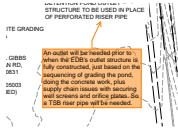


# Grading and Erosion Control Plan\_V1.pdf Markup Summary

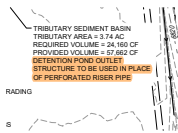
6/27/2022 3:45:28 PM (1)



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**Author:** Glenn Reese - EPC Stormwater  
**Date:** 6/27/2022 3:45:28 PM  
**Status:**  
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**Space:**

An outlet will be needed prior to when the EDB's outlet structure is fully constructed, just based on the sequencing of grading the pond, doing the concrete work, plus supply chain issues with securing well screens and orifice plates. So a TSB riser pipe will be needed.

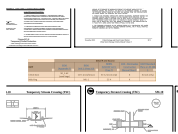
6/27/2022 3:42:50 PM (1)



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**Author:** Glenn Reese - EPC Stormwater  
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DETENTION POND OUTLET  
STRUCTURE TO BE USED IN PLACE  
OF PERFORATED RISER PIPE

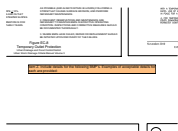
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Item Z. Include details for the following BMP's. Examples of acceptable details for each are provided:

6/27/2022 3:37:47 PM (1)



**Subject:** SW - Textbox  
**Page Label:** [6] 6 ECN02  
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Item Z. Include details for the following BMP's. Examples of acceptable details for each are provided:

6/27/2022 3:31:39 PM (1)



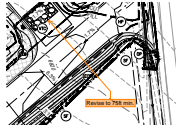
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**Author:** Glenn Reese - EPC Stormwater  
**Date:** 6/27/2022 3:31:39 PM  
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Show pond maintenance easement and/or label as a Tract.

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6/27/2022 12:33:30 PM (1)

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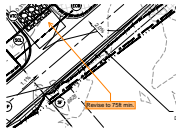
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**Author:** Glenn Reese - EPC Stormwater  
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Revise to 75ft min.

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6/27/2022 12:33:23 PM (1)

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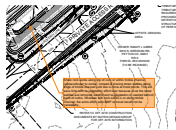
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**Author:** Glenn Reese - EPC Stormwater  
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Revise to 75ft min.

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6/27/2022 12:30:27 PM (1)

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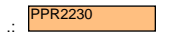
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**Author:** Glenn Reese - EPC Stormwater  
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Show rock socks along top of curb or within trickle channel (perpendicular to curbs), instead of placing straw wattles along edge of trickle channel curb like is done at most ponds. This will save time with re-vegetation effort later because once the straw wattles are removed, backfill and re-vegetation is needed behind back of curbs. Whereas with rock socks in or along trickle channel, the extra effort post-BMP removal would not be necessary.

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6/25/2022 6:25:06 PM (1)

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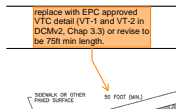
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**Space:**

PPR2230

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6/25/2022 6:24:35 PM (1)

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**Subject:** SW - Textbox with Arrow  
**Page Label:** [5] 5 ECN01  
**Author:** Glenn Reese - EPC Stormwater  
**Date:** 6/25/2022 6:24:35 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

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

**BENCHMARK:**

SITE BM NO. 1: CENTER OF SANITARY SEWER MANHOLE LOCATED 242 FEET SOUTH OF THE SOUTH EDGE OF ASPHALT OF HIGHWAY 24 AND 9 FEET EAST OF THE EAST EDGE OF ASPHALT OF OLD MERIDIAN ROAD NAVD88 DATUM ELEVATION 6825.51.

SITE BM NO. 2: CENTER OF SANITARY SEWER MANHOLE LOCATED 861 FEET SOUTH OF THE SOUTH EDGE OF ASPHALT OF HIGHWAY 24 AND 3 FEET EAST OF THE EAST EDGE OF ASPHALT OF OLD MERIDIAN ROAD NAVD88 DATUM ELEVATION 6816.71.

**BASIS OF BEARINGS:**

ALL BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHEAST 1/4 OF SECTION 12 AS MONUMENTED BY A 3-1/4 INCH ALUMINUM CAP STAMPED "EL PASO COUNTY DPW T13S S12/S7/S13/S18 R65W R64W 1982 LS 17496" AT THE SOUTHEAST CORNER OF SECTION 12 AND BY A 3-1/4 INCH ALUMINUM CAP STAMPED "SURVCON INC. T13S R65W 1/4 S12 S13 2003 PLS 30829" AT THE SOUTH 1/4 CORNER OF SECTION 12, SAID LINE BEARS N89°50'28"W.

**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.

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

NICOLE SCHANEL, PE #52434  
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.

**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 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 DIRECTORS DISCRETION.

JENNIFER IRVINE, P.E. \_\_\_\_\_ DATE \_\_\_\_\_  
COUNTY ENGINEER / ECM ADMINISTRATOR

**OWNER/DEVELOPER:**

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

ZOE PERICAK \_\_\_\_\_ DATE \_\_\_\_\_  
LAND DEVELOPMENT CONSULTANTS  
950 S. CHERRY STREET, SUITE 512  
DENVER, CO 80246

**CONTACT LIST**

**OWNER**  
CIRCLE K STORES INC.  
5500 S. QUEBEC STREET, SUITE 100  
GREENWOOD VILLAGE, CO 80111  
PHONE: (720) 758-6223

**LAND SURVEYOR**  
RUBINO SURVEYING  
3312 AIRPORT ROAD  
BOULDER, COLORADO 80301  
PHONE: (303) 464-9515

**FIRE**  
FALCON FIRE PROTECTION DISTRICT  
7030 OLD MERIDIAN ROAD  
FALCON, CO 80831  
PHONE: (719) 495-4050

**DEVELOPER**  
LAND DEVELOPMENT CONSULTANTS, LLC  
950 S. CHERRY ST., SUITE 512  
DENVER, CO 80246  
SOFIA HERNANDEZ  
PHONE: (303) 717-3305

**GEOTECHNICAL ENGINEER**  
TERRACON CONSULTANTS, INC.  
4172 CENTER PARK DRIVE  
COLORADO SPRINGS, CO 80916  
PHONE: (719) 597-2116

**STORM SEWER**  
EL PASO COUNTY PUBLIC SERVICES  
3275 AKERS DR.  
COLORADO SPRINGS, COLORADO 80922  
PHONE: (719) 520-6460

**CIVIL ENGINEER/ LANDSCAPE ARCHITECT**  
MATRIX DESIGN GROUP  
2435 RESEARCH PARKWAY, SUITE 300  
COLORADO SPRINGS, CO 80920  
NICOLE SCHANEL/ JASON ALWINE  
PHONE: (719) 575-0100

**ELECTRICAL SERVICE**  
MOUNTAIN VIEW ELECTRIC ASSOCIATION  
11140 E. WOODMEN ROAD  
PEYTON, COLORADO 80831  
PHONE: (719) 495-2283

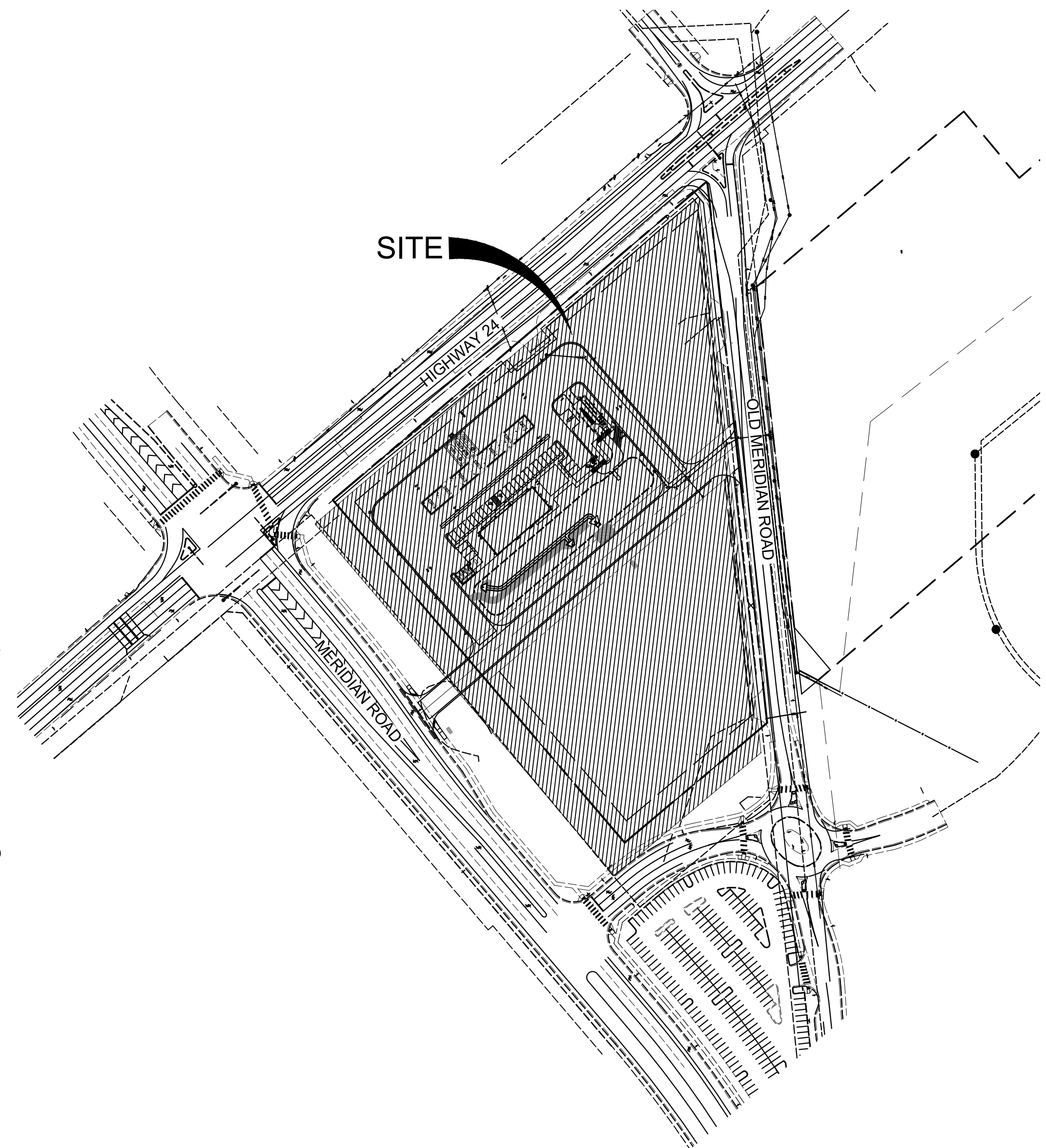
**GAS**  
COLORADO SPRINGS UTILITIES  
7710 DURANT DRIVE  
COLORADO SPRINGS, COLORADO 80920  
TIM BENEDICT  
PHONE: (719) 668-3574

**ARCHITECT**  
GREENBERG FARROW  
30 EXECUTIVE DRIVE, SUITE 100  
IRVINE, CA 92614  
DOUG COUPER  
PHONE: (949) 296-0450

