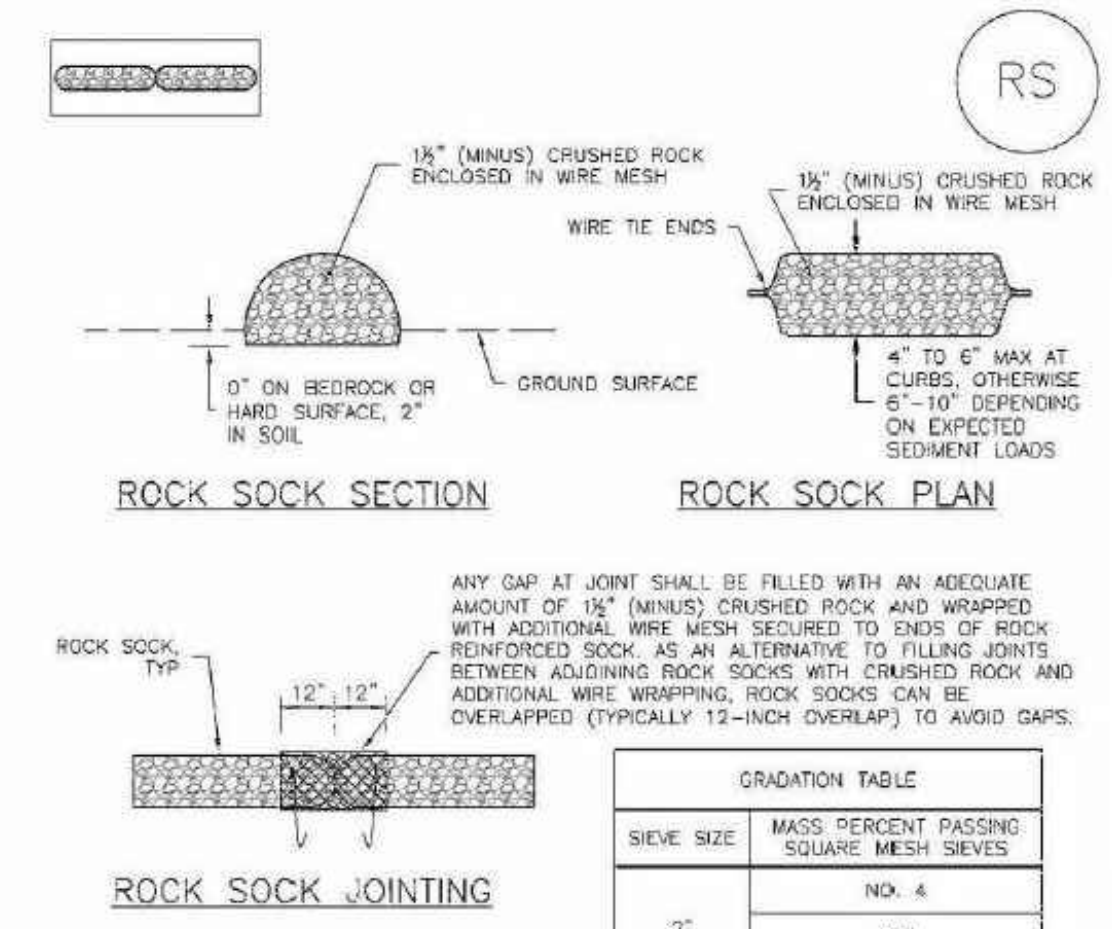
- STABILIZED STAGING AREA INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
    - LOCATION OF STAGING AREA(S).
    - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
  - STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
  - STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
  - THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
  - UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
  - ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

- STABILIZED STAGING AREA MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

- STABILIZED STAGING AREA MAINTENANCE NOTES**
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
  - 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 UDFCO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



**ROCK SOCK JOINTING**

ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 1 1/2" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED SOCK. AS AN ALTERNATIVE TO FILLING JOINTS BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND ADDITIONAL WIRE WRAPPING, ROCK SOCKS CAN BE OVERLAPPED (TYPICALLY 12-INCH OVERLAP) TO AVOID GAPS.

