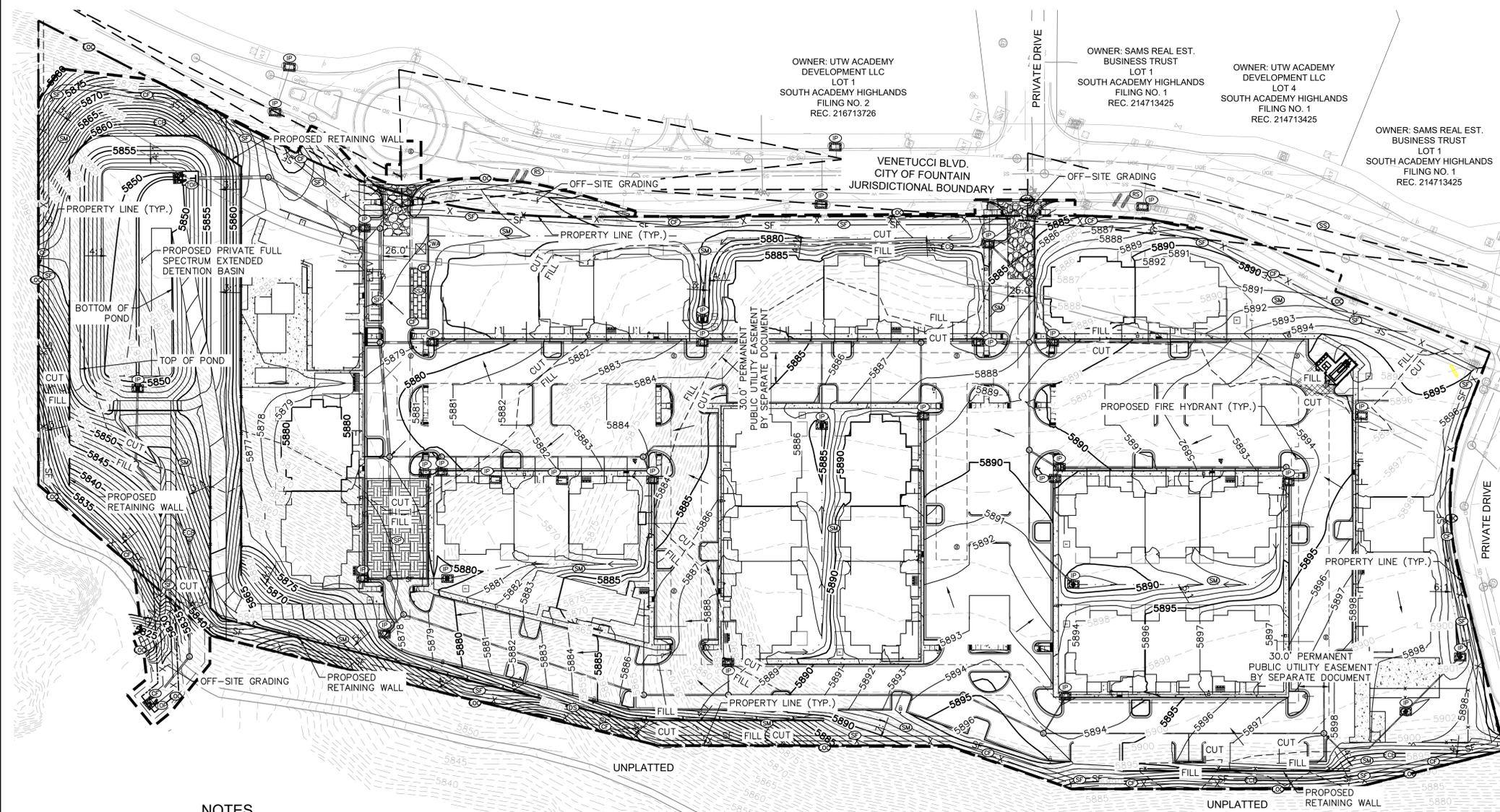


K:\DEN_Civil\096302017_Venetucci\Multi-Family\CADD\PlanSheets\GEC\096302017_GEC-INTER.dwg Rankin, Cormac 11/14/2024 11:56 AM



