

EPC STORMWATER REVIEW COMMENTS  
IN ORANGE BOXES WITH BLACK TEXT

# OVERLOOK AT HOMESTEAD FILING NO. 1 PRE DEVELOPMENT GRADING AND EROSION CONTROL PLAN

THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER; THE SOUTH HALF OF THE NORTHEAST QUARTER;  
AND THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER, ALL IN SECTION 27, TOWNSHIP 11 SOUTH,  
RANGE 64 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO

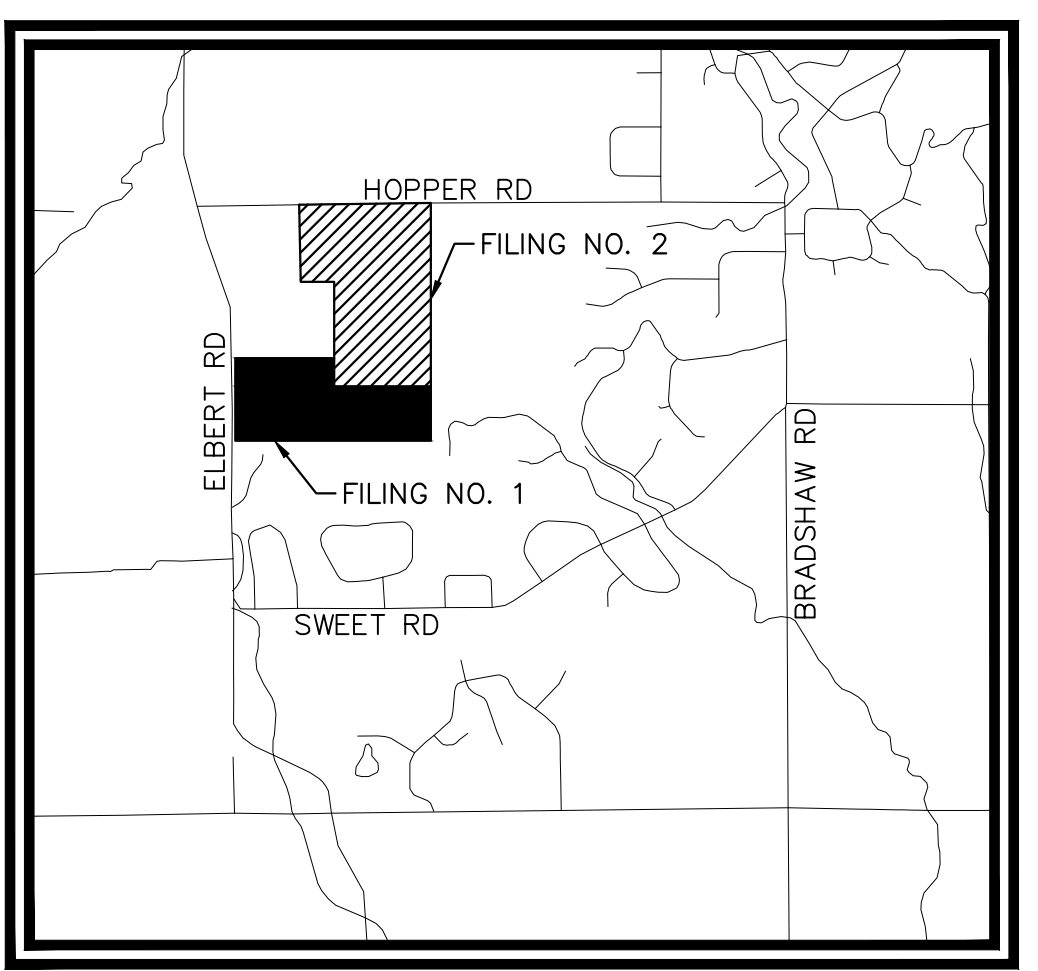
**CONTACTS:**

**OWNER:**  
PT OVERLOOK LLC  
1864 WOODMOOR DRIVE, SUITE 100  
MONUMENT, CO 80132  
CONTACT: JOE DESJARDIN  
TEL: 719-476-0800

**ENGINEER:**  
KIMLEY-HORN AND ASSOCIATES, INC.  
2 NEVADA NORTH AVE., SUITE 300  
COLORADO SPRINGS, CO 80903  
CONTACT: KEVIN KOFFORD, PE  
TEL: 719-453-0180

**SURVEYOR:**  
EDWARD-JAMES SURVEYING, INC.  
926 ELKTON DRIVE  
COLORADO SPRINGS, CO 80907  
CONTACT: JON TESSIN, PLS  
TEL: (719) 576-1216

**EL PASO COUNTY:**  
EL PASO COUNTY  
PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT  
2880 INTERNATIONAL CIRCLE, SUITE 110  
COLORADO SPRINGS, CO 80910  
PHONE: (719) 520-6300



**VICINITY MAP**  
SCALE: 1"=5000'

Please ensure all GEC pages are stamped and signed by ENGR

Use the standalone GEC Plan signature blocks - see GEC Checklist Items FF and HH

**BENCHMARK**

A 2.5" ALUMINUM CAP BEING A 30 FOOT WITNESS CORNER NORTH OF THE SOUTHWEST CORNER OF SECTION 24, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN.

**BASIS OF BEARING**

THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6 PRINCIPAL MERIDIAN MONUMENTED ON THE SOUTHERLY END BY A 2-1/2" ALUMINUM CAP STAMPED 'LS 28658" AND AT THE NORTHERLY END BY A 3-1/2" ALUMINUM CAP STAMPED 'LS 12103" BEING ASSUMED TO BEAR N00°14'25"E A DISTANCE OF 2636.99 FEET AS SHOWN IN LAND SURVEY PLAT RECORDED UNDER RECEPTION 218900072 RECORDS OF EL PASO COUNTY, COLORADO.

**LEGAL DESCRIPTION**

THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER; THE SOUTH HALF OF THE NORTHEAST QUARTER; AND THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER, ALL IN SECTION 27, TOWNSHIP 11 SOUTH, RANGE 64 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO.

TOGETHER WITH

THE NORTH HALF OF THE SOUTHEAST QUARTER OF SECTION 22 IN TOWNSHIP 11 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN; EXCEPTING THEREFROM THE PORTION OF LAND CONVEYED IN DEED RECORDED OCTOBER 4, 2005 UNDER RECEPTION NO. 205156836, COUNTY OF EL PASO, STATE OF COLORADO.

TOGETHER WITH

THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 22 IN TOWNSHIP 11 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN; THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 27 IN TOWNSHIP 11 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN; THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 27 IN TOWNSHIP 11 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN, EXCEPT THAT PORTION OF SAID QUARTER SECTION LYING NORTHWEST OF THE FORMER RIGHT OF WAY OF THE COLORADO AND SOUTHERN RAILWAY COMPANY, COUNTY OF EL PASO, STATE OF COLORADO AND EXCEPTING ANY PORTION CONVEYED TO THE DEPARTMENT OF HIGHWAYS IN DEED RECORDED MARCH 26, 1959 IN BOOK 1734 AT PAGE 504.

CONTAINING A CALCULATED AREA OF 350.830 ACRES.

Sheet Number	Sheet Title
1.0	COVER PAGE
1.1	NOTES
1.2	CUT AND FILL PLAN
1.3	GEC INITIAL PLAN
1.4	GEC INITIAL PLAN
1.5	GEC INITIAL PLAN
1.6	GEC INITIAL PLAN
1.7	GEC INTERIM PLAN
1.8	GEC INTERIM PLAN
1.9	GEC INTERIM PLAN
1.10	GEC INTERIM PLAN
1.11	CULVERT PLAN
1.12	CULVERT PLAN
1.13	CULVERT END TREATMENT
1.14	DETAIL SHEET (1 OF 7)
1.15	DETAIL SHEET (2 OF 7)
1.16	DETAIL SHEET (3 OF 7)
1.17	DETAIL SHEET (4 OF 7)
1.18	DETAIL SHEET (5 OF 7)
1.19	DETAIL SHEET (6 OF 7)
1.20	DETAIL SHEET (7 OF 7)

**FLOODPLAIN NOTE**

FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP, MAP NUMBER 08041003500, EFFECTIVE DECEMBER 7, 2018 INDICATES THE PROJECT AREA TO BE IN ZONE X (AREA DETERMINED TO BE OUT OF THE 500 YEAR FLOODPLAIN).

**SOIL TYPE**

THE SOIL ON SITE IS USGS HYDROLOGIC SOIL GROUP B.

**SITE INFORMATION**

**TIMING:**  
ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING:  
START: FALL 2024  
END: FALL 2025  
EXPECTED DATE ON WHICH THE FINAL STABILIZATION WILL BE COMPLETE:  
SUMMER 2026

**AREAS:**  
TOTAL DISTURBED AREA: 21.37 ACRES

**RECEIVING WATERS:**  
NAME OF RECEIVING WATERS: UPPER BLACK SQUIRREL, LA VEGA RANCH

**DESCRIPTION OF EXISTING VEGETATION:**  
THE EXISTING SITE IS CURRENTLY UNDEVELOPED AND GROUND COVER CONSISTS OF 90% NATIVE GRASSES, SHRUBS, AND TREES.

**DESCRIPTION OF PERMANENT BMPS:**  
THREE (3) FULL SPECTRUM EXTENDED DETENTION BASIN

**LIMITS OF CONSTRUCTION**

ONSITE DISTURBANCE = ±20.75 ACRES  
OFFSITE DISTURBANCE = ±0.62 ACRES  
TOTAL = ±21.37 ACRES

**GEC PLAN SIGNATURES:**

**DEVELOPER'S/OWNER'S SIGNATURE BLOCK**

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

Owner sign

PT OVERLOOK, LLC \_\_\_\_\_ DATE \_\_\_\_\_

**ENGINEER'S SIGNATURE BLOCK**

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

Engineer sign and stamp

KEVIN KOFFORD, P.E. 57234 -- KIMLEY-HORN AND ASSOCIATES, INC. \_\_\_\_\_ DATE \_\_\_\_\_

**EL PASO COUNTY**

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL, AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION PLANS ARE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE OF APPROVAL BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL. THE PLAN GETS APPROVED.

Please remove this note through the whole plan before the plan gets approved.

JOSHUA PALMER, P.E. -- COUNTY ENGINEER/ECM ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_



<p>2023 KIMLEY-HORN AND ASSOCIATES, INC. 2 North Nevada Avenue Suite 900 Colorado Springs, Colorado 80903 (719) 453-0180</p>	NO.	REVISION	BY	DATE	APPR.
	<p>DESIGNED BY: KRK DRAWN BY: AJL CHECKED BY: KRK DATE: 12/04/2023</p>				
<p>OVERLOOK AT HOMESTEAD FILING NO. 1 EL PASO COUNTY, COLORADO PRE DEVELOPMENT GEC PLAN COVER SHEET</p>					
<p>PRELIMINARY FOR REVIEW ONLY NOT FOR CONSTRUCTION</p>					
<p>PROJECT NO. 196239003</p>					
<p>SHEET 1.0</p>					

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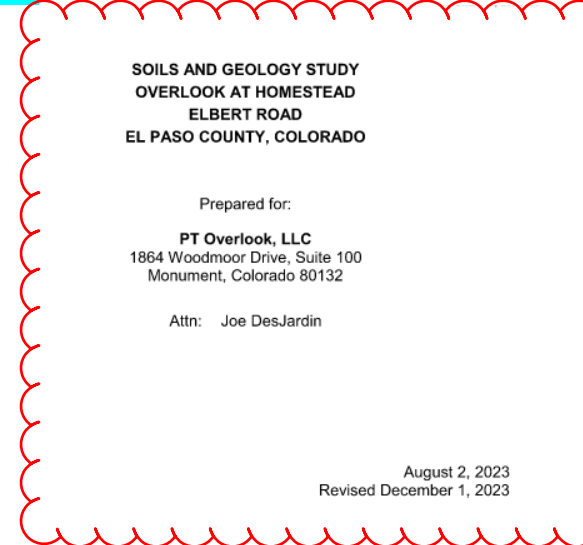
**EL PASO COUNTY GRADING AND EROSION CONTROL PLAN NOTES**

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT 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.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES 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.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. 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.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL 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 LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO 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.
14. 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.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. 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.

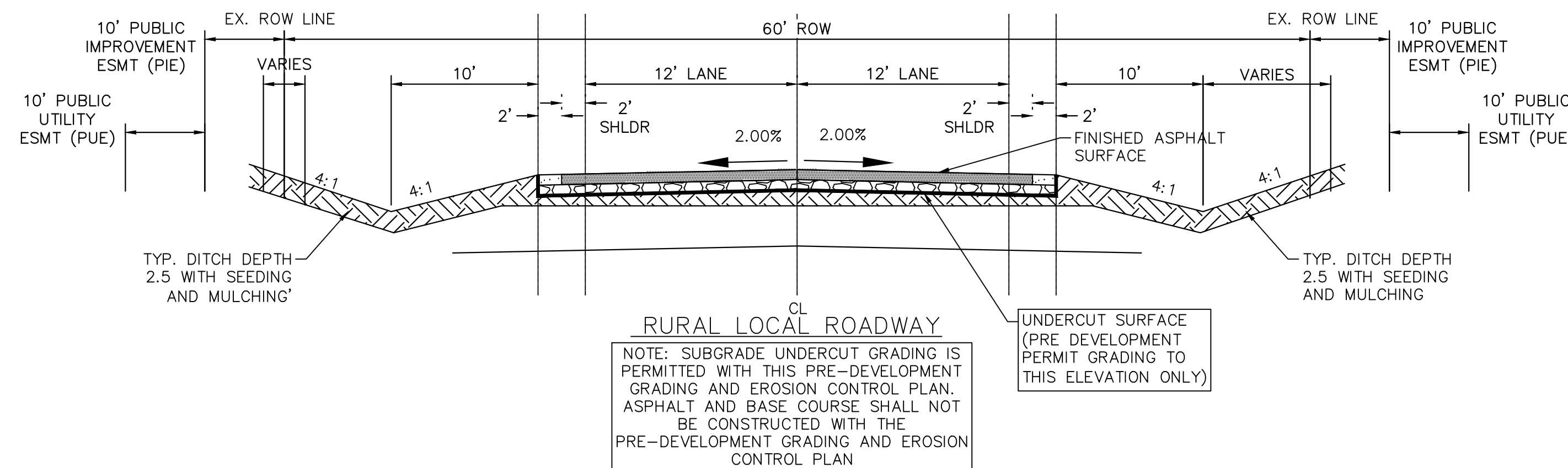
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. 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.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
21. NO 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.
22. 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.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. 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.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. 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.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. DATED **JANUARY 26, 2021** AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. 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

Update GEOTECH Report date



**TYPICAL ROADWAY CROSS SECTION**



NO.	REVISION	BY	DATE	APPR.

**Kimley»Horn**  
 2023 KIMLEY-HORN AND ASSOCIATES, INC.  
 2 North Nevada Avenue Suite 900  
 Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
 DRAWN BY: AJL  
 CHECKED BY: KRK  
 DATE: 12/04/2023

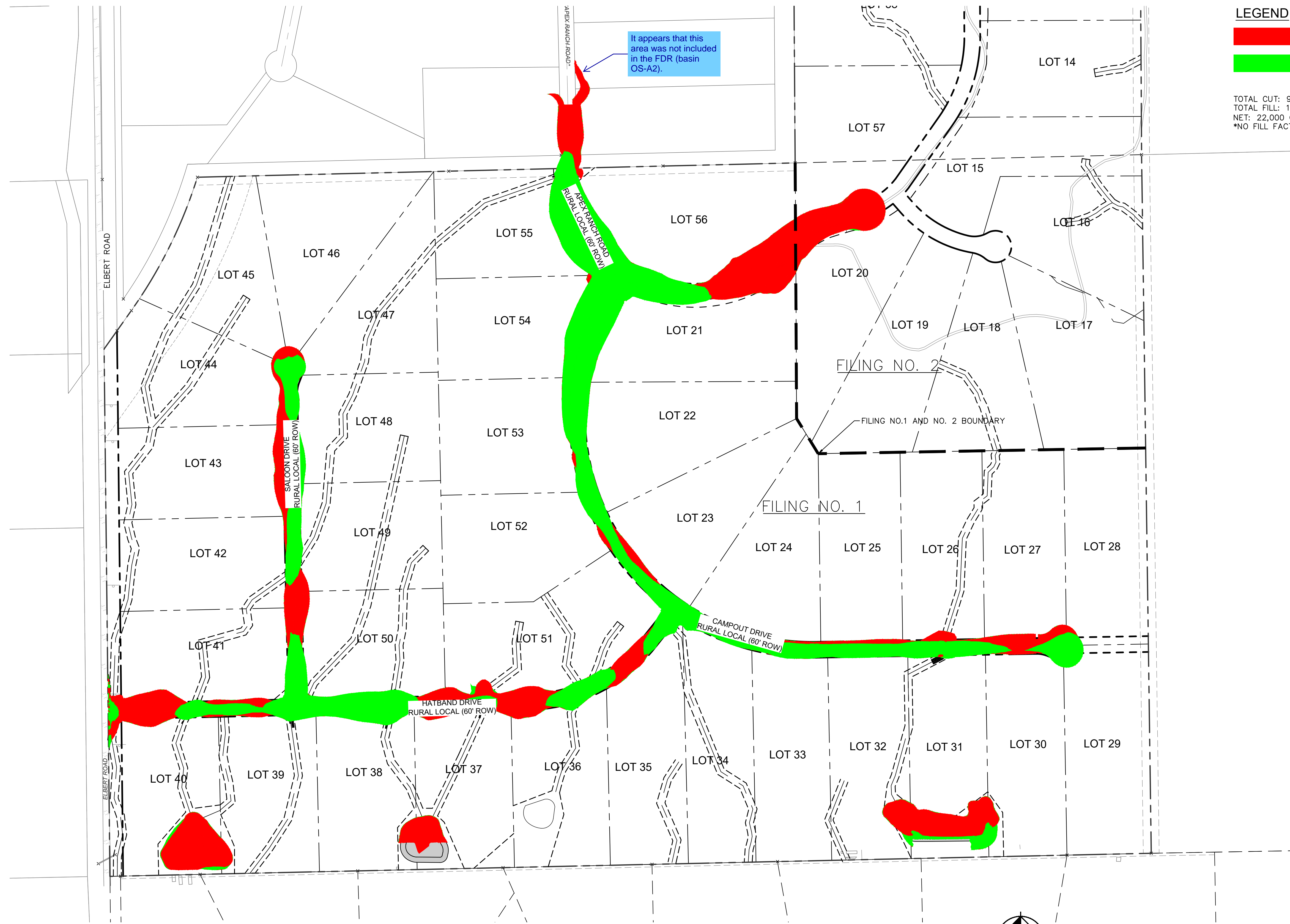
OVERLOOK AT HOMESTEAD FILING NO. 1  
 EL PASO COUNTY, COLORADO  
 PRE DEVELOPMENT GESC PLAN  
**NOTES**

PRELIMINARY  
 FOR REVIEW ONLY  
 NOT FOR CONSTRUCTION  
**Kimley»Horn**  
 Kimley-Horn and Associates, Inc.

PROJECT NO.  
 196239003

SHEET  
**1.1**

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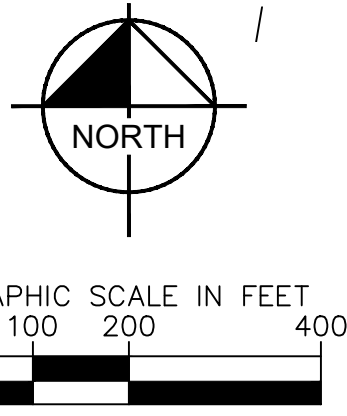
It appears that this area was not included in the FDR (basin OS-A2).

**LEGEND**

CUT AREA

FILL AREA

TOTAL CUT: 90,195 CY  
 TOTAL FILL: 112,195 CY  
 NET: 22,000 CY (FILL)\*  
 \*NO FILL FACTOR APPLIED



prior to approval all sheets need to be stamped and signed

NO.	REVISION	BY	DATE	APPR.

**Kimley»Horn**  
 2023 KIMLEY-HORN AND ASSOCIATES, INC.  
 2 North Nevada Avenue Suite 900  
 Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
 DRAWN BY: A.JL  
 CHECKED BY: KRK  
 DATE: 12/04/2023

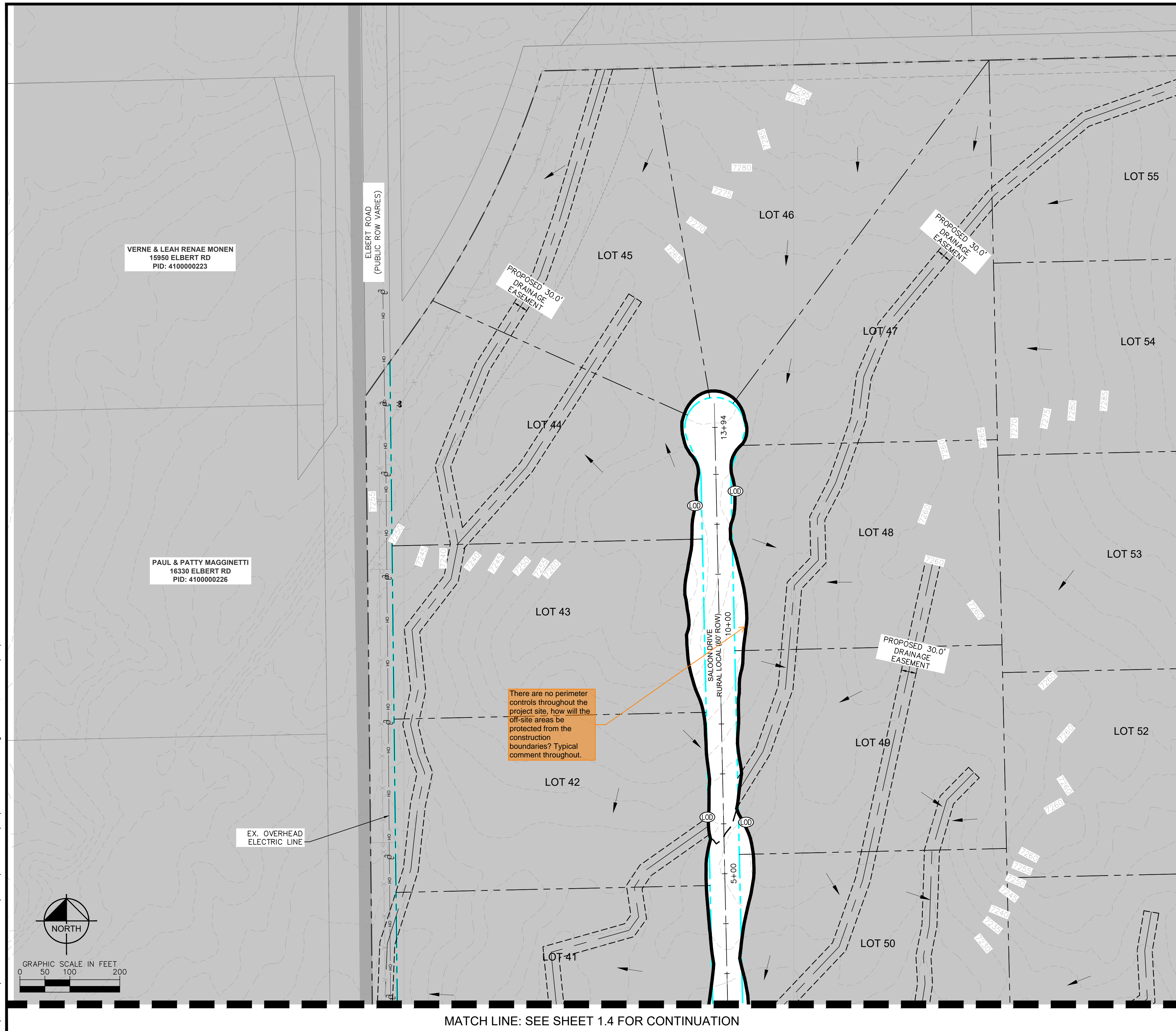
OVERLOOK AT HOMESTEAD FILING NO. 1  
 EL PASO COUNTY, COLORADO  
 PRE DEVELOPMENT GESC PLAN  
**CUT AND FILL PLAN**

PRELIMINARY  
 FOR REVIEW ONLY  
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 CONSTRUCTION  
 Kimley»Horn  
 Kimley-Horn and Associates, Inc.