GRADATION TABLE	
NO. 4	
2"	100
1 1/2"	90 - 100
1"	20 - 55
3/4"	0 - 15
3/8"	0 - 5

**MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SOCKS.**

- ROCK SOCK INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
    - LOCATION(S) OF ROCK SOCKS.
  - CRUSHED ROCK SHALL BE 1 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1 1/2" MINUS).
  - WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF 1/2 INCH, RECOMMENDED MINIMUM ROLL WIDTH OF 48 INCHES.
  - WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS.
  - ALONG ALL JOINTS AND AT 2' CENTERS ON ENDS OF SOCKS.
  - JEFFERSON COUNTY MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE IF SPECIFIED ON THE APPROVED PLANS.

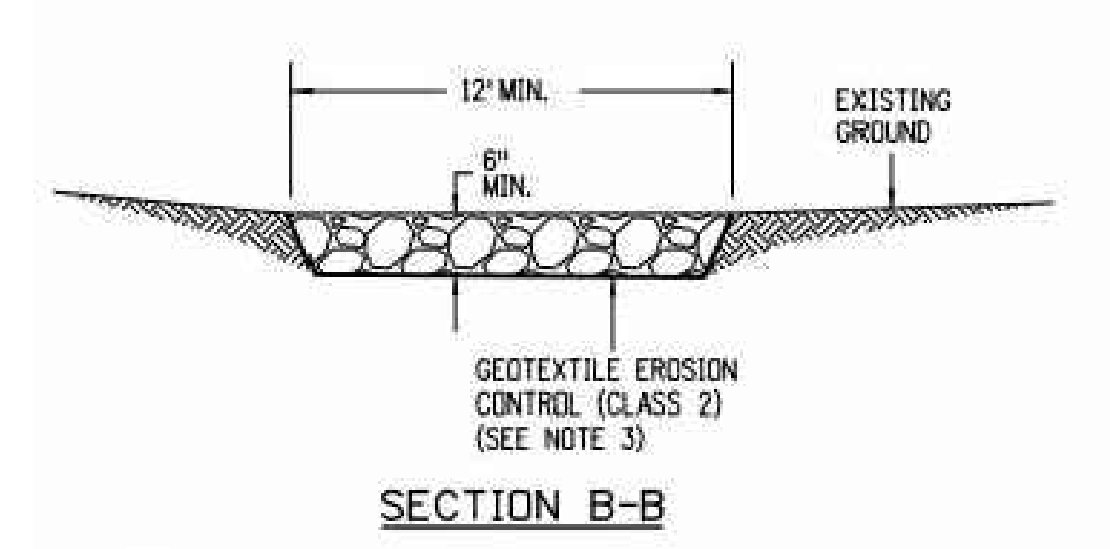
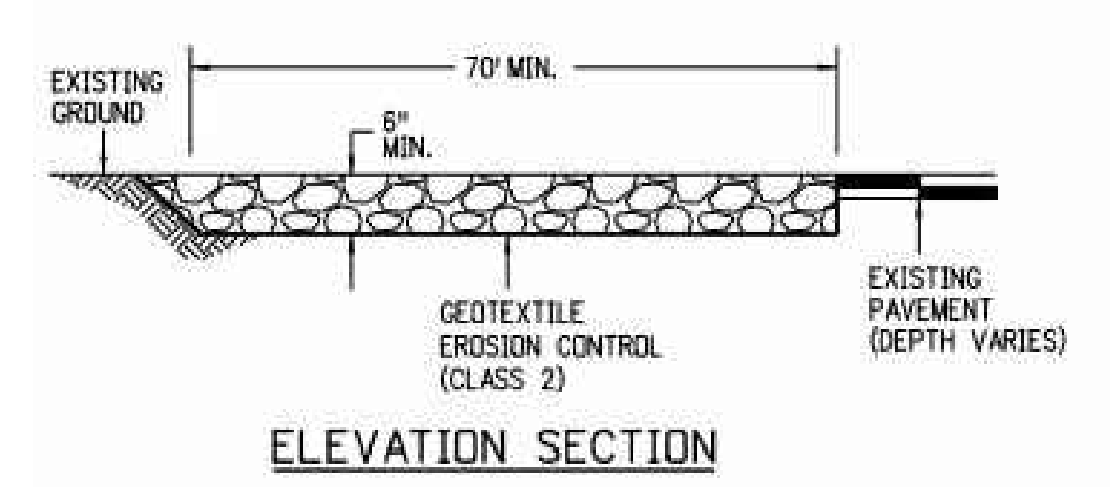
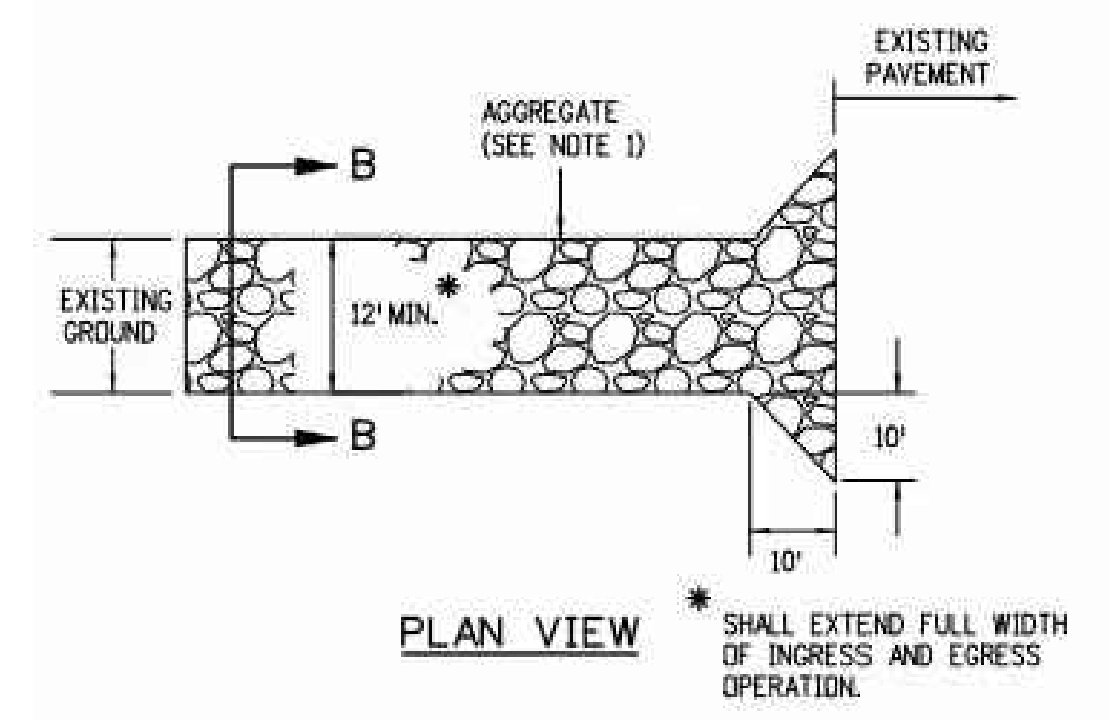
- ROCK SOCK MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.
  - SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.
  - ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY JEFFERSON COUNTY.
  - WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY JEFFERSON COUNTY.