LEGEND

	PROPERTY LINE
	LIMITS OF CONSTRUCTION/DISTURBANCE
	SILT FENCE
	CONSTRUCTION FENCE
	TEMPORARY OUTLET PROTECTION
	INLET/OUTLET PROTECTION
	CONCRETE WASHOUT AREA
	STABILIZED STAGING AREA
	EROSION CONTROL BLANKET
	VEHICLE TRACKING CONTROL
	SOIL STOCKPILE
	SEEDING AND MULCHING
	CHECK DAM
	DIVERSION SWALE
	ROCK SOCKS
	EXISTING FLOW ARROW
	STREET SWEEPING
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	CUT/FILL BOUNDARY
	PROPOSED FLOW ARROW
	PROPOSED SLOPE ARROW

NOTES

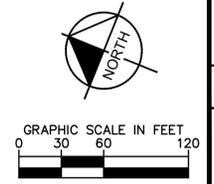
1. THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. ADJACENT STREETS SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS AT ALL TIMES.
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 VENETUCCI BLVD. AND WALMART HTS. ROW REQUIRES A ROW PERMIT FROM EL PASO COUNTY. CONTRACTOR IS RESPONSIBLE FOR APPLYING FOR AND OBTAINING ALL NECESSARY ROW PERMITS.
8. SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF ONSITE GRADING AND CONSTRUCTION ACTIVITIES.
9. DEMOLITION, REMOVAL, OVEREXCAVATION AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
10. SEE SHEET C301 FOR RISER PIPE AND SEDIMENT BASIN DETAILS.
11. EXISTING SITE CONSISTS OF NATIVE WEEDS, BRUSH, GRASSES, AND VEGETATIVE SWALES.

LIMITS OF CONSTRUCTION

TOTAL DISTURBANCE	= ±16.23 ACRES
OFFSITE DISTURBANCE	= ±0.21 ACRES
TOTAL	= ±16.44 ACRES

Earthwork Summary

Cut	Fill	Net
107,498 Cu. Yd	65,192 Cu. Yd	42,306 Cu. Yd <Cut>



Kimley»Horn
 2024 KIMLEY-HORN AND ASSOCIATES, INC.
 6200 South Syracuse Way, Suite 300
 Greenwood Village, Colorado 80111 (303) 228-2300

