

MCDONALD'S AT FONTAINE AND MARKSHEFFEL GRADING AND EROSION CONTROL VILLAGE AT LORSON RANCH FILING NO.1 LOT 2

S $\frac{1}{2}$ OF SE $\frac{1}{4}$ OF SECTION 15, TOWNSHIP 15S, RANGE 65 WEST OF THE
6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO

OWNER'S SIGNATURE BLOCK

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

NAME _____ DATE _____

ENGINEER'S SIGNATURE BLOCK

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.

JESSICA MCCALLUM, PE _____ DATE _____
KIMLEY-HORN AND ASSOCIATES, INC.

EL PASO COUNTY REVIEW STATEMENT

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, DIMENSION, 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 A CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF THE 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.

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



VICINITY MAP

NOT TO SCALE

GRADING AND EROSION CONTROL PLAN	
SHEET NUMBER	SHEET TITLE
C2.0	COVER
C2.1	NOTES
C2.2	INITIAL EC
C2.3	FINAL EC
C2.4	CUT FILL PLAN
C2.5	EROSION CONTROL DETAILS
C2.6	EROSION CONTROL DETAILS
C2.7	EROSION CONTROL DETAILS
C2.8	EROSION CONTROL DETAILS
C2.9	EROSION CONTROL DETAILS

LAND AREA:

55,024 SQ. FT. OR 1.265 ACRES MORE OR LESS

BASIS OF BEARING:

BEARINGS ARE BASED ON THE NORTH LINE OF TRACT D, CARRIAGE MEADOWS NORTH FILING NO. 1, BEARING N89°48'24" E, A DISTANCE OF 699.24 FEET, AS MONUMENTED AT BOTH ENDS BY A FOUND YELLOW PLASTIC CAP STAMPED "FWS PLS 38226".

BENCHMARK:

ELEVATIONS ARE BASED UPON A FOUND 2" ALUMINUM CAP STAMPED "FARNSWORTH GROUP INC. PLS 38053" ON THE WEST LINE OF TRACT B AS SHOWN AS HEREON (ELEVATION = 5724.52)

LEGAL DESCRIPTION

VILLAGE AT LORSON RANCH FILING NO.1, LOT 2

GENERAL NOTES:

1. THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATIONS AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE.
2. THE OWNER IS AWARE THAT THE ACCESS PERMITS (AP211569, AP211570) ARE SUBJECT TO CONDITIONS OF APPROVAL.

FEMA CLASSIFICATION

THE FLOOD INSURANCE RATE MAP (FIRM) PANEL NO. 08041C0957G EFFECTIVE DATE DECEMBER 7, 2018, HAS BEEN EXAMINED AS IT RELATES TO THE PROPERTY BEING PLATTED. THE PROPERTY LIES WITHIN ZONE X, AREA OF MINIMAL FLOOD HAZARD.

LIMITS OF CONSTRUCTION

ONSITE DISTURBANCE: = ±1.106 ACRES
OFFSITE DISTURBANCE: = ±0.004 ACRES
TOTAL: = ±1.110 ACRES

CONTACTS:

DEVELOPER:
MCDONALD'S USA, LLC
110 N. CARPENTER STREET
CHICAGO, IL 60607
TEL: (206) 348-4374
CONTACT: ROBERT YAGUSESKY
EMAIL: ROBERT.YAGUSESKY@US.MCD.COM

ARCHITECT:
CORE STATES GROUP
135 WATER STREET, SUITE 201
NAPERVILLE, IL 60540
TEL: (224) 585-4591
CONTACT: JOY VRCHOTA
EMAIL: JVRCHOTA@CORE-STATES.COM

ENGINEER:
KIMLEY-HORN AND ASSOCIATES, INC.
2 NORTH NEVADA AVE., SUITE 900
COLORADO SPRINGS, CO 80903
TEL: (719) 284-7275
CONTACT: JESSICA MCCALLUM, P.E.
EMAIL: JESSICA.MCCALLUM@KIMLEY-HORN.COM

SURVEYOR:
KIMLEY-HORN AND ASSOCIATES, INC.
6200 S. SYRACUSE WAY, SUITE 300
GREENWOOD VILLAGE, CO 80111
TEL: (303) 228-2300
CONTACT: DARREN WOLTERSTORFF, P.L.S.
EMAIL: DARREN.WOLTERSTORFF@KIMLEY-HORN.COM

LANDSCAPE ARCHITECT:
KIMLEY-HORN AND ASSOCIATES, INC.
2 NEVADA NORTH AVE., SUITE 300
COLORADO SPRINGS, CO 80903
TEL: (719) 453-0180
CONTACT: JEREMY POWELL, P.L.A.
EMAIL: JEREMY.POWELL@KIMLEY-HORN.COM

OWNER:
CRADLAN COMMERCIAL, LLLP
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, CO 80903
TEL: (719)-635-3200
CONTACT: JEFF MARK
EMAIL: JMARK@LANDHUISCO.COM

DRAWN BY ALS	STD ISSUE DATE 7/30/2024	REVIEWED BY JIM	DATE ISSUED 7/30/2024	TITLE CONSTRUCTION DRAWINGS	DESCRIPTION COVER	SITE ADDRESS 9664 FONTAINE BLVD., COLORADO SPRINGS, COLORADO	SITE ID 51028	EDARP FILE # PPR2427	811 Know what's below. Call before you dig.	C2.0	PREPARED BY: Kimley»Horn	REV	DATE	BY

ENGINEERING CONSTRUCTION NOTES

- ALL EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME THE DRAWINGS WERE PREPARED AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. THE LOCATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTORS RESPONSIBILITY AND SHALL BE DONE BEFORE HE COMMENCES ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
- CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING: SAFETY OF ALL PERSONS AND PROPERTY, AND THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL CONTACT UTILITY NOTIFICATION CENTER FOR THE LOCATION OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION (1-800-922-1987).
- CONSTRUCTION SHALL COMPLY WITH ALL GOVERNING CODES AND BE CONSTRUCTED TO SAME.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS AND BONDS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE.
- ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN THE PUBLIC RIGHT-OF-WAY OR EASEMENT SHALL CONFORM TO THE CITY OF COLORADO SPRINGS'S SPECIFICATIONS AND STANDARDS. (LATEST EDITION)
- CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGGERS, AND ALL OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH MUTCD CONSTRUCTION AREA TRAFFIC CONTROL.

ENGINEERING DEMOLITION NOTES

- ALL DEMOLITION SHALL BE CARRIED OUT IN A SAFE MANNER AND IN STRICT ACCORDANCE WITH OSHA REGULATIONS.
- ALL CONDITIONS SHOWN TO BE "EXISTING" SHALL BE VERIFIED IN THE FIELD BY THE GENERAL CONTRACTOR PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE NOTED AND SUBMITTED TO THE OWNER AND THE ENGINEER FOR REVIEW. CHANGES TO THE ORIGINAL DESIGN OF THIS PROJECT DUE TO EXISTING SITE CONDITIONS MUST BE APPROVED BY BOTH THE OWNER AND THE ENGINEER PRIOR TO MAKING ANY CHANGES.
- THE CONTRACTOR SHALL FIELD VERIFY THE EXTENT OF DEMOLITION.
- WHEN UTILITIES ARE REMOVED, CAP AND SEAL A MINIMUM OF 8" BELOW FINISH GRADE.

ENGINEERING SITE NOTES

- CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.
- CONTRACTOR SHALL MATCH PROPOSED CURB AND GUTTER, CONCRETE, AND PAVEMENT TO EXISTING GRADE AT ALL TIE IN LOCATIONS.
- CONTRACTOR SHALL REMOVE PAVEMENT AND CONCRETE IN ACCORDANCE WITH SPECIFICATIONS OF EL PASO COUNTY AND/OR THE COLORADO STATE DEPARTMENT OF TRANSPORTATION.
- THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS AND ARCHITECTURAL BUILDING PLANS AND SPECIFICATIONS.
- CONTRACTOR SHALL REFER TO BUILDING PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL UTILITY ENTRANCES, TO INCLUDE, SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, AND TELEPHONE SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS ARE ACHIEVED, AS WELL AS, COORDINATE WITH ANY UTILITY COMPANIES FOR APPROVED LOCATIONS AND SCHEDULING OF TIE-INS/CONNECTIONS TO THEIR FACILITIES.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO, OR BETTER THAN, EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND NOTIFY CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION START.
- CONTRACTOR TO REMOVE OR RELOCATE, WHEN APPLICABLE, ALL EXISTING BUILDINGS, FOUNDATIONS, BASEMENTS, CONNECTING IMPROVEMENTS, DRAIN PIPES, SANITARY SEWER PIPES, POWER POLES, AND GUY WRES, WATER METERS AND WATER LINES, WELLS, SIDEWALKS, SIGN POLES, UNDERGROUND GAS, SEPTIC TANKS, AND ASPHALT, SHOWN AND NOT SHOWN, WITHIN CONSTRUCTION LIMITS AND WHERE NEEDED, TO ALLOW FOR NEW CONSTRUCTION AS SHOWN.

ENGINEERING PAVING NOTES

- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- ALL CONCRETE SIDEWALKS SHALL HAVE CONTROL JOINTS CUT ON 5' CENTERS AND EXPANSION JOINTS PLACED ON 20' CENTERS. CONCRETE PAVEMENT JOINTS SHALL BE SPACED AT 12' CENTERS MAXIMUM.
- ALL AREAS INDICATED AS PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL PAVEMENT SECTIONS.
- WHERE NEW PAVEMENT MEETS THE EXISTING PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND MATCH THE EXISTING PAVEMENT ELEVATION WITH THE PROPOSED PAVEMENT UNLESS OTHERWISE INDICATED.

ENGINEERING GRADING NOTES

- CONTOURS ON SIDEWALKS AND PRIVATE/PUBLIC ROADWAYS ARE TO FINISH GRADE.
- FOR GROUND TREATMENT OF ALL DISTURBED AREAS WITHIN THE PROJECT SITE, REFER TO LANDSCAPE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
- THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL RE-GRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND OR OTHER FINAL LANDSCAPE PLANTING IS WELL ESTABLISHED.

ENGINEERING DRAINAGE AND STORM WATER NOTES

- ON-SITE STORM SEWER SYSTEM HAS BEEN PROVIDED TO MAINTAIN THE EXISTING DRAINAGE PATTERNS.
- ALL ON-SITE STORM SEWER IS PRIVATE, UNLESS OTHERWISE NOTED.
- EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED. EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- THE CONTRACTOR SHALL DE-SILT ALL DRAINAGE STRUCTURES AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.
- IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER PRIOR TO EXCAVATION.

