

**THE COTTAGES AT MESA RIDGE**  
**CONSTRUCTION DRAWING**  
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LEGAL DESCRIPTION:

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 28 AND THE NORTHEAST QUARTER OF SECTION 29, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 29, MONUMENTED AT THE WEST END WITH A 3.25" ALUMINUM CAP IN CONCRETE STAMPED "PLS 4842" AND MONUMENTED AT THE EAST END WITH A #6 REBAR AND 3.25" ALUMINUM CAP STAMPED "PLS 38141" AND ASSUMED TO BEAR S 89°57'13" E A FIELD MEASURED DISTANCE OF 2,652.37 FEET.

BENCHMARK: ELEVATIONS ARE BASED UPON THE FOUNTAIN SANITATION DISTRICT POINT N-1, BEING A 2" BRASS CAP IN CONCRETE AT THE NORTHEAST CORNER OF MESA RIDGE PARKWAY AND FOUNTAIN MESA ROAD. (ELEVATION=5750.57 NGVD 29).

BEGINNING AT THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 28; THENCE N 89°41'59" E ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 117.50 FEET TO A POINT ON THE WEST LINE OF POWERS BOULEVARD AS RECORDED UNDER BOOK 6788 AT PAGE 531 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDERS OFFICE; THENCE ALONG THE WEST LINE OF SAID POWERS BOULEVARD, 933.14 FEET ALONG THE ARC OF A 1,096.98 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 48°44'17" AND A CHORD THAT BEARS S 12°56'23" W, 905.26 FEET TO A POINT ON THE NORTHERLY LINE OF THAT PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290 OF SAID RECORDS;

THENCE OF THE FOLLOWING EIGHT (8) COURSES ALONG SAID NORTHERLY LINES AND EASTERLY LINES OF SAID PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290:

- 1) N 84°16'00" W, A DISTANCE OF 198.99 FEET;
- 2) 46.11 FEET ALONG THE ARC OF A 540.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 04°53'33" AND A CHORD THAT BEARS N 86°42'46" W, 46.10 FEET;
- 3) N 89°09'33" W, A DISTANCE OF 124.09 FEET;
- 4) 100.02 FEET ALONG THE ARC OF A 140.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 40°56'07" AND A CHORD THAT BEARS N 68°41'30" W, 97.91 FEET;
- 5) N 48°13'27" W, A DISTANCE OF 126.77 FEET;
- 6) 6.49 FEET ALONG THE ARC OF AN 8.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 46°29'23" AND A CHORD THAT BEARS N 24°58'45" W, 6.31 FEET;
- 7) N 01°44'04" W, A DISTANCE OF 137.18 FEET;
- 8) 87.71 FEET ALONG THE ARC OF A 135.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 37°13'35" AND A CHORD THAT BEARS N 20°21'02" W, 86.18 FEET TO THE SOUTHWEST CORNER OF LOT 15, BLOCK 3, SUNRISE RIDGE SUBDIVISION FILING NO. 8 AS RECORDED UNDER RECEPTION NO. 1722613 OF SAID RECORDS;

THENCE THE FOLLOWING TWO (2) COURSES ALONG THE EASTERLY LINE OF SAID SUNRISE RIDGE SUBDIVISION FILING NO. 8:

- 1) 511.39 FEET ALONG THE ARC OF A 1,034.60 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 28°19'14" AND A CHORD THAT BEARS N 58°13'41" E, 506.20 FEET TO A POINT OF COMPOUND CURVATURE;
- 2) 283.12 FEET ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 32°26'36" AND A CHORD THAT BEARS N 27°50'47" E, 279.35 FEET TO A POINT ON THE NORTH LINE OF SAID NORTHEAST QUARTER;

THENCE N 89°57'13" E ALONG THE NORTH LINE OF SAID NORTHEAST QUARTER, A DISTANCE OF 115.21 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 445,104 SQUARE FEET (10.218 ACRES) OF LAND, MORE OR LESS.

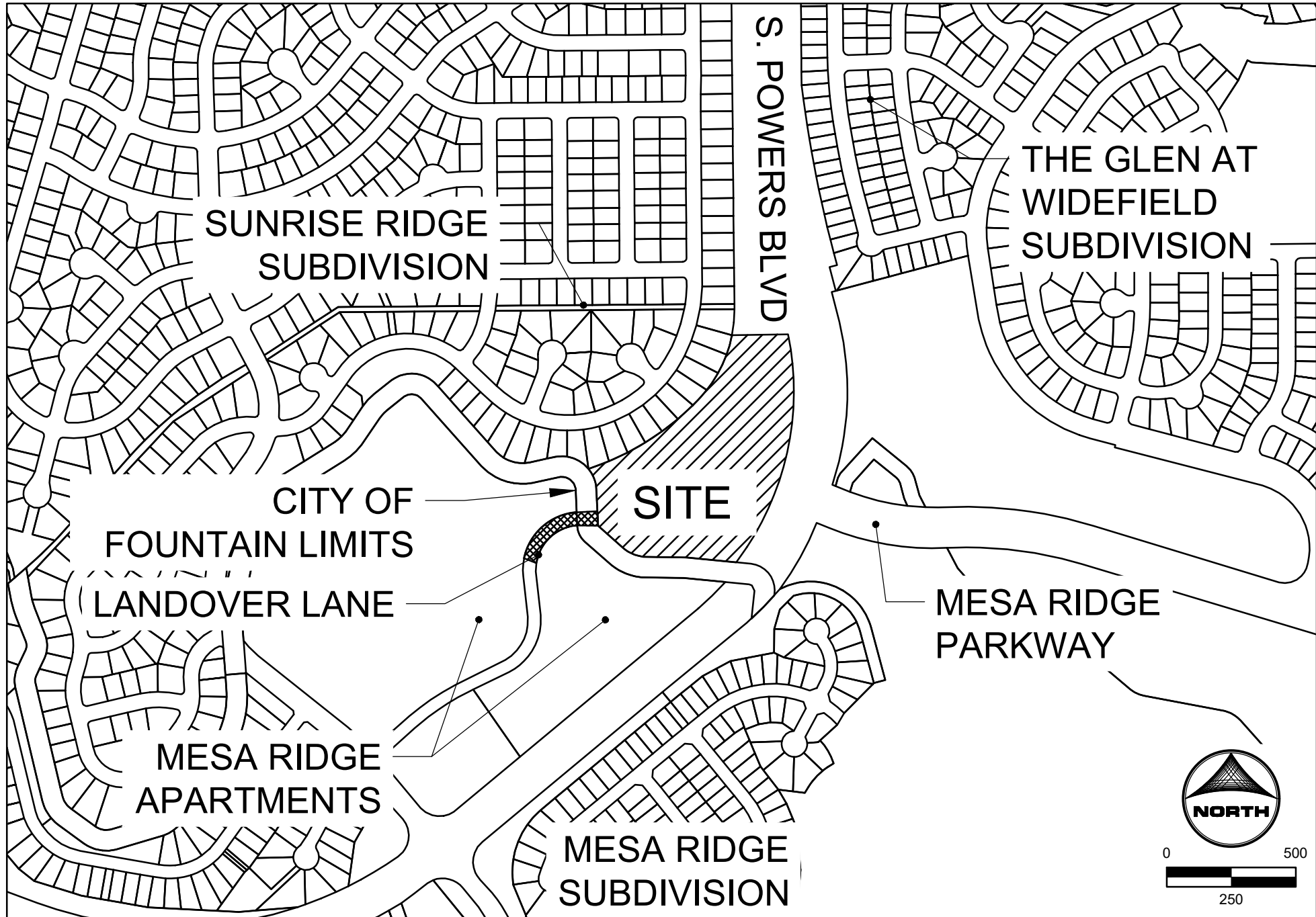
TO BE PLATTED AS "COTTAGES AT MESA RIDGE"

STANDARD NOTES:

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FILED NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC)
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
  - A. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - B. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - C. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - D. CDOT M & S STANDARDS
4. 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. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT (PCD) - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DPW, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

THE COTTAGES AT MESA RIDGE  
EL PASO COUNTY CONSTRUCTION DOCUMENTS  
AND GRADING AND EROSION CONTROL PLANS

A PORTION OF THE NORTHEAST QUARTER OF SECTION 29, THE SOUTHEAST QUARTER OF SECTION 20, THE SOUTHWEST QUARTER OF SECTION 21, & THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO



VICINITY MAP  
SCALE: 1"=500'

LEGEND

	EXISTING	PROPOSED
MATCH LINE		
PHASE LINE		
SECTION LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT-OF-WAY		
CENTERLINE		
CHAIN LINK FENCE		
WOODEN FENCE		
ROD IRON FENCE		
GUARDRAIL		
CABLE TV		
U.G. ELECTRIC		
OVERHEAD ELECTRIC		
FIBER OPTIC		
GAS MAIN		
SANITARY SEWER		
STORM DRAIN		
TELEPHONE		
WATER MAIN		
SWALE		
TRAIL		
CURB & GUTTER		
DRAINAGE BASIN		
INDEX CONTOUR		
INTER. CONTOUR		
100-YR FLOODPLAIN		
FLOODWAY		
EDGE OF WETLANDS		
DRAINAGE		
DRAINAGE BASIN		
DESIGN POINT		
BASIN TAG		
STORM SEWER		
MANHOLE		
STORM INLET		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
CLEAN OUT		
MANHOLE		
PLUG		
WATER		
FIRE HYDRANT		
FIRE DEPT. CONNECTION		
GATE VALVE		
MANHOLE		
METER		
TEE		
REDUCER		
DRY UTILITIES		
ELECTRIC METER		
ELECTRIC PEDESTAL		
ELECTRIC CABINET		
ELECTRIC VAULT		
FIBER OPTIC PULL BOX		
FIBER OPTIC MANHOLE		
FIBER OPTIC PEDESTAL		
FIBER OPTIC SIGN		
FIBER OPTIC VAULT		
GAS METER		
GAS SIGN		
GAS VAULT		
TELEPHONE CABINET		
TELEPHONE MANHOLE		
TELEPHONE SIGNALMAST		
TELEPHONE SIGN		
TELEPHONE PEDESTAL		
TRANSFORMER		
LIGHT POLE		
FIBER OPTIC VAULT		
MISCELLANEOUS		
SIGN		
BOLLARD		
ACCESSIBLE PARKING		

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STAKEHOLDERS:

OWNER:	CSJ NO 1 LLC 111 S. TEJON STREET, SUITE 222 COLORADO SPRINGS, CO 80903
DEVELOPER:	GOODWIN KNIGHT 8605 EXPLORER DRIVE, SUITE 250 COLORADO SPRINGS, CO 80920 DAVE MORRISON
ATTN:	
APPLICANT:	HR GREEN DEVELOPMENT, LLC 1975 RESEARCH PKWY, SUITE 230 COLORADO SPRINGS, CO 80920 PHIL STUEPFERT, KEN HUHN
ATTN:	
SURVEYOR:	BARRON LAND, LLC 2790 N ACADEMY BLVD #311 COLORADO SPRINGS, CO 80917 ATTN: SPENCER BARRON

DEVELOPERS STATEMENT - FOUNTAIN SANITATION DISTRICT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF FOUNTAIN SANITATION DISTRICT REGULATIONS AND STANDARD SPECIFICATIONS. OWNER WILL COMPLY WITH THE CONSTRUCTION DRAWINGS PREPARED BY HIS/HER CIVIL ENGINEER.

DEVELOPER/OWNER SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

NAME OF DEVELOPER/OWNER: \_\_\_\_\_

TITLE: \_\_\_\_\_

PHONE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

FOUNTAIN SANITATION DISTRICT

PLANS ARE RECOMMENDED FOR USE IN CONSTRUCTION OF WASTEWATER COLLECTION SYSTEM FOR THIS PROJECT. DESIGN ENGINEER OF RECORD TAKES SOLE RESPONSIBILITY FOR ALL DESIGN ASPECTS OF THE PROJECT.

JONATHAN MOORE, P.E. DATE  
FOUNTAIN SANITATION DISTRICT - DISTRICT ENGINEER

OWNER'S STATEMENT

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 SIGNATURE DATE

OWNER NAME

ENGINEER'S STATEMENT

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 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.

KENNETH M. HUHN, P.E. DATE  
KHUHN@HRGREEN.COM  
COLORADO P.E. 0054022

PCD FILNE NO.: SF2214

DRAWN BY: CBM JOB DATE: 8/22/2022  
APPROVED: KMH JOB NUMBER: 200541  
CAD DATE: 8/31/2022  
CAD FILE: J:\2020\200541\CAD\DWG\IC\CDIE\El\_Paso\_ColCover

BAR IS ONE INCH ON  
OFFICIAL DRAWINGS.  
0" = 1" IF NOT ONE INCH,  
ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION



HR GREEN - COLORADO SPRINGS  
7222 COMMERCE CENTER DR SUITE 220  
COLORADO SPRINGS CO 80919  
PHONE: 719.300.4140 TOLL FREE: 800.728.7805  
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE  
GOODWIN KNIGHT  
EL PASO COUNTY, COLORADO



EL PASO COUNTY CONSTRUCTION DOCUMENTS  
COVER

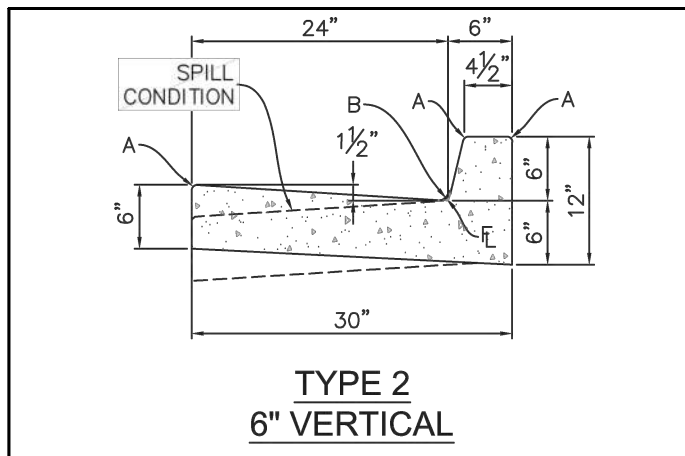
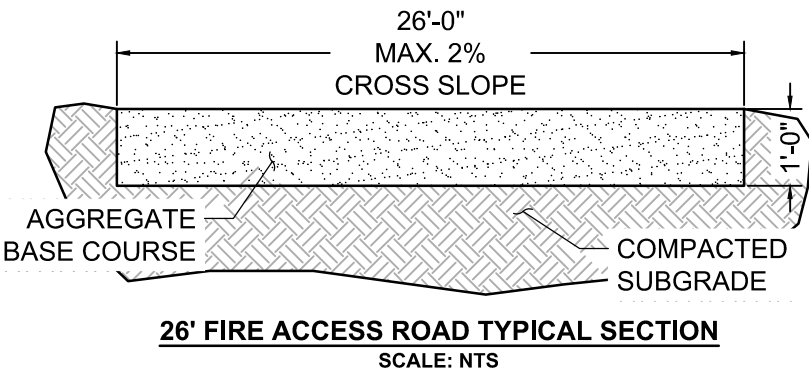
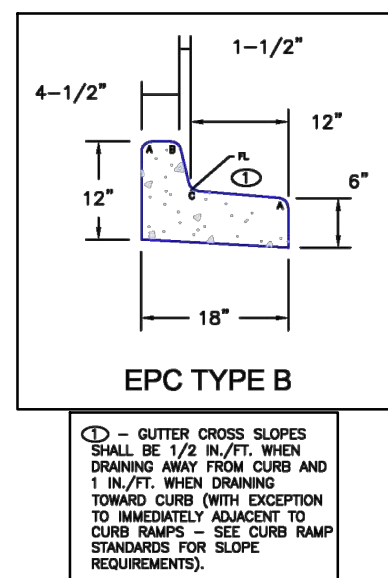
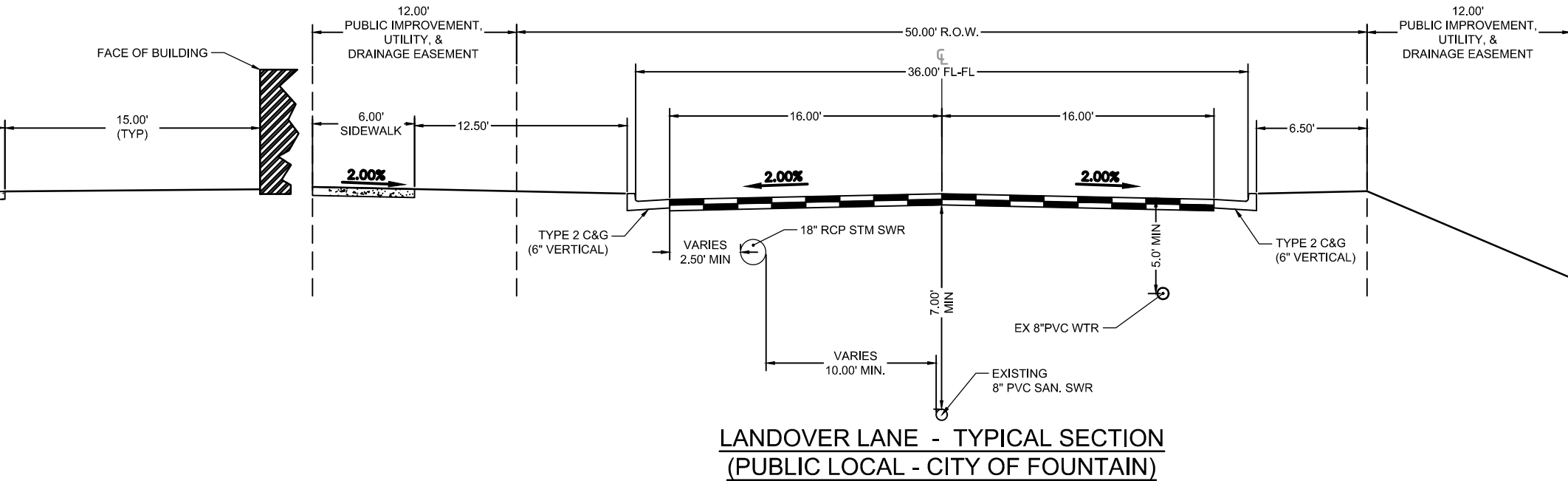
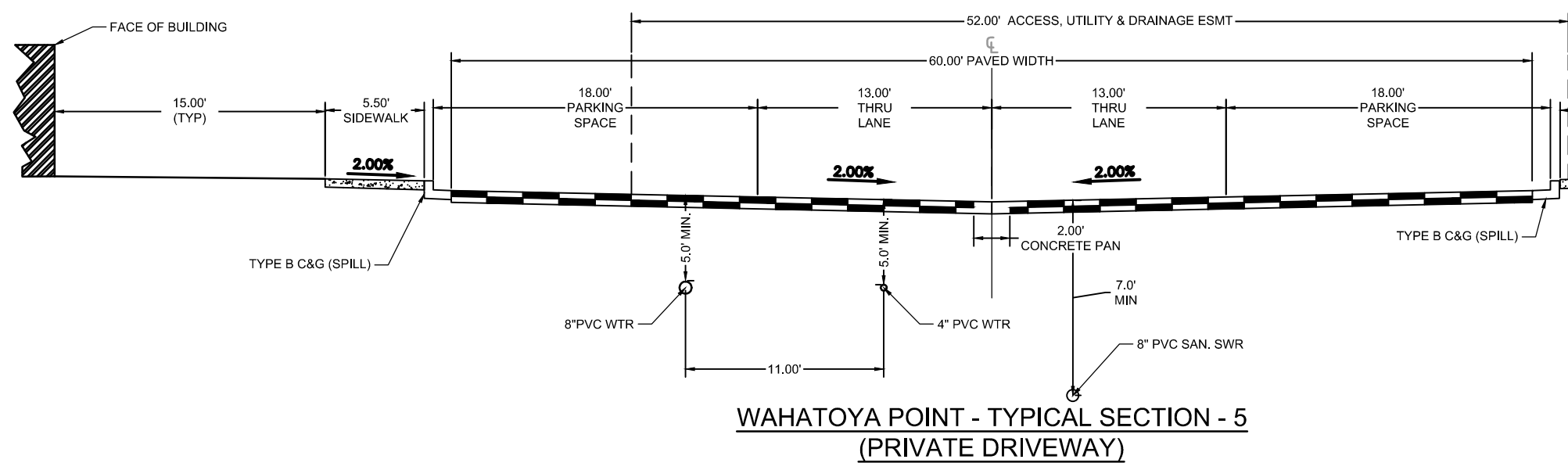
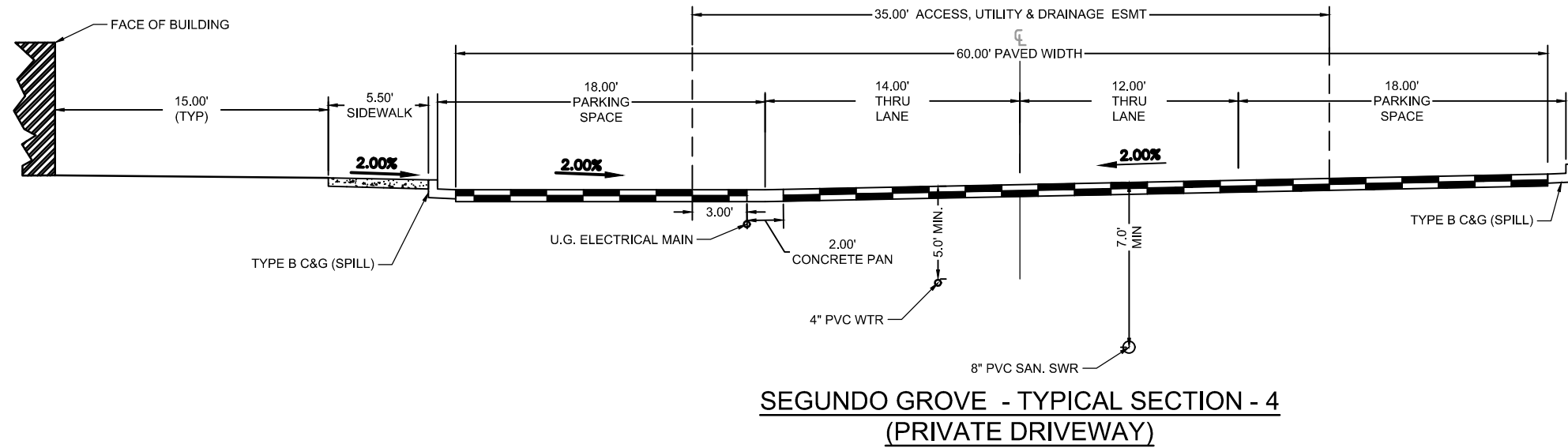
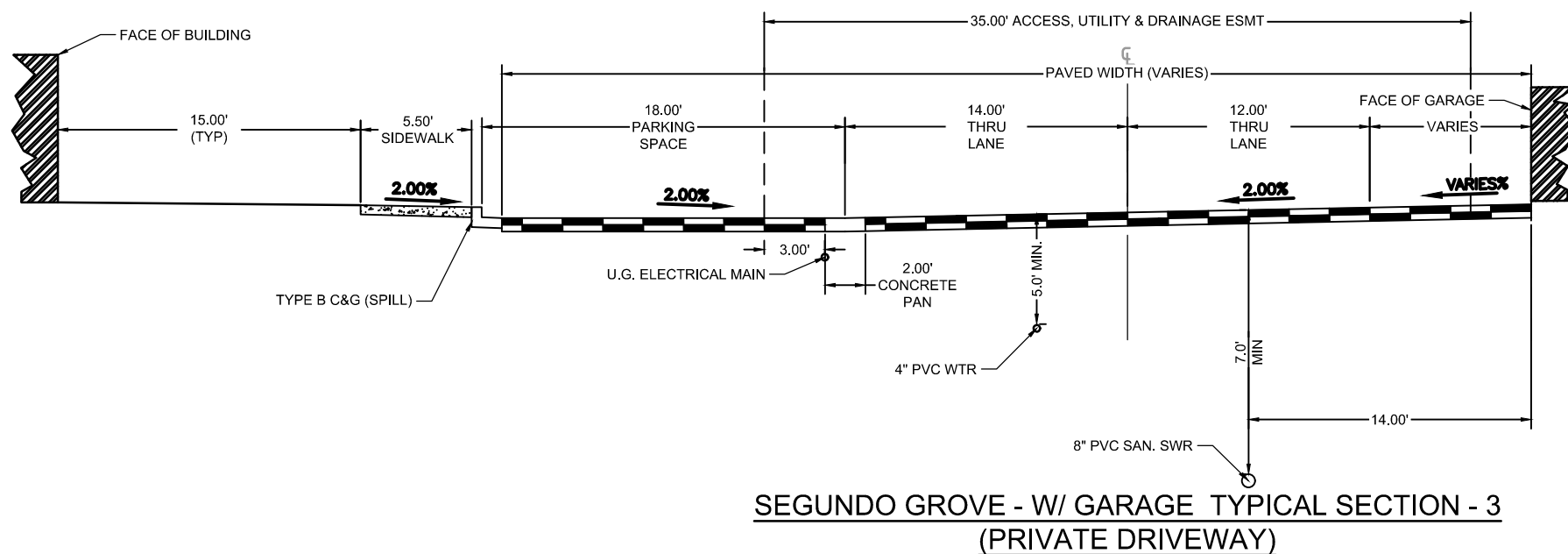
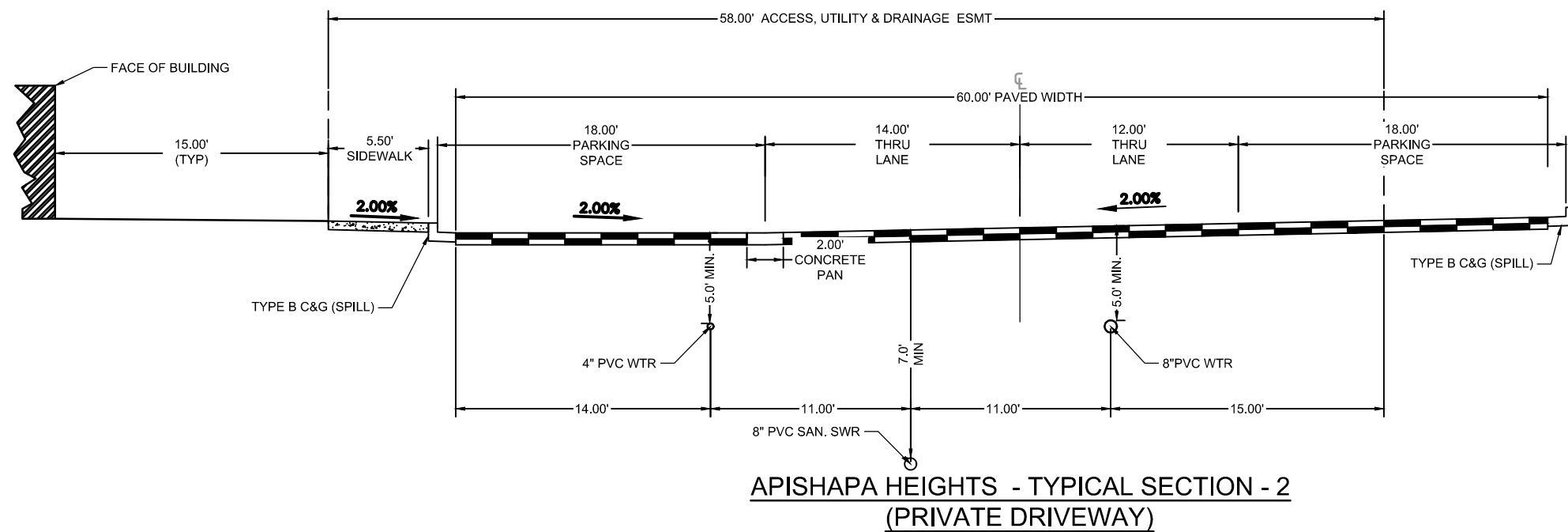
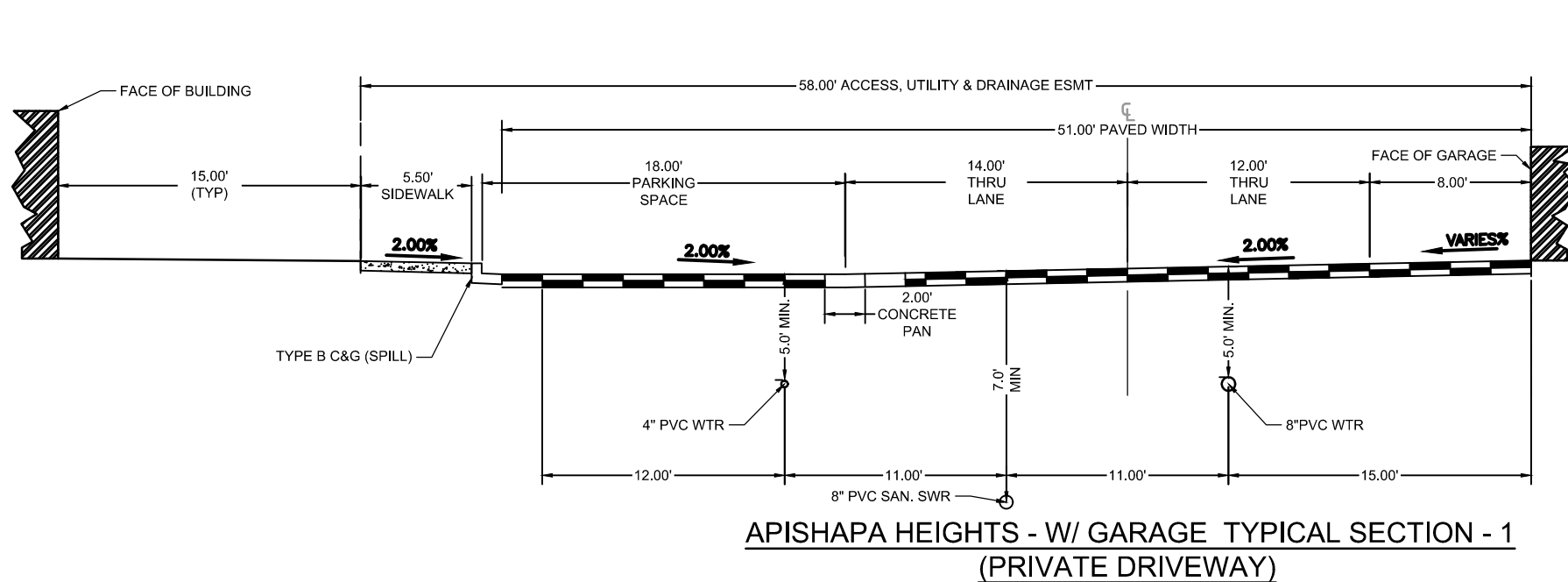
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### GRADING AND EROSION CONTROL NOTES:

3. STORMWATER DISCHARGE 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 CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OF 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 THE 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 OPERATION 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 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 FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OF 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 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 OF 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 BLANKET 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 THIS 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 PROPERLY 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 THE 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 AN EAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABEL.
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 REQUIRED ADEQUATE SECONDARY 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 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 THE SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST (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 CHERR CREEK DRIVE SOUTH  
DENVER, CO 80246-1530  
ATTN: PERMITS UNIT



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PCD FILNE NO.: SF2214

DRAWN BY: CBM JOB DATE: 8/22/2022 BAR IS ONE INCH ON  
APPROVED: KMH JOB NUMBER: 200541 OFFICIAL DRAWINGS.  
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CAD DATE: 9/1/2022 IF NOT ONE INCH,  
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NO.	DATE	BY	REVISION DESCRIPTION



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7222 COMMERCE CENTER DR SUITE 220  
COLORADO SPRINGS CO 80919  
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THE COTTAGES AT MESA RIDGE  
GOODWIN KNIGHT  
EL PASO COUNTY, COLORADO



EL PASO COUNTY CONSTRUCTION DOCUMENTS

GEC NOTES & TYPICAL SECTIONS

SHEET  
TS

2





1. SEE SHEETS 28 - 31 FOR CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL DETAILS.
2. ALL STORMWATER MANAGEMENT MEASURES SHOWN ON THIS PLAN MUST BE INSTALLED AND MAINTAINED PER THE COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.
3. ARE WITHIN LIMITS OF DISTURBANCE TO BE CLEARED, GRUBBED AND STOCKPILED PRIOR TO IMPACT OF ANY FILL.
4. ALL 3:1 SLOPES MUST BE RECEIVE SLOPE TRACKING TREATMENT AND EROSION CONTROL BLANKET.
5. STOCKPILES REQUIRED DURING ONSITE CONSTRUCTION ACTIVITIES WILL BE PLACED AT THE DISCRETION OF THE CONTRACTOR. STOCKPILING OF MATERIAL MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN.
6. NON-STRUCTURAL CONTROLS (I.E. STREET SWEEPING) WILL BE AT THE DISCRETION OF THE PROJECT'S CERTIFIED GEC ADMINISTRATOR THROUGHOUT THE DURATION OF LAND DISTURBING ACTIVITIES.
7. THERE ARE NO ANTICIPATED ASPHALT AND/OR CONCRETE BATCH PLANTS, OR MASONRY MIX STATIONS ASSOCIATED WITH THIS PROJECT. IF THE CONTRACTOR REQUIRES A ASPHALT/CONCRETE BATCH PLANTS OR MASONRY MIX STATIONS, THESE PLANS WILL BE AMENDED AS REQUIRED.
8. THERE ARE NO EXISTING PRESERVATION EASEMENTS LOCATED ON SITE.
9. THE SITE IS NOT LOCATED IN THE FEMA 100-YR FLOODPLAIN.
10. ONSITE EXISTING VEGETATION IS NATIVE GRASSES AND WEEDS. THERE IS NO NOTABLE VEGETATION OTHERWISE.
11. PROPOSED VEGETATION IS FOUND IN LANDSCAPE PLANS OF THE CONSTRUCTION DRAWINGS.

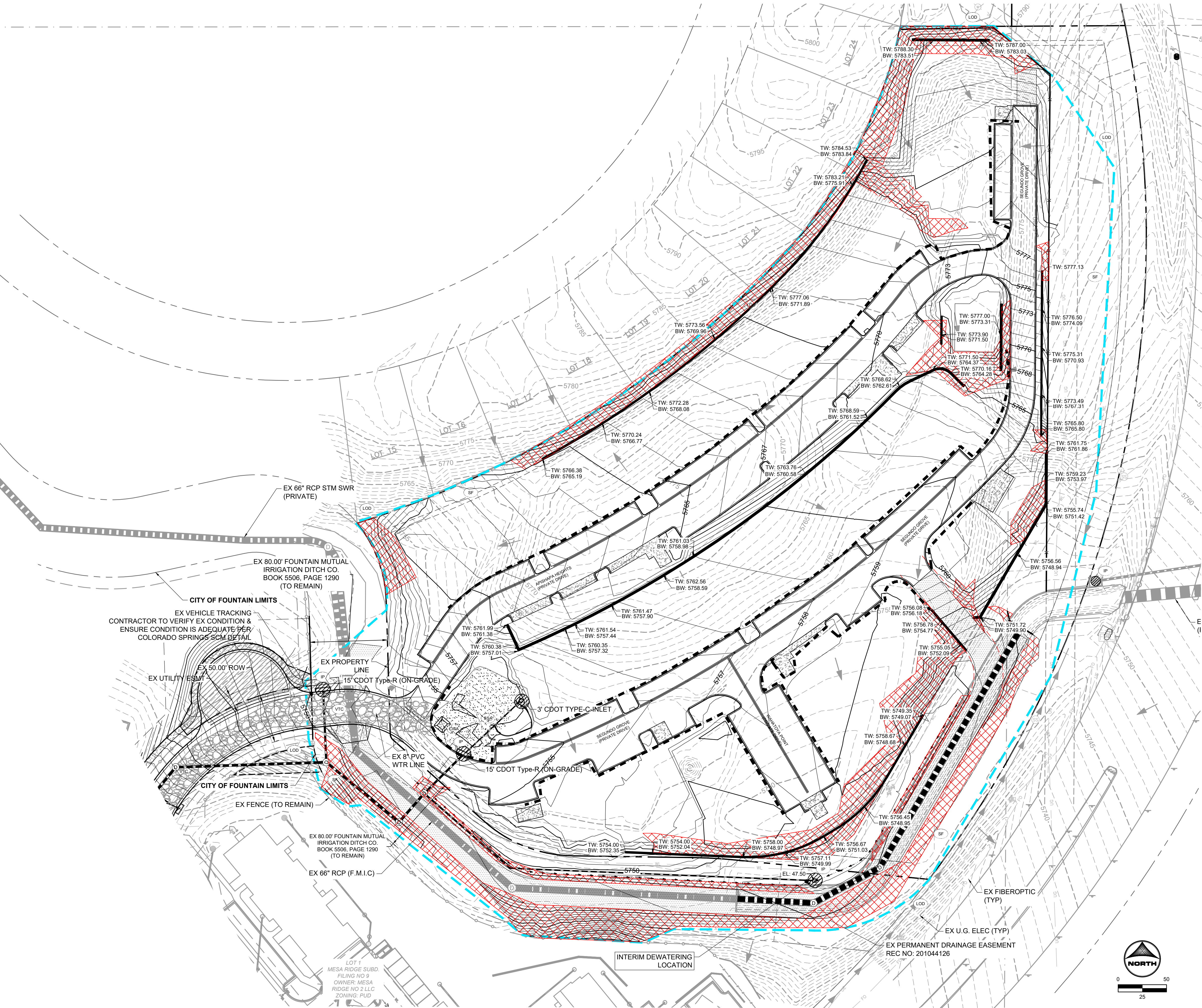
- ✓ TOTAL DISTURBANCE AREA = 11.33 AC
- ✓ RECEIVING WATERS: JIMMY CAMP CREEK
- ✓ ANTICIPATED START OF CONSTRUCTION: SPRING 2022
- ✓ ANTICIPATED END OF LAND DISTURBANCE: WINTER 2022

	<b>CWA</b>	CONCRETE WASHOUT AREA
	<b>CF</b>	CONSTRUCTION FENCE
	<b>DD</b>	DIVERSION DITCH
	<b>IP</b>	INLET PROTECTION
	<b>CIP</b>	CULVERT INLET PROTECTION
	<b>SCL</b>	SEDIMENT CONTROL LOG
	<b>SF</b>	SILT FENCE
	<b>SSA</b>	STABILIZED STAGING AREA
	<b>SP</b>	STOCKPILE MANAGEMENT
	<b>VTC</b>	VEHICLE TRACKING CONTROL
	<b>LOD</b>	LIMITS OF CONSTRUCTION/ DISTURBANCE
	<b>SM</b>	SEEDING AND MULCHING
	<b>FA</b>	FILL AREA (ALL OTHER AREAS ARE CUT)
	<b>RS</b>	ROCK SOCK
	<b>TSB</b>	TEMPORARY SEDIMENT BASIN
	<b>ECB</b>	EROSION CONTROL BLANKET

<b>TW/BW</b>	ELEVATION OF TOP/BOTTOM OF WALL
	PROP FLOW DIRECTION
	EX FLOW DIRECTION
	EX PROPERTY LINE
	EX RIGHT OF WAY





GRADING & EROSION CONTROL PLAN NOTES:

1. SEE SHEETS 28 -31 FOR CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL DETAILS.
2. ALL STORMWATER MANAGEMENT MEASURES SHOWN ON THIS PLAN MUST BE INSTALLED AND MAINTAINED PER THE COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.
3. AREA WITHIN LIMITS OF DISTURBANCE TO BE CLEARED, GRUBBED AND STOCKPILED PRIOR TO IMPORT OF ANY FILL.
4. ALL 3:1 SLOPES MUST BE RECEIVE SLOPE TRACKING TREATMENT AND EROSION CONTROL BLANKET.
5. STOCKPILES REQUIRED DURING ONSITE CONSTRUCTION ACTIVITIES WILL BE PLACED AT THE DISCRETION OF THE CONTRACTOR. STOCKPILING OF MATERIAL MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN.
6. NON-STRUCTURAL CONTROLS (I.E. STREET SWEEPING) WILL BE AT THE DISCRETION OF THE PROJECT'S CERTIFIED GEC ADMINISTRATOR THROUGHOUT THE DURATION OF LAND DISTURBING ACTIVITIES.
7. THERE ARE NO ANTICIPATED ASPHALT AND/OR CONCRETE BATCH PLANTS, OR MASONRY MIX STATIONS ASSOCIATED WITH THIS PROJECT. IF THE CONTRACTOR REQUIRES A ASPHALT/CONCRETE BATCH PLANTS OR MASONRY MIX STATIONS, THESES PLANS WILL BE AMENDED AS REQUIRED.
8. THERE ARE NO EXISTING PRESERVATION: EASEMENTS LOCATED ON SITE.
9. THE SITE IS NOT LOCATED IN THE FEMA 100-YR FLOODPLAIN
10. ONSITE EXISTING VEGETATION IS NATIVE GRASSES AND WEEDS. THERE IS NO NOTABLE VEGETATION OTHERWISE.
11. PROPOSED VEGETATION IS FOUND IN LANDSCAPE PLANS OF THE CONSTRUCTION DRAWINGS

PROJECT INFO:

TOTAL DISTURBANCE AREA = 11.33 AC

RECEIVING WATERS: JIMMY CAMP CREEK

ANTICIPATED START OF CONSTRUCTION: SPRING 2022

ANTICIPATED END OF LAND DISTURBANCE: WINTER 2022

GEC LEGEND:

- |  |       |                                     |
|--|-------|-------------------------------------|
|  | CWA   | CONCRETE WASHOUT AREA               |
|  | CF    | CONSTRUCTION FENCE                  |
|  | DD    | DIVERSION DITCH                     |
|  | IP    | INLET PROTECTION                    |
|  | CIP   | CULVERT INLET PROTECTION            |
|  | SCL   | SEDIMENT CONTROL LOG                |
|  | SF    | SILT FENCE                          |
|  | SSA   | STABILIZED STAGING AREA             |
|  | SP    | STOCKPILE MANAGEMENT                |
|  | VTC   | VEHICLE TRACKING CONTROL            |
|  | LOD   | LIMITS OF CONSTRUCTION/ DISTURBANCE |
|  | SM    | SEEDING AND MULCHING                |
|  | FA    | FILL AREA (ALL OTHER AREAS ARE CUT) |
|  | RS    | ROCK SOCK                           |
|  | TSB   | TEMPORARY SEDIMENT BASIN            |
|  | ECB   | EROSION CONTROL BLANKET             |
|  | TW/BW | ELEVATION OF TOP/BOTTOM OF WALL     |
|  |       | PROP FLOW DIRECTION                 |
|  |       | EX FLOW DIRECTION                   |
|  |       | EX PROPERTY LINE                    |
|  |       | EX RIGHT OF WAY                     |

NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM JOB DATE: 8/31/2022  
APPROVED: KMH JOB NUMBER: 200541  
CAD DATE: 8/31/2022  
CAD FILE: J:\2020\200541\CAD\Drawings\C\CD\IEI\_Paso\_Co\GEC\GEC\_Interim

BAR IS ONE INCH ON OFFICIAL DRAWINGS.  
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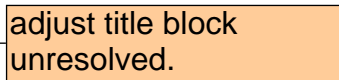
THE COTTAGES AT MESA RIDGE  
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EL PASO COUNTY, COLORADO



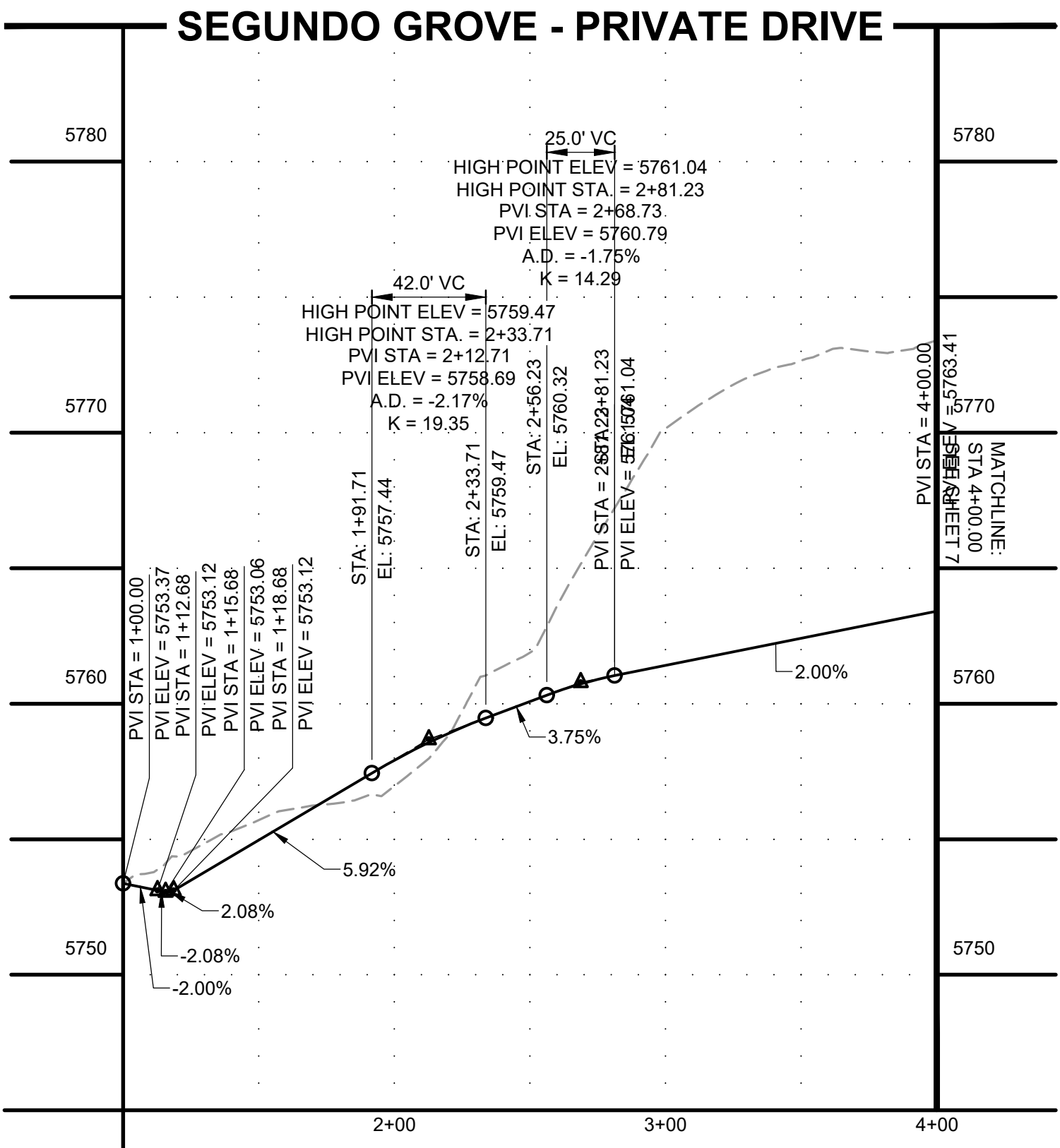
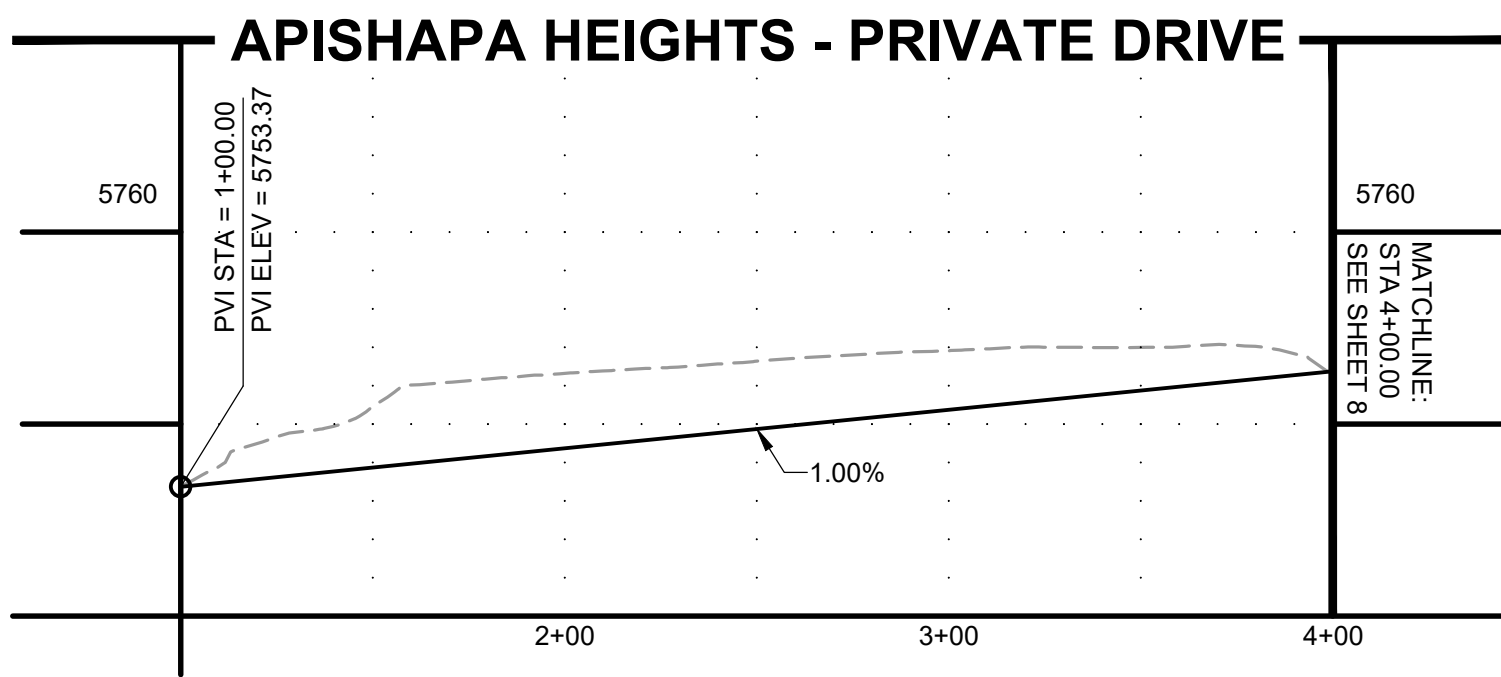
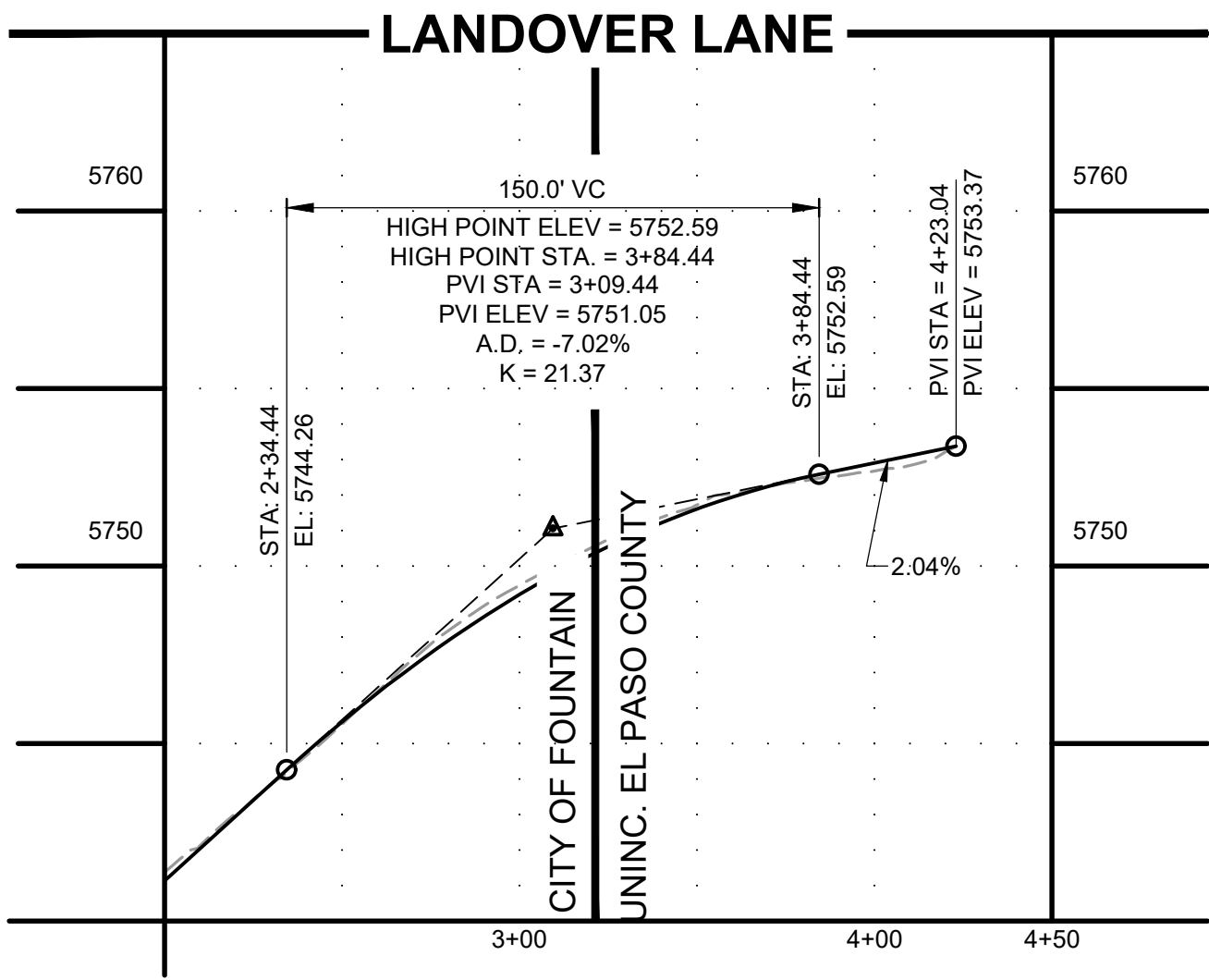
EL PASO COUNTY CONSTRUCTION DOCUMENTS  
GEC- INTERIM PLAN

SHEET  
EC  
4



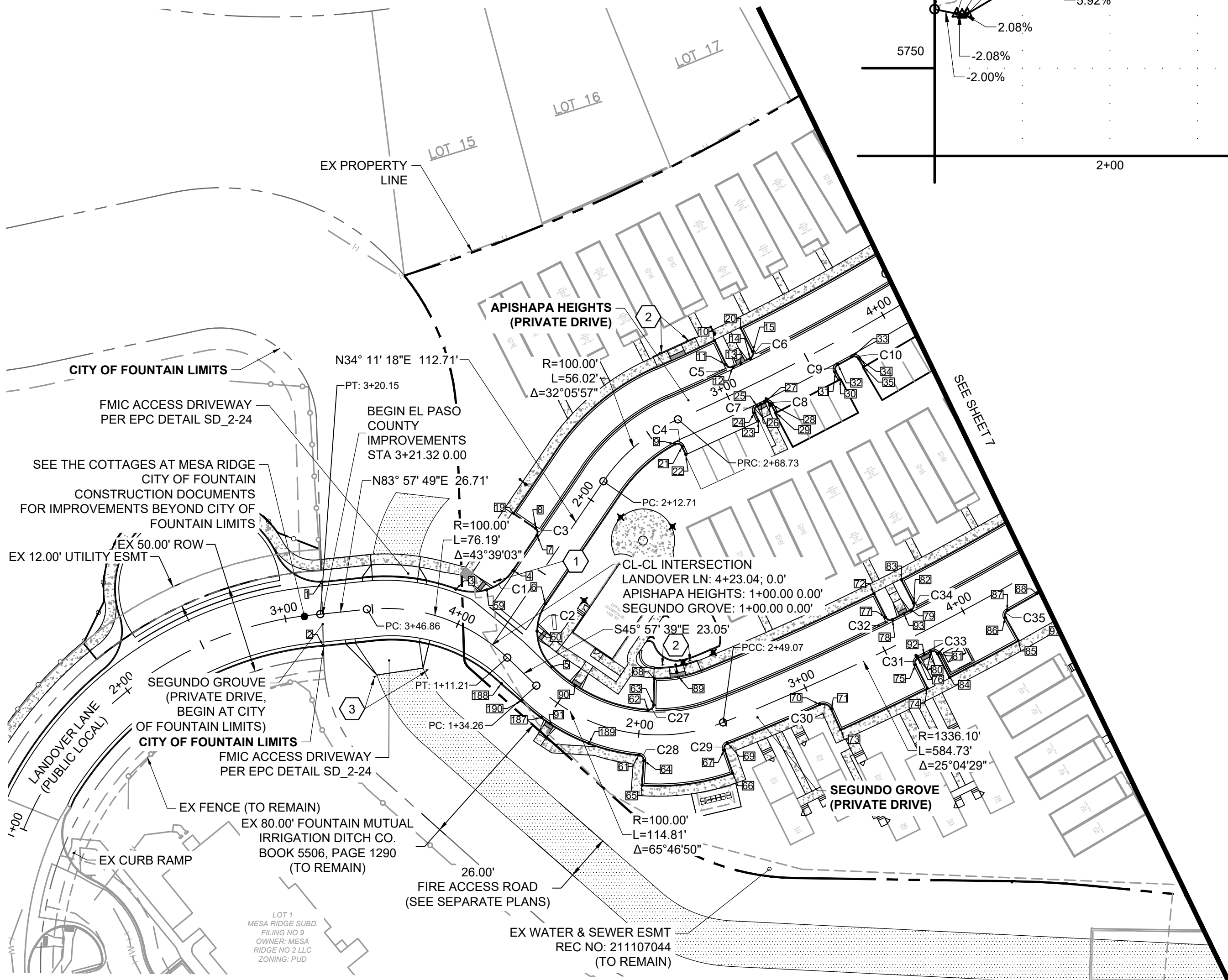






POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL E.
1	MATCH EX/BEGIN T2 C&G	LANDOVER LN	STA 3+22.73	18.0' L	5750.38
2	MATCH EX/BEGIN T2 C&G	LANDOVER LN	STA 3+20.15	18.0' R	5749.90
3	PCR	LANDOVER LN	STA 3+92.13	18.0' L	5752.24
4	PCR/ BEGIN TYPE B C&G (CATCH)	APISHAPA HEIGHTS	STA 1+41.66	14.0' L	5753.91
5	PCR/ BEGIN TYPE B C&G (CATCH)	APISHAPA HEIGHTS	STA 1+08.73	35.2' R	5753.34
6	PCR	APISHAPA HEIGHTS	STA 1+36.32	12.0' R	5754.12
7	PC/ END CATCH CURB	APISHAPA HEIGHTS	STA 1+65.86	14.0' L	5755.57
8	PT	APISHAPA HEIGHTS	STA 1+68.86	17.0' L	5755.97
9	PC	APISHAPA HEIGHTS	STA 2+60.53	12.0' R	5760.74
10	PI	APISHAPA HEIGHTS	STA 3+06.84	32.0' L	5761.63
11	PC	APISHAPA HEIGHTS	STA 3+06.84	17.0' L	5761.34
12	PT	APISHAPA HEIGHTS	STA 3+09.89	14.0' L	5761.37
13	HC RAMP MP	APISHAPA HEIGHTS	STA 3+15.07	14.0' L	5761.50
14	PC	APISHAPA HEIGHTS	STA 3+21.08	14.0' L	5761.59
15	PT	APISHAPA HEIGHTS	STA 3+24.12	17.0' L	5761.68
19	PI	APISHAPA HEIGHTS	STA 1+68.86	32.0' L	5756.25
20	PI	APISHAPA HEIGHTS	STA 3+24.12	32.0' L	5762.02
21	PT	APISHAPA HEIGHTS	STA 2+64.06	15.1' R	5761.37
22	END TYPE B C&G	APISHAPA HEIGHTS	STA 2+63.88	20.2' R	5762.00
23	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 3+09.65	20.2' R	5762.00
24	PC	APISHAPA HEIGHTS	STA 3+09.74	14.9' R	5761.90
25	PT	APISHAPA HEIGHTS	STA 3+12.71	12.0' R	5761.90
26	HC RAMP MP	APISHAPA HEIGHTS	STA 3+15.06	12.0' R	5762.01
27	PC	APISHAPA HEIGHTS	STA 3+17.41	12.0' R	5762.10
28	PT	APISHAPA HEIGHTS	STA 3+20.38	14.9' R	5762.50
29	END TYPE B C&G	APISHAPA HEIGHTS	STA 3+20.48	20.3' R	5763.10
30	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 3+60.90	20.1' R	5763.10
31	PC	APISHAPA HEIGHTS	STA 3+60.90	15.0' R	5762.95
32	PT	APISHAPA HEIGHTS	STA 3+63.86	12.0' R	5762.94
33	PC	APISHAPA HEIGHTS	STA 3+72.97	12.0' R	5763.21
34	PT	APISHAPA HEIGHTS	STA 3+75.93	14.9' R	5763.60
35	END TYPE B C&G	APISHAPA HEIGHTS	STA 3+76.03	20.2' R	5764.20
59	HC RAMP MP	APISHAPA HEIGHTS	STA 1+23.99	20.3' L	5753.04
60	HC RAMP MP	APISHAPA HEIGHTS	STA 1+20.75	16.7' R	5753.21
61	PC	SEGUNDO GROVE	STA 2+01.40	12.0' R	5754.65
62	PC/ END CATCH CURB	SEGUNDO GROVE	STA 2+04.49	14.0' L	5754.16

POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL E.
63	PT	SEGUNDO GROVE	STA 2+08.11	17.1' L	5754.29
64	PT	SEGUNDO GROVE	STA 2+04.01	15.0' R	5754.77
65	PI	SEGUNDO GROVE	STA 2+04.01	29.0' R	5755.03
66	PI	SEGUNDO GROVE	STA 2+44.56	29.0' R	5755.49
67	PC	SEGUNDO GROVE	STA 2+44.56	15.0' R	5755.23
68	PI	SEGUNDO GROVE	STA 2+08.11	32.0' L	5754.58
69	PT	SEGUNDO GROVE	STA 2+47.17	12.0' R	5755.10
70	PC	SEGUNDO GROVE	STA 3+03.57	12.0' R	5755.67
71	PT	SEGUNDO GROVE	STA 3+08.51	17.0' R	5755.81
72	PI	SEGUNDO GROVE	STA 3+58.87	32.0' L	5756.05
73	PI	SEGUNDO GROVE	STA 3+08.51	30.0' R	5756.05
74	PI	SEGUNDO GROVE	STA 3+62.04	30.0' R	5756.71
75	PC	SEGUNDO GROVE	STA 3+62.04	15.0' R	5756.28
76	PT	SEGUNDO GROVE	STA 3+65.01	12.0' R	5756.28
77	PC	SEGUNDO GROVE	STA 3+58.87	17.0' L	5755.75
78	PT	SEGUNDO GROVE	STA 3+61.91	14.0' L	5755.73
79	PC	SEGUNDO GROVE	STA 3+73.97	14.0' L	5755.85
80	PC	SEGUNDO GROVE	STA 3+73.06	12.0' R	5756.36
81	PT	SEGUNDO GROVE	STA 3+76.02	15.0' R	5756.43
82	PT	SEGUNDO GROVE	STA 3+77.00	17.0' L	5755.93
83	PI	SEGUNDO GROVE	STA 3+77.00	32.0' L	5756.25
84	PI	SEGUNDO GROVE	STA 3+75.97	30.0' R	5756.75
85	PI	SEGUNDO GROVE	STA 4+19.28	30.0' R	5757.17
86	PC	SEGUNDO GROVE	STA 4+19.28	15.0' R	5757.12
87	PT	SEGUNDO GROVE	STA 4+22.25	12.0' R	5756.86
88	PC	SEGUNDO GROVE	STA 4+41.55	12.0' R	5757.05
89	HC RAMP MP	SEGUNDO GROVE	STA 2+28.22	32.0' L	5754.75
90	HC RAMP MP	SEGUNDO GROVE	STA 1+52.86	14.0' L	5753.57
92	HC RAMP MP	SEGUNDO GROVE	STA 3+69.03	12.0' R	5756.32
93	HC RAMP MP	SEGUNDO GROVE	STA 3+69.10	14.0' L	5755.83
187	BEGIN TYPE B C&G	SEGUNDO GROVE	STA 1+47.35	12.0' R	5753.88
188	END T2 C&G (CATCH)/ BEGIN FL TRANS + FULL CROWN	SEGUNDO GROVE	STA 1+19.13	13.0' R	5753.18
189	BEGIN SUPERELEVATED SECTION	SEGUNDO GROVE	STA 1+75.00	12.0' R	5754.40
190	BEGIN TYPE B C&G (END CATCH CURB)	SEGUNDO GROVE	STA 1+34.26	12.0' R	5753.54

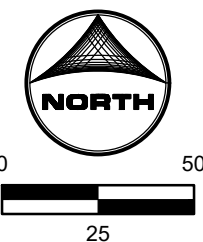
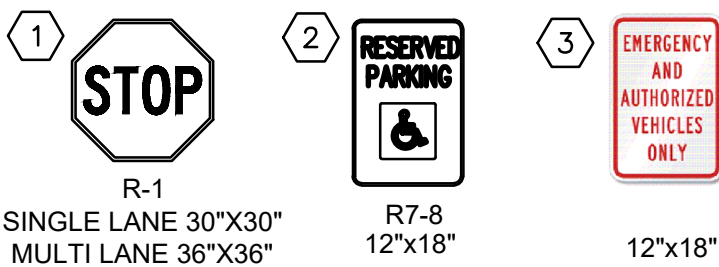


**NOTES:**

1. ALL TYPE B C&G IS IN SPILL CONDITION UNLESS OTHERWISE NOTED

**LEGEND:**

SIGN LOCATION AS NOTED ON PLAN



Curve Table				
Curve #	Length	Radius	Delta	Centerline/Flowline
C1	37.00	28.00	75°42'56"	Flowline
C2	39.17	28.00	80°08'56"	Flowline
C3	4.71	3.00	90°00'00"	Flowline
C4	4.91	3.00	93°40'48"	Flowline
C5	4.72	3.00	90°08'58"	Flowline
C6	4.72	3.00	90°08'58"	Flowline
C7	4.65	3.00	88°51'25"	Flowline
C8	4.65	3.00	88°45'05"	Flowline
C9	4.71	3.00	89°52'44"	Flowline
C10	4.65	3.00	88°45'05"	Flowline
C27	4.82	3.00	92°04'17"	Flowline
C28	4.63	3.00	88°30'19"	Flowline
C29	4.63	3.00	88°30'19"	Flowline
C30	7.84	5.00	89°47'18"	Flowline
C31	4.71	3.00	89°52'22"	Flowline
C32	4.72	3.00	90°07'49"	Flowline
C33	4.72	3.00	90°03'49"	Flowline
C34	4.72	3.00	90°07'49"	Flowline

PCD FILNE NO.: SF2214

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CAD FILE: J:\2020\200541\CAD\DWG\CD\CDIE\_Paso\_Co\Roadway

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COLORADO SPRINGS CO 80919  
PHONE: 719.300.4140 TOLL FREE: 800.728.7805  
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THE COTTAGES AT MESA RIDGE  
GOODWIN KNIGHT  
EL PASO COUNTY, COLORADO



EL PASO COUNTY CONSTRUCTION DOCUMENTS  
ROADWAY PLAN & PROFILE

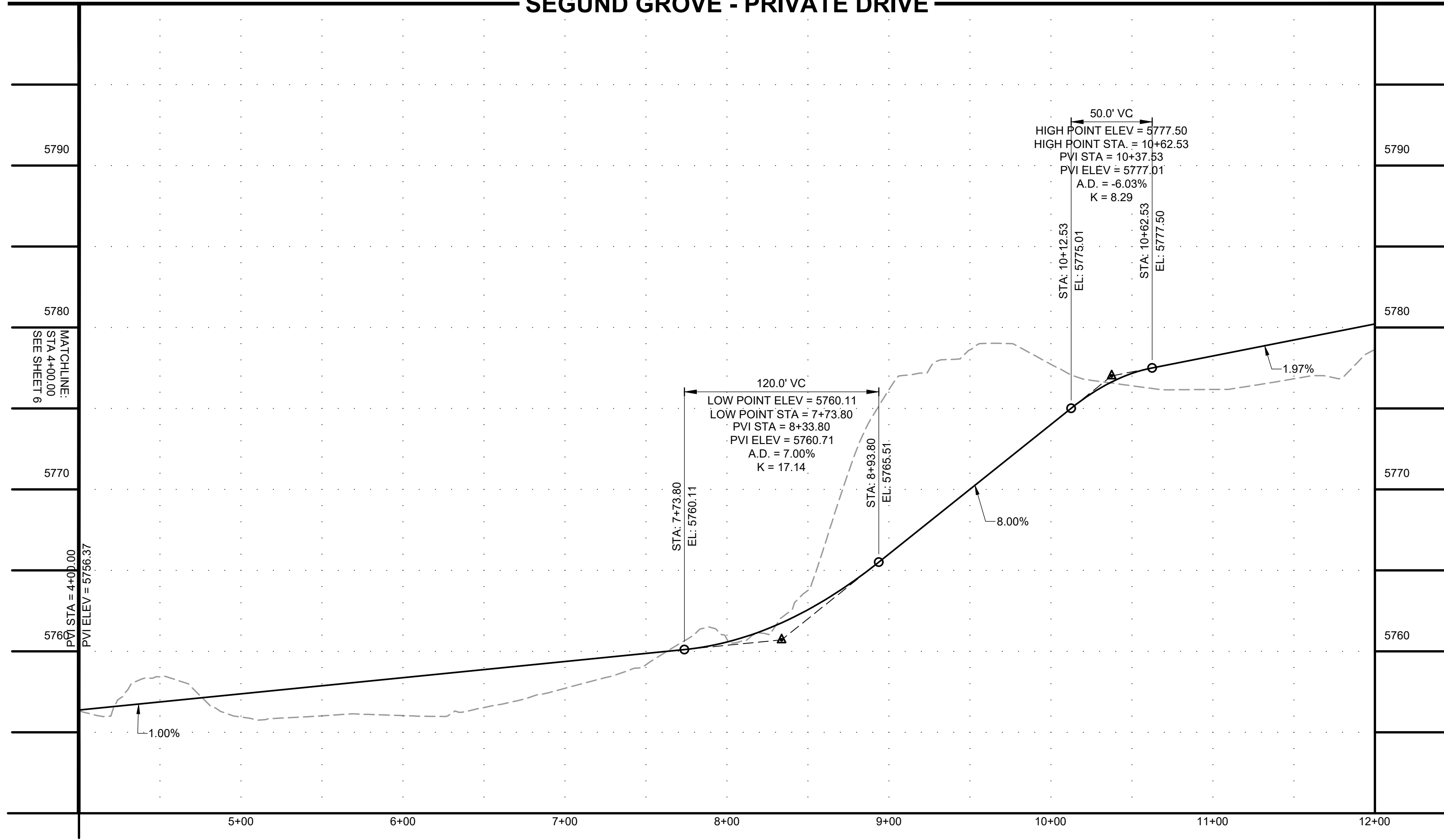
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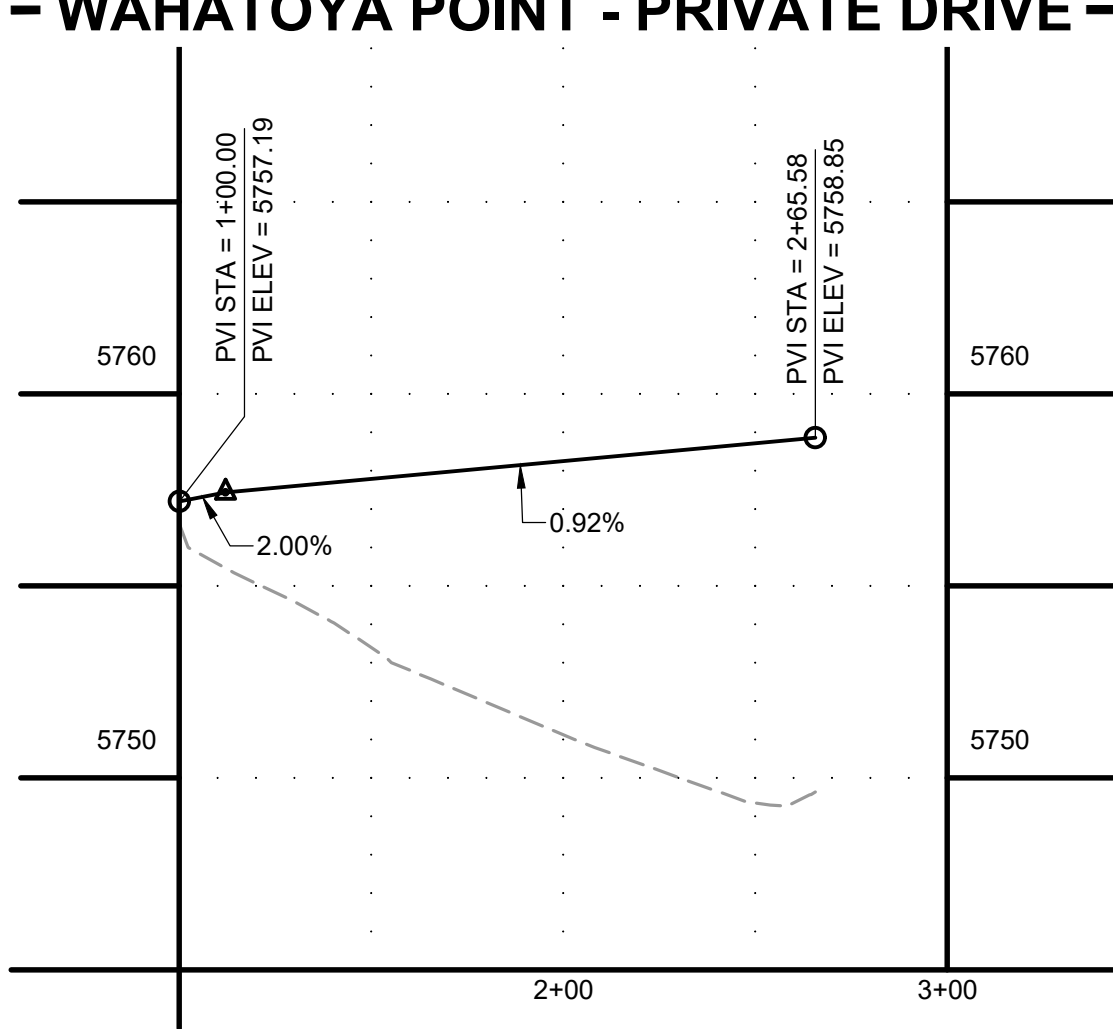
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SEGUNDO GROVE - PRIVATE DRIVE

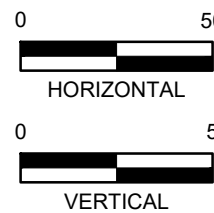


- WAHATOYA POINT - PRIVATE DRIVE -



NOTES:

1. ALL TYPE B C&G IS IN SPILL CONDITION UNLESS OTHERWISE NOTED



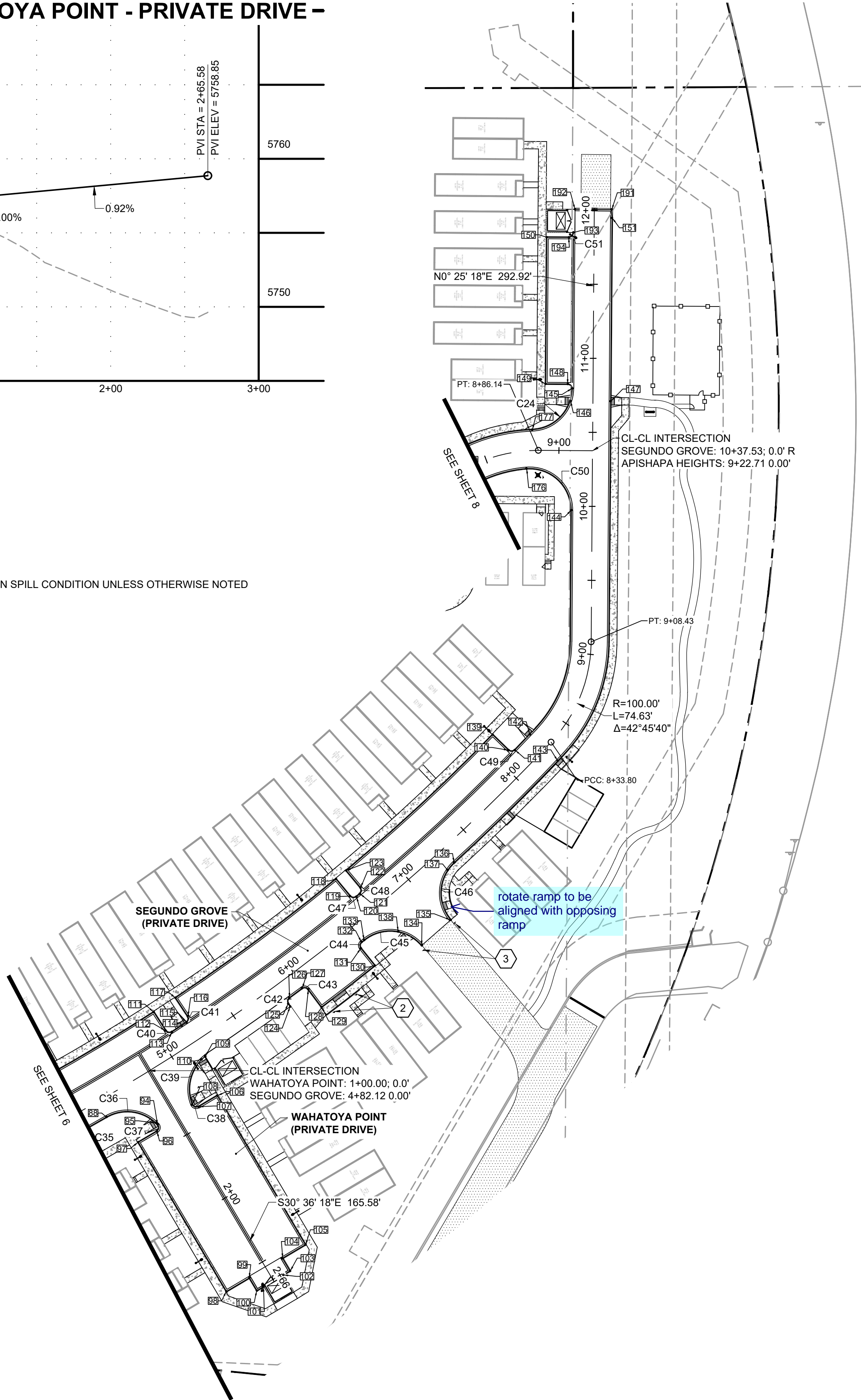
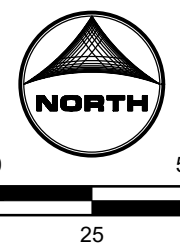
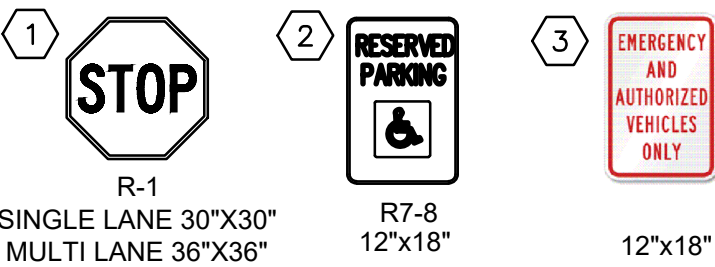
POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
88	PC	SEGUNDO GROVE	STA 4+41.55	12.0' R	5757.05
94	PCC	SEGUNDO GROVE	STA 4+68.15	33.9' R	5757.93
95	HC RAMP MP	SEGUNDO GROVE	STA 4+67.77	32.3' R	5757.90
96	PT	SEGUNDO GROVE	STA 4+65.26	37.6' R	5758.10
97	PI	SEGUNDO GROVE	STA 4+51.25	37.5' R	5758.37
98	PI	WAHATOYA POINT	STA 2+54.80	31.0' R	5759.52
99	PI	WAHATOYA POINT	STA 2+54.80	13.0' R	5759.15
100	PI	WAHATOYA POINT	STA 2+64.80	13.0' R	5759.35
101	END TYPE B C&G	WAHATOYA POINT	STA 2+64.80	7.8' R	5759.42
102	BEGIN TYPE B C&G	WAHATOYA POINT	STA 2+64.80	7.8' L	5759.42
103	PI	WAHATOYA POINT	STA 2+64.80	13.0' L	5759.35
104	PI	WAHATOYA POINT	STA 2+54.80	13.0' L	5759.15
105	PI	WAHATOYA POINT	STA 2+54.80	31.0' L	5759.51
106	PI	SEGUNDO GROVE	STA 5+11.52	38.7' R	5758.36
107	PC	SEGUNDO GROVE	STA 4+97.23	38.2' R	5758.10
108	PCC	SEGUNDO GROVE	STA 4+94.45	34.7' R	5757.96
109	END TYPE B C&G	SEGUNDO GROVE	STA 5+19.07	12.1' R	5758.32
110	HC RAMP MP	SEGUNDO GROVE	STA 5+15.83	12.5' R	5757.79
111	PI	SEGUNDO GROVE	STA 5+06.10	32.0' L	5757.52
112	PC	SEGUNDO GROVE	STA 5+06.10	17.0' L	5757.22
113	PT	SEGUNDO GROVE	STA 5+09.13	14.0' L	5757.22
114	HC RAMP MP	SEGUNDO GROVE	STA 5+17.06	14.0' L	5757.29
115	PC	SEGUNDO GROVE	STA 5+21.08	14.0' L	5757.33
116	PT	SEGUNDO GROVE	STA 5+24.12	17.0' L	5757.40
117	PI	SEGUNDO GROVE	STA 5+24.12	32.0' L	5757.72
118	PI	SEGUNDO GROVE	STA 6+62.37	32.0' L	5759.09
119	PC	SEGUNDO GROVE	STA 6+62.37	17.0' L	5758.78
120	PT	SEGUNDO GROVE	STA 6+65.41	14.0' L	5758.77
121	PC	SEGUNDO GROVE	STA 6+68.55	14.0' L	5758.80
122	PT	SEGUNDO GROVE	STA 6+71.59	17.0' L	5758.87
123	PI	SEGUNDO GROVE	STA 6+71.59	32.0' L	5759.20
124	BEGIN TYPE B C&G	SEGUNDO GROVE	STA 5+84.69	17.2' R	5758.57

POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
125	PC	SEGUNDO GROVE	STA 5+84.73	14.9' R	5758.52
126	PT	SEGUNDO GROVE	STA 5+87.70	12.0' R	5758.49
127	PC	SEGUNDO GROVE	STA 5+98.26	12.0' R	5758.59
128	PT	SEGUNDO GROVE	STA 6+01.23	15.0' R	5758.68
129	PI	SEGUNDO GROVE	STA 6+01.23	30.0' R	5758.99
130	PI	SEGUNDO GROVE	STA 6+45.82	30.0' R	5759.53
131	PC	SEGUNDO GROVE	STA 6+45.82	15.0' R	5759.25
132	PT	SEGUNDO GROVE	STA 6+48.79	12.0' R	5759.12
133	PCR	SEGUNDO GROVE	STA 6+51.00	12.0' R	5759.14
134	END TYPE B C&G	SEGUNDO GROVE	STA 6+78.19	39.6' R	5758.87
135	BEGIN TYPE B C&G	SEGUNDO GROVE	STA 7+03.45	39.3' R	5759.39
136	PCR	SEGUNDO GROVE	STA 7+30.63	12.0' R	5759.94
137	HC RAMP MP	SEGUNDO GROVE	STA 7+23.96	12.8' R	5759.82
138	HC RAMP MP	SEGUNDO GROVE	STA 6+72.17	22.3' R	5759.38
139	PI	SEGUNDO GROVE	STA 8+09.90	32.0' L	5760.72
140	PC	SEGUNDO GROVE	STA 8+09.90	17.0' L	5760.74
141	PT/ BEGIN CATCH CURB	SEGUNDO GROVE	STA 8+12.94	14.0' L	5760.61
142	HC RAMP MP	SEGUNDO GROVE	STA 8+27.83	14.0' L	5761.16
143	HC RAMP MP	SEGUNDO GROVE	STA 8+27.77	12.0' R	5761.74
144	PCR/ END CATCH CURB	SEGUNDO GROVE	STA 9+97.28	14.0' L	5773.45
145	PCR	SEGUNDO GROVE	STA 10+79.52	14.0' L	5777.52
146	HC RAMP MP	SEGUNDO GROVE	STA 10+71.05	15.3' L	5777.35
147	HC RAMP MP	SEGUNDO GROVE	STA 10+71.05	12.0' R	5777.94
148	PT	SEGUNDO GROVE	STA 10+82.51	17.0' L	5777.64
149	PI	SEGUNDO GROVE	STA 10+82.51	32.0' L	5777.95
150	PI	SEGUNDO GROVE	STA 11+81.51	32.0' L	5779.97
151	END TYPE B C&G (END CATCH CURB)	SEGUNDO GROVE	STA 11+94.86	12.0' R	5781.95
191	BEGIN TYPE E C&G	SEGUNDO GROVE	STA 12+00.53	11.7' R	5782.63
192	END TYPE E C&G	SEGUNDO GROVE	STA 12+00.53	13.0' L	5780.50
193	PT/END TYPE B C&G	SEGUNDO GROVE	STA 11+84.86	14.0' L	5779.80
194	PC	SEGUNDO GROVE	STA 11+81.51	17.0' L	5779.75

Curve Table			
Curve #	Length	Radius	Delta
C36	37.60	28.00	76°56'16"
C37	5.37	3.00	102°38'48"
C38	5.17	3.00	98°45'33"
C39	36.19	28.00	74°03'36"
C40	4.72	3.00	90°07'49"
C41	4.72	3.00	90°07'49"
C42	4.66	3.00	88°54'28"
C43	4.71	3.00	89°52'22"
C44	4.71	3.00	89°52'22"
C45	43.27	28.00	88°32'23"
C46	43.03	28.00	88°02'44"
C47	4.72	3.00	90°07'49"
C48	4.72	3.00	90°07'49"
C49	4.72	3.00	90°07'49"
C50	46.52	28.00	95°11'48"
C51	5.06	3.03	95°45'36"

LEGEND:

SIGN LOCATION AS NOTED ON PLAN



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PCD FILNE NO.: SF2214

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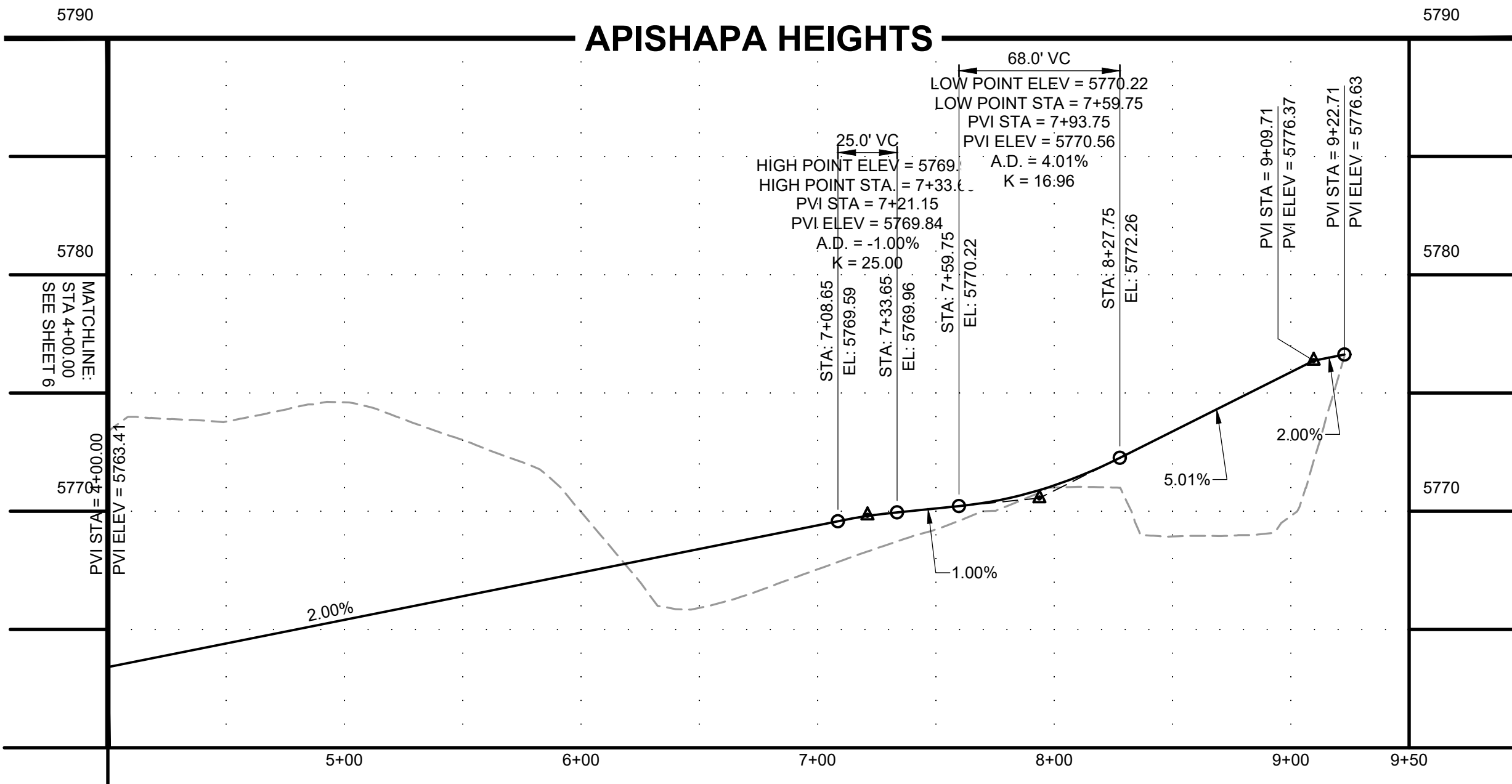


POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
16	PI	APISHAPA HEIGHTS	STA 4+35.17	32.0' L	5764.19
17	PC	APISHAPA HEIGHTS	STA 4+35.22	17.0' L	5763.90
18	PT	APISHAPA HEIGHTS	STA 4+38.27	14.0' L	5763.93
36	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 4+35.92	27.6' R	5764.62
37	PC	APISHAPA HEIGHTS	STA 4+36.32	14.9' R	5764.42
38	PT	APISHAPA HEIGHTS	STA 4+39.28	12.0' R	5764.43
39	HC RAMP MP	APISHAPA HEIGHTS	STA 4+41.83	12.0' R	5764.52
40	PC	APISHAPA HEIGHTS	STA 4+53.20	12.0' R	5764.72
41	PT	APISHAPA HEIGHTS	STA 4+56.16	15.0' R	5764.84
42	HC RAMP MP	APISHAPA HEIGHTS	STA 4+41.81	14.0' L	5764.01
43	PC	APISHAPA HEIGHTS	STA 4+51.48	14.0' L	5764.19
44	PT	APISHAPA HEIGHTS	STA 4+54.53	17.0' L	5764.29
45	PI	APISHAPA HEIGHTS	STA 4+54.53	32.0' L	5764.62
46	PI	APISHAPA HEIGHTS	STA 4+56.16	29.0' R	5765.15
47	PI	APISHAPA HEIGHTS	STA 5+63.15	29.0' R	5767.26
48	PC	APISHAPA HEIGHTS	STA 5+63.15	15.0' R	5766.98
49	PT	APISHAPA HEIGHTS	STA 5+66.11	12.0' R	5766.97
50	PC	APISHAPA HEIGHTS	STA 5+69.10	12.0' R	5767.03

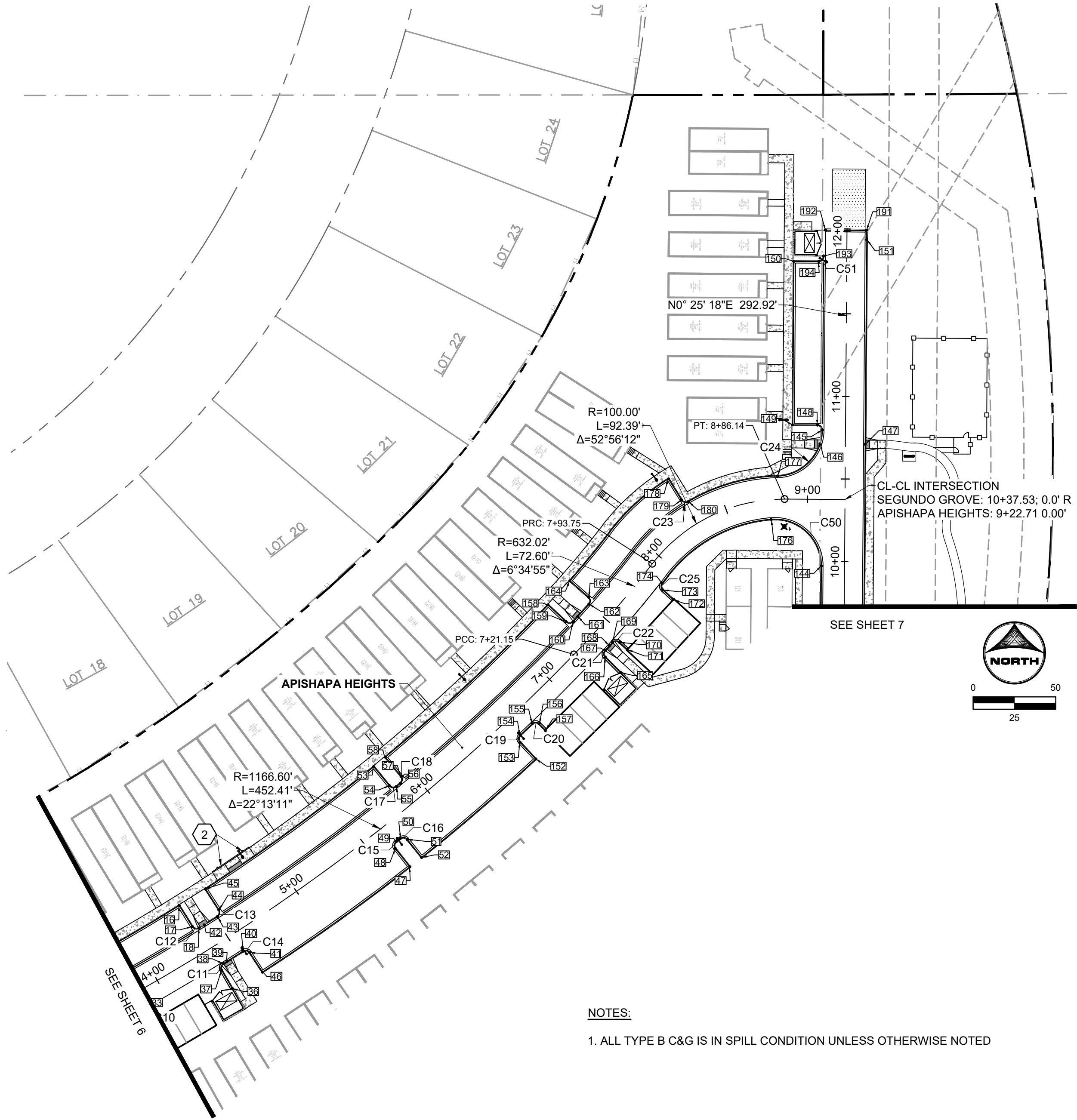
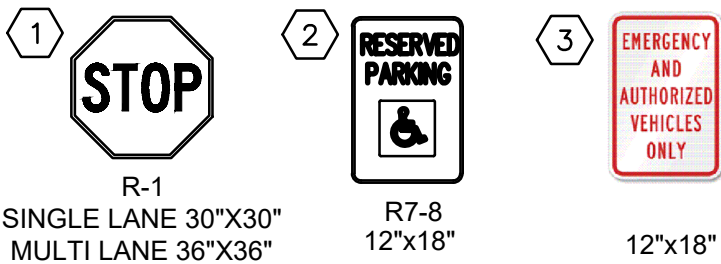
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No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
51	PT	APISHAPA HEIGHTS	STA 5+72.07	15.0' R	5767.15
52	PI	APISHAPA HEIGHTS	STA 5+72.07	29.0' R	5767.47
53	PI	APISHAPA HEIGHTS	STA 5+84.08	32.0' L	5767.17
54	PC	APISHAPA HEIGHTS	STA 5+84.08	17.0' L	5766.87
55	PT	APISHAPA HEIGHTS	STA 5+87.12	14.0' L	5766.89
56	PC	APISHAPA HEIGHTS	STA 5+90.29	14.0' L	5766.96
57	PT	APISHAPA HEIGHTS	STA 5+93.33	17.0' L	5767.06
58	PI	APISHAPA HEIGHTS	STA 5+93.33	32.0' L	5767.40
152	PI	APISHAPA HEIGHTS	STA 6+61.09	29.0' R	5769.21
153	PC	APISHAPA HEIGHTS	STA 6+61.09	15.0' R	5768.93
154	PT	APISHAPA HEIGHTS	STA 6+64.05	12.0' R	5768.93
155	PC	APISHAPA HEIGHTS	STA 6+73.94	12.0' R	5769.22
156	PT	APISHAPA HEIGHTS	STA 6+76.90	14.9' R	5769.61
157	END TYPE B C&G	APISHAPA HEIGHTS	STA 6+76.99	20.2' R	5770.19
158	PI	APISHAPA HEIGHTS	STA 7+32.41	32.0' L	5770.04
159	PC	APISHAPA HEIGHTS	STA 7+32.41	17.0' L	5769.87
160	PT	APISHAPA HEIGHTS	STA 7+35.49	14.0' L	5769.82
161	HC RAMP MP	APISHAPA HEIGHTS	STA 7+39.69	14.0' L	5769.81

POINT TABLE					
No.	DESC.	ALIGNMENT	STATION	OFFSET	FL EL.
162	PC	APISHAPA HEIGHTS	STA 7+50.07	14.0' L	5769.95
163	PT	APISHAPA HEIGHTS	STA 7+53.15	17.0' L	5770.02
164	PI	APISHAPA HEIGHTS	STA 7+53.15	32.0' L	5770.27
165	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 7+32.37	27.8' R	5770.85
166	PC	APISHAPA HEIGHTS	STA 7+32.86	14.9' R	5770.78
167	PT	APISHAPA HEIGHTS	STA 7+35.79	12.0' R	5770.42
168	HC RAMP MP	APISHAPA HEIGHTS	STA 7+39.67	12.0' R	5770.35
169	PC	APISHAPA HEIGHTS	STA 7+42.10	12.0' R	5770.30
170	PT	APISHAPA HEIGHTS	STA 7+45.03	15.0' R	5770.61
171	END TYPE B C&G	APISHAPA HEIGHTS	STA 7+44.96	21.6' R	5771.12
172	BEGIN TYPE B C&G	APISHAPA HEIGHTS	STA 7+84.63	23.4' R	5771.12
173	PC	APISHAPA HEIGHTS	STA 7+85.27	14.8' R	5771.00
174	PT	APISHAPA HEIGHTS	STA 7+88.19	12.0' R	5771.01
176	PCR	APISHAPA HEIGHTS	STA 8+77.07	12.0' R	5775.00
177	PCR	APISHAPA HEIGHTS	STA 8+82.31	14.0' L	5774.66
178	PI	APISHAPA HEIGHTS	STA 8+29.95	32.0' L	5772.43
179	PC	APISHAPA HEIGHTS	STA 8+29.95	17.0' L	5772.25
180	PT	APISHAPA HEIGHTS	STA 8+32.51	14.0' L	5772.20

Curve Table				
Curve #	Length	Radius	Delta	
C11	4.61	3.00	87°59'29"	
C12	4.71	3.00	89°57'01"	
C13	4.72	3.00	90°08'58"	
C14	4.70	3.00	89°51'16"	
C15	4.70	3.00	89°51'16"	
C16	4.70	3.00	89°51'16"	
C17	4.72	3.00	90°08'58"	
C18	4.72	3.00	90°08'58"	
C19	4.70	3.00	89°51'16"	
C20	4.65	3.00	88°51'27"	
C21	4.58	3.00	87°29'50"	
C22	4.74	3.00	90°26'34"	
C23	4.64	3.00	88°31'51"	
C24	43.01	28.00	88°00'41"	
C25	4.47	3.00	85°22'45"	
C50	46.52	28.00	95°11'48"	



LEGEND:  
SIGN LOCATION AS NOTED ON PLAN



NOTES:  
1. ALL TYPE B C&G IS IN SPILL CONDITION UNLESS OTHERWISE NOTED

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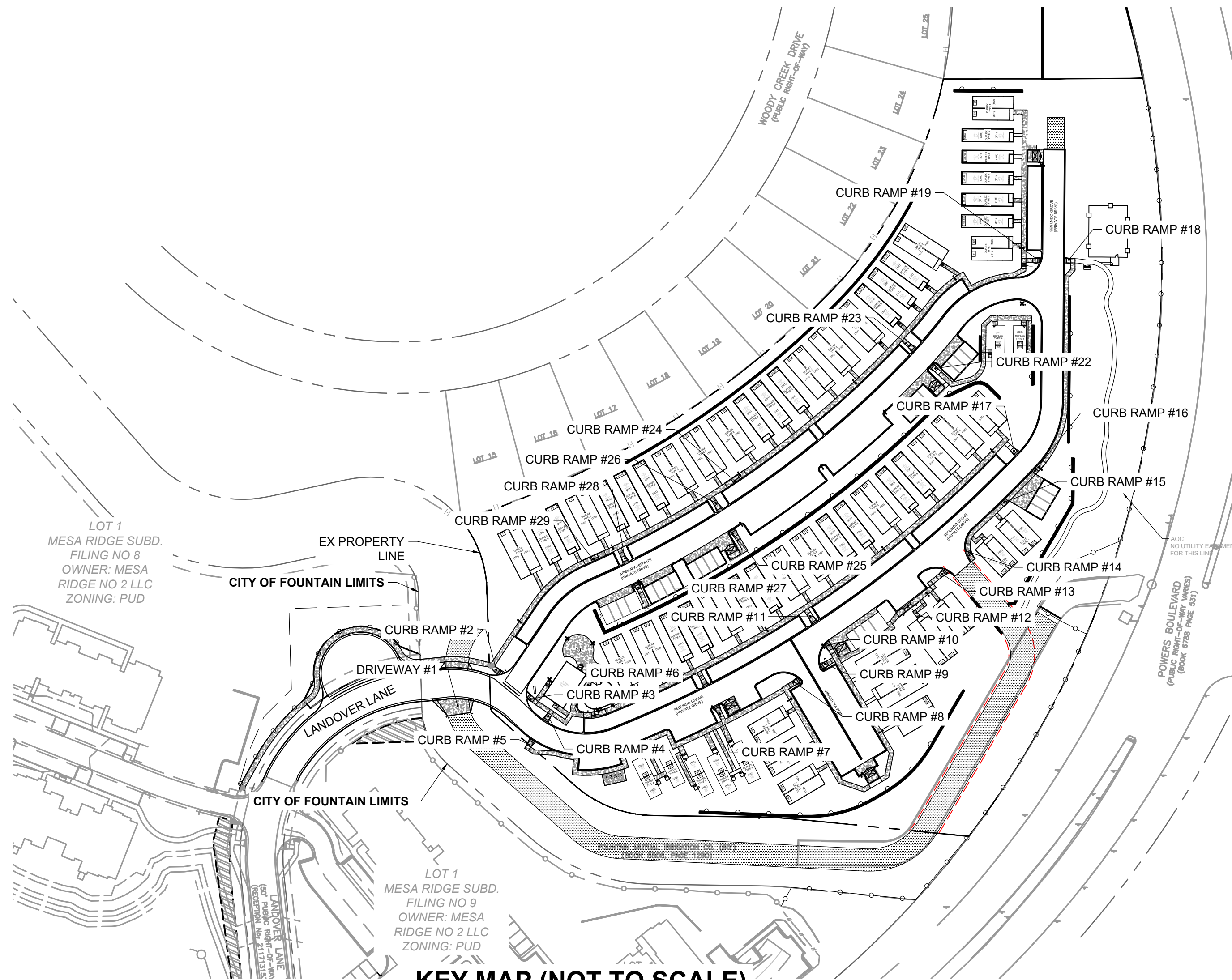


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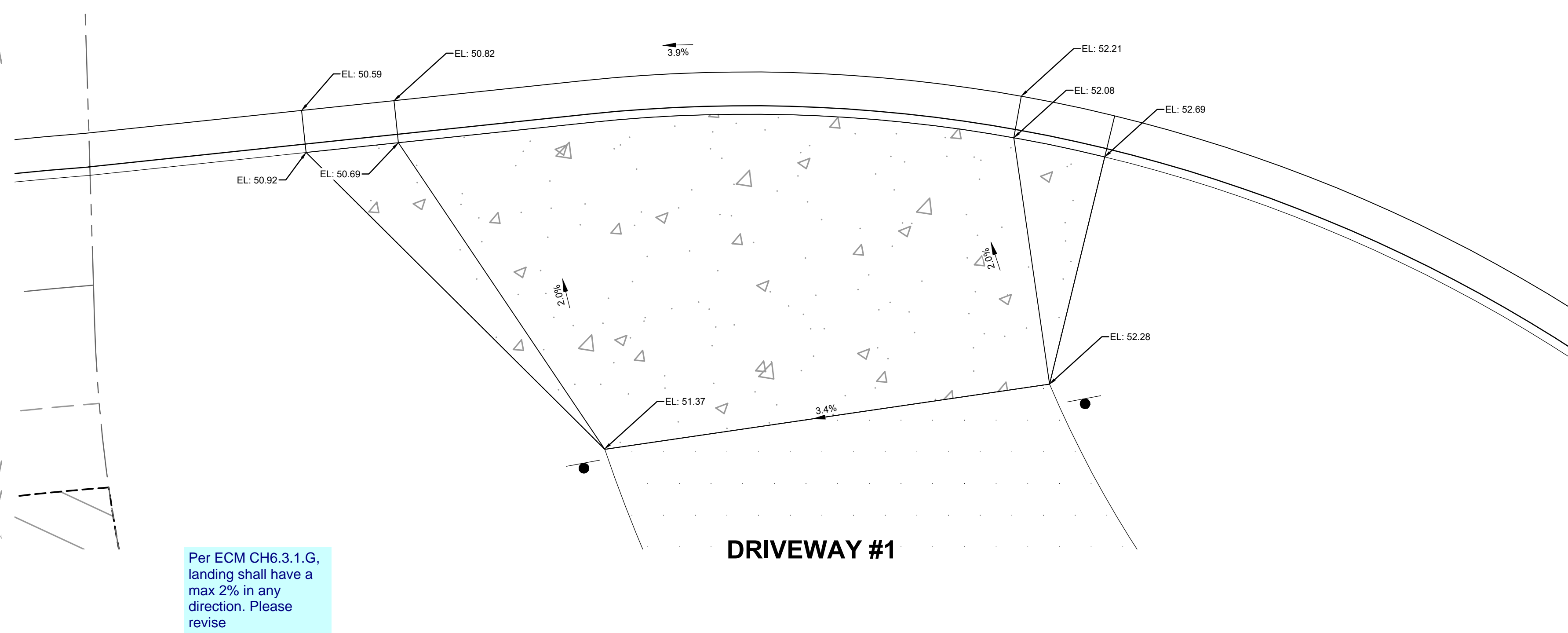
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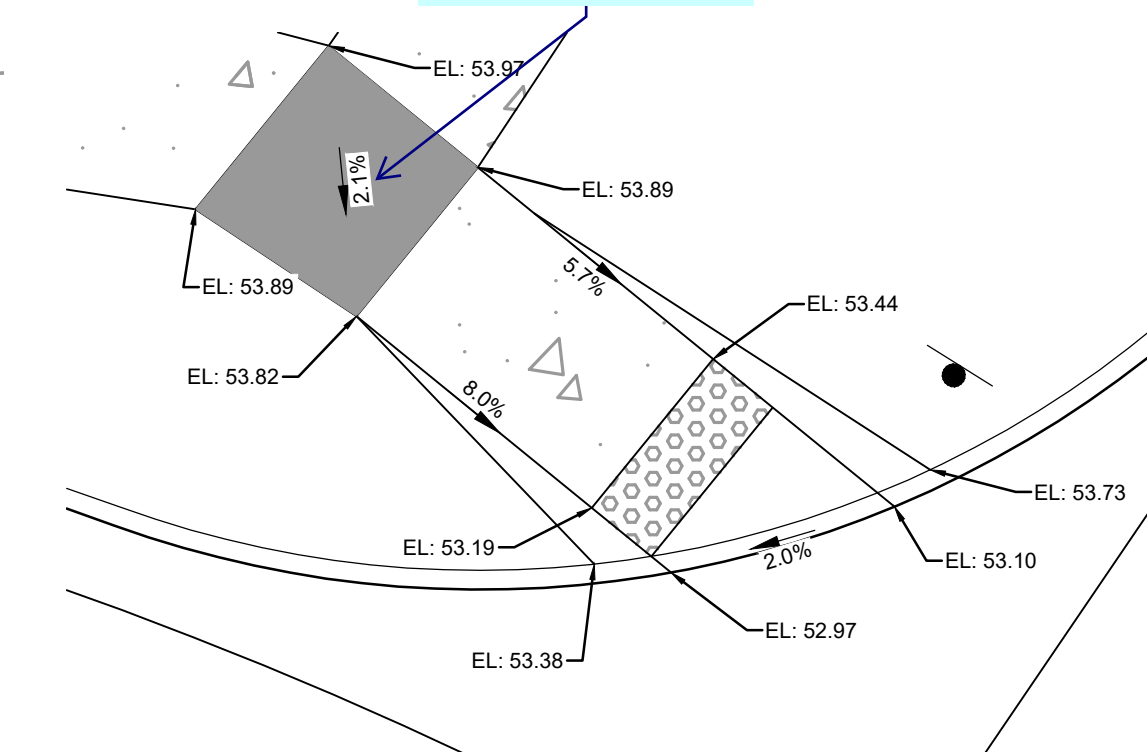