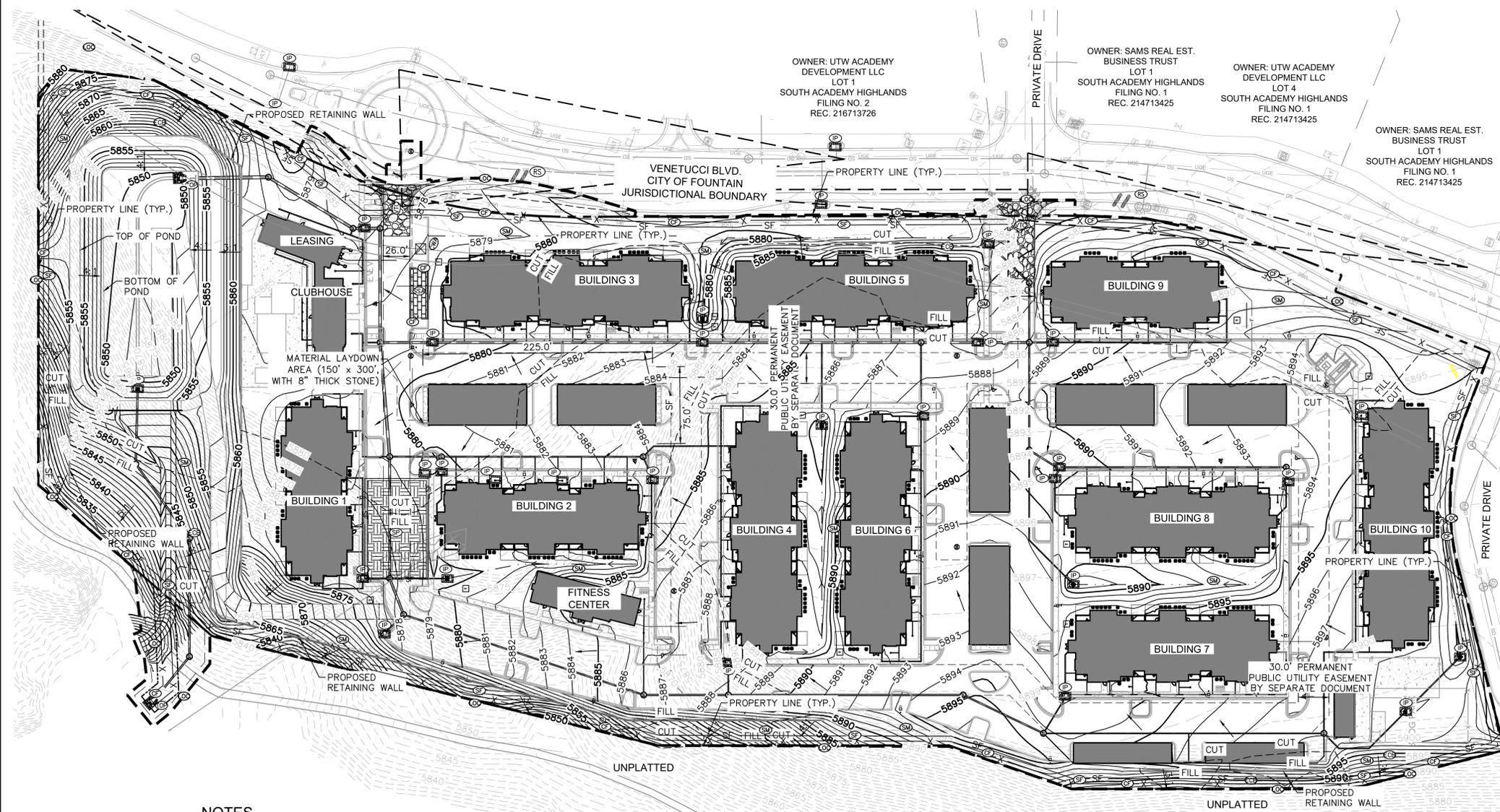
DESIGNED BY: MTH
 DRAWN BY: FCR
 CHECKED BY: MTH
 DATE: 11/05/2024

VENETUCCI MULTIFAMILY
 EL PASO COUNTY, COLORADO
 GRADING AND EROSION CONTROL PLANS
GEC INTERIM PLAN

NO.	REVISION	BY	DATE	APPR.

PROJECT NO. 0963020187
 SHEET C302

K:\DEN_Civil\096302017_Venettucci\Multi-Family\CADD\PlanSheets\GEC\096302017_GEC-FINAL.dwg Rankin, Cormac 11/14/2024 11:58 AM



LEGEND

- PROPERTY LINE
- LIMITS OF CONSTRUCTION/DISTURBANCE
- SILT FENCE
- CONSTRUCTION FENCE
- TEMPORARY OUTLET PROTECTION
- CULVERT INLET/OUTLET PROTECTION
- CONCRETE WASHOUT AREA
- STABILIZED STAGING AREA
- EROSION CONTROL BLANKET
- VEHICLE TRACKING CONTROL
- SOIL STOCKPILE
- SEEDING AND MULCHING
- CHECK DAM
- DIVERSION SWALE
- ROCK SOCKS
- EXISTING FLOW ARROW
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- CUT/FILL BOUNDARY
- PROPOSED FLOW ARROW
- PROPOSED FLOW ARROW WITH RUN:RISE

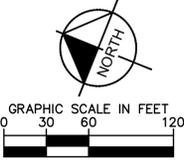
NOTES

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 SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS AT ALL TIMES.
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 VENETUCCI BLVD. AND WALMART HTS. ROW REQUIRES A ROW PERMIT FROM EL PASO COUNTY. CONTRACTOR IS RESPONSIBLE FOR APPLYING FOR AND OBTAINING ALL NECESSARY ROW PERMITS.
8. SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF ONSITE GRADING AND CONSTRUCTION ACTIVITIES.
9. DEMOLITION, REMOVAL, OVEREXCAVATION AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
10. SEE SHEET C301 FOR RISER PIPE AND SEDIMENT BASIN DETAILS.
11. EXISTING SITE CONSISTS OF NATIVE WEEDS, BRUSH, GRASSES, AND VEGETATIVE SWALES.