ENGINEERING GENERAL NOTES FOR CONTRACTOR

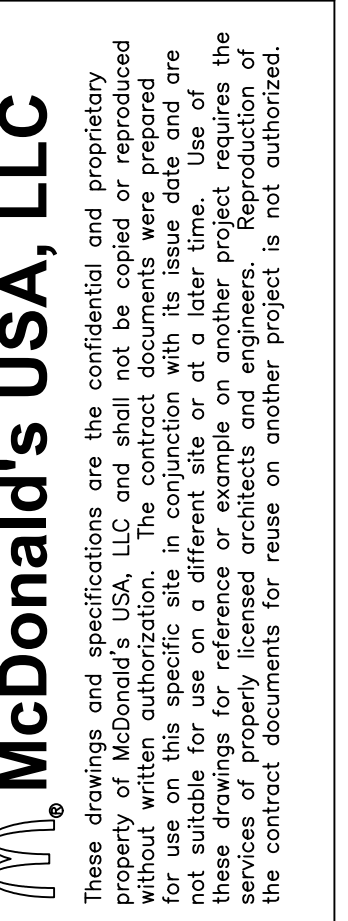
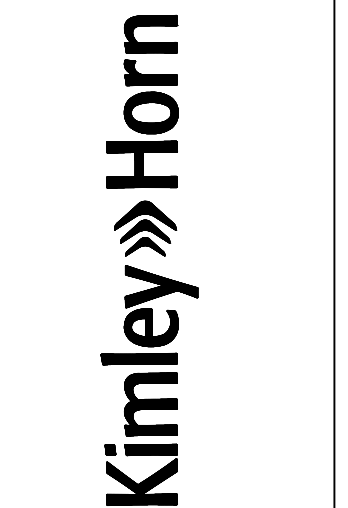
THE FOLLOWING NOTES ARE PROVIDED TO GIVE DIRECTIONS TO THE CONTRACTOR BY THE ENGINEER OF THE PLANS.

- THE CITY OR COUNTY ENGINEER'S SIGNATURE ON THESE PLANS DOES NOT CONSTITUTE APPROVAL OF ANY OF THESE NOTES AND THE CITY WILL NOT BE HELD RESPONSIBLE FOR THEIR ENFORCEMENT.
- APPROVAL OF THESE PLANS BY THE CITY/COUNTY DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED.
- THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY EL PASO COUNTY DOES NOT AUTHORIZE THE SUBDIVIDER AND OWNER TO VIOLATE ANY FEDERAL, STATE OR COUNTY LAWS, ORDINANCES, REGULATIONS, OR POLICIES.
- NEITHER THE OWNER, NOR THE ENGINEER OF WORK WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS, AND REGULATIONS.
- CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOBSITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING: SAFETY OF ALL PERSONS AND PROPERTY, AND THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT ALL SLOPES, STREETS, UTILITIES, AND STORM SEWERS ARE BUILT IN ACCORDANCE WITH THESE PLANS. IF THERE IS ANY QUESTION REGARDING THESE PLANS OR FIELD STAKES, THE CONTRACTOR SHALL REQUEST AN INTERPRETATION BEFORE DOING ANY WORK BY CALLING THE ENGINEER OF WORK AT 719-453-0190. THE CONTRACTOR SHALL ALSO TAKE THE NECESSARY STEPS TO PROTECT THE PROJECT AND ADJACENT PROPERTY FROM ANY EROSION AND SILTATION THAT RESULT FROM HIS OPERATIONS BY APPROPRIATE MEANS (SAND BAGS, TEMPORARY DESILTING BASINS, DIKES, SHORING, ETC.) UNTIL SUCH TIME THAT THE PROJECT IS COMPLETED AND ACCEPTED FOR MAINTENANCE BY WHATEVER OWNER, AGENCY, OR ASSOCIATION IS TO BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE.
- EXCEPT AS NOTED HEREON ALL UTILITY SERVICES WITHIN THIS DEVELOPMENT ARE UNDERGROUND INSTALLATIONS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO STARTING WORK NEAR THEIR FACILITIES, AND SHALL COORDINATE HIS WORK WITH COMPANY REPRESENTATIVES. FOR UTILITY MARK-OUT SERVICE, CALL 811.
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO OTHER EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL DAMAGES THERETO CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND STANDARDS AT THE EXPENSE OF THE CONTRACTOR.
- LOCATION AND ELEVATION OF EXISTING IMPROVEMENTS SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION OF NEW WORK.
- CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF ACTUAL LOCATION OF EXISTING FACILITIES.
- FOR ALL UTILITY TRENCHES, SOILS REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD BY A QUALIFIED SOILS ENGINEER WHICH CERTIFY THAT TRENCH BACKFILL WAS COMPACTED AS DIRECTED BY THE SOILS ENGINEER IN ACCORDANCE WITH THE ON-SITE EARTHWORK SPECIFICATIONS.
- ANY WORK DONE WITHOUT INSPECTION OR MATERIALS TESTING IS SUBJECT TO REMOVAL OR CORRECTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY DAMAGE TO THE EXISTING IMPROVEMENTS AND REPLACEMENT TO THE SATISFACTION OF THE FIELD ENGINEER.
- PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL JOIN CONDITIONS FOR GRADING, DRAINAGE AND UNDERGROUND FACILITIES, INCLUDING LOCATION AND ELEVATION OF EXISTING UNDERGROUND FACILITIES AT CROSSINGS WITH PROPOSED UNDERGROUND FACILITIES. IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CHANGED CONDITIONS HAVE BEEN EVALUATED.
- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE PLANS, THE SOILS AND/OR GEOLOGY REPORTS, AND THE SITE CONDITIONS PRIOR TO COMMENCING WORK.
- SHOULD CONFLICTING INFORMATION BE FOUND ON THE PLANS OR IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT KIMLEY-HORN BEFORE PROCEEDING WITH THE WORK IN QUESTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR MUST FIELD LOCATE, REFERENCE, AND/OR PRESERVE ALL HISTORICAL OR CONTROLLING MONUMENTS PRIOR TO ANY EARTHWORK. IF DESTROYED, A LAND SURVEYOR SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS. A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE EL PASO COUNTY FIELD SURVEY SECTION MUST BE NOTIFIED, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
- DEVIATIONS FROM THESE SIGNED PLANS WILL NOT BE ALLOWED UNLESS THE COUNTY ENGINEER APPROVES A CONSTRUCTION CHANGE OR THE COUNTY/AGENCY INSPECTOR REQUIRES THE CHANGE.
- AS-BUILT DRAWINGS MUST BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO ACCEPTANCE OF THIS PROJECT.
- THE AREA WHICH IS DEFINED AS A NON-GRADING AREA AND WHICH IS NOT TO BE DISTURBED SHALL BE STAKED PRIOR TO START OF THE WORK. THE PERMIT APPLICANT AND ALL OF THEIR REPRESENTATIVES OR CONTRACTORS SHALL COMPLY WITH THE REQUIREMENTS FOR PROTECTION OF THIS AREA AS REQUIRED BY ANY APPLICABLE AGENCY. ISSUANCE OF THE CITY/COUNTY'S GRADING PERMIT SHALL NOT RELIEVE THE APPLICANT OR ANY OF THEIR REPRESENTATIVES OR CONTRACTORS FROM COMPLYING WITH ANY STATE OR FEDERAL REQUIREMENTS BY AGENCIES INCLUDING BUT NOT LIMITED TO COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT OR COLORADO DIVISION OF WILDLIFE. COMPLIANCE MAY INCLUDE OBTAINING PERMITS, OTHER AUTHORIZATIONS, OR COMPLIANCE WITH MANDATES BY ANY APPLICABLE STATE OR FEDERAL AGENCY.
- NOTES AND DETAILS DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
- IF AT ANY TIME DURING THE GRADING OPERATION, ANY UNFAVORABLE GEOLOGICAL CONDITIONS ARE ENCOUNTERED, GRADING IN THAT AREA SHALL STOP UNTIL APPROVED CORRECTIVE MEASURES ARE OBTAINED.
- STRAIGHT GRADE SHALL BE MAINTAINED BETWEEN CONTOUR LINES AND SPOT ELEVATIONS UNLESS OTHERWISE SHOWN ON THE PLANS. THE CONTRACTOR SHALL TAKE ADDITIONAL CARE TO ENSURE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE WHILE MEETING MINIMUM AND MAXIMUM PAVEMENT SLOPES AS DEFINED IN THE CRITERIA.
- ALL DEBRIS AND FOREIGN MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT APPROVED DISPOSAL SITES. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS FOR THE TRANSPORTATION OF MATERIAL TO AND FROM THE SITE.
- DIMENSIONS TO PIPELINES ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
- CONSTRUCTION STAKING FOR IMPROVEMENTS SHOWN IN THESE PLANS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR.
- ALL DIMENSIONS ARE IN FEET OR DECIMALS THEREOF.
- SPOT GRADES ARE TO FLOWLINE OR FINISH PAVEMENT GRADE UNLESS OTHERWISE NOTED.
- CONTRACTOR TO BE AWARE OF ALL OVERHEAD LINES AT ALL TIMES, SO AS NOT TO DISTURB THEM.
- WATER SHALL BE PROVIDED ONSITE AND USED TO CONTROL DUST DURING DEMOLITION AND CONSTRUCTION OPERATIONS.
- STORM DRAINAGE SYSTEMS SHOWN ON THESE PLANS HAVE BEEN DESIGNED FOR THE FINAL SITE CONDITION AT COMPLETION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE OF THE SITE, DURING INTERIM CONDITIONS OF CONSTRUCTION.
- RETAINING WALLS LOCATED CLOSER TO THE PROPERTY LINE THAN THE HEIGHT OF THE WALL SHALL BE BACKFILLED NOT LATER THAN 10 DAYS AFTER CONSTRUCTION OF THE WALL AND NECESSARY STRUCTURAL SUPPORTING MEMBERS UNLESS RECOMMENDED OTHERWISE BY RESPONSIBLE ENGINEER.

STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS

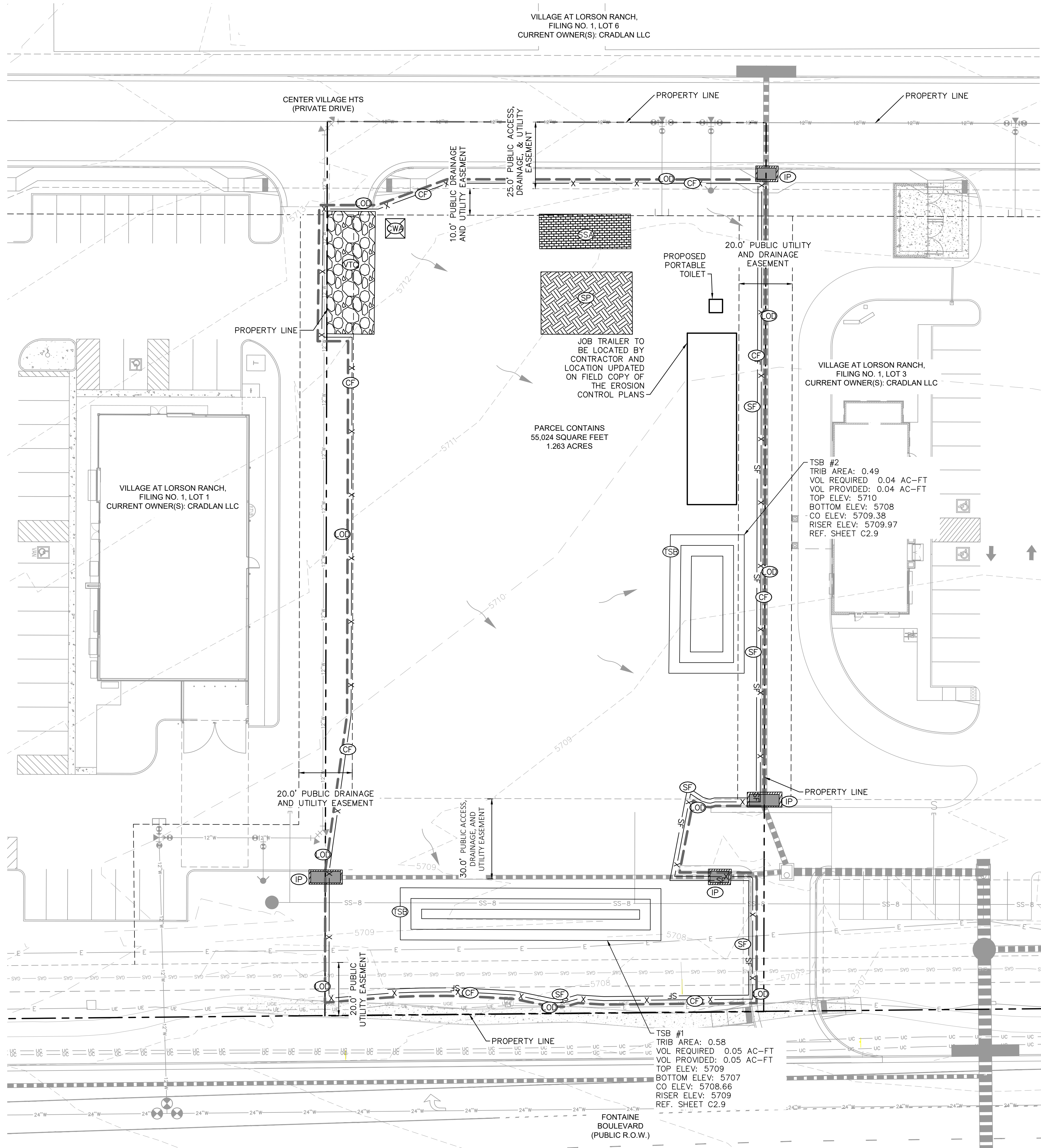
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS, ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED ON 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 (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS 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 PRE-CONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLAN DENSITY OF 70% OF PRE-DISTURBED LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENER PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK, OR STREAM.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS, AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE GEOTECHNICAL EVALUATION FOR THIS SITE HAS BEEN PREPARED BY CTL THOMPSON, INC 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
<https://cdphe.colorado.gov/cor400000-stormwater-discharge>

TITLE	CONSTRUCTION DRAWINGS	DESCRIPTION	NOTES	SITE ID	51028	REV	DATE	DESCRIPTION	BY
DRAWN BY	ALS	STD ISSUE DATE	7/30/2024	REVIEWED BY	JJM	DATE ISSUED	7/30/2024		
PREPARED FOR:	 <p>These drawings and specifications are the confidential and proprietary property of McDonald's USA, LLC and shall not be copied or reproduced without written authorization. The contract documents were prepared in accordance with this authorization. In the event of a conflict, the contract documents shall govern. Use of these drawings for reference on another project requires the approval of the contract documents for reuse on another project is not authorized.</p>								
									



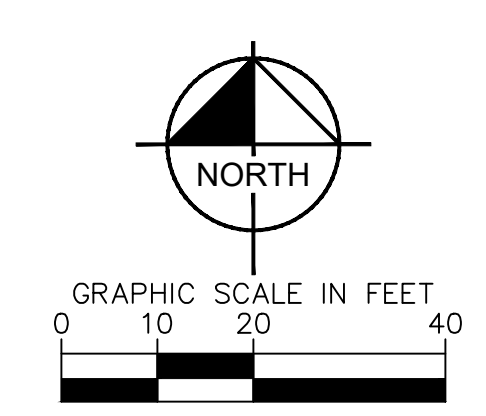
C2.1



LEGEND

---	PROPERTY LINE
---	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	LIMITS OF CONSTRUCTION/DISTURBANCE
X X	CONSTRUCTION FENCE
SF	SILT FENCE
---	PROPOSED EASEMENTS
---	EXISTING EASEMENTS
---	PROPOSED SETBACKS
SS-B	EXISTING SANITARY SEWER
---	EXISTING WATER LINE
---	EXISTING STORM SEWER PIPE
SSA	STABILIZED STAGING AREA
CWA	CONCRETE WASHOUT VEHICLE TRACKING CONTROL
VTC	VEHICLE TRACKING CONTROL
SP	SOIL STOCKPILE
IP	INLET PROTECTION
TSB	TEMPORARY SEDIMENT BASIN
E	EXISTING ELECTRIC LINE
UC	EXISTING UNDERGROUND COMMUNICATION LINE

- NOTES**
1. THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.
 2. ADJACENT STREETS AND SIDEWALK SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS AT ALL TIMES. CONTRACTOR SHALL PERFORM STREET SWEEPING AT ALL TIMES DURING ACTIVE TRACKING AND AT A MINIMUM ON A DAILY BASIS AT THE END OF EACH CONSTRUCTION DAY.
 3. TEMPORARY STABILIZATION (TS) SHALL BE IMPLEMENTED WITHIN THE DISTURBED PORTIONS OF THE PROJECT SITE NO LATER THAN 14 DAYS FOLLOWING THE CEASE OF CONSTRUCTION ACTIVITIES WITHIN THE DISTURBED AREAS.
 4. PERMANENT STABILIZATION (PS) MAY BE USED WITHIN AREAS OF TEMPORARY STABILIZATION (TS) AT THE CONTRACTOR'S DISCRETION. STABILIZATION SHALL BE APPLIED IN ACCORDANCE WITH APPLICABLE TEMPORARY STABILIZATION SEQUENCING REQUIREMENTS.
 5. CONTRACTOR SHALL UTILIZE ROLLED EROSION CONTROL PRODUCTS ON ALL SLOPES 3H:1V OR GREATER TO ACHIEVE REQUIRED STABILIZATION.
 6. CONTRACTOR SHALL MAINTAIN ACCEPTABLE EROSION CONTROL PRACTICES WITHIN THE ANTICIPATED LIMITS OF CONSTRUCTION IDENTIFIED HEREIN. BEST MANAGEMENT PRACTICES AND STABILIZATION SHALL BE COMPLETED AS IDENTIFIED HEREIN IN ACCORDANCE WITH OWNER REQUIREMENTS.
 7. ALL WORK IN THE FONTAINE BOULEVARD ROW REQUIRES A ROW PERMIT FROM COLORADO SPRINGS. CONTRACTOR IS RESPONSIBLE FOR APPLYING FOR AND OBTAINING ALL NECESSARY ROW PERMITS.
 8. CONTRACTOR SHALL REFER TO THE APPROVED GEOTECHNICAL REPORT FOR OVEREXCAVATION REQUIREMENTS AND ADDITIONAL INFORMATION.
 9. SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF ONSITE GRADING AND CONSTRUCTION ACTIVITIES.
 10. DEMOLITION, REMOVAL AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
 11. CONTRACTOR TO NOTE EXISTING IMPROVEMENTS ADJACENT TO THE SITE AND PROVIDE NECESSARY MEASURES TO PROTECT ALL FACILITIES AND STRUCTURES IN PLACE.
 12. CONTRACTOR SHALL MAINTAIN STABILIZED STAGING AREA (SSA), VEHICLE TRACKING CONTROL (VTC), AND CONCRETE WASHOUT AREA (CWA) AT THE CONSTRUCTION ENTRANCE AT ALL TIMES. CONTRACTOR SHALL UPDATE THE EROSION CONTROL PLAN IN THE FIELD TO INDICATE THE LOCATION OF THE SSA, VTC, AND CWA Bmps AS EXCAVATION SEQUENCING DICTATES.
 13. CONTRACTOR MAY SUBSTITUTE SEDIMENT CONTROL LOGS (SCL) FOR SILT FENCE (SF) AS PERIMETER CONTROL, DEPENDING UPON SITE CONDITIONS. SCL, AND SF MAY BE INTERCHANGED DEPENDING ON SITE CONDITIONS.
 14. CONTRACTOR SHALL OBTAIN R.O.W. PERMITS FOR ANY R.O.W. CLOSURES.
 15. THE EXISTING VEGETATION CONSISTS OF NATIVE GRASSES. SEE FINAL LANDSCAPING PLAN IN THE SITE DEVELOPMENT PLAN FOR FINAL STABILIZATION MEASURES.