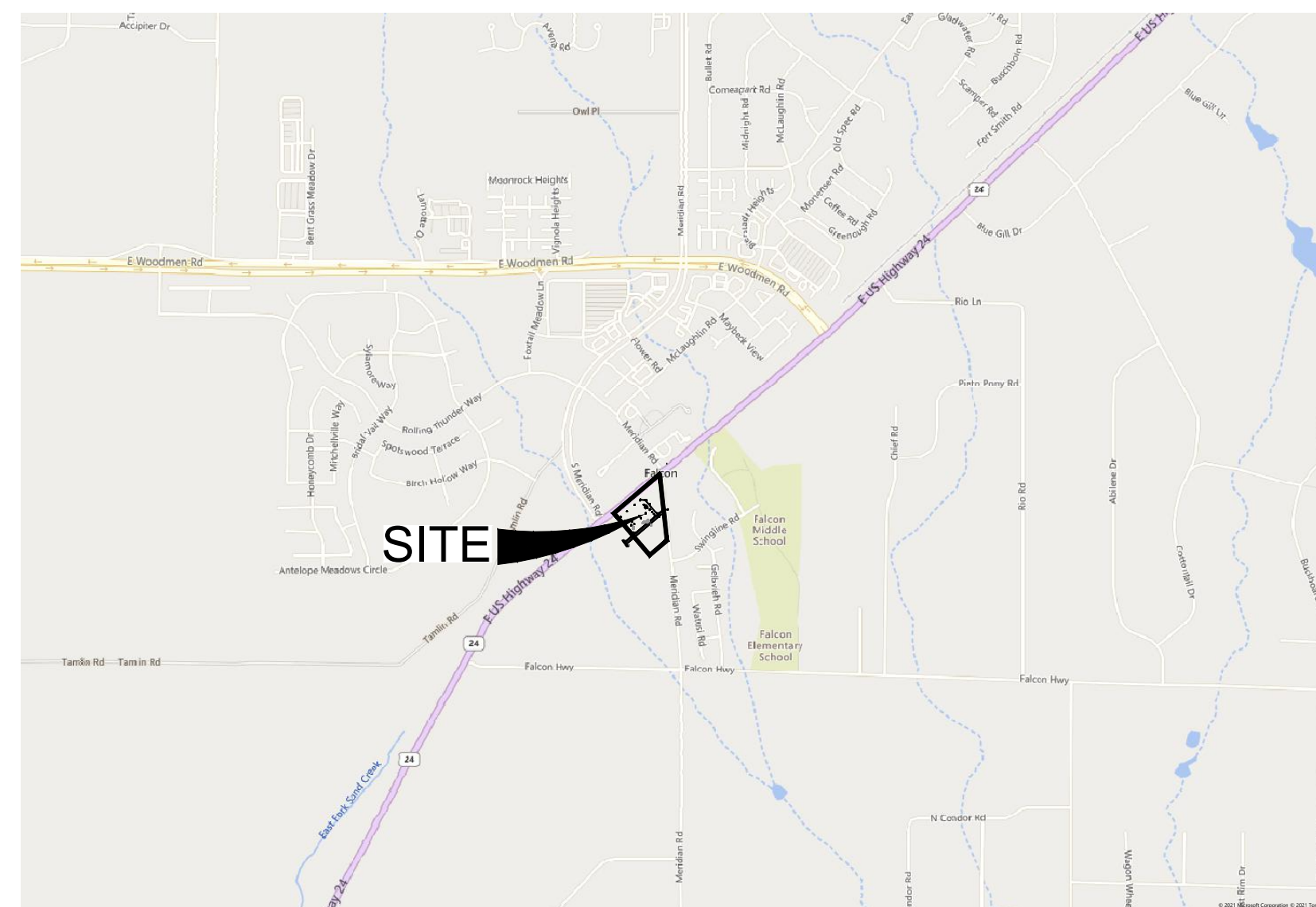
**WATER & SANITARY**  
WOODMEN HILLS METRO DISTRICT  
8046 EASTONVILLE ROAD  
FALCON, CO 80831  
PHONE: (719) 495-2500

# CIRCLE K AT HIGHWAY 24 & MERIDIAN ROAD GRADING & EROSION CONTROL PLANS

EL PASO COUNTY, CO  
MARCH 2022



**SITE MAP**  
1" = 150'



**VICINITY MAP**  
1" = 2,000'

SHEET INDEX		
SHEET TITLE	SHEET DESCRIPTION	SHEET NUMBER
TS01	TITLE SHEET	1
GN01	GENERAL NOTES	2
GEC01	INITIAL GRADING & EROSION CONTROL PLAN	3
GEC02	INTERIM/FINAL GRADING & EROSION CONTROL PLAN	4
ECN01	EROSION CONTROL NOTES	5
ECN02	EROSION CONTROL NOTES	6



**Matrix**  
Excellence by Design  
2435 RESEARCH PARKWAY, SUITE 300  
COLORADO SPRINGS, CO 80920  
PHONE: (719) 575-0100

**LAND DEVELOPMENT CONSULTANTS, LLC**  
950 S. CHERRY ST., SUITE 512  
DENVER, CO 80246

OWNER/DEVELOPER:

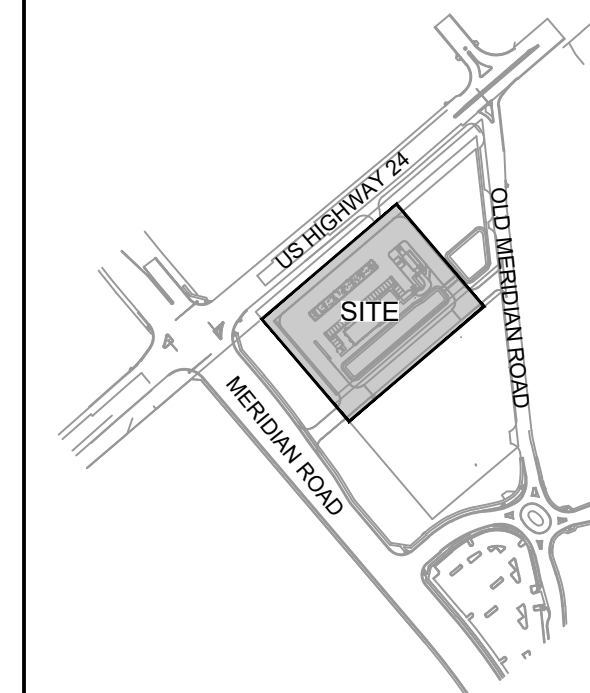


ROCKY MOUNTAINS DIVISION  
5500 S QUEBEC STREET, SUITE 100  
GREENWOOD VILLAGE, CO 80111  
PHONE: (720) 758-6223

SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.

VICINITY MAP:



PROJECT:

**CIRCLE K STORES INC.**

**GRADING & EROSION CONTROL PLANS**  
HIGHWAY 24 & MERIDIAN ROAD  
FALCON, CO

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO: 21.1207.037

DRAWN BY: LCB

CHECKED BY: NMS

DESIGNED BY: NMS

SHEET TITLE:

**TITLE SHEET**

**SHEET 1 OF 6**  
**TS01**

THIS FINAL GRADING PLAN IS AN ACCURATE REPRESENTATION OF THE GENERAL DRAINAGE PATTERNS ON THE SITE, BUT IS NOT A COMPREHENSIVE DETAILED GRADING PLAN THAT ADDRESSES ALL CONDITIONS THAT MAY OCCUR. THE GRADING SHOULD BE CHECKED BY THE BUILDER TO ENSURE THAT DRAINAGE WILL NOT BE COMPROMISED ON THE PROPERTY OR THE ADJACENT PROPERTIES. CONTRACTOR TO CONTACT DESIGN ENGINEER IF FIELD CONDITIONS DIFFER FROM WHAT IS SHOWN WITHIN THESE PLANS.

PCD FILING NO.: PPR2230

ISSUE DATE: MARCH 2022

FILE LOCATION: S:\CIRCLE K HWY 24 & MERIDIAN\DWG\PLAN SETS\SITE DEVELOPMENT PLANS\TS01\_GEC.DWG

**GENERAL CONSTRUCTION NOTES:**

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- 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. DURING CONSTRUCTION THE SWMP 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. TEMPORARY SEDIMENT AND EROSION 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 PRIOR TO IMPLEMENTATION.
- 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.
- 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.
- 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.
- 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, UNLESS INFEASIBLE.
- 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.
- 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 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.

- 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 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 (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 HAS BEEN PREPARED BY TERRACON CONSULTANTS, INC., DATED NOVEMBER 30, 2018 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 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