LIMITS OF CONSTRUCTION

TOTAL DISTURBANCE	= ±16.23 ACRES
OFFSITE DISTURBANCE	= ±0.21 ACRES
TOTAL	= ±16.44 ACRES

Earthwork Summary		
Cut	Fill	Net
107,498 Cu. Yd.	65,192 Cu. Yd.	42,306 Cu. Yd. <Cut>



NO. _____ BY _____ DATE _____

REVISION _____

Kimley»Horn

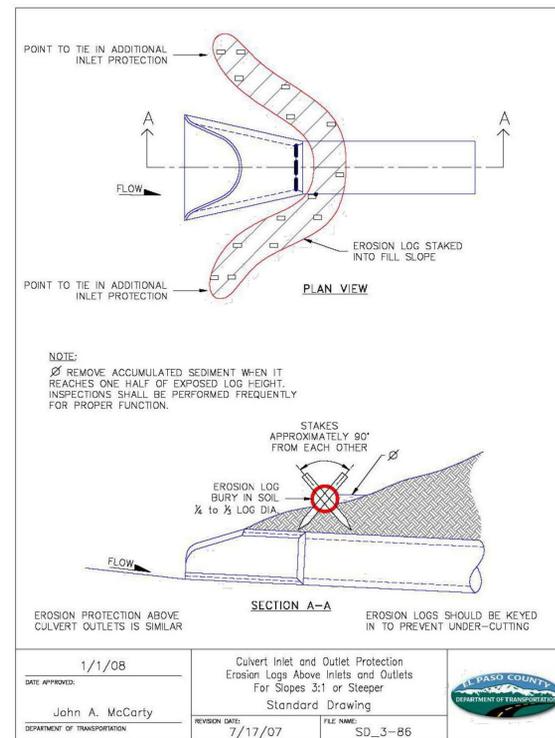
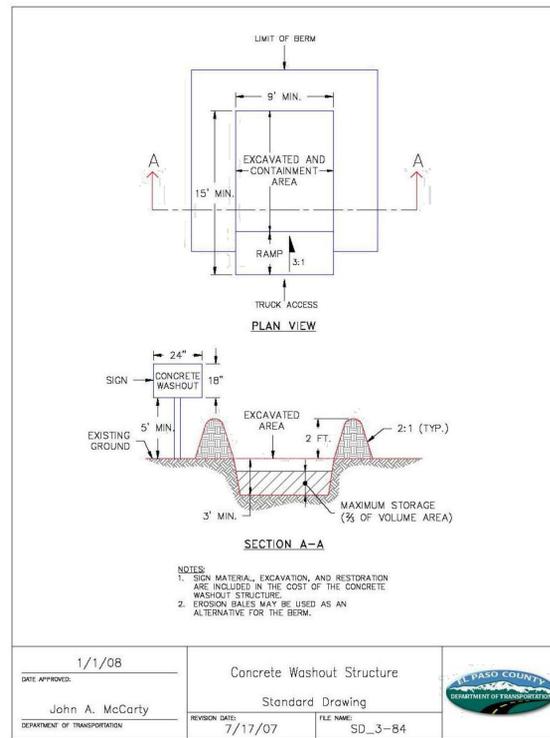
2024 KIMLEY-HORN AND ASSOCIATES, INC.
6200 South Syracuse Way, Suite 300
Greenwood Village, Colorado 80111 (303) 228-2300

DESIGNED BY: MTH
DRAWN BY: FCR
CHECKED BY: MTH
DATE: 11/05/2024

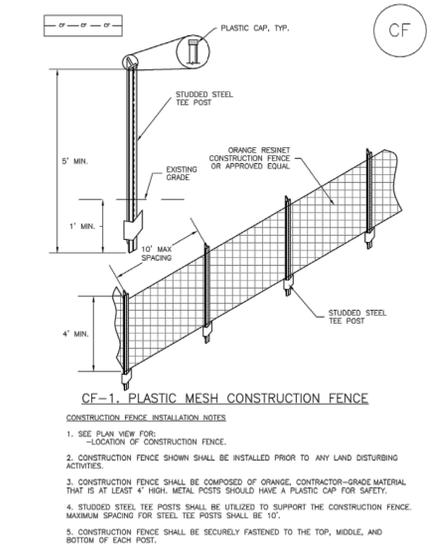
VENETUCCI MULTIFAMILY
EL PASO COUNTY, COLORADO
GRADING AND EROSION CONTROL PLANS
GEC FINAL PLAN