PROJECT NO.  
 196239003

SHEET  
**1.2**

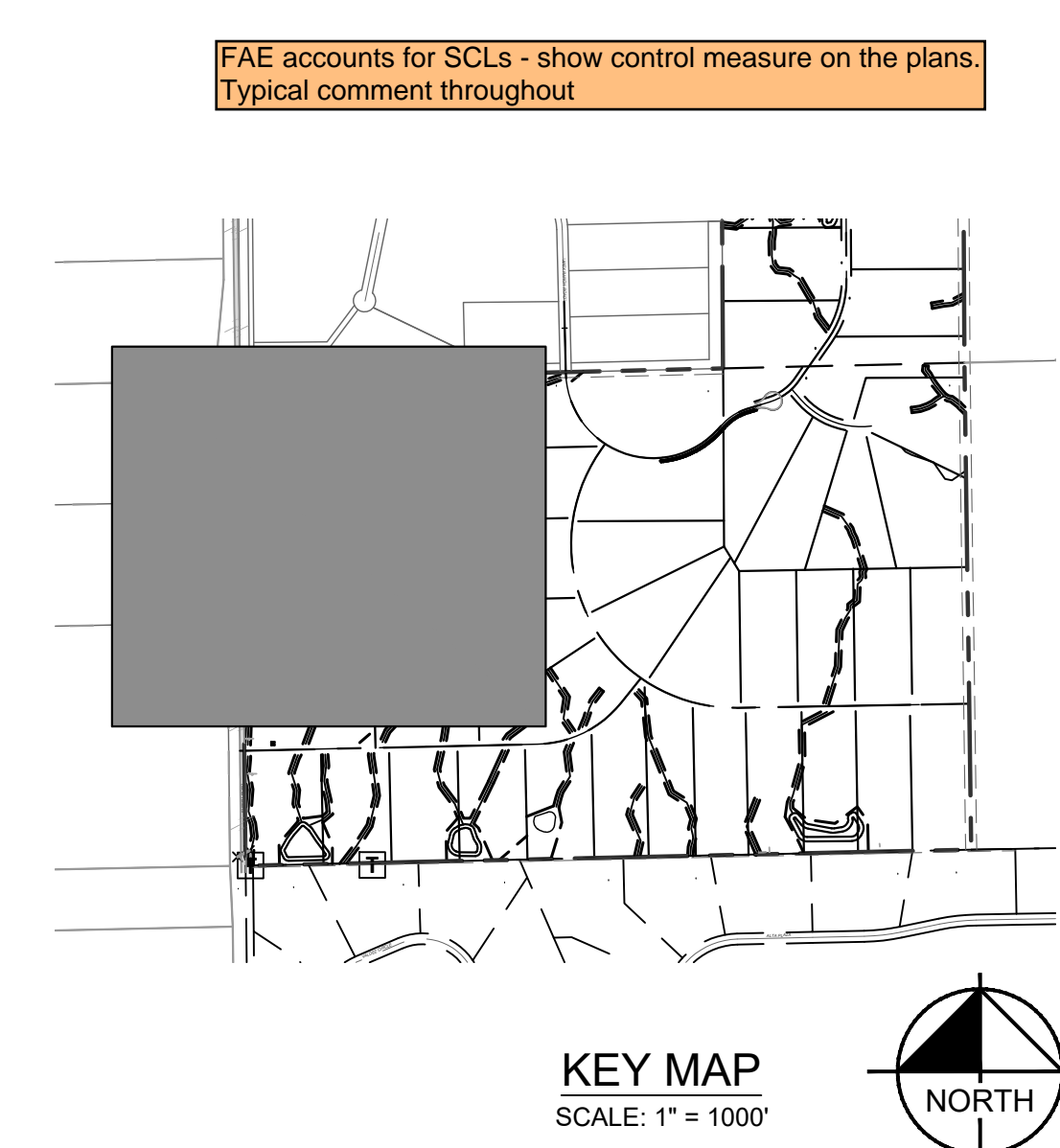
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**LEGEND**

---	LOT BOUNDARY LINE
---	LOT BOUNDARY LINE
XXXX	EXISTING MAJOR CONTOUR
XXXX	EXISTING MINOR CONTOUR
XXXX	PROPOSED MAJOR CONTOUR
XXXX	PROPOSED MINOR CONTOUR
LOD	LIMITS OF CONSTRUCTION/DISTURBANCE
SF	SILT FENCE
---	CUT/FILL DEMARCATION
SP	SOIL STOCKPILE
SSA	STABILIZED STAGING AREA
VTC	VEHICLE TRACKING CONTROL
SM	SEEDING AND MULCHING
---	TEMPORARY SEDIMENT BASIN
---	FILING NO. 2 (NOT A PART OF THIS PLAN)
ECB	EROSION CONTROL BLANKET (SEE NOTE 4)
SM	SEEDING AND MULCHING
→	EXISTING FLOW DIRECTION ARROW
IP	INLET PROTECTION
CD	CHECK DAM (SEE NOTE 8)

- NOTES**
- 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.
  - 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.
  - 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. CONTRACTOR SHALL UTILIZE ROLLED EROSION CONTROL PRODUCTS (STRAW-SINGLE NET EROSION CONTROL BLANKETS AND OPEN WEAVE TEXTILES) ON ALL SLOPES 3H:1V OR GREATER TO ACHIEVE REQUIRED STABILIZATION.
  - SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF ONSITE GRADING AND CONSTRUCTION ACTIVITIES.
  - DEMOLITION, REMOVAL, OVEREXCAVATION AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
  - VEGETATION COVER IS ABOUT 90% CONSISTING OF NATIVE GRASSES, TREES AND SHRUBS, BASED ON VISUAL INSPECTION
  - ROCK CHECK DAMS (CD) MAY BE SUBSTITUTED FOR SEDIMENT CONTROL LOGS (SCL) OR STRAW WADDLES. CONTRACTOR TO DETERMINE LOCATION OF CD WITHIN THE ROADSIDE DITCH (SEE TABLE FOR MIN. SPACING REQUIREMENTS) IN COORDINATION WITH COUNTY INSPECTORS.
  - NO ASPHALT OR CONCRETE BATCH PLANTS SHALL BE USED FOR THIS PROJECT.



MATCH LINE: SEE SHEET 1.5 FOR CONTINUATION

MATCH LINE: SEE SHEET 1.4 FOR CONTINUATION

**Kimley»Horn**  
2023 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 900  
Colorado Springs, Colorado 80903 (719) 453-0180

NO.	REVISION	BY	DATE	APPR.

DESIGNED BY: KRK  
DRAWN BY: AUL  
CHECKED BY: KRK  
DATE: 12/04/2023

OVERLOOK AT HOMESTEAD FILING NO. 1  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
GEC INITIAL PLAN

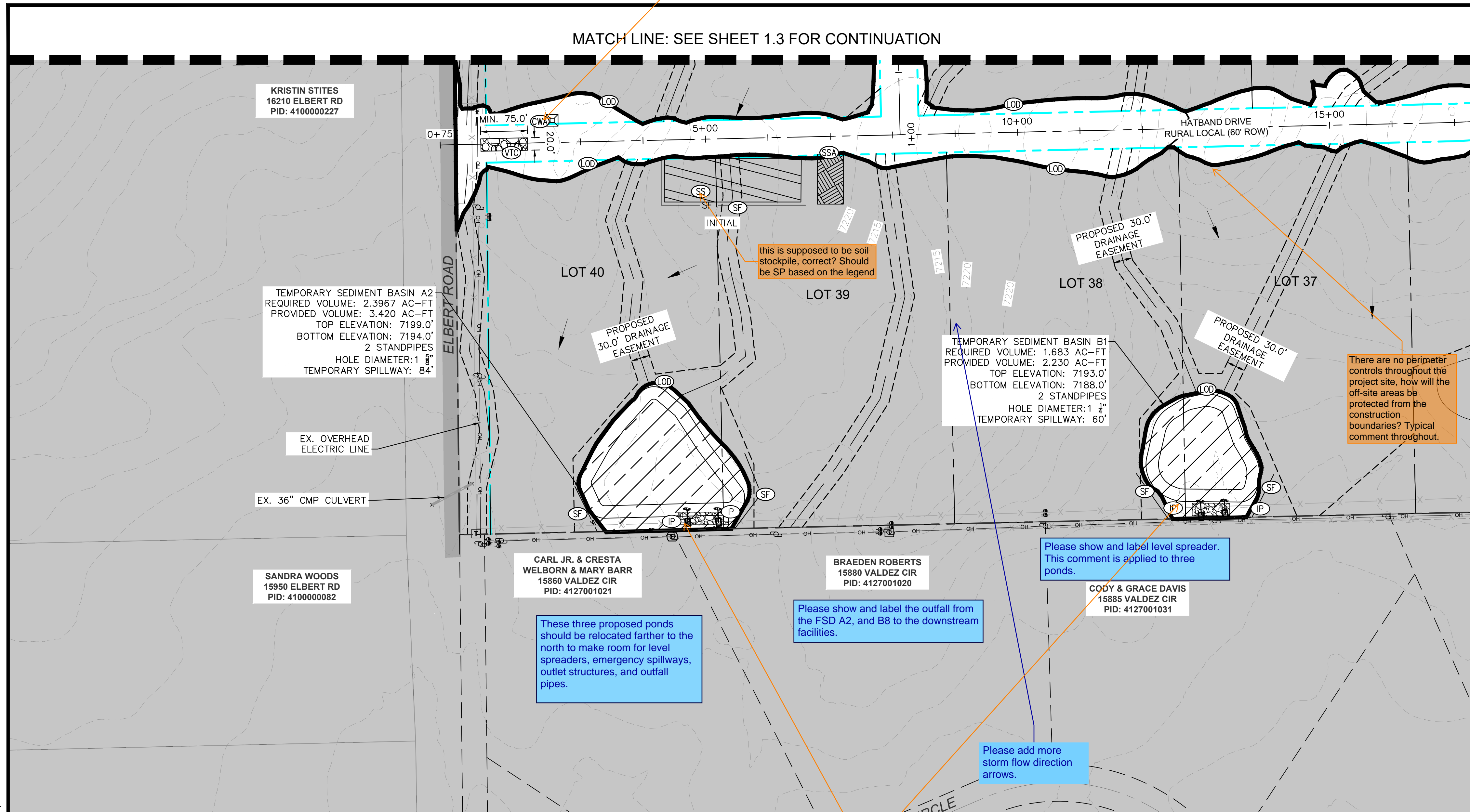
PRELIMINARY  
FOR REVIEW ONLY  
NOT FOR CONSTRUCTION  
Kimley»Horn  
Kimley-Horn and Associates, Inc.

PROJECT NO.  
196239003

SHEET  
1.3

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MATCH LINE: SEE SHEET 1.3 FOR CONTINUATION

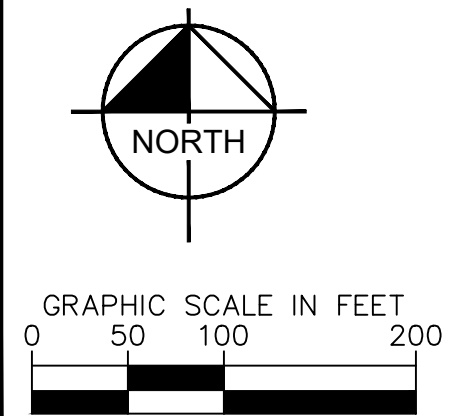


**LEGEND**

- LOT BOUNDARY LINE
- LOT BOUNDARY LINE
- XXXX EXISTING MAJOR CONTOUR
- XXXX EXISTING MINOR CONTOUR
- XXXX PROPOSED MAJOR CONTOUR
- XXXX PROPOSED MINOR CONTOUR
- LOD LIMITS OF CONSTRUCTION/DISTURBANCE
- SF SILT FENCE
- CUT/FILL DEMARCATION
- SP SOIL STOCKPILE
- SSA STABILIZED STAGING AREA
- VTC VEHICLE TRACKING CONTROL
- SM SEEDING AND MULCHING
- TEMPORARY SEDIMENT BASIN
- FILING NO. 2 (NOT A PART OF THIS PLAN)
- ECB EROSION CONTROL BLANKET (SEE NOTE 4)
- SM SEEDING AND MULCHING
- EXISTING FLOW DIRECTION ARROW
- IP INLET PROTECTION
- CD CHECK DAM (SEE NOTE 8)

**NOTES**

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Put CWA in legend

this is supposed to be soil stockpile, correct? Should be SP based on the legend

There are no perimeter controls throughout the project site, how will the off-site areas be protected from the construction boundaries? Typical comment throughout.

Please show and label level spreader. This comment is applied to three ponds.

Please show and label the outfall from the FSD A2, and B8 to the downstream facilities.

Please add more storm flow direction arrows.

These three proposed ponds should be relocated farther to the north to make room for level spreaders, emergency spillways, outlet structures, and outfall pipes.

GEC Checklist Item s - Show SW flow arrows on all sheets.

Provide more detail to show the outfall to the TSBs. Ensure that there is suitable erosion protection at all three outlets. Drainage report should provide calculations showing adequate downstream protection.

MATCH LINE: SEE SHEET 1.6 FOR CONTINUATION

**Kimley»Horn**  
2023 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 900  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: AJL  
CHECKED BY: KRK  
DATE: 12/04/2023

OVERLOOK AT HOMESTEAD FILING NO. 1  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
GEC INITIAL PLAN

PRELIMINARY  
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Kimley»Horn  
Kimley-Horn and Associates, Inc.

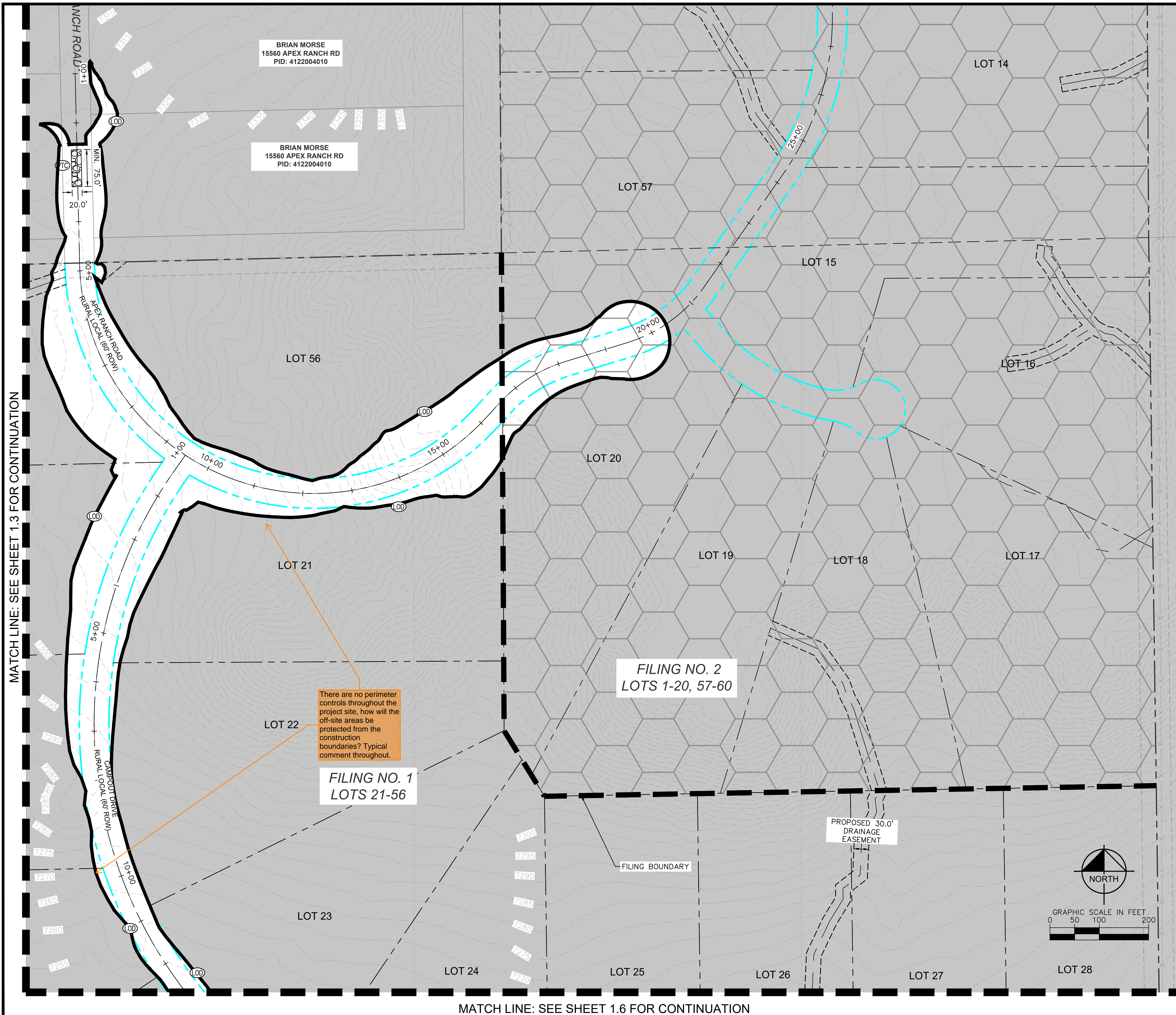
PROJECT NO.  
196239003

SHEET  
**1.4**

NO.	REVISION	BY	DATE	APPR.

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MATCH LINE: SEE SHEET 1.3 FOR CONTINUATION



BRIAN MORSE  
15560 APEX RANCH RD  
PID: 4122004010

BRIAN MORSE  
15560 APEX RANCH RD  
PID: 4122004010

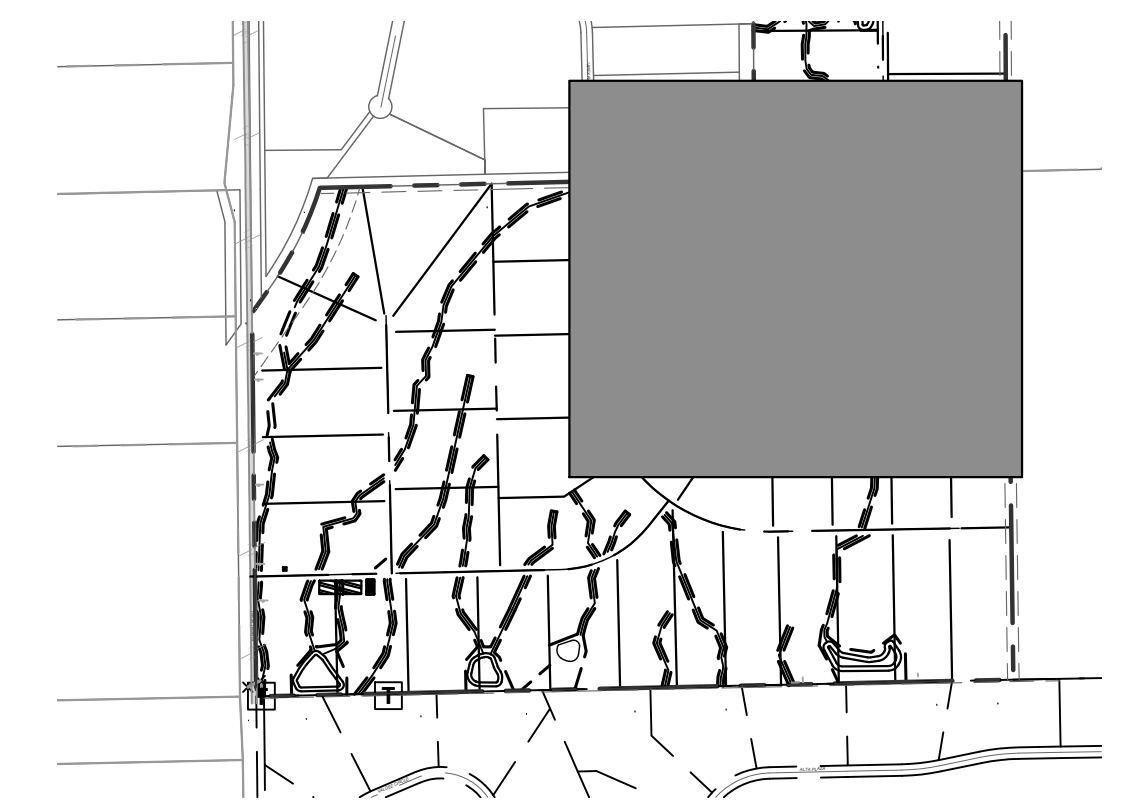
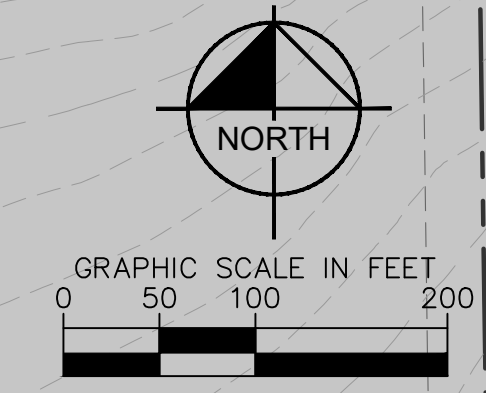
FILING NO. 2  
LOTS 1-20, 57-60

FILING NO. 1  
LOTS 21-56

There are no perimeter controls throughout the project site, how will the off-site areas be protected from the construction boundaries? Typical comment throughout.

- LEGEND**
- LOT BOUNDARY LINE
  - - - LOT BOUNDARY LINE
  - XXXX EXISTING MAJOR CONTOUR
  - XXXX EXISTING MINOR CONTOUR
  - XXXX PROPOSED MAJOR CONTOUR
  - XXXX PROPOSED MINOR CONTOUR
  - LOD LIMITS OF CONSTRUCTION/DISTURBANCE
  - SF SILT FENCE
  - - - CUT/FILL DEMARCATION
  - SP SOIL STOCKPILE
  - SSA STABILIZED STAGING AREA
  - VTC VEHICLE TRACKING CONTROL
  - SM SEEDING AND MULCHING
  - TEMPORARY SEDIMENT BASIN
  - FILING NO. 2 (NOT A PART OF THIS PLAN)
  - ECB EROSION CONTROL BLANKET (SEE NOTE 4)
  - SM SEEDING AND MULCHING
  - EXISTING FLOW DIRECTION ARROW
  - IP INLET PROTECTION
  - CD CHECK DAM (SEE NOTE 8)

- NOTES**
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KEY MAP  
SCALE: 1" = 1000'

MATCH LINE: SEE SHEET 1.6 FOR CONTINUATION

NO. \_\_\_\_\_ BY \_\_\_\_\_ DATE \_\_\_\_\_  
REVISION \_\_\_\_\_

**Kimley»Horn**  
2023 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 900  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: AUL  
CHECKED BY: KRK  
DATE: 12/04/2023

OVERLOOK AT HOMESTEAD FILING NO. 1  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
GEC INITIAL PLAN

PRELIMINARY  
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**Kimley»Horn**  
Kimley-Horn and Associates, Inc.

PROJECT NO.  
196239003  
SHEET  
**1.5**

MATCH LINE: SEE SHEET 1.5 FOR CONTINUATION

**LEGEND**

- LOT BOUNDARY LINE
- LOT BOUNDARY LINE
- XXXX ----- EXISTING MAJOR CONTOUR
- XXXX ----- EXISTING MINOR CONTOUR
- XXXX ----- PROPOSED MAJOR CONTOUR
- XXXX ----- PROPOSED MINOR CONTOUR
- (L)--- LIMITS OF CONSTRUCTION/DISTURBANCE
- (SF)--- SILT FENCE
- (C)--- CUT/FILL DEMARCATION
- (SP) SOIL STOCKPILE
- (SSA) STABILIZED STAGING AREA
- (VTC) VEHICLE TRACKING CONTROL
- (SM) SEEDING AND MULCHING
- (TS) TEMPORARY SEDIMENT BASIN
- (F2) FILING NO. 2 (NOT A PART OF THIS PLAN)
- (ECB) EROSION CONTROL BLANKET (SEE NOTE 4)
- (SM) SEEDING AND MULCHING
- EXISTING FLOW DIRECTION ARROW
- (IP) INLET PROTECTION
- (CD) CHECK DAM (SEE NOTE 8)

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SCALE: 1" = 1000'



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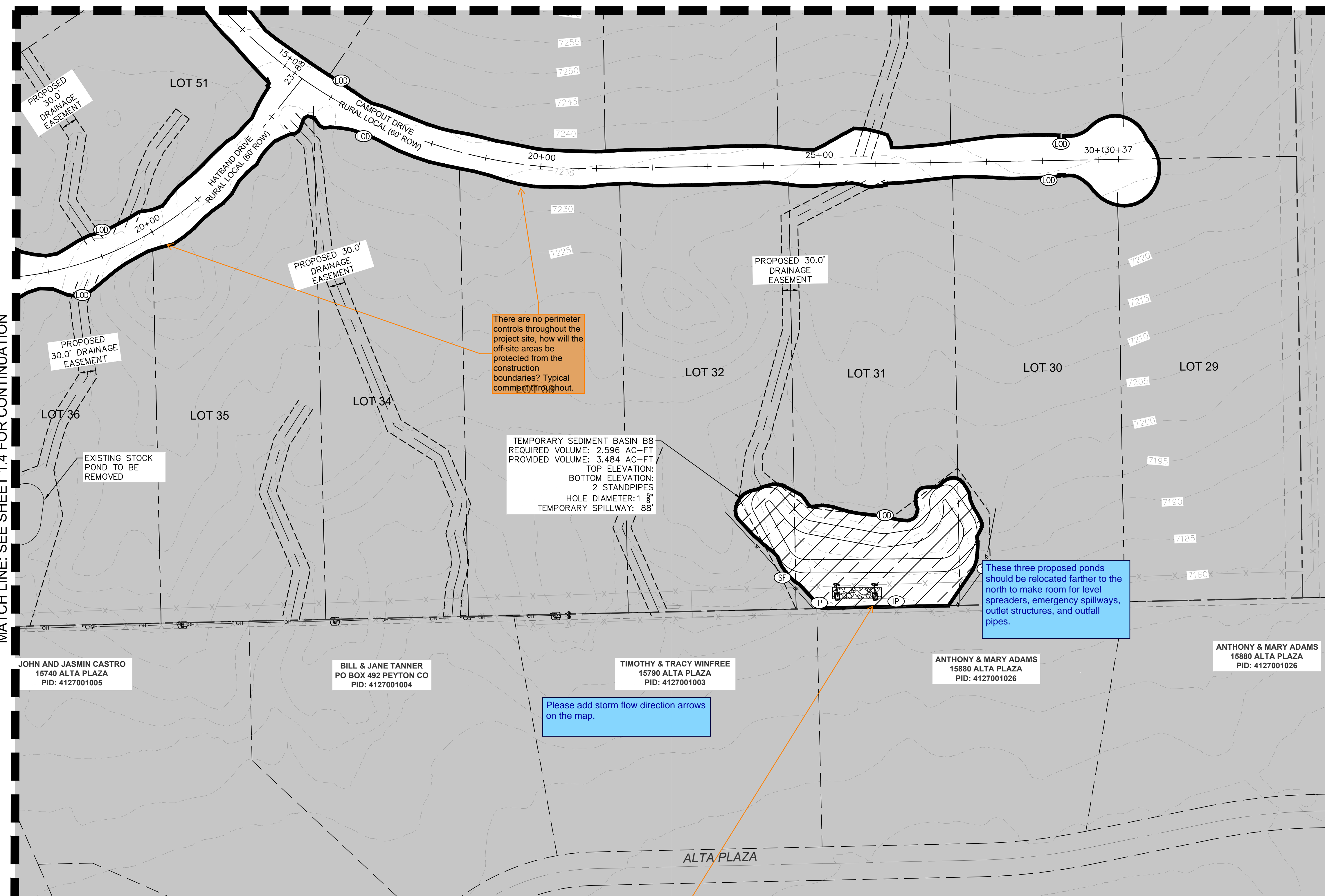
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PROJECT NO.  
196239003

SHEET  
**1.6**

MATCH LINE: SEE SHEET 1.4 FOR CONTINUATION

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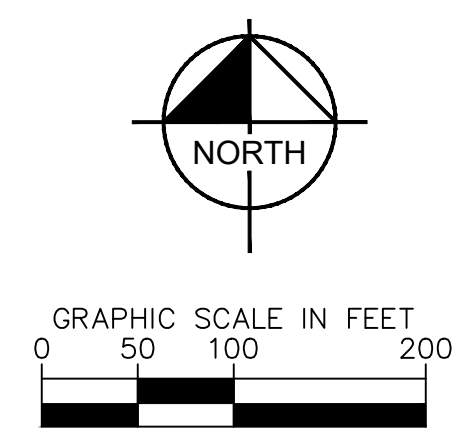
There are no perimeter controls throughout the project site, how will the off-site areas be protected from the construction boundaries? Typical comment throughout.