**NPDES NOTES:**

- THE CONTRACTOR SHALL REMOVE ALL SEDIMENT, MUD, AND CONSTRUCTION DEBRIS THAT MAY ACCUMULATE IN THE FLOWLINES AND PUBLIC RIGHTS OF WAYS AS A RESULT OF THIS CONSTRUCTION PROJECT. SAID REMOVAL SHALL BE CONDUCTED IN A TIMELY MANNER, OR AS DIRECTED BY THE ENGINEER.
- THIS CONSTRUCTION ACTIVITIES STORMWATER MANAGEMENT PLAN (SWMP) HAS BEEN SUBMITTED AS PART OF AN APPLICATION FOR AN EROSION AND SEDIMENT CONTROL PERMIT FILED WITH THE CITY OF COLORADO SPRINGS AND AS INCLUSION BY REFERENCE TO THE CDPHE CONSTRUCTION ACTIVITY PERMIT. THE SWMP IS A LIVING DOCUMENT AND ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE CONTRACTOR DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL BE THE OBLIGATION OF THE LAND OWNER AND/OR HIS SUCCESSORS OR HEIRS; UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED, OR VOIDED.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
- THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM DURING ALL DEMOLITION, EXCAVATION, TRENCHING, BORING, GRADING OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT.
- A LAYER OF SUITABLE MULCH SHALL BE APPLIED TO ALL DISTURBED PORTIONS OF THE SITE WITHIN 21 DAYS OF THE COMPLETION OF GRADING. SAID MULCH SHALL BE APPLIED AT A RATE OF 2 TONS PER ACRE AND SHALL BE TACKED OR FASTENED BY AN APPROVED METHOD SUITABLE FOR THE TYPE OF MULCH USED. ROUGH-CUT STREETS SHALL BE MULCHED UNLESS A LAYER OF AGGREGATE ROAD BASE OR ASPHALT PAVING IS TO BE APPLIED TO SAID ROUGH-CUT STREETS WITHIN THE 21 DAY PERIOD AFTER COMPLETION OF OVERLOT GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THEN SIXTY (60) DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
- THE CONTRACTOR SHALL LOCATE, INSTALL, AND MAINTAIN ALL EROSION CONTROL AND WATER QUALITY "BEST MANAGEMENT PRACTICES" AS INDICATED IN THE APPROVED CONSTRUCTION ACTIVITIES STORMWATER MANAGEMENT PLAN. BMP'S SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT.
- AT A MINIMUM, THE CONTRACTOR SHALL INSPECT, AND KEEP A LOG OF, ALL BMP'S WEEKLY AND AFTER SIGNIFICANT PRECIPITATION EVENTS. ALL NECESSARY MAINTENANCE AND REPAIR SHALL BE COMPLETED IN A TIMELY MANNER. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP WHEN THE SEDIMENT LEVEL REACHES ONE-HALF THE HEIGHT OF THE BMP, OR, AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP.
- THE CONTRACTOR SHALL PROPERLY COVER ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THIS SITE TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT WITHIN PUBLIC RIGHTS OF WAY.
- THE USE OF REBAR, STEEL STAKES, OR STEEL FENCE POSTS TO STAKE DOWN STRAW OR HAY BALES; OR TO SUPPORT SILT FENCING USED AS AN EROSION CONTROL MEASURE; IS PROHIBITED. THE USE OF OSHA APPROVED COLORED WARNING CAPS ON REBAR OR FENCE POSTS USED WITH EROSION CONTROL MEASURES IS NOT ACCEPTABLE.
- SOILS THAT WILL BE STOCKPILED FOR MORE THAN 30 DAYS SHALL BE MULCHED AND SEEDED WITH A TEMPORARY OR PERMANENT GRASS COVER WITHIN 21 DAYS OF STOCKPILE CONSTRUCTION. IF STOCKPILES ARE LOCATED WITHIN 100 FEET OF A DRAINAGEWAY, ADDITIONAL SEDIMENT CONTROLS SUCH AS TEMPORARY DIKES OR SILT FENCE SHALL BE REQUIRED.
- MODIFICATION OF AN ACTIVE EROSION AND SEDIMENT CONTROL PERMIT BY THE CONTRACTOR SHALL REQUIRE TIMELY NOTIFICATION OF AND APPROVAL BY THE CITY OF COLORADO SPRINGS. TERMINATION OF AN ACTIVE EROSION AND SEDIMENT CONTROL PERMIT UPON COMPLETION OF THE PROJECT REQUIRES NOTIFICATION OF AND APPROVAL BY THE CITY OF COLORADO SPRINGS.
- UNLESS CONFINED IN A PREDEFINED, BERMED CONTAINMENT AREA, THE CLEANING OF CONCRETE TRUCK DELIVERY CHUTES IS PROHIBITED AT THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CEMENT TO THE STORM SEWER SYSTEM IS PROHIBITED.
- THE CONTRACTOR SHALL PROTECT ALL STORM SEWER FACILITIES ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS INVOLVING WHEEL CUTTING, SAW CUTTING OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE. THE DISCHARGE OF ANY WATER CONTAMINATED BY WASTE PRODUCTS FROM CUTTING OPERATIONS TO THE STORM SEWER SYSTEM IS PROHIBITED. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL WASTE PRODUCTS GENERATED BY SAID CUTTING OPERATIONS ON A DAILY BASIS.
- LOCATION OF STAGING, STORAGE, EQUIPMENT MAINTENANCE, TEMPORARY DISPOSAL, VEHICLE TRACKING CONTROL AND CONCRETE TRUCK WASHOUT AREAS WILL BE DETERMINED IN THE FIELD AT THE START OF CONSTRUCTION ACTIVITY AND DELINEATED ON THIS PLAN.

**NRCS SOIL SURVEY FOR EL PASO COUNTY**

SOIL ID NO.	SOIL TYPE	HYDROLOGIC CLASSIFICATION
9	BLAKELAND-FLUVAQUENTIC HAPLAQUOLLS	A
19	COLUMBINE GRAVELLY SANDY LOAM (0%-3% SLOPES)	A

**TIMING**

ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING:  
**MAY 2022 THRU SEPTEMBER 2022**

EXPECTED DATE ON WHICH THE FINAL STABILIZATION WILL BE COMPLETED:  
**AUGUST 2023**

**AREAS**

TOTAL AREA: 5.00 ACRES

**RECEIVING WATERS**

NAME OF RECEIVING WATERS  
**CHICO CREEK (ULTIMATE)**

**ENGINEER'S NOTES:**

THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND SCRUB OAK WITH AREAS OF FARM TILLAGE.

**ABBREVIATIONS**

AD	ALGEBRAIC DIFFERENCE	MID	MIDDLE or MIDPOINT
ASSY	ASSEMBLY	MIN	MINIMUM
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS	MJ	MECHANICAL JOINT
APPROX	APPROXIMATE or APPROXIMATELY	MSL	MEAN SEA LEVEL
AVE	AVENUE	NC	NORMAL CROWN
AVG	AVERAGE	NIC	NOT IN CONTRACT
B/C	BACK OF CURB	NO	NUMBER
± or B/L	BASELINE	NOM	NOMINAL
BLVD	BOULEVARD	NTS	NOT TO SCALE
BTM	BOTTOM	OC	ON CENTER
CI	CAST IRON	O/S	OFFSET
CEN	CENTER	P	PROPOSED
± or CL	CENTERLINE	PC	POINT OF CURVATURE
CFS	CUBIC FEET PER SECOND	PCC	POINT OF COMPOUND CURVE
CLR	CLEAR	PCR	POINT OF CURB RETURN
CMP	CORRUGATED METAL PIPE	PE	PLAIN END
CONC	CONCRETE	PIE	PUBLIC IMPROVEMENT EASEMENT
CONST	CONSTRUCTION	PGL	PROFILE GRADE LINE
CONT	CONTINUOUS	± or P/L	PROPERTY LINE
DIA	DIAMETER	PRC	POINT OF REVERSE CURVE
DN	DOWN	PT	POINT OF TANGENCY
DWG	DRAWING	PVC	POINT OF VERTICAL CURVE or POLYVINYL CHLORIDE
EA	EACH	PVI	POINT OF VERTICAL INTERSECTION
EGL	ENERGY GRADE LINE	PVMT	PAVEMENT
ELEV or EL	ELEVATION	PVT	POINT OF VERTICAL TANGENT
ELL	ELBOW	R OR RAD	RADIUS
ESMT	EASEMENT	RC	REVERSE CROWN
EW	EACHWAY	RCP	REINFORCED CONCRETE PIPE
EX or EXIST	EXISTING	RED	REDUCER
FES	FLARED END SECTION	REF	REFERENCE
FIN	FINISHED	REINF	REINFORCING
± or FL	FLOWLINE	REQ	REQUIRED
FLG	FLANGE	REV	REVISION
FT	FOOT / FEET	ROW	RIGHT-OF-WAY
FRP	FIBERGLASS REINFORCED PIPE	RT	RIGHT
GAL	GALLON	SCH	SCHEDULE
GALV	GALVANIZED	SD	STORM SEWER
GAU	GAUGE (MATERIAL)	SQ	SQUARE
GV	GATE VALVE	ST	STREET
GW	GROUNDWATER	STA	STATION
HBP	HOT BITUMINOUS PAVEMENT	STD	STANDARD
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE	STL	STEEL
HGL	HYDRAULIC GRADE LINE	SS OR SAN	SANITARY SEWER
HP	HIGH POINT	SW OR S/W	SIDEWALK
HORIZ	HORIZONTAL	TAN	TANGENT
HCL	HORIZONTAL CONTROL LINE	TB	THRUST BLOCK
HR	HOUR	TBC	TOP BACK OF CURB
INV	INVERT	TFC	TOP FACE OF CURB
K	VERTICAL CURVE FACTOR	THD	THREADED
LBS	POUNDS	THK	THICKNESS
LF	LINEAR FEET	TYP	TYPICAL
LN	LANE	UG	UNDERGROUND
LP	LOW POINT	UTIL	UTILITY
LS	LANDSCAPING	VC	VERTICAL CURVE
LT	LEFT	VERT	VERTICAL
MAX	MAXIMUM	W	WIDTH
MFR	MANUFACTURER	W/	WITH
MH	MANHOLE		

**SYMBOLS**

	PROPOSED CENTERLINE		UT	EXISTING UNDERGROUND UTILITY
	EXISTING FENCE		UE	EXISTING UNDERGROUND UTILITY
	RIGHT OF WAY/PROPERTY BOUNDARY		G	EXISTING WATER
	EXISTING EASEMENT		W	EXISTING WATER
	PROPERTY LINE/TRACT A BOUNDARY		H	EXISTING HYDRANT
	EXISTING CURB & GUTTER		V	EXISTING WATER VALVE
	PROPOSED CURB & GUTTER		SS	EXISTING SANITARY
	EXISTING CONTOUR			
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2435 RESEARCH PARKWAY, SUITE  
300 COLORADO SPRINGS, CO 80920  
PHONE: (719) 575-0100



**LAND DEVELOPMENT**  
CONSULTANTS, LLC

950 S. CHERRY ST., SUITE 512  
DENVER, CO 80246

OWNER/DEVELOPER:

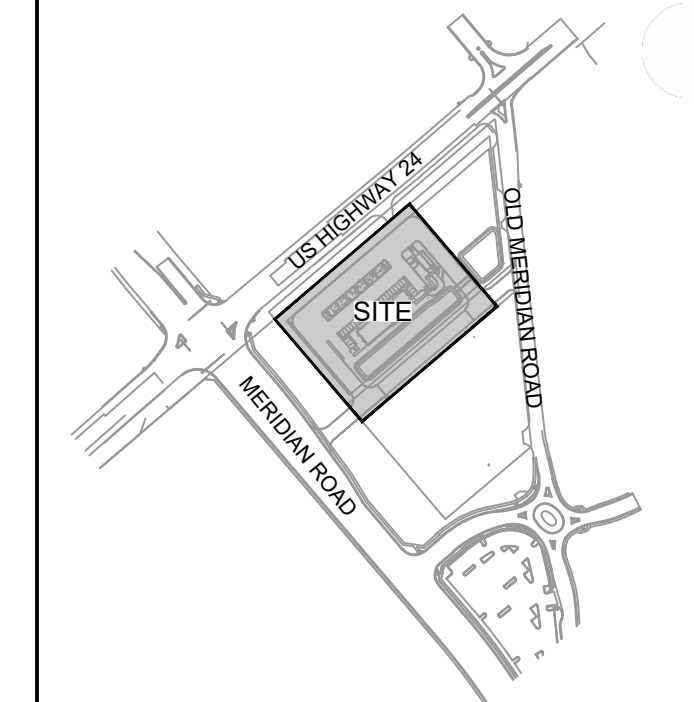


ROCKY MOUNTAINS DIVISION  
5500 S. CHERRY STREET, SUITE 100  
GREENWOOD VILLAGE, CO 80111  
PHONE: (720) 758-6223

SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC

VICINITY MAP:



PROJECT:

**CIRCLE K STORES INC.**

**GRADING & EROSION CONTROL  
PLANS  
HIGHWAY 24 & MERIDIAN ROAD  
FALCON, CO**

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO: 21.1207.037

DRAWN BY: LCB

CHECKED BY: NMS

DESIGNED BY: NMS

SHEET TITLE:

**INTERIM/FINAL  
GRADING &  
EROSION  
CONTROL PLAN**

**SHEET 4 OF 6  
GEC02**

ISSUE DATE: MARCH 2022

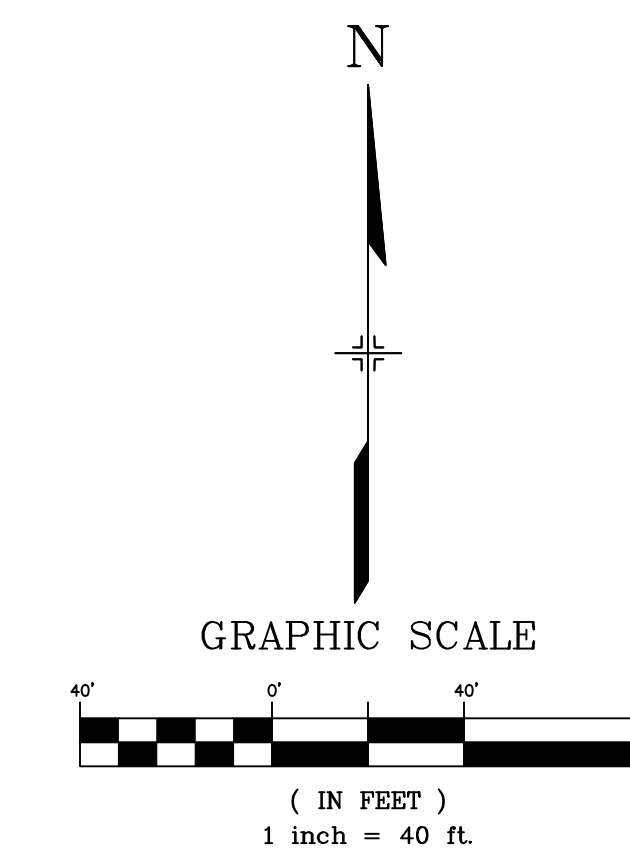
### EROSION CONTROL LEGEND

- SLOPE TRACKING
- SURFACE ROUGHENING
- SILT FENCE
- EROSION CONTROL BLANKET
- TEMPORARY MULCHING AND SEEDING
- SEDIMENT CONTROL LOG
- CHECK DAM
- VEHICLE TRACKING CONTROL
- TEMPORARY SEDIMENT BASIN
- CONCRETE WASHOUT
- STOCKPILE MANAGEMENT / STABILIZED STAGING AREA
- CULVERT INLET PROTECTION / OUTLET PROTECTION
- INLET PROTECTION
- HIGH POINT / LOW POINT
- PROPOSED CONTOURS
- EXISTING CONTOURS
- DRAINAGE SWALE SLOPE LABEL
- OVERLAND FLOW
- LIMITS OF DISTURBANCE / CONSTRUCTION SITE BOUNDARY
- PROPERTY LINE
- OVERFLOW ROUTE
- CUT / FILL LINE
- OFFSITE CONSTRUCTION LIMITS

### NOTES:

- ALL DRAINAGE SWALES SHALL HAVE A MINIMUM LONGITUDINAL SLOPE OF 0.5%, MINIMUM 1.5' DEPTH, AND MAXIMUM 3:1 SIDE SLOPES.
- ALL EROSION CONTROL BLANKET SHALL BE INSPECTED 24-MONTHS AFTER INSTALLATION. EROSION CONTROL BLANKET MAY BE REQUIRED TO RE-INSTALLED PER MANUFACTURER SPECIFICATIONS.
- CONTRACTOR TO USE SLOPE TRACKING OR EROSION CONTROL BLANKET ON SLOPES 3:1 OR GREATER

BMP SEQUENCING	
INITIAL	SILT FENCE, CONSTRUCTION FENCE, VEHICLE TRACKING, TEMP STREAM CROSSINGS, CHECK DAMS
INTERIM / FINAL	SEDIMENT CONTROL LOGS, INLET PROTECTION, STOCKPILES, STAGING, EROSION CONTROL BLANKETS, SEEDING & MULCHING



OWNER: FARMERS STATE BANK OF CALHAN  
1500 8TH ST. CALHAN CO, 80808  
PUD  
PARCEL #5312407001

EASEMENT PE-7  
REC. #219142201

OWNER: IBS  
ENTERPRISES LLC  
6550 GUN CLUB TRAIL  
COLORADO SPRINGS,  
CO 80908  
CC  
PARCEL #4307303007

EXISTING  
WATER MAIN

EXISTING  
SANITARY  
MAIN

EXISTING  
SANITARY  
FORCE MAIN

Revise to 75ft min.

TRIBUTARY SEDIMENT BASIN  
TRIBUTARY AREA = 3.74 AC  
REQUIRED VOLUME = 24,160 CF  
PROVIDED VOLUME = 57,662 CF  
DETENTION POND OUTLET  
STRUCTURE TO BE USED IN PLACE  
OF PERFORATED RISER PIPE

OWNER: RANDY L GIBBS  
6810 N. MERIDIAN RD,  
PEYTON CO, 80831  
RR-5  
PARCEL #5312405003  
(TO BE REZONED)

An outlet will be needed prior to  
when the EDB's outlet structure is  
fully constructed, just based on the  
sequencing of grading the pond,  
doing the concrete work, plus  
supply chain issues with securing  
well screens and orifice plates. So  
a TSB riser pipe will be needed.

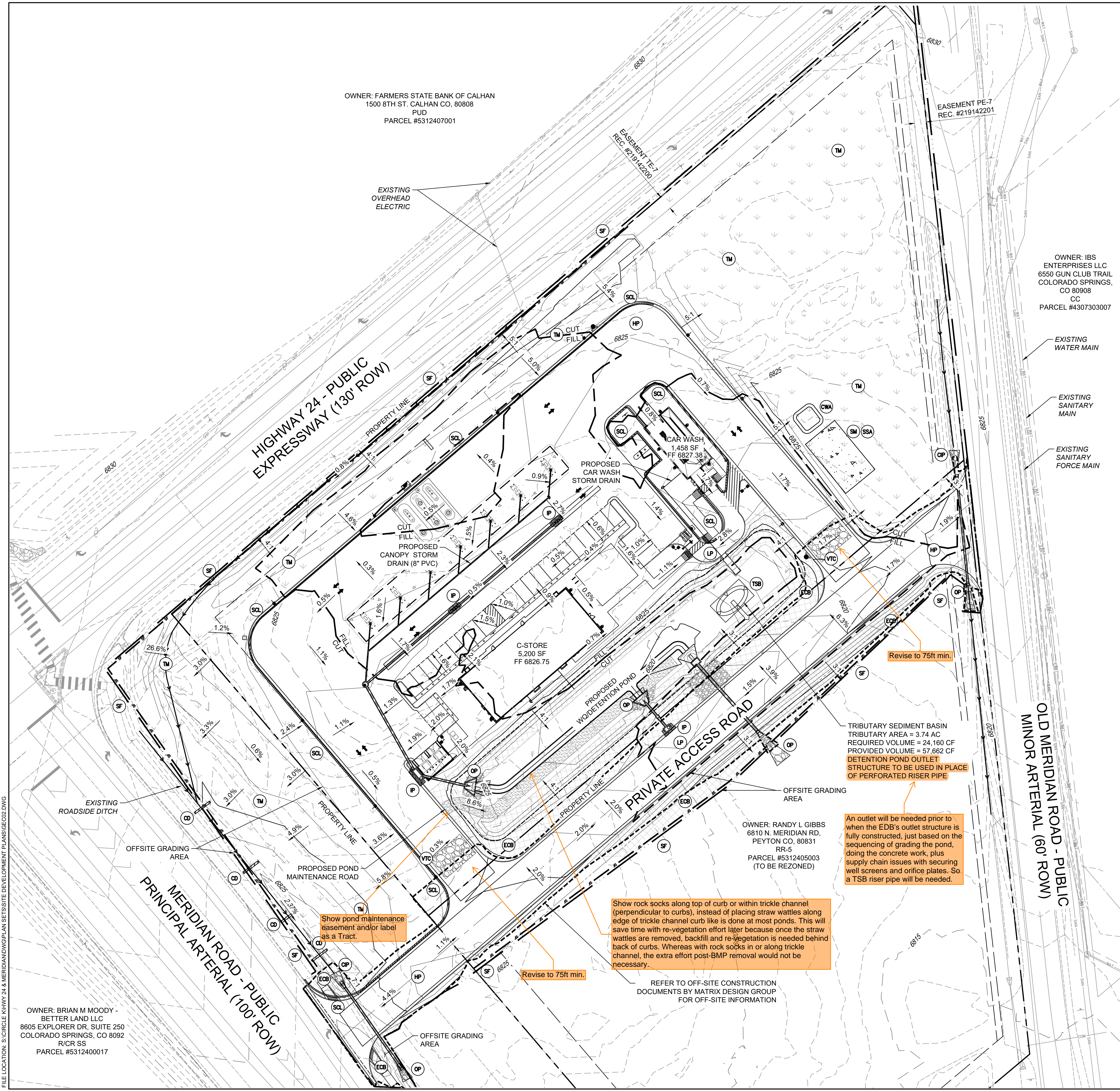
Show rock socks along top of curb or within trickle channel  
(perpendicular to curbs), instead of placing straw wattles along  
edge of trickle channel curb like is done at most ponds. This will  
save time with re-vegetation effort later because once the straw  
wattles are removed, backfill and re-vegetation is needed behind  
back of curbs. Whereas with rock socks in or along trickle  
channel, the extra effort post-BMP removal would not be  
necessary.

Revise to 75ft min.

REFER TO OFF-SITE CONSTRUCTION  
DOCUMENTS BY MATRIX DESIGN GROUP  
FOR OFF-SITE INFORMATION

FILE LOCATION: S:\CIRCLE K HWY 24 & MERIDIAN\DWG\PLAN SET\SITE DEVELOPMENT\PLANS\GEC02.DWG

OWNER: BRIAN M MOODY -  
BETTER LAND LLC  
8605 EXPLORER DR, SUITE 250  
COLORADO SPRINGS, CO 8092  
R/C/R SS  
PARCEL #5312400017