PROJECT NO.
0963020187

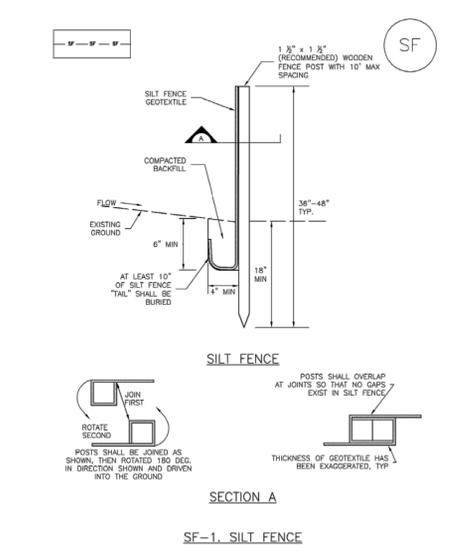
SHEET
C303



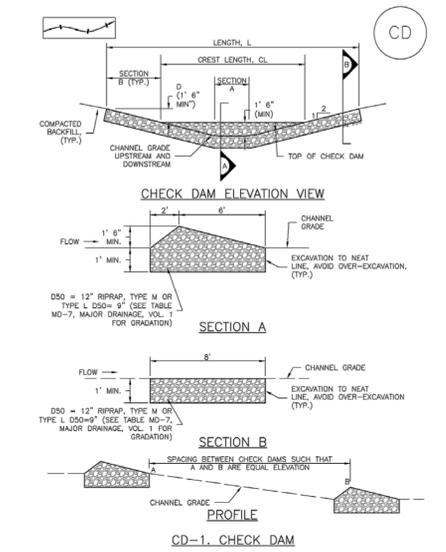
SM-3 Construction Fence (CF)



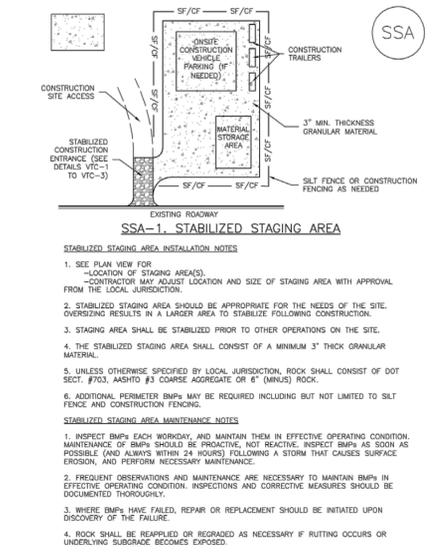
Silt Fence (SF) SC-1



Check Dams (CD) EC-12



Stabilized Staging Area (SSA) SM-6



K:\DEN_Civil\096302017_Venettucci\Multi-Famil\CADD\PlanSheets\GEC\096302017 - GEC_DT.dwg Rankin, Cormac 11/14/2024 11:58 AM

NO.	REVISION	BY	DATE	APPR

Kimley»Horn
 2024 KIMLEY-HORN AND ASSOCIATES, INC.
 6200 South Syracuse Way, Suite 300
 Greenwood Village, Colorado 80111 (303) 228-2300

DESIGNED BY: MTH
 DRAWN BY: FCR
 CHECKED BY: MTH
 DATE: 11/12/2024

VENTURE ON VENETUCCI
 EL PASO COUNTY, COLORADO
 GRADING AND EROSION CONTROL PLAN
 GEC DETAILS

PROJECT NO.
 096302017
 SHEET
C304



Temporary Outlet Protection (TOP)

EC-8

Description

Outlet protection helps to reduce erosion immediately downstream of a pipe, culvert, slope drain, rundown or other conveyance with concentrated, high-velocity flows. Typical outlet protection consists of riprap or rock aprons at the conveyance outlet.