TITLE	CONSTRUCTION DRAWINGS	DATE	7/30/2024
DESCRIPTION	INITIAL EC	REVIEWED BY	JJM
SITE ID	51028	DATE ISSUED	7/30/2024
SITE ADDRESS: 8664 FONTAINE BLVD., COLORADO SPRINGS, COLORADO			
DRAWN BY: ALS		PREPARED FOR: McDonald's USA, LLC	
<p>These drawings and specifications are the confidential and proprietary property of McDonald's USA, LLC and shall not be copied or reproduced without written authorization. The contract documents were prepared in accordance with the contract documents for the project. Use of these drawings for reference or example on another project requires the approval of McDonald's USA, LLC. Use of these drawings for any other purpose without the contract documents for reuse on another project is not authorized.</p>			
DRAWN BY: ALS		DATE	7/30/2024
REVIEWED BY: JJM		DATE	7/30/2024
DATE ISSUED: 7/30/2024		REV	DATE
DESCRIPTION		REV	DATE
BY		REV	DATE



Concrete Washout Area (CWA)

MM-1

Description

Concrete waste management involves designating and properly managing a specific area of the construction site as a concrete washout area. A concrete washout area can be created using one of several approaches designed to receive wash water from washing of tools and concrete mixer chutes, liquid concrete waste from dump trucks, mobile batch mixers, or pump trucks. Three basic approaches are available: excavation of a pit in the ground, use of an above ground storage area, or use of prefabricated haul-away concrete washout containers. Surface discharges of concrete washout water from construction sites are prohibited.



Photograph CWA-1. Example of concrete washout area. Note gravel tracking pad for access and sign.

Appropriate Uses

Concrete washout areas must be designated on all sites that will generate concrete wash water or liquid concrete waste from on-site concrete mixing or concrete delivery.

Because pH is a pollutant of concern for washout activities, when unlined pits are used for concrete washout, the soil must have adequate buffering capacity to result in protection of state groundwater standards; otherwise, a liner/containment must be used. The following management practices are recommended to prevent an impact from unlined pits to groundwater:

- The use of the washout site should be temporary (less than 1 year), and
- The washout site should be not be located in an area where shallow groundwater may be present, such as near natural drainages, springs, or wetlands.

Design and Installation

Concrete washout activities must be conducted in a manner that does not contribute pollutants to surface waters or stormwater runoff. Concrete washout areas may be lined or unlined excavated pits in the ground, commercially manufactured prefabricated washout containers, or aboveground holding areas constructed of berms, sandbags or straw bales with a plastic liner.

Although unlined washout areas may be used, lined pits may be required to protect groundwater under certain conditions.

Concrete Washout Area	
Functions	
Erosion Control	No
Sediment Control	No
Site/Material Management	Yes

Do not locate an unlined washout area within 400 feet of any natural drainage pathway or waterbody or within 1,000 feet of any wells or drinking water sources. Even for lined concrete washouts, it is advisable to locate the facility away from waterbodies and drainage paths. If site constraints make these

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Concrete Washout Area (CWA)

MM-1

setbacks infeasible or if highly permeable soils exist in the area, then the pit must be installed with an impermeable liner (16 mil minimum thickness) or surface storage alternatives using prefabricated concrete washout devices or a lined aboveground storage area should be used.

Design details with notes are provided in Detail CWA-1 for pits and CWA-2 for aboveground storage areas. Pre-fabricated concrete washout container information can be obtained from vendors.

Maintenance and Removal

A key consideration for concrete washout areas is to ensure that adequate signage is in place identifying the location of the washout area. Part of inspecting and maintaining washout areas is ensuring that adequate signage is provided and in good repair and that the washout area is being used, as opposed to washout in non-designated areas of the site.

Remove concrete waste in the washout area, as needed to maintain BMP function (typically when filled to about two-thirds of its capacity). Collect concrete waste and deliver offsite to a designated disposal location.

Upon termination of use of the washout site, accumulated solid waste, including concrete waste and any contaminated soils, must be removed from the site to prevent on-site disposal of solid waste. If the wash water is allowed to evaporate and the concrete hardens, it may be recycled.



Photograph CWA-2. Prefabricated concrete washout. Photo courtesy of CDOT.



Photograph CWA-3. Earthen concrete washout. Photo courtesy of CDOT.

CWA-2 Urban Drainage and Flood Control District CWA-1
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Concrete Washout Area (CWA)

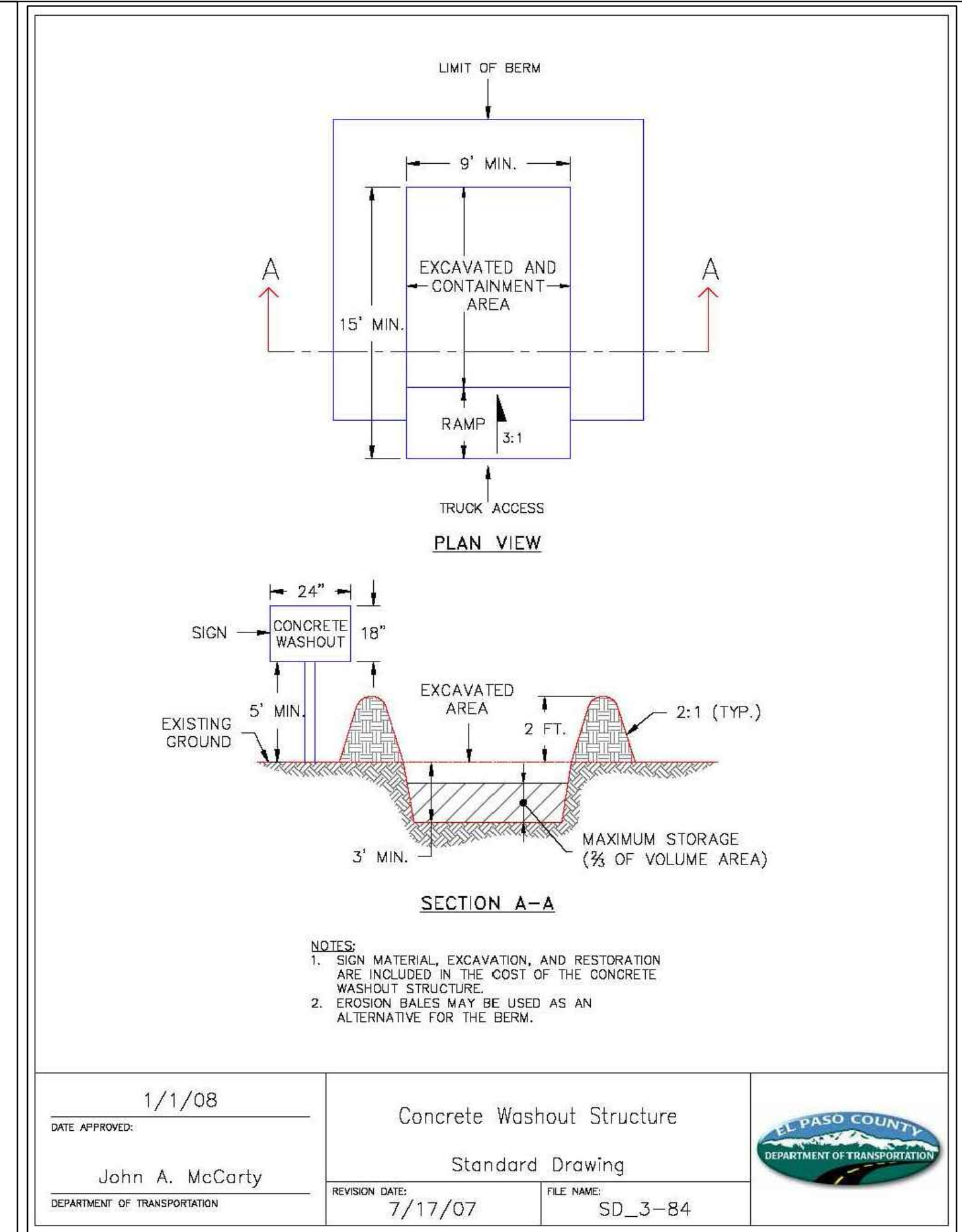
MM-1

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.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, 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.

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1/1/08 DATE APPROVED:	Concrete Washout Structure	EL PASO COUNTY DEPARTMENT OF TRANSPORTATION
John A. McCarty DEPARTMENT OF TRANSPORTATION	Standard Drawing REVISION DATE: 7/17/07 FILE NAME: SD_3-84	

Silt Fence (SF)

SC-1

Description

A silt fence is a woven geotextile fabric attached to wooden posts and trenched into the ground. It is designed as a sediment barrier to intercept sheet flow runoff from disturbed areas.



Photograph SF-1. Silt fence creates a sediment barrier, forcing sheet flow runoff to evaporate or infiltrate.

Appropriate Uses

A silt fence can be used where runoff is conveyed from a disturbed area as sheet flow. Silt fence is not designed to receive concentrated flow or to be used as a filter fabric. Typical uses include:

- Down slope of a disturbed area to accept sheet flow.
- Along the perimeter of a receiving water such as a stream, pond or wetland.
- At the perimeter of a construction site.

Design and Installation

Silt fence should be installed along the contour of slopes so that it intercepts sheet flow. The maximum recommended tributary drainage area per 100 lineal feet of silt fence, installed along the contour, is approximately 0.25 acres with a disturbed slope length of up to 150 feet and a tributary slope gradient no steeper than 3:1. Longer and steeper slopes require additional measures. This recommendation only applies to silt fence installed along the contour. Silt fence installed for other uses, such as perimeter control, should be installed in a way that will not produce concentrated flows. For example, a "J-hook" installation may be appropriate to force runoff to pond and evaporate or infiltrate in multiple areas rather than concentrate and cause erosive conditions parallel to the silt fence.

See Detail SF-1 for proper silt fence installation, which involves proper trenching, staking, securing the fabric to the stakes, and backfilling the silt fence. Properly installed silt fence should not be easily pulled out by hand and there should be no gaps between the ground and the fabric.

Silt fence must meet the minimum allowable strength requirements, depth of installation requirement, and other specifications in the design details. Improper installation of silt fence is a common reason for silt fence failure; however, when properly installed and used for the appropriate purposes, it can be highly effective.

Silt Fence	
Functions	
Erosion Control	No
Sediment Control	Yes
Site/Material Management	No

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SC-1

Silt Fence (SF)

Maintenance and Removal

Inspection of silt fence includes observing the material for tears or holes and checking for slumping fence and undercut areas bypassing flows. Repair of silt fence typically involves replacing the damaged section with a new section. Sediment accumulated behind silt fence should be removed, as needed to maintain BMP effectiveness, typically before it reaches a depth of 6 inches.

Silt fence may be removed when the upstream area has reached final stabilization.