TEMPORARY SEDIMENT BASIN B8  
REQUIRED VOLUME: 2,596 AC-FT  
PROVIDED VOLUME: 3,484 AC-FT  
TOP ELEVATION:  
BOTTOM ELEVATION:  
2 STANDPIPES  
HOLE DIAMETER: 1 8"  
TEMPORARY SPILLWAY: 88'

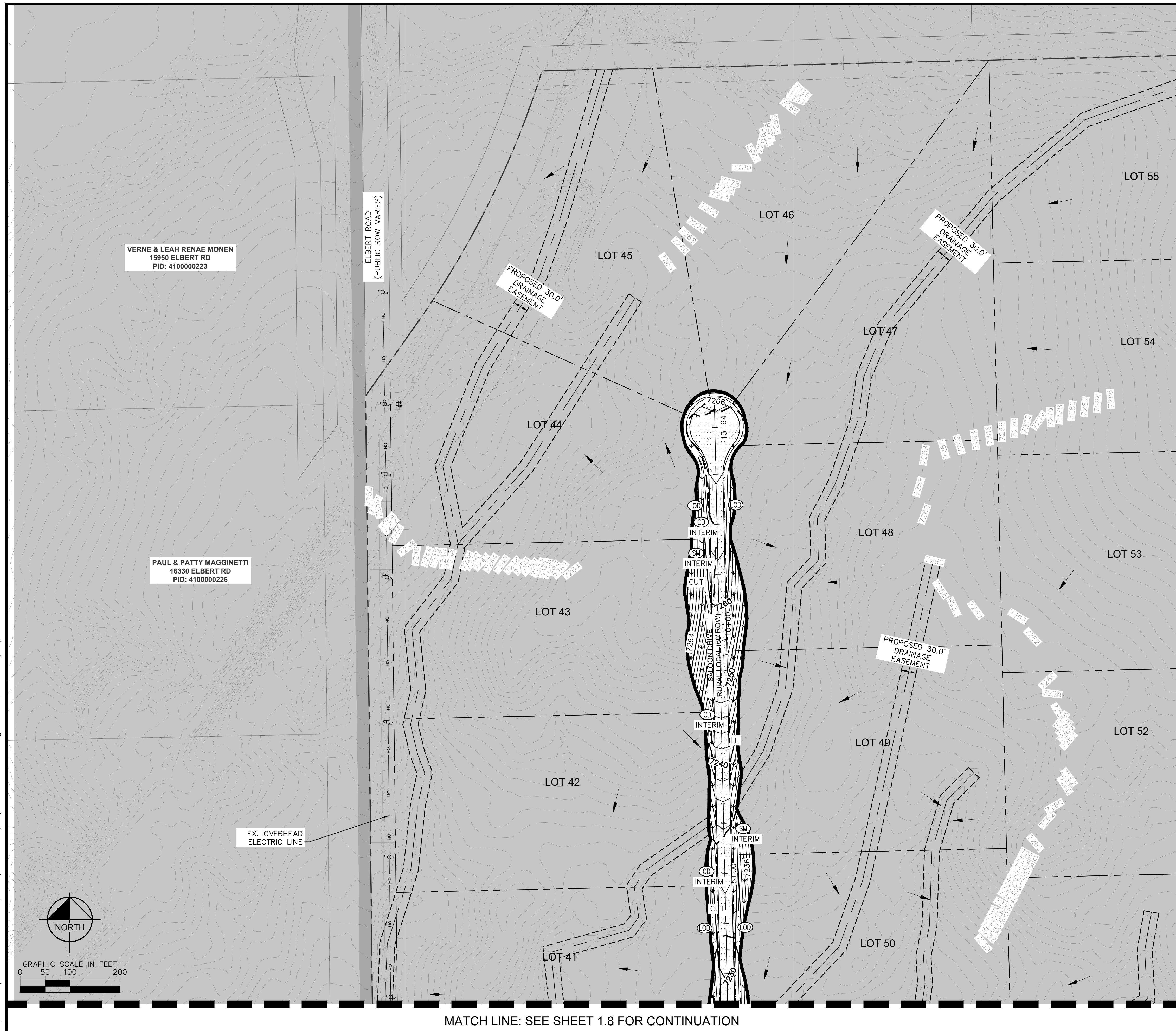
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Please add storm flow direction arrows on the map.

Provide more detail to show the outfall to the TSBs. Ensure that there is suitable erosion protection at all three outlets. Drainage report should provide calculations showing adequate downstream protection.



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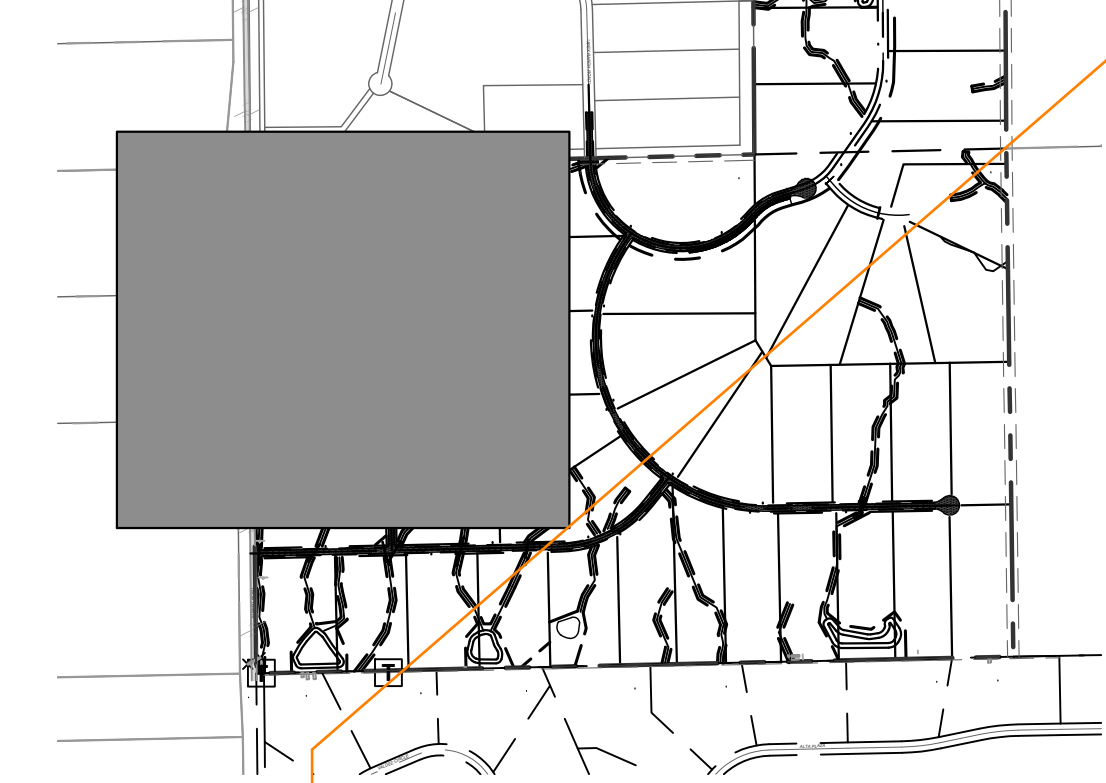


**LEGEND**

- LOT BOUNDARY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- LIMITS OF CONSTRUCTION/DISTURBANCE
- SILT FENCE
- CUT/FILL DEMARCATION
- SOIL STOCKPILE
- STABILIZED STAGING AREA
- VEHICLE TRACKING CONTROL
- SEEDING AND MULCHING
- TEMPORARY SEDIMENT BASIN
- FILING NO. 2 (NOT A PART OF THIS PLAN)
- EROSION CONTROL BLANKET (SEE NOTE 4)
- SEEDING AND MULCHING
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- CHECK DAM (SEE NOTE 8)

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SIZE OF SCL (STRAW WADDLE)	SPACING (PER VERTICAL FEET OF FALL)
9 INCH	1.5 FEET
12 INCH	2 FEET
16 INCH	2.67 FEET



Final? GEC Plans need to show initial, interim, and final. If BMPs are to be left because this is early grading, the plans should read interim/final

MATCH LINE: SEE SHEET 1.9 FOR CONTINUATION

MATCH LINE: SEE SHEET 1.8 FOR CONTINUATION

**Kimley»Horn**  
 2023 KIMLEY-HORN AND ASSOCIATES, INC.  
 2 North Nevada Avenue Suite 900  
 Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
 DRAWN BY: AJL  
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OVERLOOK AT HOMESTEAD FILING NO. 1  
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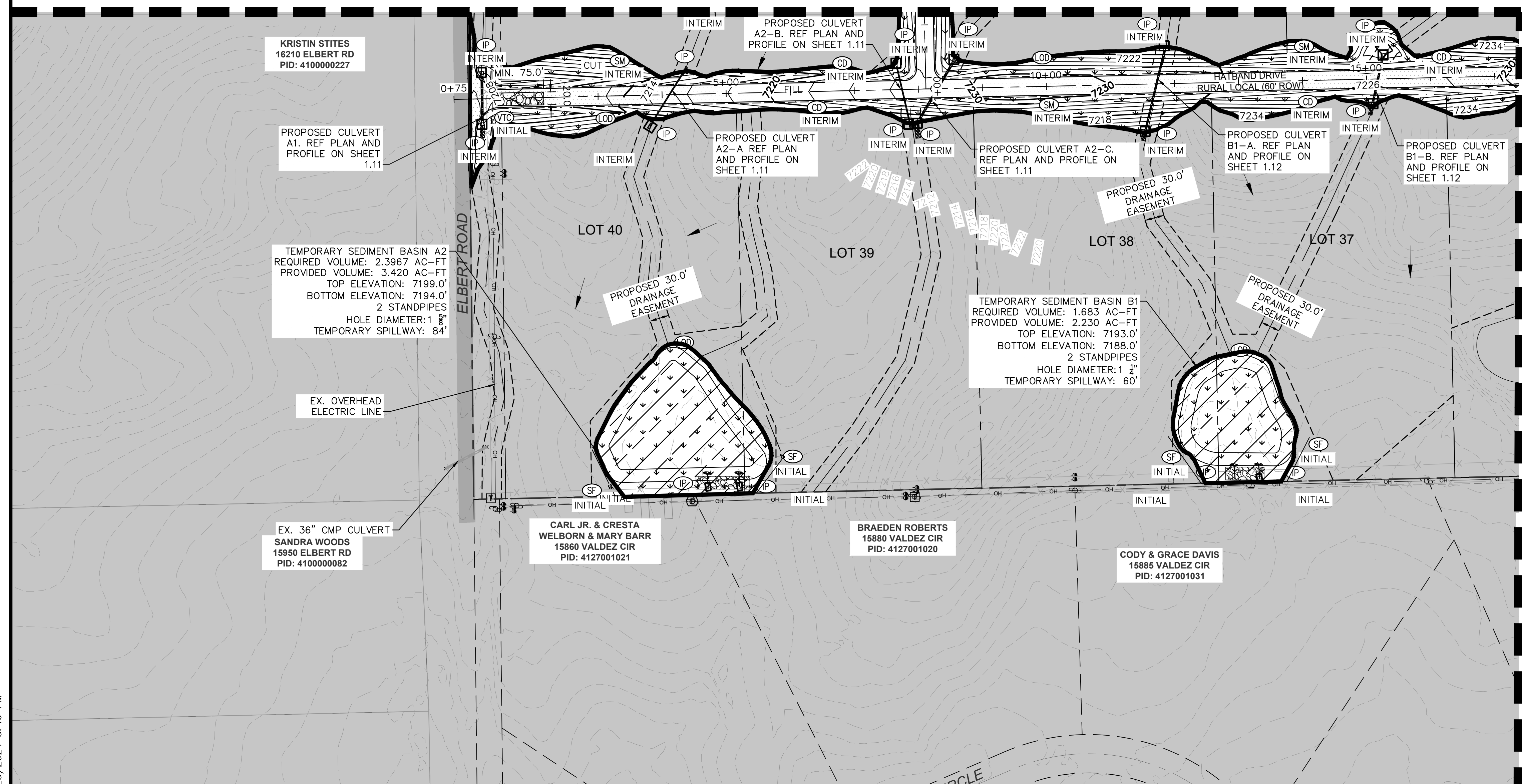
PROJECT NO.  
 196239003

SHEET  
 1.7

NO.	REVISION	BY	DATE	APPR.



MATCH LINE: SEE SHEET 1.7 FOR CONTINUATION



**LEGEND**

- LOT BOUNDARY LINE
- LOT BOUNDARY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
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- EXISTING FLOW DIRECTION ARROW
- IP INLET PROTECTION
- CD CHECK DAM (SEE NOTE 8)

**NOTES**

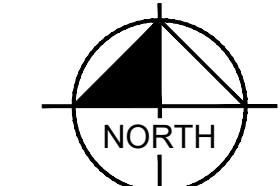
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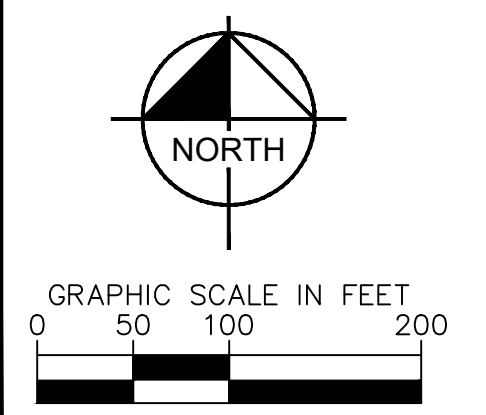
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**KEY MAP**  
SCALE: 1" = 1000'



MATCH LINE: SEE SHEET 1.10 FOR CONTINUATION

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**OVERLOOK AT HOMESTEAD FILING NO. 1**  
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PRE DEVELOPMENT GESC PLAN  
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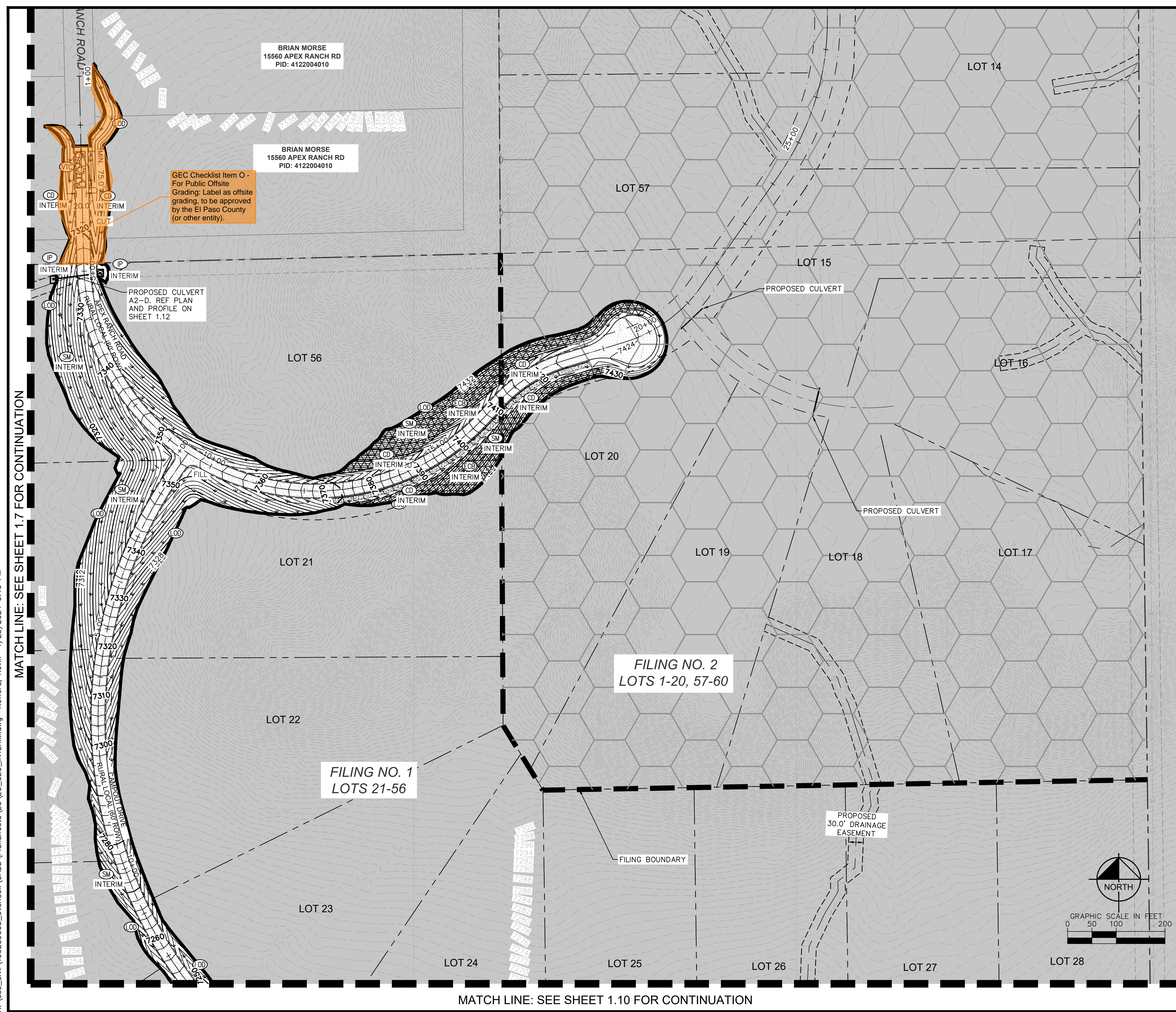
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PROJECT NO.  
196239003

SHEET  
**1.8**

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MATCH LINE: SEE SHEET 1.7 FOR CONTINUATION

MATCH LINE: SEE SHEET 1.10 FOR CONTINUATION

GEC Checklist Item O - For Public Offsite Grading: Label as offsite grading, to be approved by the El Paso County (or other entity).

PROPOSED CULVERT A2-D, REF PLAN AND PROFILE ON SHEET 1.12

PROPOSED 30.0' DRAINAGE EASEMENT

FILING NO. 2 LOTS 1-20, 57-60

FILING NO. 1 LOTS 21-56

**LEGEND**

- LOT BOUNDARY LINE
- LOT BOUNDARY LINE
- XXXX ----- EXISTING MAJOR CONTOUR
- XXXX ----- EXISTING MINOR CONTOUR
- XXXX ----- PROPOSED MAJOR CONTOUR
- XXXX ----- PROPOSED MINOR CONTOUR
- LOD --- LIMITS OF CONSTRUCTION/DISTURBANCE
- SF --- SILT FENCE
- CUT/FILL DEMARCATION
- SP SOIL STOCKPILE
- SSA STABILIZED STAGING AREA
- VTC VEHICLE TRACKING CONTROL
- SM SEEDING AND MULCHING
- TEMPORARY SEDIMENT BASIN
- FILING NO. 2 (NOT A PART OF THIS PLAN)
- ECB EROSION CONTROL BLANKET (SEE NOTE 4)
- SM SEEDING AND MULCHING
- EXISTING FLOW DIRECTION ARROW
- IP INLET PROTECTION
- CD CHECK DAM (SEE NOTE 8)

**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. 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.
3. 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.
4. CONTRACTOR SHALL UTILIZE ROLLED EROSION CONTROL PRODUCTS (STRAW-SINGLE NET EROSION CONTROL BLANKETS AND OPEN WEAVE TEXTILES) ON ALL SLOPES 3H:1V OR GREATER TO ACHIEVE REQUIRED STABILIZATION.
5. SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF ONSITE GRADING AND CONSTRUCTION ACTIVITIES.
6. DEMOLITION, REMOVAL, OVEREXCAVATION AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
7. VEGETATION COVER IS ABOUT 90% CONSISTING OF NATIVE GRASSES, TREES AND SHRUBS, BASED ON VISUAL INSPECTION
8. ROCK CHECK DAMS (CD) MAY BE SUBSTITUTED FOR SEDIMENT CONTROL LOGS (SCL) OR STRAW WADDLES. CONTRACTOR TO DETERMINE LOCATION OF CD WITHIN THE ROADSIDE DITCH (SEE TABLE FOR MIN. SPACING REQUIREMENTS) IN COORDINATION WITH COUNTY INSPECTORS.
10. NO ASPHALT OR CONCRETE BATCH PLANTS SHALL BE USED FOR THIS PROJECT.

SIZE OF SCL (STRAW WADDLE)	SPACING (PER VERTICAL FEET OF FALL)
9 INCH	1.5 FEET
12 INCH	2 FEET
16 INCH	2.67 FEET



Final? GEC Plans need to show initial, interim, and final. If BMPs are to be left because this is early grading, the plans should read interim/final

KEY MAP SCALE: 1" = 1000'

NO. \_\_\_\_\_

REVISION \_\_\_\_\_

DATE \_\_\_\_\_

APPR. \_\_\_\_\_

**Kimley»Horn**

2023 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 900  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK

DRAWN BY: AUL

CHECKED BY: KRK

DATE: 12/04/2023

OVERLOOK AT HOMESTEAD FILING NO. 1

EL PASO COUNTY, COLORADO

PRE DEVELOPMENT GEC PLAN

GEC INTERIM PLAN

PRELIMINARY

FOR REVIEW ONLY

NOT FOR CONSTRUCTION

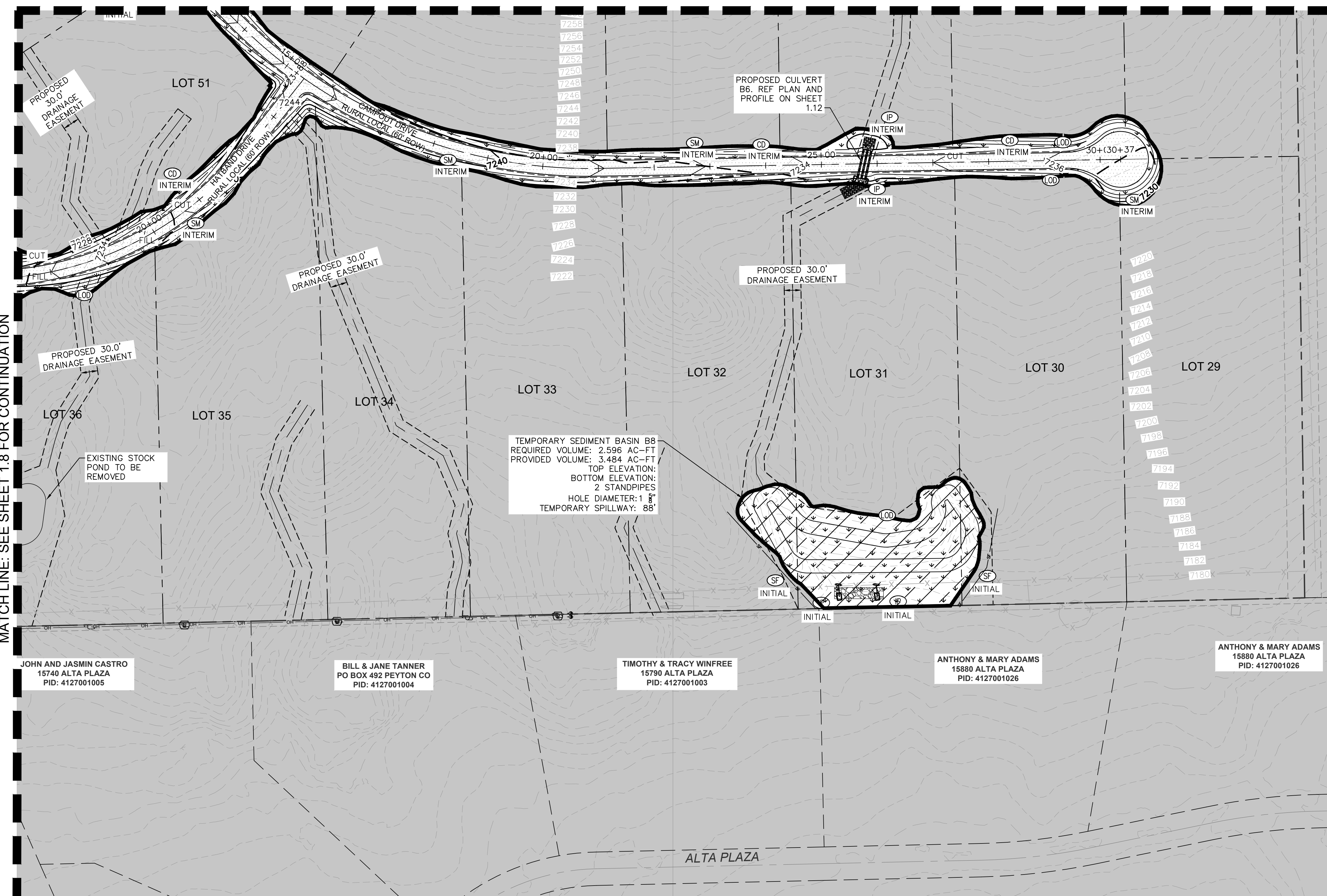
Kimley»Horn

Kimley-Horn and Associates, Inc.