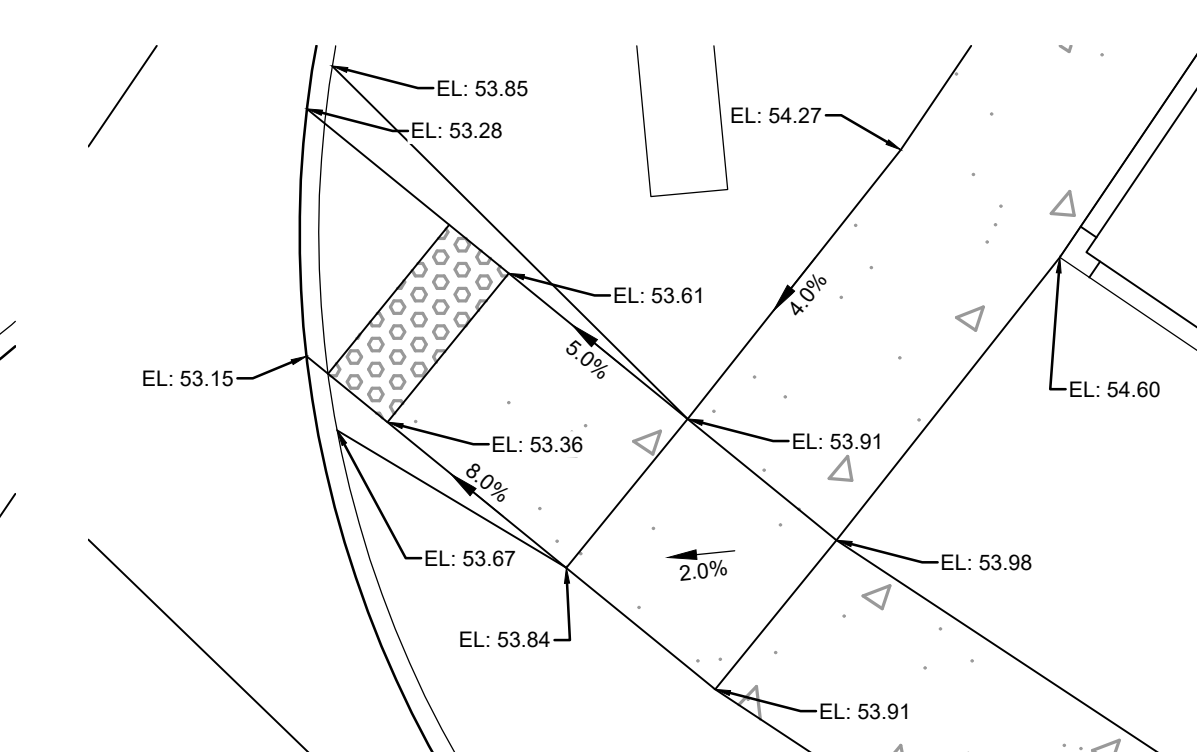
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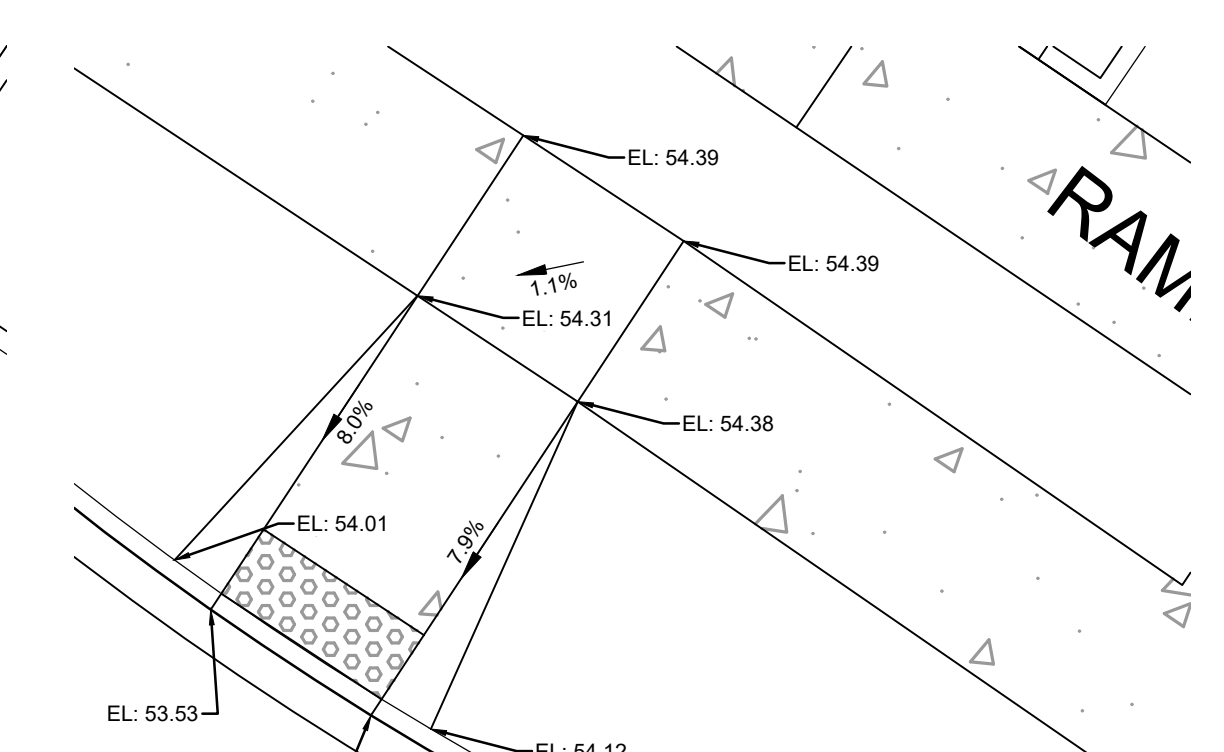
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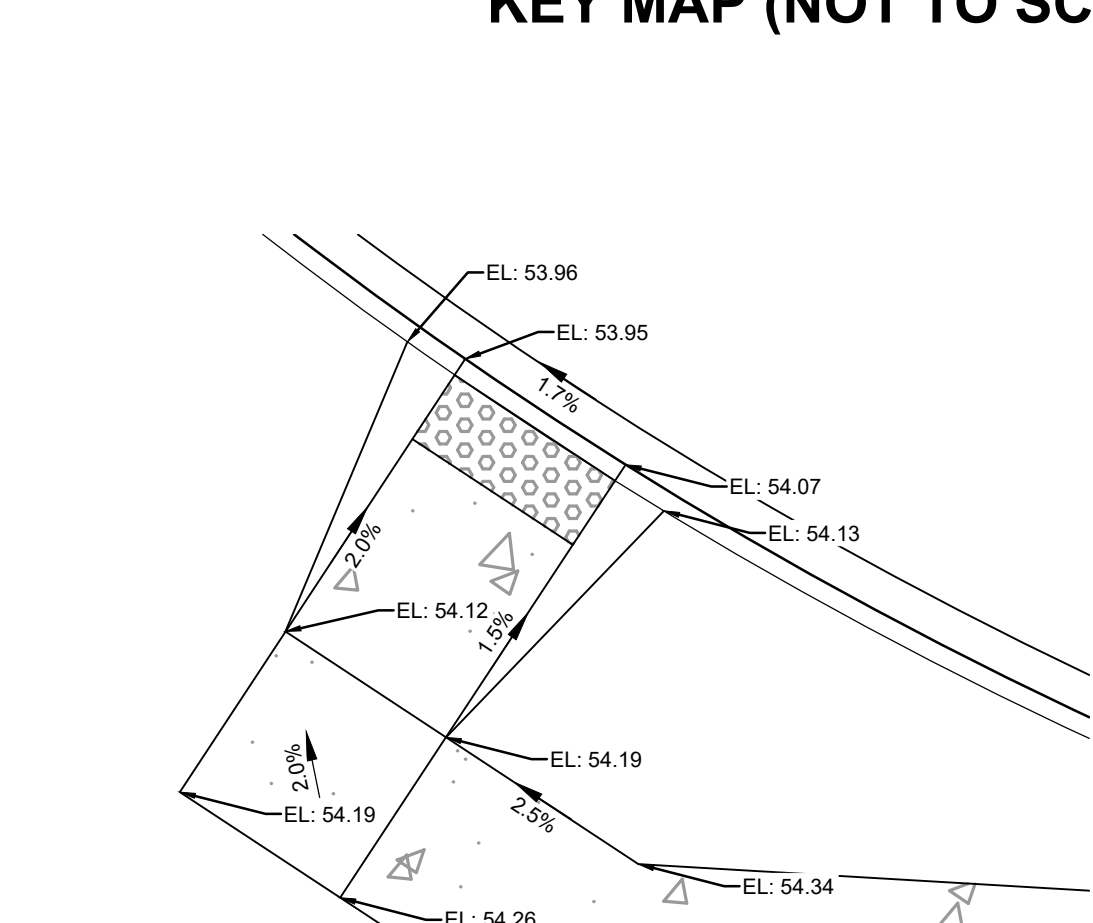
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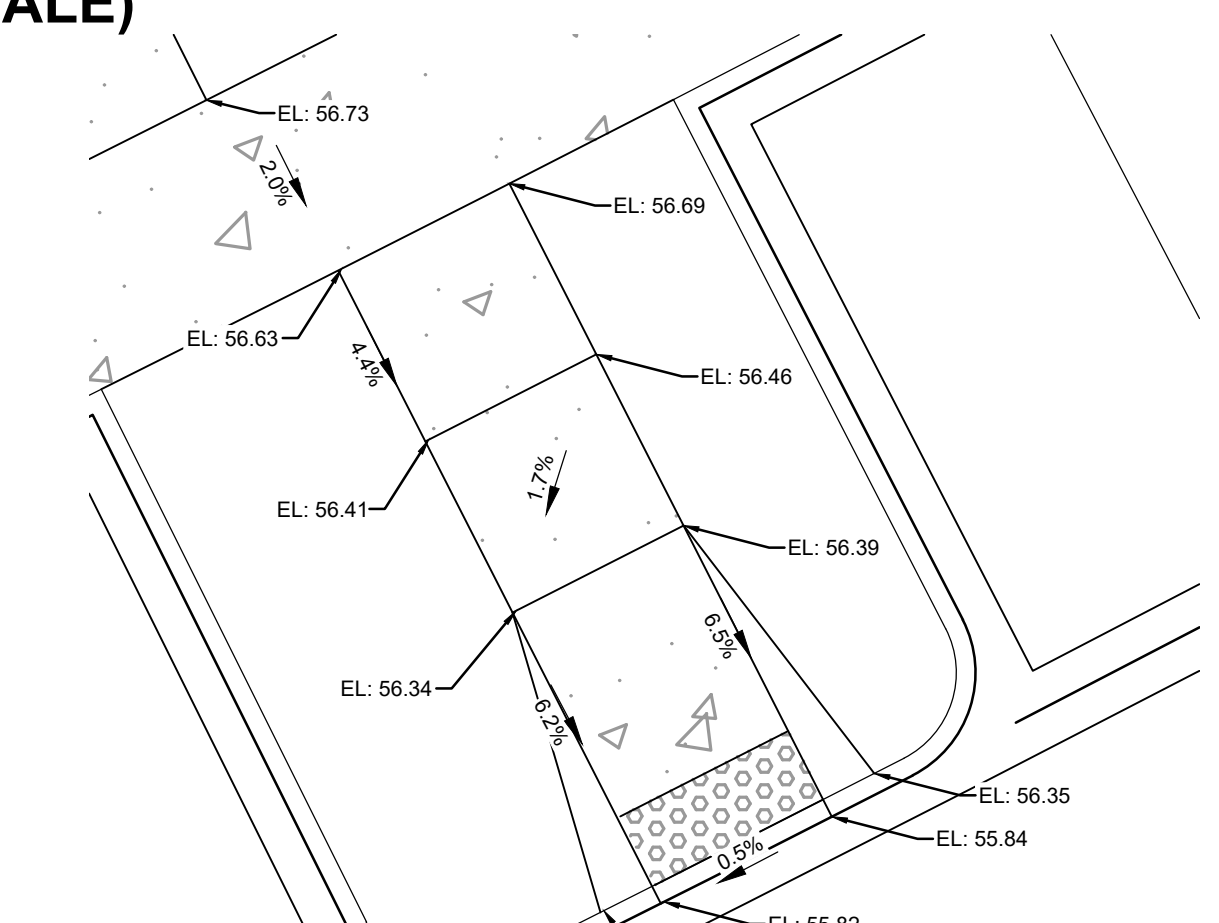
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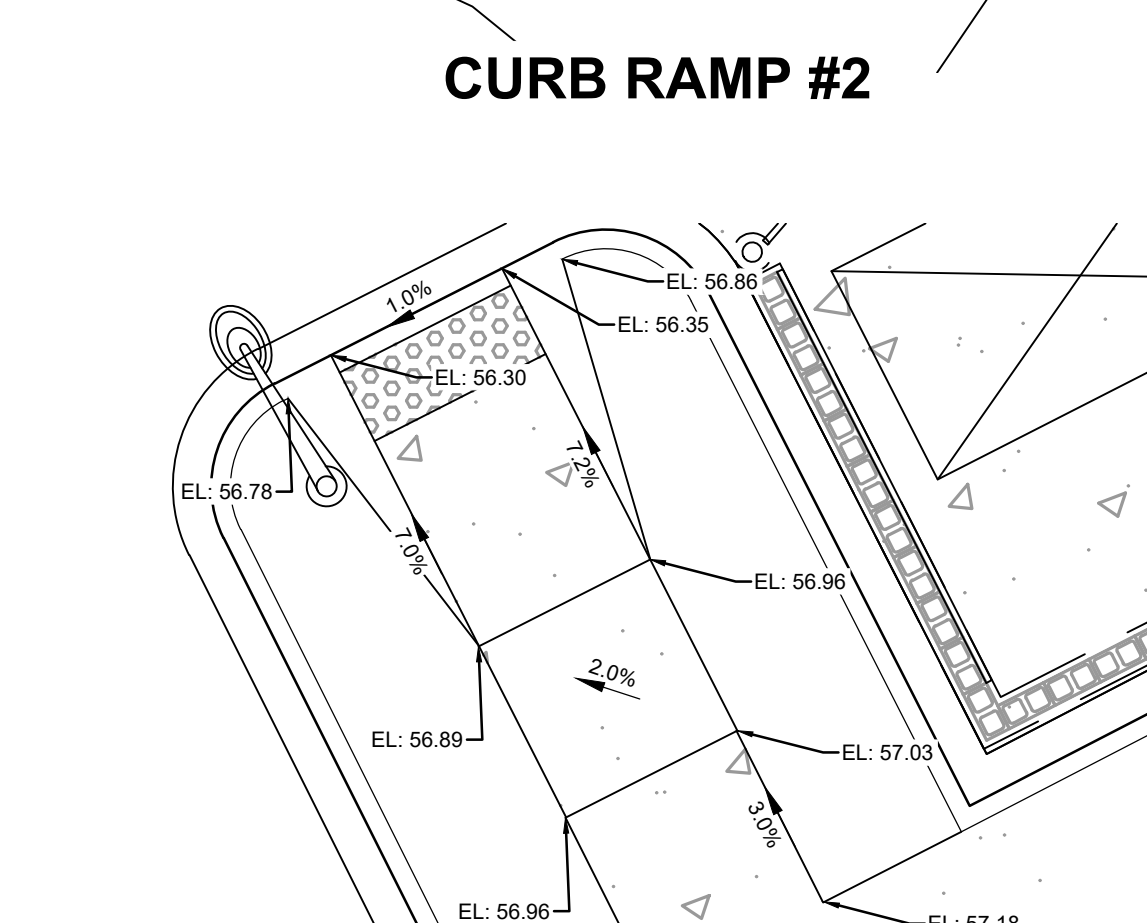
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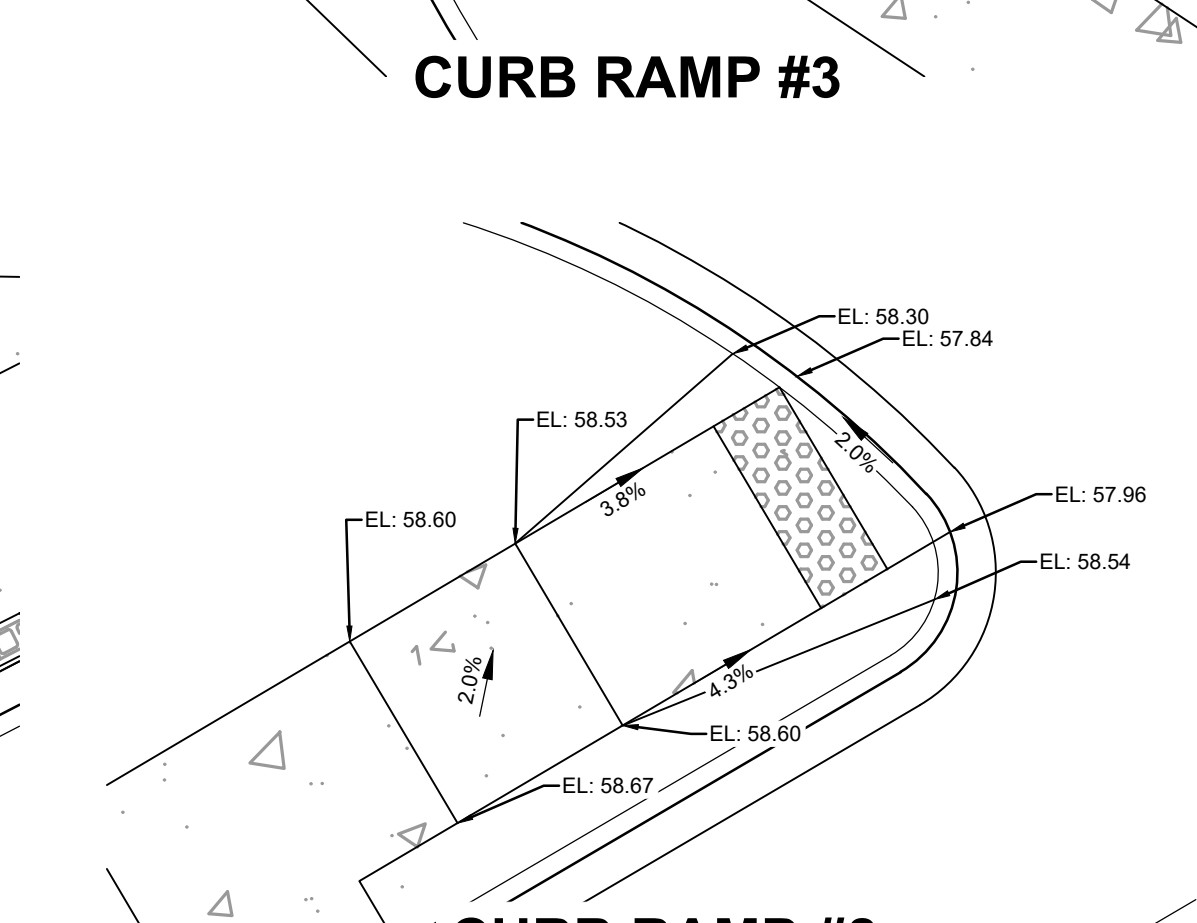
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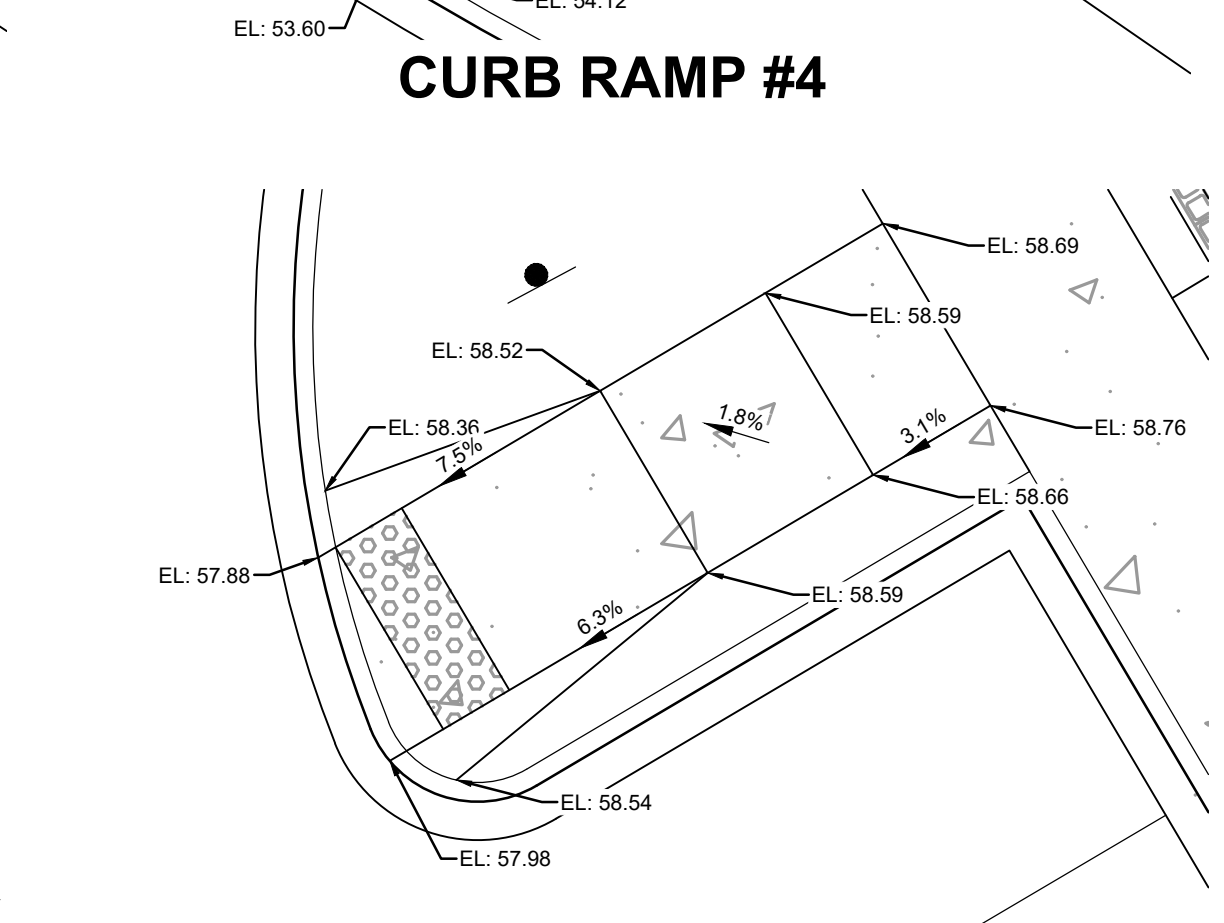
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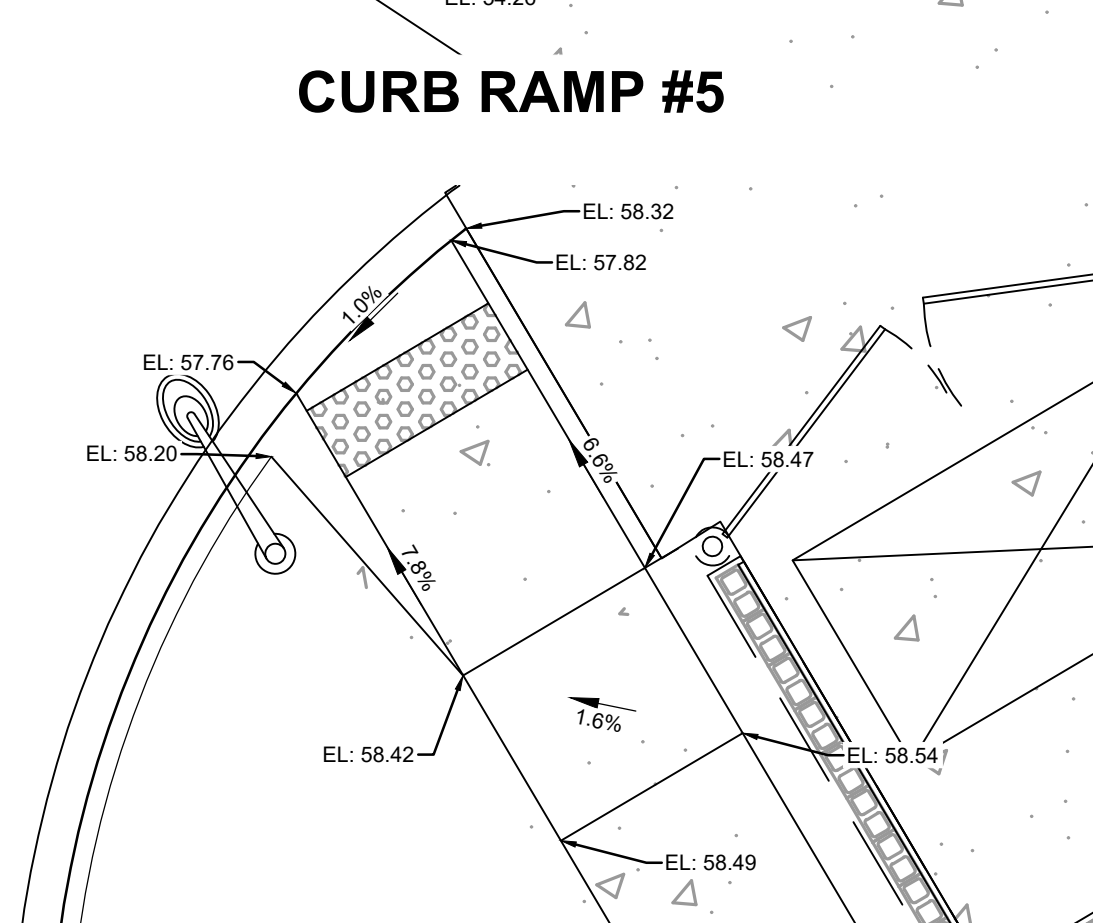
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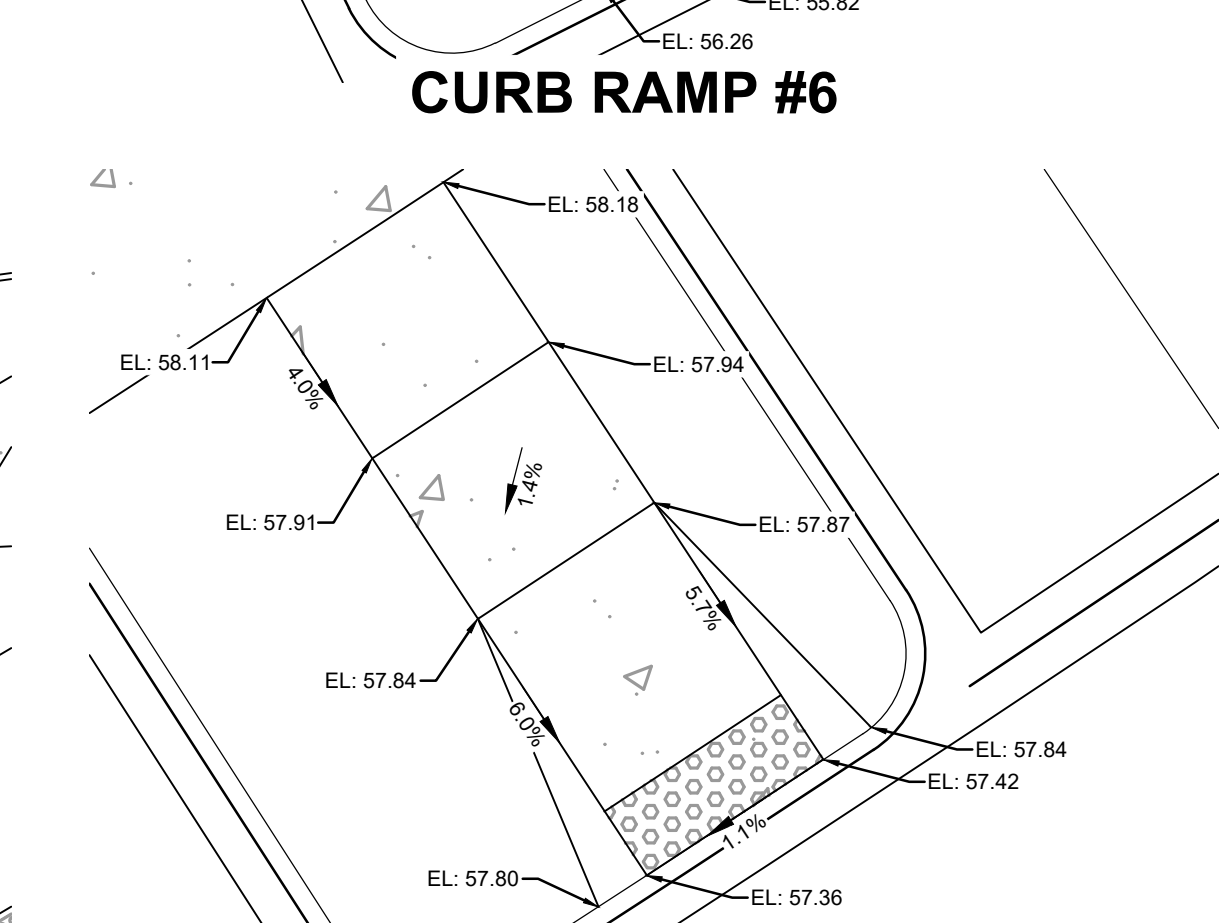
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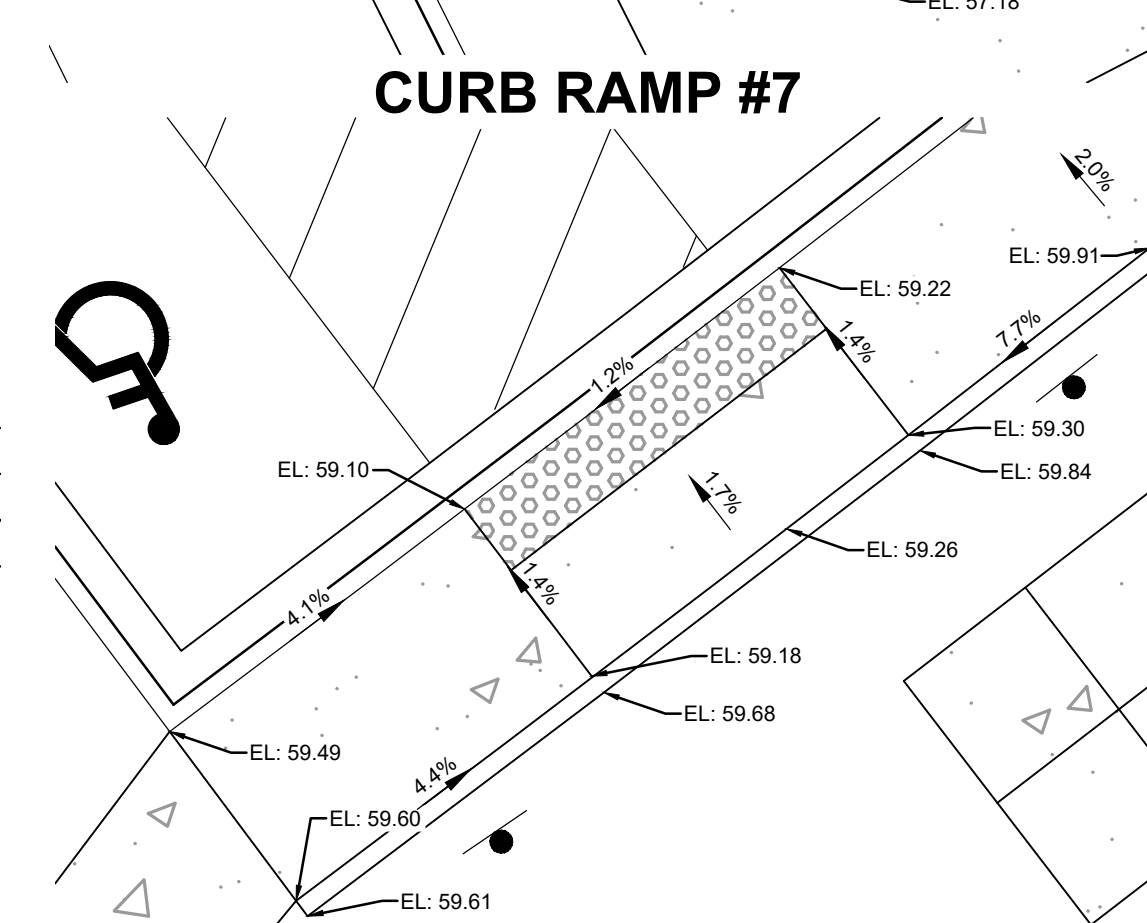
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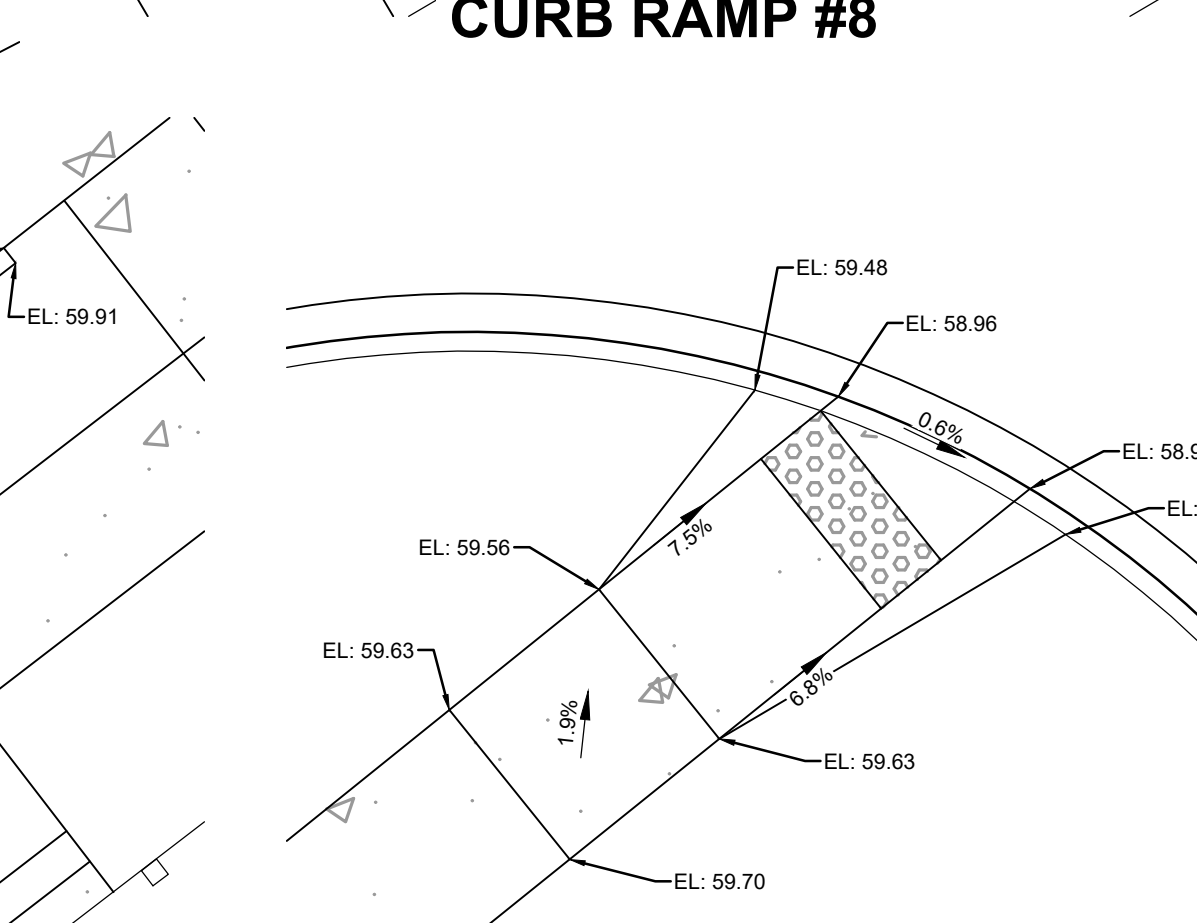
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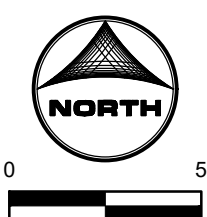
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CURB RAMP #12



CURB RAMP #13



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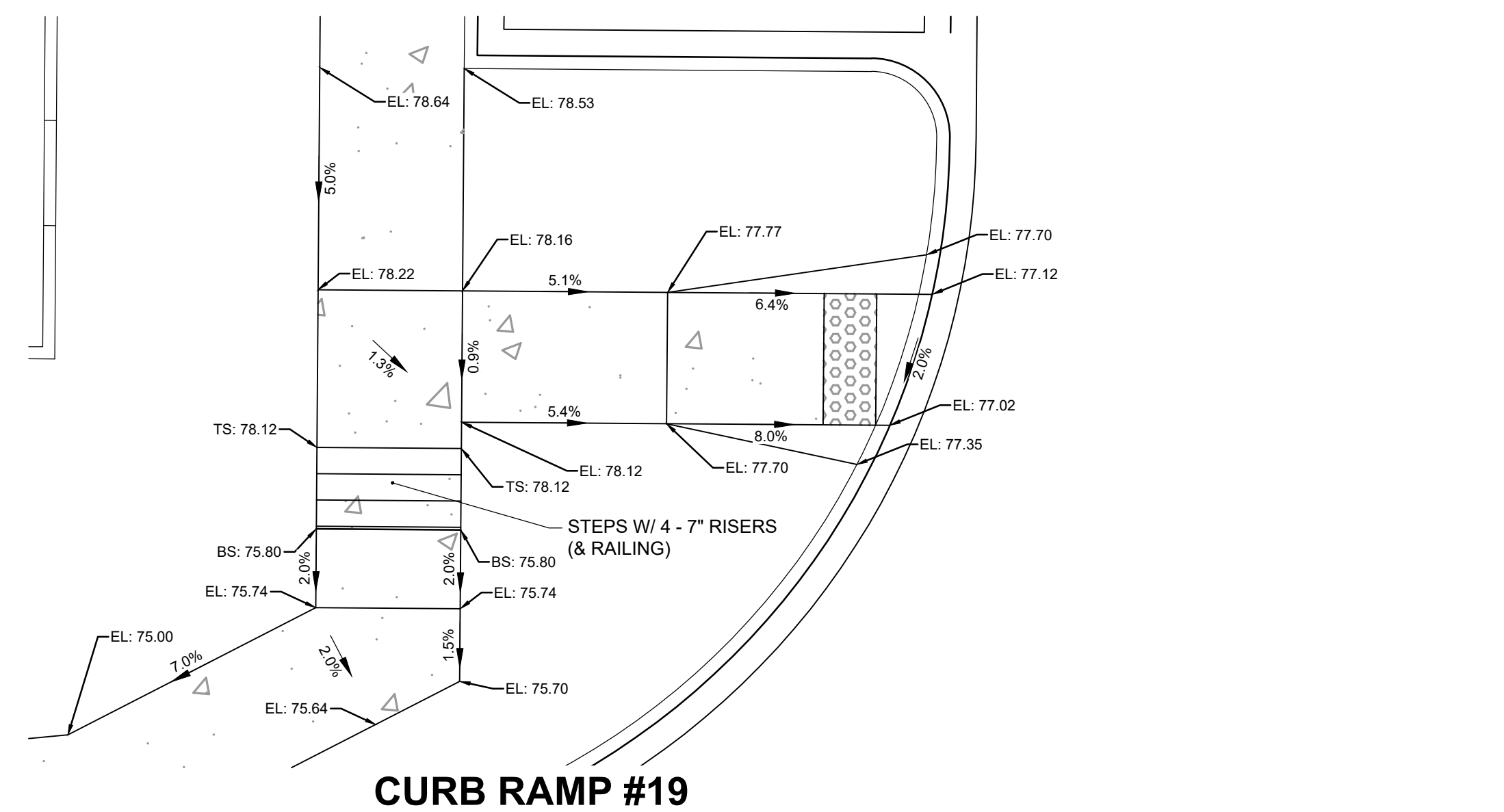
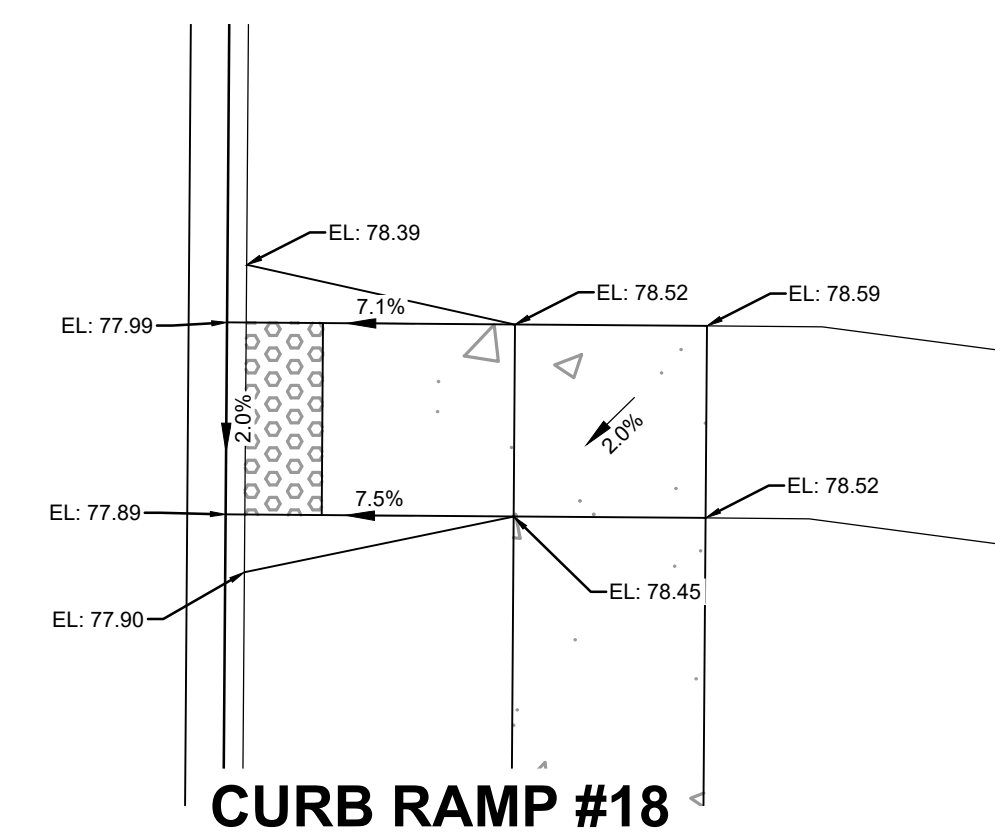
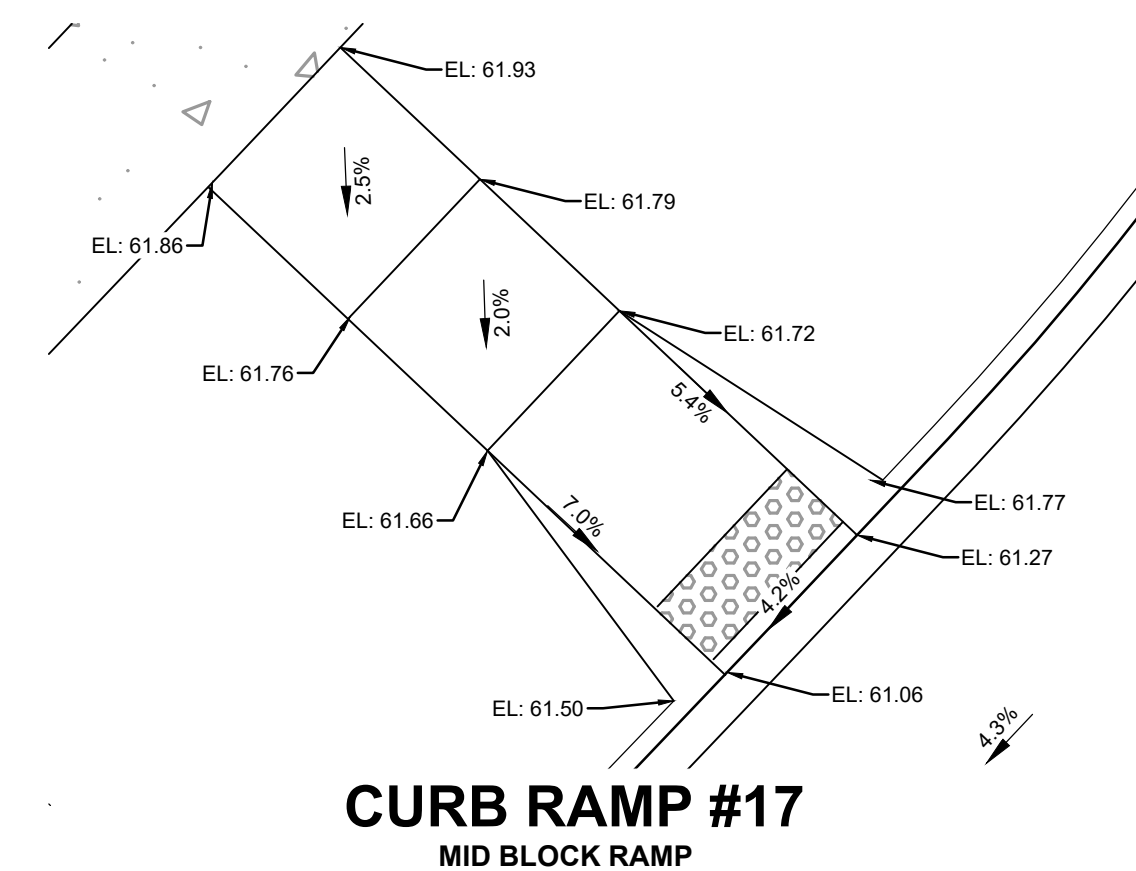
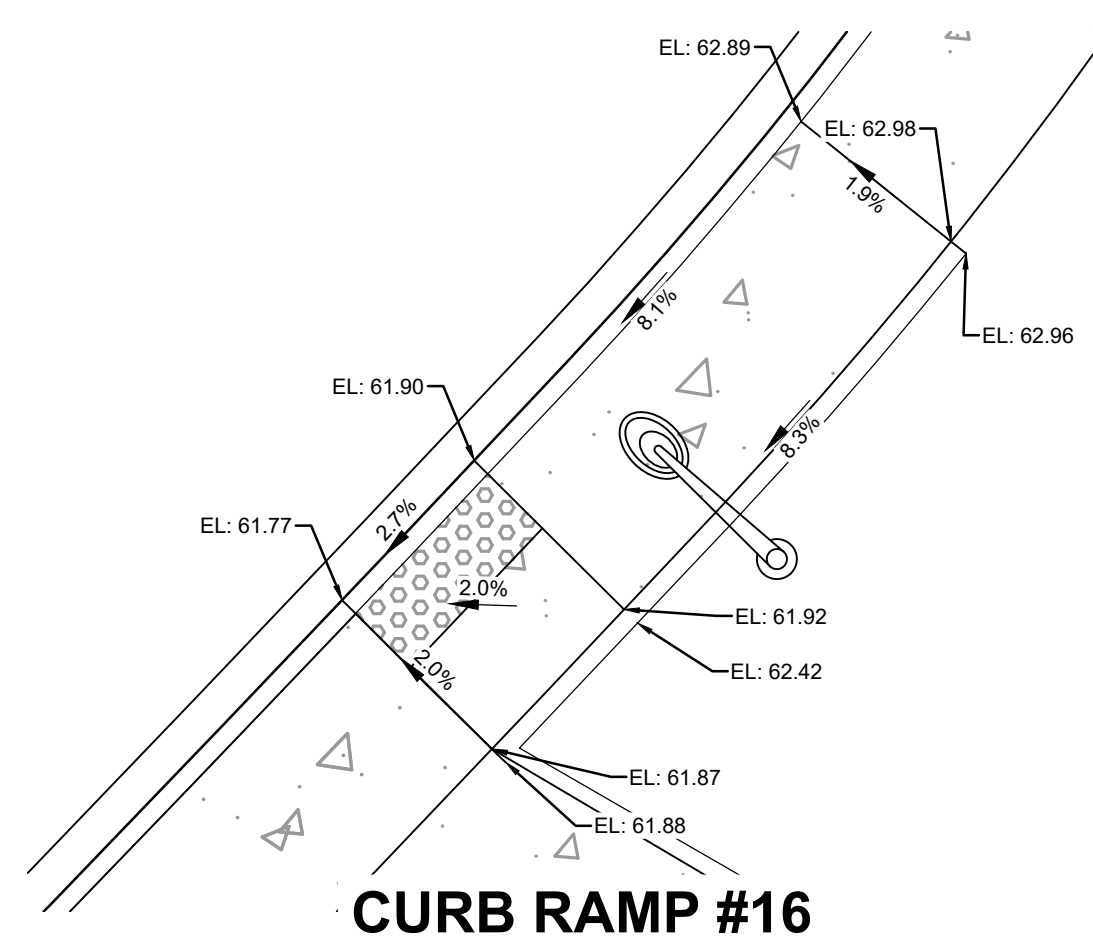


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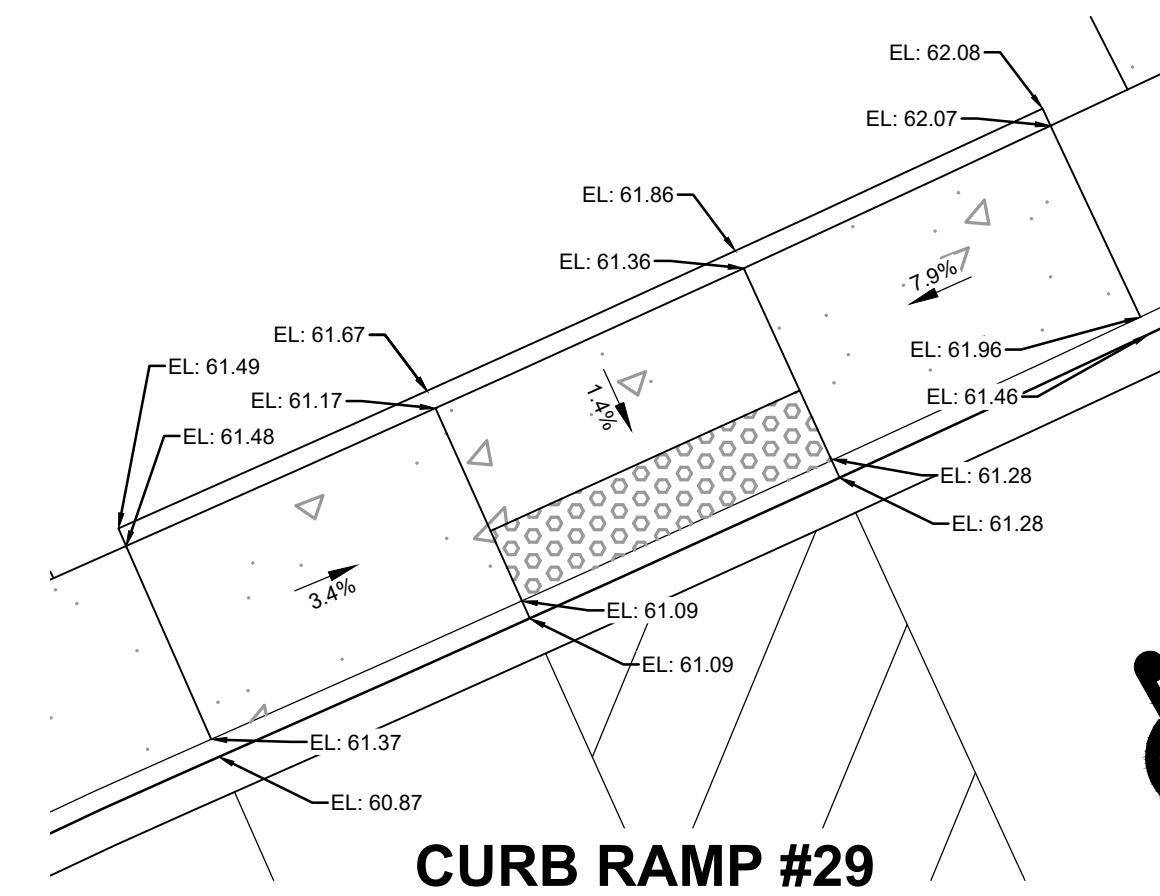
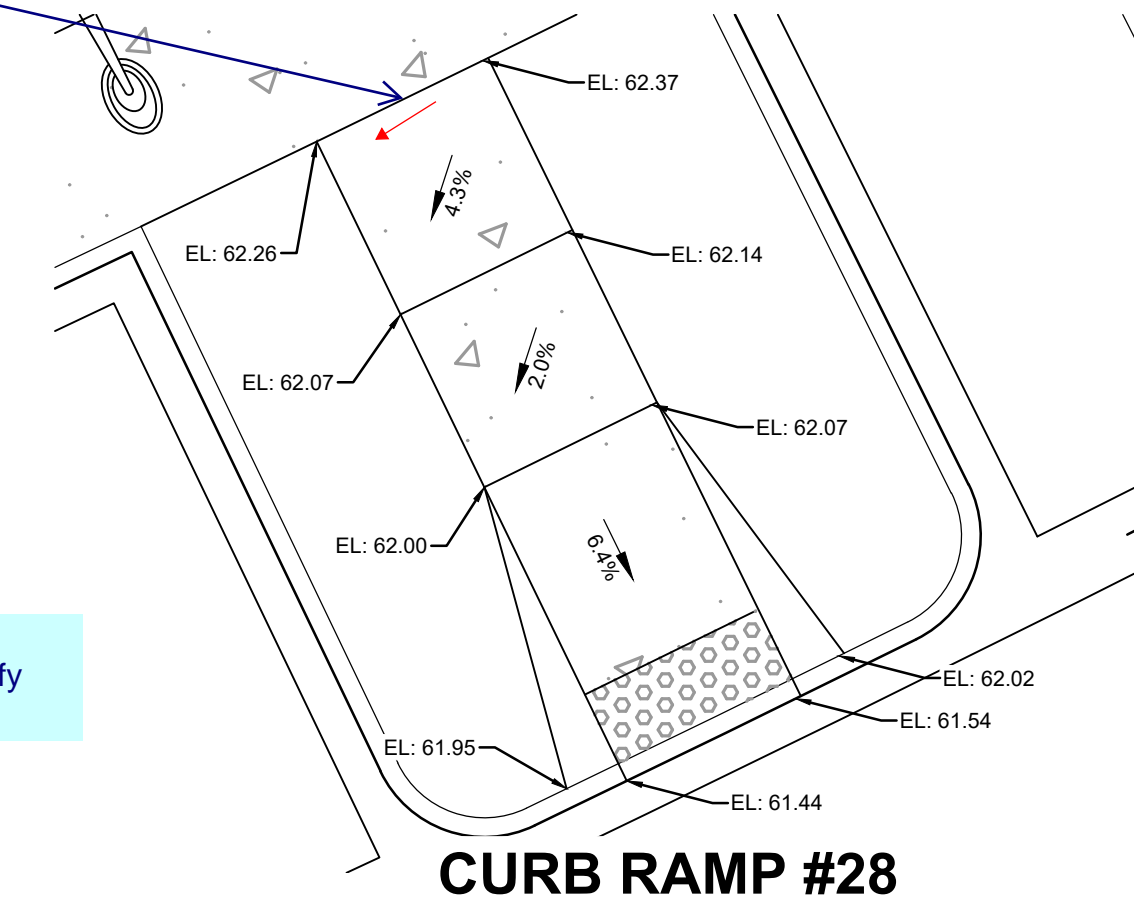
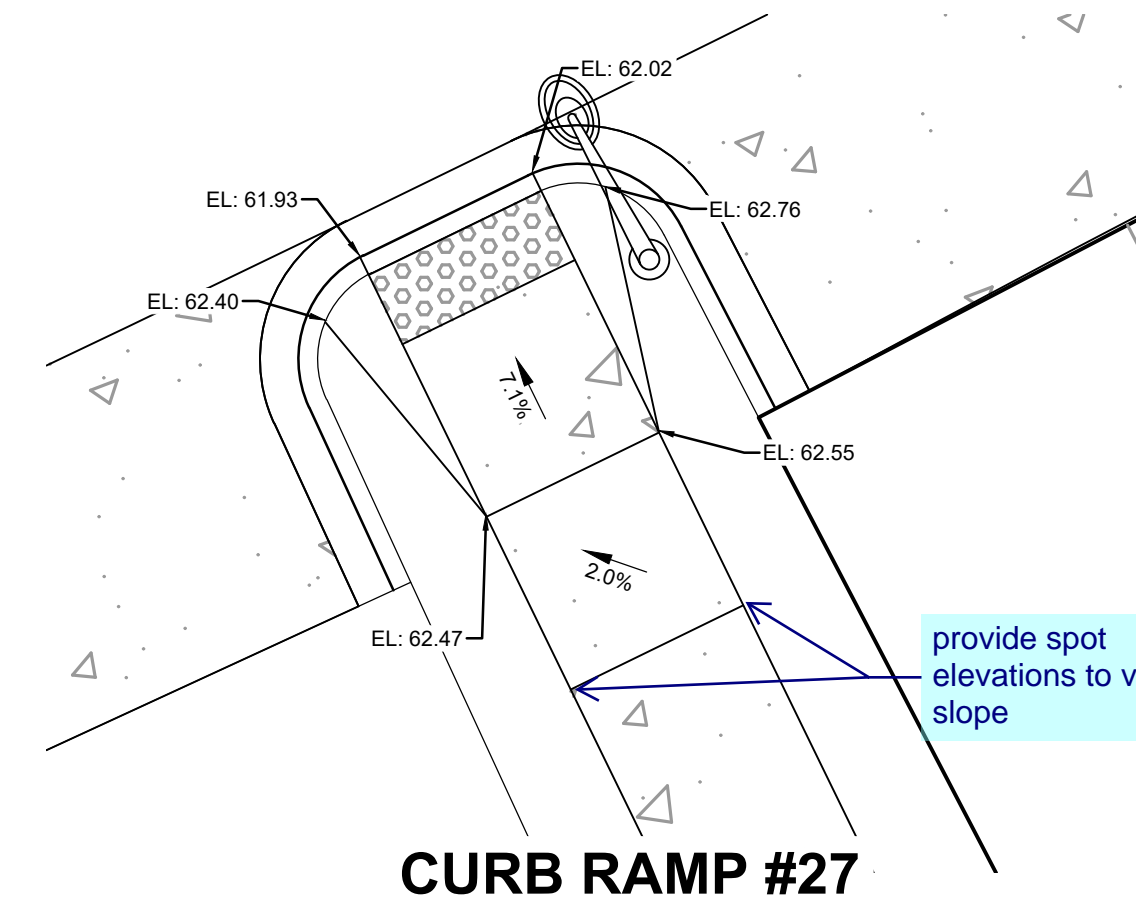
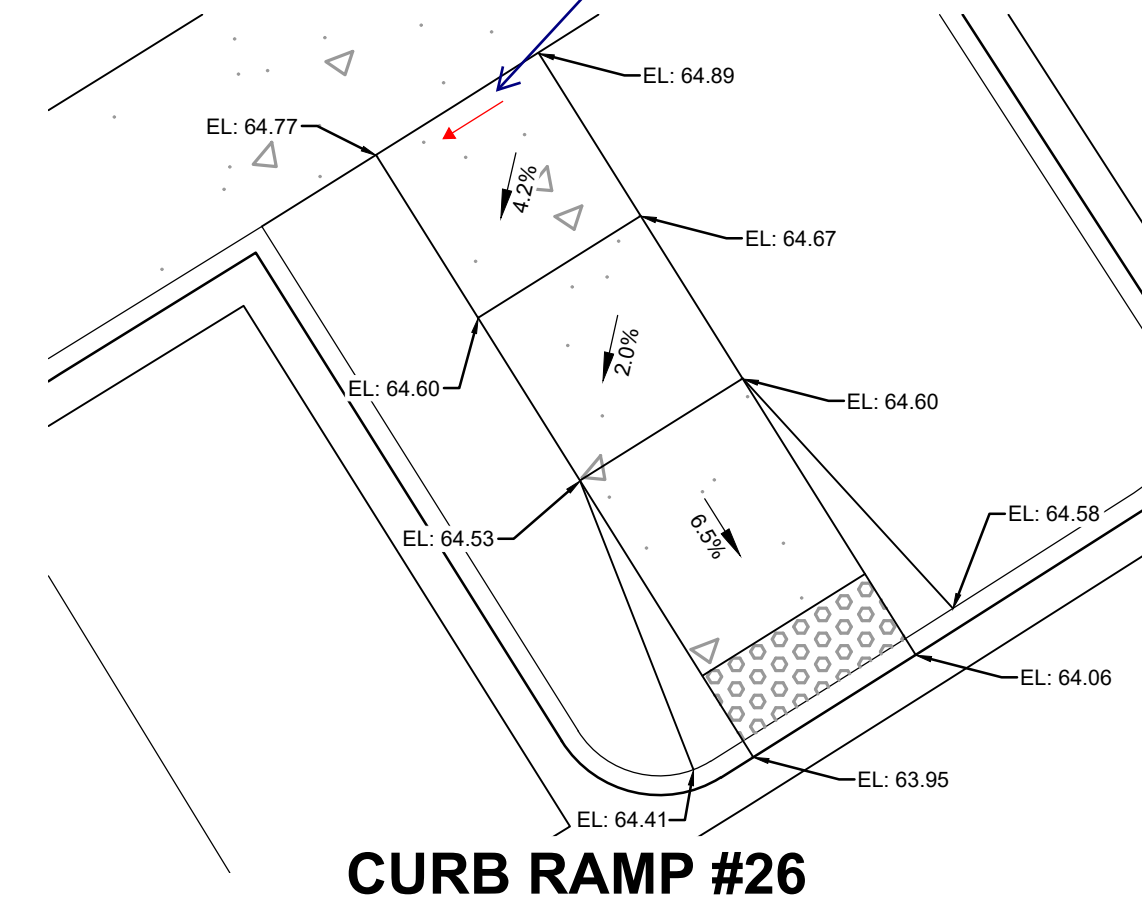
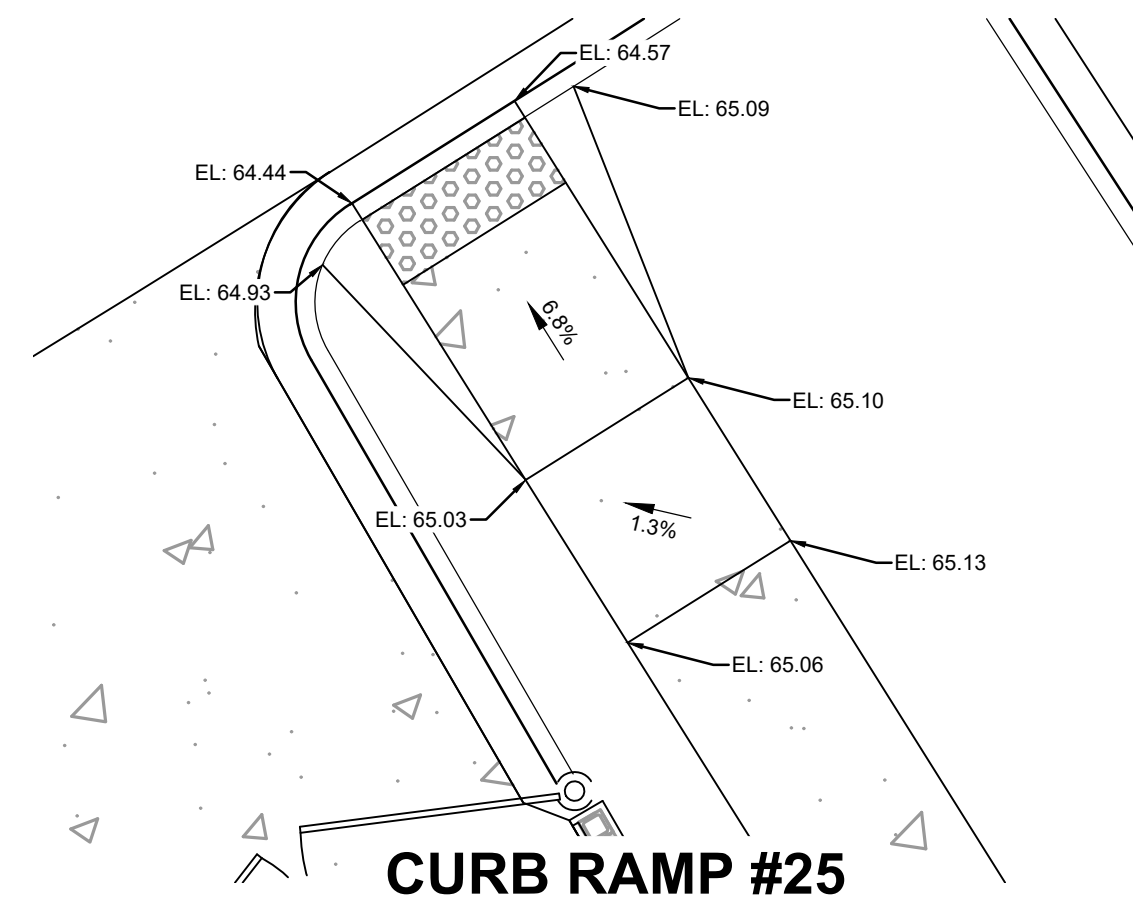
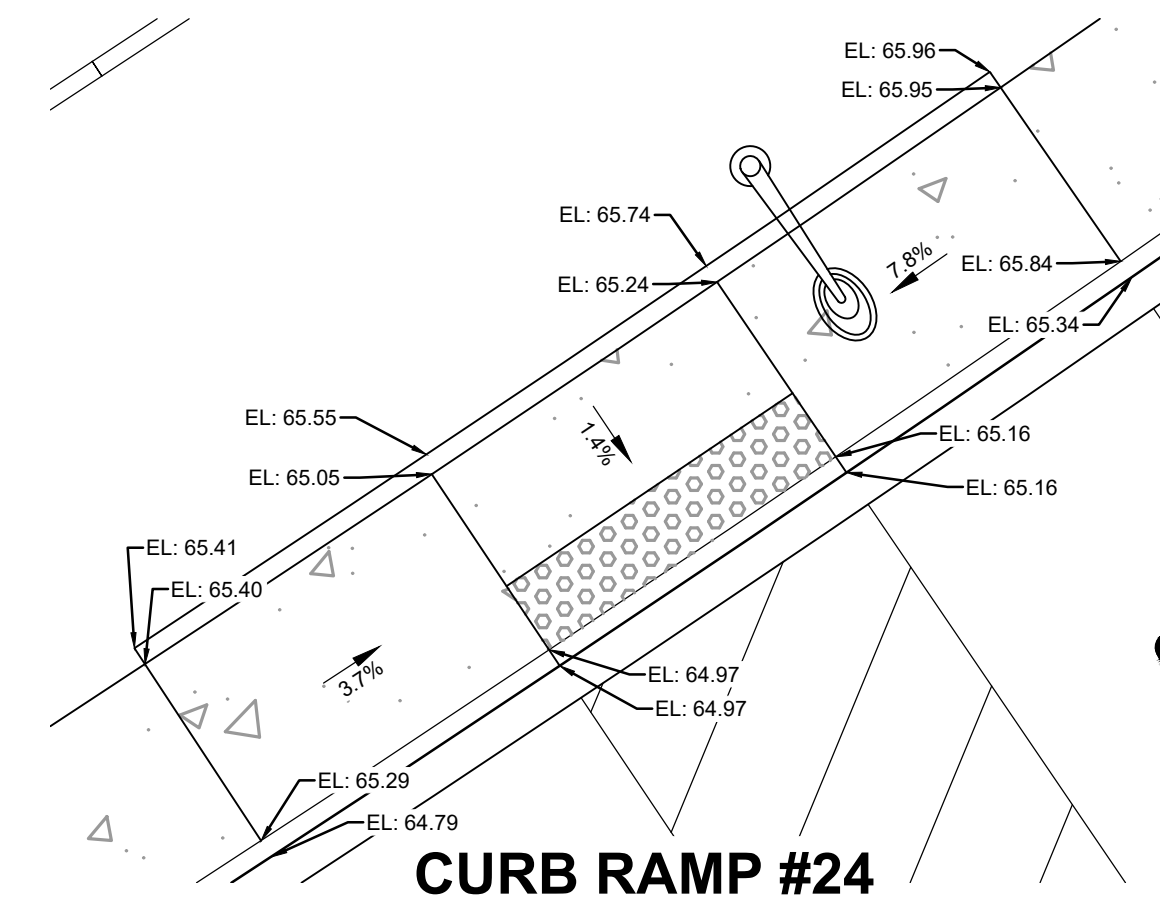
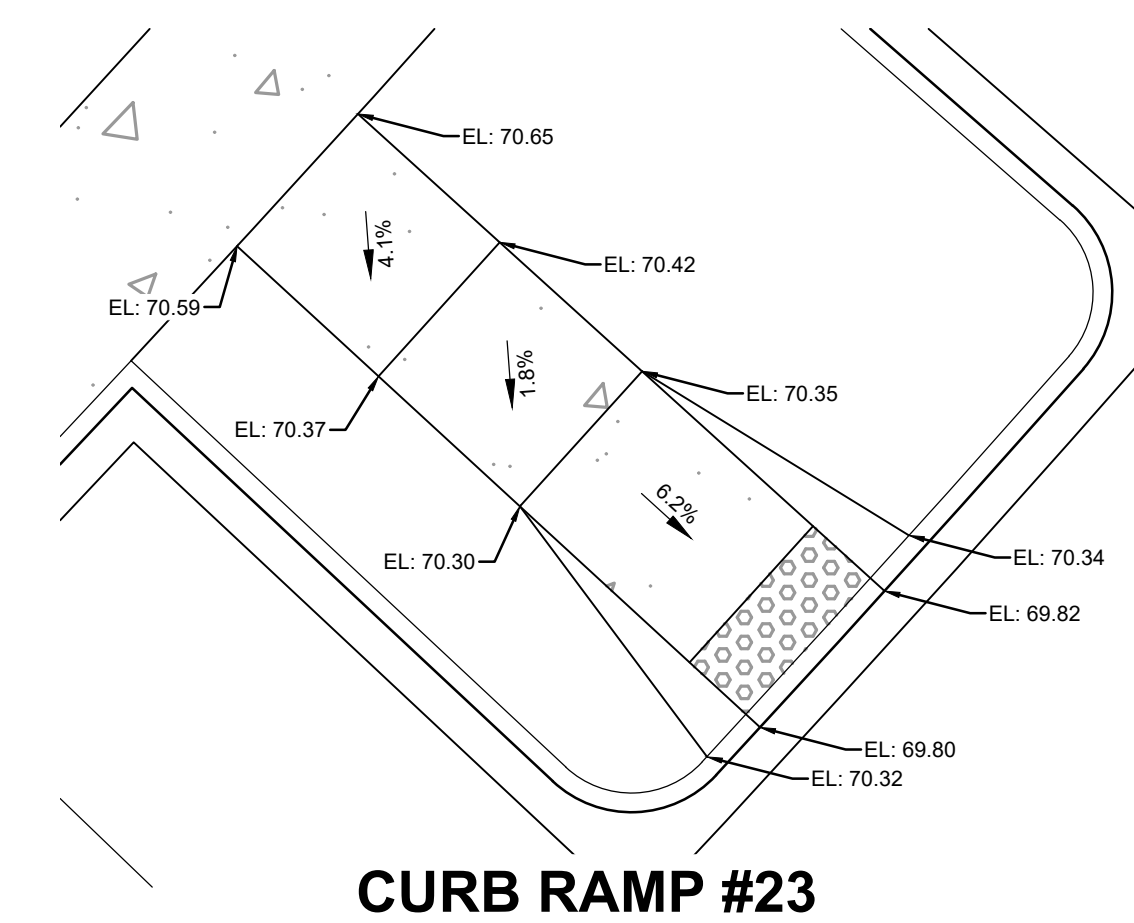
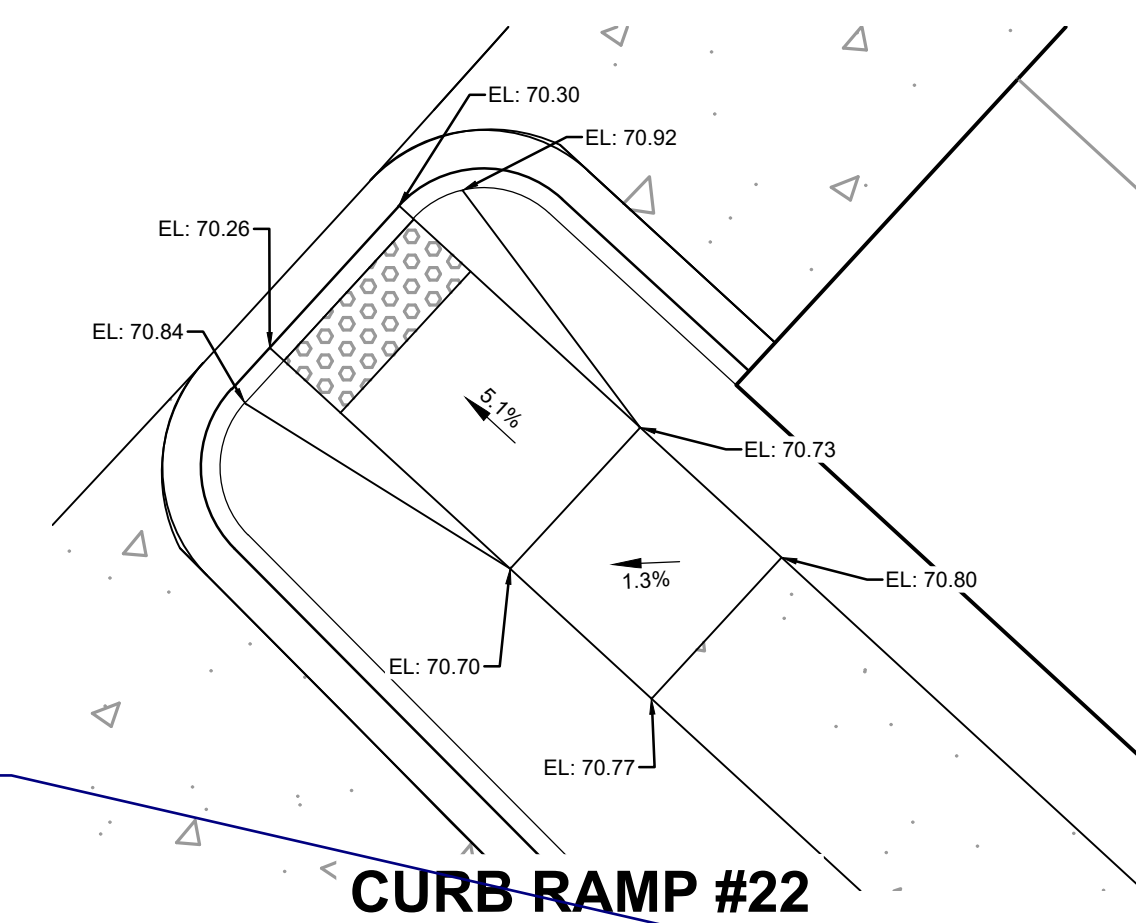
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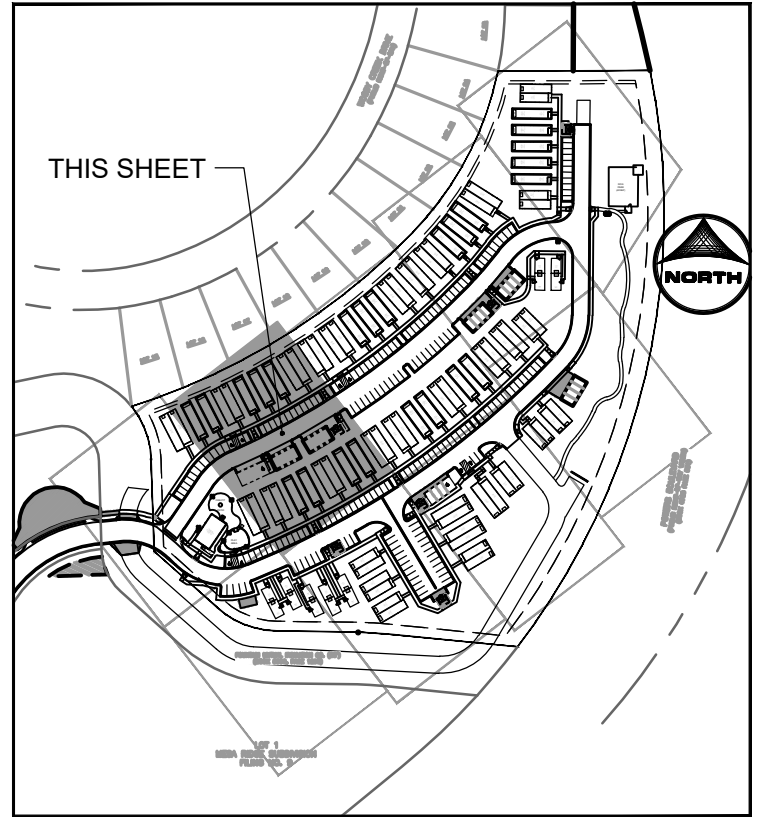
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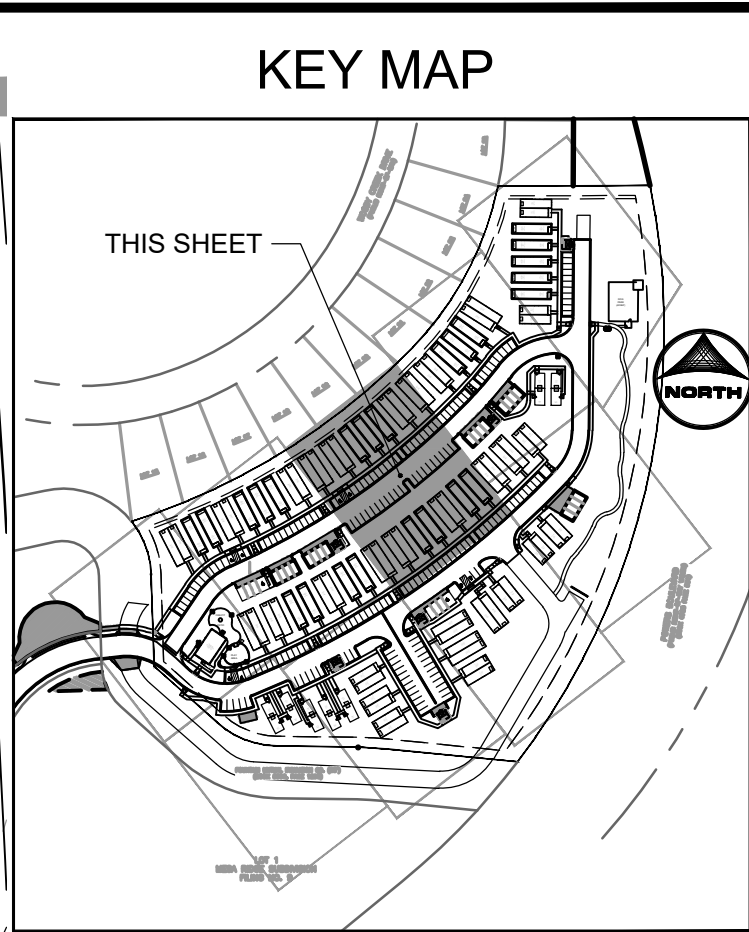
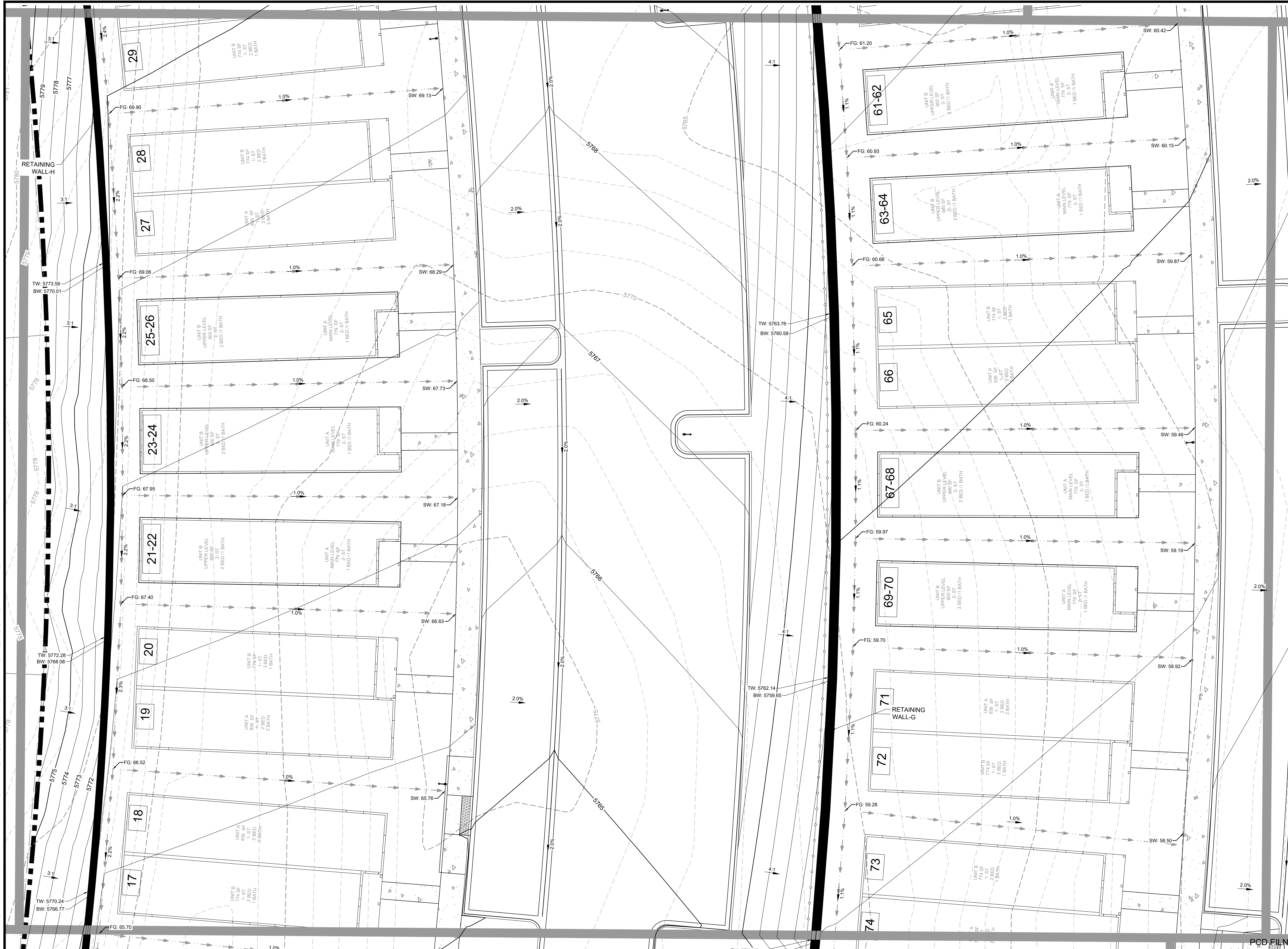