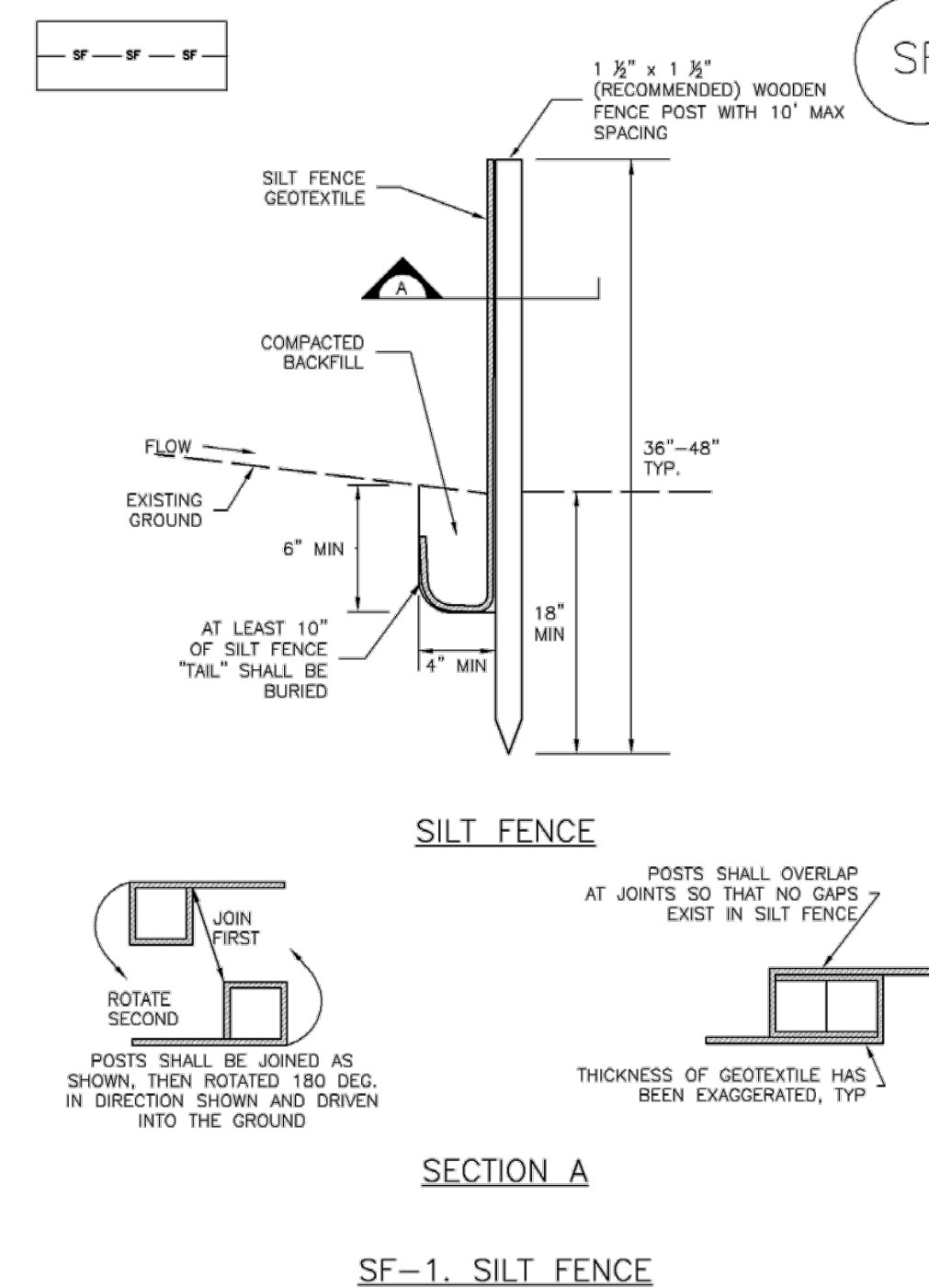


Photograph SF-2. When silt fence is not installed along the contour, a "J-hook" installation may be appropriate to ensure that the BMP does not create concentrated flow parallel to the silt fence. Photo courtesy of Tom Gore.

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Silt Fence (SF)

SC-1



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SC-1

Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

- SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE 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, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, 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.

SF-4 Urban Drainage and Flood Control District SF-1
Urban Storm Drainage Criteria Manual Volume 3 November 2010



TITLE	CONSTRUCTION DRAWINGS	DESCRIPTION	EROSION CONTROL DETAILS	SITE ADDRESS	8664 FONTAINE BLVD., COLORADO SPRINGS, COLORADO	51028
DATE	7/30/2024	REVIEWED BY	JJM	DATE ISSUED	7/30/2024	
ISSUED BY	ALS	DATE	7/30/2024	DATE	7/30/2024	
PREPARED BY:	McDonald's USA, LLC					
PREPARED FOR:	These drawings and specifications are the confidential and proprietary property of McDonald's USA, LLC and shall not be copied or reproduced without written authorization. The contract documents were prepared in accordance with the contract documents for the project. Use of these drawings for reference or example on another project requires the contract documents for reuse on another project is not authorized.					
DESIGNER	Kimley»Horn					
DATE		REV		DATE		
DESCRIPTION						

Vehicle Tracking Control (VTC) SM-4

Description

Vehicle tracking controls provide stabilized construction site access where vehicles exit the site onto paved public roads. An effective vehicle tracking control helps remove sediment (mud or dirt) from vehicles, reducing tracking onto the paved surface.



Photograph VTC-1. A vehicle tracking control pad constructed with properly sized rock reduces off-site sediment tracking.

Appropriate Uses

Implement a stabilized construction entrance or vehicle tracking control where frequent heavy vehicle traffic exits the construction site onto a paved roadway. An effective vehicle tracking control is particularly important during the following conditions:

- Wet weather periods when mud is easily tracked off site.
- During dry weather periods where dust is a concern.
- When poorly drained, clayey soils are present on site.

Although wheel washes are not required in designs of vehicle tracking controls, they may be needed at particularly muddy sites.

Design and Installation

Construct the vehicle tracking control on a level surface. Where feasible, grade the tracking control towards the construction site to reduce off-site runoff. Place signage, as needed, to direct construction vehicles to the designated exit through the vehicle tracking control. There are several different types of stabilized construction entrances including:

VTC-1. Aggregate Vehicle Tracking Control. This is a coarse-aggregate surfaced pad underlain by a geotextile. This is the most common vehicle tracking control, and when properly maintained can be effective at removing sediment from vehicle tires.

VTC-2. Vehicle Tracking Control with Construction Mat or Turf Reinforcement Mat. This type of control may be appropriate for site access at very small construction sites with low traffic volume over vegetated areas. Although this application does not typically remove sediment from vehicles, it helps protect existing vegetation and provides a stabilized entrance.

Vehicle Tracking Control	
Functions	
Erosion Control	Moderate
Sediment Control	Yes
Site/Material Management	Yes

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VTC-1

SM-4 Vehicle Tracking Control (VTC)

VTC-3. Stabilized Construction Entrance/Exit with Wheel Wash. This is an aggregate pad, similar to VTC-1, but includes equipment for tire washing. The wheel wash equipment may be as simple as hand-held power washing equipment to more advanced proprietary systems. When a wheel wash is provided, it is important to direct wash water to a sediment trap prior to discharge from the site.

Vehicle tracking controls are sometimes installed in combination with a sediment trap to treat runoff.

Maintenance and Removal

Inspect the area for degradation and replace aggregate or material used for a stabilized entrance/exit as needed. If the area becomes clogged and ponds water, remove and dispose of excess sediment or replace material with a fresh layer of aggregate as necessary.

With aggregate vehicle tracking controls, ensure rock and debris from this area do not enter the public right-of-way.

Remove sediment that is tracked onto the public right of way daily or more frequently as needed. Excess sediment in the roadway indicates that the stabilized construction entrance needs maintenance.

Ensure that drainage ditches at the entrance/exit area remain clear.

A stabilized entrance should be removed only when there is no longer the potential for vehicle tracking to occur. This is typically after the site has been stabilized.

When wheel wash equipment is used, be sure that the wash water is discharged to a sediment trap prior to discharge. Also inspect channels conveying the water from the wash area to the sediment trap and stabilize areas that may be eroding.

When a construction entrance/exit is removed, excess sediment from the aggregate should be removed and disposed of appropriately. The entrance should be promptly stabilized with a permanent surface following removal, typically by paving.



Photograph VTC-2. A vehicle tracking control pad with wheel wash facility. Photo courtesy of Tom Gore.

VTC-2

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SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

- SEE PLAN VIEW FOR:
 - LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
 - TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
- CONSTRUCTION MAT OR TRM 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 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 THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