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

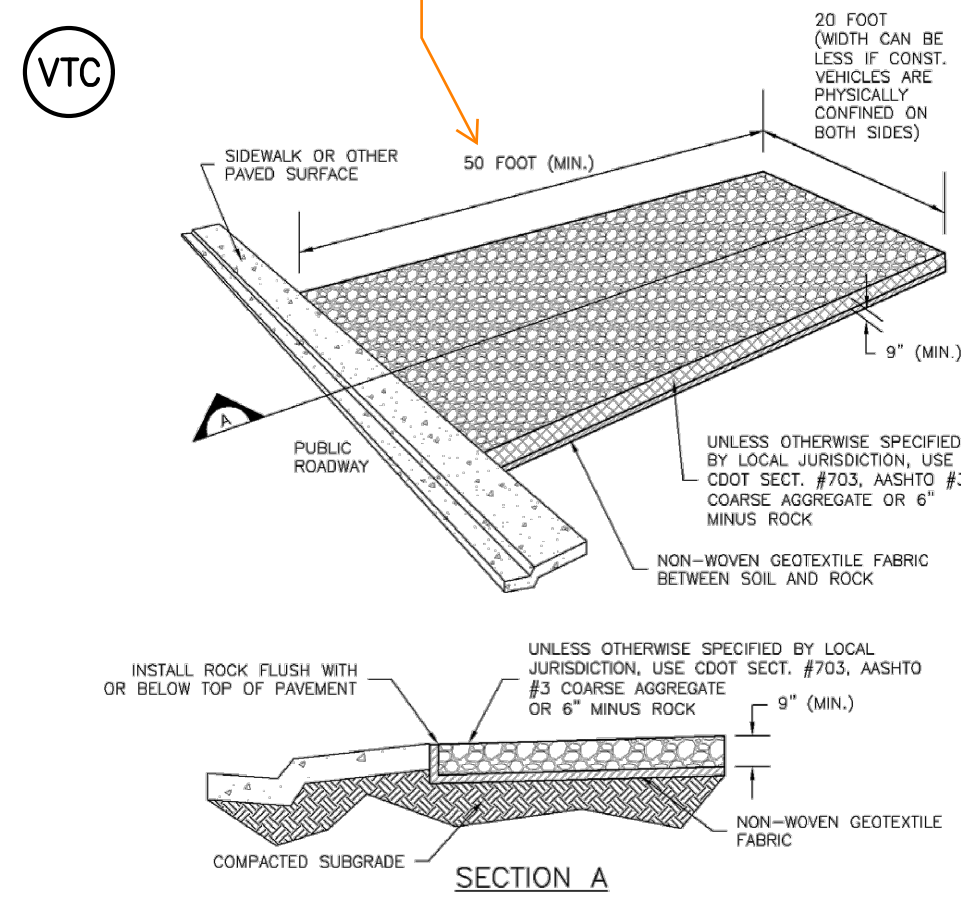


Figure SM-4 Vehicle Tracking Control

**STABILIZED CONSTRUCTION ENTRANCE/EXIT**

- INSTALLATION NOTES:**
- SEE PLAN VIEW FOR:
    - LOCATION OF CONSTRUCTION ENTRANCE/EXIT.
    - TYPE OF CONSTRUCTION ENTRANCE/EXIT WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRIM.
  - CONSTRUCTION MAT OR TRIM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
  - A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES SHALL ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
  - STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
  - A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO PLACEMENT OF ROCK.
  - UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECTION # 703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- 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 TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN CONSISTENT DEPTH.
  - SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN THE STORM SEWER DRAINS.

Figure SM-4 Vehicle Tracking Control

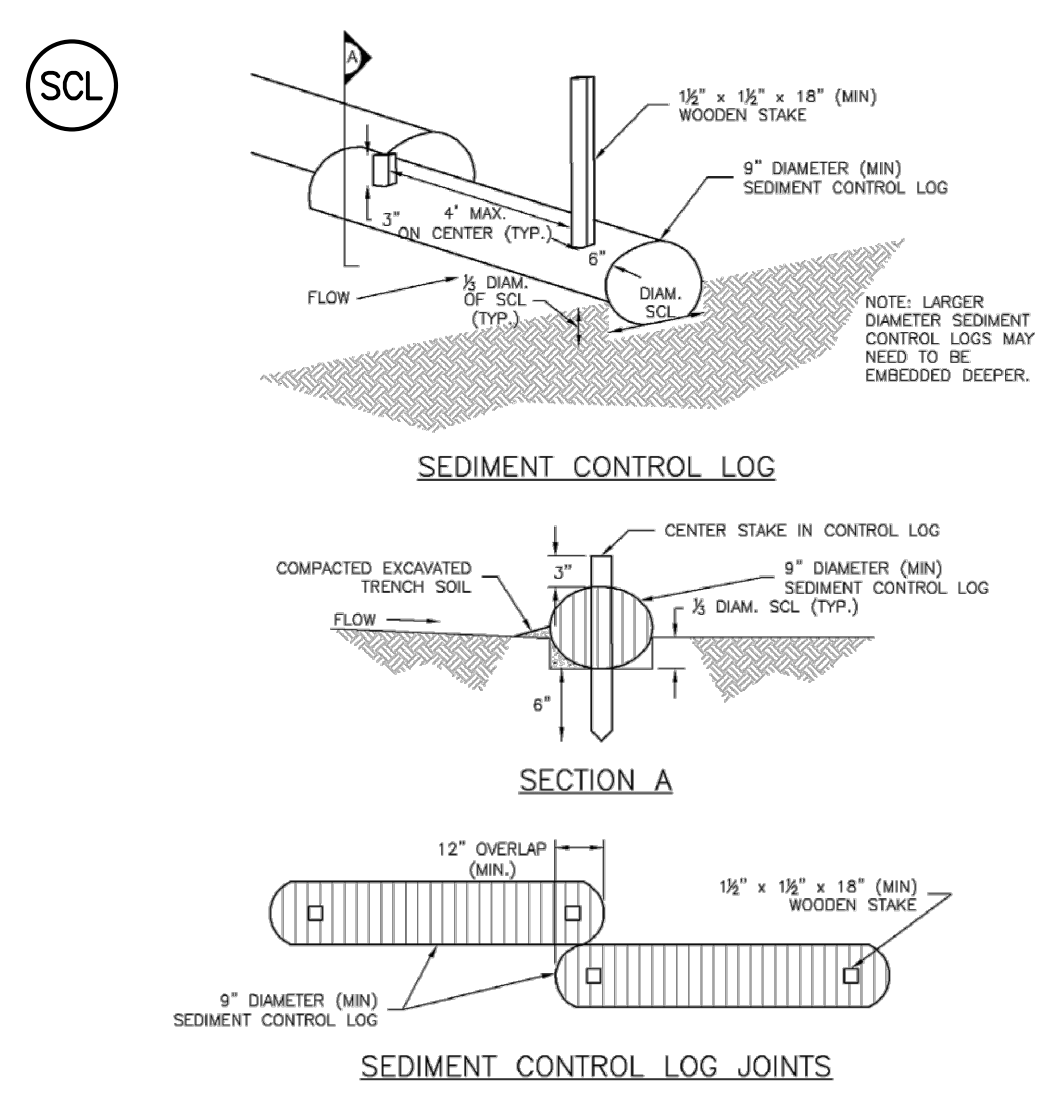


Figure SC-2 Sediment Control Log

- INSTALLATION NOTES:**
- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
  - SEDIMENT CONTROL LOGS THAT ACT AS PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADED LAND-DISTURBING ACTIVITIES.
  - SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELISOR 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 OR HIGH VELOCITY DRAINAGE WAYS.
  - IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/3 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.
  - THE UPSIDE SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL 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.
  - 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.
- 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. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

Figure SC-2 Sediment Control Log

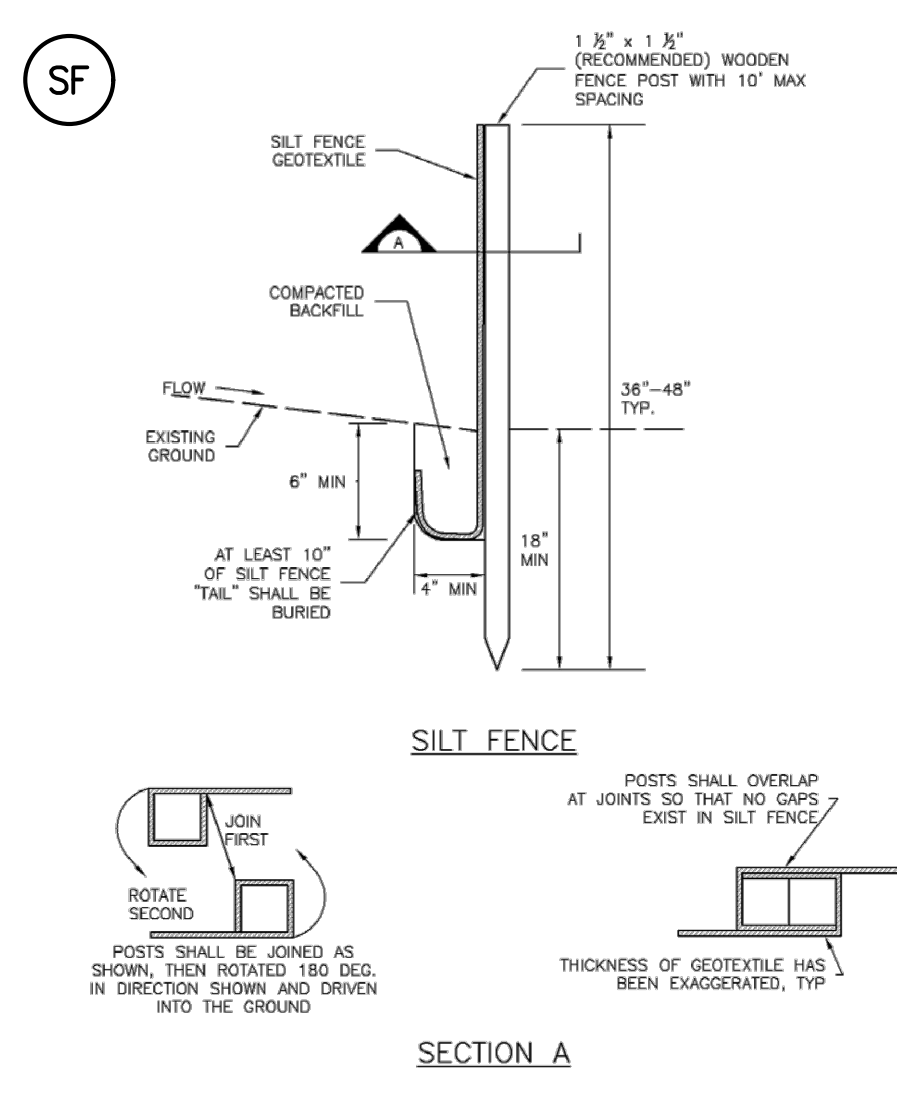
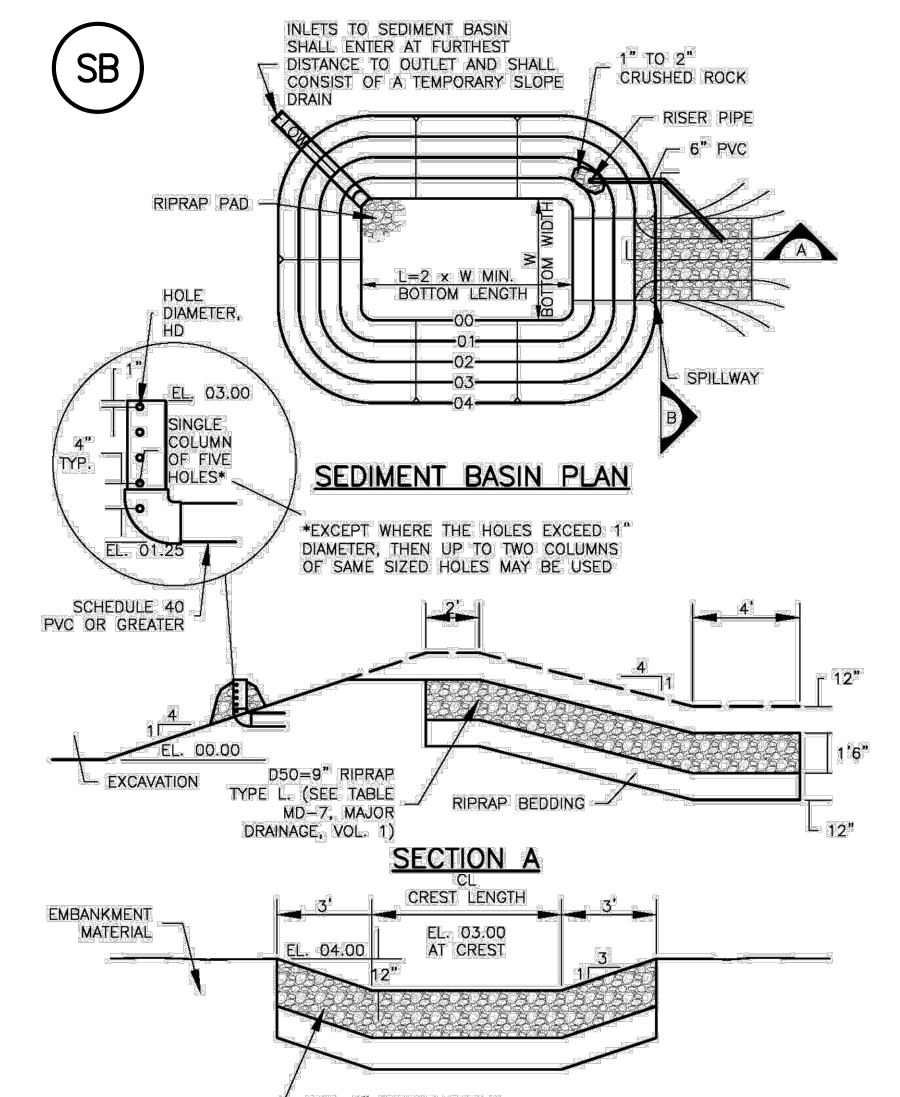