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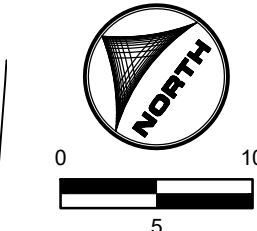
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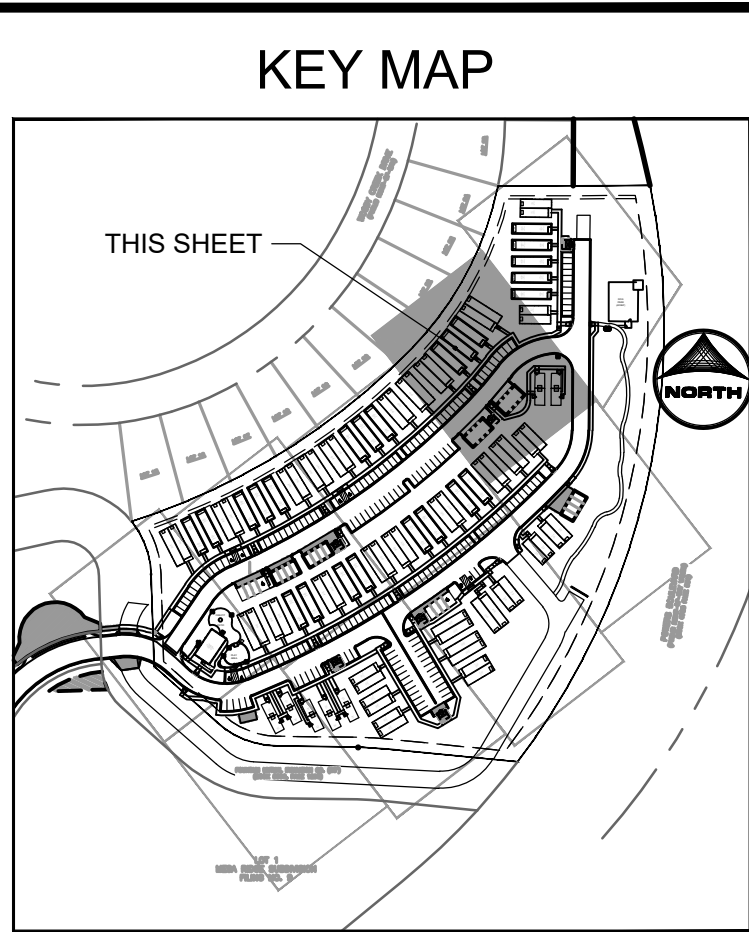
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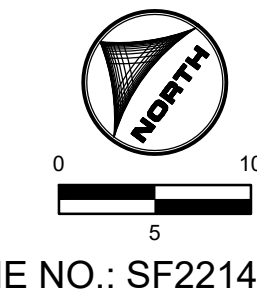
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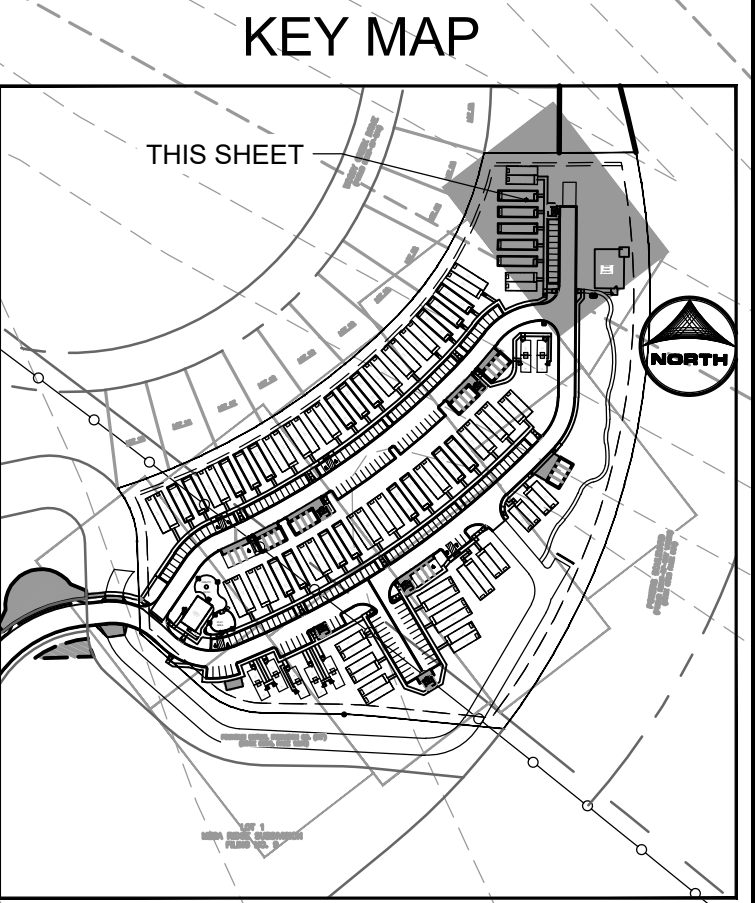
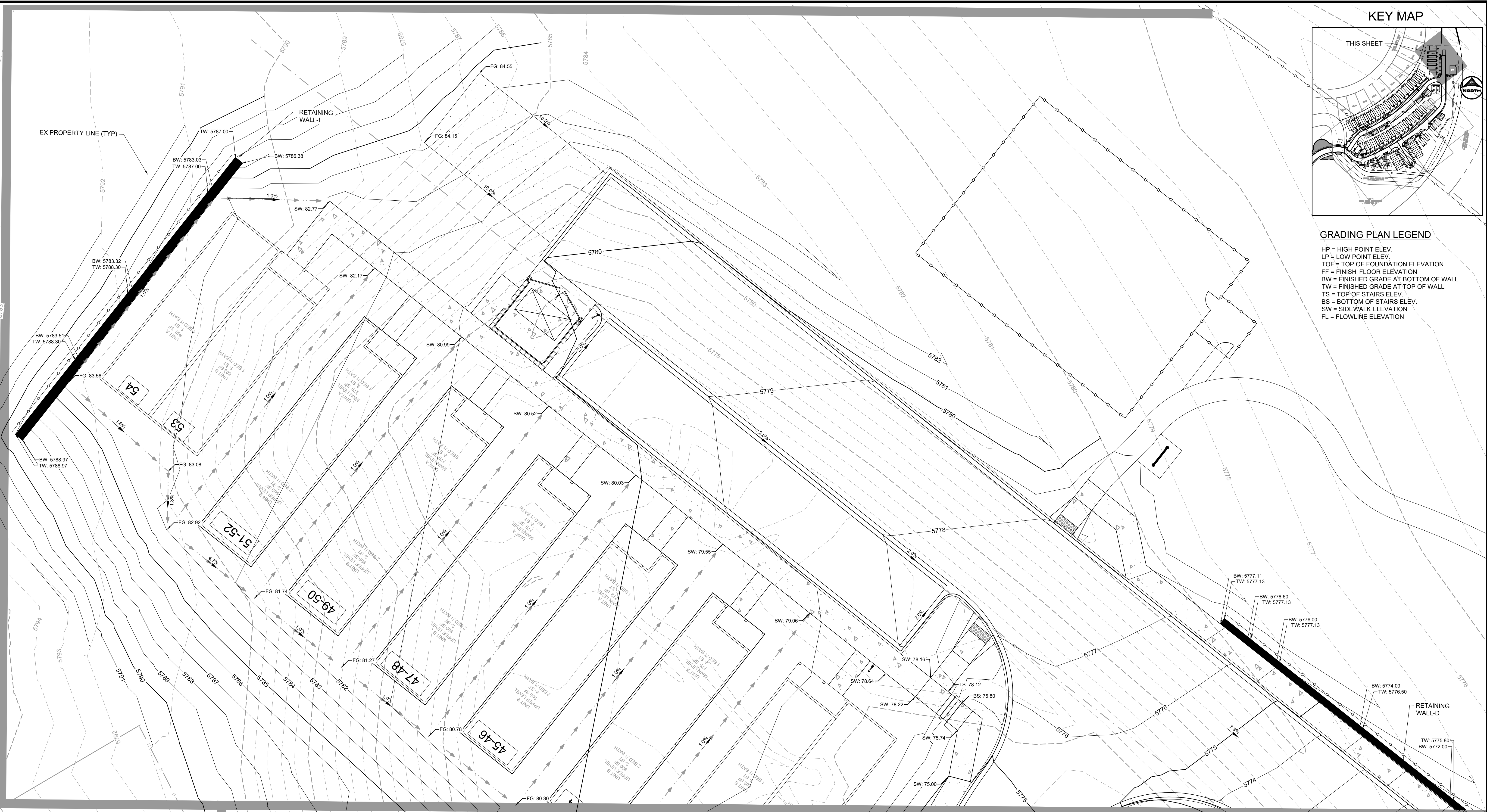
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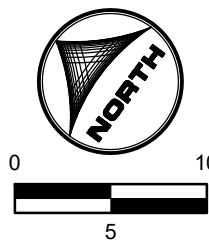
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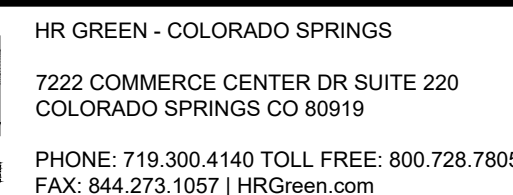
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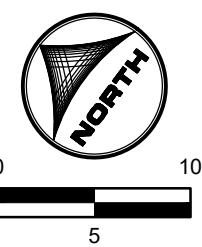
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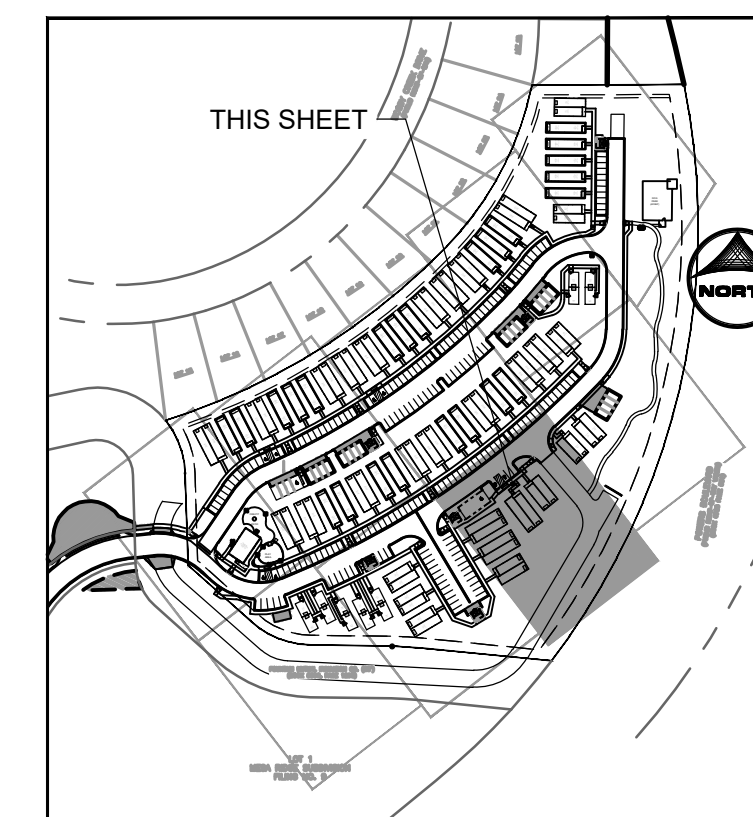
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## KEY MAP



### GRADING PLAN LEGEND

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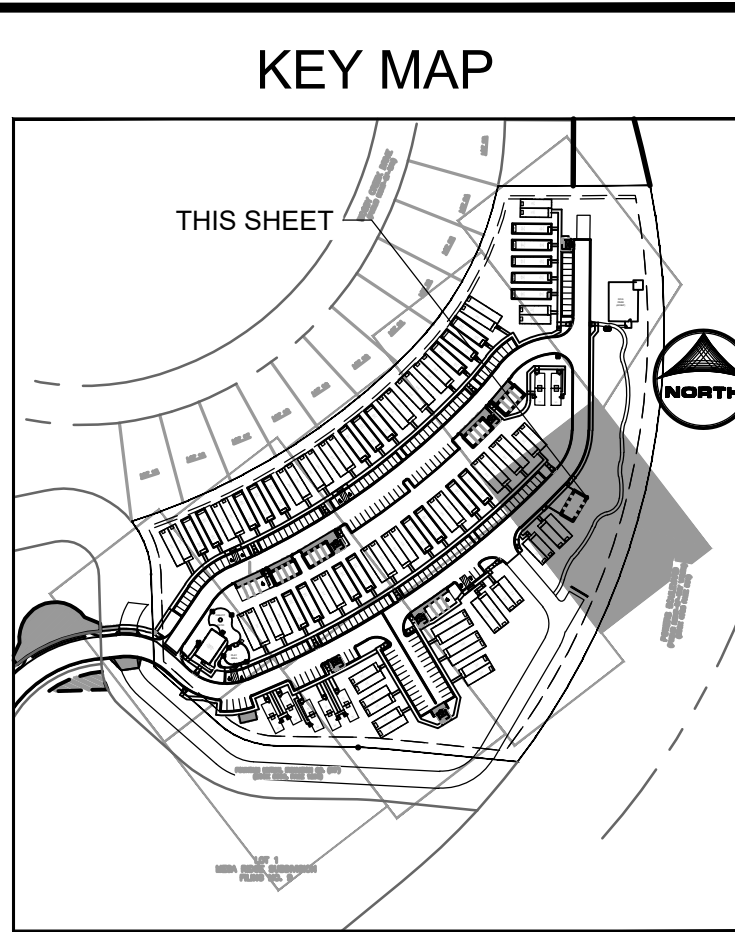


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FSD SANITARY SEWER CONSTRUCTION NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH FOUNTAIN SANITATION DISTRICT DESIGN CRITERIA AND CONSTRUCTION SPECIFICATIONS.
- CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING PIPE INVERTS PRIOR TO INSTALLATION OF NEW SANITARY SEWER SYSTEM.
- THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. PRIOR TO ANY EXCAVATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 811 AT LEAST TWO WORKING DAYS PRIOR TO DIGGING.
- ALL PROPOSED SANITARY SEWER PIPELINES WITHIN THIS PROJECT SHALL BE AIR TESTED AND VIDEO INSPECTED PER THE FOUNTAIN SANITATION DISTRICT (FSD) STANDARD SPECIFICATIONS,
- ALL AS-CONSTRUCTED RECORDS AND OTHER REQUIREMENTS OF THE SUBDIVISION PUBLIC IMPROVEMENTS AGREEMENT SHALL BE COMPLETED PRIOR TO CONSIDERATION OF ACCEPTANCE OF THE SYSTEM BY THE DISTRICT,
- DURING THE CONSTRUCTION OF THE SANITARY SEWER SYSTEM THE CONTRACTOR SHALL HAVE IN HIS/HER POSSESSION AT LEAST ONE "APPROVED FOR CONSTRUCTION" SET OF UPDATED PLANS AT ALL TIMES. APPROVED FIELD MODIFICATIONS TO PLAN SETS SHALL BE CLEARLY IDENTIFIED IN RED INK ON THE PLANS BY THE CONTRACTOR PER FIELD CONSTRUCTION. THESE AS-BUILT CHANGES SHALL BE DATED AND SUBMITTED TO THE ENGINEER OF RECORD. THE ENGINEER OF RECORD SHALL PREPARE A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS AND DELIVER THE SETS TO THE FOUNTAIN SANITATION DISTRICT PRIOR TO FINAL ACCEPTANCE OF THE SANITARY SEWER SYSTEM.
- WITH PRIOR APPROVAL, THE CONTRACTOR SHALL PROVIDE 3 DEGREE BENDS ON ALL CURVILINEAR SANITARY SEWER PIPE AT THE LOCATIONS DETAILED ON THE APPROVED CONSTRUCTION PLANS.
- SANITARY SEWER SERVICE LINES SHALL BE LOCATED PER THE DETAIL ON THE UTILITY SERVICE PLAN, THE DIMENSIONS GIVEN AT EACH LOT WHERE A TYPICAL INSTALLATION IS REQUIRED OR AT THE DIRECTION OF THE FOUNTAIN SANITATION DISTRICT REPRESENTATIVE.
- SERVICE STUBS SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET INTO THE PROPERTY, UNLESS OTHERWISE SHOWN, AND THE END OF THE STUB SHALL BE MARKED WITH A 2"X4"X12' STEEL OR WOODEN POST PAINTED GREEN.
- OVERLOT GRADING AND STREET SUBGRADE MUST BE WITHIN ± ONE (1) FOOT PRIOR TO ANY UTILITY INSTALLATION.
- CONTRACTOR TO CONSTRUCT ALL MANHOLES AND STRUCTURES TO FINISHED GRADE.
- ALL SANITARY SERVICE PIPE TO BE GREEN GASKET SDR35.
- ALL 3' BENDS SHALL BE A SPIGOT X BELL FITTING. THE SPIGOT END OF EACH BEND FITTING SHALL BE INSERTED IN THE BELL OF A FULL PIECE (13 FEET) OF ASTM D3034 FOR PVC, SDR 26 OR 35 PIPE WITH THE SUBSEQUENT UPSTREAM PIPE SEGMENT BEING A FULL PIECE OF PIPE. EACH JOINT OF PIPE MAY BE DEFLECTED TO A MINIMUM RADIUS OF 200 FEET IN CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS BETWEEN EACH BEND FITTING. THE CONTRACTOR SHALL USE EXTREME CARE AND EXPERT WORKMANSHIP TO PROVIDE PROPER HORIZONTAL AND VERTICAL ALIGNMENT THROUGH SECTIONS WITH 3' BENDS.
- MINIMUM RADIUS FOR SANITARY SEWER WITHOUT JOINT FITTINGS IS 267 FEET USING A 14-FOOT-LONG PIPE SEGMENT.
- CONTRACTOR SHALL BE AWARE THAT WHEN DEBRIS IS DROPPED INTO MANHOLES AND OTHER STRUCTURES, THEY ARE TO IMMEDIATELY REMOVE THIS TO ELIMINATE THE POSSIBILITY OF PROPERTY DAMAGE DUE TO THE DEBRIS-CAUSING BACKUP INTO PRIVATE PROPERTIES. IF AND WHEN IT IS DETERMINED THAT DEBRIS CAUSED A BACKUP, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DAMAGES.
- NO TREES ARE TO BE PLANTED WITHIN ANY SEWER EASEMENT OR WITHIN FIFTEEN (15) FEET OF ANY MANHOLE OR PIPE.
- ACCESS TO MANHOLES AND INLETS SHALL BE MADE AVAILABLE FOR MAINTENANCE PURPOSES.
- ALL MANHOLES SHALL RECEIVE AN EXTERIOR WATERPROOF COATING OF COAL TAR EPOXY, ICS DEVCOE "DEV TAR," OR APPROVED EQUIVALENT.
- ALL MANHOLES SHALL RECEIVE AN EXTERIOR JOINT WRAP TO BEST ASSURE WATERTIGHTNESS. REFER TO THE FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
- ALL SANITARY SEWER MANHOLES ON THIS PROJECT SHALL BE SUBJECT TO VACUUM TESTING PRIOR TO THE CONSIDERATION OF ACCEPTANCE BY THE DISTRICT. AT THE DISTRICT'S SOLE OPTION, ADDITIONAL VACUUM TESTING MAY BE REQUIRED DURING AND PRIOR TO THE CONCLUSION OF THE WARRANTY PERIOD FOR THIS WORK. REFER TO THE FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICATIONS FOR TESTING REQUIREMENTS.
- CLASS "B" GRANULAR BEDDING SHALL BE UTILIZED FOR ALL WASTEWATER PIPELINE CONSTRUCTION ON THIS PROJECT. AS A MINIMUM, THE CLASS "B" BEDDING SHALL BE COMPRISED OF 3/4-INCH CRUSHED ROCK. LARGER AGGREGATE AND/OR ALTERNATIVE GRADATIONS MAY BE NECESSARY IN ORDER TO ADDRESS TRENCH SUBGRADE STABILIZATION CONDITIONS FOUND UPON EXCAVATION OF THE TRENCH IN ADDITION TO THE SPECIFIED CLASS "B" PIPE BEDDING.
- WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE 3' BENDS ON ALL CURVILVEAR SANITARY SEWER PIPE AT THE LOCATIONS SHOWN ON THE PLANS.
- SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC), SDR 35, IN ACCORDANCE WITH ASTM D3034 FOR DEPTHS UP TO SIXTEEN (16) FEET. SANITARY SEWER LINES WITH COVER EXCEEDING SIXTEEN (16) FEET FROM FINISHED GRADE SHALL BE POLYVINYL CHLORIDE (PVC), SDR 26, IN ACCORDANCE WITH ASTM D3034. ALL SDR 26 PIPE SHALL BE BEDDED IN CLASS B BEDDING MATERIAL OR WITH RECLAIMED CONCRETE MATERIAL MEETING SANITATION DISTRICT STANDARD.
- MANHOLES SHALL BE STANDARD PRECAST CONCRETE.
- ALL SANITARY SEWER MANHOLES SHALL NOT HAVE ANY ACCESS STEPS INSTALLED INSIDE THE MANHOLE. ANY PRECAST SANITARY MANHOLES WITH STEPS SHALL HAVE THE STEPS REMOVED BY SAW CUTTING STEPS FLUSH TO THE MANHOLE AND ADDING EPOXY TO THE CUT ENDS OF THE STEPS.
- SANITARY SEWER MH COVERS SHALL BE LOCATED ALONG THE CENTERLINE OF THE STREET OR AS CLOSE TO THE CENTERLINE AS IS PRACTICAL.
- IF GROUNDWATER IS ENCOUNTERED DURING TRENCHING THEN THE TRENCH SHALL BE OVEREXCAVATED AND DEWATERED. WELL POINTS SHALL BE PLACED AS NECESSARY TO PREVENT WATER IN THE TRENCH. THE GROUNDWATER LEVEL SHALL BE KEPT 12-INCHES OR MORE BELOW THE UTILITY BEING INSTALLED. OVEREXCAVATED TRENCH DEPTH SHALL BE BACKFILLED WITH 2-INCH MINUS ROCK WITH <5% PASSING NO. 4 SIEVE. DEWATERING SHALL CONTINUE UNTIL SUCH TIME AS IT IS SAFE TO ALLOW THE WATER TABLE TO RISE IN THE EXCAVATION. PIPE TRENCHES SHALL CONTAIN ENOUGH BACKFILL TO PREVENT PIPE FLOATATION.
- IN AREAS WHERE SANITARY SEWER WILL BE PLACED ON FILL THE CONTRACTOR SHALL SUPPLY THE FOUNTAIN SANITATION DISTRICT WITH SOIL DENSITY REPORTS PRIOR TO COMMENCING CONSTRUCTION OF THE PIPELINES. THE DENSITY REPORTS SHALL DEMONSTRATE THAT ALL FILLS PLACED WITHIN PIPELINE CONSTRUCTION SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY OR PER GEOTECHNICAL RECOMMENDATION, WHICHEVER STANDARD IS STRICTER. ADDITIONALLY, FILLS SHALL BE PLACED TO A MINIMUM OF 6' ABOVE THE TOP OF THE PROPOSED PIPE PRIOR TO CONSTRUCTION OF THE PIPELINES.
- THE SANITARY SEWER SERVICES TO BE CONSTRUCTED IN THIS PROJECT SHALL BE CONNECTED TO THE MAIN WITH IN-LINE WYE FITTINGS IN ACCORDANCE WITH FOUNTAIN SANITATION DISTRICT DESIGN CRITERIA AND CONSTRUCTION SPECIFICATIONS. EACH WYE FITTING WILL BE LOCATED NO LESS THAN 3- FEET CLEAR FROM AN ADJACENT SERVICE LINE WYE FITTING. IF TWO (2) SERVICE LINES ARE LOCATED ON THE SAME SIDE OF THE WASTEWATER COLLECTION SYSTEM MAIN, THERE SHALL BE NO LESS THAN 4 FEET OF SPACE BETWEEN THE TWO SEPARATE SEWER SERVICE PIPELINES TO FACILITATE FUTURE EXCAVATION OF EACH WITHOUT DISTURBANCE.
- ALL SANITARY SEWER MAINS AND PIPELINES SHALL BE CONSTRUCTED WITH COPPER TRACER WIRE, 6 GAUGE SOLID COPPER, EXTENDING FROM THE MANHOLE-TO-MANHOLE ON THE MAIN LINES. IN ADDITION, A COPPER TRACER WIRE SHALL EXTEND ALONG EACH SERVICE LINE, CONNECTED TO THE MAIN LINE COPPER TRACER WIRE, TO A LOCATION NO LESS THAN 10 FEET INSIDE THE LOT FRONTAGE. THE TRACER WIRES WILL BE CONTINUED AT THE TIME OF BUILDING SEWER CONSTRUCTION SUBJECT TO THE INSPECTION OF THE FOUNTAIN SANITATION DISTRICT.
- THE TRACER WIRE WILL EXTEND UP THE OUTSIDE OF EACH MANHOLE AND BE INSERTED INTO THE MANHOLE INTERIOR UNDER ADJUSTING RINGS SET ON THE CONE WITH NO LESS THAN 1.5 FEET OF CONDUCTOR COILED AT THE MANHOLE INTERIOR.

FSD SANITARY SERVICE PLAN NOTES:

- ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICIATIONS.
- FINAL LOCATION OF ALL SEWER, WATER AND GAS SERVICES TO BE APPROVED IN THE FIELD BY THE CONSTRUCTION MANAGER AND DISTRICT INSPECTOR PRIOR TO INSTALLATION.
- PROPERTY END OF ALL SEWER SERVICES TO BE MARKED WITH A 12"x2"x4" STEEL OR WOODEN POST EXTENDING VERTICALLY FROM THE FLOWLINE.
- UTILITY LOCATIONS, WHETHER OR NOT SHOWN ON THIS PLAN, IN NO WAY RELIEVES THE CONTRACTOR FROM THE RESPONSIBILITY FOR CALLING FOR UTILITY LOCATIONS FROM THE APPROPRIATE AUTHORITIES PRIOR TO BEGINNING EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND PROTECT ALL EXISTING UTILITIES WITHIN THE PROJECT. ANY DAMAGE TO EXISTING UTILITIES SHALL BE IMMEDIATELY REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.
- REUSE OF ANY MATERIAL IS AT THE DISCRETION OF THE DISTRICT INSPECTOR.
- ALL SANITARY SERVICES TO BE INSTALLED AT THE MINIMUM PERMISSIBLE GRADE OF 2.08% UNLESS OTHERWISE PRE-APPROVED BY THE FOUNTAIN SANITATION DISTRICT.
- ALL SANITARY SERVICE PIPE SHALL BE GREEN GASKETED SDR35.
- SANITARY SEWER SERVICE CONNECTIONS ARE TO BE A MINIMUM OF 5' FROM THE MANHOLE.
- THE CONTRACTOR SHALL NOTIFY FOUNTAIN SANITATION DISTRICT'S INSPECTOR (382- 5303) 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO OUTLINE METHODS OF CONSTRUCTION, MATERIALS TO BE USED AND CONSTRUCTION STAKING.
- ALL SANITARY SEWER SERVICE LINES TO THE RESIDENTIAL LOTS SHALL BE 4-INCH DIAMETER PIPE. SEWER SERVICES SHALL BE EXTENDED 10' INTO THE RESIDENTIAL LOTS TO AVOID GAS, ELECTRIC AND WATER EASEMENTS ADJACENT TO THE RIGHT OF WAY.
- ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION PART C, ARTICLE II OF THE FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICATIONS MANUAL.

FSD GENERAL SERVICE PLAN NOTES

THE CONTRACTOR SHALL NOTIFY THE FOUNTAIN SANITATION DISTRICT OFFICE (719-382-5303) A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

GENERAL:

- ALL CONSTRUCTION METHODS AND MATERIALS SHALL MEET FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICIATIONS.
- FOUNTAIN SANITATION DISTRICT DOES NOT GUARANTEE THE ACCURACY OF LOCATIONS OF EXISTING PIPELINES, MANHOLES, AND SERVICE LINES. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE DISTRICT INSPECTOR AND THE DESIGN ENGINEER IMMEDIATELY.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY FACILITIES AS A RESULT OF THEIR ACTIONS. THE CONTRACTOR SHALL MAKE ALL THE REQUIRED REPAIRS IMMEDIATELY TO THE SATISFACTION OF FOUNTAIN SANITATION DISTRICT.
- ALL FIELD STAKING SHALL COMPLY WITH THE WASTEWATER STANDARD SPECIFICATIONS.
- FINAL LOCATION OF ALL WASTEWATER SERVICES SHALL BE APPROVED IN THE FIELD BY THE DISTRICT INSPECTOR.
- ALL TRENCH BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION PART C, ATRICLE II OF THE FOUNTAIN SANITATION DISTRICT STANDARD SPECIFICATIONS MANUAL.

WIDEFIELD WATER AND SANITATION DISTRICT GENERAL NOTES

- ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT WIDEFIELD WATER AND SANITATION DISTRICT SPECIFICATIONS. COMPACTION REQUIREMENTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE WIDEFIELD WATER AND SANITATION DISTRICT OR A HIGHER STANDARD IS IMPOSED BY ANOTHER AGENCY HAVING RIGHT-OF-WAY JURISDICTION.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE WIDEFIELD WATER AND SANITATION DISTRICT. THE WIDEFIELD WATER AND SANITATION DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
- THE DEVELOPER OR HIS ENGINEER HAS LOCATED ALL FIRE HYDRANTS AND FUTURE SERVICE STUBS. ANY REQUIRED REALIGNMENT, EITHER HORIZONTAL OR VERTICAL, SHALL BE AT THE EXPENSE OF THE DEVELOPER.
- ALL DUCTILE IRON PIPE, TO INCLUDE FITTINGS, VALVES AND FIRE HYDRANTS WILL BE WRAPPED WITH POLYETHYLENE TUBING, AND ELECTRICALLY ISOLATED.
- ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE DOUBLE BONDED. SPECIFICATIONS FOR CATHODIC PROTECTION ON BOTH DIP MAINS AND PVC MAINS IS SPECIFIED IN THE STANDARDS AND SPECIFICATIONS.
- PVC MAIN LINES SHALL BE INSTALLED WITH COATED NO. 12 TRACER WIRE.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE WIDEFIELD WATER AND SANITATION DISTRICT (390-7111) A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES 48 HOURS PRIOR TO CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
- THE LOCATION OF ALL UTILITIES AS SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE VERIFIED PRIOR TO CONSTRUCTION BY THE CONTRACTOR.
- THE CONTRACTOR SHALL FIELD EXCAVATE AND VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF ALL TIE-INS. CONTRACTOR SHALL NOTIFY THE WIDEFIELD WATER AND SANITATION DISTRICT AND THE ENGINEER OF THE FIELD VERIFIED INFORMATION PRIOR TO CONSTRUCTION.
- ALL BENDS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION.
- ANY WATER UTILITY MATERIAL REMOVED AND NOT REUSED SHALL BE RETURNED TO THE WIDEFIELD WATER AND SANITATION DISTRICT IF THE DISTRICT SO REQUESTS.
- THE CONTRACTOR SHALL AT HIS EXPENSE SUPPORT AND PROTECT ALL UTILITY MAINS SO THAT THEY WILL FUNCTION CONTINUOUSLY DURING CONSTRUCTION. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT WILL BE REPLACED IMMEDIATELY BY EITHER THE CONTRACTOR OR THE WIDEFIELD WATER AND SANITATION DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR.
- ANY PUMPING OR BYPASS OPERATIONS MUST BE REVIEWED AND APPROVED PRIOR TO EXECUTION BY BOTH THE WIDEFIELD WATER AND SANITATION DISTRICT AND THE ENGINEER.
- CONTRACTOR MUST REPLACE OR REPAIR ANY DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
- ALL WATER LINES 6" AND LARGER, AND ALL SEWER LINES 8" AND LARGER, SHALL HAVE AS "AS-BUILT" PLANS PREPARED AND APPROVED PRIOR TO FINAL ACCEPTANCE BY THE WIDEFIELD WATER AND SANITATION DISTRICT.
- PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION CONFERENCE IS REQUIRED A MINIMUM OF 72 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. TO SET THE PRE-CONSTRUCTION CONFERENCE, CONTACT BRANDON BERNARD-WATER DIVISION MANAGER AND/OR JASON DREESSEN, WASTEWATER DIVISION MANAGER AT (719)955-0548 OF THE WIDEFIELD WATER AND SANITATION DISTRICT FOR A TIME. NO PRE-CONSTRUCTION CONFERENCE TIMES WILL BE SET UNTIL 4 SETS OF SIGNED DRAWINGS ARE RECEIVED BY THE WIDEFIELD W & S DISTRICT. PRE-CONSTRUCTION DATE/INITIALS ----- .

DRAWN BY: CBM

APPROVED: KMH

CAD DATE: 8/31/2022

CAD FILE: J:\2020\200541\CADD\dwgs\C\CDIEI\_Paso\_Co\Notes

JOB DATE: 8/31/2022

JOB NUMBER: 200541

BAR IS ONE INCH ON OFFICIAL DRAWINGS.

0" 1"

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GOODWIN KNIGHT

EL PASO COUNTY, COLORADO

G

GOODWIN

KNIGHT

EL PASO COUNTY CONSTRUCTION DOCUMENTS

NOTES WATER AND SANITARY SEWER

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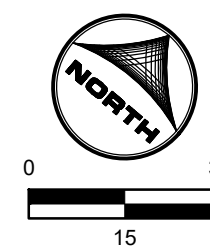
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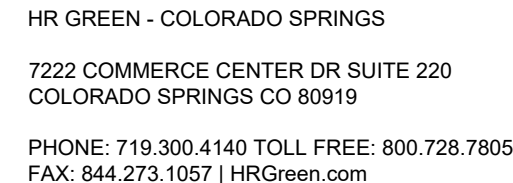
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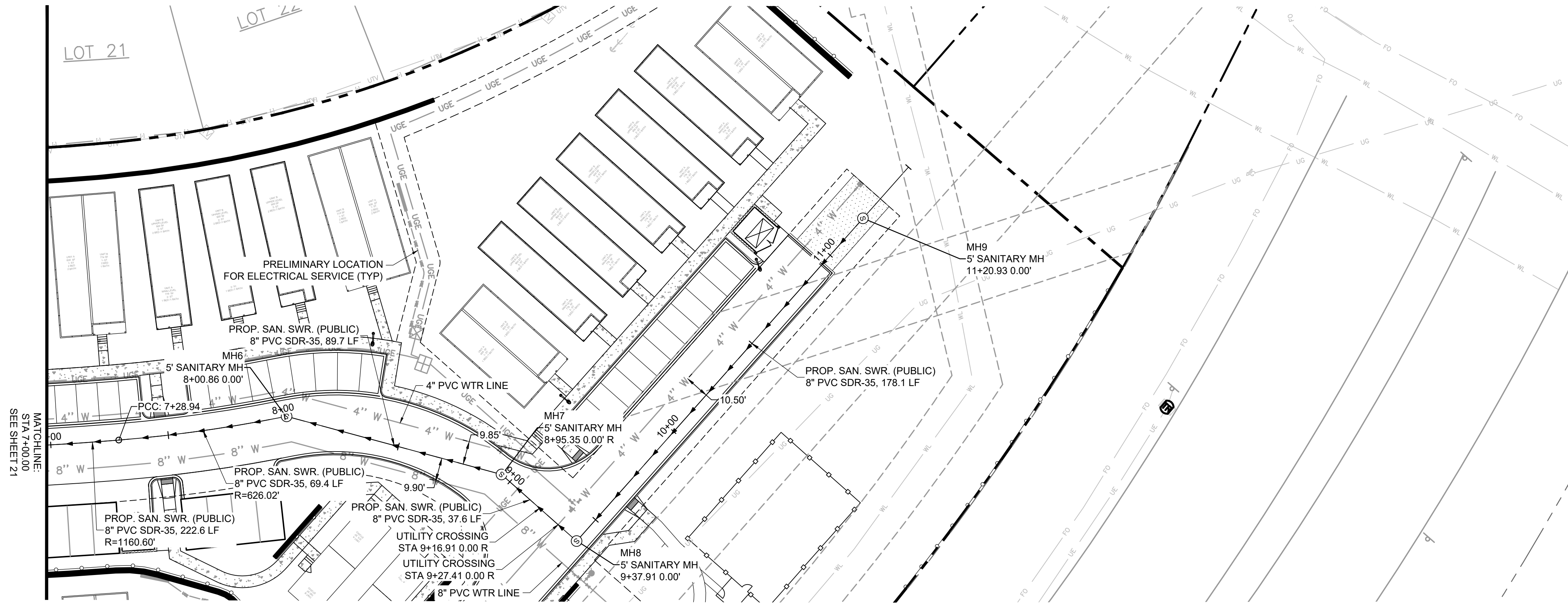
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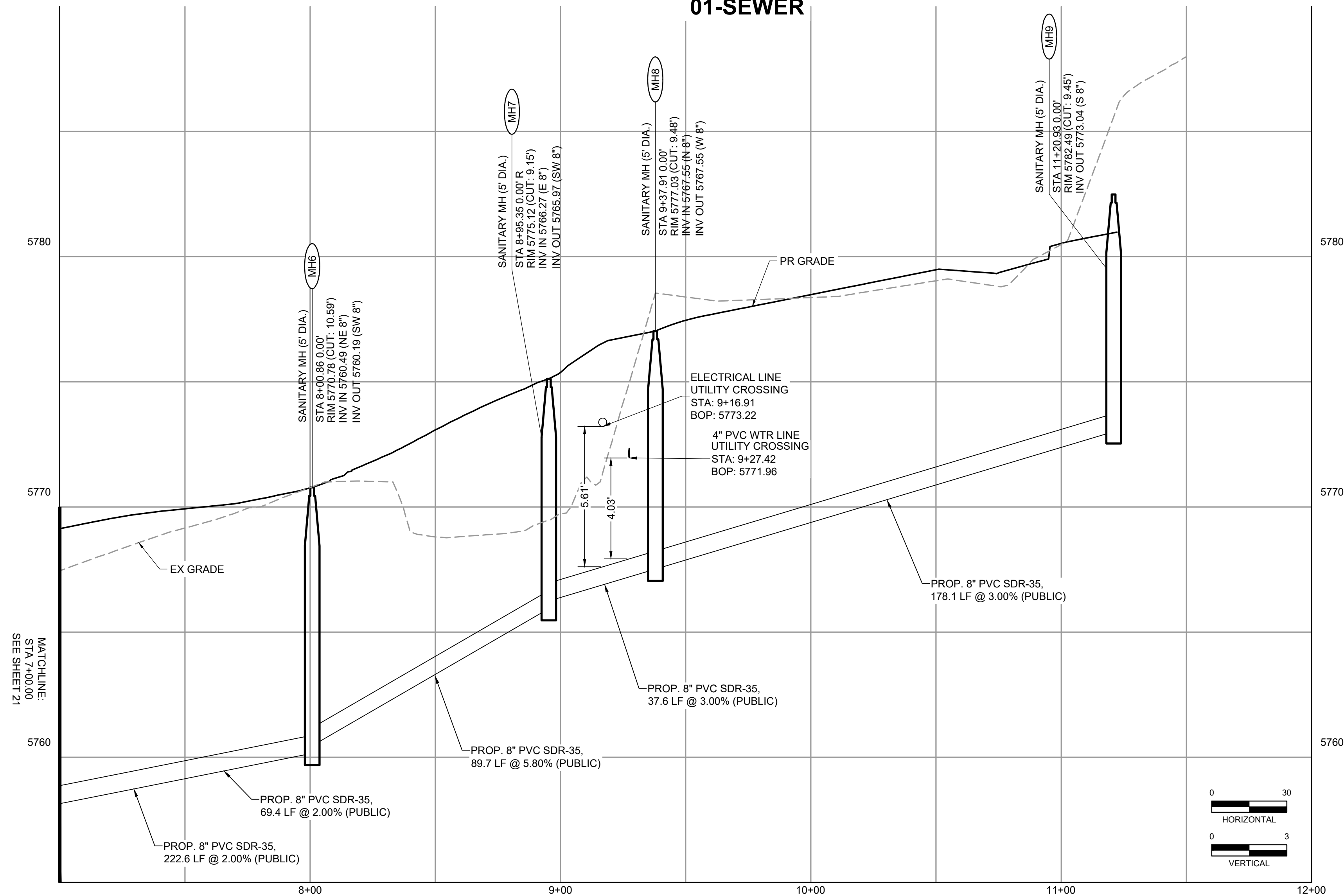


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01-SEWER



DEVELOPERS STATEMENT - FOUNTAIN SANITATION DISTRICT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF FOUNTAIN SANITATION DISTRICT REGULATIONS AND STANDARD SPECIFICATIONS. OWNER WILL COMPLY WITH THE CONSTRUCTION DRAWINGS PREPARED BY HIS/HER CIVIL ENGINEER.

DEVELOPER/OWNER SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

NAME OF DEVELOPER/OWNER: \_\_\_\_\_

TITLE: \_\_\_\_\_

PHONE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

FOUNTAIN SANITATION DISTRICT

PLANS ARE RECOMMENDED FOR USE IN CONSTRUCTION OF WASTEWATER COLLECTION SYSTEM FOR THIS PROJECT. DESIGN ENGINEER OF RECORD TAKES SOLE RESPONSIBILITY FOR ALL DESIGN ASPECTS OF THE PROJECT.

JONATHAN MOORE, P.E. DATE \_\_\_\_\_  
FOUNTAIN SANITATION DISTRICT - DISTRICT ENGINEER

PCD FILNE NO.: SF2214

DRAWN BY: CBM JOB DATE: 8/31/2022  
APPROVED: KMH JOB NUMBER: 200541  
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EL PASO COUNTY, COLORADO



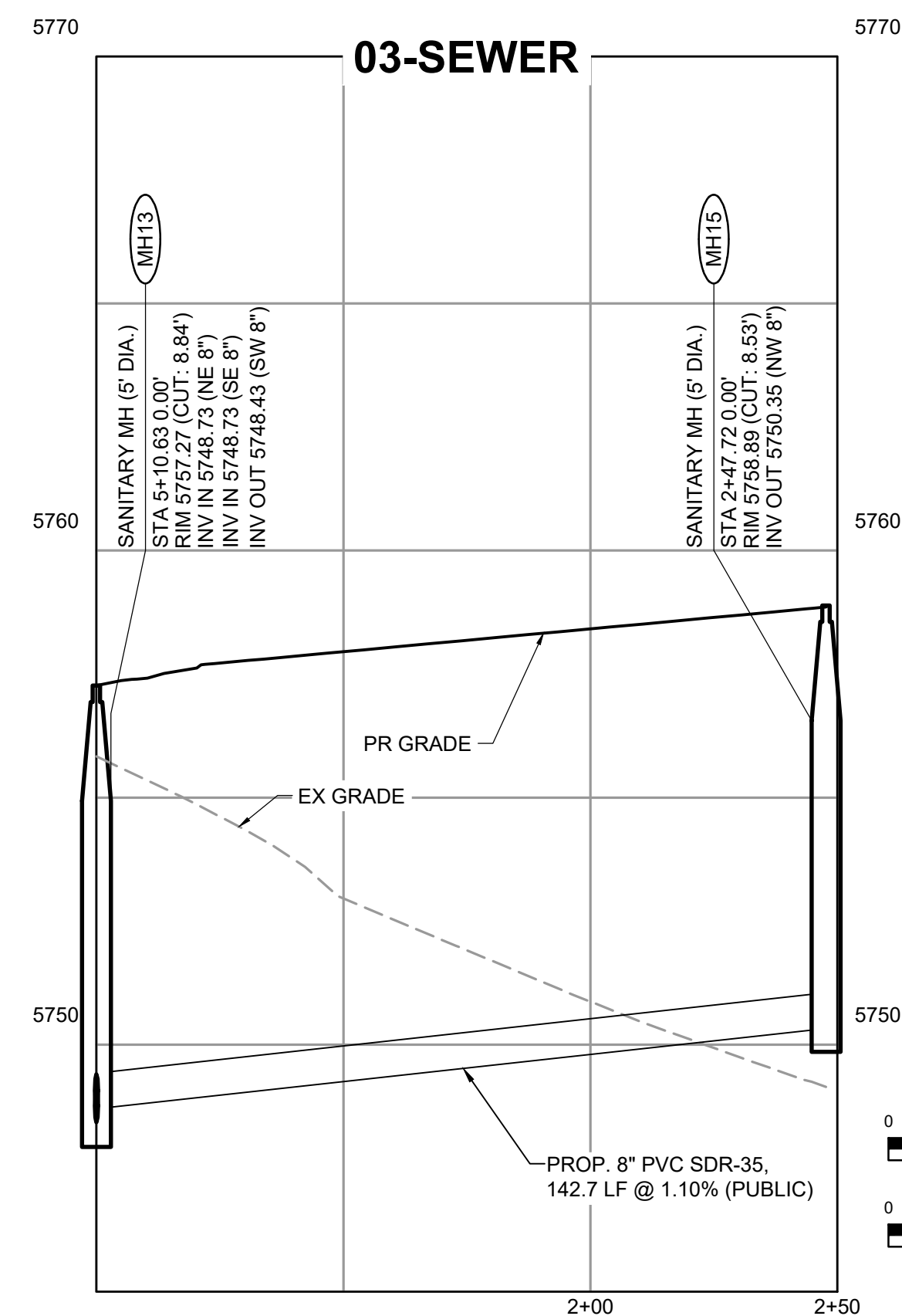
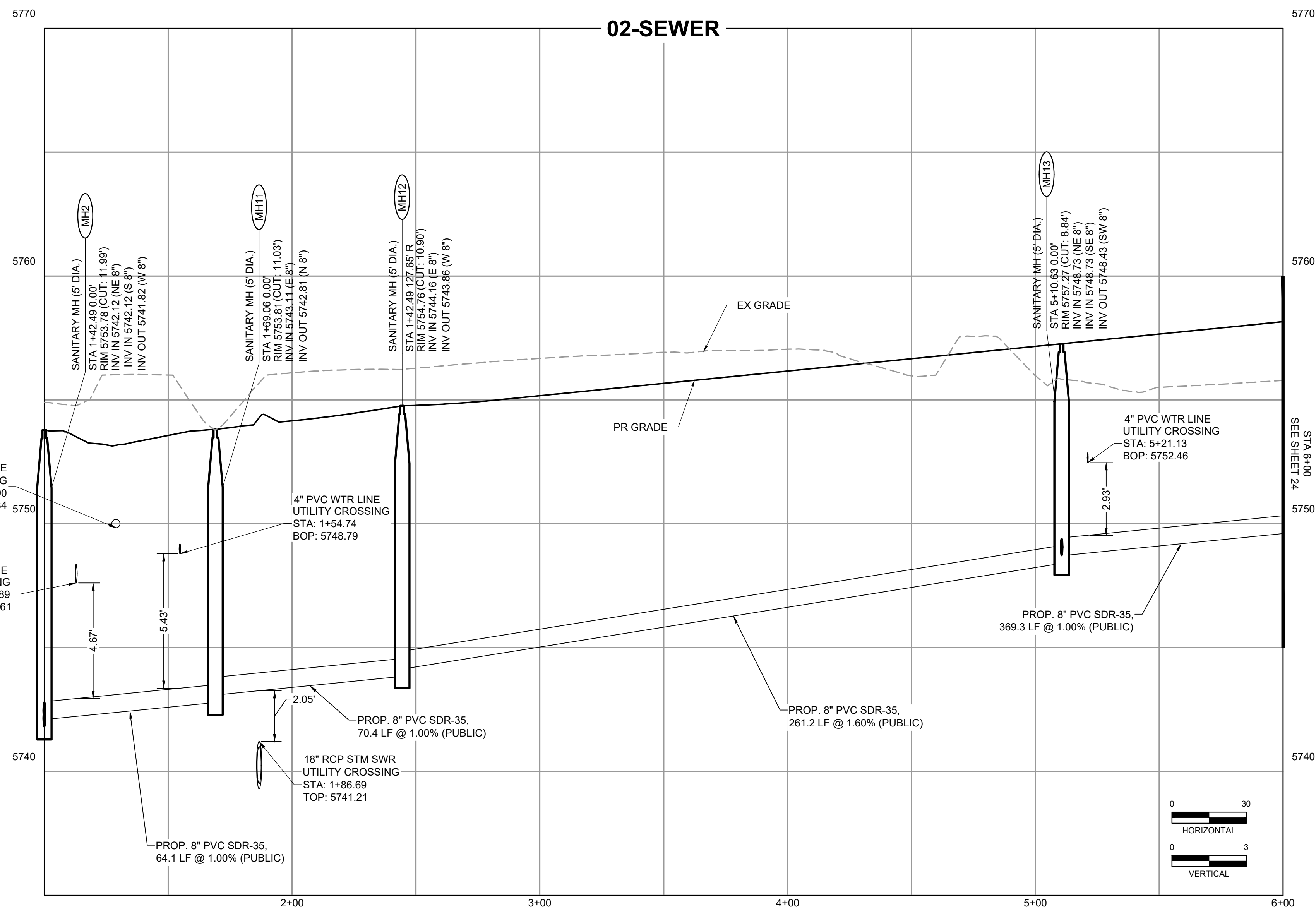
EL PASO COUNTY CONSTRUCTION DOCUMENTS  
SANITARY PLAN & PROFILE

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22

NOT FOR CONSTRUCTION





**DEVELOPERS STATEMENT - FOUNTAIN SANITATION DISTRICT**

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF FOUNTAIN SANITATION DISTRICT REGULATIONS AND STANDARD SPECIFICATIONS. OWNER WILL COMPLY WITH THE CONSTRUCTION DRAWINGS PREPARED BY HIS/HER CIVIL ENGINEER.

DEVELOPER/OWNER SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

NAME OF DEVELOPER/OWNER:

TITLE: \_\_\_\_\_

PHONE: \_\_\_\_\_

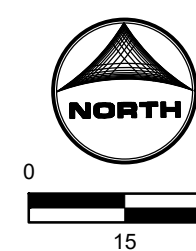
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FOUNTAIN SANITATION DISTRICT


PLANS ARE RECOMMENDED FOR USE IN CONSTRUCTION OF WASTEWATER COLLECTION SYSTEM FOR THIS PROJECT.  
DESIGN ENGINEER OF RECORD TAKES SOLE RESPONSIBILITY FOR ALL DESIGN ASPECTS OF THE PROJECT.