Photograph TOP-1. Riprap outlet protection.

Appropriate Uses

Outlet protection should be used when a conveyance discharges onto a disturbed area where there is potential for accelerated erosion due to concentrated flow. Outlet protection should be provided where the velocity at the culvert outlet exceeds the maximum permissible velocity of the material in the receiving channel.

Note: This Fact Sheet and detail are for temporary outlet protection, outlets that are intended to be used for less than 2 years. For permanent, long-term outlet protection, see the *Major Drainage* chapter of Volume 1.

Design and Installation

Design outlet protection to handle runoff from the largest drainage area that may be contributing runoff during construction (the drainage area may change as a result of grading). Key in rock, around the entire perimeter of the apron, to a minimum depth of 6 inches for stability. Extend riprap to the height of the culvert or the normal flow depth of the downstream channel, whichever is less. Additional erosion control measures such as vegetative lining, turf reinforcement mat and/or other channel lining methods may be required downstream of the outlet protection if the channel is susceptible to erosion. See Design Detail OP-1 for additional information.

Maintenance and Removal

Inspect apron for damage and displaced rocks. If rocks are missing or significantly displaced, repair or replace as necessary. If rocks are continuously missing or displaced, consider increasing the size of the riprap or deeper keying of the perimeter.

Remove sediment accumulated at the outlet before the outlet protection becomes buried and ineffective. When sediment accumulation is noted, check that upgradient BMPs, including inlet protection, are in effective operating condition.

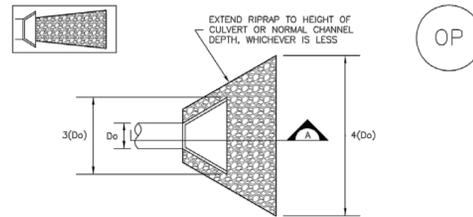
Outlet protection may be removed once the pipe is no longer draining an upstream area, or once the downstream area has been sufficiently stabilized. If the drainage pipe is permanent, outlet protection can be left in place; however, permanent outlet protection should be designed and constructed in accordance with the requirements of the *Major Drainage* chapter of Volume 2.

Outlet Protection	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

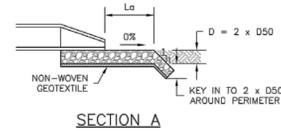
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 TOP-1

EC-8

Temporary Outlet Protection (TOP)



TEMPORARY OUTLET PROTECTION PLAN



PIPE DIAMETER, D _o (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, L _a (FT)	RIPRAP D ₅₀ DIAMETER MIN. (INCHES)
8	2.5	5	4
	5	10	6
12	5	10	4
	10	13	6
	10	10	6
18	20	16	9
	30	23	12
	40	26	16
	30	16	9
24	40	26	9
	50	26	12
	60	30	16
	30	16	9

OP-1. TEMPORARY OUTLET PROTECTION

TOP-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

Temporary Outlet Protection (TOP)

EC-8

TEMPORARY OUTLET PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR -LOCATION OF OUTLET PROTECTION, -DIMENSIONS OF OUTLET PROTECTION.
- DETAIL IS INTENDED FOR PIPES WITH SLOPE \leq 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.

TEMPORARY OUTLET PROTECTION INSPECTION AND 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.

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 AURORA, COLORADO AND PREVIOUS VERSION OF VOLUME 3, NOT AVAILABLE IN AUTOCAD)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 TOP-3

NO.	REVISION	BY	DATE	APPR

Kimley»Horn
 2024 KIMLEY-HORN AND ASSOCIATES, INC.
 6200 South Syracuse Way, Suite 300
 Greenwood Village, Colorado 80111 (303) 228-2300

DESIGNED BY: MTH
 DRAWN BY: FCR
 CHECKED BY: MTH
 DATE: 11/12/2024

VENTURE ON VENETUCCI
 EL PASO COUNTY, COLORADO
 GRADING AND EROSION CONTROL PLAN
GEC DETAILS

PROJECT NO.
 096302017

SHEET
C307

K:\DEN_Civil\096302017_VenetuCCI\Multi-Family\CADD\PlanSheets\GEC\096302017 - GEC_DT.dwg Rankin, Cormac 11/14/2024 11:58 AM