Figure SC-1 Silt Fence

- INSTALLATION NOTES:**
- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT TOP 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 OR 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.
- 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 FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
  - REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGN 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 TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

Figure SC-1 Silt Fence



**TABLE SB-1 SIZING INFORMATION FOR STANDARD SEDIMENT BASIN**

Upstream drainage area (rounded to nearest acre), (ac)	Basin Bottom Width (ft), (ft)	Spillway Crest Length (ft), (ft)	Hole Diameter (ft), (ft)
2	12 1/2	2	1/2
3	21	3	3/4
4	28	5	1
5	32 1/2	6	1 1/4
6	38 1/2	8	1 1/2
7	43	9	1 3/4
8	47 1/2	11	1 3/4
9	51	12	2
10	55	13	2 1/4
11	59	15	2 1/2
12	61	16	2 1/2
13	64	18	2 3/4
14	67 1/2	19	2 3/4
15	70 1/2	21	3
16	73 1/2	22	3 1/4

Figure SC-7 Sediment Basin

- INSTALLATION NOTES:**
- SEE PLAN VIEW FOR:
    - LOCATION OF SEDIMENT BASIN.
    - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
    - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
    - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
  - FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
  - SEDIMENT BASINS INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON BASINS AS A STORMWATER CONTROL.
  - EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
  - EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D998.
  - PIPE SCH 40 OR GREATER SHALL BE USED.
  - THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASINS FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASINS THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS.

Figure SC-7 Sediment Basin

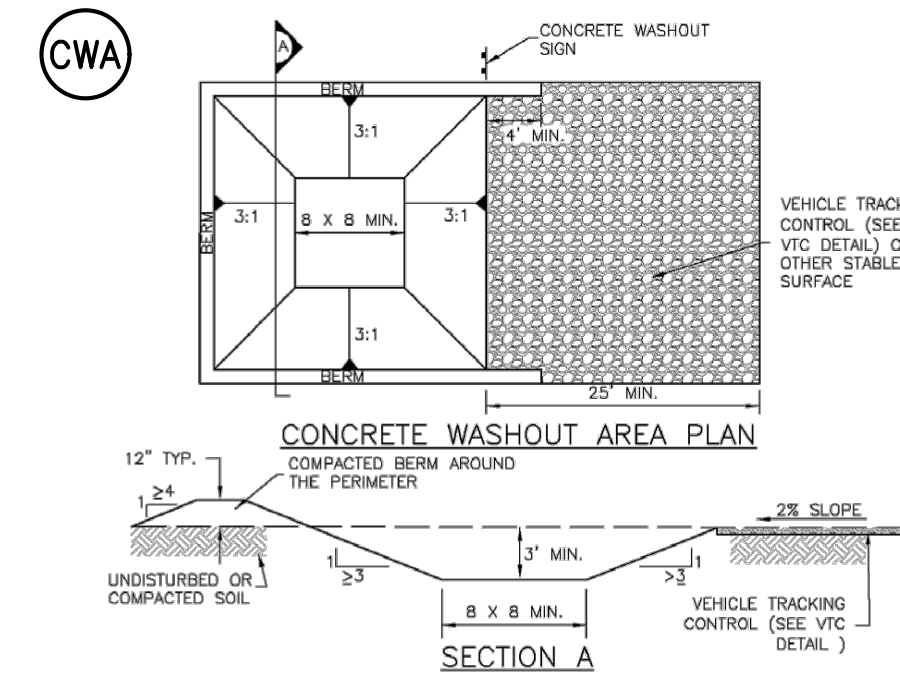


Figure CWA-3 Concrete Washout Area

- INSTALLATION NOTES:**
- SEE PLAN VIEW FOR:
    - CWA INSTALLATION LOCATION
  - DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATER BODY. DO NOT LOCATE WITHIN 100' 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 AREA SHOULD BE USED.
  - THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
  - THE 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 A 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.

Figure CWA-3 Concrete Washout Area

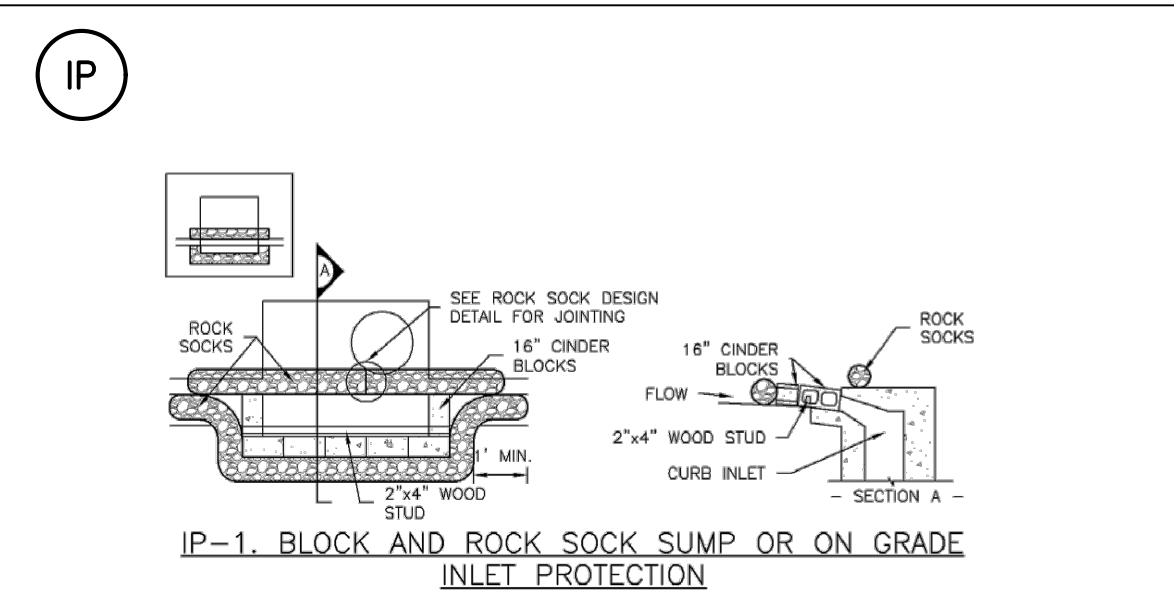


Figure IP-1 Temporary Inlet Protection

- INSTALLATION NOTES:**
- SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
  - CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
  - GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.

Figure IP-1 Temporary Inlet Protection

**Table 14-10. Recommended Seed Mix for Transition Areas<sup>1</sup>**

Common Name (Variety)	Scientific Name	Growth Season	Growth Form	Seeds/Lb	Lbs PLS/Acre Drilled	Lbs Broadcast or Hydroseeded
Sheep fescue (Datur)	<i>Festuca ovina</i>	Cool	Bunch	680,000	1.3	2.6
Western wheatgrass (Arriba)	<i>Pascopyrum smithii</i>	Cool	Sod	110,000	7.9	15.8
Alkali sacaton	<i>Spolobolus airoides</i>	Warm	Bunch	1,758,000	0.5	1.0
Slender wheatgrass	<i>Elymus trachynotus</i>	Cool	Bunch	159,000	5.5	11.0
Canadian bluegrass (Ruebens)	<i>Poa compressa</i>	Cool	Sod	2,500,000	0.3	0.6
Switchgrass (Pathfinder)	<i>Panicum virgatum</i>	Warm	Sod/ Bunch	389,000	1.3	2.6
Annual rye	<i>Lolium multiflorum</i>	Cool	Cover crop	227,000	10.0	20.0
<b>TOTAL</b>					<b>26.8</b>	<b>53.6</b>
<b>Wildflowers</b>						
Blanket flower	<i>Fallardia aristata</i>	---	---	132,000	0.25	0.50
Prairie coneflower	<i>Ratibida columnaris</i>	---	---	1,230,000	0.20	0.40
Purple prairie clover	<i>Fetostemma purpurea</i>	---	---	210,000	0.20	0.40
Gayfeather	<i>Liatris puncata</i>	---	---	138,000	0.06	0.12
Flax	<i>Linum lewisii</i>	---	---	293,000	0.20	0.40
Penstemon	<i>Penstemon strictus</i>	---	---	592,000	0.20	0.40
Yarrow	<i>Achillea millefolium</i>	---	---	2,770,000	0.03	0.06
<b>TOTAL</b>					<b>1.14</b>	<b>2.28</b>

<sup>1</sup>For side slopes or between wet and dry areas.  
<sup>2</sup>Substitute 1.7 lbs PLS/Acre of inland saltgrass (*Dactylis spicata*) in salty soils.