PROJECT NO. 196239003

SHEET 1.9

MATCH LINE: SEE SHEET 1.9 FOR CONTINUATION



**LEGEND**

- LOT BOUNDARY LINE
- LOT BOUNDARY LINE
- XXXX ----- EXISTING MAJOR CONTOUR
- XXXX ----- EXISTING MINOR CONTOUR
- XXXX ----- PROPOSED MAJOR CONTOUR
- XXXX ----- PROPOSED MINOR CONTOUR
- LOD --- LIMITS OF CONSTRUCTION/DISTURBANCE
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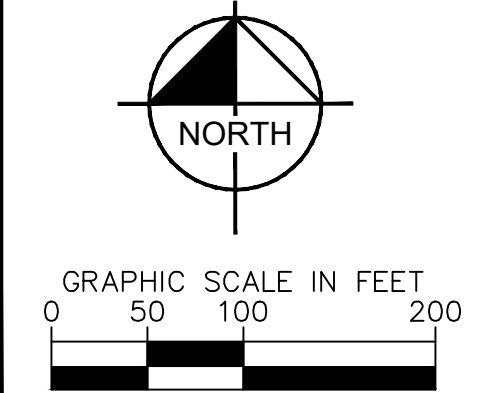
Final? GEC Plans need to show initial, interim, and final. If BMPs are to be left because this is early grading, the plans should read interim/final

KEY MAP  
SCALE: 1" = 1000'



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MATCH LINE: SEE SHEET 1.8 FOR CONTINUATION



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APPR.

2023 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 900  
Colorado Springs, Colorado 80903 (719) 453-0180

OVERLOOK AT HOMESTEAD FILING NO. 1

EL PASO COUNTY, COLORADO

PRE DEVELOPMENT GESC PLAN

GEC INTERIM PLAN

**PRELIMINARY**

FOR REVIEW ONLY  
NOT FOR  
CONSTRUCTION

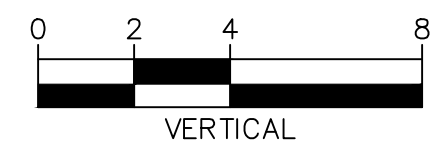
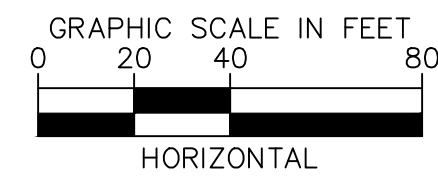
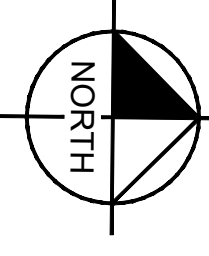
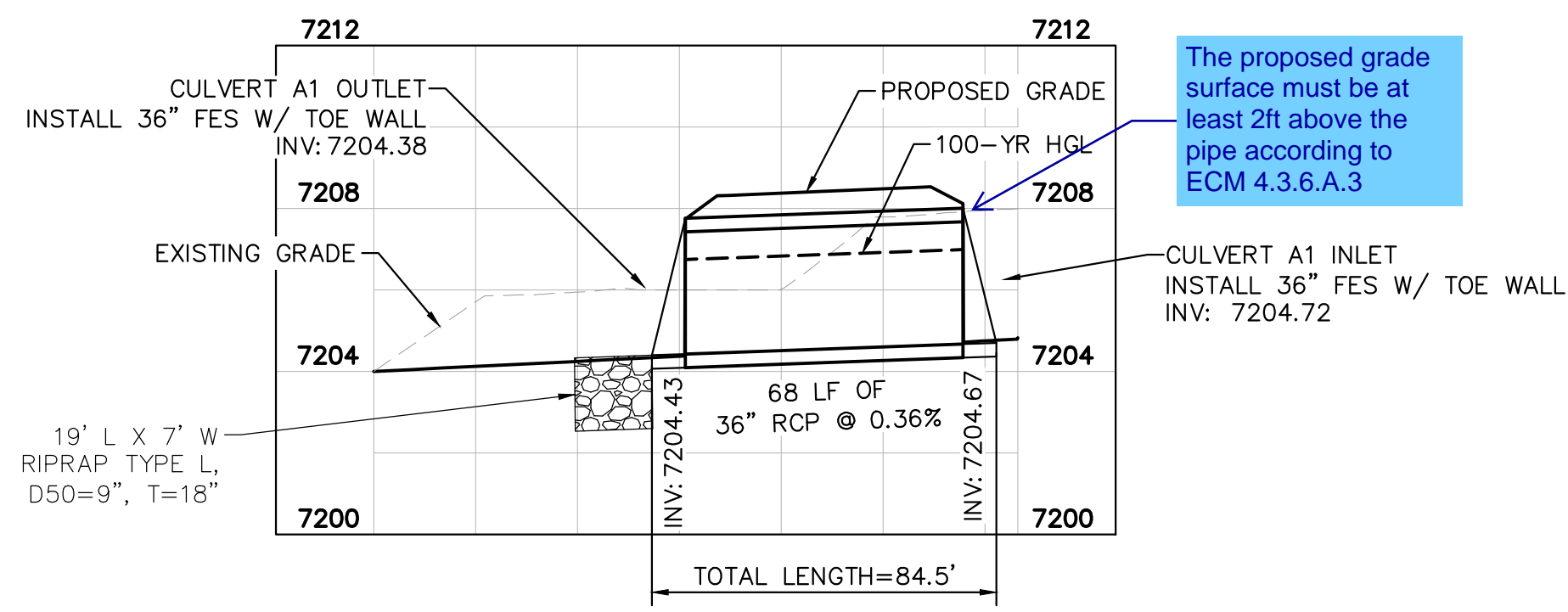
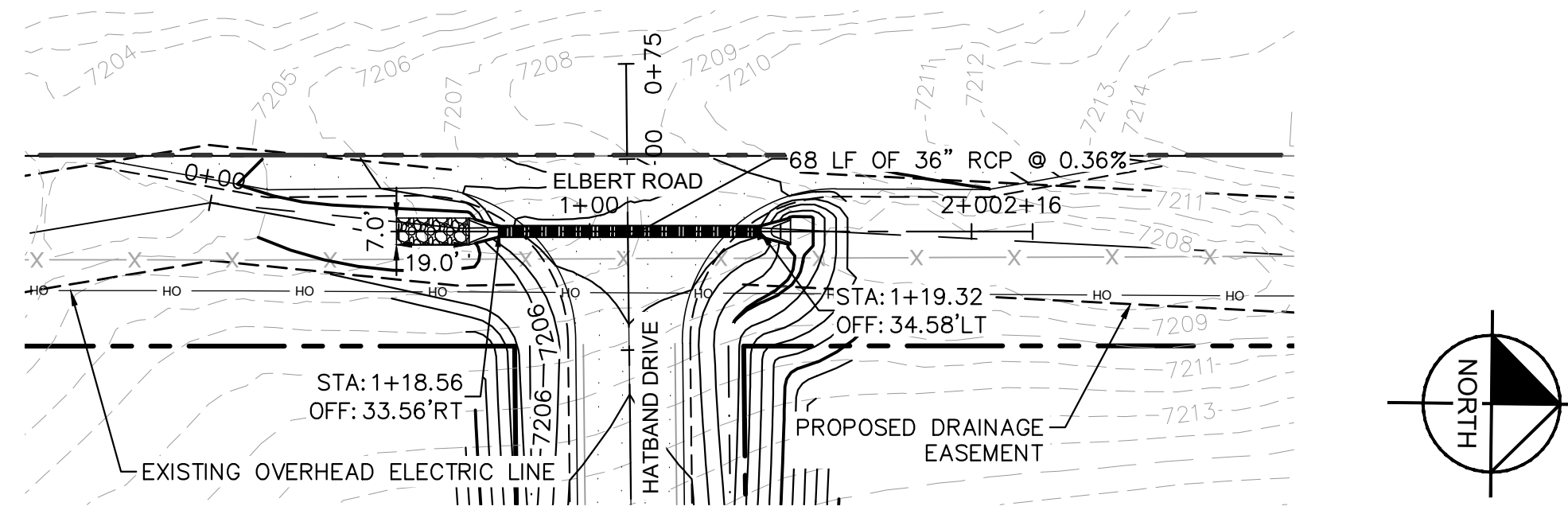
PROJECT NO.  
196239003
SHEET

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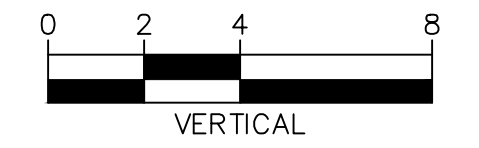
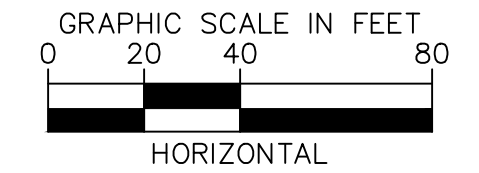
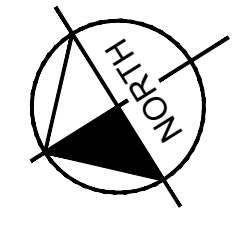
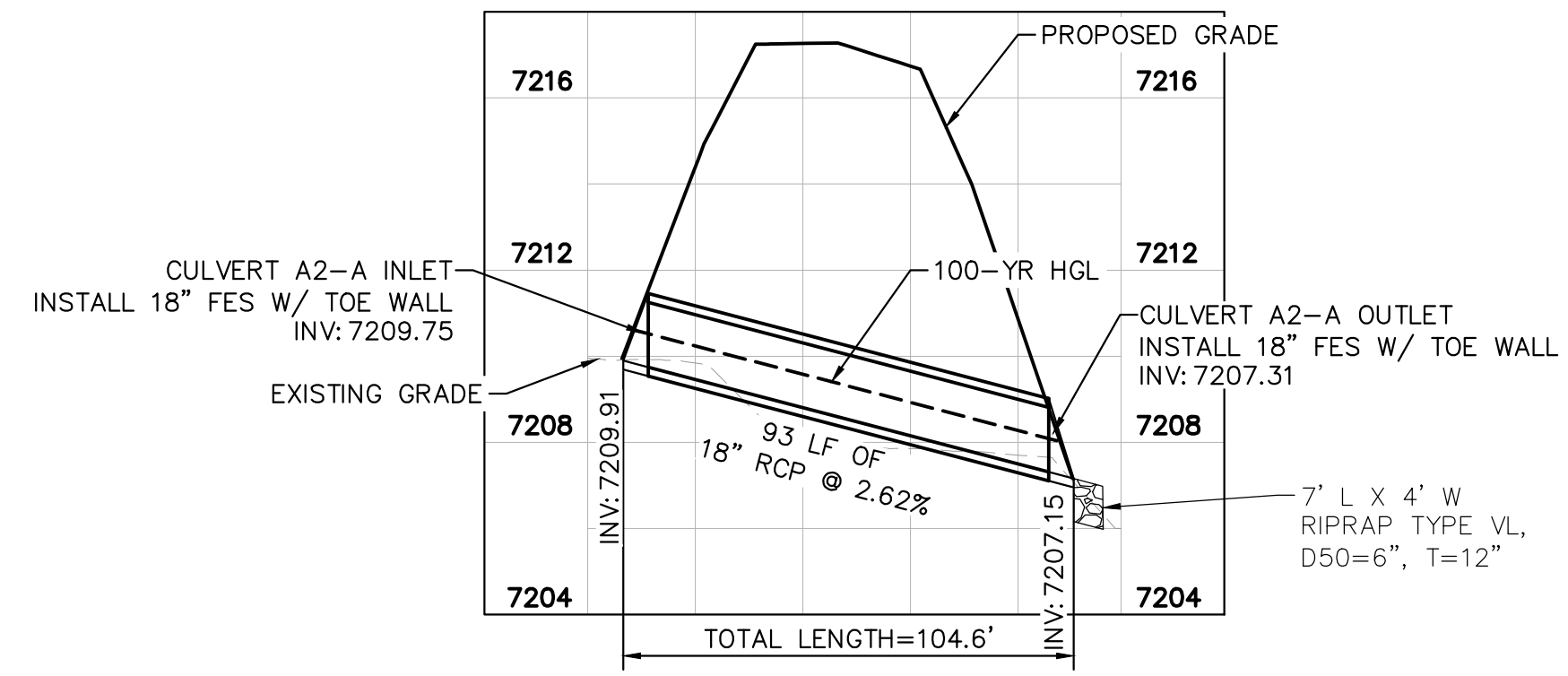
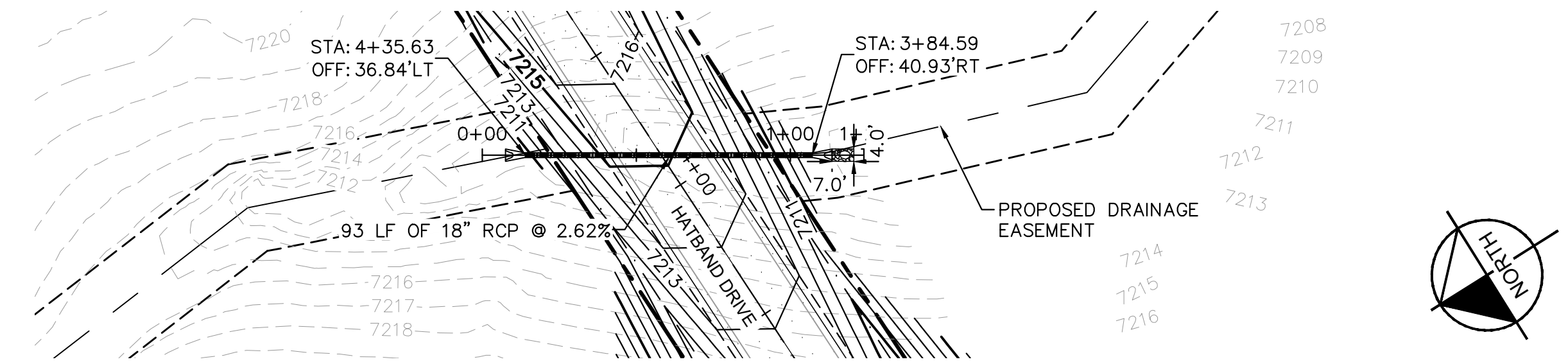
Pipe profiles cannot be fully reviewed without calculations provided in FDR.

**NOTES**

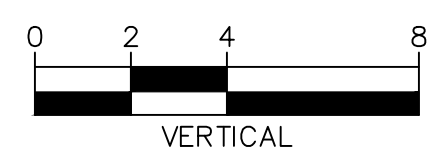
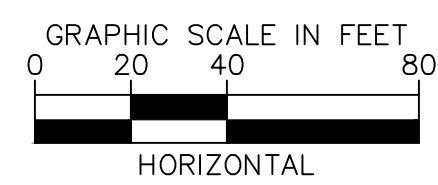
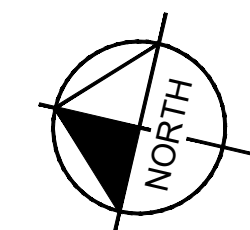
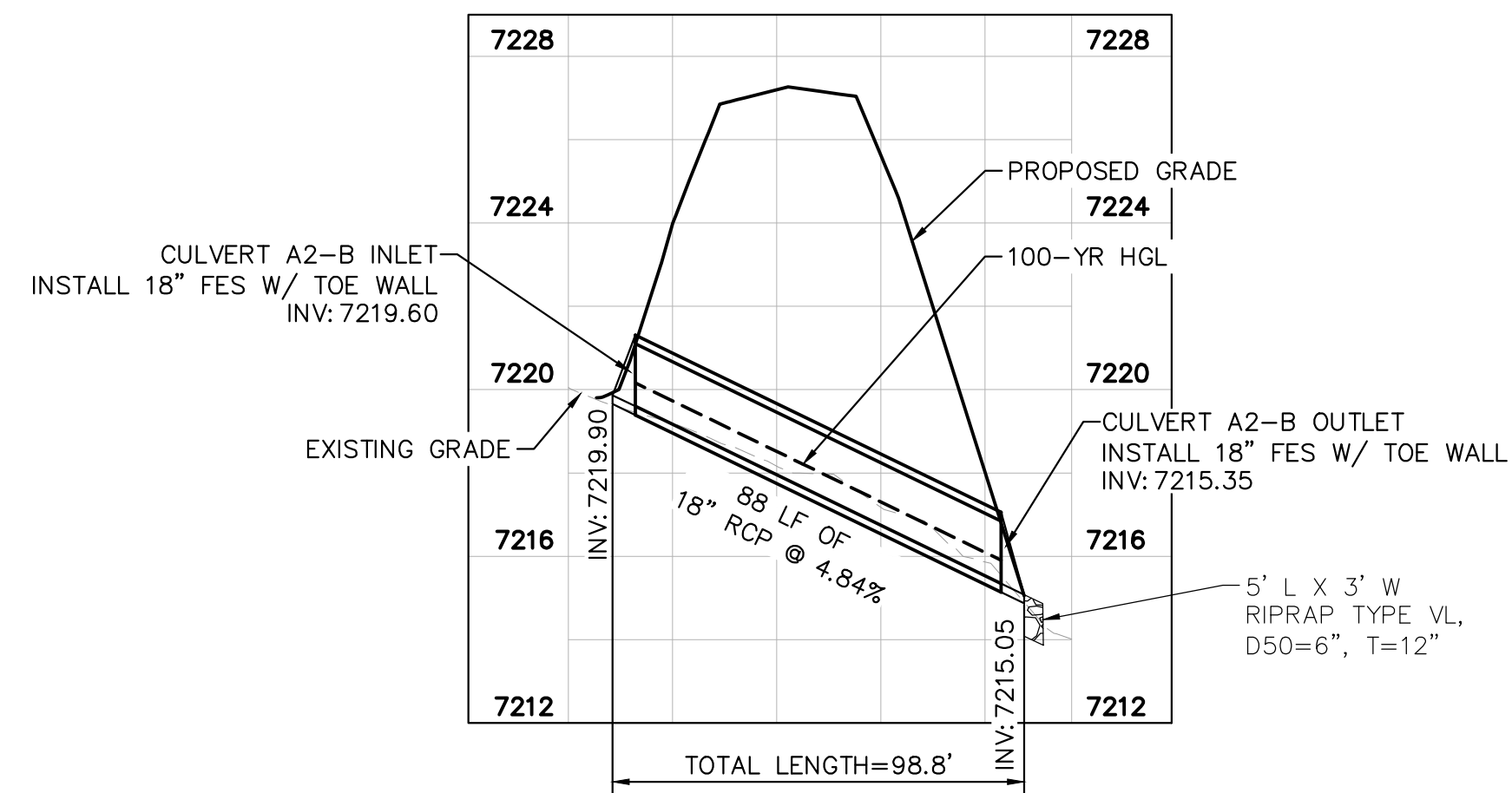
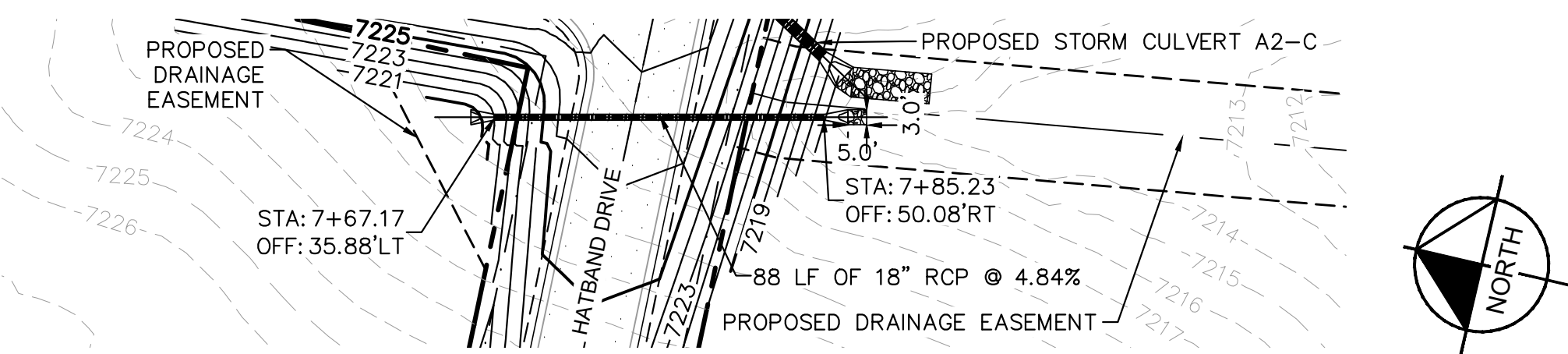
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 6'-1": 18"-30" FES  
 8'-1": 30" FES  
 8'-2": 42"-48" FES



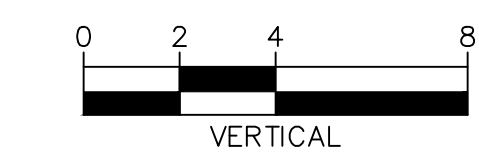
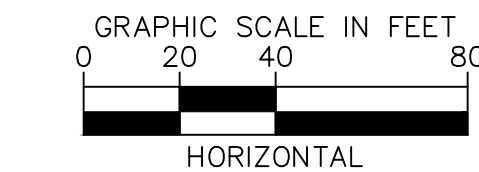
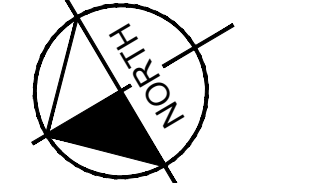
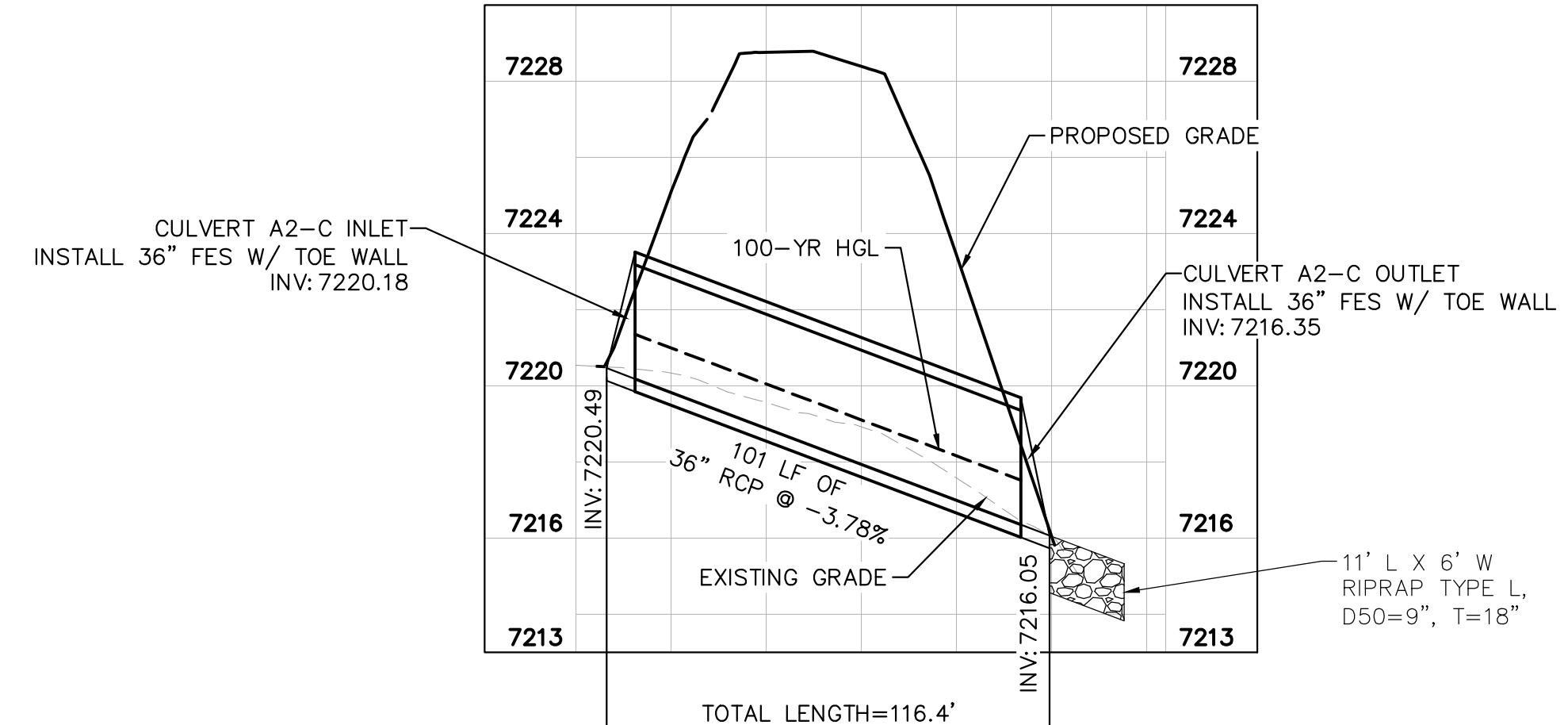
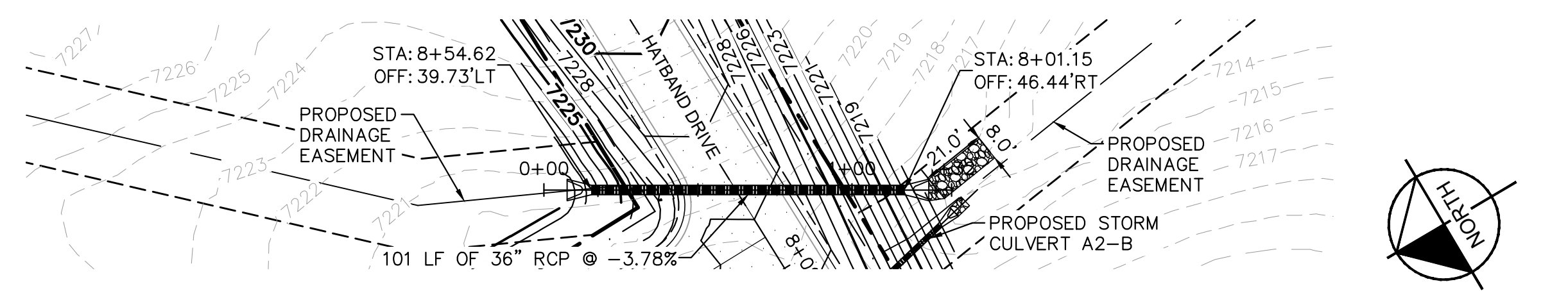
**CULVERT A1 PLAN AND PROFILE**



**CULVERT A2-A PLAN AND PROFILE**



**CULVERT A2-B PLAN AND PROFILE**



**CULVERT A2-C PLAN AND PROFILE**

NO.	REVISION	BY	DATE	APPR.