\_\_\_\_\_  
JONATHAN MOORE, P.E. DATE \_\_\_\_\_  
FOUNTAIN SANITATION DISTRICT – DISTRICT ENGINEER

PCD FILNE NO.: SF2214



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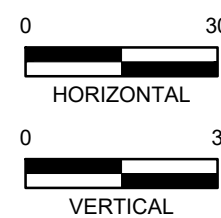


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SANITARY PLAN & PROFILE

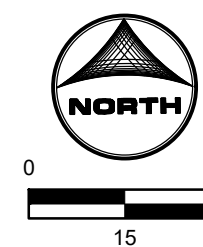
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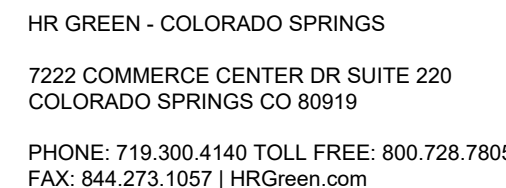
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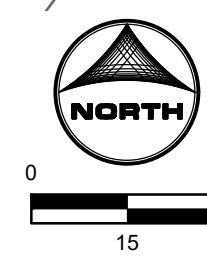
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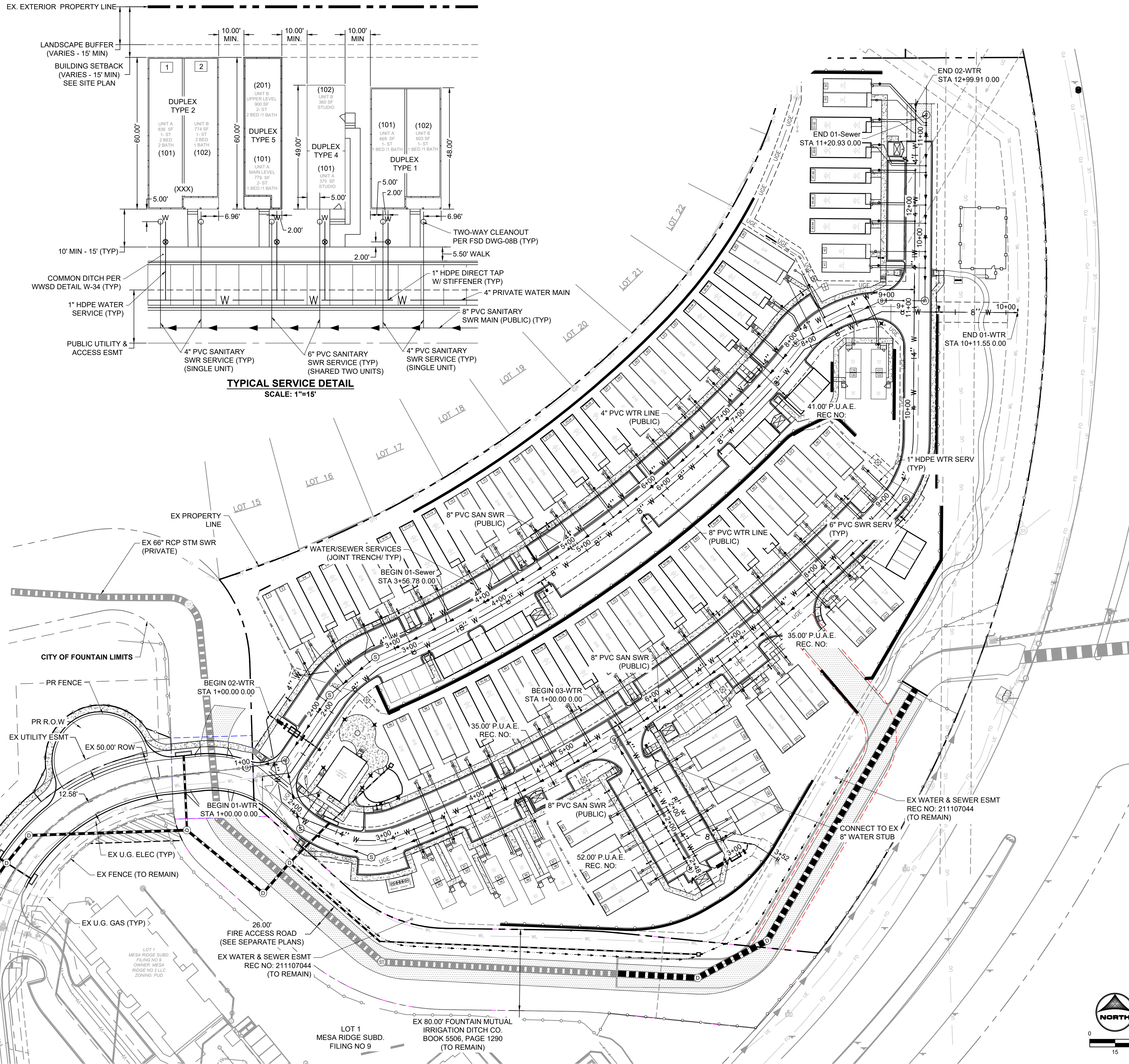
Approval expires 180 days from Design Approval



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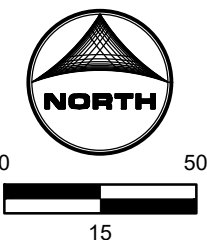


SEWER SERVICES

LOT	ALIGNMENT	STATION	OFFSET	LOT	ALIGNMENT	STATION	OFFSET	LOT	ALIGNMENT	STATION	OFFSET
CH	02-Sewer	STA 1+38.37	0.0'	41	01-Sewer	STA 9+70.23	0.0' R	83-84	02-Sewer	STA 3+90.68	0.0'
1	01-Sewer	STA 2+13.72	0.0'	42	01-Sewer	STA 9+86.27	0.0'	85	02-Sewer	STA 3+69.35	0.0'
2	01-Sewer	STA 2+37.90	0.0'	43-44	01-Sewer	STA 10+14.23	0.0'	86	02-Sewer	STA 3+55.30	0.0' L
3-4	01-Sewer	STA 2+49.75	0.0'	45-46	01-Sewer	STA 10+32.23	0.0'	87	02-Sewer	STA 3+30.96	0.0' L
5-6	01-Sewer	STA 2+71.44	0.0' L	47-48	01-Sewer	STA 10+64.23	0.0'	88	02-Sewer	STA 3+13.00	0.0' L
7	01-Sewer	STA 2+99.91	0.0'	49-50	01-Sewer	STA 10+70.90	0.0' R	89-90	02-Sewer	STA 2+91.75	0.0'
8	01-Sewer	STA 3+15.96	0.0'	51-52	01-Sewer	STA 11+03.11	0.0'	91-92	02-Sewer	STA 3+24.33	0.0'
9-10	01-Sewer	STA 3+43.92	0.0'	53	01-Sewer	STA 11+10.78	0.0'	93-94	02-Sewer	STA 3+49.35	0.0'
11-12	01-Sewer	STA 3+61.64	0.0'	54	01-Sewer	STA 11+13.28	0.0'	95-96	02-Sewer	STA 3+71.85	0.0' R
13-14	01-Sewer	STA 3+98.98	0.0'	55	02-Sewer	STA 8+76.31	0.0'	97-98	02-Sewer	STA 4+02.65	0.0'
15	01-Sewer	STA 4+08.40	0.0'	56	02-Sewer	STA 8+61.57	0.0'	99	03-Sewer	STA 1+49.08	0.0'
16	01-Sewer	STA 4+36.70	0.0'	57	02-Sewer	STA 8+38.01	0.0' L	100	03-Sewer	STA 1+63.12	0.0'
17	01-Sewer	STA 4+64.42	0.0'	58	02-Sewer	STA 8+23.57	0.0'	101	03-Sewer	STA 1+85.12	0.0'
18	01-Sewer	STA 4+78.08	0.0' L	59	02-Sewer	STA 7+96.15	0.0'	102	03-Sewer	STA 2+01.17	0.0'
19	01-Sewer	STA 4+97.10	0.0'	60	02-Sewer	STA 7+79.72	0.0'	103	03-Sewer	STA 2+25.08	0.0'
20	01-Sewer	STA 5+20.54	0.0'	61-62	02-Sewer	STA 7+58.19	0.0'	104	03-Sewer	STA 2+40.72	0.0'
21-22	01-Sewer	STA 5+51.56	0.0'	63-64	02-Sewer	STA 7+21.44	0.0'	105	03-Sewer	STA 2+36.62	0.0'
23-24	01-Sewer	STA 5+69.76	0.0' L	65	02-Sewer	STA 6+99.70	0.0'	106	03-Sewer	STA 2+20.43	0.0' L
25-26	01-Sewer	STA 6+05.35	0.0' L	66	02-Sewer	STA 6+83.29	0.0'	107	03-Sewer	STA 2+05.05	0.0'
27	01-Sewer	STA 6+28.50	0.0'	67-68	02-Sewer	STA 6+61.88	0.0'	108	03-Sewer	STA 1+82.44	0.0'
28	01-Sewer	STA 6+44.96	0.0'	69-70	02-Sewer	STA 6+25.13	0.0'	109	03-Sewer	STA 1+61.12	0.0'
29	01-Sewer	STA 6+72.73	0.0'	71	02-Sewer	STA 6+03.70	0.0'	110	03-Sewer	STA 1+46.05	0.0'
30	01-Sewer	STA 6+85.67	0.0'	72	02-Sewer	STA 5+89.30	0.0'	111-112	02-Sewer	STA 6+39.69	0.0'
31	01-Sewer	STA 7+12.19	0.0'	73	02-Sewer	STA 5+61.75	0.0'	113-114	02-Sewer	STA 6+91.44	0.0'
32	01-Sewer	STA 7+28.94	0.0'	74	02-Sewer	STA 5+45.35	0.0'	115	02-Sewer	STA 7+53.80	0.0'
33-34	01-Sewer	STA 7+62.32	0.0'	75-76	02-Sewer	STA 5+23.84	0.0'	116	02-Sewer	STA 7+68.90	0.0'
35-36	01-Sewer	STA 7+81.29	0.0'	77-78	02-Sewer	STA 4+87.09	0.0'	117	02-Sewer	STA 7+89.92	0.0' L
37-38	01-Sewer	STA 8+09.57	0.0'	79	02-Sewer	STA 4+65.34	0.0' L	118	02-Sewer	STA 8+06.90	0.0'
39	01-Sewer	STA 8+20.55	0.0' R	80	02-Sewer	STA 4+48.94	0.0'	119-120	01-Sewer	STA 8+61.59	0.0' R
40	01-Sewer	STA 8+35.52	0.0' L	81-82	02-Sewer	STA 4+27.43	0.0' L	121-122	01-Sewer	STA 8+80.68	0.0' R

WATER SERVICES

LOT	ALIGNMENT	STATION	OFFSET	LOT	ALIGNMENT	STATION	OFFSET	LOT	ALIGNMENT	STATION	OFFSET
CH	02-WTR	STA 2+14.48	0.0'	41-42	02-WTR	STA 11+41.08	0.0'	83-84	02-WTR	STA 4+28.31	0.0'
1-2	01-WTR	STA 2+12.72	39.5' L	43-44	02-WTR	STA 11+85.08	0.0'	85-86	02-WTR	STA 4+07.44	0.0'
3-4	01-WTR	STA 2+41.41	24.2' L	45-46	02-WTR	STA 12+03.08	0.0' R	87-88	02-WTR	STA 3+51.24	0.0'
5-6	01-WTR	STA 2+68.80	21.9' L	47-48	02-WTR	STA 12+41.74	0.0'	89-90	02-WTR	STA 3+30.15	0.0' L
7-8	01-WTR	STA 2+88.16	22.0' L	49-50	02-WTR	STA 12+93.48	0.0'	91-92	02-WTR	STA 3+62.46	0.0' R
9-10	01-WTR	STA 3+33.01	22.0' L	51-52	02-WTR	STA 12+85.08	0.0' R	93-94	02-WTR	STA 3+87.30	0.0'
11-12	01-WTR	STA 3+51.07	22.0' L	53-54	02-WTR	STA 12+35.08	0.0' R	95-96	02-WTR	STA 4+09.94	0.0' R
13-14	01-WTR	STA 3+88.62	22.0' L	55-56	02-WTR	STA 9+10.38	0.0'	97-98	02-WTR	STA 4+40.19	0.0'
15-16	01-WTR	STA 4+10.38	22.0' L	57-58	02-WTR	STA 8+72.12	0.0' L	99-100	03-WTR	STA 1+75.84	0.0'
17-18	01-WTR	STA 4+68.51	22.0' L	59-60	02-WTR	STA 8+14.30	0.0'	101-102	03-WTR	STA 1+97.84	0.0'
19-20	01-WTR	STA 4+95.40	22.0' L	61-62	02-WTR	STA 7+92.95	0.0'	103-104	03-WTR	STA 2+49.84	0.0'
21-22	01-WTR	STA 5+42.64	22.0' L	63-64	02-WTR	STA 7+56.48	0.0'	105-106	03-WTR	STA 2+45.34	0.0'
23-24	01-WTR	STA 5+61.02	22.0' L	65-66	02-WTR	STA 7+18.63	0.0'	107-108	03-WTR	STA 2+17.77	0.0'
25-26	01-WTR	STA 5+97.29	22.0' L	67-68	02-WTR	STA 6+97.39	0.0'	109-110	03-WTR	STA 1+58.77	0.0' R
27-28	01-WTR	STA 6+20.62	22.0' L	69-70	02-WTR	STA 6+60.92	0.0'	111-112	02-WTR	STA 6+75.37	0.0'
29-30	01-WTR	STA 6+79.22	22.0' L	71-72	02-WTR	STA 6+39.66	0.0'	113-114	02-WTR	STA 7+26.63	0.0'
31-32	01-WTR	STA 7+05.69	22.0' L	73-74	02-WTR	STA 5+81.77	0.0'	115-116	02-WTR	STA 7+88.23	0.0'
33-34	01-WTR	STA 7+55.71	22.0' L	75-76	02-WTR	STA 5+60.99	0.0'	117-118	02-WTR	STA 8+24.35	0.0'
35-36	01-WTR	STA 7+75.36	22.0' L	77-78	02-WTR	STA 5+23.96	0.0'	119-120	01-WTR	STA 8+50.86	19.7' L
37-38	01-WTR	STA 7+98.28	19.7' L	79-80	02-WTR	STA 4+86.11	0.0'	121-122	01-WTR	STA 8+69.75	19.7' L
39-40	01-WTR	STA 8+24.59	19.7' L	81-82	02-WTR	STA 4+64.77	0.0'				



NOT FOR CONSTRUCTION

PCD FILNE NO.: SF2214

DRAWN BY: CBM JOB DATE: 8/31/2022  
APPROVED: KMH JOB NUMBER: 200541  
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CAD FILE: J:\2020\200541\CAD\DWG\CD\CDIE\_Paso\_CoUtil Service Plan

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NO.	DATE	BY	REVISION DESCRIPTION

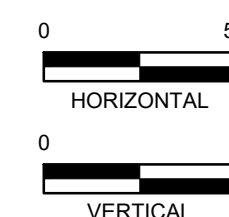
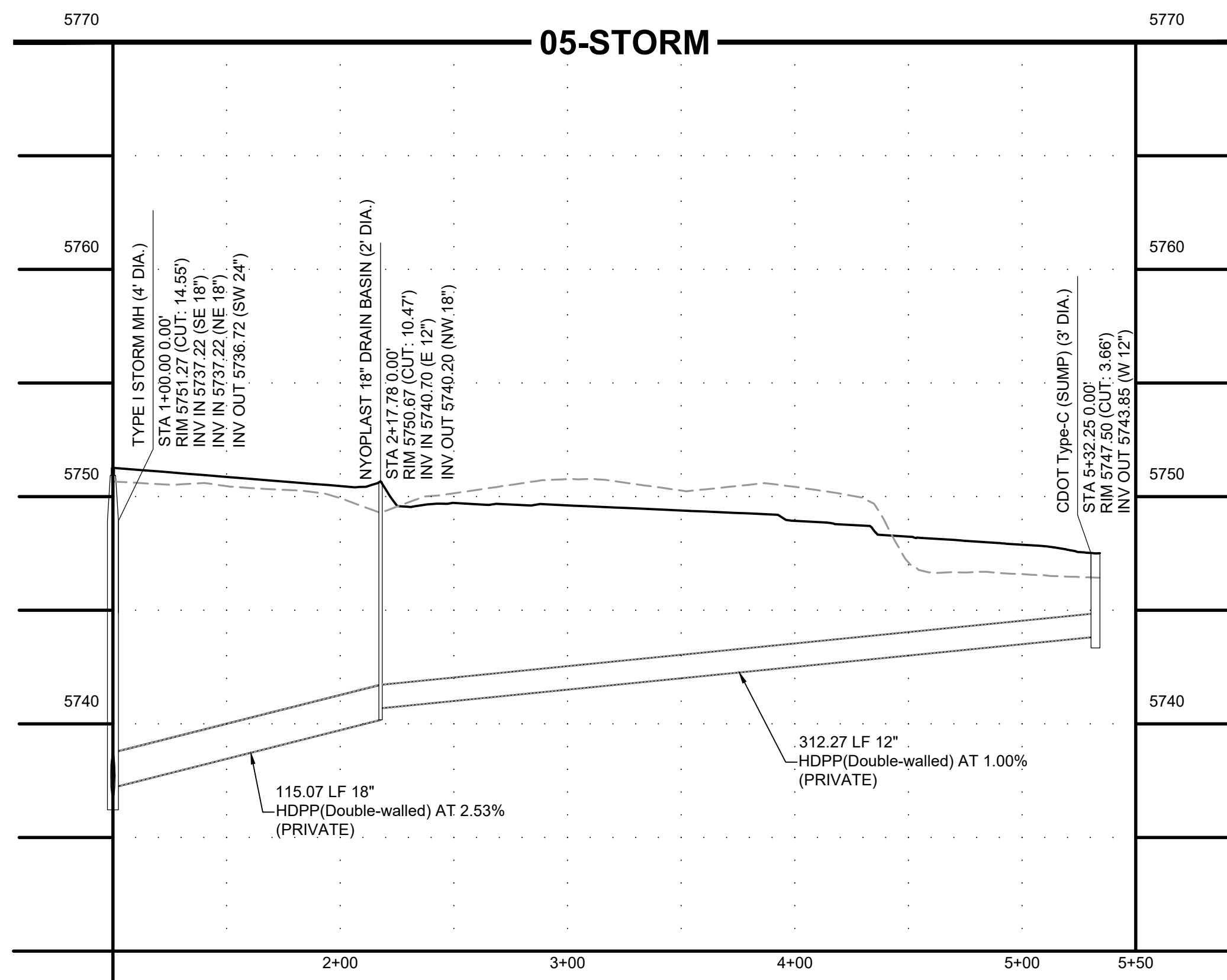
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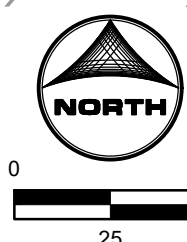
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**STORM SEWER CONSTRUCTION NOTES:**

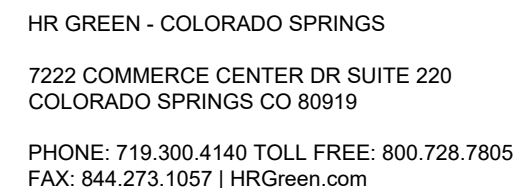
1. ALL RCP STORM SEWER TO BE CLASS III UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING UTILITY PRIOR TO THE START OF CONSTRUCTION. IF CONFLICTS ARE IDENTIFIED THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.



PCD FILE NO : SE2214

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NO.	DATE	BY	REVISION DESCRIPTION



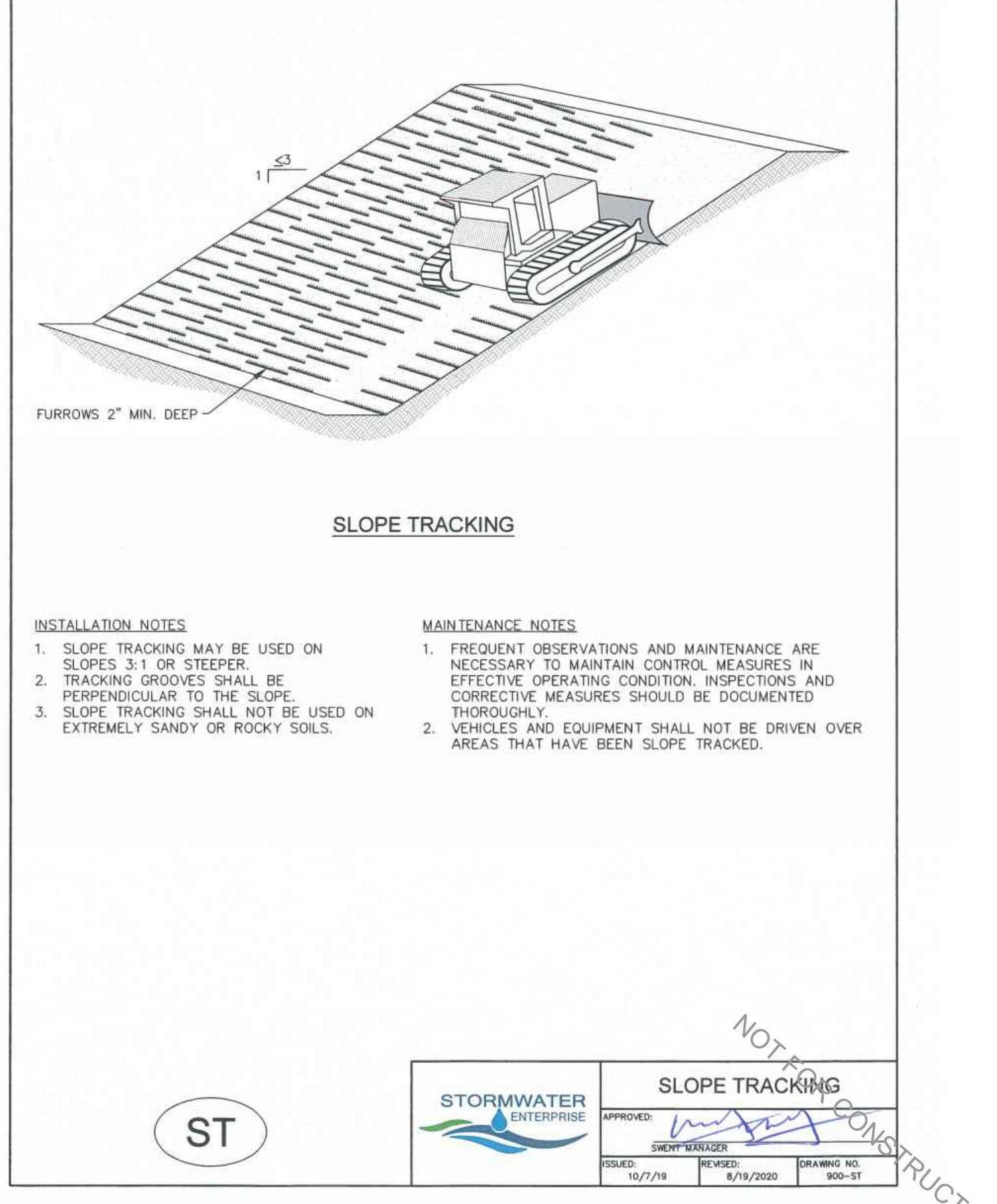
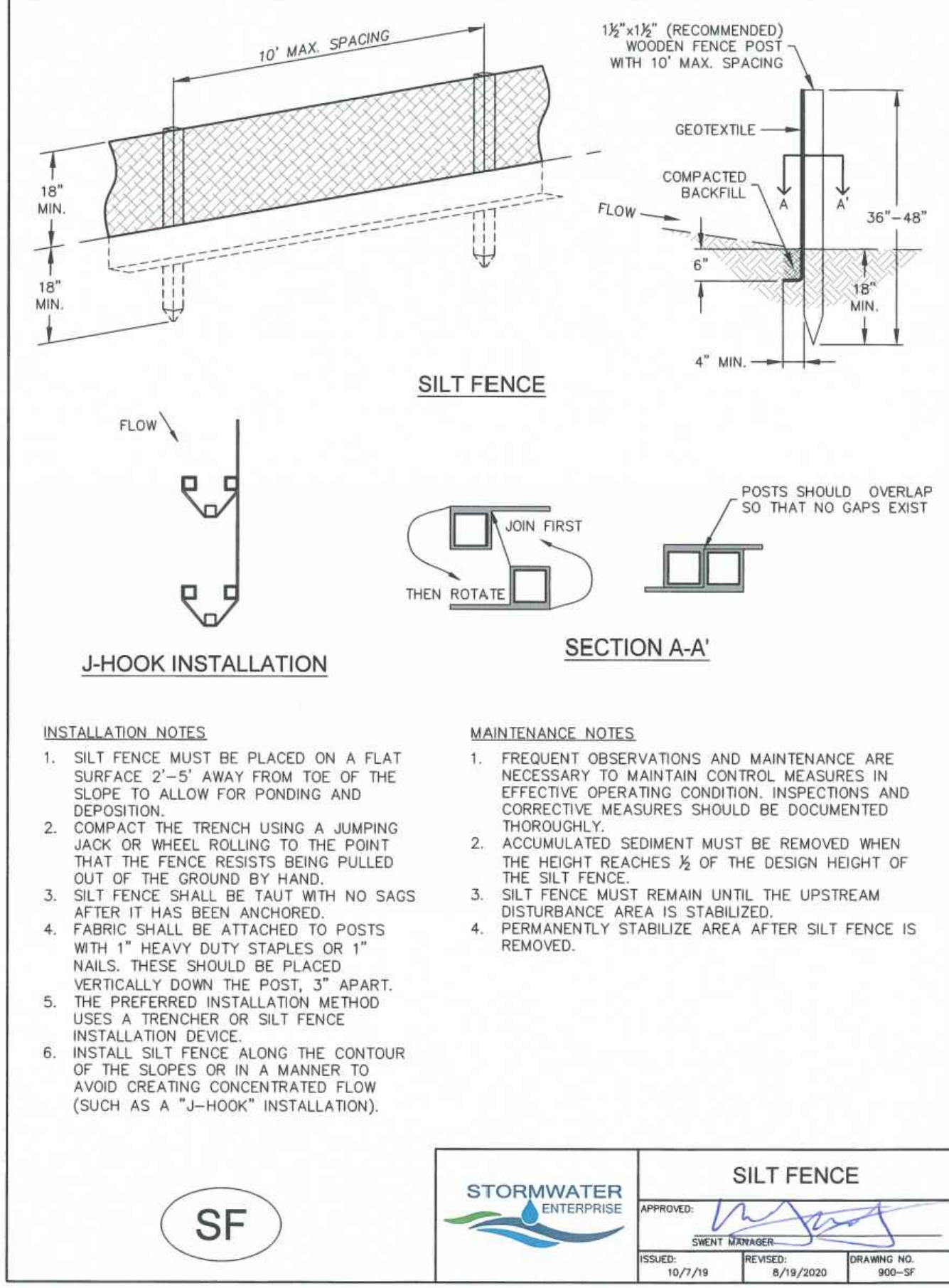
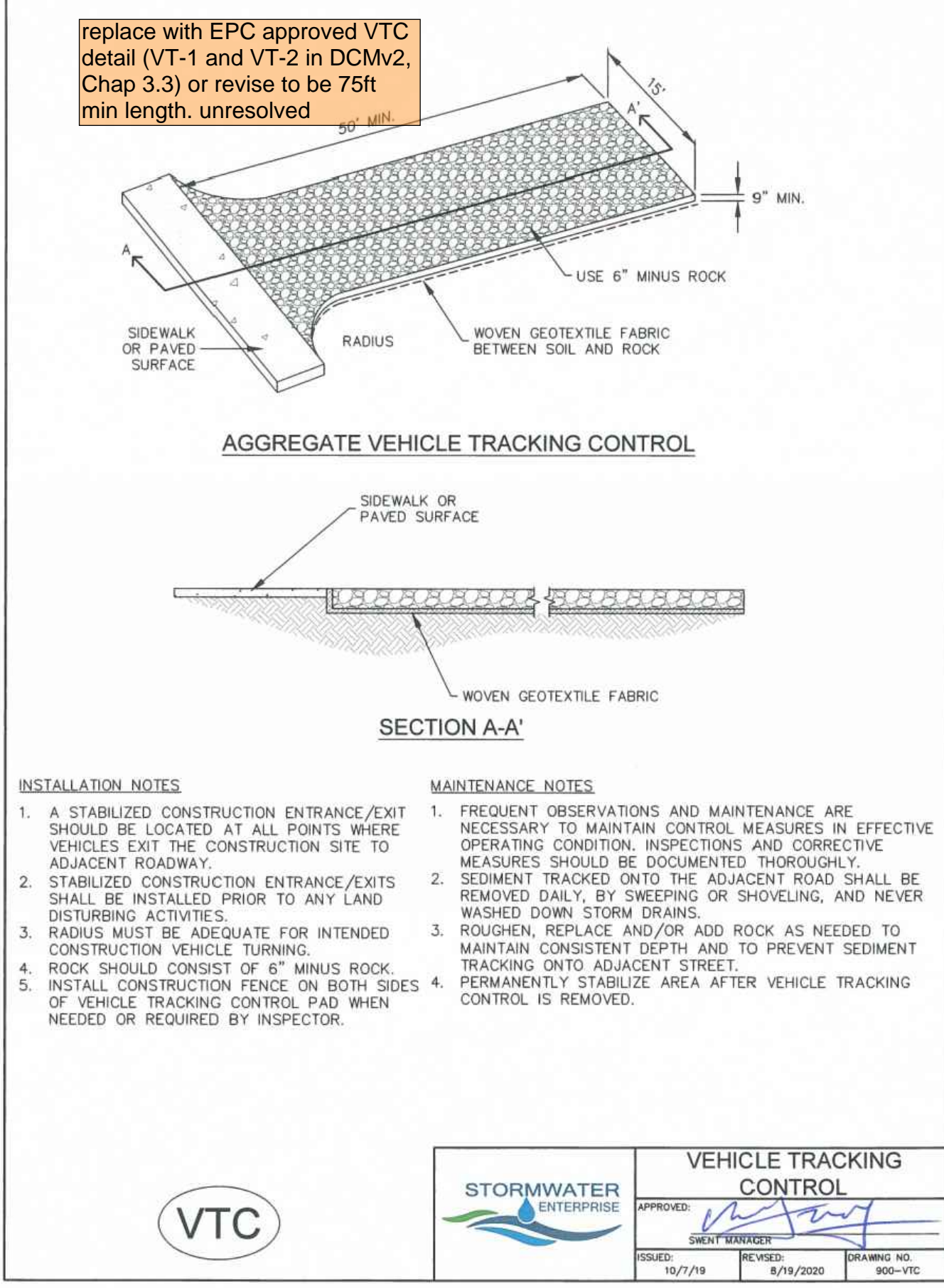
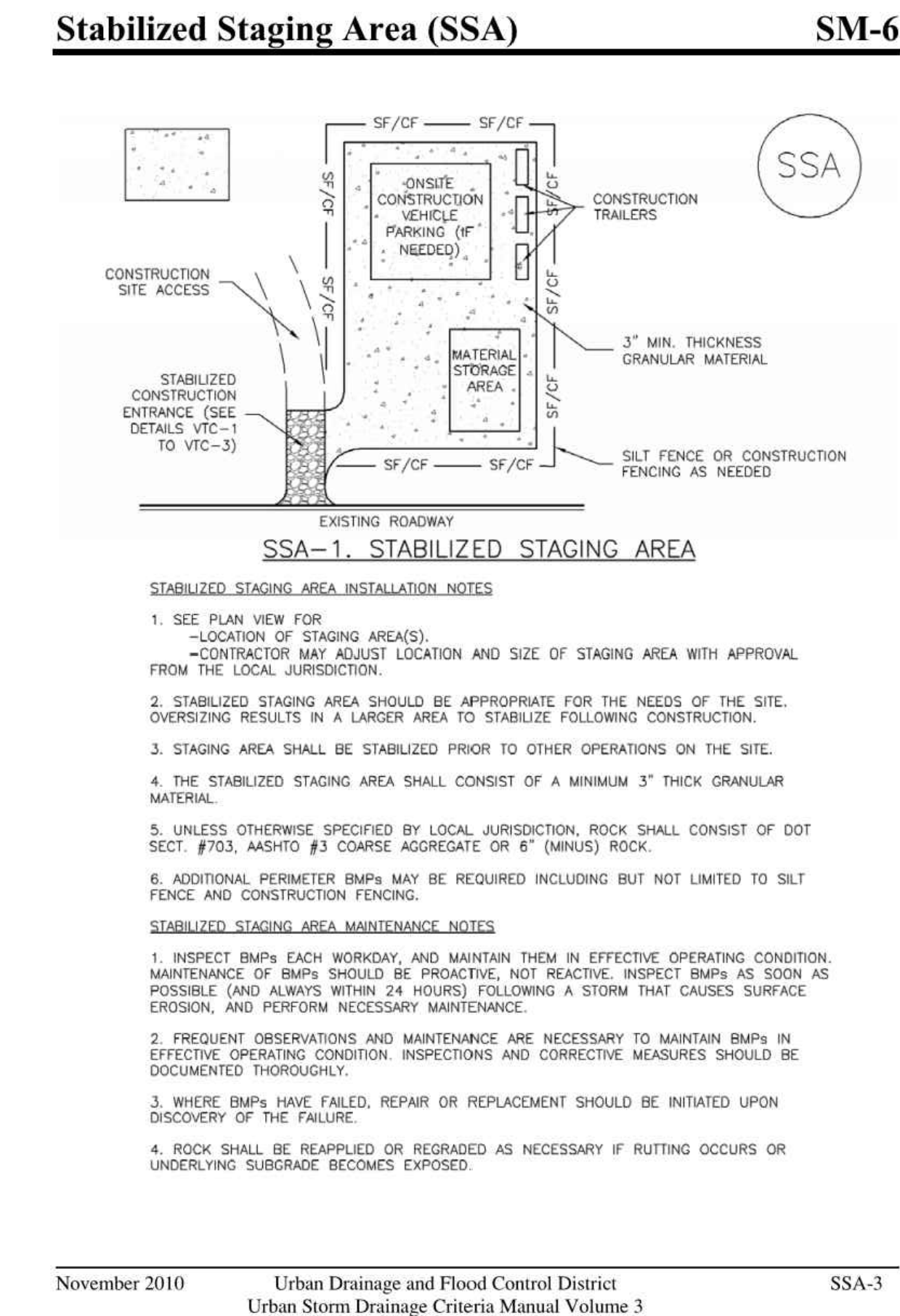
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KNIGHT**

27

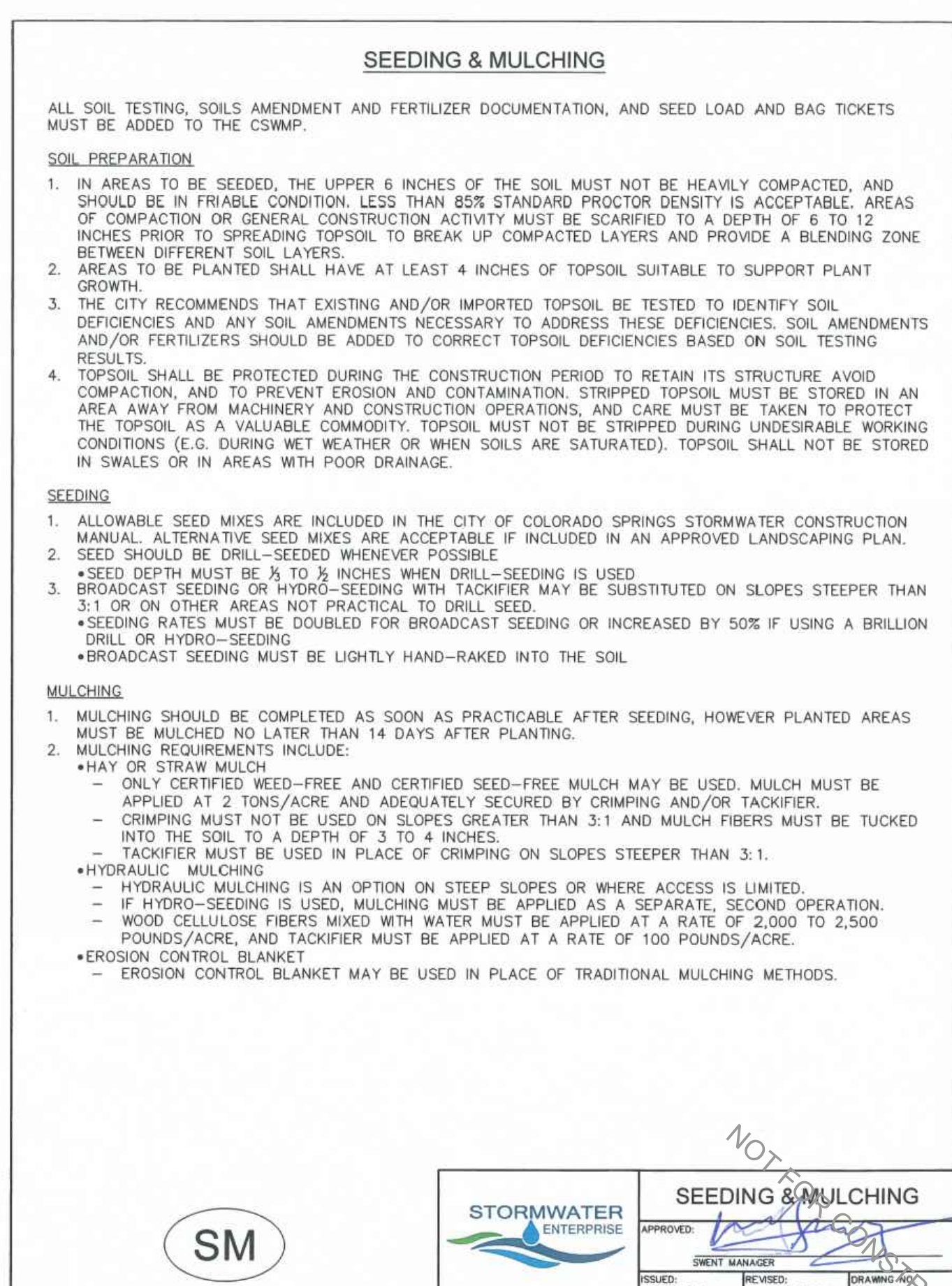
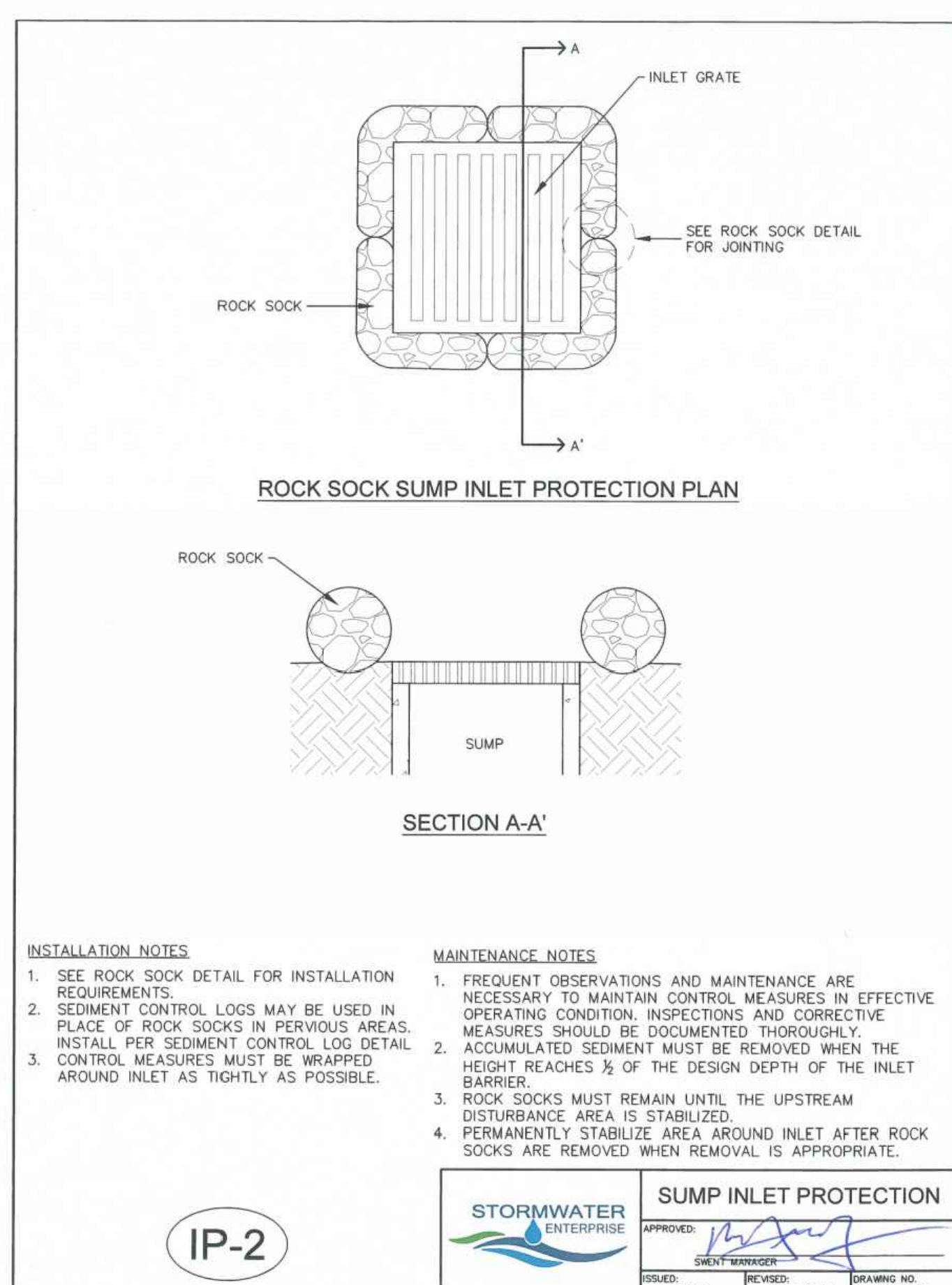
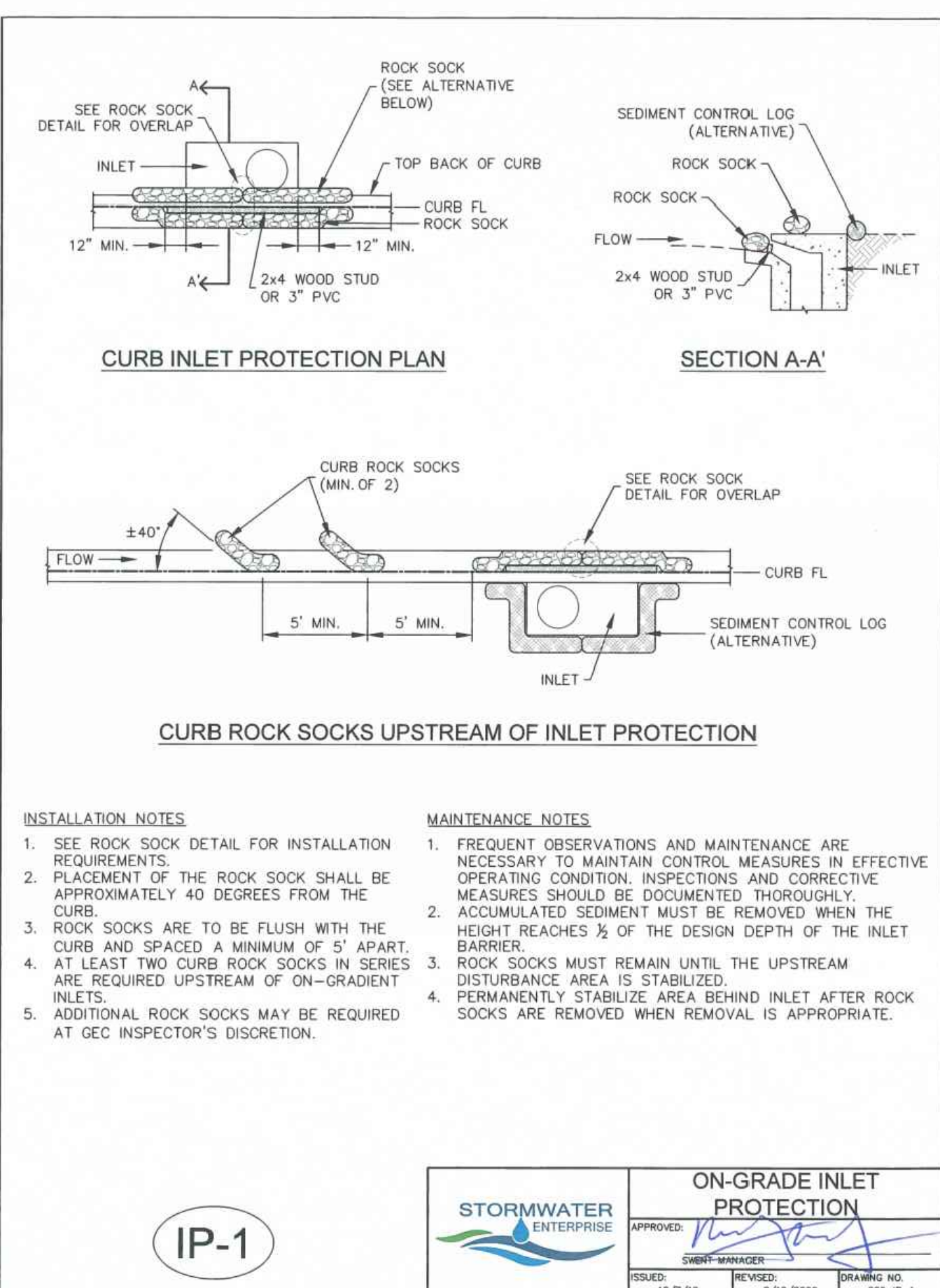
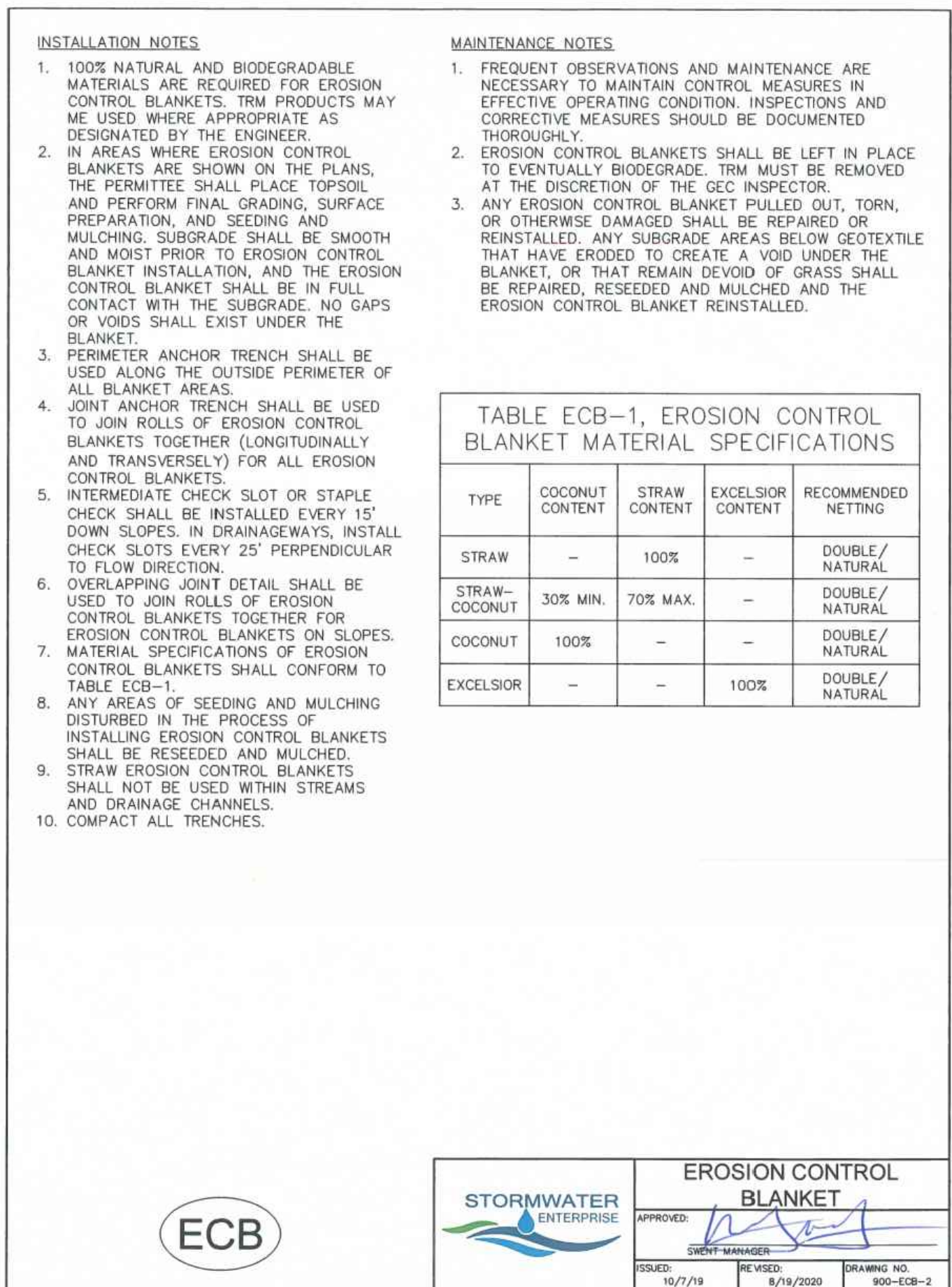
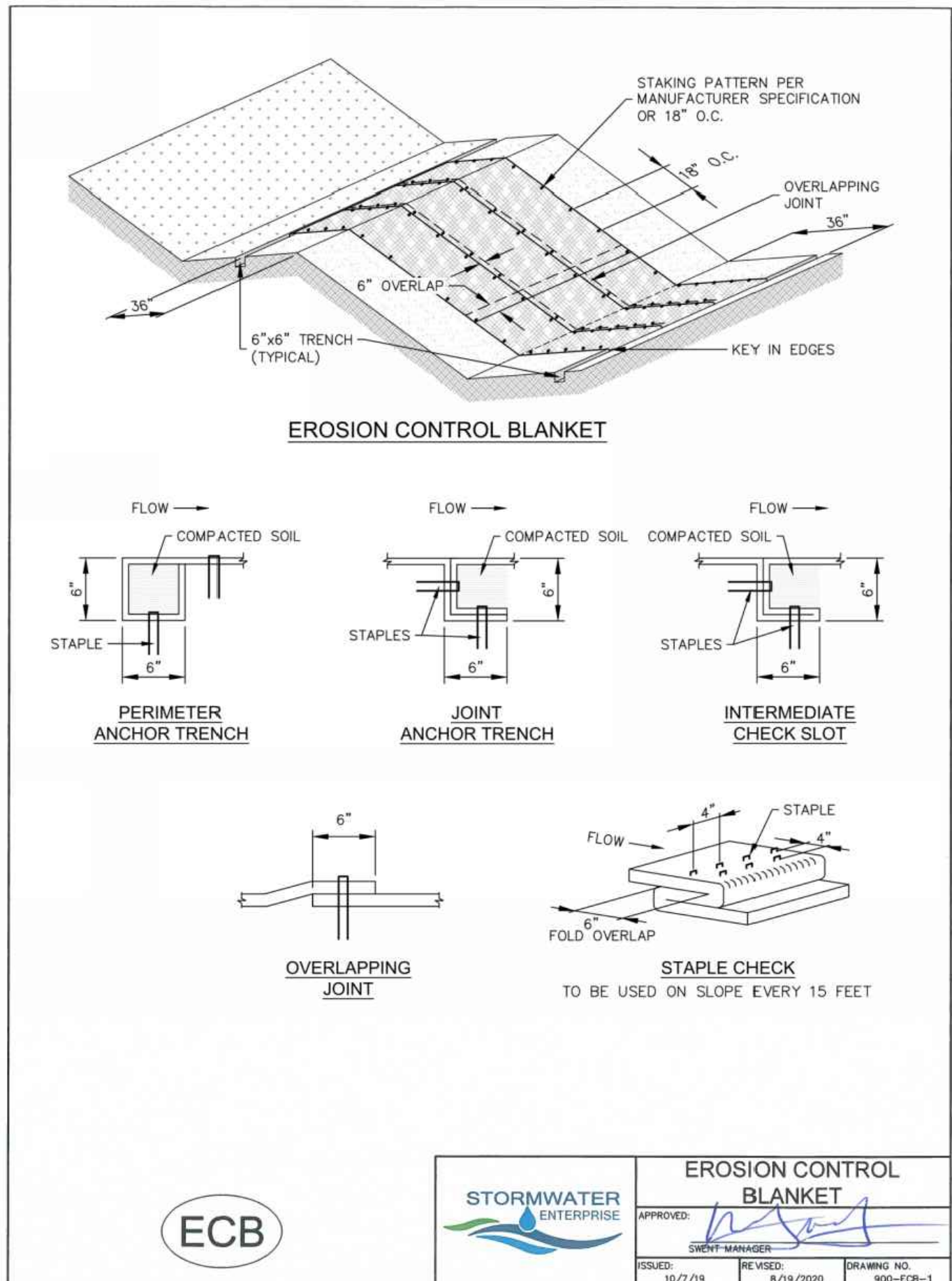
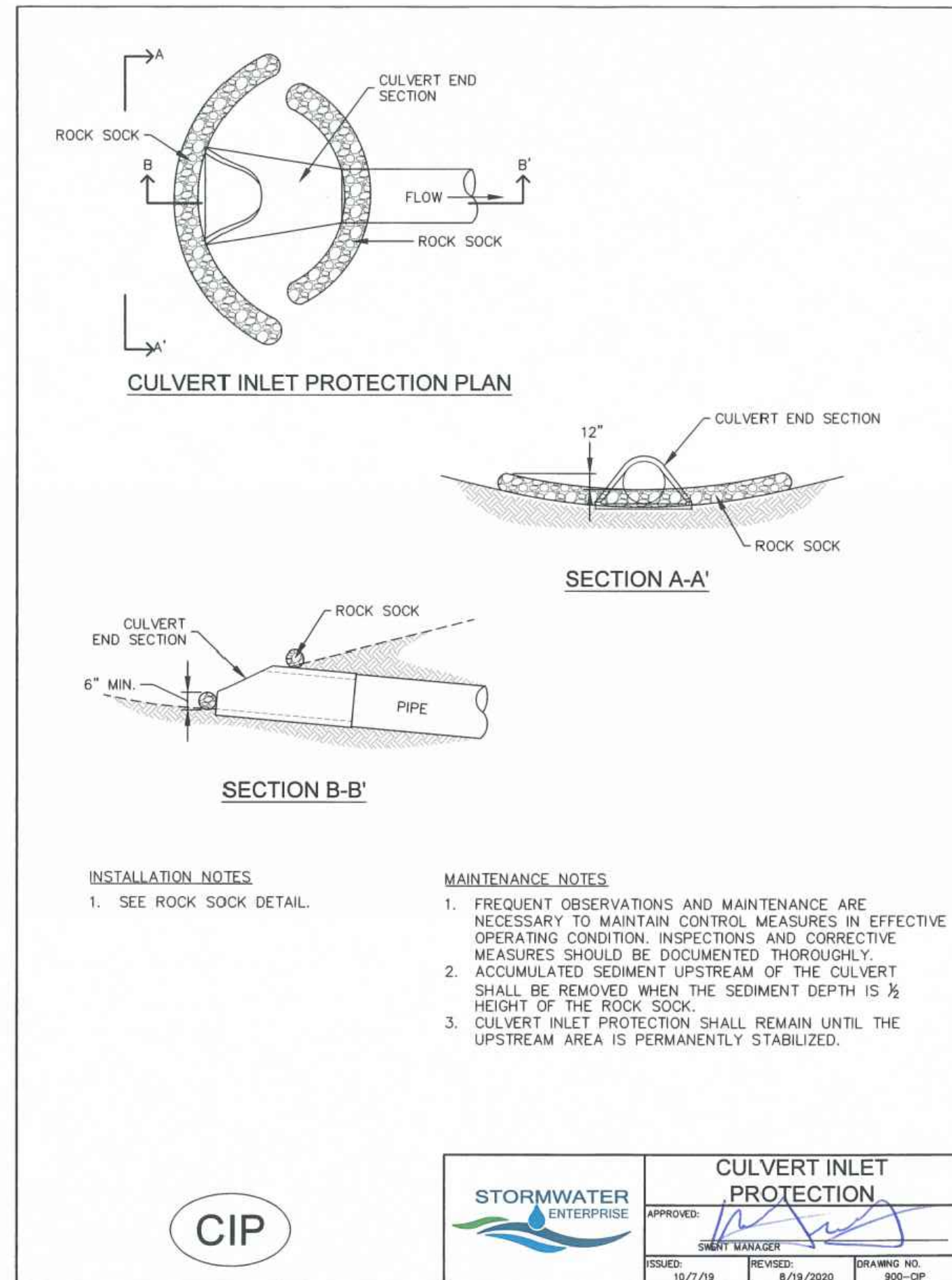
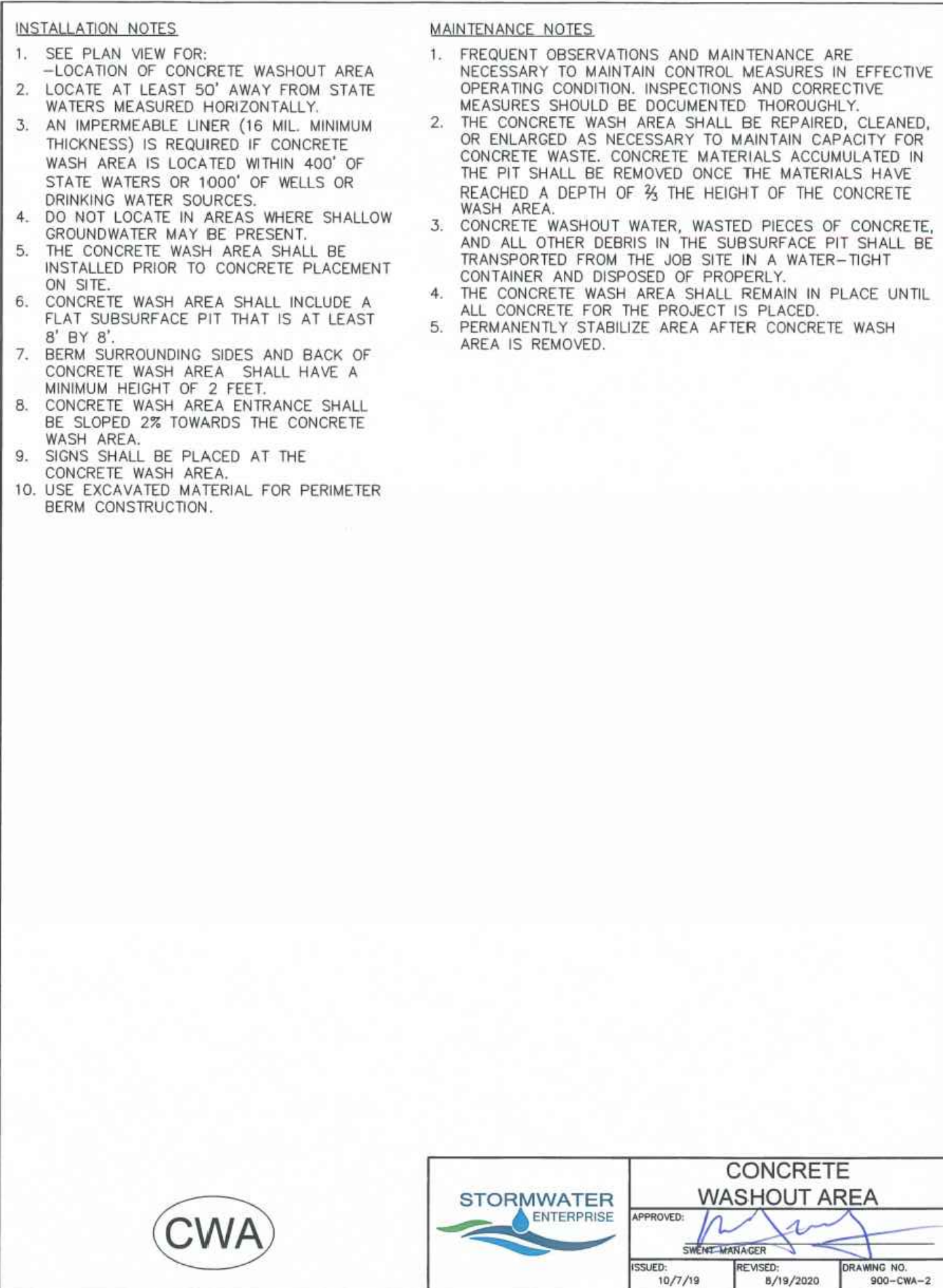
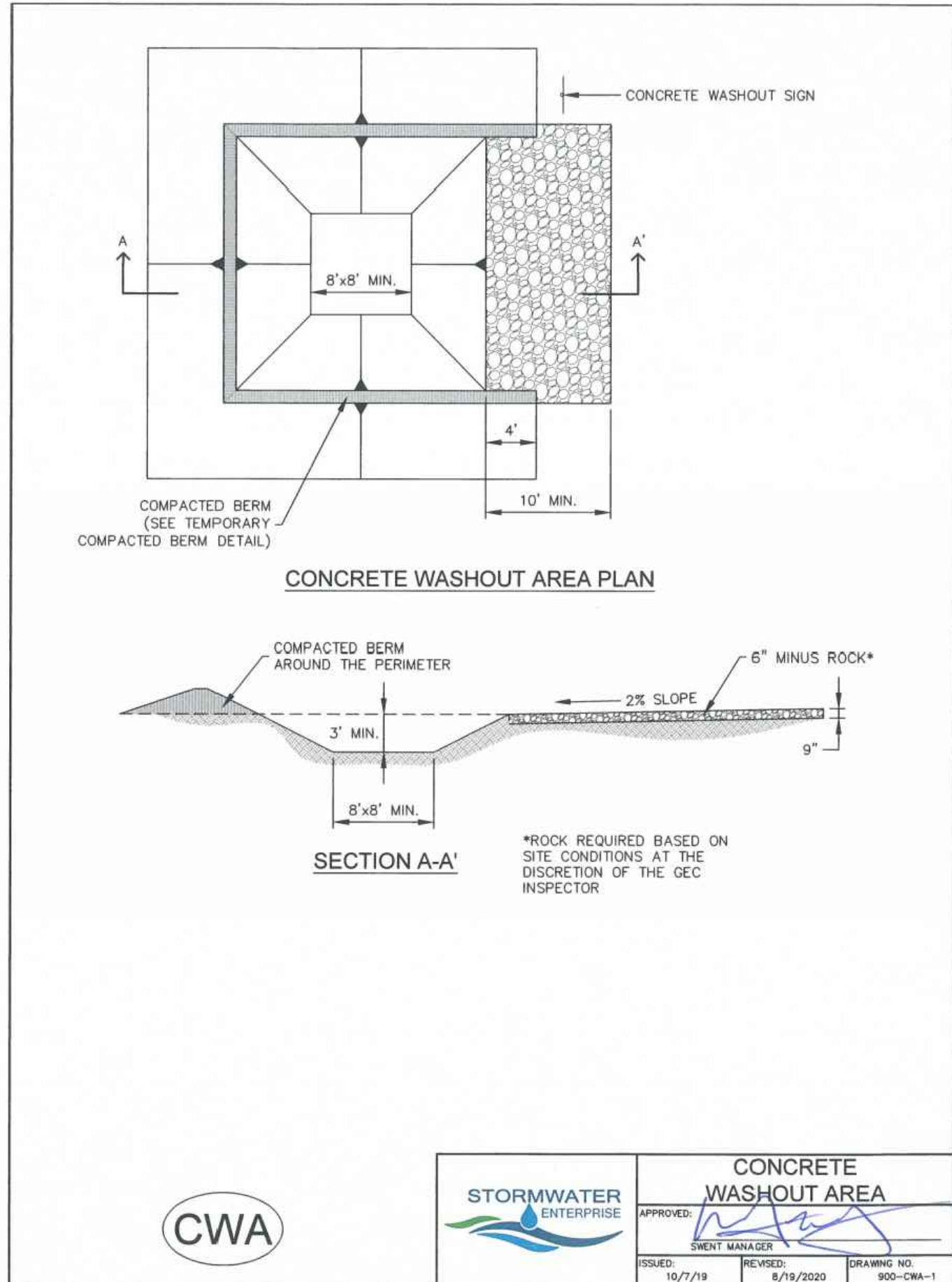