- SEED MIX NOTES:**
- A MIXTURE DEVELOPED FOR ELEVATIONS 3,000 TO 8,000 FEET TO PROVIDE NATURAL COVER UNDER DRYLAND CONDITIONS. CONTAINS BOTH COOL AND WARM SEASON GRASSES ADAPTED TO THE WESTERN GREAT PLAINS AND SOUTHWESTERN REGION. HAS EXCELLENT COLD AND DROUGHT TOLERANCE. GOOD FOR SOIL STABILIZATION ON POOR SOILS.
- CHARACTERISTICS:**
- GROWS 30-60 INCHES WITH AVERAGE RAINFALL.
- SEEDING RATE:**
- BROADCAST: 20-25 LBS/ACRE  
DRILLED: 15-20 LBS/ACRE
- OVERSEEDING:**
- BROADCAST: 10-15 LBS/ACRE  
DRILLED: 5-10 LBS/ACRE
- MIX CONTAINS:**
- | KIND AND VARIETY:  | PURE  | GERM | ORIGIN |
|--------------------|-------|------|--------|
| ANNUAL RYEGRASS    | 15.72 | 97   | OR     |
| SLENDER WHEATGRASS | 14.75 | 98   | WA     |
| CRESTED WHEATGRASS | 10.91 | 96   | SD     |
| MOUNTAIN BROME     | 9.91  | 97   | WY     |
| CANADA BLUEGRASS   | 9.80  | 87   | WA     |
| HARD FESCUE        | 9.78  | 86   | MT     |
| SIDE-OATS GRAMA    | 5.78  | 80   | TX     |
| SWITCHGRASS        | 4.99  | 93   | MN     |
| BIG BLUESTEM       | 4.55  | 95   | KS     |
| BLUE GRAMA         | 2.37  | 95   | MN     |
| SAND DROPSSEED     | 0.99  | 95   | CO     |



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SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.

VICINITY MAP:

PROJECT:  
**CIRCLE K STORES INC.**

GRADING & EROSION CONTROL PLANS  
HIGHWAY 24 & MERIDIAN ROAD  
FALCON, CO

REVISION HISTORY:

NO.	DATE	DESCRIPTION	BY

DRAWING INFORMATION:

PROJECT NO: 21.1207.037  
DRAWN BY: LCB  
CHECKED BY: NMS  
DESIGNED BY: NMS

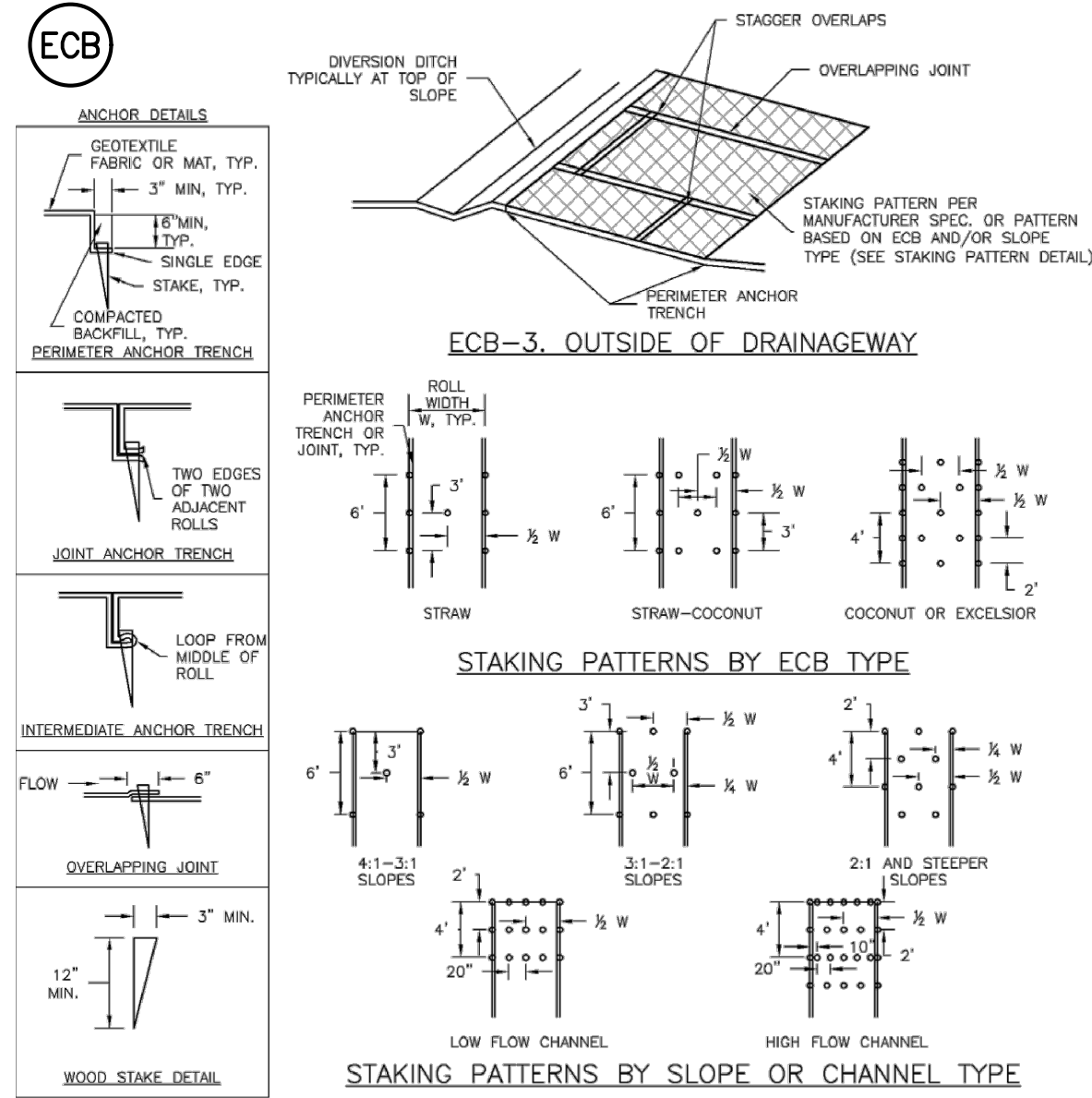
SHEET TITLE:

**EROSION CONTROL NOTES**

SHEET 5 OF 6  
ECN01

ISSUE DATE: MARCH 2022

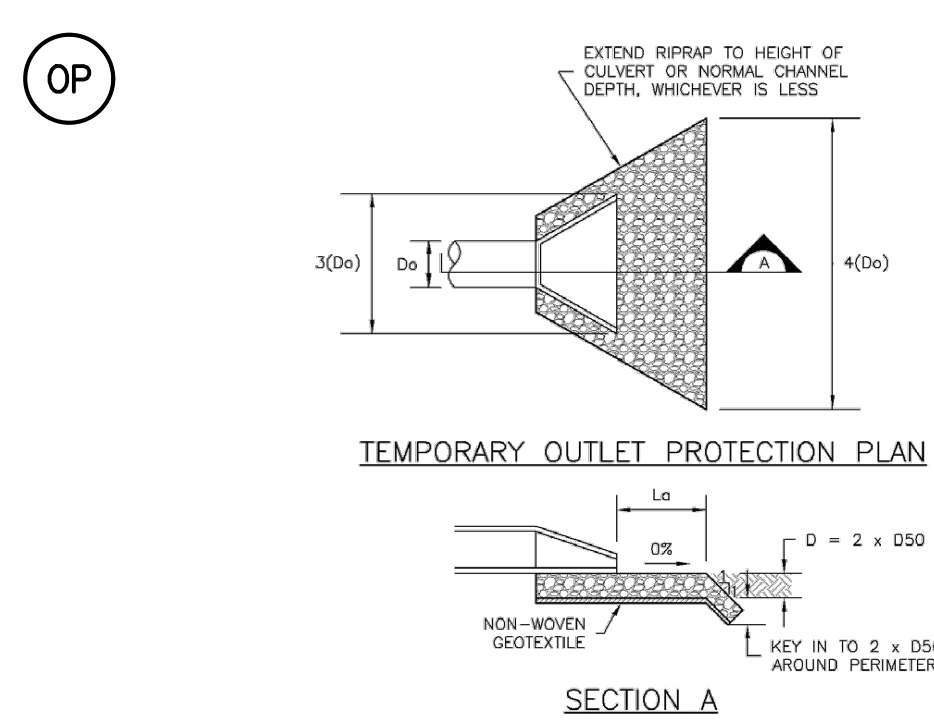
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TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING*
STRAW*	-	100%	-	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN	70% MAX	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELSIOR	-	-	100%	DOUBLE/NATURAL

- INSTALLATION NOTES:**
- SEE PLAN VIEW FOR:
    - LOCATION OF ECB
    - TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, EXCELSIOR)
    - AREA A, IN SQUARE YARDS OF EACH TYPE OF ECB
  - 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
  - IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
  - PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
  - JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
  - INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
  - OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
  - MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.
  - ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBs SHALL BE RESEDED AND MULCHED.
  - DETAILS ON DESIGN PLAN FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.
- MAINTENANCE NOTES:**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
  - ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEDED AND MULCHED AND THE ECB REINSTALLED.

Figure EC-6  
Rolled Erosion Control Product  
Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3



PIPE DIAMETER, D <sub>p</sub> (INCHES)	DISCHARGE, Q (CFS)	APPROX LENGTH, L <sub>a</sub> (FT)	RIPRAP D <sub>50</sub> DIAMETER MIN (INCHES)
8	2.5	5	4
10	5	10	6
12	10	15	8
18	20	25	12
24	30	40	16
30	50	60	24
36	80	90	36

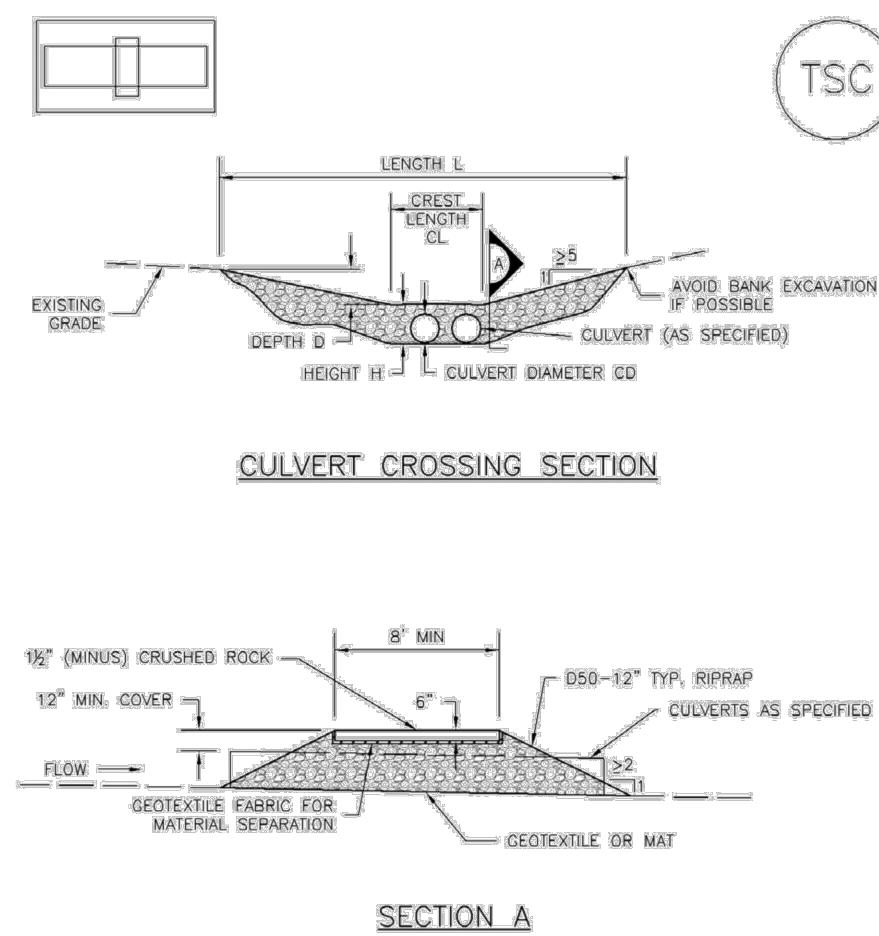
- TEMPORARY OUTLET PROTECTION**
- INSTALLATION NOTES:**
- SEE PLAN VIEW FOR:
    - LOCATION OF OUTLET PROTECTION
    - DIMENSIONS OF OUTLET PROTECTION
  - DETAIL IS INTENDED FOR PIPES WITH SLOPE < 10%. ADDITIONAL EVALUATION OF RIPRAP SIZING AND OUTLET PROTECTION DIMENSIONS REQUIRED FOR STEEPER SLOPES.
  - TEMPORARY OUTLET PROTECTION INFORMATION IS FOR OUTLETS INTENDED TO BE UTILIZED LESS THAN 2 YEARS.
- 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.