**Kimley»Horn**  
 2023 KIMLEY-HORN AND ASSOCIATES, INC.  
 2 North Nevada Avenue Suite 900  
 Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
 DRAWN BY: A.JL  
 CHECKED BY: KRK  
 DATE: 12/04/2023

**OVERLOOK AT HOMESTEAD FILING NO. 1  
 EL PASO COUNTY, COLORADO  
 PRE DEVELOPMENT GESC PLAN  
 CULVERT PLAN**

PRELIMINARY  
 FOR REVIEW ONLY  
 NOT FOR CONSTRUCTION  
**Kimley»Horn**  
 Kimley-Horn and Associates, Inc.

PROJECT NO.  
 196239003

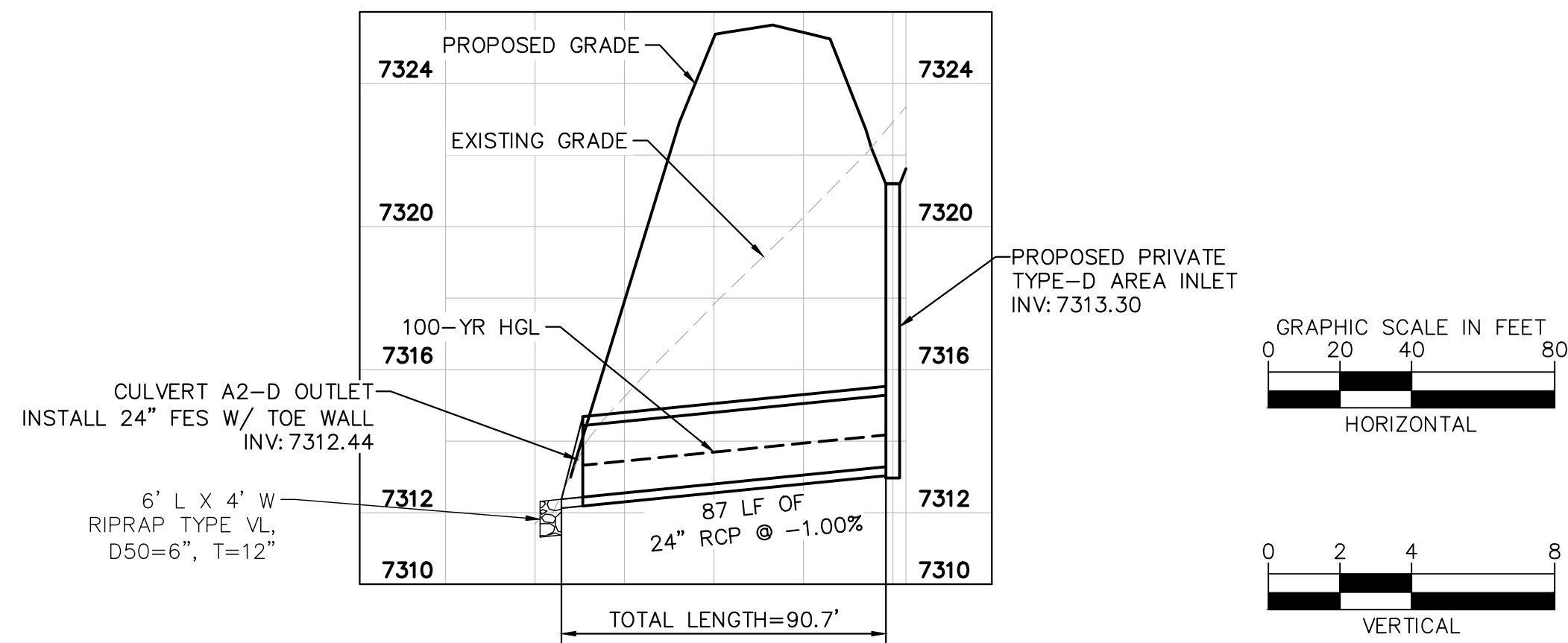
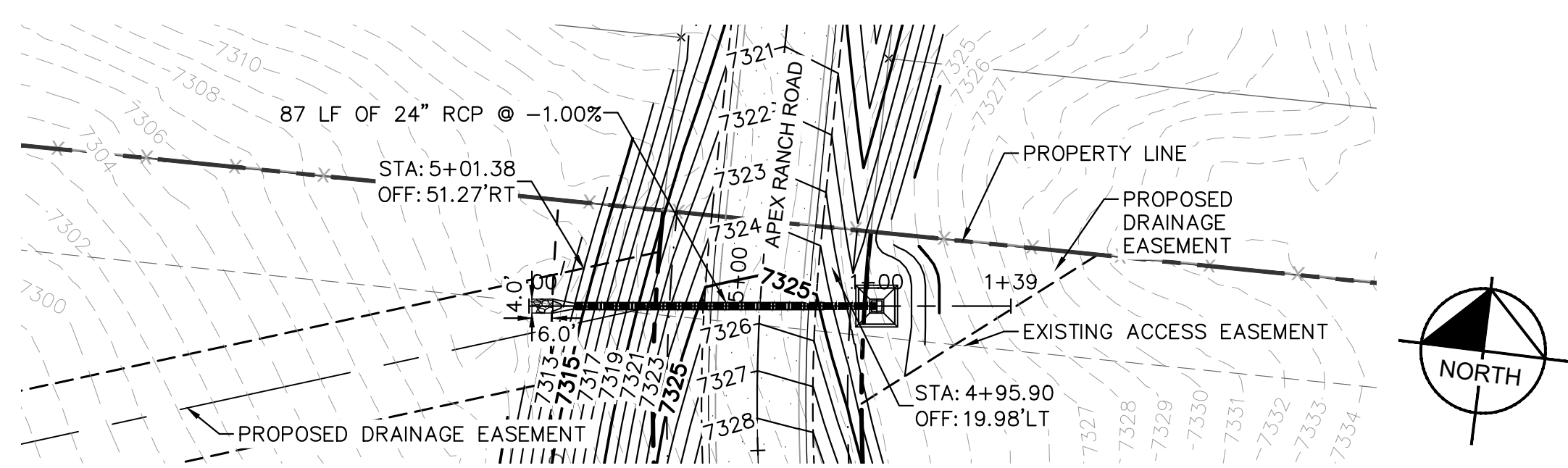
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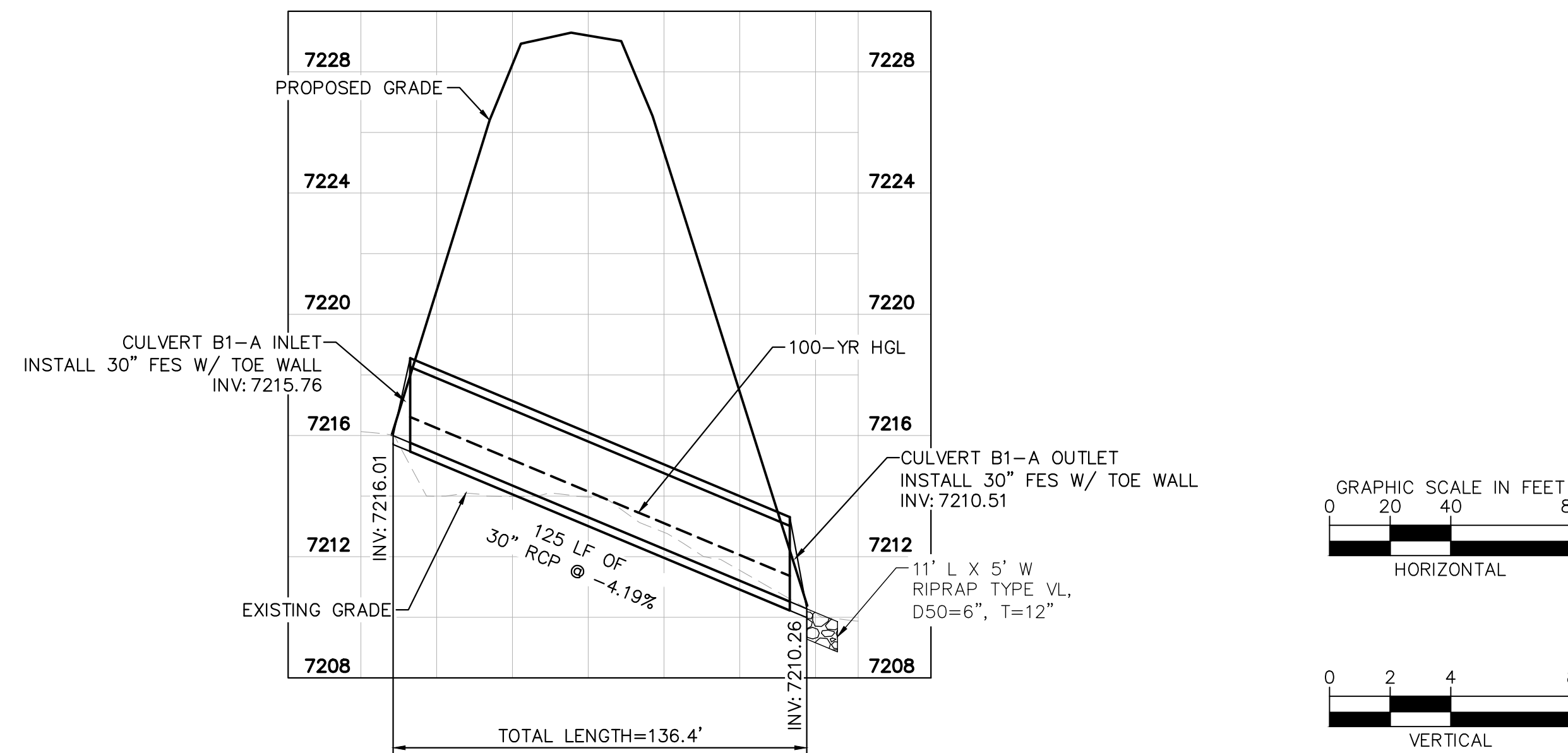
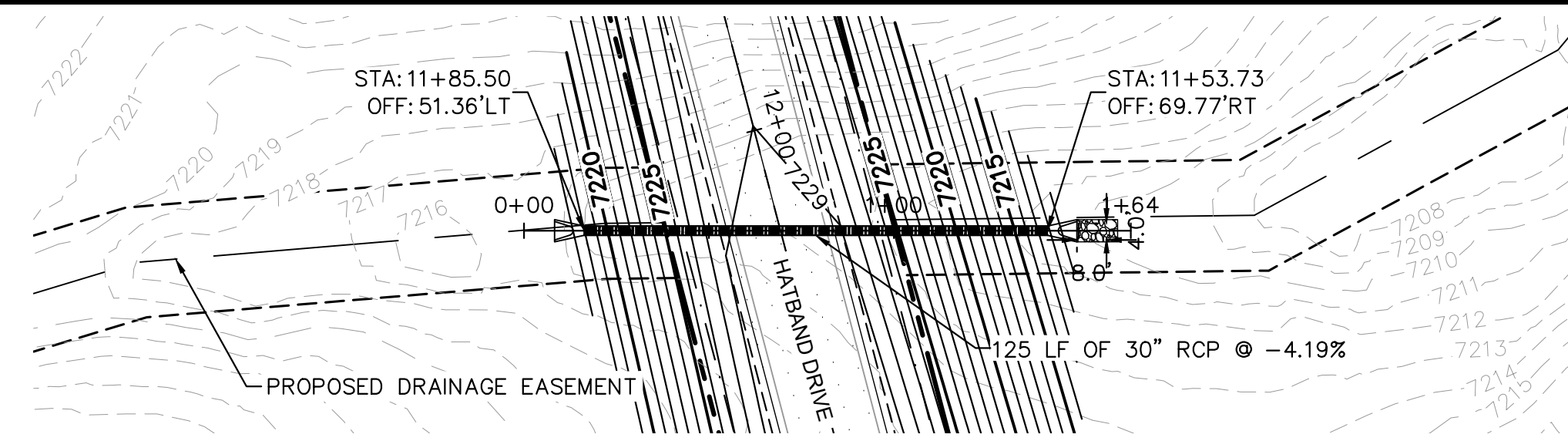
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**NOTES**

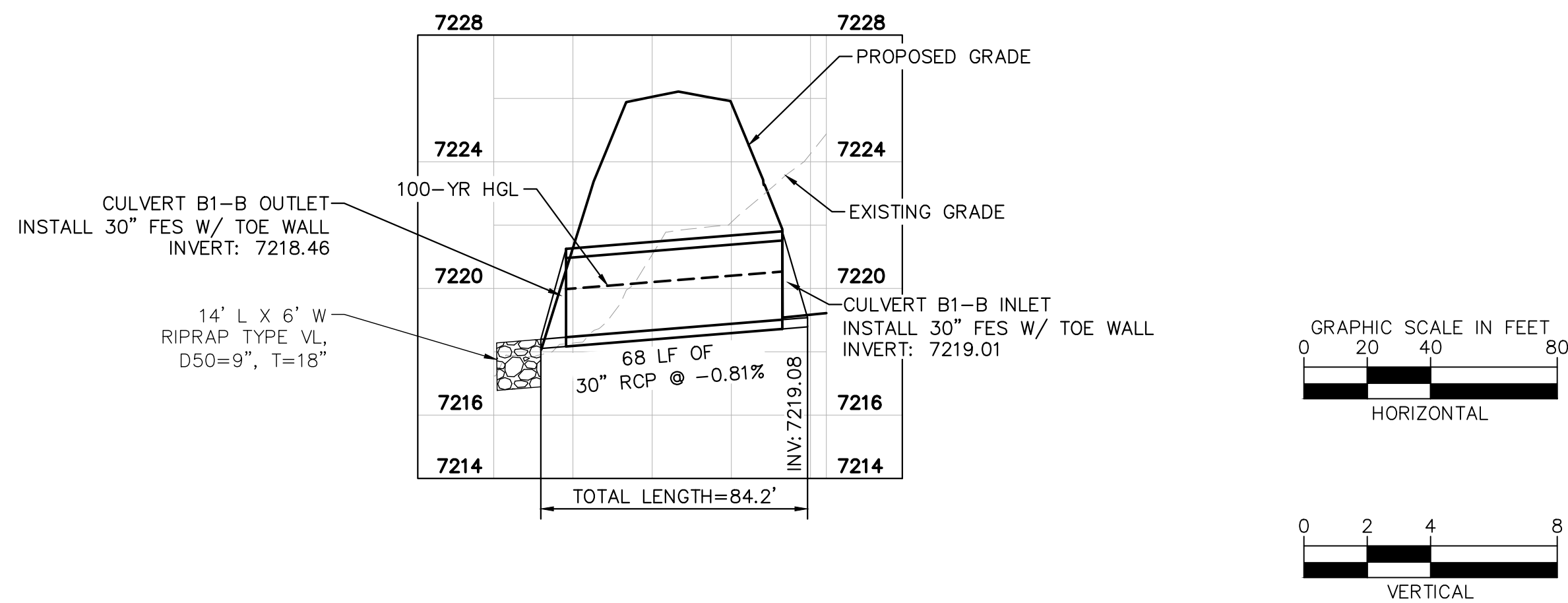
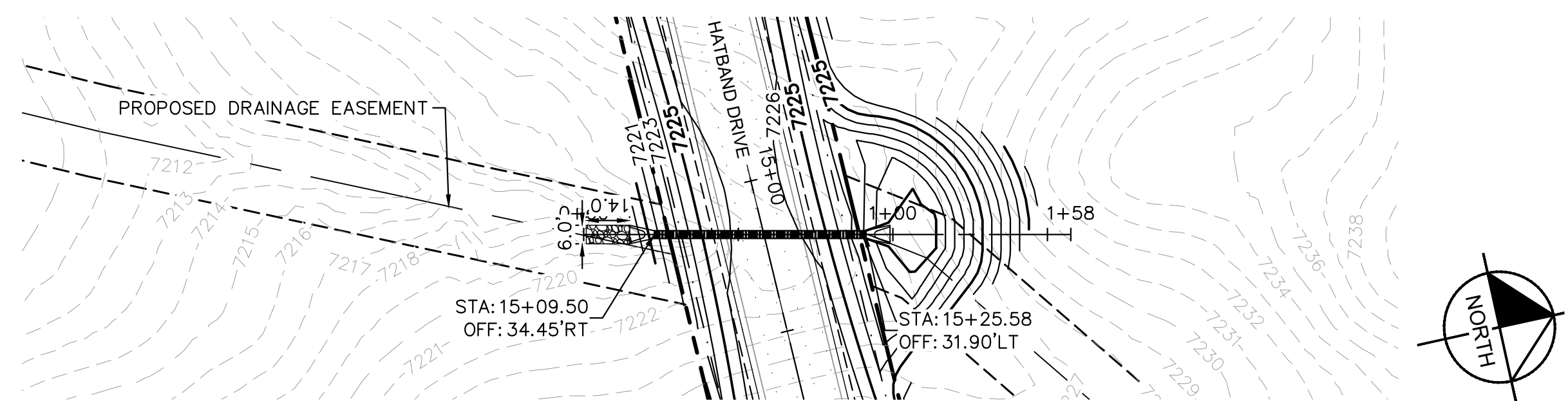
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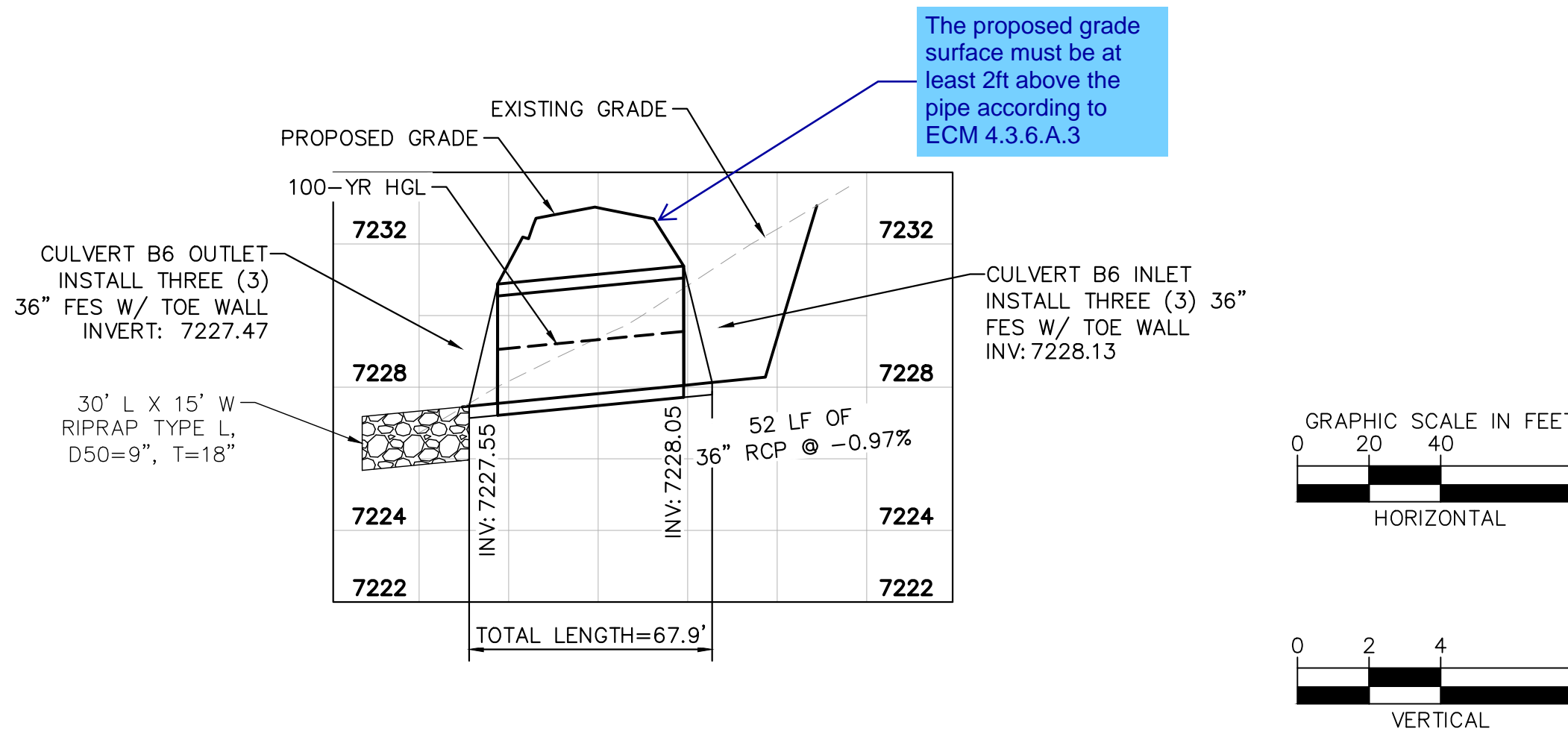
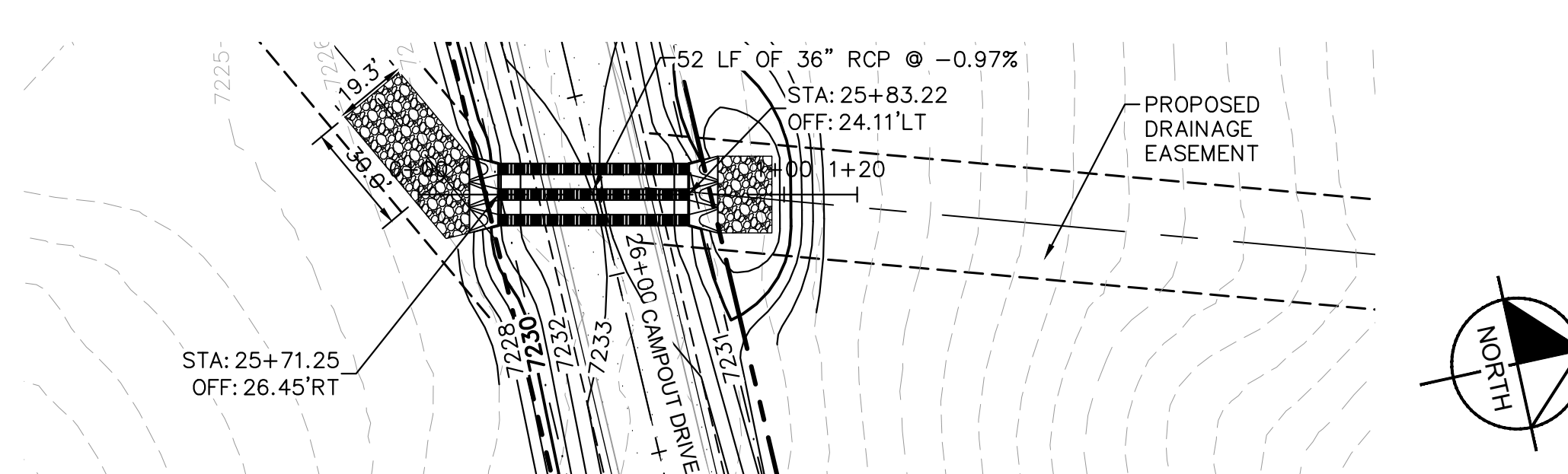
**CULVERT A2-D PLAN AND PROFILE**



**CULVERT B1-A PLAN AND PROFILE**



**CULVERT B1-B PLAN AND PROFILE**



**CULVERT B6 PLAN AND PROFILE**

NO.	REVISION	BY	DATE	APPR.

**Kimley»Horn**  
 2023 KIMLEY-HORN AND ASSOCIATES, INC.  
 2 North Nevada Avenue Suite 900  
 Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
 DRAWN BY: AJL  
 CHECKED BY: KRK  
 DATE: 12/04/2023

**OVERLOOK AT HOMESTEAD FILING NO. 1  
 EL PASO COUNTY, COLORADO  
 PRE DEVELOPMENT GESC PLAN  
 CULVERT PLAN**

**PRELIMINARY**  
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**Kimley»Horn**  
 Kimley-Horn and Associates, Inc.