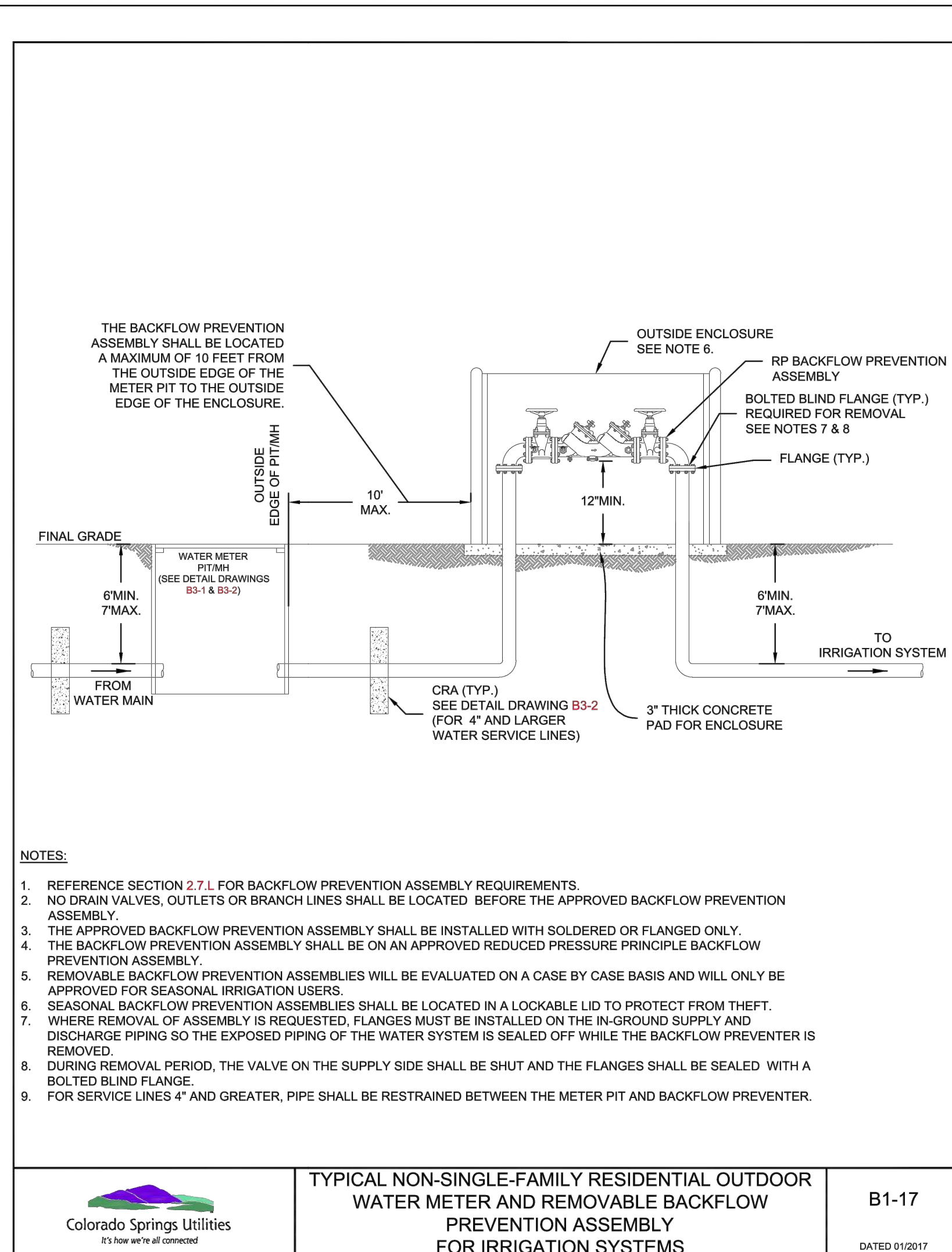
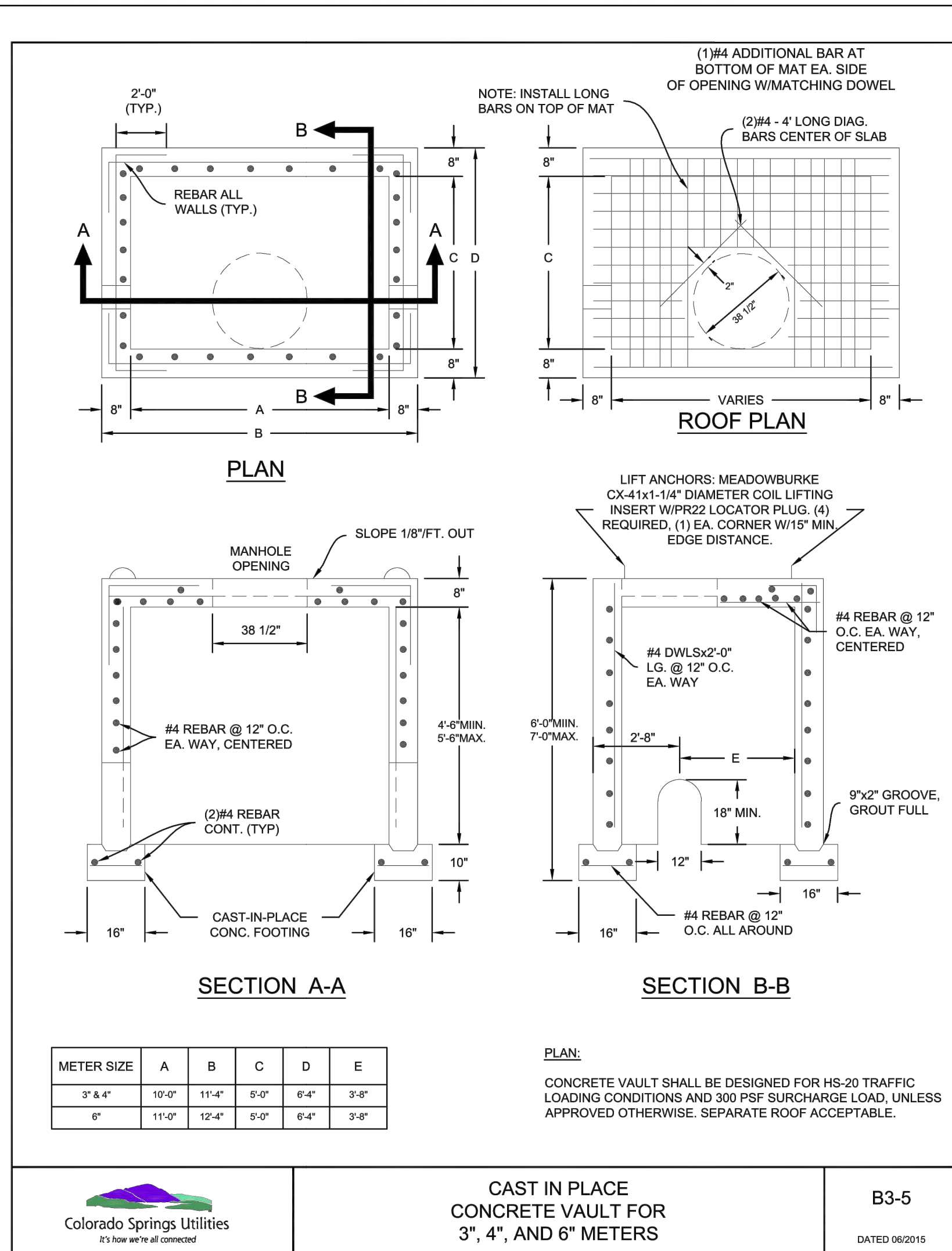
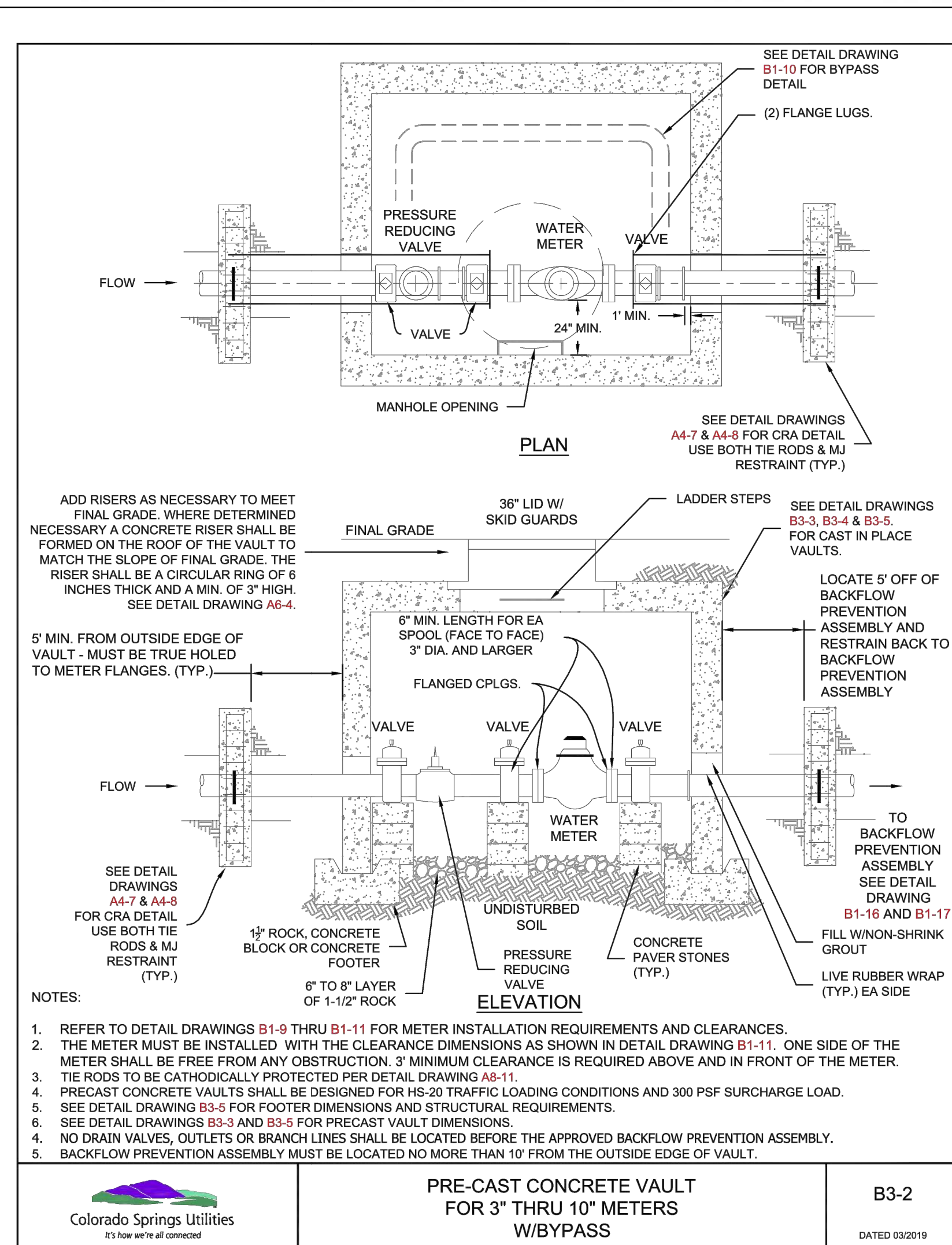
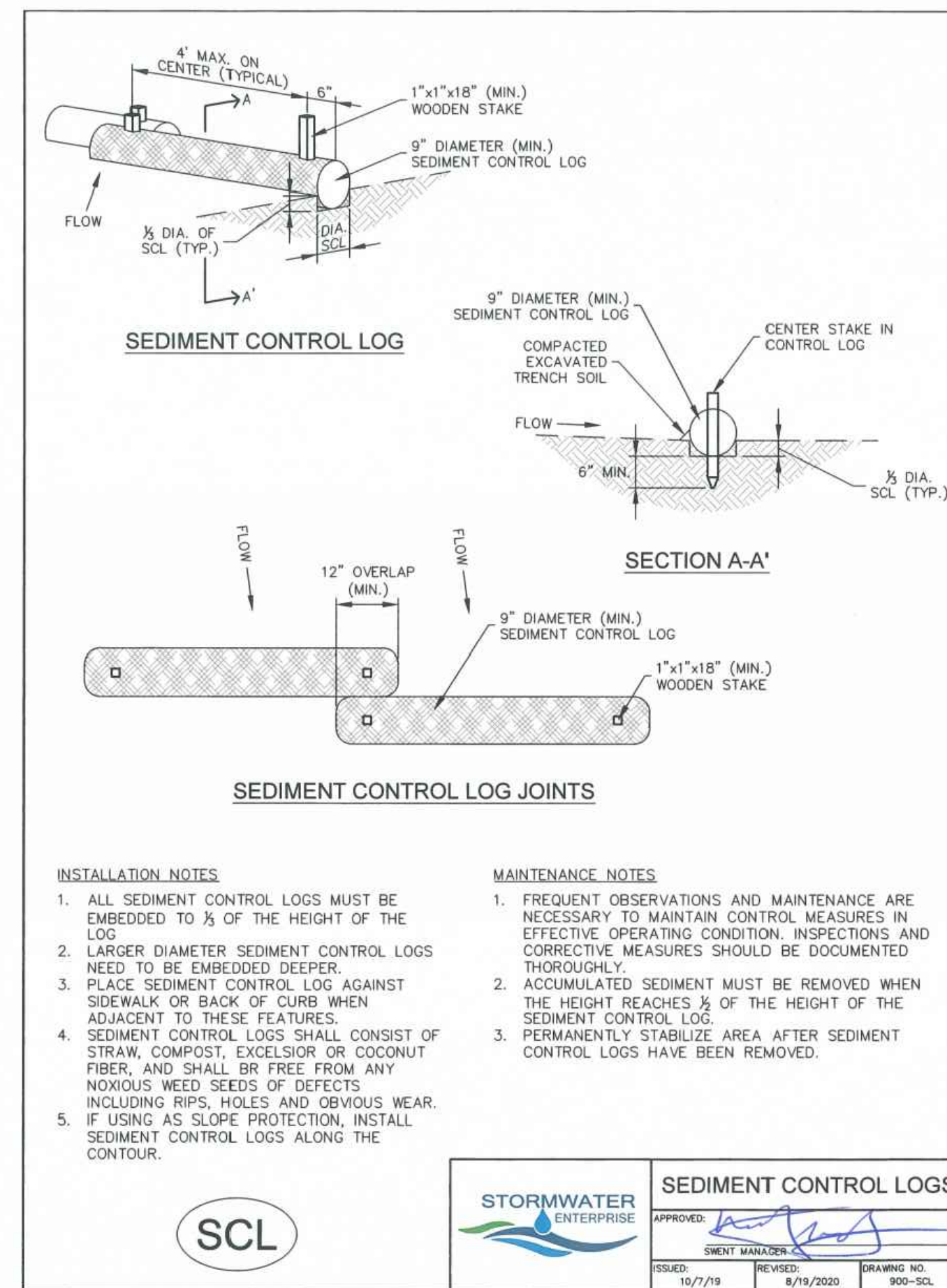
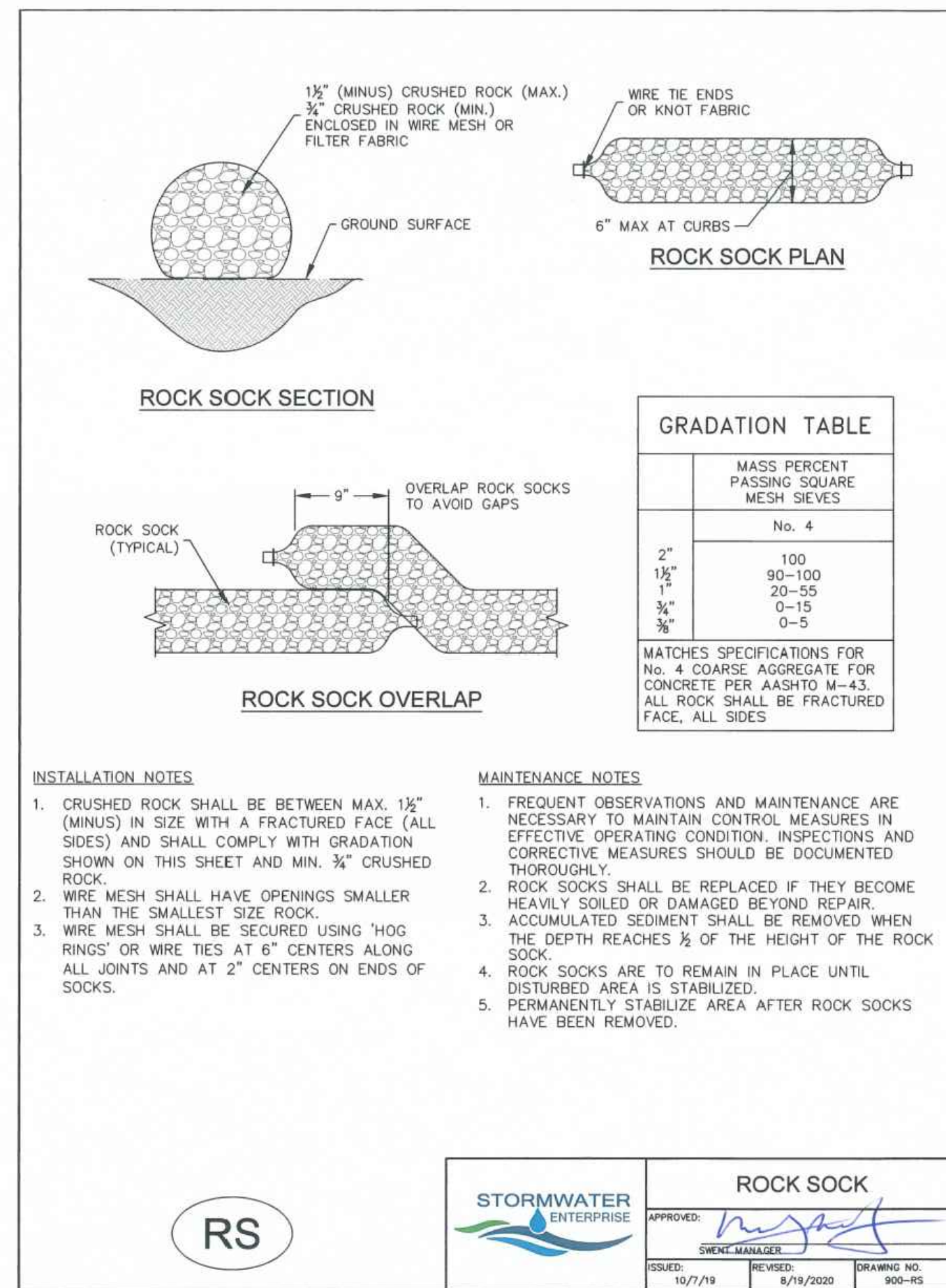
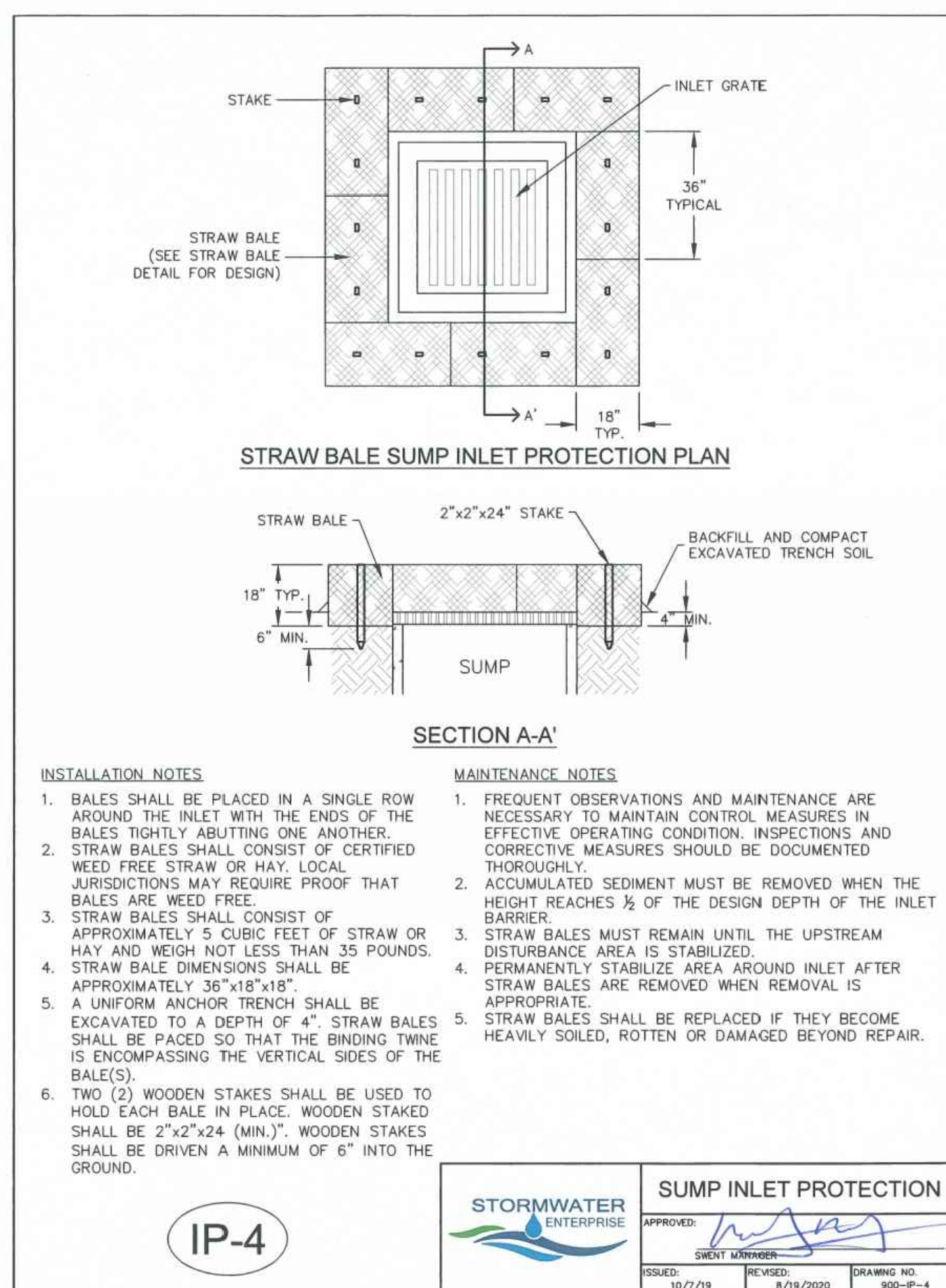
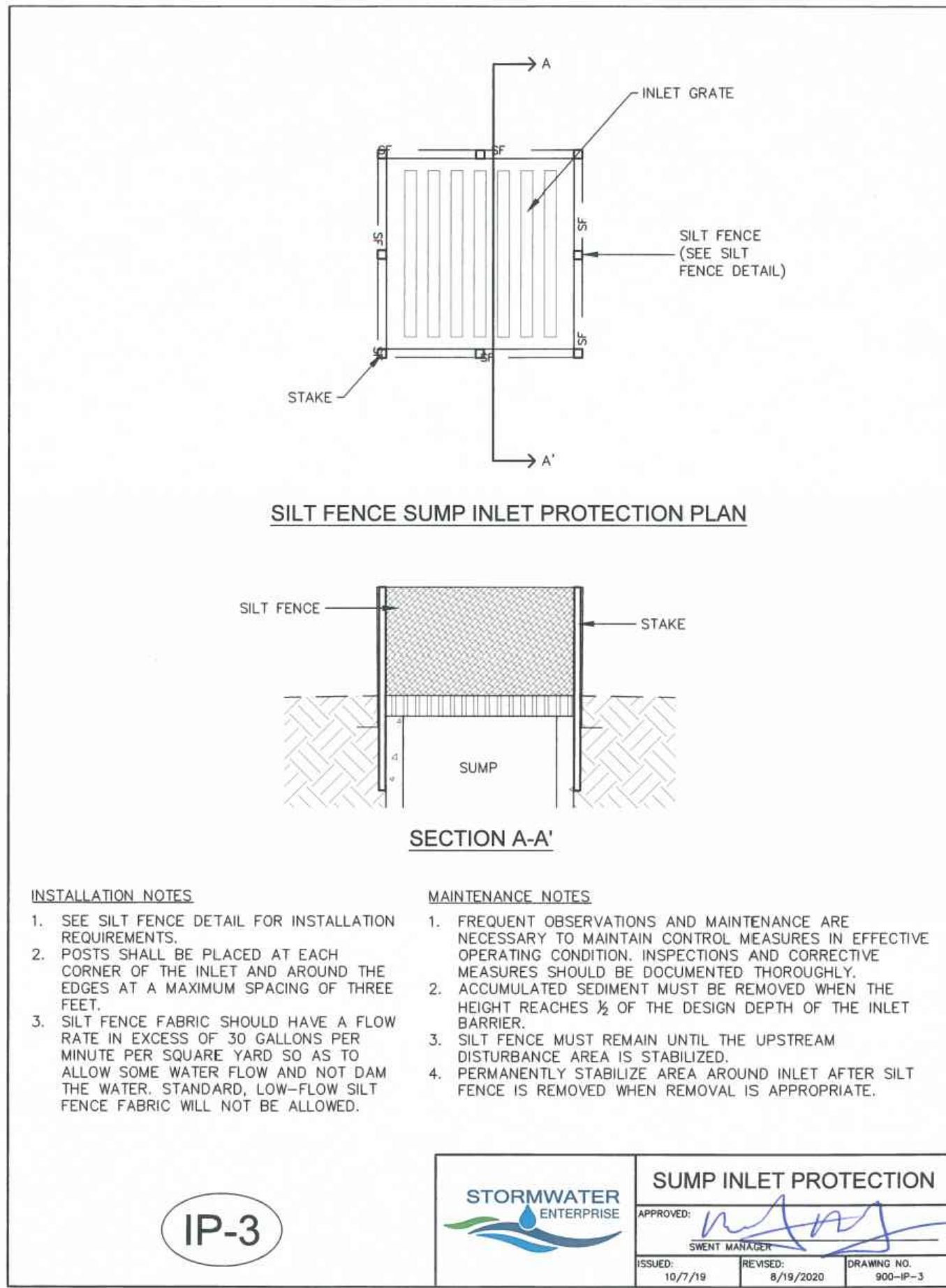




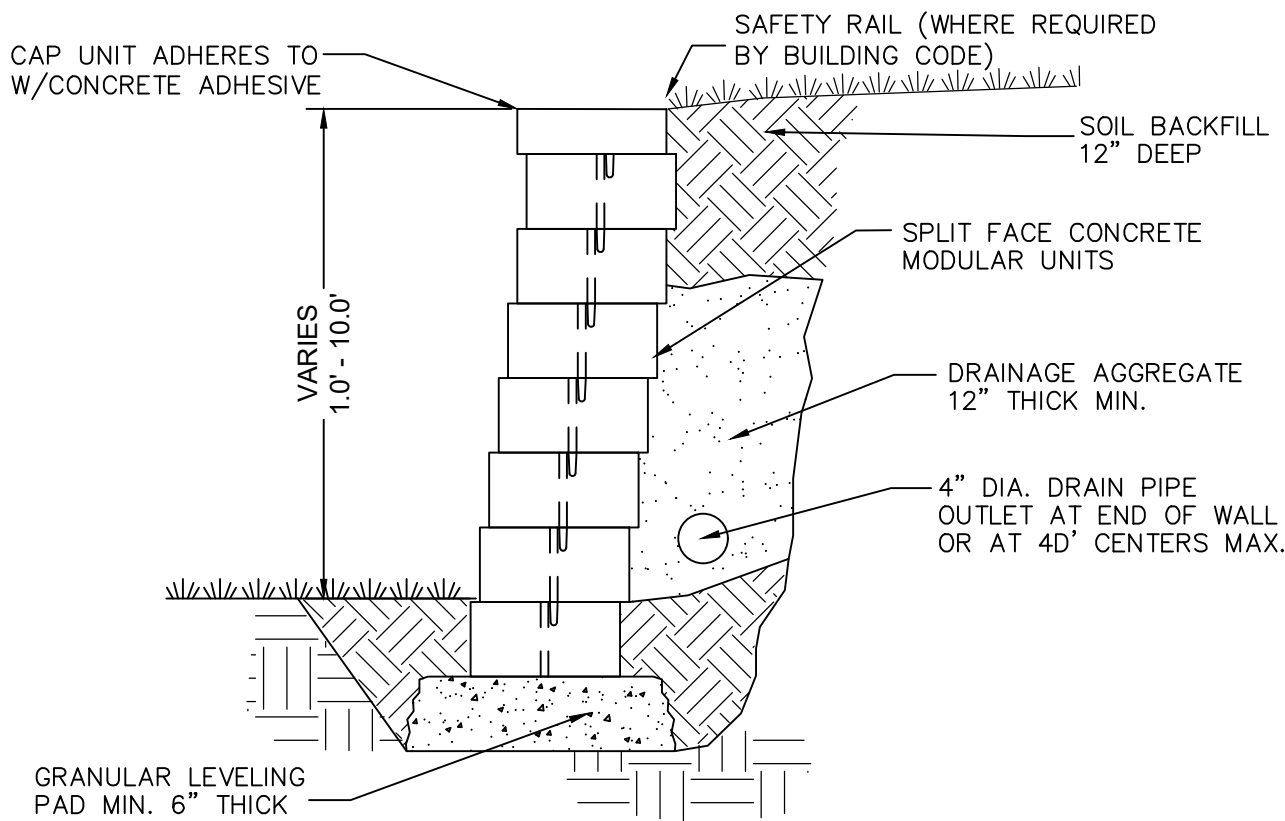
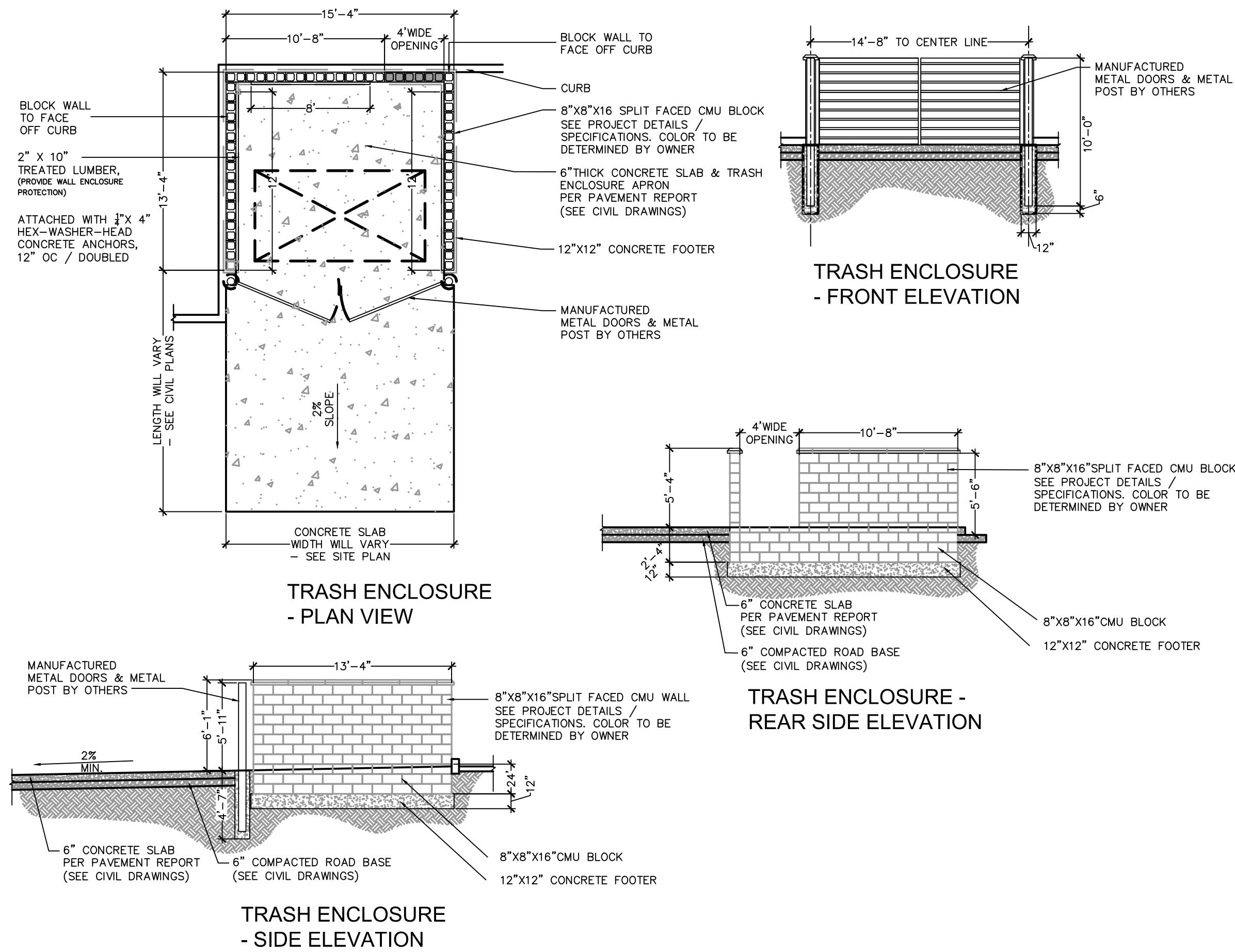






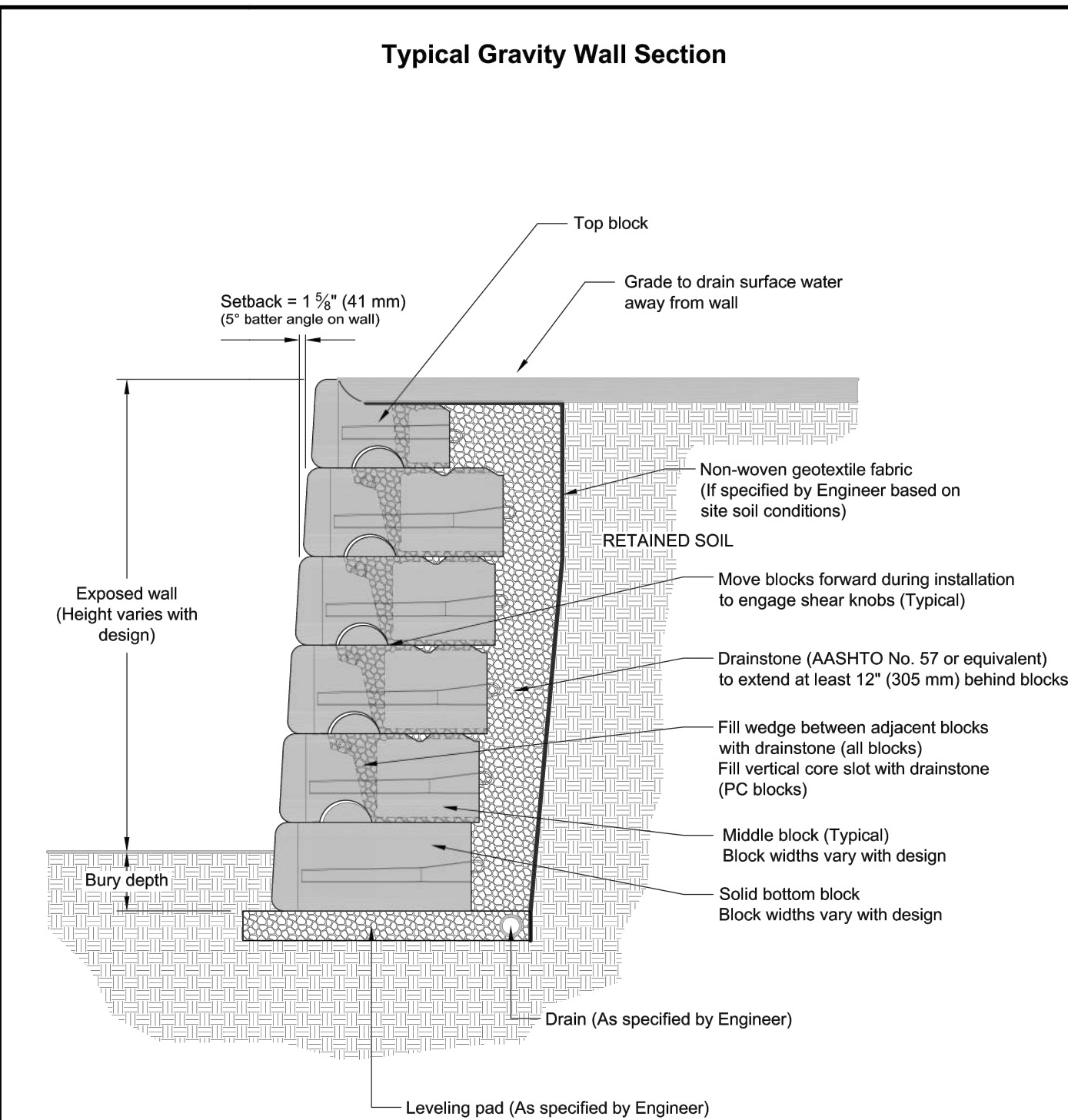






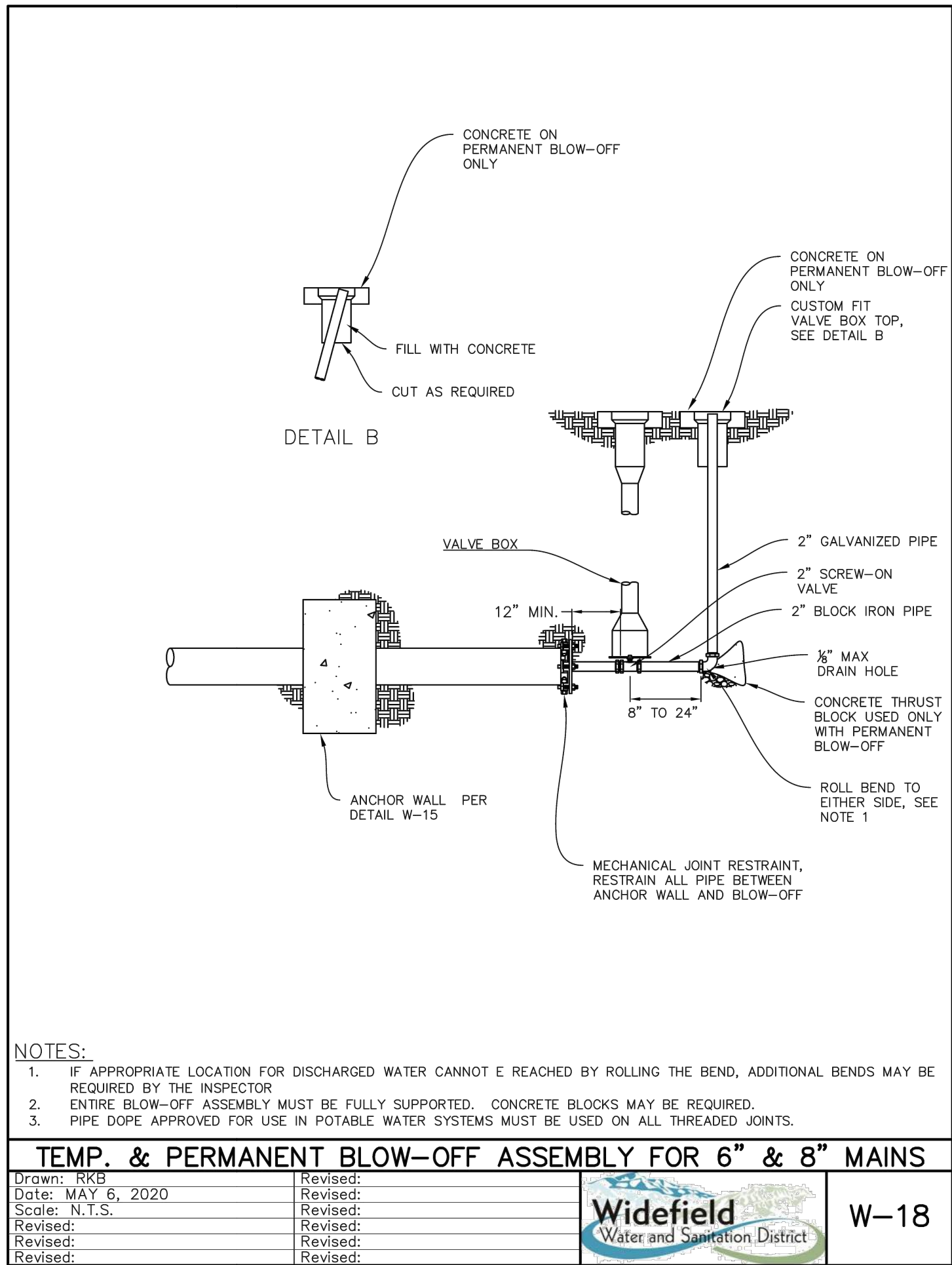
- NOTES:**
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
  2. RETAINING WALLS TO BE (ALTERNATE #1) AMASTONE MODULAR BLOCK WALL OR EQUAL (FINISH STRAIGHT W/ TEXTURE) OR (ALTERNATE #2) RED-ROCK LEDGESTONE
  3. WALLS THAT RETAIN MORE THAN 4 VERTICAL FEET SHALL REQUIRE A BUILDING PERMIT FROM THE PPRBD. STRUCTURAL DESIGNS TO BE PROVIDED BY CONTRACTOR PRIOR TO CONSTRUCTION.
  4. SEE CONSTRUCTION DRAWING GRADING SHEETS FOR TOP/BOTTOM/HEIGHT OF ALL WALLS
  5. SAFETY RAIL TO BE INSTALLED WHERE REQUIRED BY CODE.

**TYPICAL DETAIL - BLOCK RETAINING WALL**  
**ALTERNATE 1**  
**SCALE: NTS**



This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ	TITLE:	Typical Gravity Wall Detail	<b>RED-ROCK</b> 05481 US 31 SOUTH, CHARLEVOLK, MI 49720 (800) 222-8400 ext 3010 • engineering@red-rock.com www.red-rock.com
APPROVED BY:	JRJ			
DATE:	17MAR2016			
SHEET:	1 of 1	FILE:	1 Typical Gravity Wall Detail 031716.dwg	



NO.	DATE	BY	REVISION DESCRIPTION



LEGAL DESCRIPTION:

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 28 AND THE NORTHEAST QUARTER OF SECTION 29, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 29, MONUMENTED AT THE WEST END WITH A 3.25" ALUMINUM CAP IN CONCRETE STAMPED "PLS 4842" AND MONUMENTED AT THE EAST END WITH A #6 REBAR AND 3.25" ALUMINUM CAP STAMPED "PLS 38141" AND ASSUMED TO BEAR S 89°57'13" E A FIELD MEASURED DISTANCE OF 2,652.37 FEET.

BENCHMARK: ELEVATIONS ARE BASED UPON THE FOUNTAIN SANITATION DISTRICT POINT N-1, BEING A 2" BRASS CAP IN CONCRETE AT THE NORTHEAST CORNER OF MESA RIDGE PARKWAY AND FOUNTAIN MESA ROAD. (ELEVATION=5750.57 NGVD 29).

BEGINNING AT THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 28; THENCE N 89°41'59" E ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 117.30 FEET TO A POINT ON THE WEST LINE OF POWERS BOULEVARD AS RECORDED UNDER BOOK 6788 AT PAGE 531 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDERS OFFICE; THENCE ALONG THE WEST LINE OF SAID POWERS BOULEVARD, 933.14 FEET ALONG THE ARC OF A 1,096.98 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 48°44'17" AND A CHORD THAT BEARS S 12°56'23" W, 905.26 FEET TO A POINT ON THE NORTHERLY LINE OF THAT PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290 OF SAID RECORDS; THENCE OF THE FOLLOWING EIGHT (8) COURSES ALONG SAID NORTHERLY LINES AND EASTERLY LINES OF SAID PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290:

1) N 84°16'00" W, A DISTANCE OF 198.99 FEET;

2) 46.11 FEET ALONG THE ARC OF A 540.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 04°53'33" AND A CHORD THAT BEARS N 86°42'46" W, 46.10 FEET;

3) N 89°09'33" W, A DISTANCE OF 124.09 FEET;

4) 100.02 FEET ALONG THE ARC OF A 140.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 40°56'07" AND A CHORD THAT BEARS N 68°41'30" W, 97.91 FEET;

5) N 48°13'27" W, A DISTANCE OF 126.77 FEET;

6) 6.49 FEET ALONG THE ARC OF AN 8.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 46°29'23" AND A CHORD THAT BEARS N 24°58'45" W, 6.31 FEET;

7) N 01°44'04" W, A DISTANCE OF 137.18 FEET;

8) 87.71 FEET ALONG THE ARC OF A 135.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 37°13'35" AND A CHORD THAT BEARS N 20°21'02" W, 86.18 FEET TO THE SOUTHWEST CORNER OF LOT 15, BLOCK 3, SUNRISE RIDGE SUBDIVISION FILING NO. 8 AS RECORDED UNDER RECEPTION NO. 1722613 OF SAID RECORDS;

THENCE THE FOLLOWING TWO (2) COURSES ALONG THE EASTERLY LINE OF SAID SUNRISE RIDGE SUBDIVISION FILING NO. 8: 1) 511.39 FEET ALONG THE ARC OF A 1,034.60 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 28°19'14" AND A CHORD THAT BEARS N 58°13'41" E, 506.20 FEET TO A POINT OF COMPOUND CURVATURE;

2) 283.12 FEET ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 32°26'36" AND A CHORD THAT BEARS N 27°50'47" E, 279.35 FEET TO A POINT ON THE NORTH LINE OF SAID NORTHEAST QUARTER;

THENCE N 89°57'13" E ALONG THE NORTH LINE OF SAID NORTHEAST QUARTER, A DISTANCE OF 115.21 FEET TO THE POINT OF BEGINNING.

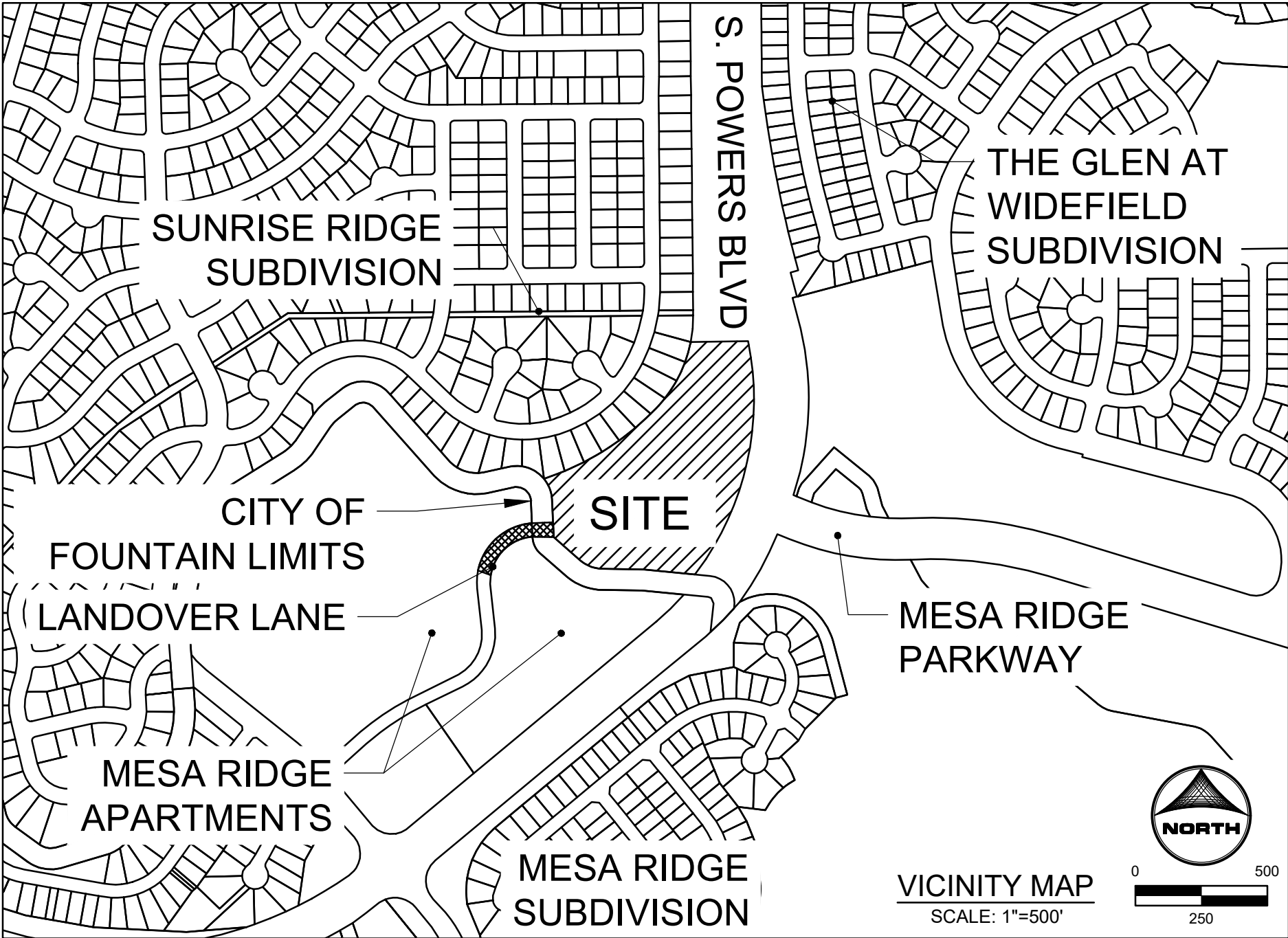
CONTAINING A CALCULATED AREA OF 445,104 SQUARE FEET (10.218 ACRES) OF LAND, MORE OR LESS.

TO BE PLATTED AS "COTTAGES AT MESA RIDGE"

GRADING AND EROSION CONTROL NOTES:

- ANY LAND DISTURBANCE BY ANY OWNER, DEVELOPER, BUILDER, CONTRACTOR, OR OTHER PERSON SHALL COMPLY WITH THE BASIC GRADING, EROSION AND STORMWATER QUALITY CONTROL REQUIREMENTS AND GENERAL PROHIBITIONS NOTED IN THE DRAINAGE CRITERIA MANUAL VOLUME II.
- NO CLEARING, GRADING, EXCAVATION, FILLING, OR OTHER LAND DISTURBING ACTIVITIES SHALL BE PERMITTED UNTIL SIGNOFF AND ACCEPTANCE OF THE GRADING PLAN AND EROSION AND STORMWATER QUALITY CONTROL PLAN IS RECEIVED FROM EDRD.
- THE INSTALLATION OF THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMP'S SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE. CALL CITY STORMWATER INSPECTIONS, 385-5980, 48 HOURS PRIOR TO CONSTRUCTION.
- SEDIMENT (MUD AND DIRT) TRANSPORTED ONTO A PUBLIC ROAD, REGARDLESS OF THE SIZE OF THE SITE, SHALL BE CLEANED IMMEDIATELY.
- CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN THIRTY (30) DAYS SHALL ALSO BE MULCHED WITHIN TWENTY-ONE (21) DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN SIXTY (60) DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
- THE GRADING AND EROSION CONTROL PLAN WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY EDRD SHOULD ANY OF THE FOLLOWING OCCUR: GRADING DOES NOT COMMENCE WITHIN TWELVE (12) MONTHS OF THE CITY ENGINEER'S ACCEPTANCE OF THE PLAN, A CHANGE IN PROPERTY OWNERSHIP, PROPOSED DEVELOPMENT CHANGES, OR PROPOSED GRADING REVISIONS.
- THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS EXISTING UTILITY LINES. ACCEPTANCE OF THIS PLAN DOES NOT CONSTITUTE APPROVAL TO GRADE IN ANY UTILITY EASEMENT OR RIGHT-OF-WAY. APPROVALS TO GRADE WITHIN UTILITY EASEMENTS MUST BE OBTAINED FROM THE APPROPRIATE UTILITY COMPANY. IT IS NOT PERMISSIBLE FOR ANY PERSON TO MODIFY THE GRADE OF THE EARTH ON ANY COLORADO SPRINGS UTILITIES EASEMENT OR UTILITY RIGHT-OF-WAY WITHOUT THEIR WRITTEN APPROVAL. THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO EXISTING UTILITY FACILITIES TO ACCOMMODATE THE PLAN MUST BE APPROVED BY THE AFFECTED UTILITY OWNER PRIOR TO IMPLEMENTING THE PLAN. THE COST TO RELOCATE OR PROTECT EXISTING UTILITIES OR TO PROVIDE INTERIM ACCESS IS THE APPLICANT'S EXPENSE.

THE COTTAGES AT MESA RIDGE  
CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS  
A PORTION OF THE NORTHEAST QUARTER OF SECTION 29, THE SOUTHEAST QUARTER OF SECTION 20, THE SOUTHWEST QUARTER OF SECTION 21, & THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 13 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO



STAKEHOLDERS:

OWNER:	CSJ NO 1 LLC 111 S. TEJON STREET, SUITE 222 COLORADO SPRINGS, CO 80903
DEVELOPER:	GOODWIN KNIGHT 8605 EXPLORER DRIVE, SUITE 250 COLORADO SPRINGS, CO 80920 DAVE MORRISON
ATTN:	
APPLICANT:	HR GREEN DEVELOPMENT, LLC 1975 RESEARCH PKWY, SUITE 230 COLORADO SPRINGS, CO 80920 PHIL STUEPFERT, KEN HUHN
ATTN:	
SURVEYOR:	BARRON LAND, LLC 2790 N ACADEMY BLVD #311 COLORADO SPRINGS, CO 80917 ATTN: SPENCER BARRON

SHEET INDEX:

- 1 - COVER
- 2 - LEGEND & TYPICAL SECTIONS
- 3 - DEMOLITION PLAN
- 4 - DETAILED GRADING
- 5 - GEC - INITIAL PLAN
- 6 - GEC - INTERIM-FINAL PLAN
- 7 - LANDOVER LANE - PLAN & PROFILE
- 8 - STORM PLAN & PROFILE
- 9 - STORM PLAN & PROFILE
- 10 - OUTLET STRUCTURE MODIFICATION PLAN
- 11 - STRUCTURAL NOTES & DETAILS
- 12 - DETAILS
- 13 - DETAILS
- 14 - DETAILS

DETAILED DRAINAGE CONSTRUCTION PLANS AND SPECIFICATIONS ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID DETAILED PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE ESTABLISHED CRITERIA FOR DETAILED DRAINAGE PLANS AND SPECIFICATIONS, AND SAID DETAILED PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH THE MASTER PLAN OF THE DRAINAGE BASIN. SAID DRAINAGE PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR DRAINAGE FACILITY(S) IS DESIGNED. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THE DETAILED PLANS AND SPECIFICATIONS.

SIGNATURE (AFFIX SEAL): \_\_\_\_\_ DATE: \_\_\_\_\_  
COLORADO PROFESSIONAL ENGINEER NO: \_\_\_\_\_

CITY OF FOUNTAIN DETAILED DRAINAGE CONSTRUCTION PLANS AND SPECIFICATIONS REVIEW:

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

BRANDY R WILLIAMS, P.E., CITY ENGINEER  
DATE: \_\_\_\_\_

ENGINEER'S STATEMENT:	
SIGNATURE (AFFIX SEAL): _____ DATE: _____ COLORADO PROFESSIONAL ENGINEER NO: _____	
ACCEPTANCE:	
THESE PLANS SUBMITTED APPEAR TO BE IN CONFORMANCE WITH THE CITY OF FOUNTAIN SUBMITTAL REQUIREMENTS AND STANDARD ENGINEERING PRINCIPLES AND PRACTICES APPEAR TO HAVE BEEN FOLLOWED. THE PROFESSIONAL ENGINEER SUBMITTED AND SEALING THE PLANS IS SOLELY RESPONSIBLY FOR THEIR ACCURACY AND VALIDITY. THE REVIEW IS ONLY VALID FOR ONE (1) YEAR FROM THE DATE BELOW.	
BRANDY R WILLIAMS, P.E., CITY ENGINEER	DATE: _____

Please provide a note that indicates that the CD's for the City of Fountain portion of the project are for reference only.

ENGINEER'S STATEMENT

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. IF SUCH WORK IS PERFORMED IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLAN, THE WORK WILL NOT BECOME A HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE OR STABILITY OF A PUBLIC WAY, DRAINAGE CHANNEL, OR OTHER PROPERTY.

SIGNATURE (AFFIX SEAL) \_\_\_\_\_ DATE \_\_\_\_\_

OWNER'S STATEMENT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN INCLUDING TEMPORARY CONTROL MEASURE INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS, ACCORDING TO THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

DEVELOPER/OWNER SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

NAME OF DEVELOPER/OWNER: \_\_\_\_\_

DBA: \_\_\_\_\_ PHONE: \_\_\_\_\_

TITLE: \_\_\_\_\_ EMAIL: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

FAX: \_\_\_\_\_

CITY OF FOUNTAIN GRADING AND EROSION CONTROL REVIEW:

THIS GRADING PLAN AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH SECTION 12.04.160 OF THE CODE OF THE CITY OF FOUNTAIN. THIS PLAN IS REVIEWED WITH THE DRAINAGE CRITERIA MANUAL, VOL. I (JANUARY 2024) AND VOL. II (DECEMBER 2020); STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.

BRANDY R WILLIAMS, P.E., CITY ENGINEER  
DATE: \_\_\_\_\_

NOTES:

DRAWN BY: NQJ  
JOB DATE: 8/22/2022  
APPROVED: KMH  
JOB NUMBER: 200541  
CAD DATE: 8/22/2022  
CAD FILE: J:\2020\200541\CAD\DWG\CI\CDIC.O.FICover

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OFFICIAL DRAWINGS.  
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IF NOT ONE INCH,  
ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION



HR GREEN - COLORADO SPRINGS  
7222 COMMERCE CENTER DR SUITE 220  
COLORADO SPRINGS CO 80919  
PHONE: 719.300.4140 TOLL FREE: 800.728.7805  
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE  
GOODWIN KNIGHT  
FOUNTAIN, COLORADO



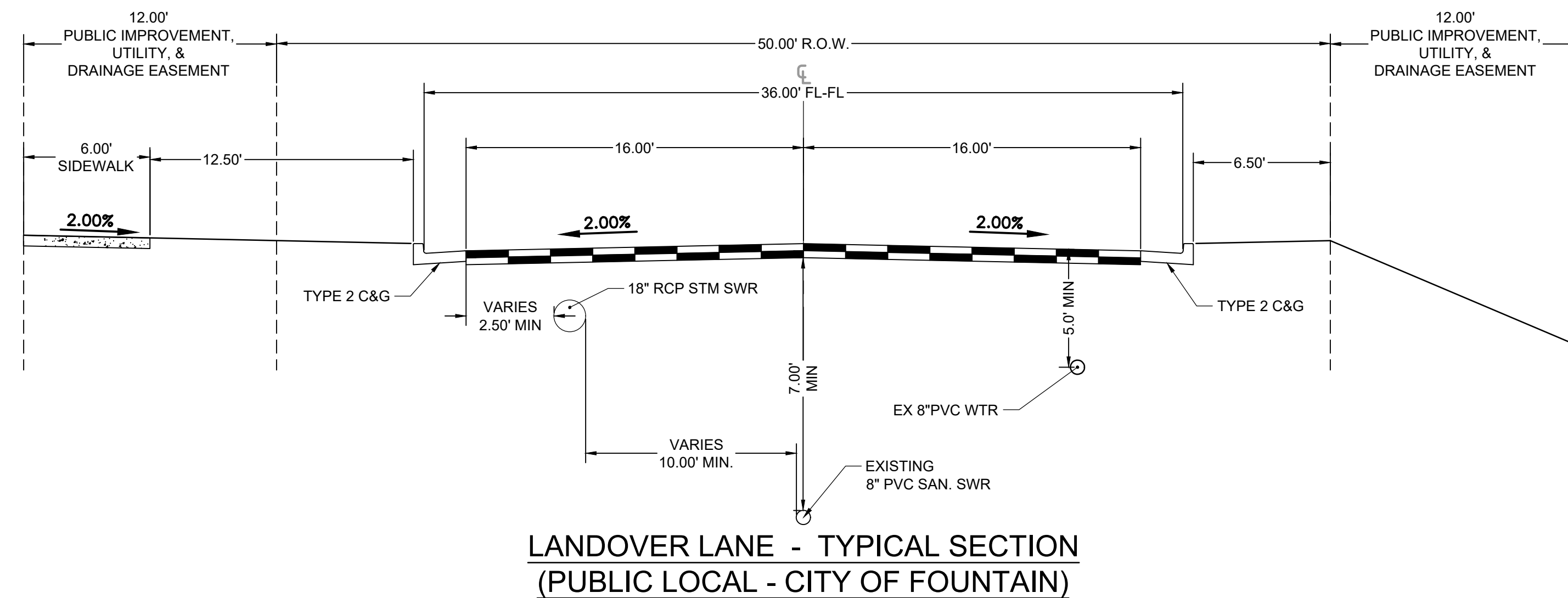
CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS  
COVER

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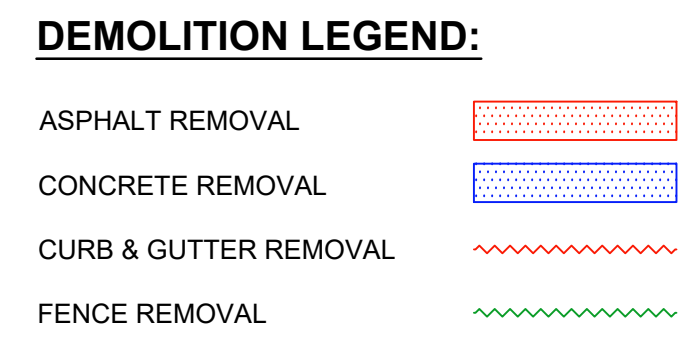
	<b>EXISTING</b>	<b>PROPOSED</b>		
MATCH LINE			<b>STORM SEWER</b>	<b>EXISTING</b>
PHASE LINE	— — — — —	— — — — —	MANHOLE	(B)
SECTION LINE	— — — — —	— — — — —	STORM INLET	[SI]
PROPERTY LINE	- - - - -	- - - - -	FLARED END SECTION	[FE]
EASEMENT LINE	- - - - -	- - - - -	RIPRAP	[RR]
RIGHT OF WAY	— — — — —	— — — — —		
CENTERLINE	— — — — —	— — — — —	<b>SANITARY SEWER</b>	
CHAIN LINK FENCE	— □ — □ — □ —	— □ — □ — □ —	CLEAN OUT	↓
WOODEN FENCE	— ○ — ○ — ○ —	— ○ — ○ — ○ —	MANHOLE	(S)
ROD IRON FENCE	— ● — ● — ● —	— ● — ● — ● —	PLUG	⊙
GUARDRAIL	— TV — TV — TV —	— TV — TV — TV —		
CABLE TV	— — — — —	— — — — —	<b>WATER</b>	
U.G. ELECTRIC	— — — — —	— — — — —	FIRE HYDRANT	[FH]
OVERHEAD ELECTRIC	— OE — OE — OE —	— OE — OE — OE —	FIRE DEPT. CONNECTION	[FDC]
FIBER OPTIC	— FO — FO — FO —	— FO — FO — FO —	GATE VALVE	[GV]
GAS MAIN	— — — — —	— — — — —	MANHOLE	(M)
SANITARY SEWER	— SS — SS — SS —	— SS — SS — SS —	METER	[ME]
STORM DRAIN	— — — — —	— — — — —	TEE	[T]
TELEPHONE	— UT — UT — UT —	— UT — UT — UT —	REDUCER	[R]
WATER MAIN	— W — W — W —	— W — W — W —		
SWALE	— ◀ — ▶ — ◀ — ▶ —	— ◀ — ▶ — ◀ — ▶ —	<b>DRY UTILITIES</b>	
TRAIL	— — — — —	— — — — —	ELECTRIC METER	[EM]
CURB & GUTTER	— — — — —	— — — — —	ELECTRIC PEDESTAL	[EP]
DRAINAGE BASIN	— — — — —	— — — — —	ELECTRIC CABINET	[EC]
INDEX CONTOUR	— — — — —	— — — — —	ELECTRIC VAULT	[EV]
INTER. CONTOUR	— — — — —	— — — — —	FIBER OPTIC PULL BOX	[FPB]
100-YR FLOODPLAIN	— — — — —	— — — — —	FIBER OPTIC MANHOLE	[FBM]
FLOODWAY	— — — — —	— — — — —	FIBER OPTIC PEDESTAL	[FBP]
EDGE OF WETLANDS	[W] [W] [W] [W] [W]	[W] [W] [W] [W] [W]	FIBER OPTIC SIGN	[FBS]
			FIBER OPTIC VAULT	[FBV]
<b>DRAINAGE</b>			GAS METER	[GM]
	<b>EXISTING</b>	<b>PROPOSED</b>	GAS SIGN	[GS]
DRAINAGE BASIN	— — — — —	— — — — —	GAS VAULT	[GV]
BASIN TAG		(I.D.) AREA	TELEPHONE CABINET	[TC]
DESIGN POINT		△	TELEPHONE MANHOLE	(TM)
			TELEPHONE SIGNAL/MAST	[TS]
			TELEPHONE SIGN	[TSN]
			TELEPHONE PEDESTAL	[TPD]
			TRANSFORMER	[X]
			LIGHT POLE	[LP]
			FIBER OPTIC VAULT	[FBV]



NOT FOR CONSTRUCTION

NO.	DATE	BY	REVISION DESCRIPTION





<b>ENGINEER'S STATEMENT:</b>	
SIGNATURE (AFFIX SEAL): _____	DATE: _____
COLORADO PROFESSIONAL ENGINEER NO: _____	

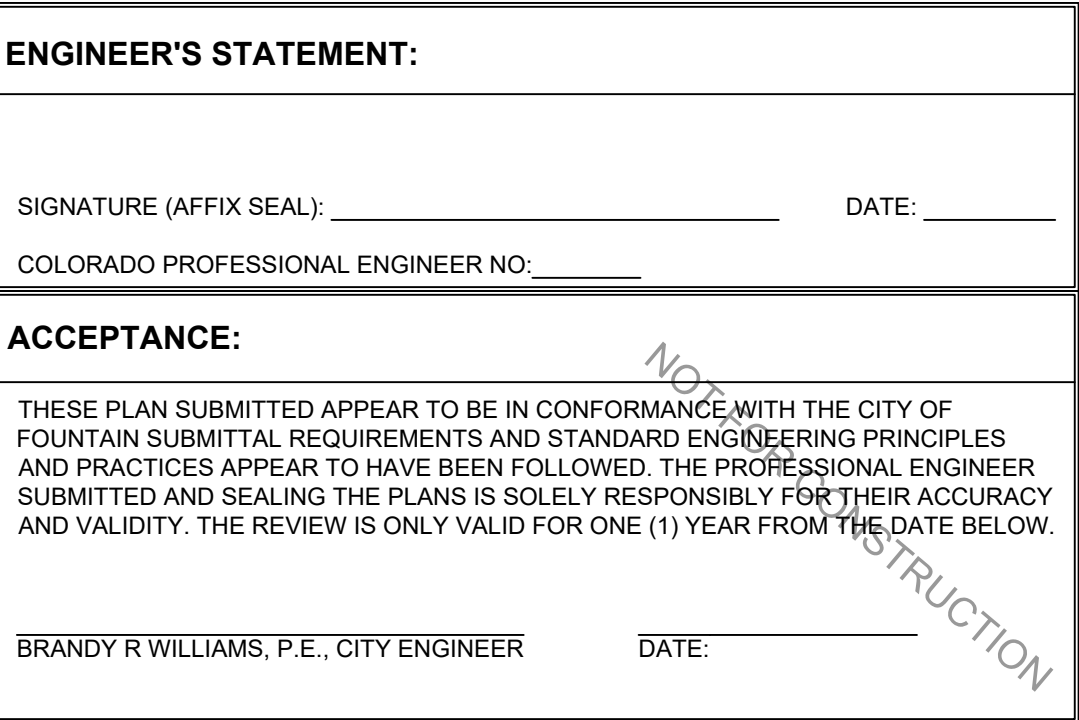
**ACCEPTANCE:**

THESE PLANS SUBMITTED APPEAR TO BE IN CONFORMANCE WITH THE CITY OF FOUNTAIN SUBMITTAL REQUIREMENTS AND STANDARD ENGINEERING PRINCIPLES AND PRACTICES APPEAR TO HAVE BEEN FOLLOWED. THE PROFESSIONAL ENGINEER SUBMITTED AND SEALING THE PLANS IS SOLELY RESPONSIBLE FOR THEIR ACCURACY AND VALIDITY. THE REVIEW IS ONLY VALID FOR ONE (1) YEAR FROM THE DATE BELOW.