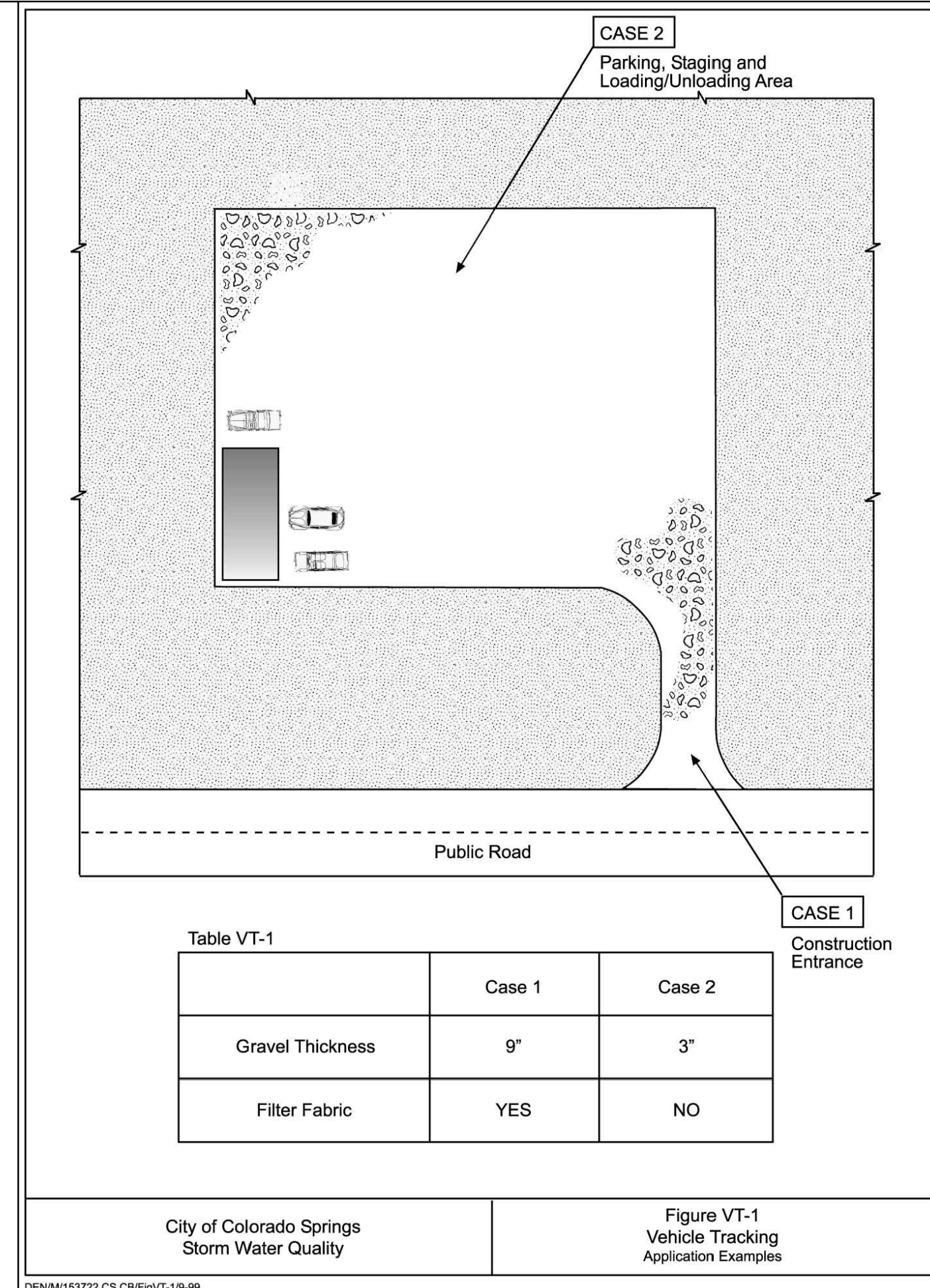
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
 - FREQUENT OBSERVATIONS 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 A CONSISTENT DEPTH.
 - SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

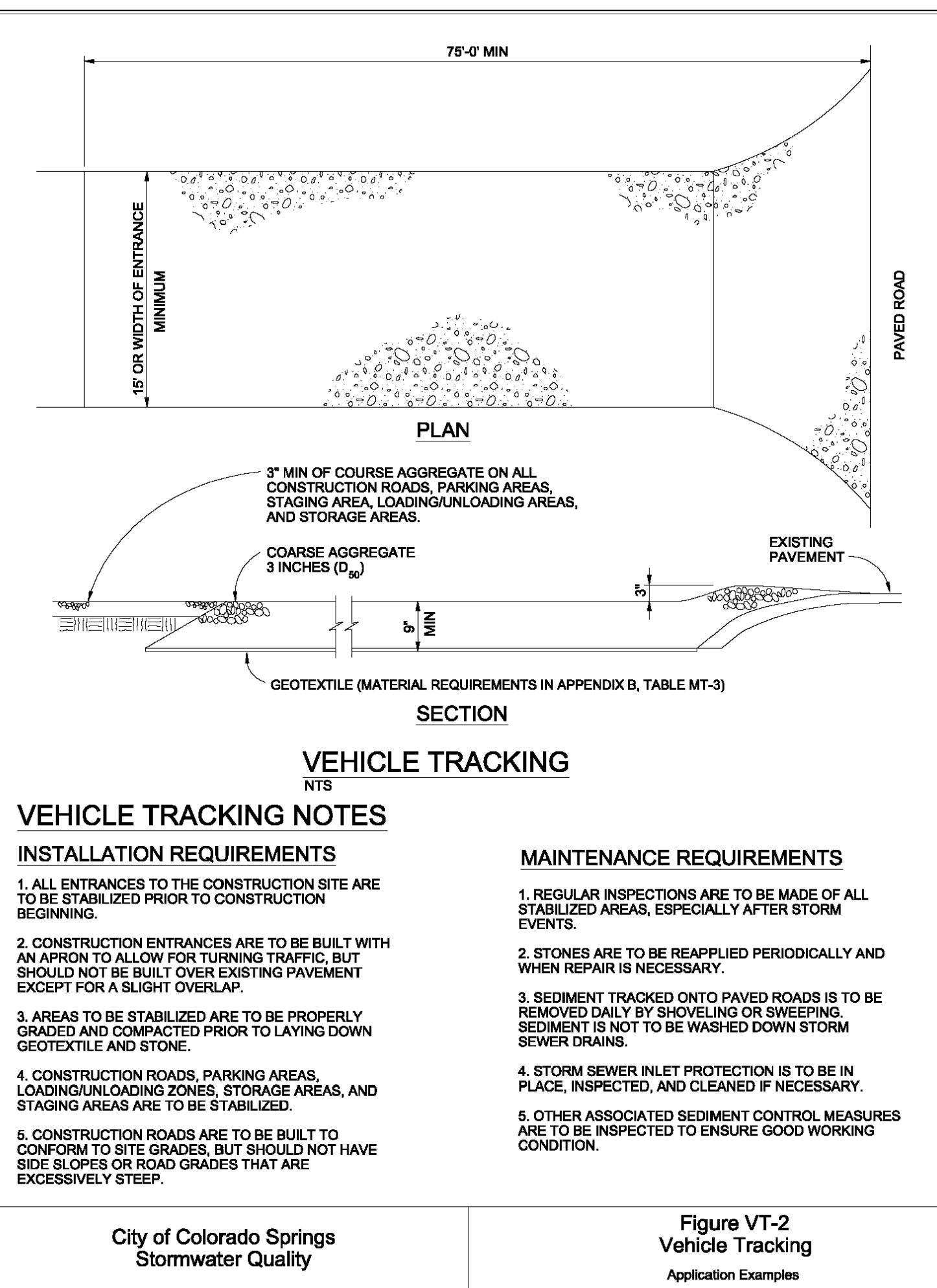
VTC-6

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Urban Storm Drainage Criteria Manual Volume 3

November 2010



DEM1153722 CS C8PpVT-116-09



Kimley»Horn

PREPARED BY:

PREPARED FOR: McDonald's USA, LLC

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DRAWN BY:

ALS

STD

ISSUE DATE

7/30/2024

REVIEWED BY:

JJM

DATE ISSUED

7/30/2024

TITLE: CONSTRUCTION DRAWINGS

DESCRIPTION: EROSION CONTROL DETAILS

SITE ID: 51028

SITE ADDRESS: 8664 FONTAINE BLVD., COLORADO SPRINGS, COLORADO

C2.7

Stabilized Staging Area (SSA)

SM-6

Description

A stabilized staging area is a clearly designated area where construction equipment and vehicles, stockpiles, waste bins, and other construction-related materials are stored. The contractor office trailer may also be located in this area. Depending on the size of the construction site, more than one staging area may be necessary.



Photograph SSA-1. Example of a staging area with a gravel surface to prevent mud tracking and reduce runoff. Photo courtesy of Douglas County.

Appropriate Uses

Most construction sites will require a staging area, which should be clearly designated in SWMP drawings. The layout of the staging area may vary depending on the type of construction activity. Staging areas located in roadways due to space constraints require special measures to avoid materials being washed into storm inlets.

Design and Installation

Stabilized staging areas should be completed prior to other construction activities beginning on the site. Major components of a stabilized staging area include:

- Appropriate space to contain storage and provide for loading/unloading operations, as well as parking if necessary.
- A stabilized surface, either paved or covered, with 3-inch diameter aggregate or larger.
- Perimeter controls such as silt fence, sediment control logs, or other measures.
- Construction fencing to prevent unauthorized access to construction materials.
- Provisions for Good Housekeeping practices related to materials storage and disposal, as described in the Good Housekeeping BMP Fact Sheet.
- A stabilized construction entrance/exit, as described in the Vehicle Tracking Control BMP Fact Sheet, to accommodate traffic associated with material delivery and waste disposal vehicles.

Over-sizing the stabilized staging area may result in disturbance of existing vegetation in excess of that required for the project. This increases costs, as well as requirements for long-term stabilization following the construction period. When designing the stabilized staging area, minimize the area of disturbance to the extent practical.

Stabilized Staging Area	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material	Yes

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SM-6 Stabilized Staging Area (SSA)

Minimizing Long-Term Stabilization Requirements

- Utilize off-site parking and restrict vehicle access to the site.
- Use construction mats in lieu of rock when staging is provided in an area that will not be disturbed otherwise.
- Consider use of a bermed contained area for materials and equipment that do not require a stabilized surface.
- Consider phasing of staging areas to avoid disturbance in an area that will not be otherwise disturbed.

See Detail SSA-1 for a typical stabilized staging area and SSA-2 for a stabilized staging area when materials staging in roadways is required.

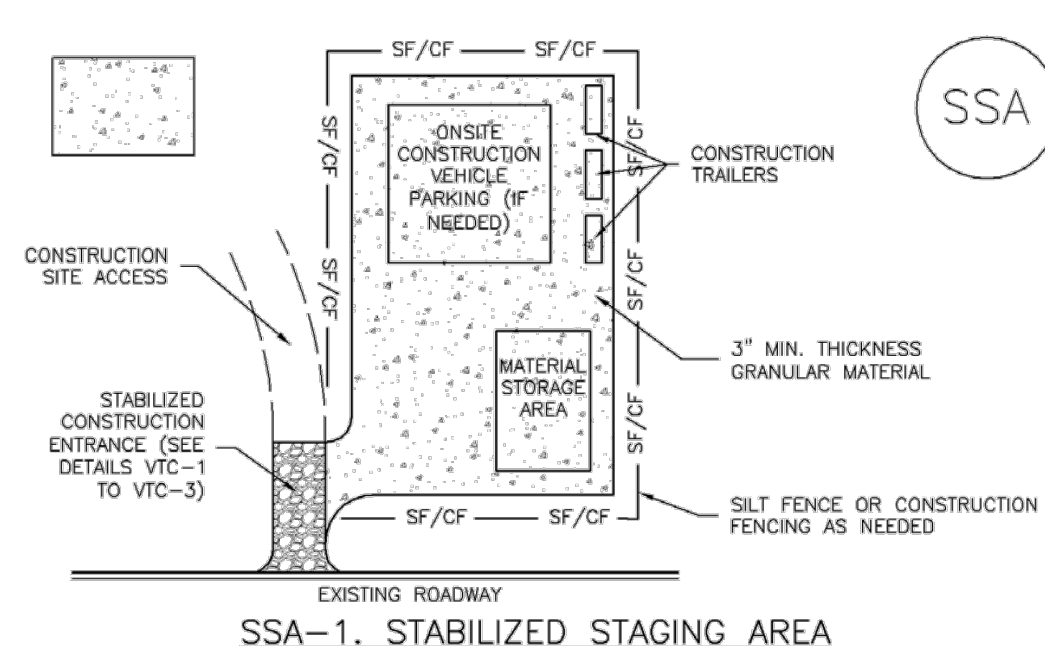
Maintenance and Removal

Maintenance of stabilized staging areas includes maintaining a stable surface cover of gravel, repairing perimeter controls, and following good housekeeping practices.