**ROCK SOCK**



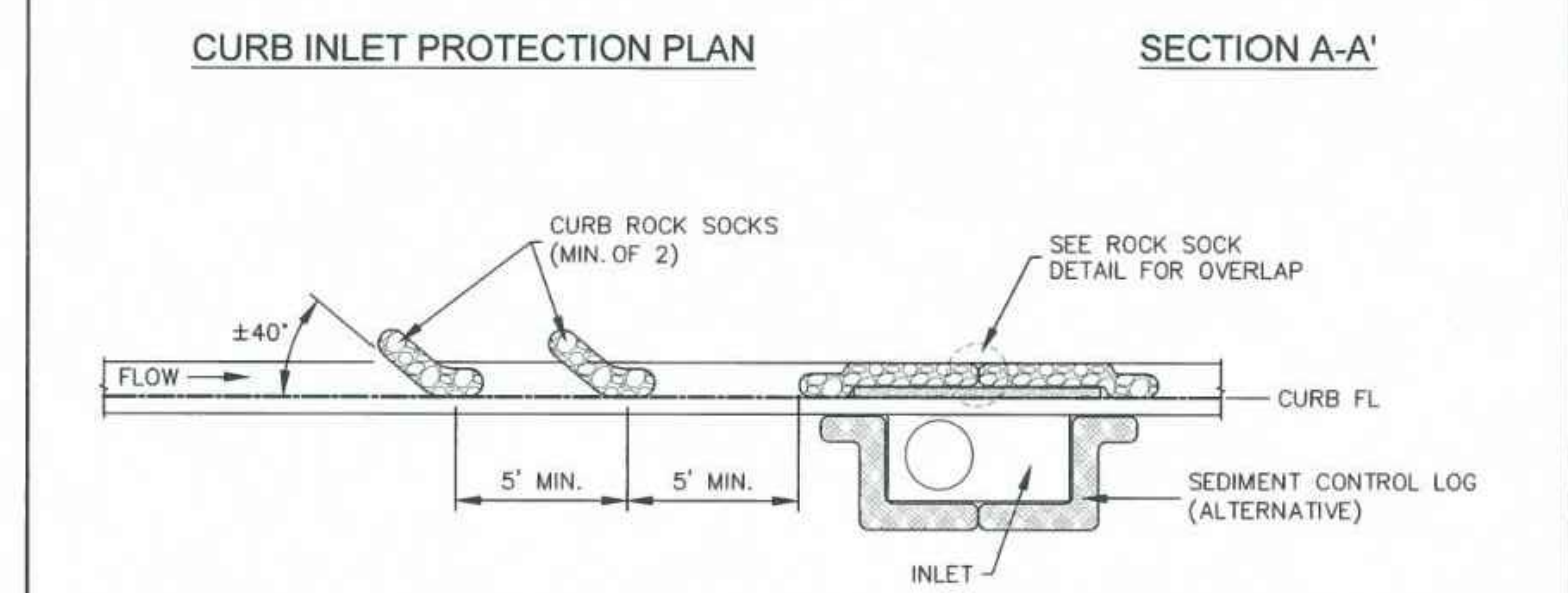
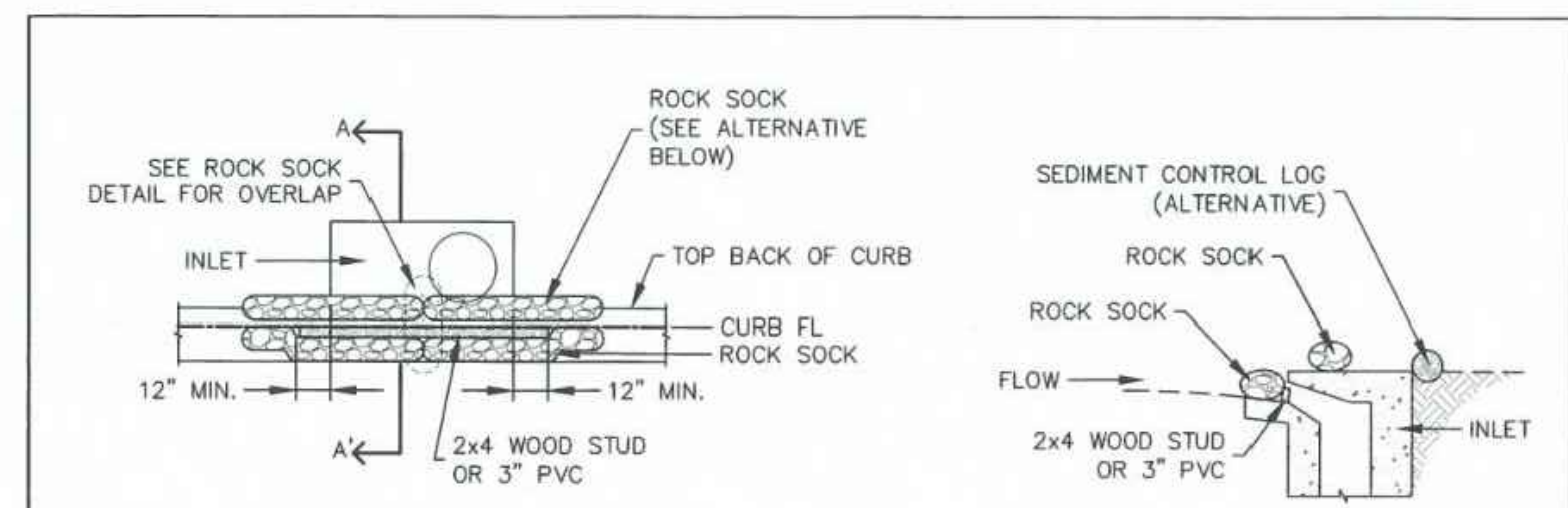
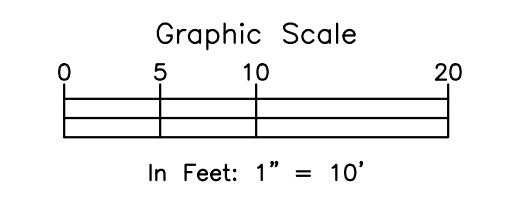
Detail 14