Figure EC-8  
Temporary Outlet Protection  
Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3

Item Z. Include details for the following BMP's. Examples of acceptable details for each are provided:

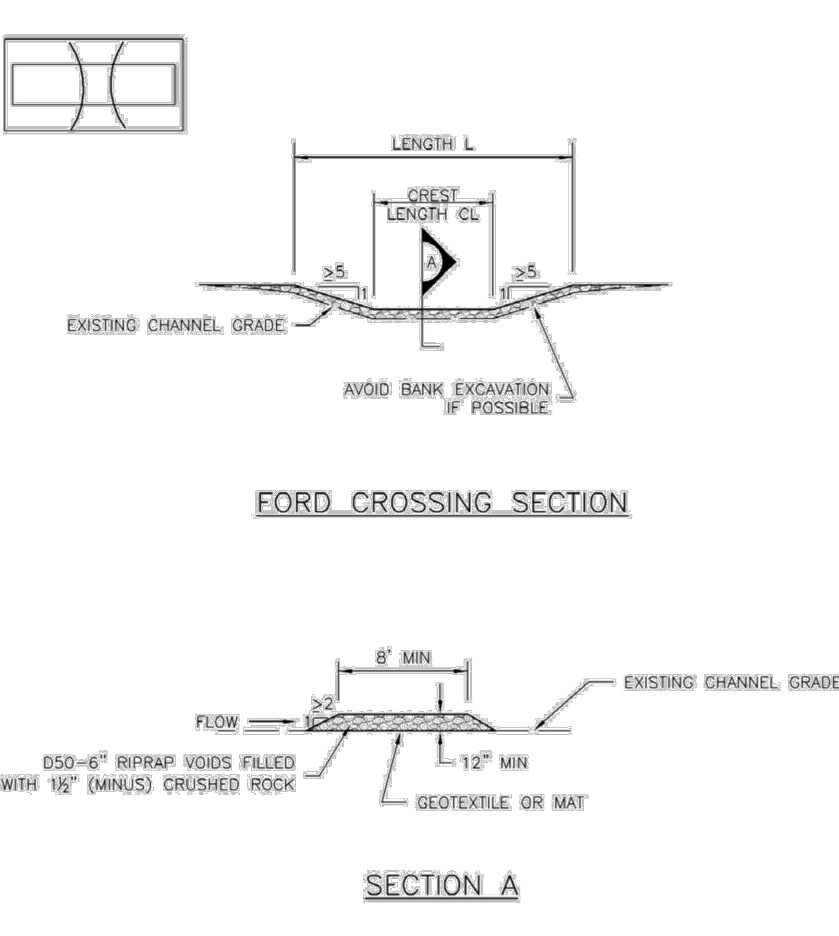
BMP	ECM (Appendix F)	DCM (Vol 2: Chap 3.3)	MHFD (USDCM Vol 3: Chap 7)	COS - Stormwater Construction Manual (App E)	CDOT Standard Plans on M-208
Check Dam	SD_3-62 (sand bags)	CD-1 (rock/straw)	EC-12 (rock only)	X	X (rock only)
Mulching		MU-1	EC-4	X	

**TSC Temporary Stream Crossing (TSC) SM-10**



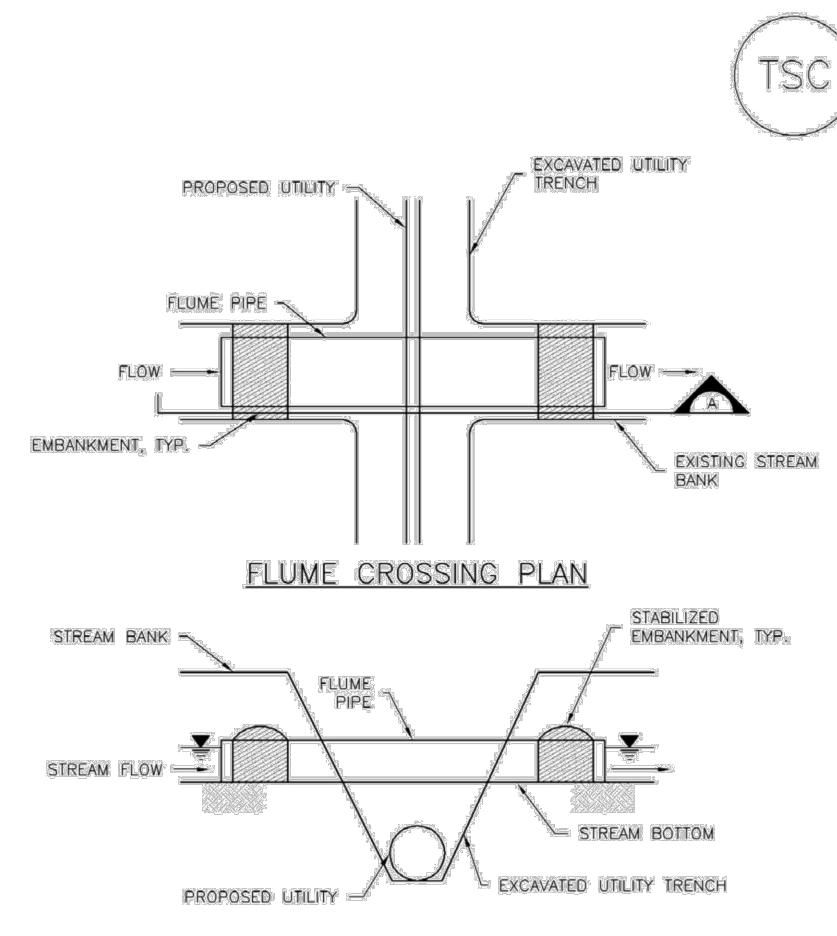
TSC-1. CULVERT CROSSING

**TSC Temporary Stream Crossing (TSC) SM-10**



TSC-2. FORD CROSSING

**TSC Temporary Stream Crossing (TSC) SM-10**



TSC-3. FLUME CROSSING

**TSC Temporary Stream Crossing (TSC) SM-10**

- TEMPORARY STREAM CROSSING INSTALLATION NOTES:**
- SEE PLAN VIEW FOR:
    - LOCATIONS OF TEMPORARY STREAM CROSSINGS
    - STREAM CROSSING TYPE (FORD, CULVERT, OR FLUME)
    - FOR FORD CROSSING: LENGTH (L), CREST LENGTH (CL), AND DEPTH (D)
    - FOR CULVERT CROSSING: LENGTH (L), CREST LENGTH (CL), CROSSING HEIGHT (H), DEPTH (D), CULVERT DIAMETER (CD), AND NUMBER, TYPE AND CLASS OR GRADE OF CULVERTS
  - TEMPORARY STREAM CROSSING DIMENSIONS, D<sub>50</sub>, AND NUMBER OF CULVERTS INDICATED FROM CULVERT CROSSING SHALL BE CONSIDERED MINIMUM DIMENSIONS. ENGINEER MAY ELECT TO INSTALL LARGER FACILITIES. ANY DAMAGE TO STREAM CROSSING OR EXISTING STREAM CHANNEL DURING BASEFLOW OR FLOOD EVENTS SHALL BE PROMPTLY REPAIRED.
  - SEE MAJOR DRAINAGE CHAPTER FOR RIPRAP GRADATIONS.
  - WHERE FAILURE OF A STREAM CROSSING CAN RESULT IN SIGNIFICANT DAMAGE OR HARM IT MUST BE DESIGNED BY A STRUCTURAL ENGINEER.
- TEMPORARY STREAM CROSSING 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.
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  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - REMOVE SEDIMENT ACCUMULATED UPSTREAM OF CROSSING AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE CROSSING.
  - STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED AND SHALL BE RESEDED PRIOR TO THE END OF CONSTRUCTION.
  - WHEN STREAM CROSSINGS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDING AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM USDCM STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- DETAIL ADAPTED FROM BOONVILLE COUNTY, COLORADO AND CITY OF JARVIS, COLORADO (SEE TSCs), NOT AVAILABLE IN PDF(S)

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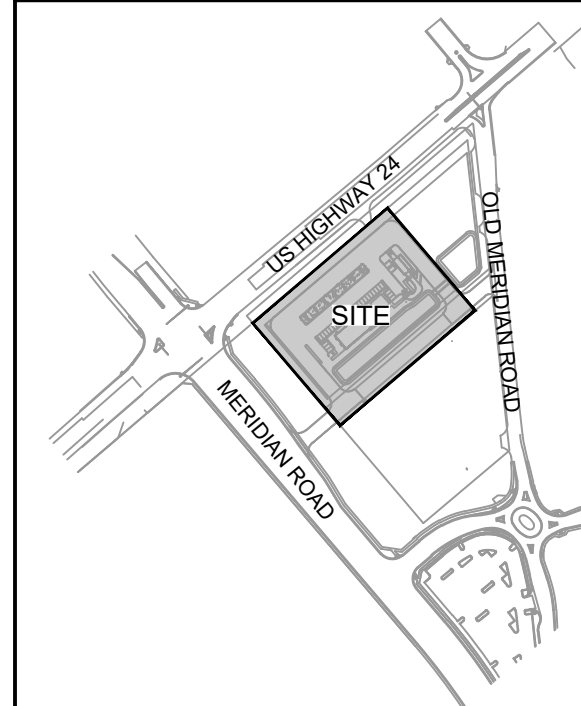


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SEAL

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC

VICINITY MAP:



PROJECT:  
**CIRCLE K STORES INC.**

GRADING & EROSION CONTROL  
PLANS  
HIGHWAY 24 & MERIDIAN ROAD  
FALCON, CO

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DRAWING INFORMATION:

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**EROSION CONTROL NOTES**

SHEET 6 OF 6  
ECN02

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