When construction is complete, debris, unused stockpiles and materials should be recycled or properly disposed. In some cases, this will require disposal of contaminated soil from equipment leaks in an appropriate landfill. Staging areas should then be permanently stabilized with vegetation or other surface cover planned for the development.

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Stabilized Staging Area (SSA) SM-6



EXISTING ROADWAY
SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

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

STABILIZED STAGING AREA MAINTENANCE NOTES

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

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SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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Stockpile Management (SP) MM-2

Description

Stockpile management includes measures to minimize erosion and sediment transport from soil stockpiles.

Appropriate Uses

Stockpile management should be used when soils or other erodible materials are stored at the construction site. Special attention should be given to stockpiles in close proximity to natural or manmade storm systems.



Photograph SP-1. A topsoil stockpile that has been partially revegetated and is protected by silt fence perimeter control.

Design and Installation

Locate stockpiles away from all drainage system components including storm sewer inlets. Where practical, choose stockpile locations that will remain undisturbed for the longest period of time as the phases of construction progress. Place sediment control BMPs around the perimeter of the stockpile, such as sediment control logs, rock socks, silt fence, straw bales and sand bags. See Detail SP-1 for guidance on proper establishment of perimeter controls around a stockpile. For stockpiles in active use, provide a stabilized designated access point on the upgradient side of the stockpile.

Stabilize the stockpile surface with surface roughening, temporary seeding and mulching, erosion control blankets, or soil binders. Soils stockpiled for an extended period (typically for more than 60 days) should be seeded and mulched with a temporary grass cover once the stockpile is placed (typically within 14 days). Use of mulch only or a soil binder is acceptable if the stockpile will be in place for a more limited time period (typically 30-60 days). Timeframes for stabilization of stockpiles noted in this fact sheet are "typical" guidelines. Check permit requirements for specific federal, state, and/or local requirements that may be more prescriptive.

Stockpiles should not be placed in streets or paved areas unless no other practical alternative exists. See the Stabilized Staging Area Fact Sheet for guidance when staging in roadways is unavoidable due to space or right-of-way constraints. For paved areas, rock socks must be used for perimeter control and all inlets with the potential to receive sediment from the stockpile (even from vehicle tracking) must be protected.

Maintenance and Removal

Inspect perimeter controls and inlet protection in accordance with their respective BMP Fact Sheets. Where seeding, mulch and/or soil binders are used, reseeding or reapplication of soil binder may be necessary.

When temporary removal of a perimeter BMP is necessary to access a stockpile, ensure BMPs are reinstalled in accordance with their respective design detail section.

Stockpile Management	
Functions	
Erosion Control	Yes
Sediment Control	Yes
Site/Material Management	Yes

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Construction Fence (CF) SM-3

Description

A construction fence restricts site access to designated entrances and exits, delineates construction site boundaries, and keeps construction out of sensitive areas such as natural areas to be preserved as open space, wetlands and riparian areas.

Appropriate Uses

A construction fence can be used to delineate the site perimeter and locations within the site where access is restricted to protect natural resources such as wetlands, waterbodies, trees, and other natural areas of the site that should not be disturbed.

If natural resource protection is an objective, then the construction fencing should be used in combination with other perimeter control BMPs such as silt fence, sediment control logs or similar measures.

Design and Installation

Construction fencing may be chain link or plastic mesh and should be installed following manufacturer's recommendations. See Detail CF-1 for typical installations.

Do not place construction fencing in areas within work limits of machinery.

Maintenance and Removal

- Inspect fences for damage; repair or replace as necessary.
- Fencing should be tight and any areas with slumping or fallen posts should be reinstalled.
- Fencing should be removed once construction is complete.



Photograph CF-1. A construction fence helps delineate areas where existing vegetation is being protected. Photo courtesy of Douglas County.

Construction Fence	
Functions	
Erosion Control	No
Sediment Control	No
Site/Material Management	Yes

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Construction Fence (CF) SM-3

CONSTRUCTION FENCE MAINTENANCE NOTES

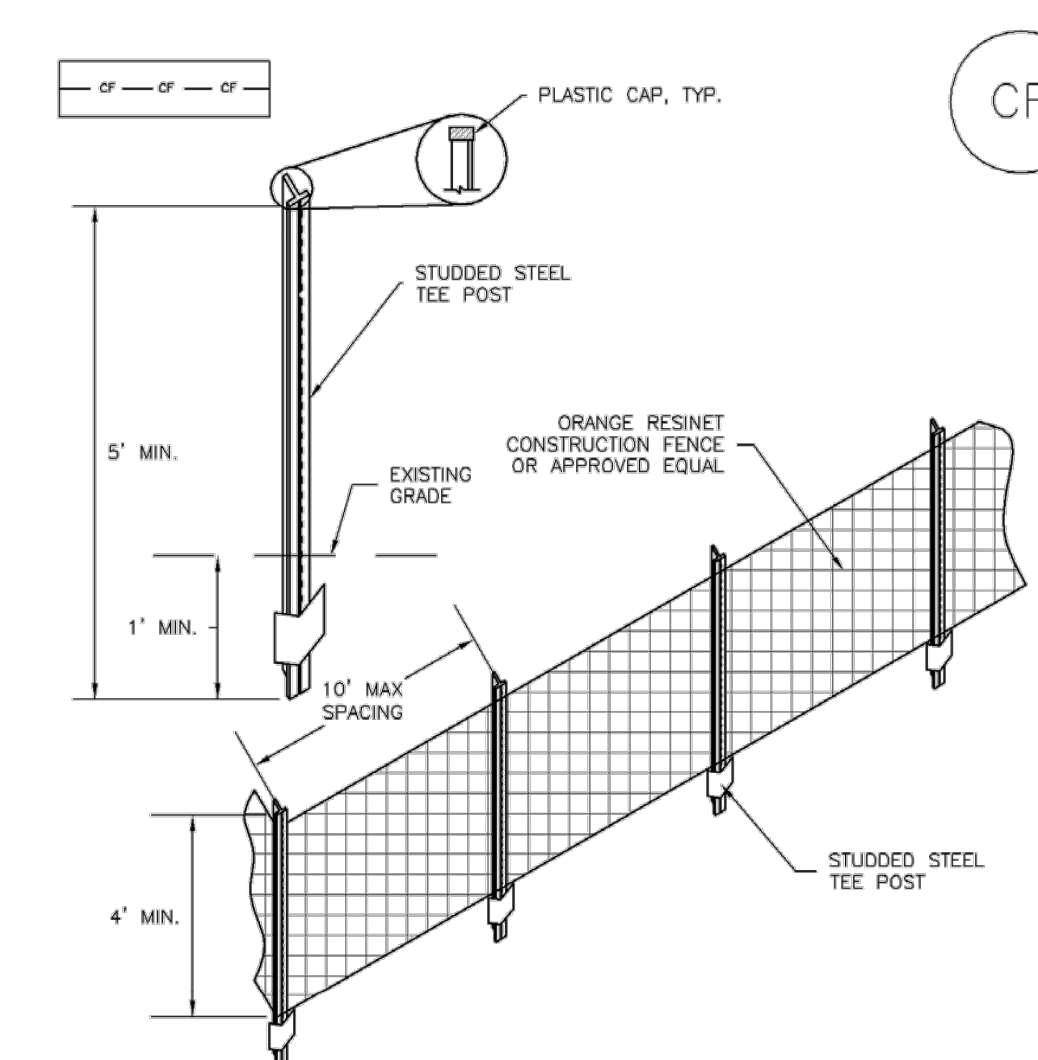
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District CF-3
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SM-3 Construction Fence (CF)



CF-1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
-LOCATION OF CONSTRUCTION FENCE.
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

CF-2 Urban Drainage and Flood Control District November 2010
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Kimley»Horn

DRAWN BY: ALS
STD ISSUE DATE: 7/30/2024
REVIEWED BY: JMM
DATE ISSUED: 7/30/2024

CONSTRUCTION DRAWINGS

EROSION CONTROL DETAILS

TITLE: CONSTRUCTION DRAWINGS
DESCRIPTION: EROSION CONTROL DETAILS
SITE ID: 51028
SITE ADDRESS: 9664 FONTAINE BLVD., COLORADO SPRINGS, COLORADO

REV. DATE

DESCRIPTION

BY

Sediment Basin (SB)

SC-7

Description

A sediment basin is a temporary pond built on a construction site to capture eroded or disturbed soil transported in storm runoff prior to discharge from the site. Sediment basins are designed to capture site runoff and slowly release it to allow time for settling of sediment prior to discharge. Sediment basins are often constructed in locations that will later be modified to serve as post-construction stormwater basins.



Photograph SB-1. Sediment basin at the toe of a slope. Photo courtesy of WWE.

Appropriate Uses

Most large construction sites (typically greater than 2 acres) will require one or more sediment basins for effective management of construction site runoff. On linear construction projects, sediment basins may be impractical; instead, sediment traps or other combinations of BMPs may be more appropriate.

Sediment basins should not be used as stand-alone sediment controls. Erosion and other sediment controls should also be implemented upstream.

When feasible, the sediment basin should be installed in the same location where a permanent post-construction detention pond will be located.

Design and Installation

The design procedure for a sediment basin includes these steps:

- Basin Storage Volume:** Provide a storage volume of at least 3,600 cubic feet per acre of drainage area. To the extent practical, undisturbed and/or off-site areas should be diverted around sediment basins to prevent "clean" runoff from mixing with runoff from disturbed areas. For undisturbed areas (both on-site and off-site) that cannot be diverted around the sediment basin, provide a minimum of 500 ft³/acre of storage for undeveloped (but stable) off-site areas in addition to the 3,600 ft³/acre for disturbed areas. For stable, developed areas that cannot be diverted around the sediment basin, storage volume requirements are summarized in Table SB-1.
- Basin Geometry:** Design basin with a minimum length-to-width ratio of 2:1 (L:W). If this cannot be achieved because of site space constraints, baffling may be required to extend the effective distance between the inflow point(s) and the outlet to minimize short-circuiting.
- Dam Embankment:** It is recommended that embankment slopes be 4:1 (H:V) or flatter and no steeper than 3:1 (H:V) in any location.