replace with EPC approved VTC detail (VT-1 and VT-2 in DCMv2, Chap 3.3) or revise to be 75ft min length



- NOTES:**
- AGGREGATE SHALL CONFORM TO SUBSECTION 208.02 (K).
  - THE CONTRACTOR SHALL PROTECT CURB AND GUTTER THAT CROSSES THE ENTRANCE FROM DAMAGE. PROTECTION OF THE CURB AND GUTTER SHALL BE INCLUDED IN THE COST OF WORK AND NOT PAID FOR SEPARATELY.
  - GEOTEXTILE SHALL CONFORM TO SUBSECTION 712.08.
  - ALL MATERIALS AND LABOR TO COMPLETE THE VEHICLE TRACKING PAD SHALL BE INCLUDED IN THE COST OF WORK AND NOT PAID FOR SEPARATELY.
  - THE PAY ITEM NUMBER FOR VEHICLE TRACKING PAD (EACH) IS 208-00070.

**VEHICLE TRACKING PAD**



- INSTALLATION NOTES**
- SEE ROCK SOCK DETAIL FOR INSTALLATION REQUIREMENTS.
  - PLACEMENT OF THE ROCK SOCK SHALL BE APPROXIMATELY 40 DEGREES FROM THE CURB.
  - ROCK SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5' APART.
  - AT LEAST TWO CURB ROCK SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADIENT INLETS.
  - ADDITIONAL ROCK SOCKS MAY BE REQUIRED AT GEC INSPECTOR'S DISCRETION.
- MAINTENANCE NOTES**
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE DESIGN DEPTH OF THE INLET BARRIER.
  - ROCK SOCKS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
  - PERMANENTLY STABILIZE AREA BEHIND INLET AFTER ROCK SOCKS ARE REMOVED WHEN REMOVAL IS APPROPRIATE.



**STORMWATER ENTERPRISE**

**ON-GRADE INLET PROTECTION**

APPROVED: [Signature]

ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO: 900-IP-1

**ROCKY MOUNTAIN GROUP**

ARCHITECTS  
Structural  
Forensics

**RMG ENGINEERS**

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Materials Testing  
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**NORTHCREST PEMB DEVELOPMENT**

2510 & 2522 CANADA DRIVE  
COLORADO SPRINGS, COLORADO

**LEISURE CONSTRUCTION**

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**EROSION CONTROL DETAILS 2**

**DESIGN DEVELOPMENT**

SHEET NAME: EROSION CONTROL DETAILS 2

PROJECT STATUS: DESIGN DEVELOPMENT

ENG: SAM  
DRAWN: ARP  
CHECKED: SAM

DATE: 11/08/2021

#	REVISION	DATE

JOB NO: 180649

SHEET NO: C-08 of 9

**NOTE:** THE STABILIZED DRIVEWAY ACCESS/DRIVEWAY TO BE CONSTRUCTED TO VEHICLE TRACKING CONTROL STANDARDS WITH THE PROPOSED DRIVEWAY AGGREGATE BASE COURSE MATERIAL AND COMPACTION. A MINIMUM OF 30' INSIDE RADII ARE TO BE CONSTRUCTED FOR THE STABILIZED DRIVEWAY ACCESS/DRIVEWAY AND VEHICLE TRACKING FOR HEAVY VEHICLE INGRESS/EGRESS.