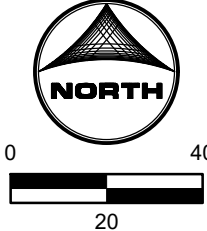
BRANDY R WILLIAMS, P.E., CITY ENGINEER

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









1. SEE SHEETS 11-13 FOR CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL DETAILS.
2. ALL STORMWATER MANAGEMENT MEASURES SHOWN ON THIS PLAN MUST BE INSTALLED AND MAINTAINED PER THE COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.
3. ALL AREAS WITHIN LIMITS OF DISTURBANCE TO BE CLEARED, GRUBBED AND STOCKPILED PRIOR TO IMPORT OF ANY FILL.
4. ALL 3:1 SLOPES MUST BE RECEIVE SLOPE TRACKING TREATMENT AND EROSION CONTROL BLANKET.
5. STOCKPILES REQUIRED DURING ONSITE CONSTRUCTION ACTIVITIES WILL BE PLACED AT THE DISCRETION OF THE CONTRACTOR. STOCKPILING OF MATERIAL MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN.
6. NON-STRUCTURAL CONTROLS (I.E. STREET SWEEPING) WILL BE AT THE DISCRETION OF THE PROJECT'S CERTIFIED GEC ADMINISTRATOR THROUGHOUT THE DURATION OF LAND DISTURBING ACTIVITIES.
7. THERE ARE NO ANTICIPATED ASPHALT AND/OR CONCRETE BATCH PLANTS, OR MASONRY MIX STATIONS ASSOCIATED WITH THIS PROJECT. IF THE CONTRACTOR REQUIRES A ASPHALT/CONCRETE BATCH PLANTS OR MASONRY MIX STATIONS, THESE PLANS WILL BE REVISED.
8. THERE ARE NO EXISTING PRESERVATION EASEMENTS LOCATED ON SITE.
9. ONITE EXISTING VEGETATION IS NATIVE GRASSES AND WEEDS. THERE IS NO NOTABLE VEGETATION OTHERWISE.

TOTAL DISTURBANCE AREA = 1.31 AC  
RECEIVING WATERS: JIMMY CAMP CREEK  
ANTICIPATED START OF CONSTRUCTION: SPRING 2023  
ANTICIPATED END OF LAND DISTURBANCE: FALL 2023  
ANTICIPATED FINAL STABILIZATION: WINTER 2023

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. IF SUCH WORK IS PERFORMED IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLAN, THE WORK WILL NOT BECOME A HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE OR STABILITY OF A PUBLIC WAY, DRAINAGE CHANNEL, OR OTHER PROPERTY.

## OWNER'S STATEMENT

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN INCLUDING TEMPORARY CONTROL MEASURE INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS, ACCORDING TO THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

DEVELOPER/OWNER SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

NAME OF DEVELOPER/OWNER:

DBA: \_\_\_\_\_ PHONE: \_\_\_\_\_

TITLE: \_\_\_\_\_ EMAIL: \_\_\_\_\_

ADDRESS:

## CITY OF FOUNTAIN GRADING AND EROSION CONTROL REVIEW:

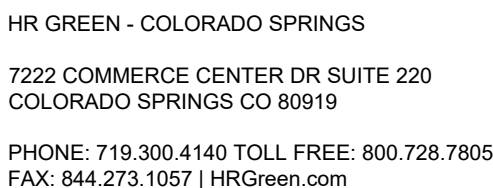
THIS GRADING PLAN AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH SECTION 12.04.160 OF THE CODE OF THE CITY OF FOUNTAIN. THIS PLAN IS REVIEWED WITH THE DRAINAGE CRITERIA MANUAL, VOL. I (JANUARY 2021) AND VOL. II (DECEMBER 2020): STORMWATER CONSTRUCTION MANUAL: LATEST REVISIONS.

BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE

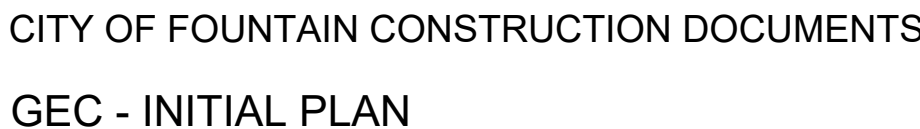
NOTES:

DRAWN BY: NQJ JOB DATE: 8/22/2022 BAR IS ONE INCH ON  
APPROVED: KMH JOB NUMBER: 200541 OFFICIAL DRAWINGS.  
0  1"  
CAD DATE: 8/22/2022 IF NOT ONE INCH,  
CAD FILE: J:\2020\200541\CAD\DWG\IC\CID.O.F\GEC Initial ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION



THE COTTAGES AT MESA RIDGE  
GOODWIN KNIGHT  
FOUNTAIN, COLORADO



SHEET  
GEC

5

NOT FOR CONSTRUCTION





1. SEE SHEETS 11-13 FOR CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL DETAILS.
2. ALL STORMWATER MANAGEMENT MEASURES SHOWN ON THIS PLAN MUST BE INSTALLED AND MAINTAINED PER THE COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.
3. AREA WITHIN LIMITS OF DISTURBANCE TO BE CLEARED, GRUBBED AND STOCKPILED PRIOR TO IMPOSITION OF ANY FILL.
4. ALL 3:1 SLOPES MUST BE RECEIVE SLOPE TRACKING TREATMENT AND EROSION CONTROL BLANKET.
5. STOCKPILES REQUIRED DURING ONSITE CONSTRUCTION ACTIVITIES WILL BE PLACED AT THE DISCRETION OF THE CONTRACTOR. STOCKPILING OF MATERIAL MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THIS PLAN.
6. NON-STRUCTURAL CONTROLS (I.E. STREET SWEEPING) WILL BE AT THE DISCRETION OF THE PROJECT'S CERTIFIED GEC ADMINISTRATOR THROUGHOUT THE DURATION OF LAND DISTURBING ACTIVITIES.
7. THERE ARE NO ANTICIPATED ASPHALT AND/OR CONCRETE BATCH PLANTS, OR MASONRY MIX STATIONS ASSOCIATED WITH THIS PROJECT. IF THE CONTRACTOR REQUIRES A ASPHALT/CONCRETE BATCH PLANTS OR MASONRY MIX STATIONS, THESE PLANTS WILL BE AMENED TO AS REQUIRED.
8. THERE ARE NO EXISTING PRESERVATION EASEMENTS LOCATED ON SITE.
9. ONSITE EXISTING VEGETATION IS NATIVE GRASSES AND WEEDS. THERE IS NO NOTABLE VEGETATION OTHERWISE.

ANTICIPATED FINAL STABILIZATION: WINTER 2023

## NOTES:

NOT FOR CONSTRUCTION

BAR IS ONE INCH ON  
OFFICIAL DRAWINGS.  
0  1"  
IF NOT ONE INCH,  
USE SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

HR GREEN - COLORADO SPRINGS  
7222 COMMERCE CENTER DR SUITE 220  
COLORADO SPRINGS CO 80919  
PHONE: 719.300.4140 TOLL FREE: 800.728.7809  
FAX: 844.273.1057 | [HRGreen.com](http://HRGreen.com)

THE COTTAGES AT MESA RIDGE  
GOODWIN KNIGHT  
FOUNTAIN, COLORADO

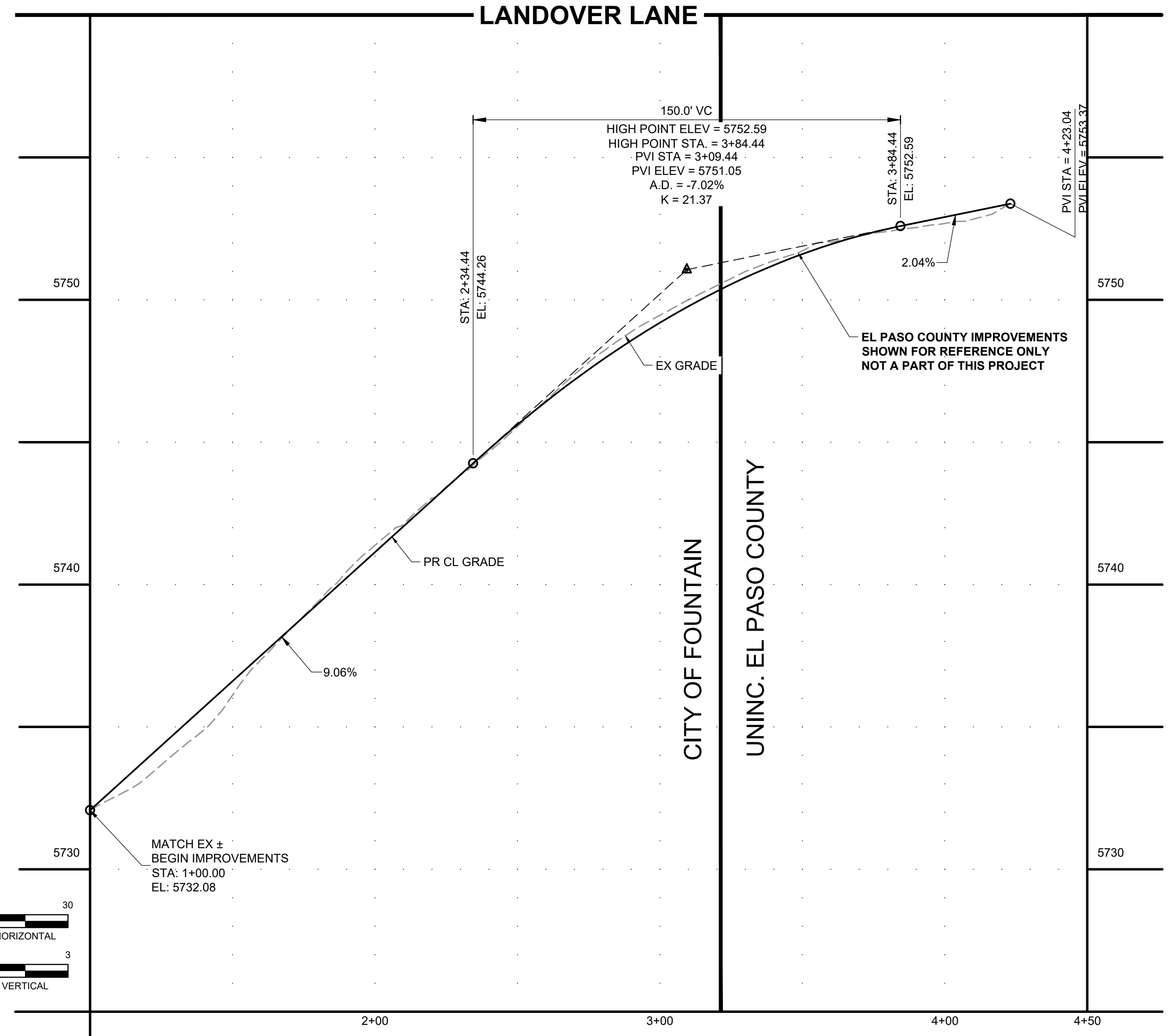


CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS  
GEC - INTERIM-FINAL PLAN

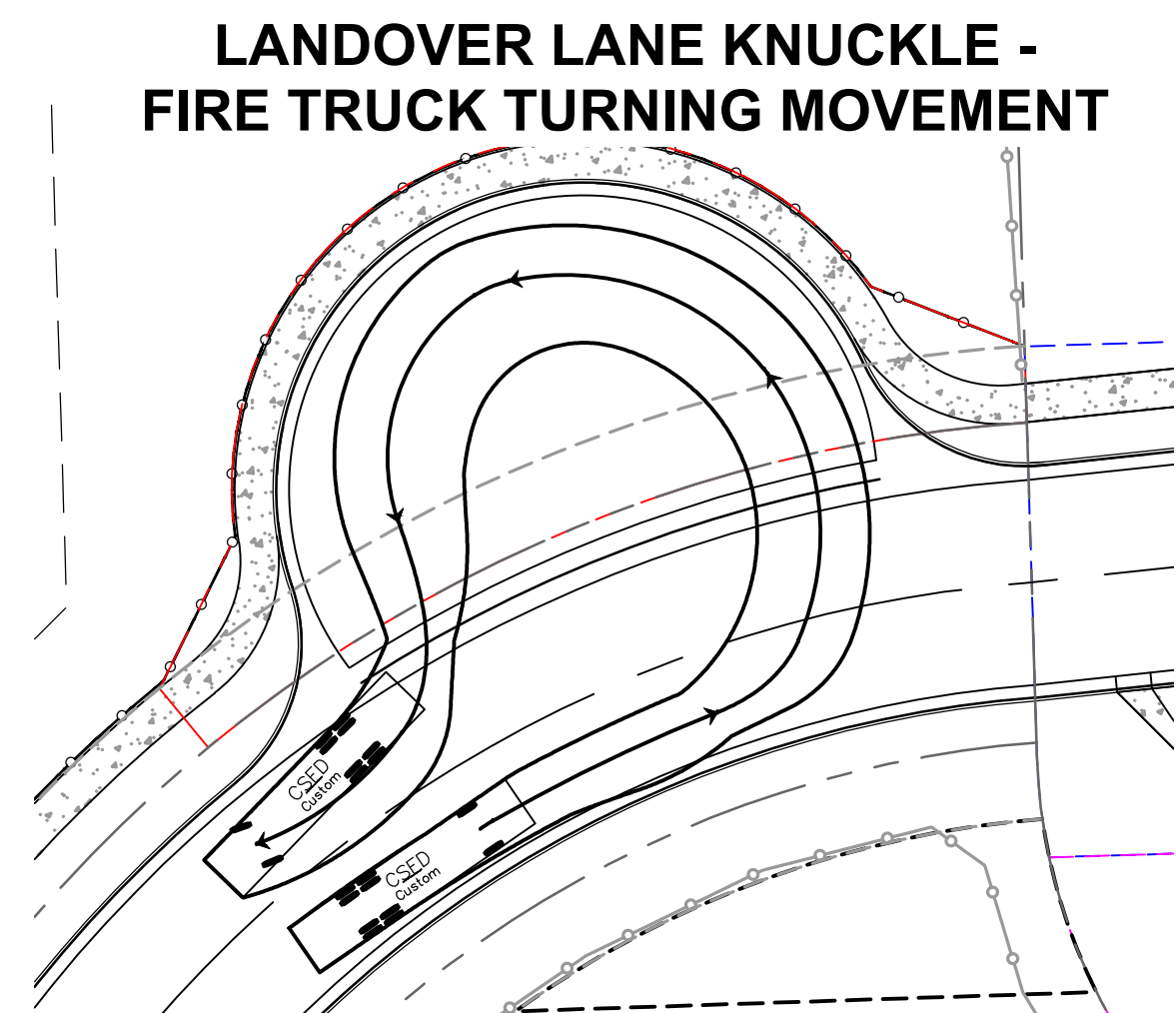
SHEET  
GEC

6



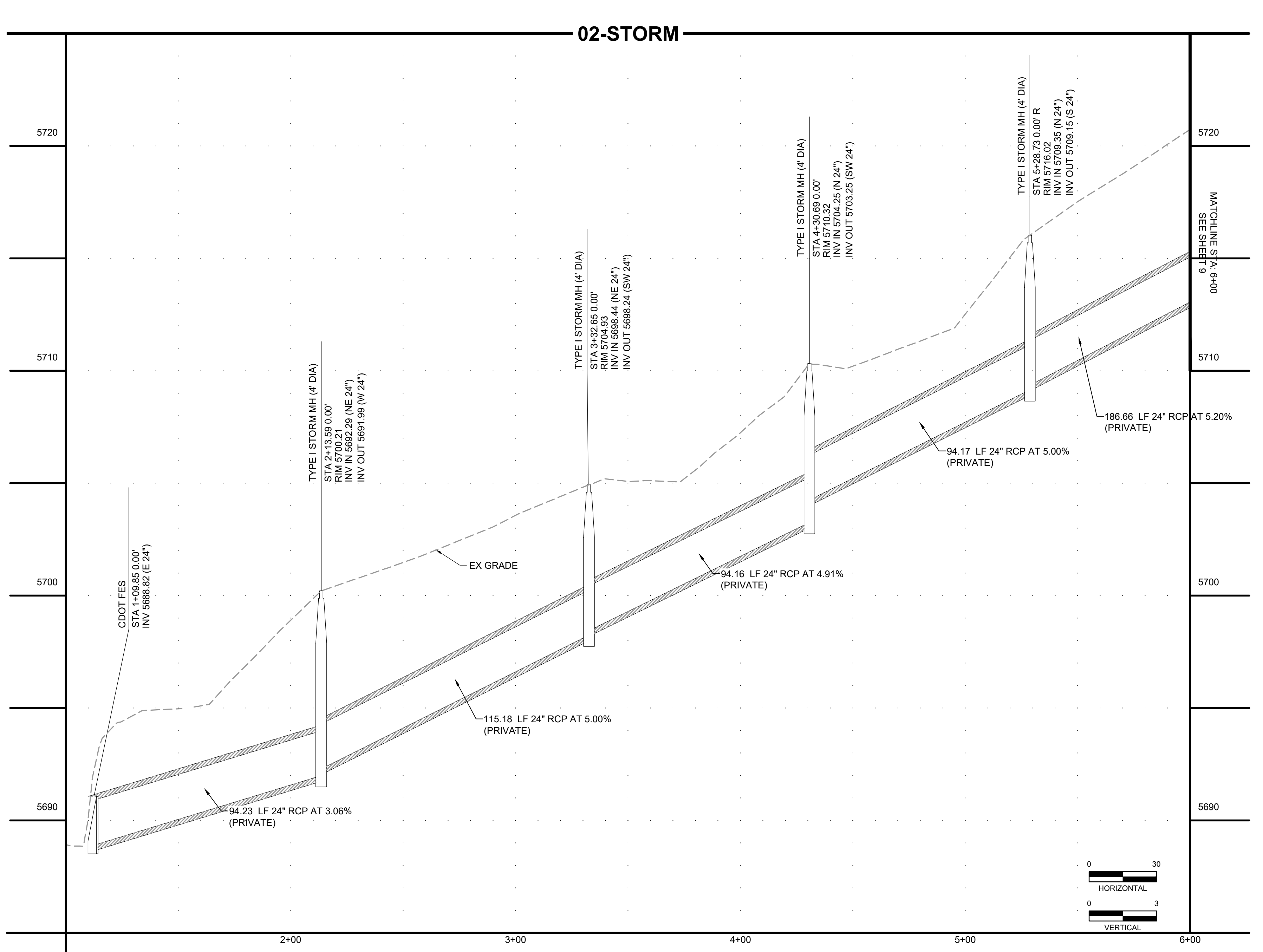


**TYPE 2**  
**6" VERTICAL**



<b>ENGINEER'S STATEMENT:</b>	
SIGNATURE (AFFIX SEAL): _____	DATE: _____
COLORADO PROFESSIONAL ENGINEER NO: _____	
<b>ACCEPTANCE:</b>	
<p>THESE PLANS SUBMITTED APPEAR TO BE IN CONFORMANCE WITH THE CITY OF FOUNTAIN SUBMITTAL REQUIREMENTS AND STANDARD ENGINEERING PRINCIPLES AND PRACTICES APPEAR TO HAVE BEEN FOLLOWED. THE PROFESSIONAL ENGINEER SUBMITTED AND SEALING THE PLANS IS SOLELY RESPONSIBLE FOR THEIR ACCURACY AND VALIDITY. THE REVIEW IS ONLY VALID FOR ONE (1) YEAR FROM THE DATE BELOW.</p>	
BRANDY R WILLIAMS, P.E., CITY ENGINEER	DATE: _____





1. ALL RCP STORM SEWER TO BE CLASS III UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL POTHOLE AND VERIFY DEPTH OF EXISTING UTILITY PRIOR TO THE START OF CONSTRUCTION. IF CONFLICTS ARE IDENTIFIED THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID DETAILED PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE ESTABLISHED CRITERIA FOR DETAILED DRAINAGE PLANS AND SPECIFICATIONS, AND SAID DETAILED PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH THE MASTER PLAN OF THE DRAINAGE BASIN. SAID DRAINAGE PLANS AND SPECIFICATIONS WERE PREPARED TO MEET THE REQUIREMENTS OF THE PARTICULAR DRAINAGE FACILITY(S) IS DESIGNED. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THE DETAILED PLANS AND SPECIFICATIONS.

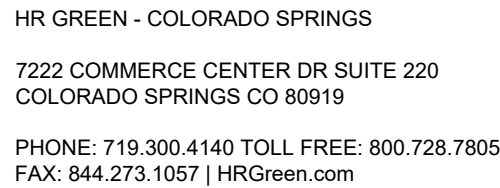
COLORADO PROFESSIONAL ENGINEER NO: \_\_\_\_\_

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

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

BAR IS ONE INCH ON  
OFFICIAL DRAWINGS.  
0  1"  
IF NOT ONE INCH,  
JUST SCALE ACCORDINGLY

NO.	DATE	BY	REVISION DESCRIPTION



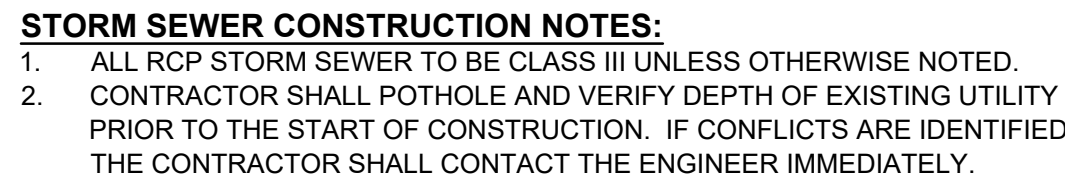
CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS  
STORM PLAN & PROFILE

SHEET  
STM

8

NOT FOR CONSTRUCTION

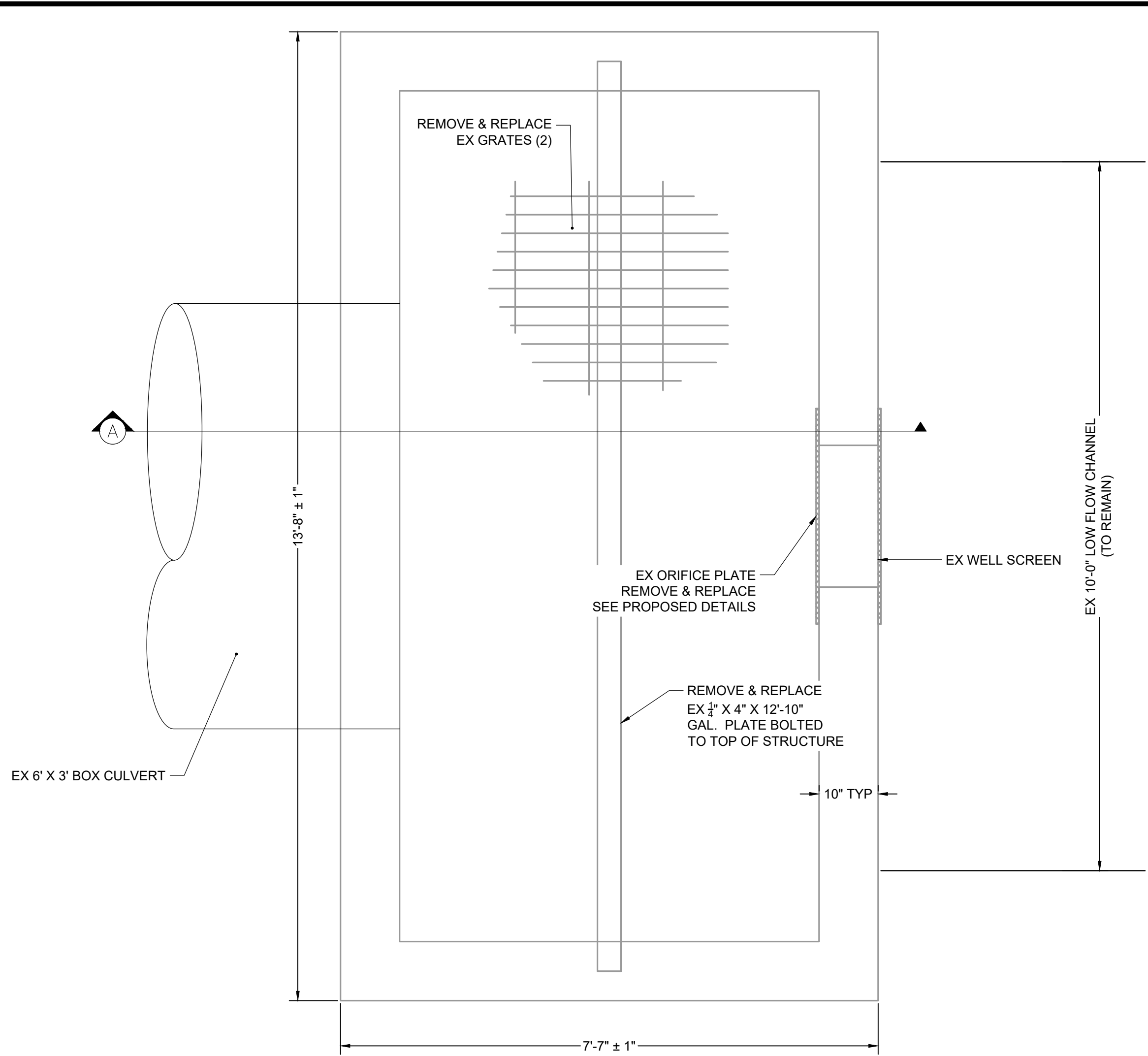




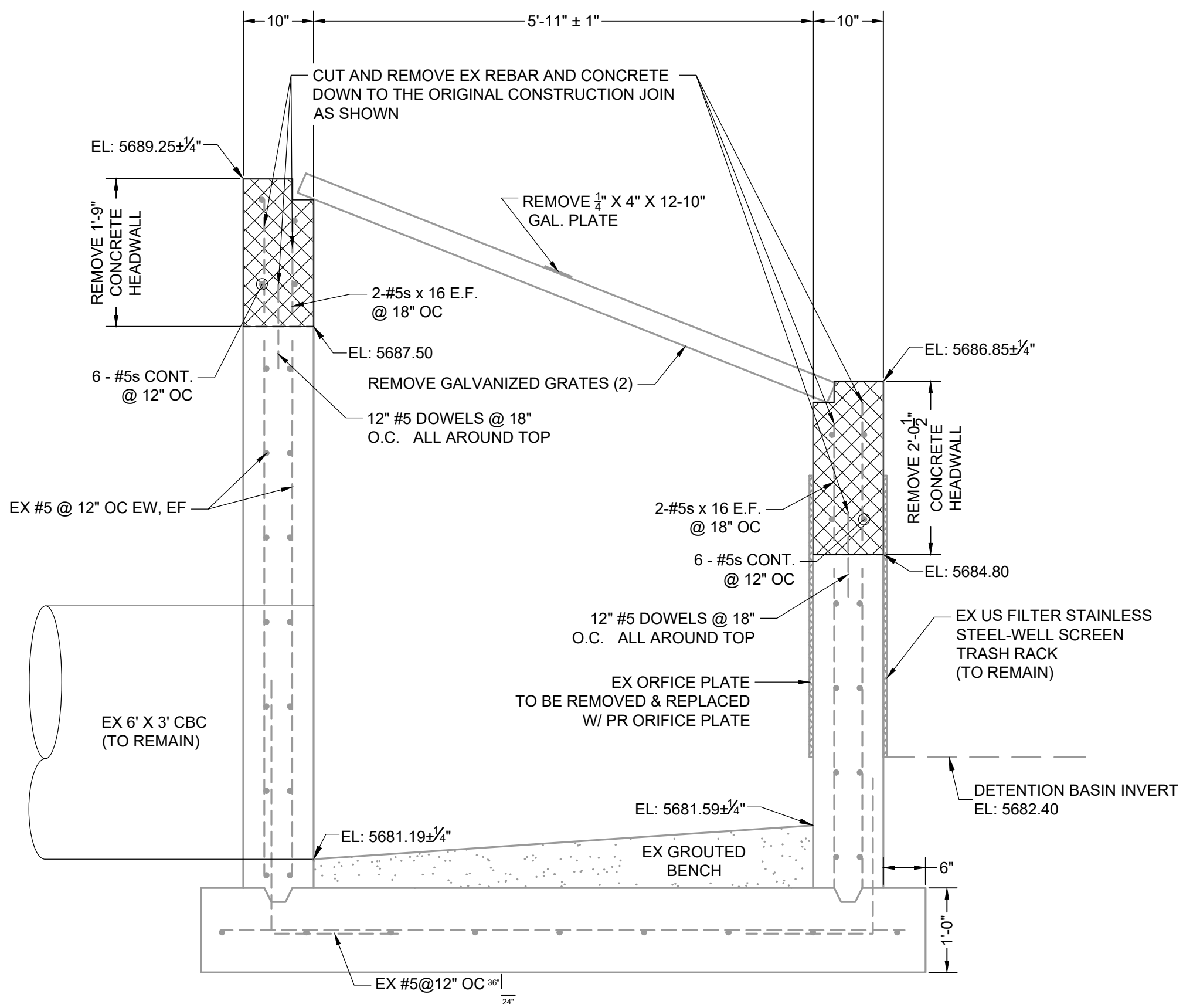
BRANDY R WILLIAMS, P.E., CITY ENGINEER DATE:

NOT FOR CONSTRUCTION

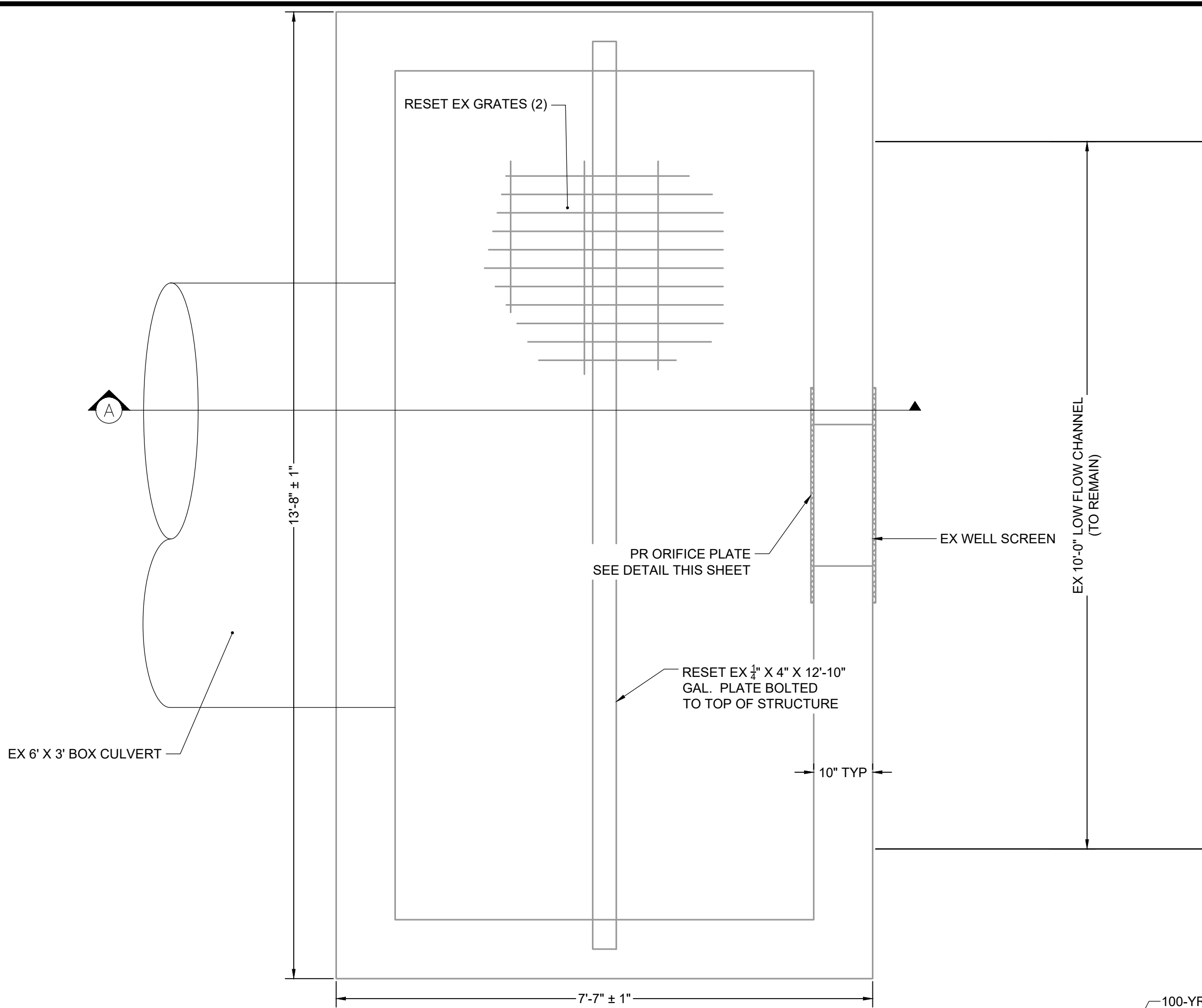




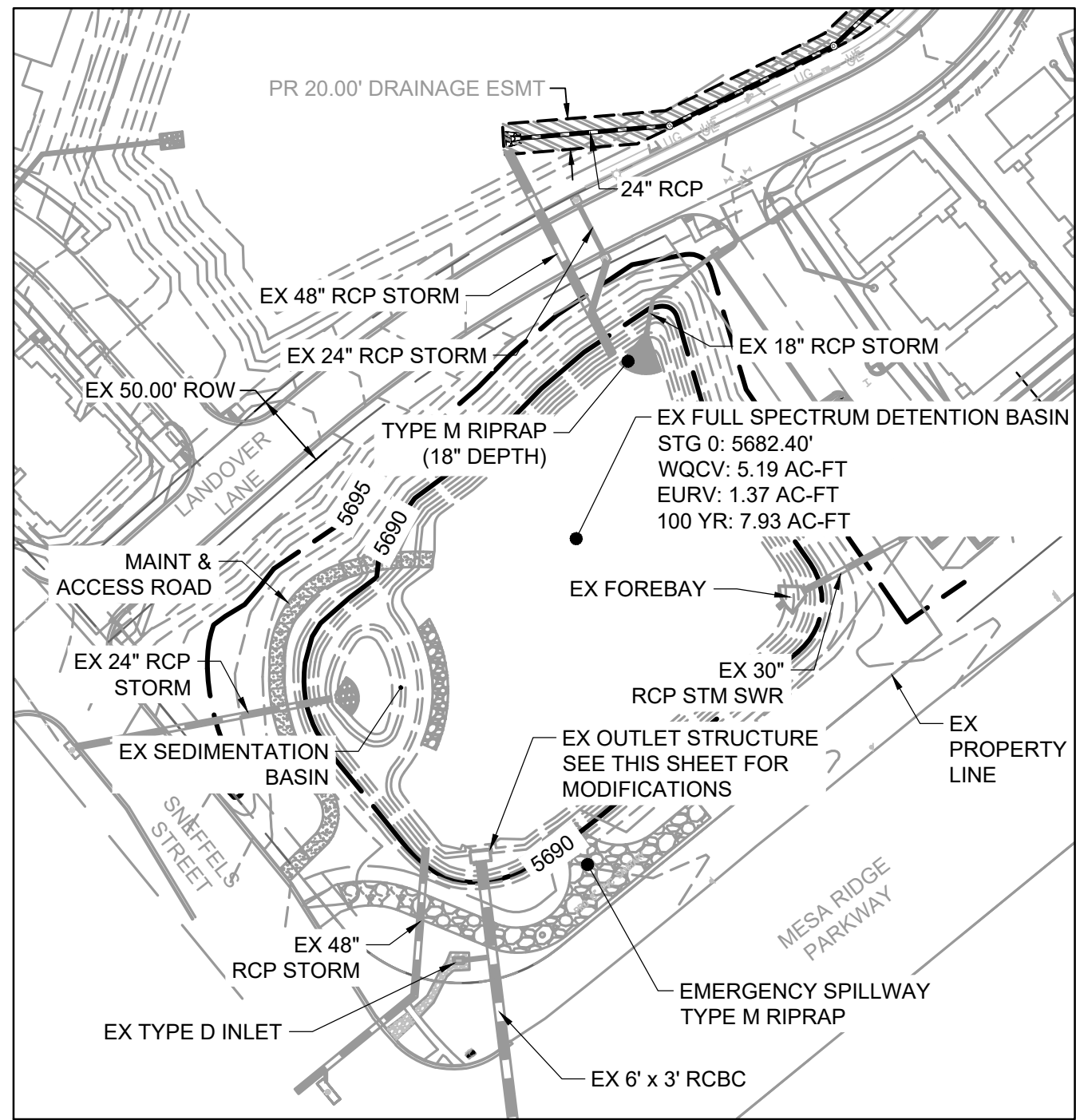
PLAN VIEW  
EX POND OUTLET STRUCTURE PLAN  
SCALE: 3/4" = 1"



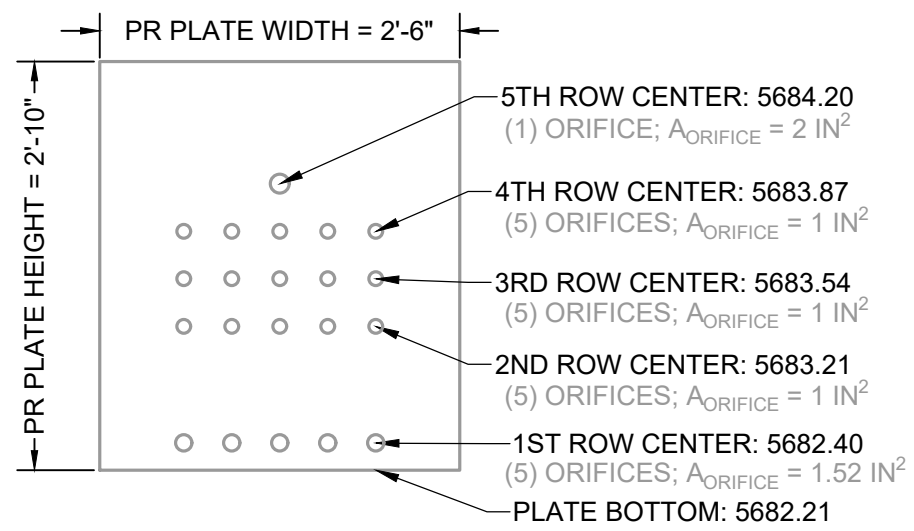
SECTION A - PROFILE VIEW  
EX POND OUTLET STRUCTURE - DEMO PLAN  
SCALE: 3/4" = 1"



SECTION A - PROFILE VIEW  
POND OUTLET STRUCTURE MODIFICATIONS  
SCALE: 3/4" = 1"



VICINITY MAP  
SCALE: 1" = 100'



ELEVATION VIEW  
PROPOSED ORIFICE PLATE  
SCALE: 3/4" = 1"

NOTES:  
1. 3'-4" DIAMETER BOULDER WING-WALLS NOT SHOWN FOR CLARITY, BUT BOULDERS MUST REMAIN IN CONTACT WITH POND OUTLET STRUCTURE TO RESIST SLIDING DUE TO LATERAL FORCES.

SCALE:  
3/4" = 1'

NOT FOR CONSTRUCTION

DRAWN BY: NQJ JOB DATE: 8/22/2022  
APPROVED: KMH JOB NUMBER: 200541  
CAD DATE: 8/22/2022  
CAD FILE: J:\2020\200541\CAD\DWG\CD\CDIC.O.F\Outlet\_Structure\_Details

BAR IS ONE INCH ON OFFICIAL DRAWINGS.  
0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

HR GREEN - COLORADO SPRINGS  
7222 COMMERCE CENTER DR SUITE 220  
COLORADO SPRINGS CO 80919  
PHONE: 719.300.4140 TOLL FREE: 800.728.7805  
FAX: 844.273.1057 | HRGreen.com

THE COTTAGES AT MESA RIDGE  
GOODWIN KNIGHT  
FOUNTAIN, COLORADO



CITY OF FOUNTAIN CONSTRUCTION DOCUMENTS  
OUTLET STRUCTURE MODIFICATION PLAN

SHEET  
DT

10



GENERAL STRUCTURAL NOTES:

- G1. SCOPE  
THE NOTES ON THIS SHEET AND DETAILS ON THIS SHEET ARE TYPICAL AND APPLY TO ALL CONCRETE POND STRUCTURES WHETHER SPECIFICALLY CALLED OUT OR NOT, EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY ON STRUCTURAL SHEETS IF THERE ARE QUESTIONS, THEY SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND ANSWERED IN WRITING PRIOR TO CONSTRUCTION.
- G2. APPLICABLE SPECIFICATIONS AND CODE  
A. COLORADO BUILDING CODE 2021: 2021 INTERNATIONAL BUILDING CODE WITH AMENDMENTS.  
B. ACI 309-20  
C. ACI 318-19  
D. AISC STEEL MANUAL 15TH EDITION  
E. AWS D1.1 - STRUCTURAL WELDING CODE - STEEL  
F. ASCE - 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- G3. DESIGN CRITERIA  
APPLIES TO ALL STRUCTURES (UNO)  
1. DEAD LOAD:  
1.1.1. ACTUAL TRIBUTARY STRUCTURE WEIGHT  
2. LIVE LOAD:  
2.1. WALKWAYS, STAIRS, GRATING 100 PSF  
3. WIND  
3.1.1. BASIC WIND SPEED (ULTIMATE): SPECIAL REGION  
3.1.2. EXPOSURE: C  
3.1.3. IMPORTANCE FACTOR, Iw: 1.0  
3.1.4. RISK CATEGORY: II  
4. SEISMIC:  
4.1. ABOVE GRADE STRUCTURES AND BELOW GRADE WATER BEARING STRUCTURES:  
4.1.1. RISK CATEGORY: II  
4.1.2. IMPORTANCE FACTOR, Ie: 1.00  
4.1.3. SPECTRAL RESPONSE ACCELERATION, SS: 0.186  
4.1.4. SPECTRAL RESPONSE ACCELERATION, S1: 0.057  
4.1.4.1. SITE CLASS: D  
4.1.4.2. SEISMIC DESIGN CATEGORY: B  
4.1.4.3. SPECTRAL RESPONSE COEFFICIENT, SD: 0.199  
4.1.4.4. SPECTRAL RESPONSE COEFFICIENT, SD1: 0.09  
5. SNOW LOAD:  
5.1. GROUND SNOW LOAD, Pg: SPECIAL REGION  
6. HYDROSTATIC LOAD: 63 PSF / FT
- G4. THE FOLLOWING GEOTECHNICAL VALUES IN SECTION G5 ARE THE BASIS OF THIS STRUCTURAL DESIGN, CONTRACTOR MUST VERIFY THE REQUIRED VALUES COMPLY WITH THE SOILS ADJACENT AND UNDERNEATH THE STRUCTURES. THIS MUST BE VALIDATED WITH A SITE GEOTECHNICAL REPORT AND/OR LOCAL GEOTECHNICAL INSPECTION FOR EACH STRUCTURE. DO NOT BEAR FOUNDATIONS ON UNSUITABLE FILL INCLUDING, BUT NOT LIMITED TO: MUD, ORGANIC SILT, ORGANIC CLAYS, PEAT, UNPREPARED FILL, OR EXPANSIVE SOILS. VALIDATE SUITABLE SUBGRADE WITH GEOTECHNICAL FIRM. OVEREXCAVATE AND REPLACE WITH SUITABLE STRUCTURAL FILL AS DIRECTED BY THE GEOTECHNICAL FIRM. ALL GEOTECHNICAL WORK MUST BE PERFORMED BY A GEOTECHNICAL ENGINEER LICENSED WITHIN THE STATE OF COLORADO.  
1. REFERENCE SITE GEOTECHNICAL REPORT: ENTECH ENGINEERING, INC. JOB NO. 211100: DATED DECEMBER 22, 2021.  
FOLLOW ALL GEOTECHNICAL RECOMMENDATIONS. IN THE EVENT OF CONFLICT WITH DESIGN DOCUMENTS THEN FOLLOW THE MOST STRINGENT DESIGN CRITERIA AND VERIFY WITH ENGINEER IN WRITING PER NOTE G1.
- G5. SOIL CHARACTERISTICS  
1. NET ALLOWABLE SOIL BEARING CAPACITY: 1,500 PSF (MIN)  
2. ALLOWABLE LATERAL EARTH PRESSURE (EFP): 115 PSF (MAX) / FT (SAT)  
3. ALLOWABLE LATERAL HYDROSTATIC PRESSURE: 63 PSF / FT  
4. SOIL UNIT WEIGHT: 120 PCF  
5. ALL BACKFILL ADJACENT TO AND UNDERNEATH STRUCTURES MUST BE: CDOT CLASS 6 AGG BASE  
6. ALL BACKFILL UNDERNEATH STRUCTURES MUST BE COMPACTED TO: 98% STANDARD PROCTOR  
7. ALL BACKFILL ADJACENT TO STRUCTURES MUST BE COMPACTED TO: 95% STANDARD PROCTOR  
8. MAXIMUM BACKFILL LIFT HEIGHT: 8"
- G6. SAFETY  
SAFETY AND STRUCTURE STABILITY DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LIVE LOADS ONLY AS A COMPLETED STRUCTURE. CONTRACTOR MUST LOCATE ALL UNDERGROUND UTILITIES, PER OSHA REQUIREMENTS, TO ENSURE ALL UTILITIES ARE NOT DAMAGED.
- G7. DO NOT BACKFILL AGAINST WALLS PRIOR TO GROUND LEVEL CONCRETE FRAMING AND SLAB HAVE REACHED THEIR 28-DAY DESIGN STRENGTH.
- G8. OPENINGS  
OPENINGS FOR PIPES, DUCTS, CONDUITS, ETC, ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE AND PROVIDE OPENINGS AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS.
- G9. SPECIAL INSPECTIONS  
THE FOLLOWING SPECIAL STRUCTURAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE 2021 INTERNATIONAL BUILDING CODE AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOTIFY AND ACCOMMODATE THE APPLICABLE INSPECTOR DURING APPROPRIATE PHASES OF THE WORK AS REQUIRED BY EACH INSPECTION.  
  
STRUCTURAL FILL PLACEMENT, EXISTING SITE CONDITIONS PER IBC TABLE 1704.7.  
CONCRETE, REINFORCING STEEL AND BOLTS INSTALLED IN CONCRETE PER IBC TABLE 1704.4.  
CONTINUOUS CONCRETE PLACEMENT AND CURING PER IBC TABLE 1704.4.  
CONCRETE ROUGHEN AND KEYED CONSTRUCTION JOINTS  
EXPANSION ANCHORS AND ADHESIVE BOLT / DOWEL / ROD INSTALLATION
- G10. TYPICAL DETAILS  
THE TYPICAL DETAILS DEPICT TYPICAL DETAILING TO BE USED ON THIS PROJECT, IF CONDITIONS ARE NOT EXPLICITLY SHOWN ON THE DRAWINGS THEY SHALL BE MADE SIMILAR TO THE TYPICAL DETAILS. OBTAIN APPROVAL OF ENGINEER IN WRITING FOR SIMILAR CONDITIONS PRIOR TO CONSTRUCTION.
- G11. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION AS REQUIRED TO COORDINATE NEW CONSTRUCTION. SUBMIT REQUIRED CHANGES FOR APPROVAL.
- CONCRETE  
C1. DESIGN STRENGTHS:  
CONCRETE  
GENERAL USE STRUCTURAL CONCRETE: F<sub>c</sub> = 4,500 PSI  
  
REINFORCING  
F<sub>y</sub> = 60,000 PSI
- C2. CONCRETE MATERIAL SCHEDULE  
1. GENERAL USE STRUCTURAL CONCRETE:  
PORTLAND CEMENT - ASTM C150: TYPE III  
FLY ASH - ASTM C618: 15% MAX  
AGGREGATE - COARSE - ASTM C33: 1" MAX  
AIR ENTRAINMENT - ASTM C260: 6% ± 1%  
SUPERPLASTICIZER - ASTM C494: TYPE F  
WATER TO CEMENT RATIO - MAXIMUM: 0.42  
SLUMP: 2"-4"  
PLACEMENT BY PUMP:  
AT PUMP: 2'-6"  
AT DISCHARGE OF LINE: 1'-4"
- C3. CONCRETE COVER  
FOR CAST-IN-PLACE CONCRETE, PROVIDE CONCRETE COVER FOR REINFORCING AS FOLLOWS, UNLESS NOTED OTHERWISE:  
CONCRETE DEPOSITED AGAINST EARTH: 3"  
ALL OTHER: 2"  
SEE DRAWINGS FOR EXCEPTIONS.
- C4. REINFORCING PLACEMENT REQUIREMENTS TO BE WITH ACI 117 TOLERANCES.
- C5. REFER TO OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION FOR EMBEDDED ITEMS AND PENETRATIONS NOT SHOWN ON STRUCTURAL DRAWINGS. AS REQUIRED TO ACCOMMODATE ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHERWISE REQUIRED FOR THE FURNISHING OF A FUNCTIONALLY COMPLETE PROJECT. REINFORCE AROUND OPENINGS PER STANDARD STRUCTURAL DETAILS UNLESS OTHERWISE SHOWN.
- C6. PROVIDE 3/4" CHAMFERS AT ALL EXPOSED EDGES UNLESS NOTED OTHERWISE. NOT ALL CHAMFERS MAY BE SHOWN ON DRAWINGS.
- C7. FIELD ADJUST REINFORCING AT OPENINGS AND EMBEDDED ITEMS AS INDICATED.

- C8. ANCHOR BOLTS NOT SPECIFIED BY ENGINEER SHALL BE DESIGNED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER, RETAINED BY THE CONTRACTOR, IN ACCORDANCE WITH APPLICABLE PROJECT AND CODE REQUIREMENTS. SUBMIT AS A SHOP DRAWING FOR REVIEW AND APPROVAL BY THE ENGINEER. COORDINATE LOCATION, SIZE AND EMBEDMENT PRIOR TO CASTING CONCRETE.
- C9. CONTINUOUS WATERSTOP SHALL BE INSTALLED IN JOINTS SUBJECT TO STATIC WATER PRESSURE. ALL WATERSTOPS SHALL BE SELF-ADHERED NON-SWELL STRIP APPLIED WATERSTOP THAT COMPLY WITH FEDERAL SPECIFICATION SS-S-210. SEE TYPICAL DETAILS FOR LOCATIONS.
- C10. ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND OR CUT REINFORCING BARS SHALL BE ALLOWED.
- C11. CONTRACTOR SHALL SUBMIT A CONCRETE PLACEMENT PLAN IDENTIFYING JOINT TYPES, JOINT LOCATIONS AND CONCRETE PLACEMENT SEQUENCE. CONTRACTOR SHALL ALSO SUBMIT "ACI COMPLIANT" CONCRETE MIX DESIGN (WITH HISTORICAL COMPRESSION BREAK RESULTS) AND REBAR SHOP DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.
- C12. ALL CAST-IN-PLACE AND POST-INSTALLED ANCHORS INDICATED IN THE STRUCTURAL DOCUMENTS SHALL COMPLY WITH APPENDIX D OF ACI 318 AND CHAPTER 19 OF THE IBC. ALL EXPANSION AND ADHESIVE ANCHORS SHALL HAVE THE ICC REPORT SHOWING EQUIVALENT LOAD CAPACITY. SUBMIT AND INSTALL PER THE ICC EVALUATION REPORT.
- C13. CONCRETE CYLINDERS MUST BE TAKEN FOR TESTING TO VALIDATE ADEQUATE COMPRESSION STRENGTH. AT LEAST ONE SET OF CYLINDERS SHALL BE TAKEN FOR EACH STRUCTURE. STRUCTURES GREATER THAN 50 CY OF CONCRETE MUST HAVE AN ADDITIONAL SET OF CYLINDER TAKEN FOR EACH ADDITIONAL 50 CY OF CONCRETE. A SET OF CYLINDERS WILL CONSIST OF THREE CYLINDERS TO TEST AT 7-DAY AND 28-DAY; WITH ONE RESERVE CYLINDER TO BE TESTED IF THE 28-DAY TEST IS NOT ADEQUATE. RESULTS OF THE COMPRESSION TESTS MUST BE SUBMITTED FOR OWNER AND ENGINEER REVIEW.
- C14. ALL REINFORCING CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.
- C15. ALL BARS INDICATED AS BEING HOOKED SHALL HAVE AN ACI STANDARD 90 DEGREE OR 180 DEGREE HOOKS AS SHOWN.
- C16. CONCRETE PLACEMENT AND CURING MUST FOLLOW ALL APPLICABLE ACI STANDARDS INCLUDING, BUT NOT LIMITED TO ACI 305R "GUIDE TO HOT WEATHER CONCRETING" AND ACI 306.1 "GUIDE TO COLD WEATHER CONCRETING". NO WATER MAY BE ADDED ON SITE UNLESS IT HAS BEEN ACCOUNTED FOR IN THE APPROVED MIX DESIGN SUBMITTAL.
- C17. CONCRETE FORMS MUST BE CLEAR OF DEBRIS AND CONCRETE MUST BE PROPERLY VIBRATED DURING PLACEMENT TO PREVENT HONEYCOMBS, CRACKS, DEFLECTS, EMBEDDED DEBRIS, OR VOIDS, AS DEFINED BY ACI CT-13. CONTRACTOR WILL BE REQUIRED TO FIX ALL DEFECTIVE AREAS TO THE SATISFACTION OF THE ENGINEER AND OWNER.

POST-INSTALLED ANCHORS:

- PA1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD (EOR) BEFORE INSTALLING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN-PLACE ANCHORS.
- PA2. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER WRITTEN INSTRUCTIONS.
- PA3. SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL ADHESIVE AND MECHANICAL ANCHOR INSTALLATIONS AS REQUIRED BY THE BUILDING CODE. INDEPENDENT ON-SITE PROOF LOAD TESTING SHALL BE PERFORMED AS REQUIRED BY THE EOR. CONTACT THE EOR FOR AMOUNT OF ANCHORS REQUIRED TO BE TESTED AND REQUIRED PROOF LOAD MAGNITUDE.
- PA4. SUBSTITUTION REQUESTS, FOR PRODUCTS OTHER THAN THOSE SPECIFIED BELOW, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE EOR ALONG WITH CALCULATIONS THAT ARE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES (MINIMUM) OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARD(S) AS REQUIRED BY THE BUILDING CODE. PRODUCT ICC-ES REPORTS SHALL BE INCLUDED WITH THE SUBMITTAL PACKAGE.
- PA5. UNLESS NOTED OTHERWISE ON PLANS, ACCEPTABLE CONCRETE ANCHOR PRODUCTS SHALL BE:

1. MECHANICAL ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 308.2 AND ICC-ES AC1093. PRE-APPROVED MECHANICAL ANCHORS INCLUDE:  
1.1. KWIK BOLT TZ (ICC-ES ESR-1917) BY HILTI, INC.  
1.2. STRONG BOLT 2 (ICC-ES ESR-3037) BY SIMPSON.  
1.3. OR ENGINEER APPROVED EQUAL.
2. ADHESIVE ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC308. PRE-APPROVED ADHESIVE ANCHORS INCLUDE:  
2.1. HIT HY-200 (ICC-ES ESR-3187) SYSTEM ADHESIVE ANCHORS BY HILTI.  
2.2. SIMPSON SET-3G (ICC-ES ESR-4057) BY SIMPSON STRONG TIE ANCHOR SYSTEMS.  
2.3. OR ENGINEER APPROVED EQUAL.
3. CONCRETE SCREW TYPE ANCHORS FOR USE IN CRACKED AND UNCRACKED CONCRETE SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 308.2 AND ICC-ES AC1093. PRE-APPROVED SCREW TYPE ANCHORS INCLUDE:  
3.1. KWIK HUS-EZ (ICC-ES ESR-3027) BY HILTI, INC.  
3.2. TITEN HD (ICC-ES ESR-2713) BY SIMPSON STRONG TIE ANCHOR SYSTEMS.  
3.3. OR ENGINEER APPROVED EQUAL.

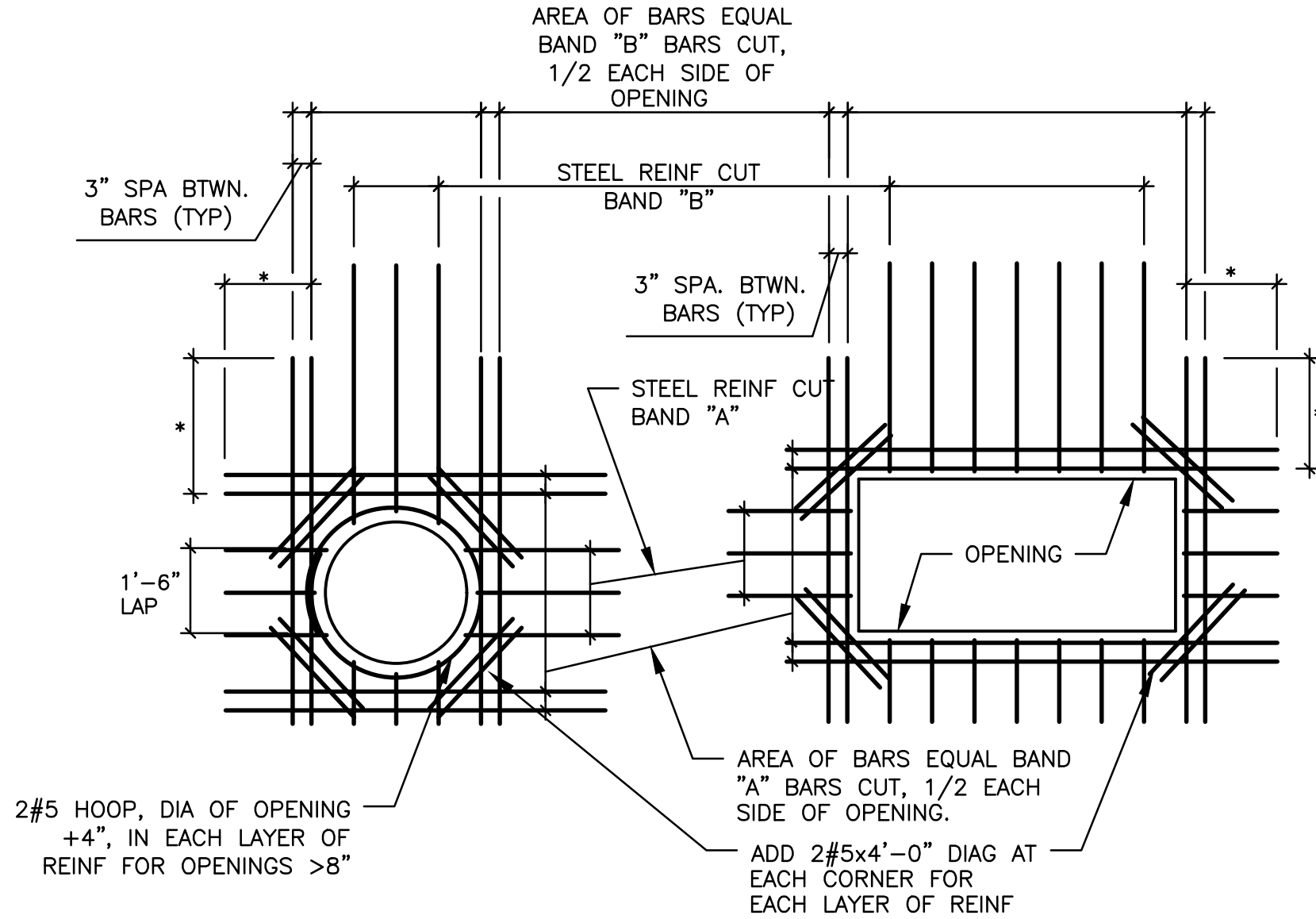
STEEL:

- S1. ALL STEEL SHALL BE HOT DIP GALVANIZED, UNLESS NOTED OTHERWISE.  
S2. STEEL SHAPES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:  
1. W-SHAPES & WT-SHAPES: ASTM A992  
2. S-SHAPES, CHANNELS, ANGLES & PLATES: ASTM A36  
3. SMOOTH & THREADED RODS: ASTM A36  
4. HSS-SHAPES: ASTM A500 GR. B  
5. PIPE: ASTM A53 GR. B  
6. HIGH-STRENGTH STRUCTURAL BOLTS: ASTM A325  
7. HARDENED WASHERS: ASTM F436  
8. HEAVY HEX NUTS: ASTM F594  
9. SHEAR STUDS AND HEADED STUDS: ASTM A108 GR. 1015 TO102.  
S3. STEEL WELDS SHALL BE E70XX ELECTRODES, UNLESS NOTED OTHERWISE.  
S4. GUARDRAIL MUST BE DESIGNED AND DETAILED BY THE FABRICATOR TO MEET OSHA REQUIREMENTS.