Sediment Basins	
Functions	
Erosion Control	No
Sediment Control	Yes
Site/Material Management	No

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SC-7

Sediment Basin (SB)

Maintenance and Removal

Maintenance activities include the following:

- Dredge sediment from the basin, as needed to maintain BMP effectiveness, typically when the design storage volume is no more than one-third filled with sediment.
- Inspect the sediment basin embankments for stability and seepage.
- Inspect the inlet and outlet of the basin, repair damage, and remove debris. Remove, clean and replace the gravel around the outlet on a regular basis to remove the accumulated sediment within it and keep the outlet functioning.
- Be aware that removal of a sediment basin may require dewatering and associated permit requirements.
- Do not remove a sediment basin until the upstream area has been stabilized with vegetation.

Final disposition of the sediment basin depends on whether the basin will be converted to a permanent post-construction stormwater basin or whether the basin area will be returned to grade. For basins being converted to permanent detention basins, remove accumulated sediment and reconfigure the basin and outlet to meet the requirements of the final design for the detention facility. If the sediment basin is not to be used as a permanent detention facility, fill the excavated area with soil and stabilize with vegetation.

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Sediment Basin (SB)

SC-7

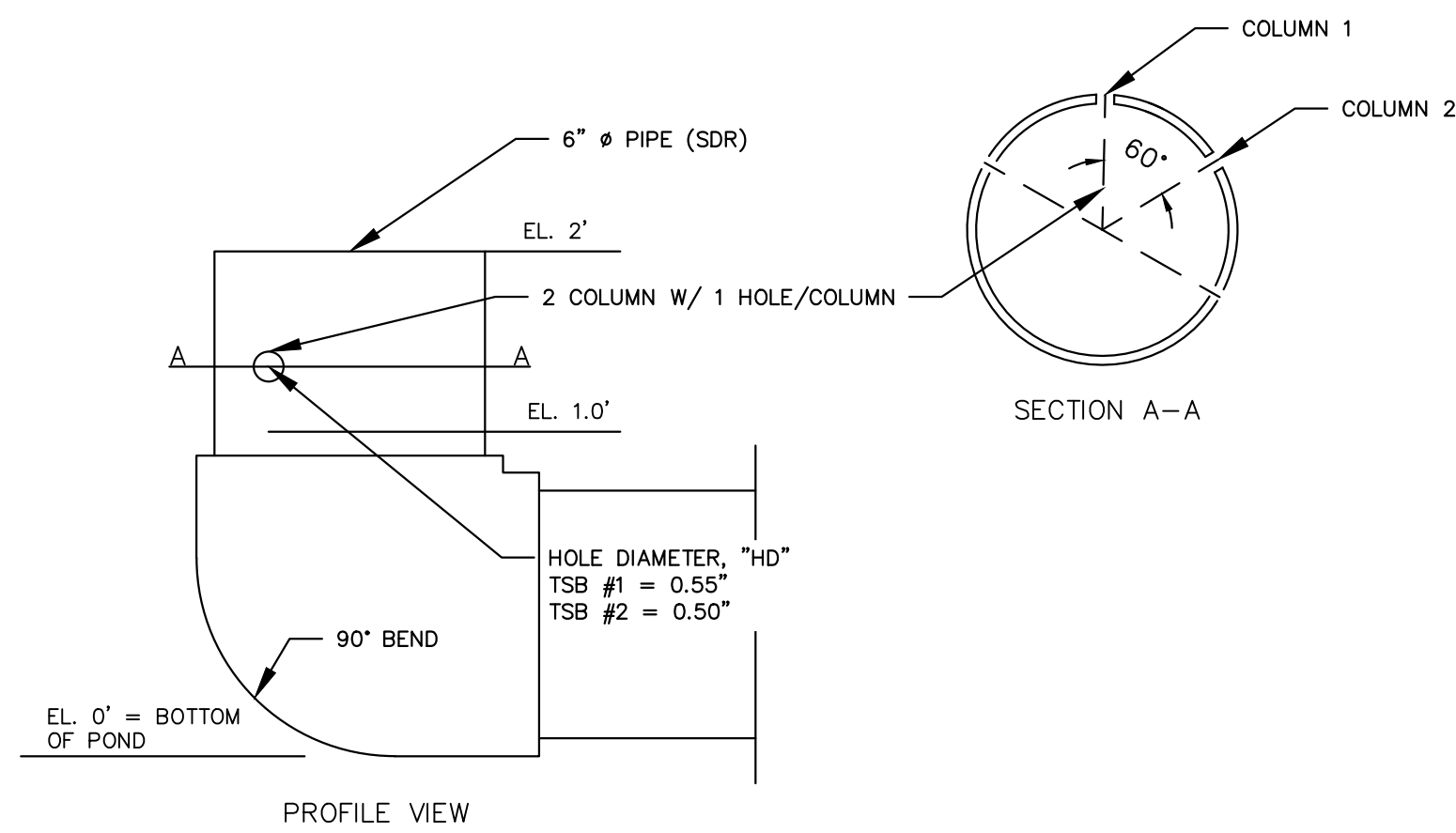
SEDIMENT BASIN MAINTENANCE NOTES

- 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 IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
- SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
- WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM BOULDER COUNTY, CO19000)

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.

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SEDIMENT BASIN RISER PIPE SCALE: NTS

TEMPORARY SEDIMENT BASIN CALCULATIONS - TSB #1						
PRISMOIDAL METHOD						
Volume Required = Tributary Area (acres) X 3600 (cu. ft./acre) 290						
Prismoidal Calculation Method = (1/3)*(ELEV1-ELEV2)*(AREA1+AREA2)+(SQRT(AREA1*AREA2))						
Sedimentation Basin ID:	A	ELEV. (FT)	AREA (SQ FT.)	VOLUME (CU FT)	ACCUM. VOL. (AC-FT)	ACCUM. VOL. (AC-FT)
Disturbed Tributary Area (ac) =	0.59	0	290	0	0	0.00
Undisturbed Tributary Area (ac) =	0.00	1	1,037	625	625	0.01
Disturbed Volume Required (cu-ft) =	2,117	2	1,911	1,452	2,077	0.05
Undisturbed Volume Required (cu-ft) =	0					
Total Volume Required (cu-ft) =	2,117					
Total Volume Required (ac-ft) =	0.05					
Total Tributary Area (ac) =	0.59					
Required Outlet Pipe? (Y/N):	Y					
Sediment Cleanout Elevation		1.69	-	-	1,058	0.02
**50% Storage Volume - Lowest Perforation						
Riser Pipe Elevation		2.03	-	-	2,117	0.05
**100% Storage Volume - Riser Elevation						

Equation EDB-3 from UDFCD USDCM Vol 3 Extended Detention Basin Fact Sheet T-5

$V = 0.05$ acre-ft
 $T_D = 72$ hrs
 $H = 0.33$ ft
 $S = 0.005$ ft/ft
Required $A_0 = 0.473$ in² per row
 $d = 0.55$ in
 $n_1 = 2$ column
 $n_2 = 1$ rows
Provided $A_0 = 0.476$ in² per row

Equation EDB-3

$$A_0 = \frac{88V^{(0.95/H^{0.885})}}{T_D^{5.099} H^{(2.68^{0.83})}}$$

Where:

- A_0 = area per row of orifices spaced on 4" centers (in²)
- V = design volume (WQCV or EURV, acre ft)
- T_D = time to drain the prescribed volume (hrs) (i.e., 40 hours for WQCV or 72 hours for EURV)
- H = depth of volume (ft)
- S = slope (ft/ft)

TEMPORARY SEDIMENT BASIN CALCULATIONS - TSB #2						
PRISMOIDAL METHOD						
Volume Required = Tributary Area (acres) X 3600 (cu. ft./acre) 290						
Prismoidal Calculation Method = (1/3)*(ELEV1-ELEV2)*(AREA1+AREA2)+(SQRT(AREA1*AREA2))						
Sedimentation Basin ID:	A	ELEV. (FT)	AREA (SQ FT.)	VOLUME (CU FT)	ACCUM. VOL. (AC-FT)	ACCUM. VOL. (AC-FT)
Disturbed Tributary Area (ac) =	0.51	0	431	0	0	0.00
Undisturbed Tributary Area (ac) =	0.00	1	878	641	641	0.01
Disturbed Volume Required (cu-ft) =	1,843	2	1,454	1,154	1,795	0.04
Undisturbed Volume Required (cu-ft) =	0					
Total Volume Required (cu-ft) =	1,843					
Total Volume Required (ac-ft) =	0.04					
Total Tributary Area (ac) =	0.51					
Required Outlet Pipe? (Y/N):	Y					
Sediment Cleanout Elevation		1.44	-	-	922	0.02
**50% Storage Volume - Lowest Perforation						
Riser Pipe Elevation		2.04	-	-	1,843	0.04
**100% Storage Volume - Riser Elevation						

Equation EDB-3 from UDFCD USDCM Vol 3 Extended Detention Basin Fact Sheet T-5

$V = 0.04$ acre-ft
 $T_D = 72$ hrs
 $H = 0.60$ ft
 $S = 0.005$ ft/ft
Required $A_0 = 0.351$ in² per row
 $d = 0.50$ in
 $n_1 = 2$ column
 $n_2 = 1$ rows
Provided $A_0 = 0.393$ in² per row

Equation EDB-3

$$A_0 = \frac{88V^{(0.95/H^{0.885})}}{T_D^{5.099} H^{(2.68^{0.83})}}$$

Where:

- A_0 = area per row of orifices spaced on 4" centers (in²)
- V = design volume (WQCV or EURV, acre ft)
- T_D = time to drain the prescribed volume (hrs) (i.e., 40 hours for WQCV or 72 hours for EURV)
- H = depth of volume (ft)
- S = slope (ft/ft)

TITLE: CONSTRUCTION DRAWINGS
 DESCRIPTION: EROSION CONTROL DETAILS
 SITE ID: 51028
 SITE ADDRESS: 9664 FONTAINE BLVD., COLORADO SPRINGS, COLORADO
 PREPARED BY: Kimley»Horn
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