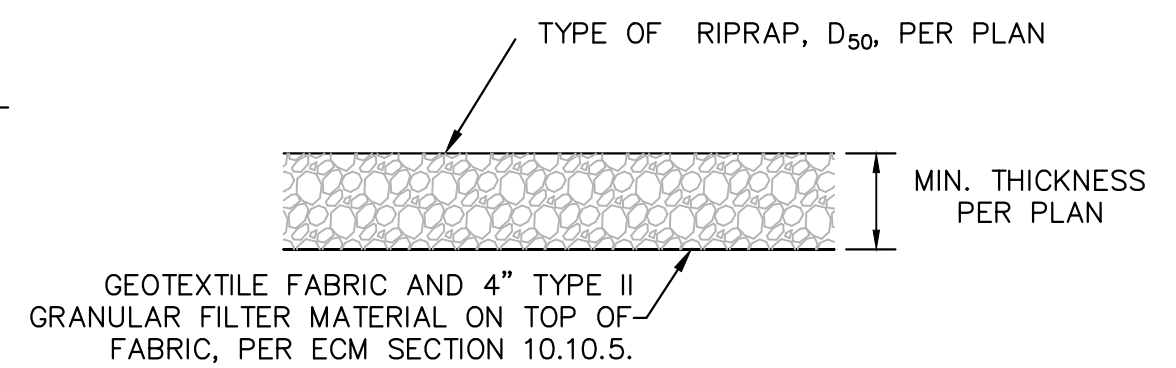
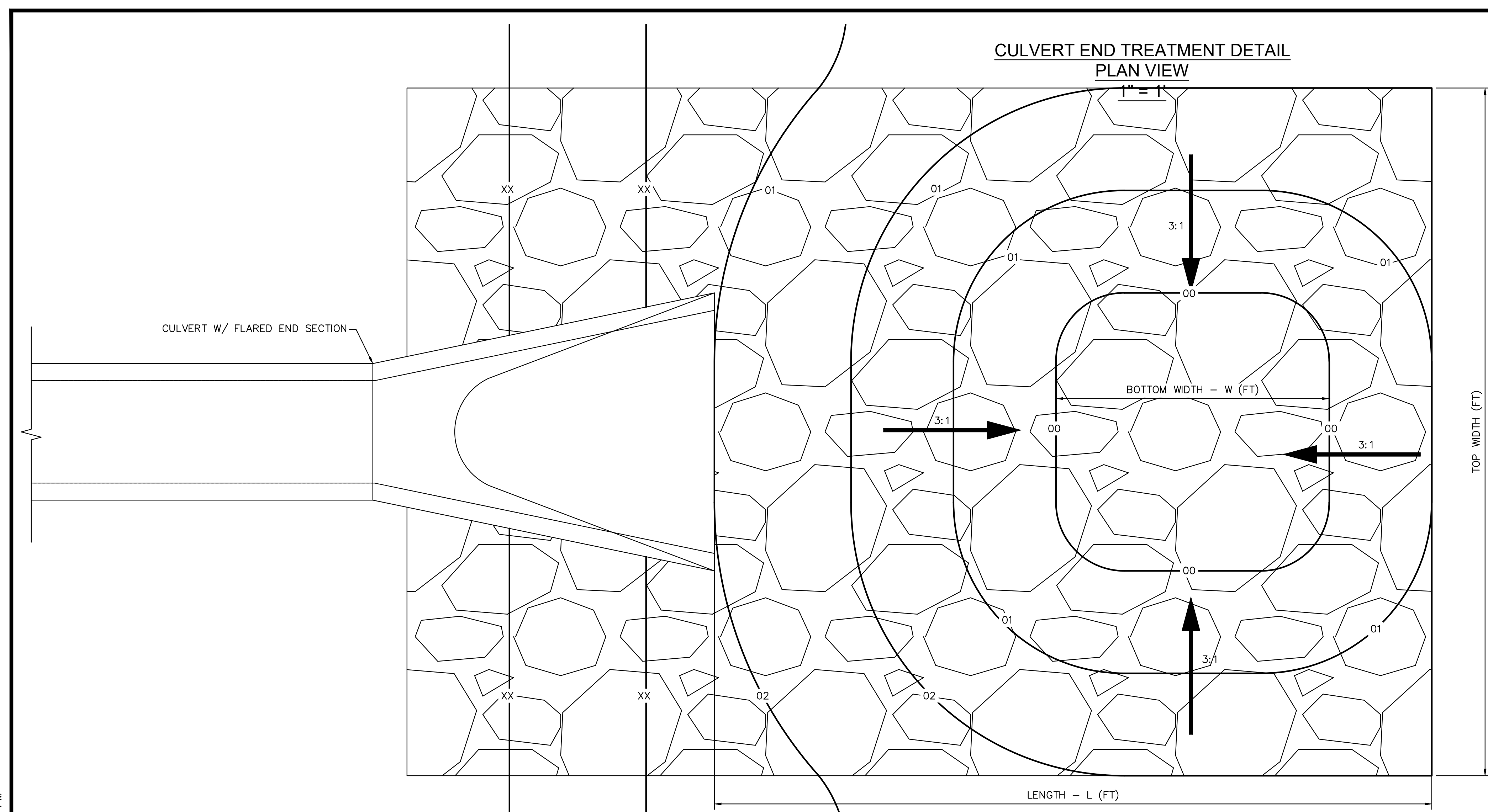
PROJECT NO.  
 196239003

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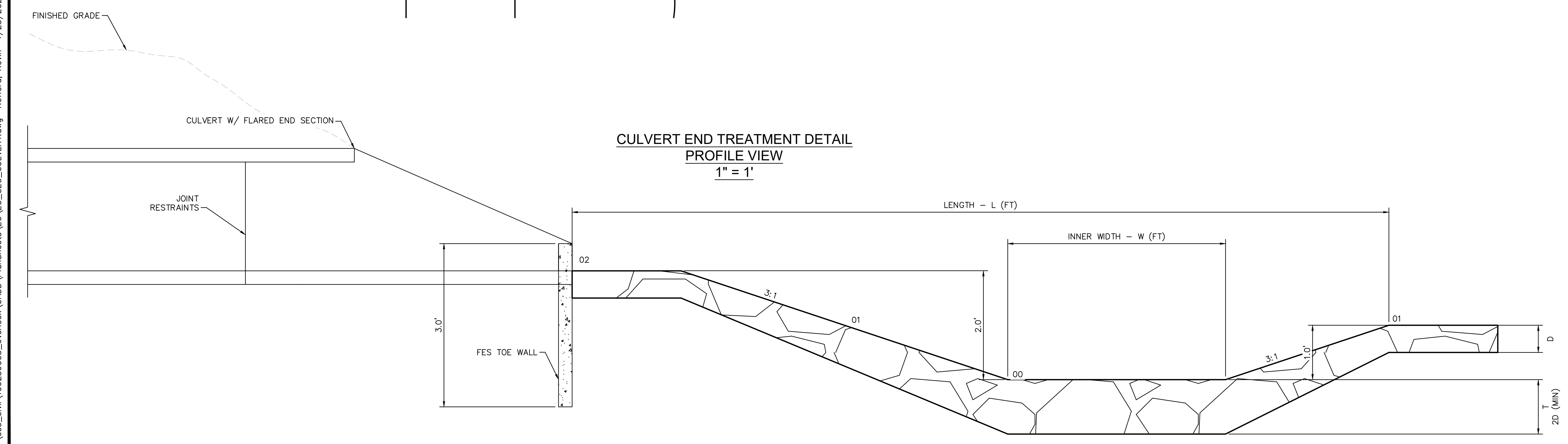
1. D50 = MEAN PARTICLE SIZE (INTERMEDIATE DIMENSION) BY WEIGHT.
2. RIP RAP SHALL BE PER PLAN AND SHALL BE MIXED WITH 30% SOIL TO 70% RIP RAP.
3. RIP RAP SECTION THICKNESS SHALL BE 2.0 TIMES THE SPECIFIED MEAN PARTICLE SIZE (I.E. D50 X 2.0 MINIMUM) PER ECM SECTION 10.10.3.
4. ALL RIP RAP SHALL BE UNDERLAIN WITH GEOTEXTILE FILTER FABRIC FOR STABILIZATION.
5. RIP RAP SHALL WRAP AROUND AND EXTEND 2' MIN. BEHIND FLUME AND FLARED END SECTIONS.

TYPICAL RIPRAP SECTION DETAIL

Table 506-2

Pay Item	Stone Size d50 <sup>1</sup> (Inches)	Percent of Material Smaller Than Typical Stone <sup>2</sup>	Typical Stone Dimensions <sup>3</sup> (Inches)	Typical Stone Weight <sup>4</sup> (Pounds)
Riprap	9	70-100 50-70 35-50 2-10	15 12 9 3	160 85 35 1.3
Riprap	12	70-100 50-70 35-50 2-10	21 18 12 4	440 275 85 3
Riprap	18	100 50-70 35-50 2-10	30 24 18 6	1280 650 275 10
Riprap	24	100 50-70 35-50 2-10	42 33 24 9	3500 1700 650 35

<sup>1</sup>d50 = nominal stone size  
<sup>2</sup>based on typical rock mass  
<sup>3</sup>equivalent spherical diameter  
<sup>4</sup>based on a specific gravity = 2.5



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DESIGNED BY: KRK  
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 CHECKED BY: KRK  
 DATE: 12/04/2023

OVERLOOK AT HOMESTEAD FILING NO. 1  
 EL PASO COUNTY, COLORADO  
 PRE DEVELOPMENT GESC PLAN  
 CULVERT END TREATMENT

PRELIMINARY  
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**Kimley»Horn**  
 Kimley-Horn and Associates, Inc.

PROJECT NO.  
 196239003

SHEET  
 1.13

**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.



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

**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.

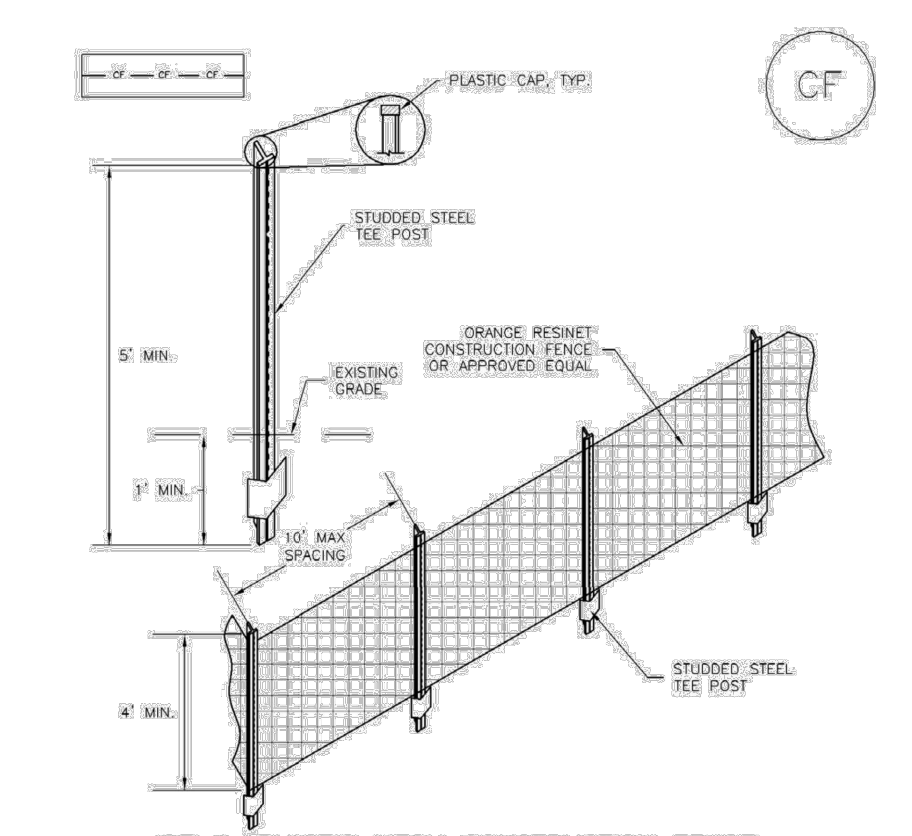
Do not place construction fencing in areas within work limits of machinery.

**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.

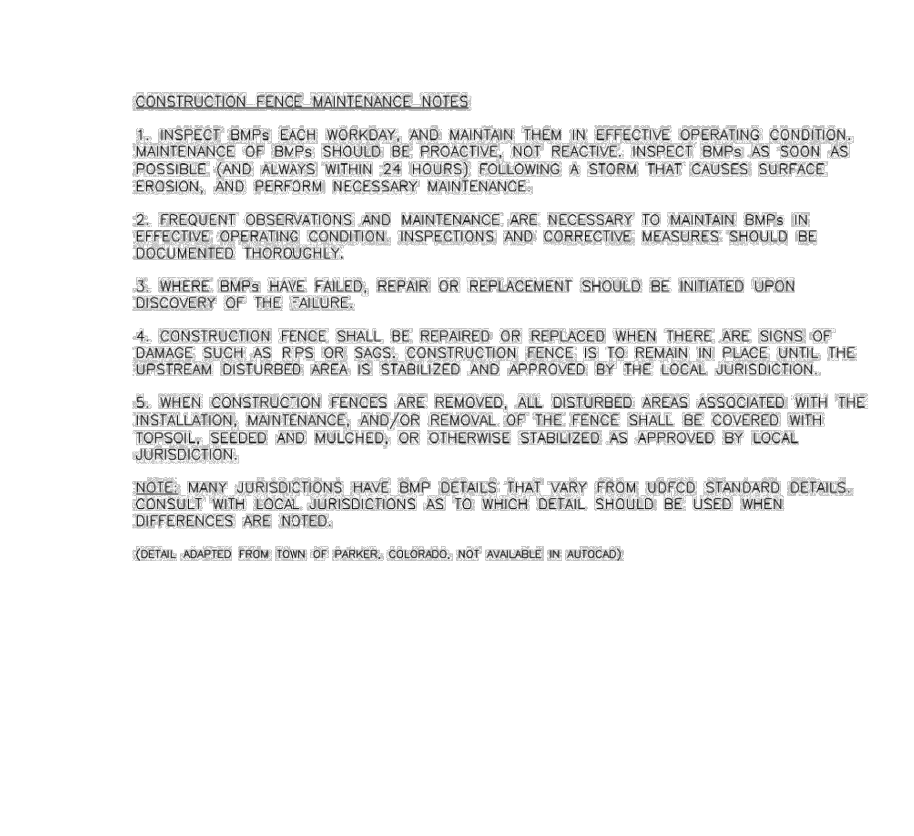
Construction Fence	
Function:	
Erosion Control	No
Sediment Control	No
Site/Material Management	Yes

**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 CONCRETE-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.  
 (DETAIL ADAPTED FROM URBAN DRAINAGE, COURTESY, NOT AVAILABLE IN AUTOCAD)

**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 8" OR MORE 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, SEEDS AND MULCH, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.  
 NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM URBAN DRAINAGE STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.  
 (DETAIL ADAPTED FROM URBAN DRAINAGE, COURTESY, NOT AVAILABLE IN AUTOCAD)

**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	
Function:	
Erosion Control	Moderate
Sediment Control	Yes
Site/Material Management	Yes

**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.



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

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.

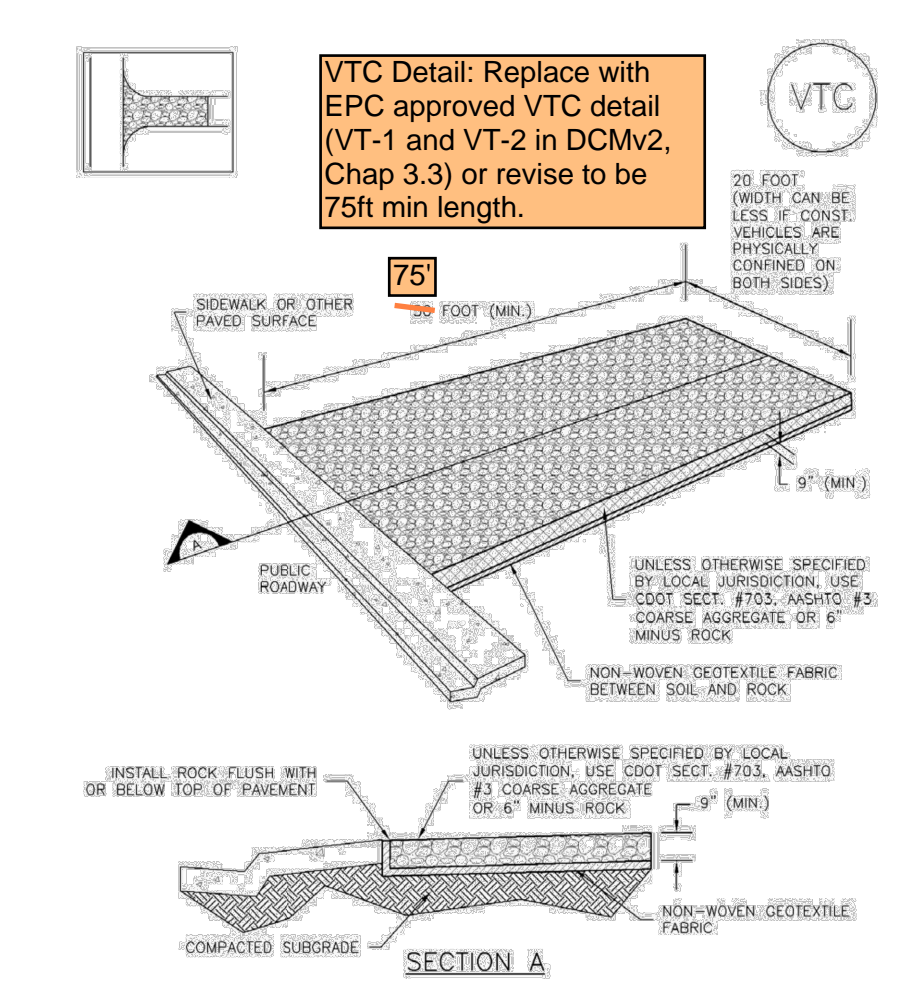
A stabilized entrance should be removed only when there is no longer the potential for vehicle tracking to occur. This is typically after the site has been stabilized.

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.

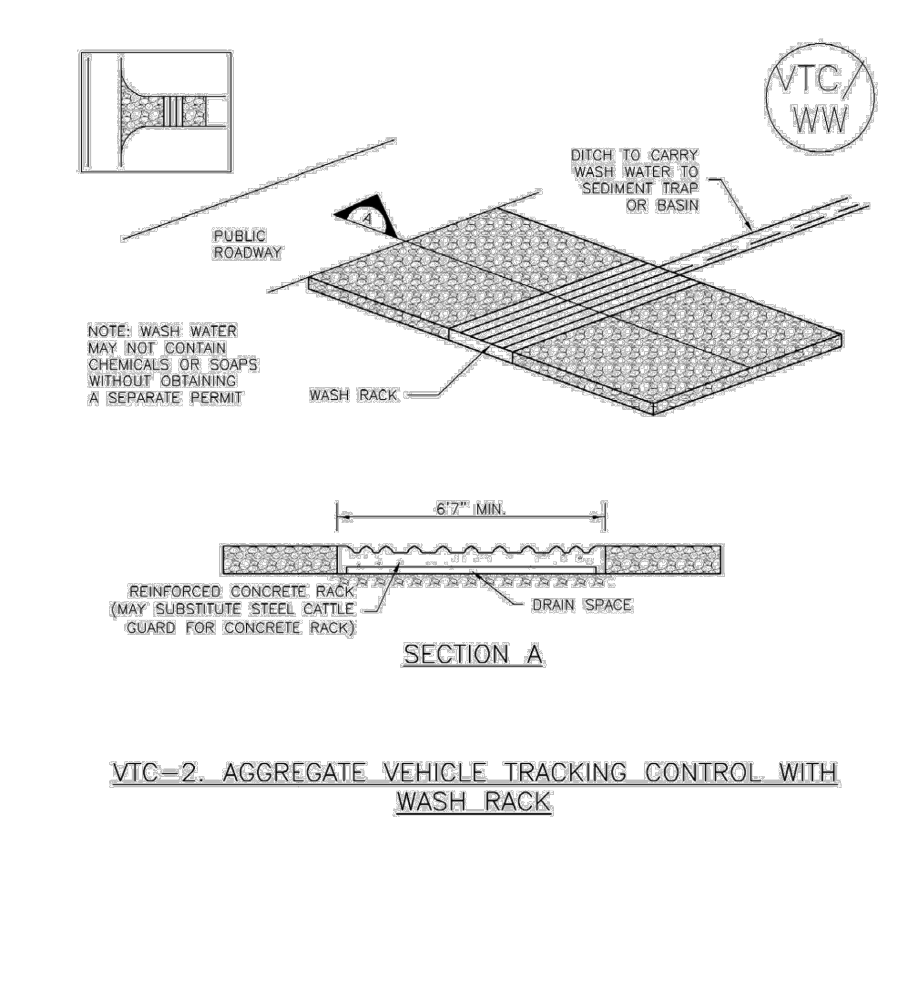
Provide ECB detail

**Vehicle Tracking Control (VTC) SM-4**



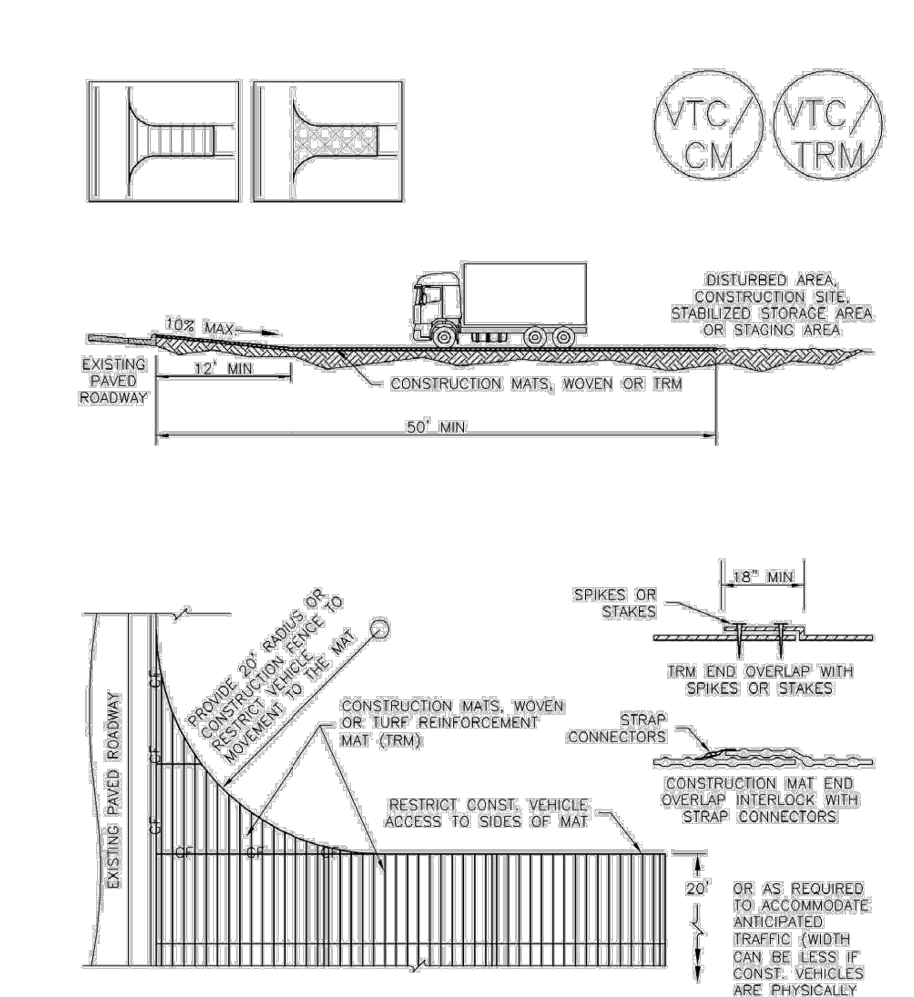
VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

**SM-4 Vehicle Tracking Control (VTC)**



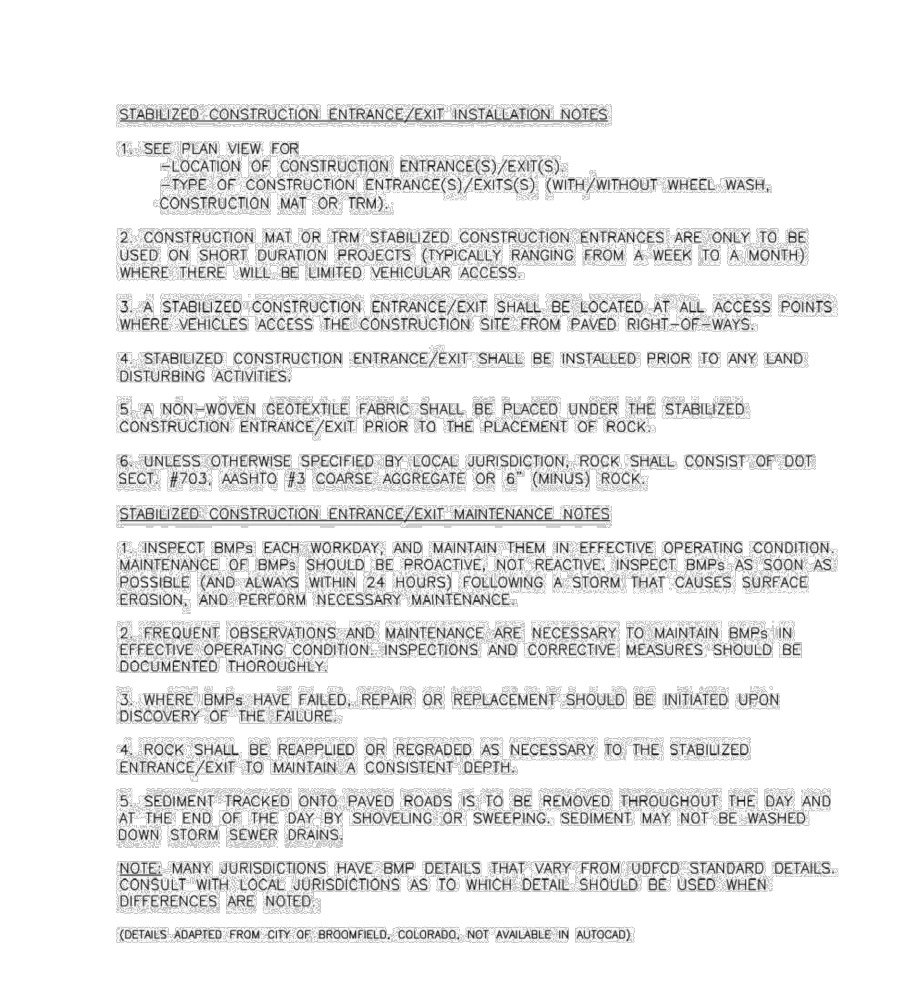
VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

**Vehicle Tracking Control (VTC) SM-4**



VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

**SM-4 Vehicle Tracking Control (VTC)**



STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

**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	
Function:	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material	Yes

NO.	REVISION	BY	DATE	APPR.

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DESIGNED BY: KRK  
 DRAWN BY: AUL  
 CHECKED BY: KRK  
 DATE: 12/04/2023

OVERLOOK AT HOMESTEAD FILING NO. 1  
 EL PASO COUNTY, COLORADO  
 PRE DEVELOPMENT GESC PLAN

PRELIMINARY  
 FOR REVIEW ONLY  
 NOT FOR CONSTRUCTION  
 Kimley»Horn  
 Kimley-Horn and Associates, Inc.

PROJECT NO.  
 196239003

SHEET

1.14





**MM-2 Stockpile Management (SM)**

**STOCKPILE PROTECTION MAINTENANCE NOTES**

1. INSPECT BMPs EACH MONTH 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.

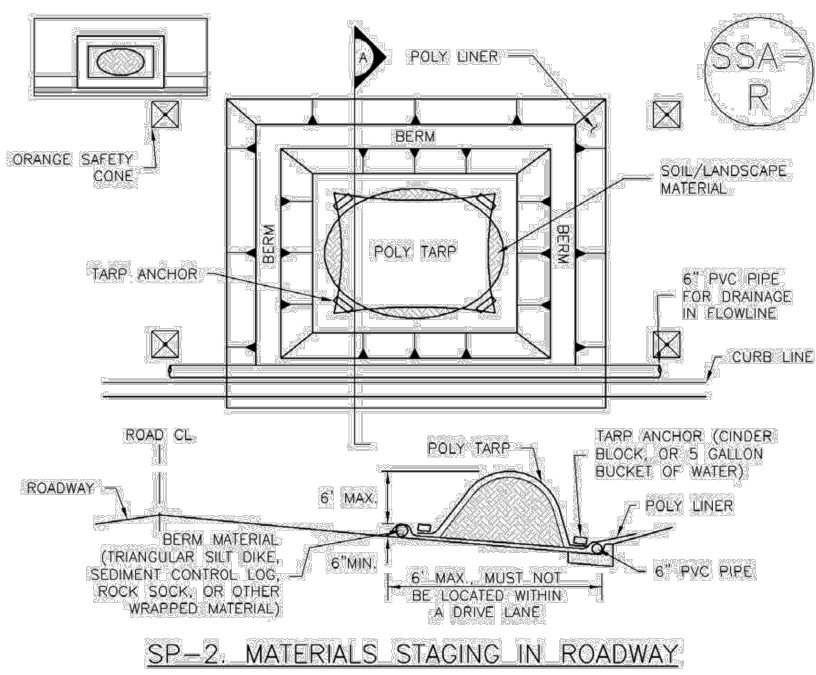
**STOCKPILE PROTECTION MAINTENANCE NOTES**

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PAGES 100-101, NOT AVAILABLE IN AUTO)

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

**Stockpile Management (SP)**



**SP-2 MATERIALS STAGING IN ROADWAY**

**MATERIALS STAGING IN ROADWAYS INSTALLATION NOTES**

1. USE PLAN VIEW FOR LOCATION OF MATERIAL STAGING AREA(S). CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
2. FEATURES MUST BE INSTALLED PRIOR TO EXCAVATION, EARTHWORK OR DELIVERY OF MATERIALS.
3. MATERIALS MUST BE STATIONED ON THE POLY LINER. ANY INCIDENTAL MATERIALS DEPOSITED ON PAVED SECTION OR ALONG CURB LINE MUST BE CLEANED UP PROMPTLY.
4. POLY LINER AND TARP COVER SHOULD BE OF SIGNIFICANT THICKNESS TO PREVENT DAMAGE OR LOSS OF INTEGRITY.
5. SAND BASE MAY BE SUBSTITUTED TO ANCHOR THE COVER TARP OR PROVIDE BERMING UNDER THE BASE LINER.
6. FEATURE IS NOT INTENDED FOR USE WITH NET MATERIAL THAT WILL BE DRAWING AND/OR SPREADING OUT ON THE POLY LINER OR FOR DEMOLITION MATERIALS.
7. THIS FEATURE CAN BE USED FOR:
  - SAFETY CHANGES
  - WHEN OTHER STAGING LOCATIONS AND OPTIONS ARE LIMITED
  - OTHER LIMITED APPLICATION AND SHORT DURATION STAGING

**MM-2 Stockpile Management (SM)**

**MATERIALS STAGING IN ROADWAYS MAINTENANCE NOTES**

1. INSPECT BMPs EACH MONTH 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. INSPECT PVC PIPE ALONG CURB LINE FOR CLOGGING AND DEBRIS. REMOVE OBSTRUCTIONS PROMPTLY.
5. CLEAN MATERIAL FROM PAVED SURFACES BY SWEEPING OR VACUATING.

(DETAILS ADAPTED FROM PAGES 100-101, NOT AVAILABLE IN AUTO)

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

**Good Housekeeping Practices (GH) MM-3**

**Description**

Implement construction site good housekeeping practices to prevent pollution associated with solid, liquid and hazardous construction-related materials and wastes. Stormwater Management Plans (SWMPs) should clearly specify BMPs including these good housekeeping practices:

- Provide for waste management.
- Establish proper building material staging areas.
- Designate paint and concrete washout areas.
- Establish proper equipment/vehicle fueling and maintenance practices.
- Control equipment/vehicle washing and allowable non-stormwater discharges.
- Develop a spill prevention and response plan.

**Acknowledgement:** This Fact Sheet is based directly on EPA guidance provided in *Developing Your Stormwater Pollution Prevention Plan* (EPA 2007).

**Appropriate Uses**

Good housekeeping practices are necessary at all construction sites.

**Design and Installation**

The following principles and actions should be addressed in SWMPs:

- **Provide for Waste Management.** Implement management procedures and practices to prevent or reduce the exposure and transport of pollutants in stormwater from solid, liquid and sanitary wastes that will be generated at the site. Practices such as trash disposal, recycling, proper material handling, and cleanup measures can reduce the potential for stormwater runoff to pick up construction site wastes and discharge them to surface waters. Implement a comprehensive set of waste-management practices for hazardous or toxic materials, such as paints, solvents, petroleum products, pesticides, wood preservatives, acids, roofing tar, and other materials. Practices should include storage, handling, inventory, and cleanup procedures, in case of spills. Specific practices that should be considered include:
 

Good Housekeeping	
Function	
Erosion Control	No
Sediment Control	No
Site/Material Management	Yes
- **Solid or Construction Waste**
  - o Designate trash and bulk waste-collection areas on-site.



Photographs GH-1 and GH-2. Proper material staging and secondary containment for fuel tanks are important good housekeeping practices. Photos courtesy of CDOT and City of Aurora.

**MM-3 Good Housekeeping Practices (GH)**

- o Recycle materials whenever possible (e.g., paper, wood, concrete, oil).
- o Segregate and provide proper disposal options for hazardous material wastes.
- o Clean up litter and debris from the construction site daily.
- o Locate waste-collection areas away from streets, gutters, watercourses, and storm drains. Waste-collection areas (dumpsters, and such) are often best located near construction site entrances to minimize traffic on disturbed soils. Consider secondary containment around waste collection areas to minimize the likelihood of contaminated discharges.
- o Empty waste containers before they are full and overflowing.

**Sanitary and Septic Waste**

- o Provide convenient, well-maintained, and properly located toilet facilities on-site.
- o Locate toilet facilities away from storm drain inlets and waterways to prevent accidental spills and contamination of stormwater.
- o Maintain clean restroom facilities and empty portable toilets regularly.
- o Where possible, provide secondary containment pans under portable toilets.
- o Provide tie-downs or stake-downs for portable toilets.
- o Educate employees, subcontractors, and suppliers on locations of facilities.
- o Treat or dispose of sanitary and septic waste in accordance with state or local regulations. Do not discharge or bury wastewater at the construction site.
- o Inspect facilities for leaks. If found, repair or replace immediately.
- o Special care is necessary during maintenance (pump out) to ensure that waste and/or biocide are not spilled on the ground.

**Hazardous Materials and Wastes**

- o Develop and implement employee and subcontractor education, as needed, on hazardous and toxic waste handling, storage, disposal, and cleanup.
- o Designate hazardous waste-collection areas on-site.
- o Place all hazardous and toxic material wastes in secondary containment.



Photograph GH-3. Locate portable toilet facilities on level surfaces away from waterways and storm drains. Photo courtesy of WVE.

**Good Housekeeping Practices (GH) MM-3**

- o Hazardous waste containers should be inspected to ensure that all containers are labeled properly and that no leaks are present.
- **Establish Proper Building Material Handling and Staging Areas.** The SWMP should include comprehensive handling and management procedures for building materials, especially those that are hazardous or toxic. Paints, solvents, pesticides, fuels and oils, other hazardous materials or building materials that have the potential to contaminate stormwater should be stored indoors or under cover whenever possible or in areas with secondary containment. Secondary containment measures prevent a spill from spreading across the site and may include dikes, berms, curbing, or other containment methods. Secondary containment techniques should also ensure the protection of groundwater. Designate staging areas for activities such as fueling vehicles, mixing paints, plaster, mortar, and other potential pollutants. Designated staging areas enable easier monitoring of the use of materials and clean up of spills. Training employees and subcontractors is essential to the success of this pollution prevention principle. Consider the following specific materials handling and staging practices:
  - o Train employees and subcontractors in proper handling and storage practices.
  - o Clearly designate site areas for staging and storage with signs and on construction drawings. Staging areas should be located in areas central to the construction site. Segment the staging area into sub-areas designated for vehicles, equipment, or stockpiles. Construction entrances and exits should be clearly marked so that delivery vehicles enter/exit through stabilized areas with vehicle tracking controls (See Vehicle Tracking Control Fact Sheet).
  - o Provide storage in accordance with Spill Protection, Control and Countermeasures (SPCC) requirements and plans and provide cover and impermeable perimeter control, as necessary, for hazardous materials and contaminated soils that must be stored on site.
  - o Ensure that storage containers are regularly inspected for leaks, corrosion, support or foundation failure, or other signs of deterioration and tested for soundness.
  - o Reuse and recycle construction materials when possible.
- **Designate Concrete Washout Areas.** Concrete contractors should be encouraged to use the washout facilities at their own plants or dispatch facilities when feasible; however, concrete washout commonly occurs on construction sites. If it is necessary to provide for concrete washout areas on-site, designate specific washout areas and design facilities to handle anticipated washout water. Washout areas should also be provided for paint and stucco operations. Because washout areas can be a source of pollutants from leaks or spills, care must be taken with regard to their placement and proper use. See the Concrete Washout Area Fact Sheet for detailed guidance.

Both self-constructed and prefabricated washout containers can fill up quickly when concrete, paint, and stucco work are occurring on large portions of the site. Be sure to check for evidence that contractors are using the washout areas and not dumping materials onto the ground or into drainage facilities. If the washout areas are not being used regularly, consider posting additional signage, relocating the facilities to more convenient locations, or providing training to workers and contractors.

When concrete, paint, or stucco is part of the construction process, consider these practices which will help prevent contamination of stormwater. Include the locations of these areas and the maintenance and inspection procedures in the SWMP.

**MM-3 Good Housekeeping Practices (GH)**

- o Do not wash concrete trucks or equipment into storm drains, streets, gutters, uncontained areas, or streams. Only use designated washout areas.
- o Establish washout areas and advertise their locations with signs. Ensure that signage remains in good repair.
- o Provide adequate containment for the amount of wash water that will be used.
- o Inspect washout structures daily to detect leaks or tears and to identify when materials need to be removed.
- o Dispose of materials properly. The preferred method is to allow the water to evaporate and to recycle the hardened concrete. Full service companies may provide dewatering services and should dispose of wastewater properly. Concrete wash water can be highly polluted. It should not be discharged to any surface water, storm sewer system, or allowed to infiltrate into the ground in the vicinity of waterbodies. Washwater should not be discharged to a sanitary sewer system without first receiving written permission from the system operator.
- **Establish Proper Equipment/Vehicle Fueling and Maintenance Practices.** Create a clearly designated on-site fueling and maintenance area that is clean and dry. The on-site fueling area should have a spill kit, and staff should know how to use it. If possible, conduct vehicle fueling and maintenance activities in a covered area. Consider the following practices to help prevent the discharge of pollutants to stormwater from equipment/vehicle fueling and maintenance. Include the locations of designated fueling and maintenance areas and inspection and maintenance procedures in the SWMP.
  - o Train employees and subcontractors in proper fueling procedures (stay with vehicles during fueling, proper use of pumps, emergency shutoff valves, etc.).
  - o Inspect on-site vehicles and equipment regularly for leaks, equipment damage, and other service problems.
  - o Clearly designate vehicle/equipment service areas away from drainage facilities and watercourses to prevent stormwater run-on and runoff.
  - o Use drip pans, drip cloths, or absorbent pads when replacing spent fluids.
  - o Collect all spent fluids, store in appropriate labeled containers in the proper storage areas, and recycle fluids whenever possible.
- **Equipment/Vehicle Washing and Allowable Non-Stormwater Discharges.** Implement practices to prevent contamination of surface and groundwater from equipment and vehicle wash water. Representative practices include:
  - o Educate employees and subcontractors on proper washing procedures.
  - o Use off-site washing facilities, when available.
  - o Clearly mark the washing areas and inform workers that all washing must occur in this area.
  - o Contain wash water and treat it using BMPs. Infiltrate washwater when possible, but maintain separation from drainage pans and waterbodies.

**Good Housekeeping Practices (GH) MM-3**

- o Use high-pressure water spray at vehicle washing facilities without detergents. Water alone can remove most dirt adequately.
- o Do not conduct other activities, such as vehicle repairs, in the wash area.
- o Include the location of the washing facilities and the inspection and maintenance procedures in the SWMP.
- **Develop a Spill Prevention and Response Plan.** Spill prevention and response procedures must be identified in the SWMP. Representative procedures include identifying ways to reduce the chance of spills, stop the source of spills, contain and clean up spills, dispose of materials contaminated by spills, and train personnel responsible for spill prevention and response. The plan should also specify material handling procedures and storage requirements and ensure that clear and concise spill cleanup procedures are provided and posted for areas in which spills may potentially occur. When developing a spill prevention plan, include the following:
  - o Note the locations of chemical storage areas, storm drains, tributary drainage areas, surface waterbodies on or near the site, and measures to stop spills from leaving the site.
  - o Provide proper handling and safety procedures for each type of waste. Keep Material Safety Data Sheets (MSDSs) for chemical used on site with the SWMP.
  - o Establish an education program for employees and subcontractors on the potential hazards to humans and the environment from spills and leaks.
  - o Specify how to notify appropriate authorities, such as police and fire departments, hospitals, or municipal sewage treatment facilities to request assistance. Emergency procedures and contact numbers should be provided in the SWMP and posted at storage locations.
  - o Describe the procedures, equipment and materials for immediate cleanup of spills and proper disposal.
  - o Identify personnel responsible for implementing the plan in the event of a spill. Update the spill prevention plan and clean up materials as changes occur to the types of chemicals stored and used at the facility.

**MM-3 Good Housekeeping Practices (GH)**

**Spill Prevention, Control, and Countermeasure (SPCC) Plan**

Construction sites may be subject to 40 CFR Part 112 regulations that require the preparation and implementation of a SPCC Plan to prevent oil spills from aboveground and underground storage tanks. The facility is subject to this rule if it is a non-transportation-related facility that:

- Has a total storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons.
- Could reasonably be expected to discharge oil in quantities that may be harmful to navigable waters of the United States and adjoining shorelines.

Furthermore, if the facility is subject to 40 CFR Part 112, the SWMP should reference the SPCC Plan. To find out more about SPCC Plans, see EPA's website on SPCC at [www.epa.gov/spillspcc](http://www.epa.gov/spillspcc).

**Reporting Oil Spills**

In the event of an oil spill, contact the National Response Center toll free at 1-800-424-8802 for assistance, or for more details, visit their website: [www.nrc.usg.gov](http://www.nrc.usg.gov).

**Maintenance and Removal**

Effective implementation of good housekeeping practices is dependent on clear designation of personnel responsible for supervising and implementing good housekeeping programs, such as site cleanup and disposal of trash and debris, hazardous material management and disposal, vehicle and equipment maintenance, and other practices. Emergency response "drills" may aid in emergency preparedness. Checklists may be helpful in good housekeeping efforts.

Staging and storage areas require permanent stabilization when the areas are no longer being used for construction-related activities.

Construction-related materials, debris and waste must be removed from the construction site once construction is complete.

**Design Details**

See the following Fact Sheets for related Design Details:

- MM-1 Concrete Washout Area
- MM-2 Stockpile Management
- SM-4 Vehicle Tracking Control

Design details are not necessary for other good housekeeping practices; however, be sure to designate where specific practices will occur on the appropriate construction drawings.

NO.	REVISION	DATE	APPR.

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DESIGNED BY: KRK  
DRAWN BY: AUL  
CHECKED BY: KRK  
DATE: 12/04/2023

OVERLOOK AT HOMESTEAD FILING NO. 1  
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PROJECT NO.  
196239003

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EC-12 Check Dams (CD)

CHECK DAM INSTALLATION NOTES

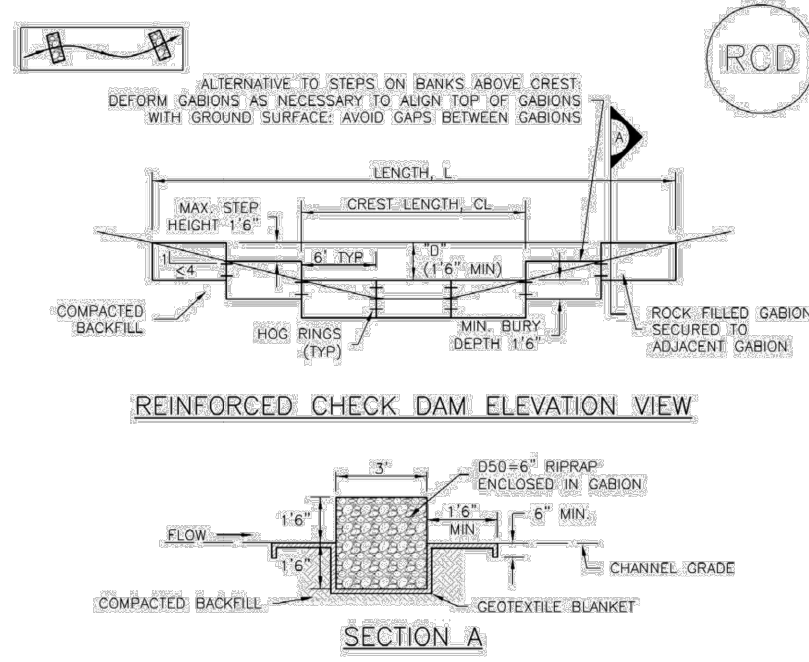
- 1. SEE PLAN VIEW FOR LOCATION OF CHECK DAMS. CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM), LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).
2. CHECK DAMS INDICATED ON INITIAL SWMP SHALL BE INSTALLED AFTER CONSTRUCTION TENDS BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.
3. RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE 'M' (D50 12") OR TYPE 'L' (D20 8").
4. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'.
5. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN THE CENTER OF THE CHECK DAM.

CHECK DAM 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. SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
5. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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

Check Dams (CD) EC-12



REINFORCED CHECK DAM ELEVATION VIEW

SECTION A

REINFORCED CHECK DAM INSTALLATION NOTES

- 1. SEE PLAN VIEW FOR LOCATION OF CHECK DAMS. CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM), LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).
2. CHECK DAMS INDICATED ON THE SWMP SHALL BE INSTALLED PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
3. REINFORCED CHECK DAMS, GABIONS SHALL HAVE GALVANIZED TWISTED WIRE NETTING WITH A MAXIMUM OPENING DIMENSION OF 40" AND A MINIMUM WIRE THICKNESS OF 0.165". "WOOD RINGS" AT 4' SPACING OR OTHER APPROVED MEANS SHALL BE USED AT ALL GABION SEAMS AND TO SECURE THE GABION TO THE ADJACENT SECTION.
4. THE CHECK DAM SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1' 6".
5. GEOTEXTILE BLANKET SHALL BE PLACED IN THE REINFORCED CHECK DAM TRENCH EXTENDING A MINIMUM OF 1' 6" ON BOTH THE UPSTREAM AND DOWNSTREAM SIDES OF THE REINFORCED CHECK DAM.

CD-2, REINFORCED CHECK DAM

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

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CD-5

EC-12 Check Dams (CD)

REINFORCED CHECK DAM 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. SEDIMENT ACCUMULATED UPSTREAM OF REINFORCED CHECK DAMS SHALL BE REMOVED AS NEEDED TO MAINTAIN THE EFFECTIVENESS OF BMPs TYPICALLY WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
5. REPAIR OR REPLACE REINFORCED CHECK DAMS WHEN THERE ARE SIGNS OF DAMAGE SUCH AS HOLES IN THE GABION OR UNDERSHOOTING.
6. REINFORCED CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN REINFORCED CHECK DAMS ARE REMOVED, ALL DISTURBED AREAS SHALL BE SEDED AND MULCHED AND COVERED WITH A GEOTEXTILE BLANKET OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

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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.

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:
- Downs 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 linear 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.



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

Table with 2 columns: Functions, and 2 rows: Erosion Control, Sediment Control. Values: Erosion Control: No, Sediment Control: Yes.

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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.

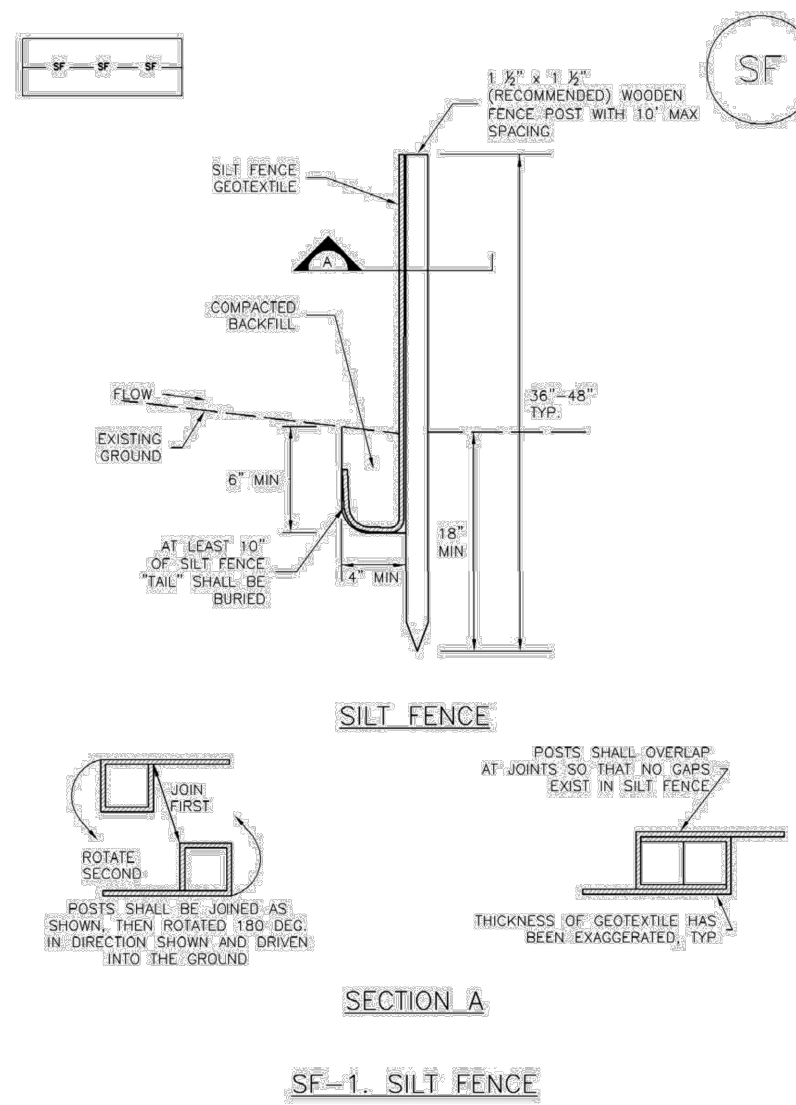
Silt fence may be removed when the upstream area has reached final stabilization.



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 Owe.

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

Silt Fence (SF) SC-1



SECTION A

SF-1, SILT FENCE

SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

- 1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PENETRATION. EDGE OF SILT FENCE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST 5 FEET (1.5 M) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DETENTION.
2. A UNIFORM 6" X 6" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE, NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. 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.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTCHES AND BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. 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.
6. 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 5' SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE. (TYPICALLY 10' IS 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

SILT 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. 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".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. 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.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

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Sediment Control Log (SCL) SC-2

Description

A sediment control log is a linear roll made of natural materials such as straw, coconut fiber, or compost. The most common type of sediment control log has straw filling and is often referred to as a "straw wattle." All sediment control logs are used as a sediment barrier to intercept sheet flow runoff from disturbed areas.

Appropriate Uses

- Sediment control logs can be used in the following applications to trap sediment:
- As perimeter control for stockpiles and the site.
- As part of inlet protection designs.
- As check dams in small drainage ditches. (Sediment control logs are not intended for use in channels with high flow velocities.)
- On disturbed slopes to shorten flow lengths (as an erosion control).
- As part of multi-layered perimeter control along a receiving water such as a stream, pond or wetland.

Sediment control logs work well in combination with other layers of erosion and sediment controls.

Design and Installation

Sediment control logs should be installed along the contour to avoid concentrating flows. The maximum allowable tributary drainage area per 100 linear feet of sediment control log, 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 sediment control logs installed along the contour. When installed for other uses, such as perimeter control, it 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 BMP.

Table with 2 columns: Functions, and 2 rows: Erosion Control, Sediment Control. Values: Erosion Control: Moderate, Sediment Control: Yes.



Photographs SCL-1 and SCL-2. Sediment control logs used as 1) a perimeter control around a stockpile and, 2) as a "J-hook" perimeter control at the corner of a construction site.

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SC-2 Sediment Control Log (SCL)

Although sediment control logs initially allow runoff to flow through the BMP, they can quickly become a barrier and should be installed as if they are impermeable.

Design details and notes for sediment control logs are provided in the following details. Sediment logs must be properly installed per the detail to prevent undercutting, bypassing and displacement. When installed on slopes, sediment control logs should be installed along the contours (i.e., perpendicular to flow).

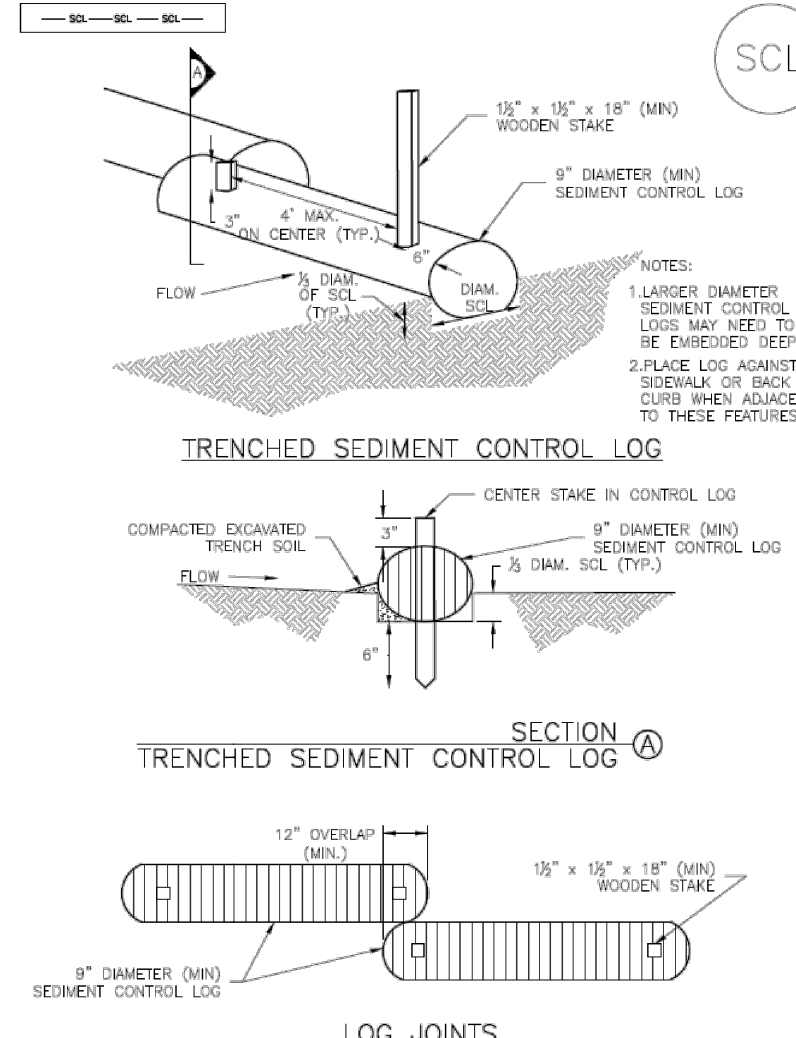
Proper installation can lead to poor performance. Be sure that sediment control logs are properly trenched (if higher than 6 feet high), anchored and tightly joined.

Maintenance and Removal

Be aware that sediment control logs will eventually degrade. Remove accumulated sediment before the depth is one-half the height of the sediment log and repair damage to the sediment log, typically by replacing the damaged section.

Once the upstream area is stabilized, remove and properly dispose of the logs. Areas disturbed beneath the logs may need to be seeded and mulched. Sediment control logs that are biodegradable may occasionally be left in place (e.g., when logs are used in conjunction with erosion control blankets as permanent slope breaks). However, removal of sediment control logs after final stabilization is typically appropriate when used in perimeter control, inlet protection and check dam applications. Compost from compost sediment control logs may be spread over the area and seeded as long as this does not cover newly established vegetation.

SC-2 Sediment Control Log (SCL)



TRENCHED SEDIMENT CONTROL LOG

SECTION A

LOG JOINTS

SCL-1, TRENCHED SEDIMENT CONTROL LOG

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OVERLOOK AT HOMESTEAD FILING NO. 1 EL PASO COUNTY, COLORADO PRE DEVELOPMENT GESC PLAN

PRELIMINARY FOR REVIEW ONLY NOT FOR CONSTRUCTION Kimley-Horn and Associates, Inc.

PROJECT NO. 196239003 SHEET

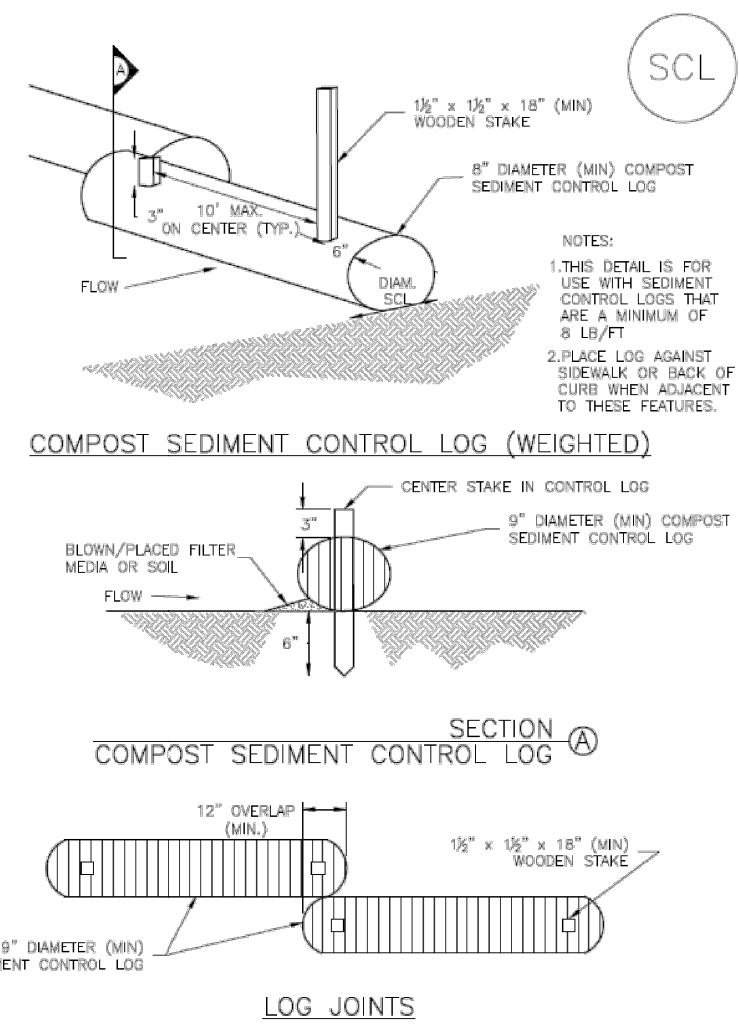
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Table with columns: NO., REVISION, DATE, APPR.

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DESIGNED BY: KRK DRAWN BY: AUL CHECKED BY: KRK DATE: 12/04/2023

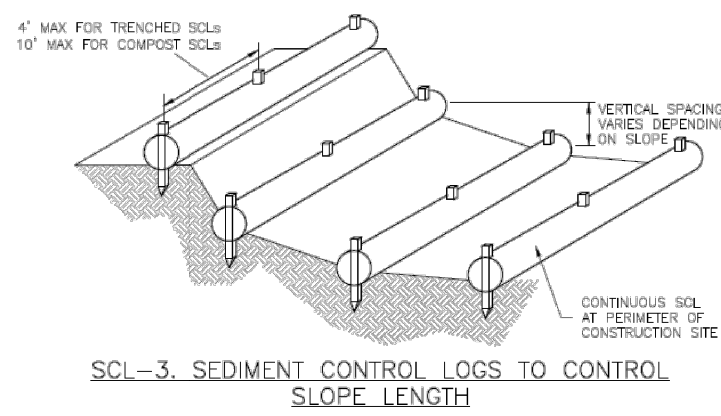
SC-2 Sediment Control Log (SCL)



SCL-2 COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

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Sediment Control Log (SCL) SC-2



SCL-3 SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

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SC-2 Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

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

SEDIMENT CONTROL LOG MAINTENANCE NOTES

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. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION/COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDS, AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF FRANK, COLORADO, PUEBLO COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)  
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM IUPED STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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Inlet Protection (IP) SC-6

Description

Inlet protection consists of permeable barriers installed around an inlet to filter runoff and remove sediment prior to entering a storm drain inlet. Inlet protection can be constructed from rock socks, sediment control logs, silt fences, block and rock socks, or other materials approved by the local jurisdiction. Area inlets can also be protected by over-excavating around the inlet to form a sediment trap.



Photograph IP-4. Inlet protection for a curb opening inlet.

Appropriate Uses

Install protection at storm sewer inlets that are operable during construction. Consider the potential for tracked-out sediment or temporary stockpile areas to contribute sediment to inlets when determining which inlet protection is most appropriate. When selecting the type of inlet protection, consider factors such as type of inlet (e.g., curb or area, sump or on-grade conditions), traffic, anticipated flows, ability to secure the BMP properly, safety and other site-specific conditions. For example, block and rock socks will be better suited to a curb and gutter along a roadway, as opposed to silt fence or sediment control logs, which cannot be properly secured in a curb and gutter setting, but are effective area inlet protection measures.

Design and Installation

To function effectively, inlet protection measures must be installed to ensure that flows do not bypass the inlet protection and enter the storm drain without treatment. However, designs must also enable the inlet to function without completely blocking flows into the inlet in a manner that causes localized flooding. When selecting the type of inlet protection, consider factors such as type of inlet (e.g., curb or area, sump or on-grade conditions), traffic, anticipated flows, ability to secure the BMP properly, safety and other site-specific conditions. For example, block and rock socks will be better suited to a curb and gutter along a roadway, as opposed to silt fence or sediment control logs, which cannot be properly secured in a curb and gutter setting, but are effective area inlet protection measures.

Several inlet protection designs are provided in the Design Details. Additionally, a variety of proprietary products are available for inlet protection that may be approved for use by local governments. If proprietary products are used, design details and installation procedures from the manufacturer must be followed. Regardless of the type of inlet protection selected, inlet protection is most effective when combined with other BMPs such as curb socks and check dams. Inlet protection is often the last barrier before runoff enters the storm sewer or receiving water.

Inlet Protection (various forms)	
Functions	
Erosion Control	No
Sediment Control	Yes
Site/Material Management	No

- Design details with notes are provided for these forms of inlet protection:
- IP-1. Block and Rock Sock Inlet Protection for Sump or On-grade Inlets
  - IP-2. Curb (Rock) Socks Upstream of Inlet Protection, On-grade Inlets

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SC-6 Inlet Protection (IP)

- IP-3. Rock Sock Inlet Protection for Sump/Area Inlet
- IP-4. Silt Fence Inlet Protection for Sump/Area Inlet
- IP-5. Over-excavation Inlet Protection
- IP-6. Straw Bale Inlet Protection for Sump/Area Inlet
- CIP-1. Culvert Inlet Protection

Proprietary inlet protection devices should be installed in accordance with manufacturer specifications. More information is provided below on selecting inlet protection for sump and on-grade locations.

Inlets Located in a Sump

When applying inlet protection in sump conditions, it is important that the inlet continue to function during larger runoff events. For curb inlets, the maximum height of the protective barrier should be lower than the top of the curb opening to allow overflow into the inlet during larger storms without excessive localized flooding. If the inlet protection height is greater than the curb elevation, particularly if the filter becomes clogged with sediment, runoff will not enter the inlet and may bypass it, possibly causing localized flooding, public safety issues, and downstream erosion and damage from bypassed flows.

Area inlets located in a sump setting can be protected through the use of silt fence, concrete block and rock socks (on paved surfaces), sediment control logs/straw wattles embedded in the adjacent soil and stacked around the area inlet (on pervious surfaces), over-excavation around the inlet, and proprietary products providing equivalent functions.

Inlets Located on a Slope

For curb and gutter inlets on paved sloping streets, block and rock sock inlet protection is recommended in conjunction with curb socks in the gutter leading to the inlet. For inlets located along unpaved roads, also see the Check Dam Fact Sheet.

Maintenance and Removal

- Inlet protection frequency. Inspection and maintenance guidance includes:
- Inspect for tears that can result in sediment directly entering the inlet, as well as result in the contents of the BMP (e.g., gravel) washing into the inlet.
  - Check for improper installation resulting in untreated flows bypassing the BMP and directly entering the inlet or bypassing to an unprotected downstream inlet. For example, silt fence that has not been properly trenched around the inlet can result in flows under the silt fence and directly into the inlet.
  - Look for displaced BMPs that are no longer protecting the inlet. Displacement may occur following larger storm events that wash away or reposition the inlet protection. Traffic or equipment may also crush or displace the BMP.
  - Monitor sediment accumulation upstream of the inlet protection.

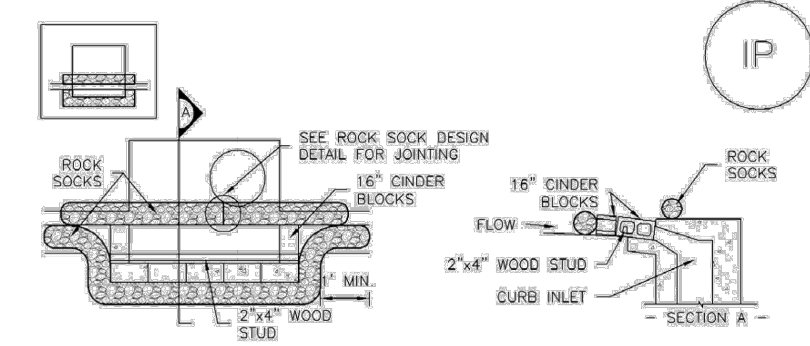
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Inlet Protection (IP) SC-6

- Remove sediment accumulation from the area upstream of the inlet protection, as needed to maintain BMP effectiveness, typically when it reaches no more than half the storage capacity of the inlet protection. For silt fence, remove sediment when it accumulates to a depth of no more than 6 inches. Remove sediment accumulation from the area upstream of the inlet protection as needed to maintain the functionality of the BMP.
  - Proprietary inlet protection devices should be inspected and maintained in accordance with manufacturer specifications. If proprietary inlet devices are used, sediment should be removed in a timely manner to prevent devices from breaking and spilling sediment into the storm drain.
- Inlet protection must be removed and properly disposed of when the drainage area for the inlet has reached final stabilization.

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SC-6 Inlet Protection (IP)



IP-1. BLOCK AND ROCK SOCK SUMP OR ON-GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "TONGUE" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ADDITION ONE ANCHOR WITH THE OPEN END FACING AWAY FROM THE CURB.
3. CURB SOCKS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ADJUTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



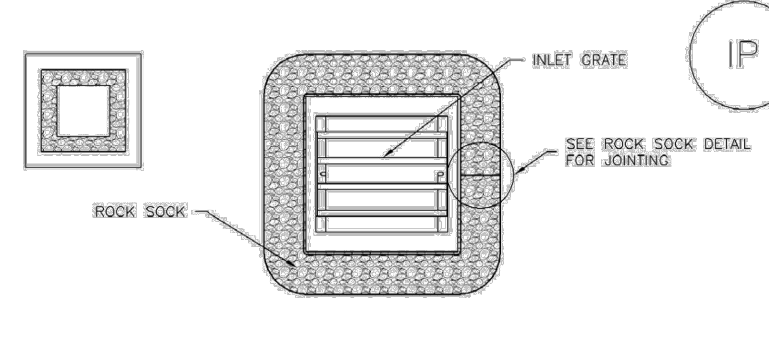
IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 3 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

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Inlet Protection (IP) SC-6



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



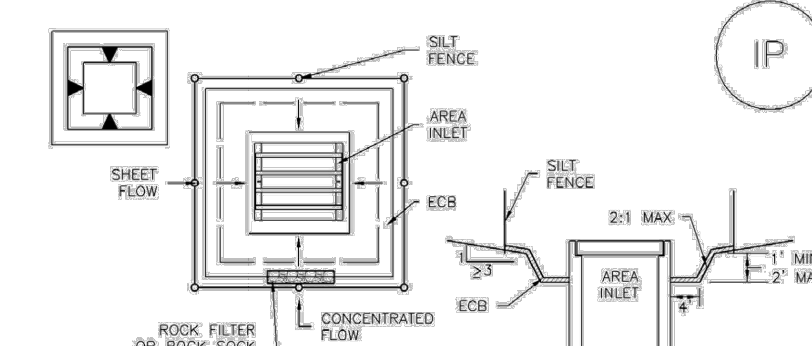
IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

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SC-6 Inlet Protection (IP)



IP-5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES

1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.
2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.
3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.



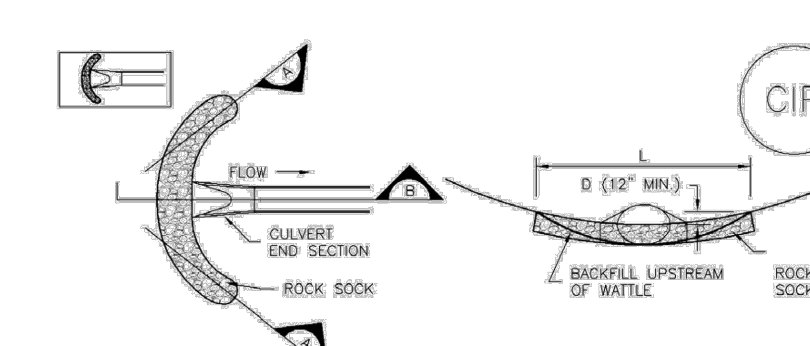
IP-6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ADJUTING ONE ANOTHER.

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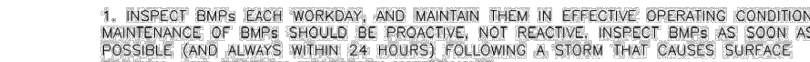
Inlet Protection (IP) SC-6



CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR "LOCATION OF CULVERT INLET PROTECTION."
2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK SOCK DESIGN REQUIREMENTS AND JOINING DETAIL.



CULVERT INLET PROTECTION 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. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1/2 THE HEIGHT OF THE ROCK SOCK.
5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

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Kimley-Horn & Associates, Inc.

PROJECT NO.  
196239003  
SHEET

1.19

NO.	REVISION	BY	DATE	APPR.

**Kimley-Horn**  
2023 KIMLEY-HORN AND ASSOCIATES, INC.  
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DATE: 12/04/2023

SC-6 Inlet Protection (IP)

GENERAL INLET PROTECTION INSTALLATION NOTES

- 1. SEE PLAN VIEW FOR...
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER CONSTRUCTION OF BASIN IS COMPLETE...
3. MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS...

INLET PROTECTION MAINTENANCE NOTES

- 1. INSPECT BMPs EACH WORKDAY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION...
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION...
3. 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.

SC-7 Sediment Basin (SB)

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.



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

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.

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

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...
• Basin Geometry: Design basin with a minimum length-to-width ratio of 2:1 (L:W)...
• 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.

Table with 2 columns: Functions, Sediment Basins. Rows include Erosion Control, Sediment Control, Site/Material Management.

SC-7 Sediment Basin (SB)

- Inflow Structure: For concentrated flow entering the basin, provide energy dissipation at the point of inflow.

Table SB-1. Additional Volume Requirements for Undisturbed and Developed Tributary Areas Draining through Sediment Basins

Table with 2 columns: Imperviousness (%), Additional Storage Volume (ft³) Per Acre of Tributary Area. Rows range from Undeveloped to 100%.

- Outlet Works: The outlet pipe shall extend through the embankment at a minimum slope of 0.5 percent.

- Outlet Works (Continued): Detail SB-1 provides a simplified design for basins treating no more than 15 acres...
• Floating Skimmer: If a floating skimmer is used, install it using manufacturer's recommendations.

SC-7 Sediment Basin (SB)

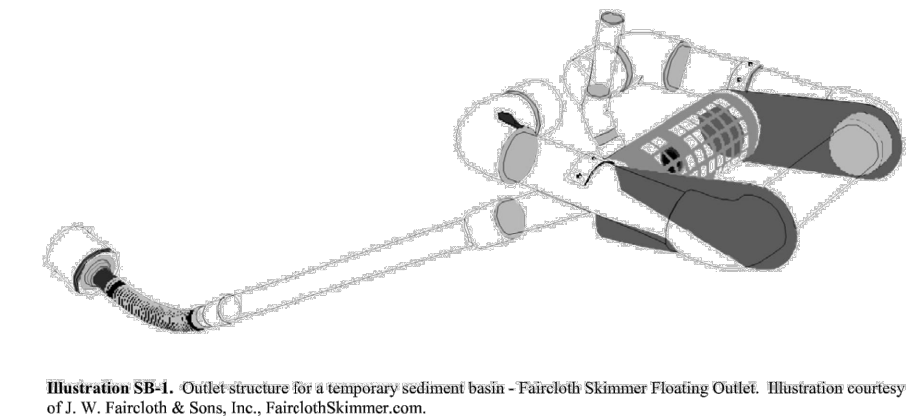


Illustration SB-1. Outlet structure for a temporary sediment basin - Faircloth Skimmer Floating Outlet. Illustration courtesy of J. W. Faircloth & Sons, Inc., FairclothSkimmer.com.

- Outlet Protection and Spillway: Consider all flow paths for runoff leaving the basin, including protection at the typical point of discharge as well as overtopping.

- Outlet Protection: Outlet protection should be provided where the velocity of flow will exceed the maximum permissible velocity...
• Emergency Spillway: Provide a stabilized emergency overflow spillway for rainstorms that exceed the capacity of the sediment basin volume and its outlet.

SC-7 Sediment Basin (SB)

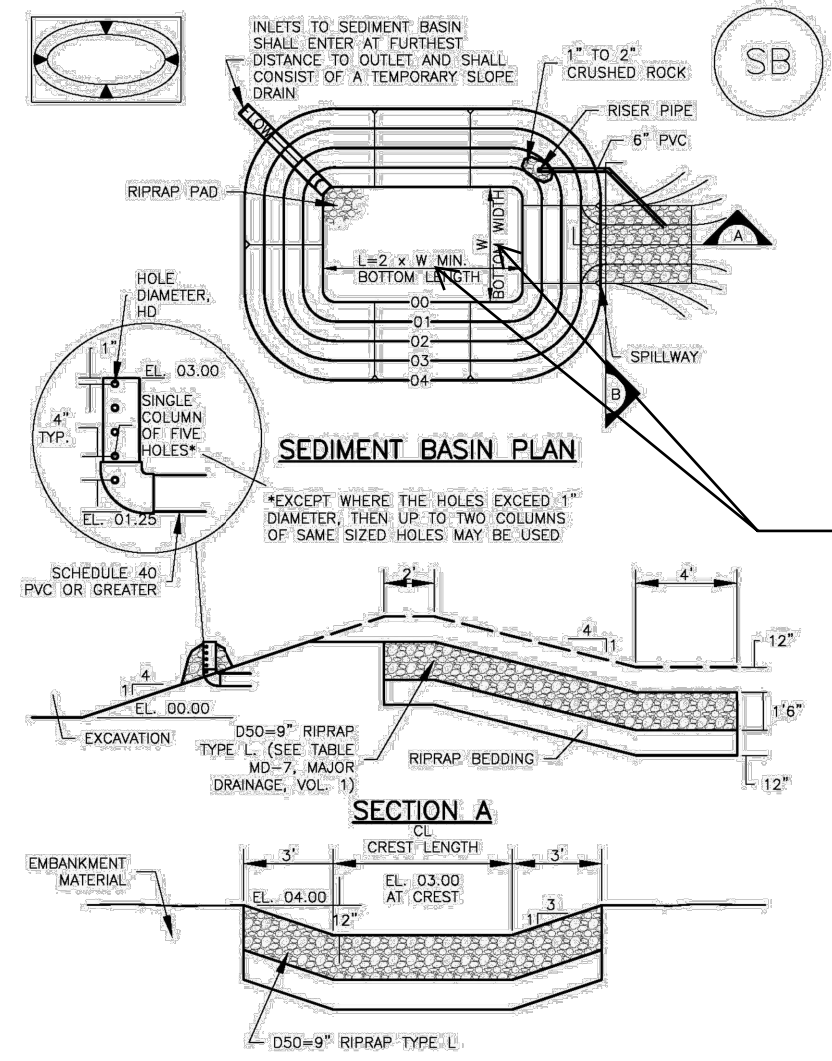
Maintenance and Removal

Maintenance activities include the following:

- Dredge sediment from the basin, as needed to maintain BMP effectiveness...
• Inspect the sediment basin embankments for stability and seepage...
• 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.

SC-7 Sediment Basin (SB)



Provide site specific dimensions and details for the TSBs on site. None of the TSBs will fit within the limits of Table SB-1 regarding upstream drainage area...

Table SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN. Columns: Upstream Drainage Area, Basin Bottom Width, Spillway Crest Length, Hole Diameter.

SEDIMENT BASIN INSTALLATION NOTES

- 1. SEE PLAN VIEW FOR...
2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE ADJUSTED AS LONG AS BOTTOM AREA IS NOT REDUCED...
3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY...
4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES IN SIZE...

SC-7 Sediment Basin (SB)

SEDIMENT BASIN MAINTENANCE NOTES

- 1. INSPECT BMPs EACH WORKDAY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION...
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3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE...

Revision table with columns: NO., REVISION, DATE, APPR.

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DESIGNED BY: KRK
DRAWN BY: A.JL
CHECKED BY: KRK
DATE: 12/04/2023

OVERLOOK AT HOMESTEAD FILING NO. 1
EL PASO COUNTY, COLORADO
PRE DEVELOPMENT GESC PLAN

PRELIMINARY FOR REVIEW ONLY NOT FOR CONSTRUCTION Kimley-Horn logo

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