REINF LAP SPLICE TABLE - CONCRETE						HOOKS
BAR SIZE	CONDITION 1		CONDITION 2		CONDITION 3	
	CLEAR COVER >= 2 DIA. AND C-TO-C SPACING >= 5 DIA.		CLEAR COVER >= 1 DIA. AND C-TO-C SPACING >= 3 DIA.		NEITHER CONDITION 1 NOR 2 IS MET	
	TOP (SEE NOTE 2)	OTHER	TOP (SEE NOTE 2)	OTHER	ALL BARS	
#3	1'-4"	1'-4"	2'-0"	1'-6"	SEE NOTE 3	0'-6"
#4	1'-7"	1'-4"	2'-8"	2'-1"		0'-8"
#5	2'-0"	1'-6"	3'-4"	2'-8"		0'-10"
#6	2'-6"	1'-10"	4'-0"	3'-1"		1'-0"
#7	3'-6"	2'-9"	5'-10"	4'-7"		1'-2"
#8	4'-0"	3'-1"	6'-8"	5'-2"		1'-4"
#9	4'-6"	3'-6"	7'-7"	5'-10"		1'-7"
#10	5'-1"	3'-11"	8'-6"	6'-6"		1'-10"
#11	5'-8"	4'-4"	9'-5"	7'-4"		2'-0"

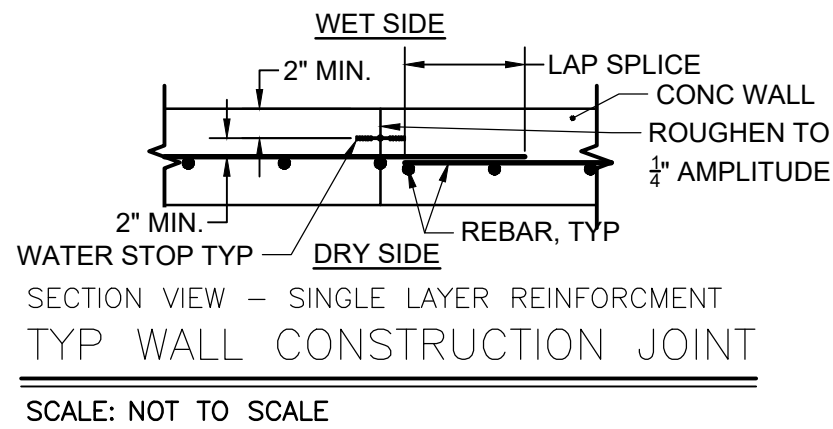
- NOTES:  
1. BAR COVER AND SPACING MUST BOTH MEET THE CRITERIA OF CONDITION 1 OR 2 IN ORDER TO USE THAT PARTICULAR LAP LENGTH.  
2. TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.  
3. FOR BARS THAT DO NOT SATISFY EITHER CONDITION, LAP LENGTH SHALL BE THE LENGTH FROM THE APPROPRIATE CATEGORY ("TOP" OR "OTHER") OF CONDITION 2 MULTIPLIED BY 1.5  
4. FOR EPOXY-COATED BARS, MULTIPLY FINAL LAP LENGTH BY 1.5.

TABLE  
TYPICAL REINFORCEMENT SPLICE AND HOOK TABLE  
SCALE: NOT TO SCALE

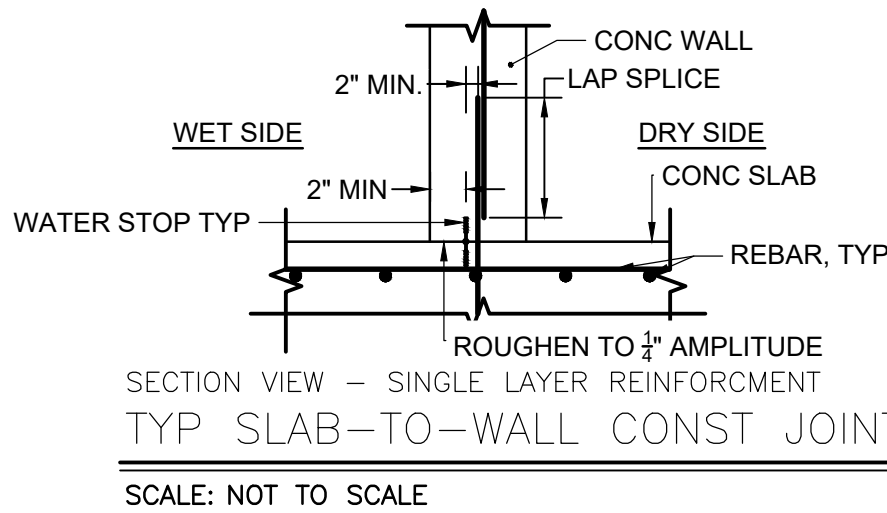


- NOTES:  
1. \* TOP BAR LAP LENGTH-CONDITION #2, UNLESS NOTED OTHERWISE ON PLANS.  
2. DO NOT WELD REIN TO PIPE SLEEVES AND INSERTS.  
3. TYP FOR ALL OPENING IN CONCRETE WALLS AND SLABS UNLESS INDICATED OTHERWISE ON PLANS.  
4. COORDINATE WALL OPENINGS WITH ALL DISCIPLINES.

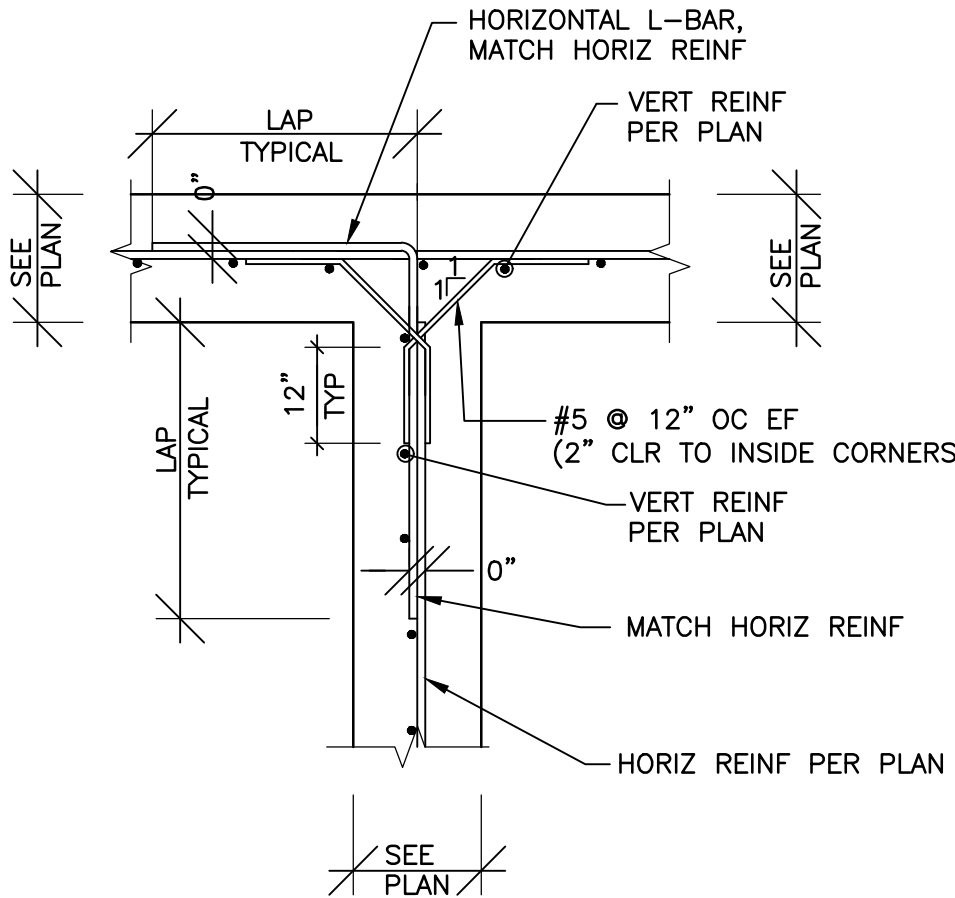
SECTION VIEW  
TYPICAL SLAB/WALL OPENING REINFORCEMENT  
SCALE: NOT TO SCALE



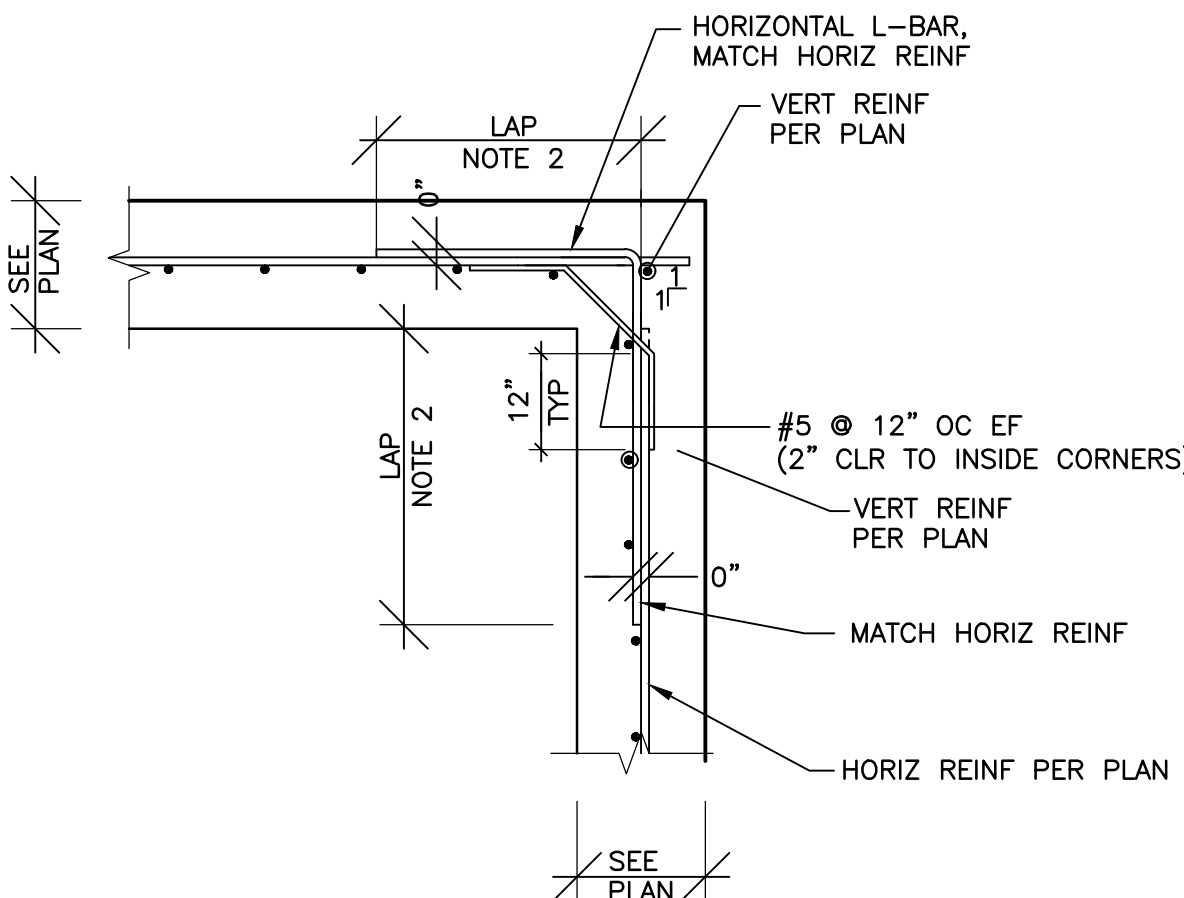
SECTION VIEW - SINGLE LAYER REINFORCEMENT  
TYP WALL CONSTRUCTION JOINT  
SCALE: NOT TO SCALE



SECTION VIEW - SINGLE LAYER REINFORCEMENT  
TYP SLAB-TO-WALL CONST JOINT  
SCALE: NOT TO SCALE

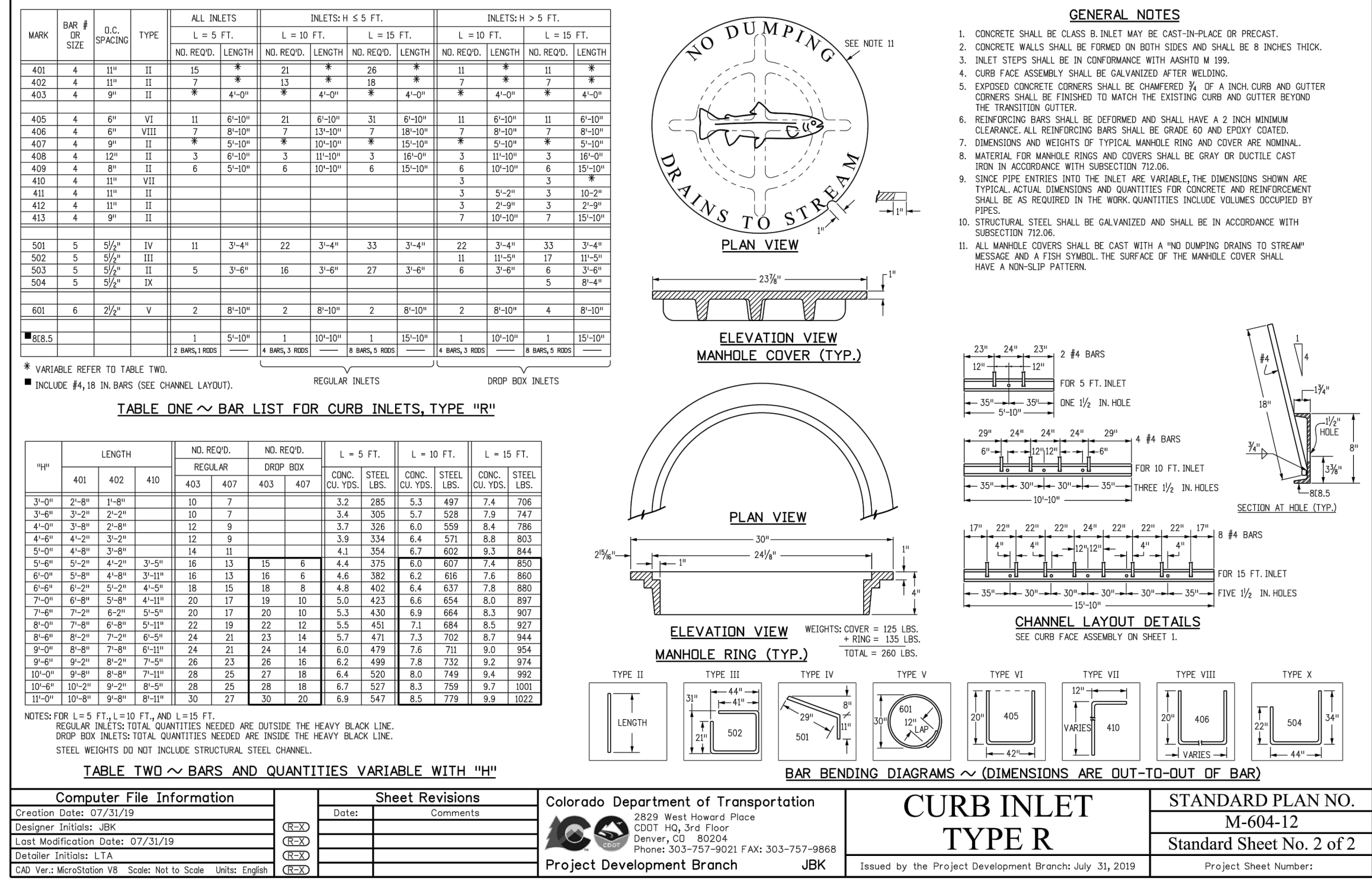
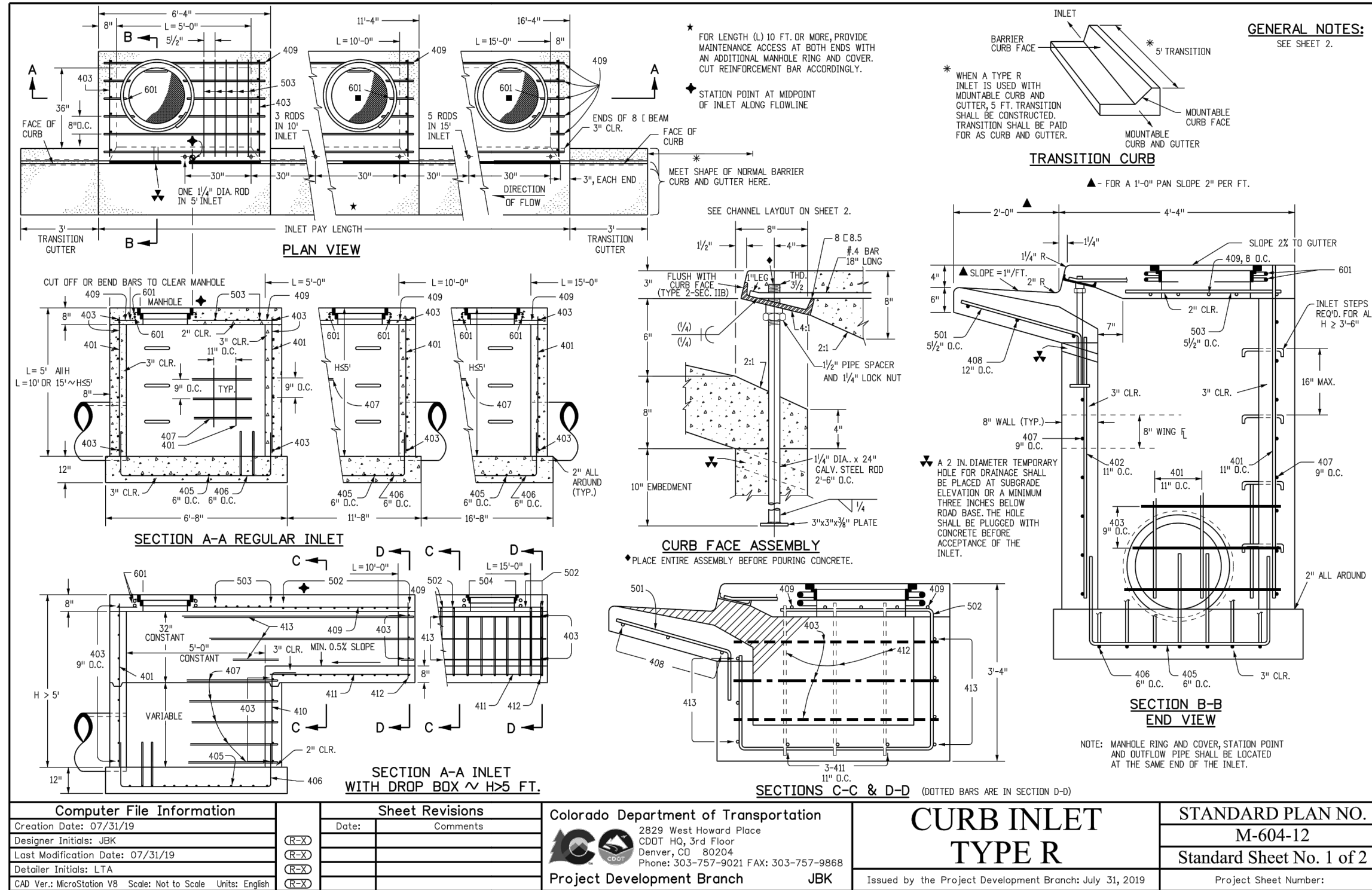
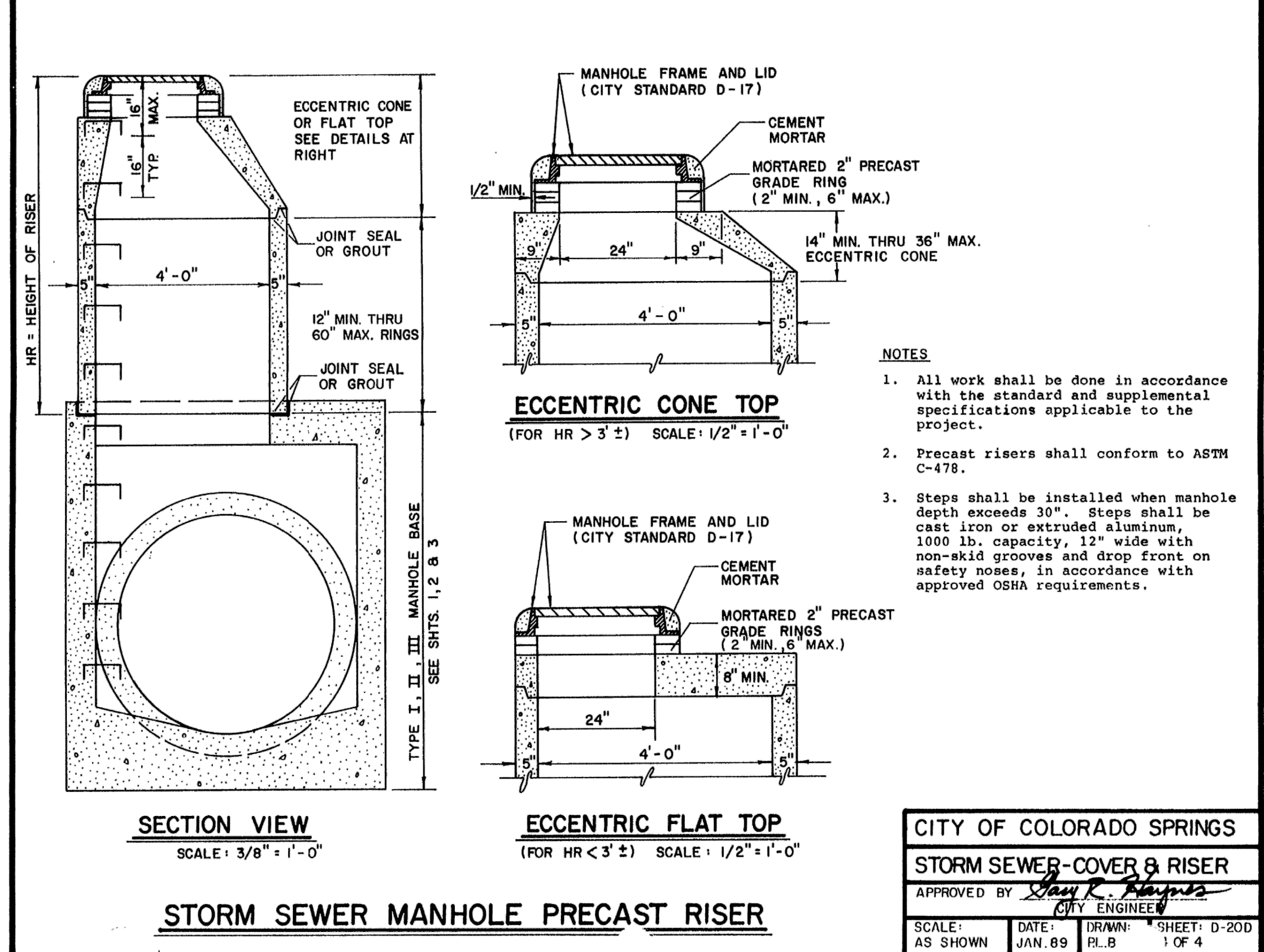
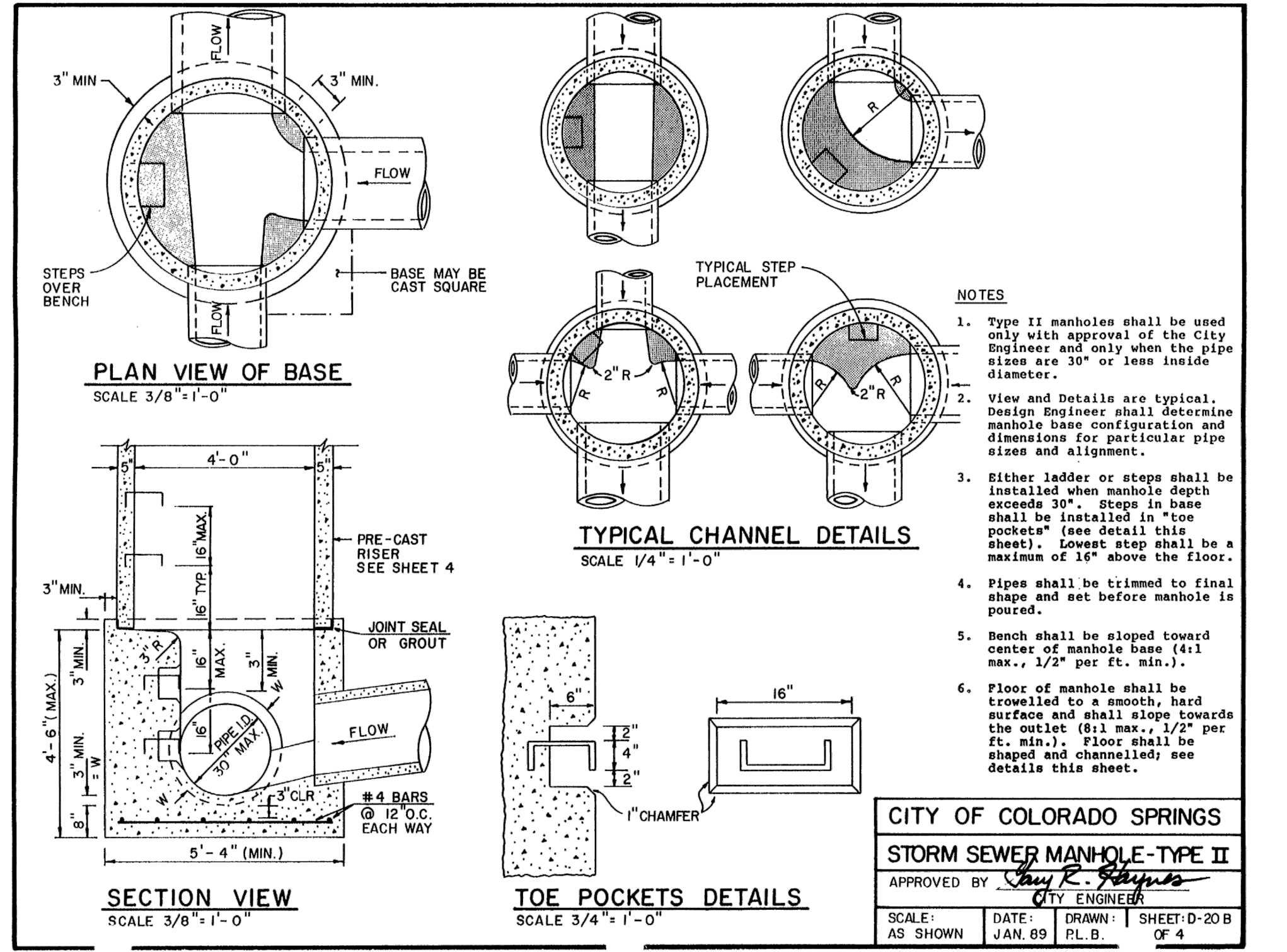


SECTION VIEW - SINGLE LAYER REINFORCEMENT  
TYPICAL WALL TEE INTERSECTION REBAR  
SCALE: NOT TO SCALE



SECTION VIEW - SINGLE LAYER REINFORCEMENT  
TYPICAL WALL CORNER INTERSECTION REBAR  
SCALE: NOT TO SCALE

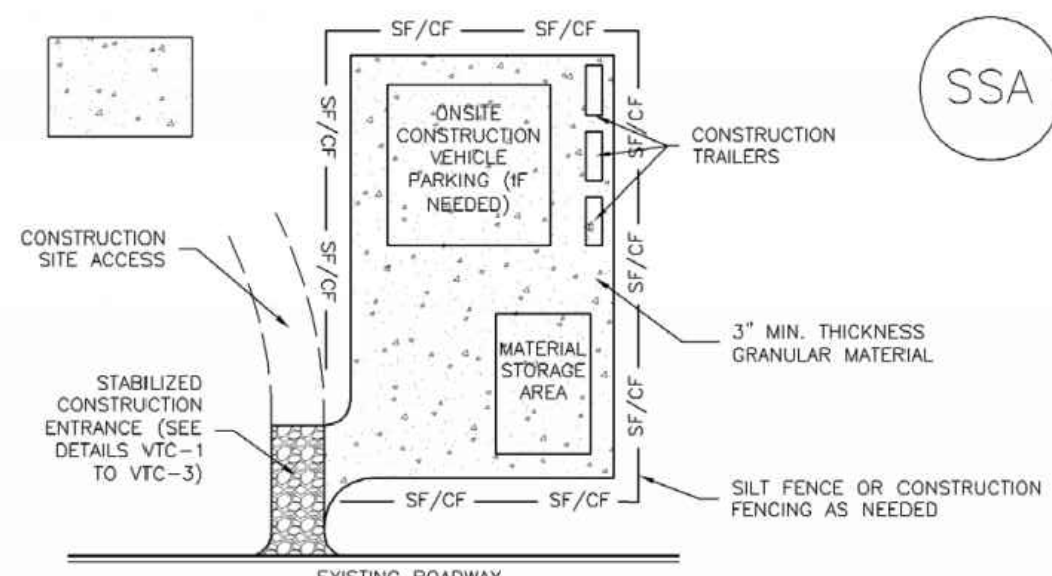






Stabilized Staging Area (SSA)

SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:  
-LOCATION OF STAGING AREA(S).  
-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

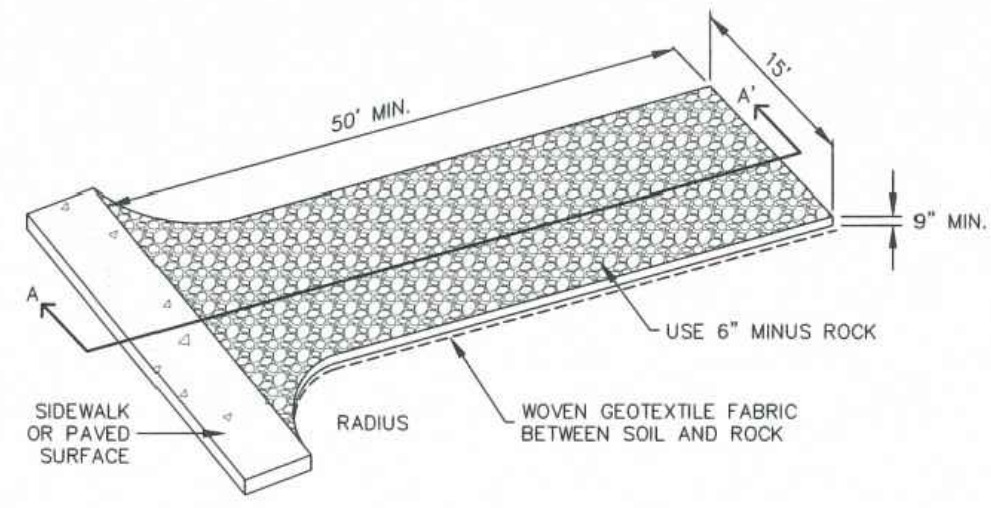
STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

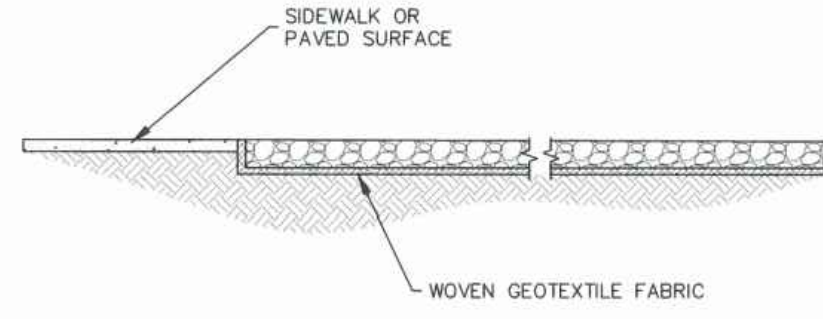
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.



AGGREGATE VEHICLE TRACKING CONTROL



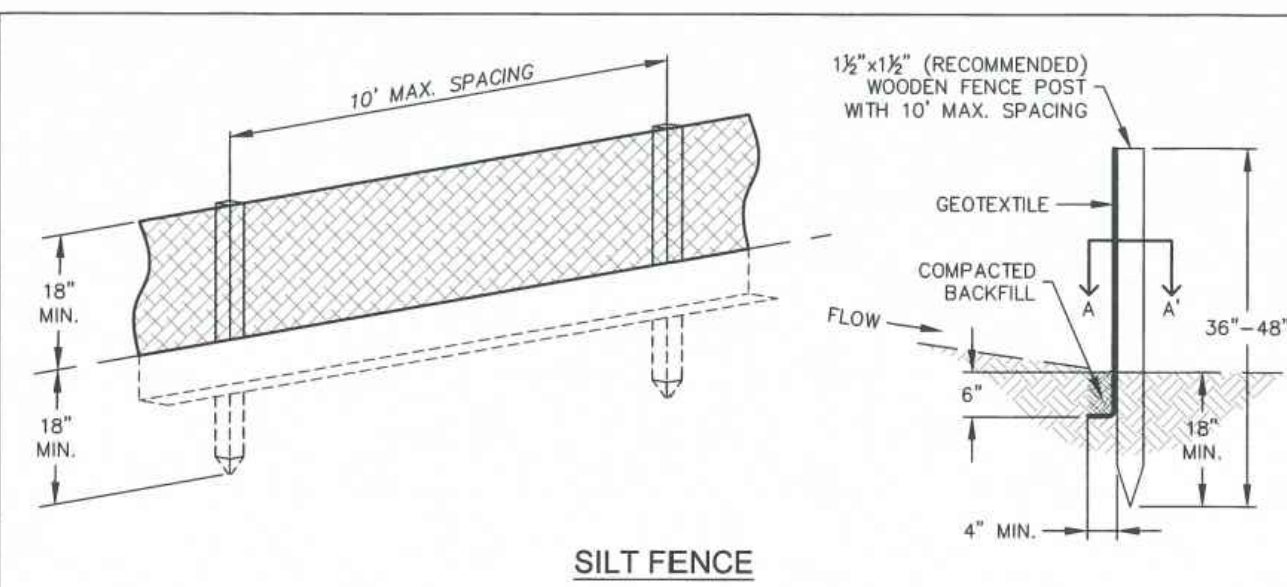
SECTION A-A'

INSTALLATION NOTES

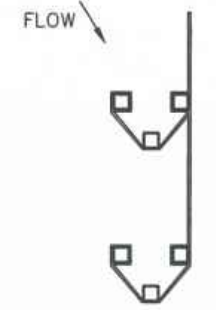
1. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
2. STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
4. ROCK SHOULD CONSIST OF 6" MINUS ROCK.
5. INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

MAINTENANCE NOTES

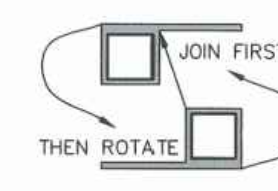
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY, BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
3. ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
4. PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.



SILT FENCE



J-HOOK INSTALLATION



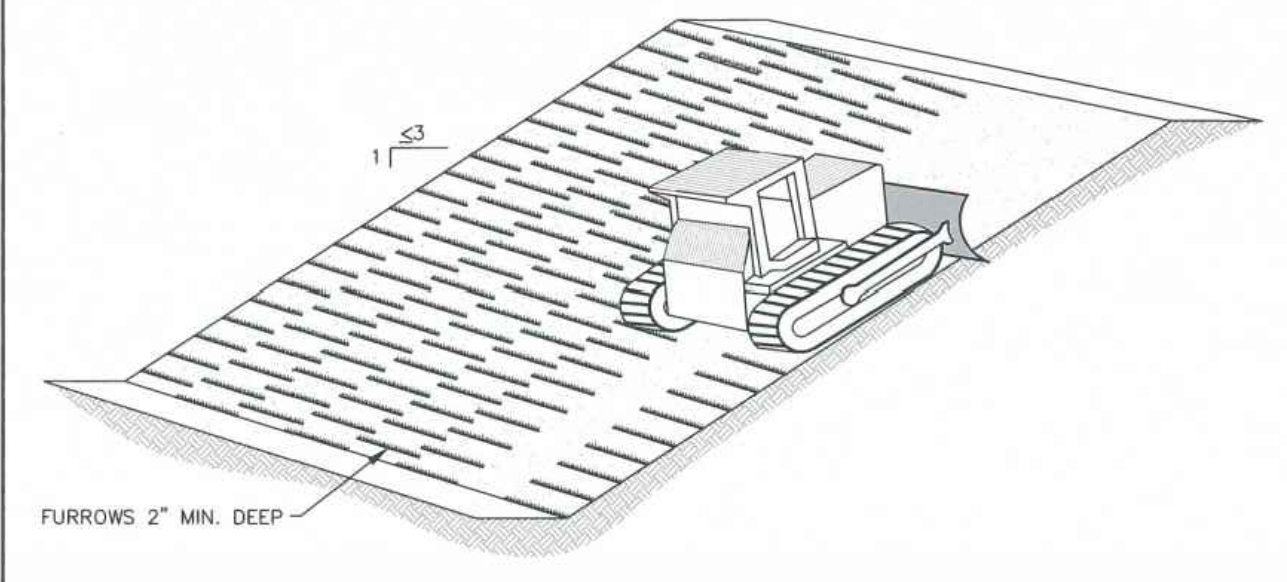
SECTION A-A'

INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED ON A FLAT SURFACE 2'-5' AWAY FROM TOE OF THE SLOPE TO ALLOW FOR FLOWING AND DEPOSITION.
2. COMPACT THE TRENCH USING A JUMPING JACK OR WHEEL ROLLING TO THE POINT THAT THE FENCE RESISTS BEING PULLED OUT OF THE GROUND BY HAND.
3. SILT FENCE SHALL BE TAUT WITH NO SAGS AFTER IT HAS BEEN ANCHORED.
4. FABRIC SHALL BE ATTACHED TO POSTS WITH 1\"/>
5. THE PREFERRED INSTALLATION METHOD USES A TRENCHER OR SILT FENCE INSTALLATION DEVICE.
6. INSTALL SILT FENCE ALONG THE CONTOUR OF THE SLOPES OR IN A MANNER TO AVOID CREATING CONCENTRATED FLOW (SUCH AS A \"J-HOOK\" INSTALLATION).

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE DESIGN HEIGHT OF THE SILT FENCE.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SILT FENCE IS REMOVED.



SLOPE TRACKING

INSTALLATION NOTES

1. SLOPE TRACKING MAY BE USED ON SLOPES 3:1 OR STEEPER.
2. TRACKING GROOVES SHALL BE PERPENDICULAR TO THE SLOPE.
3. SLOPE TRACKING SHALL NOT BE USED ON EXTREMELY SANDY OR ROCKY SOILS.

MAINTENANCE NOTES

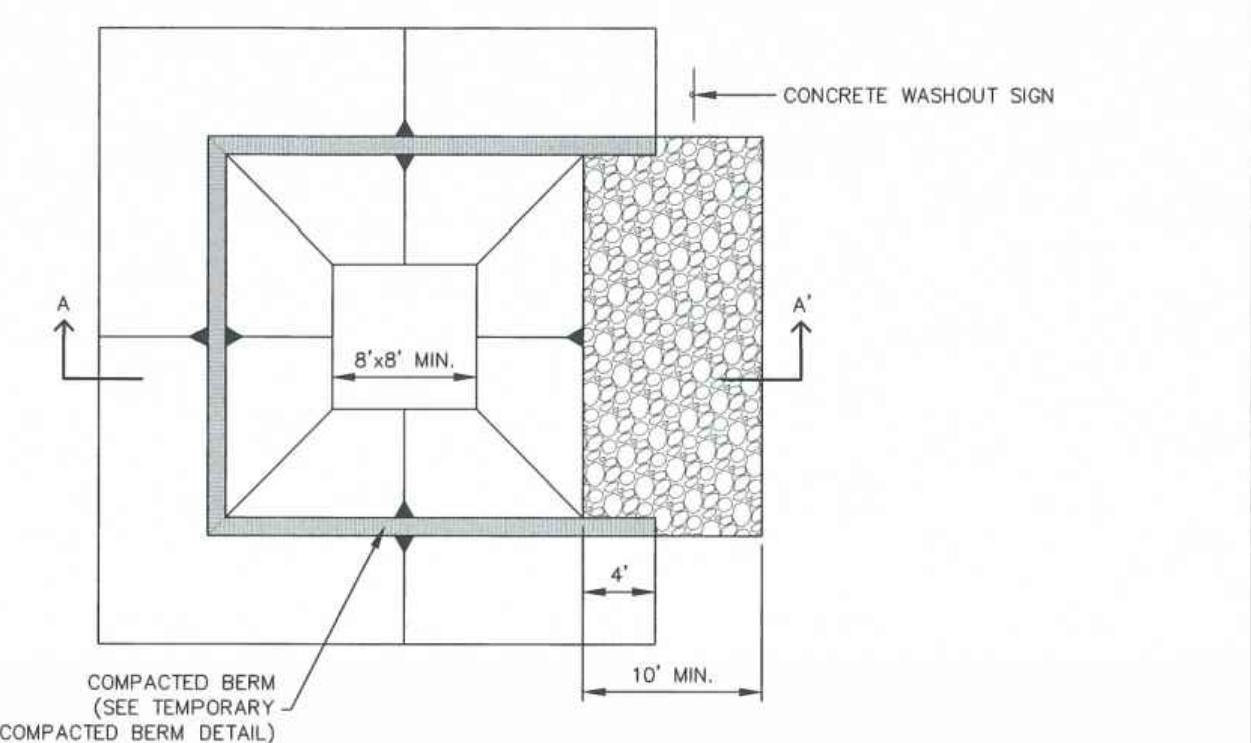
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SLOPE TRACKED.



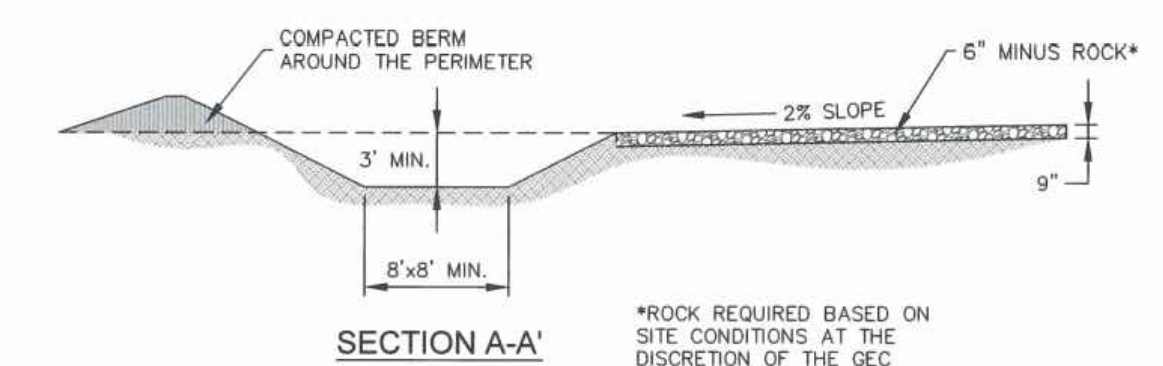
November 2010

Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3

SSA-3



CONCRETE WASHOUT AREA PLAN



SECTION A-A'

\*ROCK REQUIRED BASED ON SITE CONDITIONS AT THE DISCRETION OF THE GEC INSPECTOR

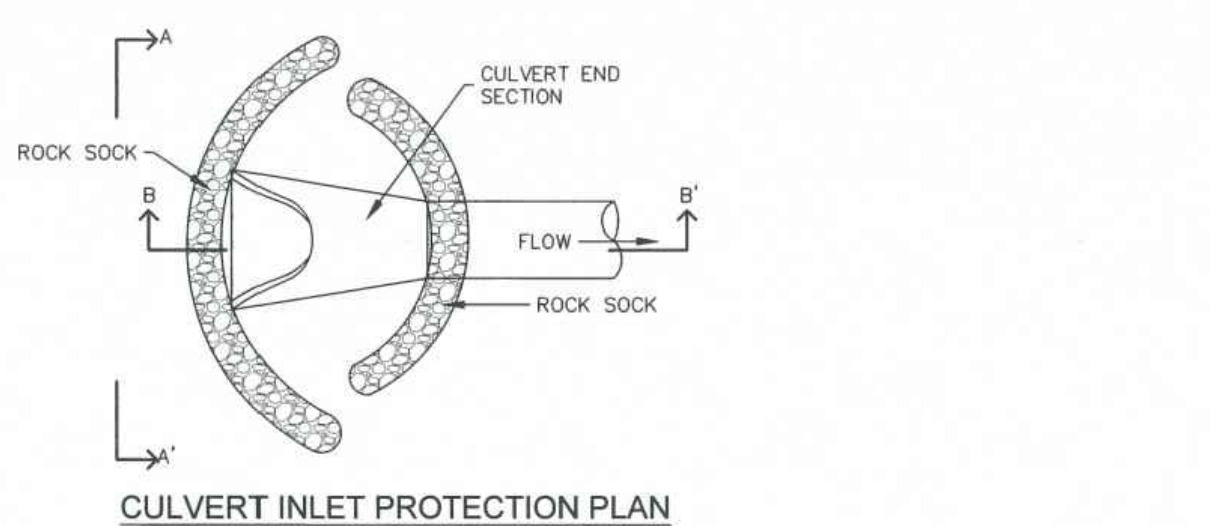


INSTALLATION NOTES

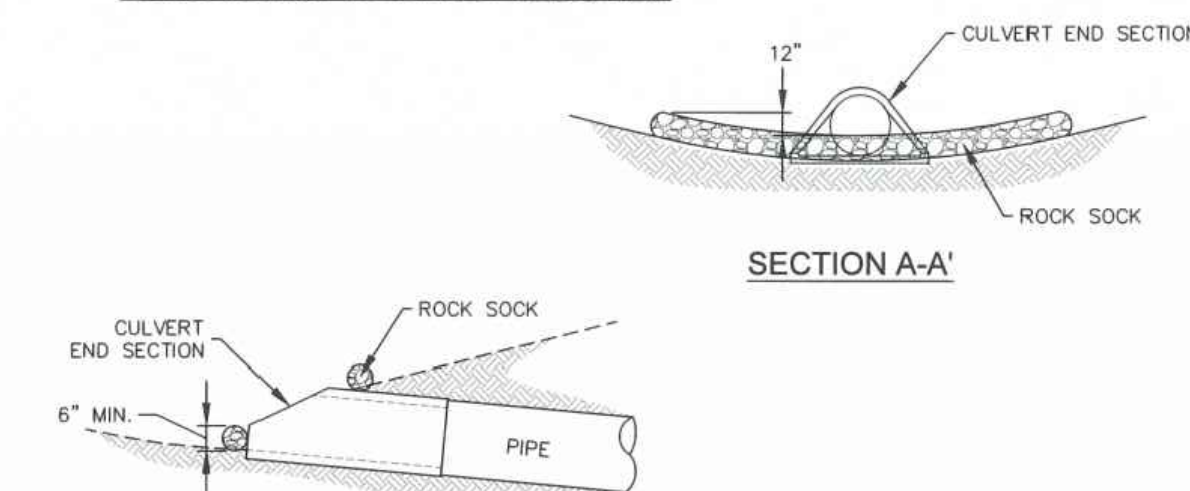
1. SEE PLAN VIEW FOR:  
-LOCATION OF CONCRETE WASHOUT AREA  
-LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY
3. AN IMPERMEABLE LINER (16 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
4. DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
5. THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
6. CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8'.
7. BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
8. CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
9. SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
10. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 1/2 THE HEIGHT OF THE CONCRETE WASH AREA.
3. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
4. THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
5. PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.



CULVERT INLET PROTECTION PLAN



SECTION A-A'



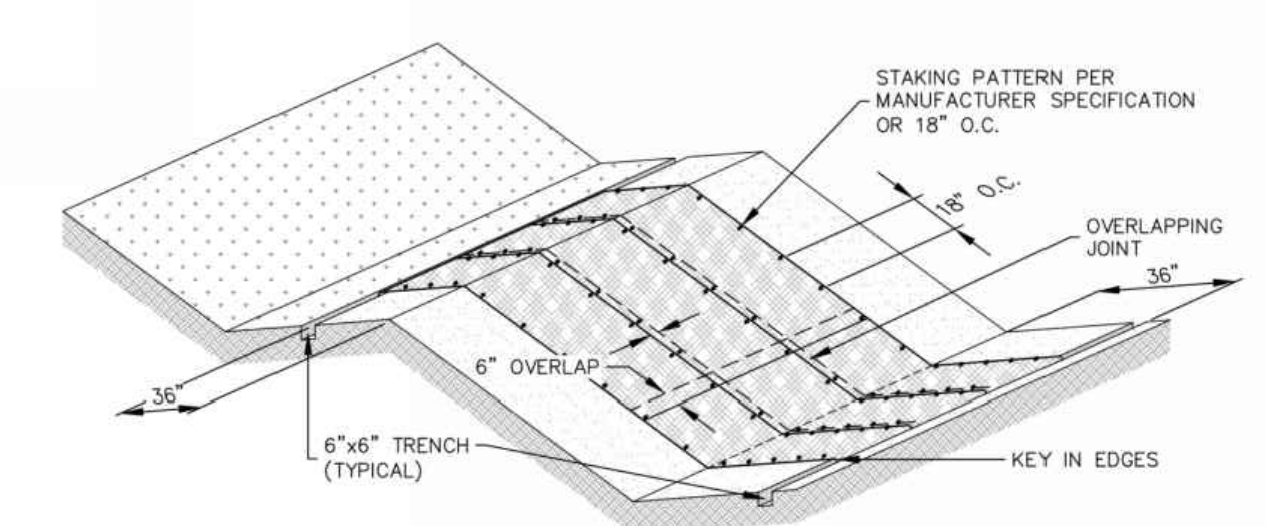
SECTION B-B'

INSTALLATION NOTES

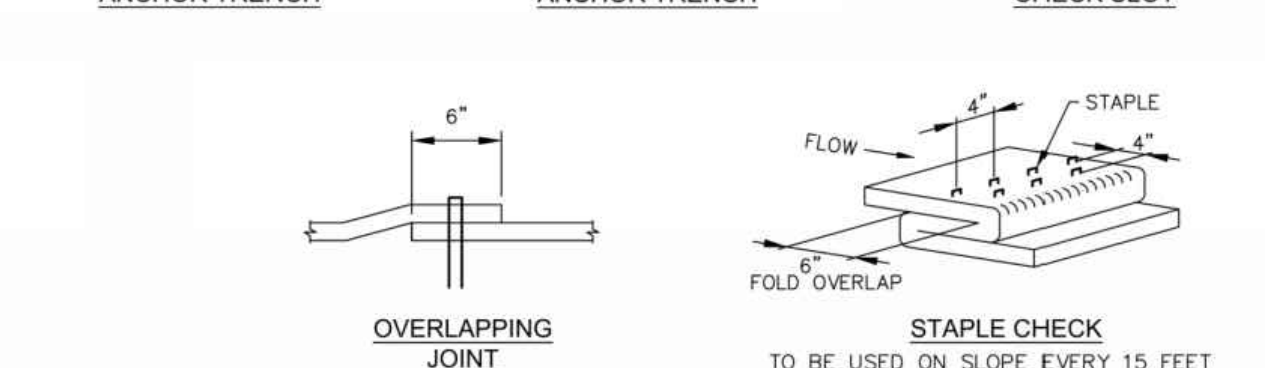
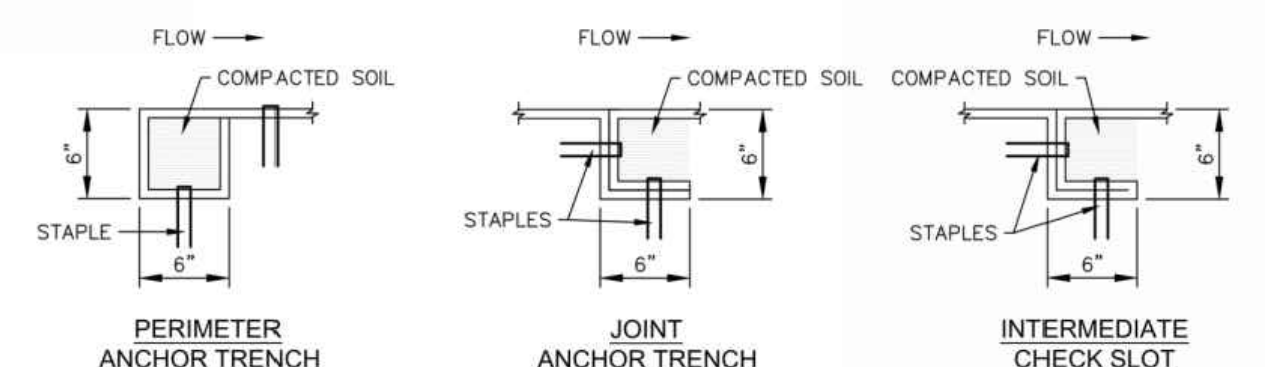
1. SEE ROCK SOCK DETAIL.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1/2 HEIGHT OF THE ROCK SOCK.
3. CULVERT INLET PROTECTION SHALL REMAIN UNTIL THE UPSTREAM AREA IS PERMANENTLY STABILIZED.



EROSION CONTROL BLANKET





**INSTALLATION NOTES**

- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY BE USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.
- IN AREAS WHERE EROSION CONTROL BLANKETS ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOST PRIOR TO EROSION CONTROL BLANKET INSTALLATION, AND THE EROSION CONTROL BLANKET SHALL BE IN FULL CONTACT WITH THE SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.
- INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.
- OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER FOR EROSION CONTROL BLANKETS ON SLOPES.
- MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKETS SHALL CONFORM TO TABLE ECB-1.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.
- STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.
- COMPACT ALL TRENCHES.

**MAINTENANCE NOTES**

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE GEC INSPECTOR.
- ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS, SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.

**TABLE ECB-1, EROSION CONTROL BLANKET MATERIAL SPECIFICATIONS**

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

**EROSION CONTROL BLANKET**

APPROVED: *[Signature]*

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-ECB-2

**CURB INLET PROTECTION PLAN**

**SECTION A-A'**

**CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION**

**INSTALLATION NOTES**

- SEE ROCK SOCK DETAIL FOR INSTALLATION REQUIREMENTS.
- PLACEMENT OF THE ROCK SOCK SHALL BE APPROXIMATELY 40 DEGREES FROM THE CURB.
- ROCK SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5' APART.
- AT LEAST TWO CURB ROCK SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.
- ADDITIONAL ROCK SOCKS MAY BE REQUIRED AT GEC INSPECTOR'S DISCRETION.

**MAINTENANCE NOTES**

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE DESIGN DEPTH OF THE INLET BARRIER.
- ROCK SOCKS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
- PERMANENTLY STABILIZE AREA BEHIND INLET AFTER ROCK SOCKS ARE REMOVED WHEN REMOVAL IS APPROPRIATE.

**ON-GRADE INLET PROTECTION**

APPROVED: *[Signature]*

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

**ROCK SOCK SUMP INLET PROTECTION PLAN**

**SECTION A-A'**

**INSTALLATION NOTES**

- SEE ROCK SOCK DETAIL FOR INSTALLATION REQUIREMENTS.
- SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.
- CONTROL MEASURES MUST BE WRAPPED AROUND INLET AS TIGHTLY AS POSSIBLE.

**MAINTENANCE NOTES**

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE DESIGN DEPTH OF THE INLET BARRIER.
- ROCK SOCKS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
- PERMANENTLY STABILIZE AREA AROUND INLET AFTER ROCK SOCKS ARE REMOVED WHEN REMOVAL IS APPROPRIATE.

**SUMP INLET PROTECTION**

APPROVED: *[Signature]*

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-IP-2

**SEEDING & MULCHING**

ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.

**SOIL PREPARATION**

- IN AREAS TO BE SEED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRABLE CONDITION. LESS THAN 85% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
- AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
- THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
- TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.

**SEEDING**

- ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
- SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE.
  - SEED DEPTH MUST BE 1/2 TO 3/4 INCHES WHEN DRILL-SEEDED IS USED.
- BROADCAST SEEDING OR HYDRO-SEEDED WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
  - SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLION DRILL OR HYDRO-SEEDED.
  - BROADCAST SEEDINGS MUST BE LIGHTLY HAND-RAKED INTO THE SOIL.

**MULCHING**

- MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
- MULCHING REQUIREMENTS INCLUDE:
  - HAY OR STRAW MULCH
    - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.
    - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.
  - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
- HYDRAULIC MULCHING
  - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
  - IF HYDRO-SEEDED IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.
  - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.

**EROSION CONTROL BLANKET**

- EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

**SEEDING & MULCHING**

APPROVED: *[Signature]*

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-SM

**SILT FENCE SUMP INLET PROTECTION PLAN**

**SECTION A-A'**

**INSTALLATION NOTES**

- SEE SILT FENCE DETAIL FOR INSTALLATION REQUIREMENTS.
- POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF THREE FEET.
- SILT FENCE FABRIC SHOULD HAVE A FLOW RATE IN EXCESS OF 30 GALLONS PER MINUTE PER SQUARE YARD SO AS TO ALLOW SOME WATER FLOW AND NOT DAM THE WATER. STANDARD, LOW-FLOW SILT FENCE FABRIC WILL NOT BE ALLOWED.

**MAINTENANCE NOTES**

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE DESIGN DEPTH OF THE INLET BARRIER.
- SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
- PERMANENTLY STABILIZE AREA AROUND INLET AFTER SILT FENCE IS REMOVED WHEN REMOVAL IS APPROPRIATE.

**SUMP INLET PROTECTION**

APPROVED: *[Signature]*

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-IP-3

**STRAW BALE SUMP INLET PROTECTION PLAN**

**SECTION A-A'**

**INSTALLATION NOTES**

- BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH THE ENDS OF THE BALES TIGHTLY ADJUTING ONE ANOTHER.
- STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
- STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
- STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"x18"x18".
- A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PAGED SO THAT THE BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S).
- TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKED SHALL BE 2"x2"x24" (MIN.), WOODEN STAKES SHALL BE DRIVEN A MINIMUM OF 6" INTO THE GROUND.

**MAINTENANCE NOTES**

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE DESIGN DEPTH OF THE INLET BARRIER.
- STRAW BALES MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
- PERMANENTLY STABILIZE AREA AROUND INLET AFTER STRAW BALES ARE REMOVED WHEN REMOVAL IS APPROPRIATE.
- STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN OR DAMAGED BEYOND REPAIR.

**SUMP INLET PROTECTION**

APPROVED: *[Signature]*

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-IP-4

**ROCK SOCK SECTION**

**ROCK SOCK PLAN**

**ROCK SOCK OVERLAP**

**GRADATION TABLE**

	MASS PERCENT PASSING SQUARE MESH SIEVES
	No. 4
2"	100
1 1/2"	90-100
1"	20-55
3/4"	0-15
3/8"	0-5

MATCHES SPECIFICATIONS FOR No. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M-43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES

**INSTALLATION NOTES**

- CRUSHED ROCK SHALL BE BETWEEN MAX. 1 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET AND MIN. 3/4" CRUSHED ROCK.
- WIRE MESH SHALL HAVE OPENINGS SMALLER THAN THE SMALLEST SIZE ROCK.
- WIRE MESH SHALL BE SECURED USING 'HOG RINGS' OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

**MAINTENANCE NOTES**

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED OR DAMAGED BEYOND REPAIR.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN THE DEPTH REACHES 1/2 OF THE HEIGHT OF THE ROCK SOCK.
- ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL DISTURBANCE AREA IS STABILIZED.
- PERMANENTLY STABILIZE AREA AFTER ROCK SOCKS HAVE BEEN REMOVED.

**ROCK SOCK**

APPROVED: *[Signature]*

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-RS

**SEDIMENT CONTROL LOG**

**SECTION A-A'**

**SEDIMENT CONTROL LOG JOINTS**

**INSTALLATION NOTES**

- ALL SEDIMENT CONTROL LOGS MUST BE EMBEDDED TO 1/2 OF THE HEIGHT OF THE LOG.
- LARGER DIAMETER SEDIMENT CONTROL LOGS NEED TO BE EMBEDDED DEEPER.
- PLACE SEDIMENT CONTROL LOG AGAINST SIDEWALK OR BACK OF CURB WHEN ADJACENT TO THESE FEATURES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE FROM ANY NOXIOUS WEED SEEDS OF DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- IF USING AS SLOPE PROTECTION, INSTALL SEDIMENT CONTROL LOGS ALONG THE CONTOUR.

**MAINTENANCE NOTES**

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- PERMANENTLY STABILIZE AREA AFTER SEDIMENT CONTROL LOGS HAVE BEEN REMOVED.

**SEDIMENT CONTROL LOGS**

APPROVED: *[Signature]*

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-SCL



# THE COTTAGES AT MESA RIDGE FOUNTAIN MUTUAL IRRIGATION COMPANY IRRIGATION PIPE CONSTRUCTION DRAWINGS

A PORTION OF THE NORTHEAST QUARTER OF SECTION 29, THE SOUTHEAST QUARTER  
OF SECTION 20, THE SOUTHWEST QUARTER OF SECTION 21, & THE NORTHWEST  
QUARTER OF SECTION 28 TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M.  
COUNTY OF EL PASO, STATE OF COLORADO

## BASIS OF BEARINGS:

BEARINGS ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 29, MONUMENTED AT THE WEST END WITH A 3.25" ALUMINUM CAP IN CONCRETE STAMPED "PLS 4842" AND MONUMENTED AT THE EAST END WITH A #6 REBAR AND 3.25" ALUMINUM CAP STAMPED "PLS 38141" AND ASSUMED TO BEAR S 89°57'13" E A FIELD MEASURED DISTANCE OF 2,652.37 FEET.

## BENCHMARK:

ELEVATIONS ARE BASED UPON THE FOUNTAIN SANITATION DISTRICT POINT N-1, BEING A 2" BRASS CAP IN CONCRETE AT THE NORTHEAST CORNER OF MESA RIDGE PARKWAY AND FOUNTAIN MESA ROAD. (ELEVATION=5750.57 NGVD 29).

## LEGAL DESCRIPTION:

THAT PORTION OF THE NORTHWEST QUARTER OF SECTION 28 AND THE NORTHEAST QUARTER OF SECTION 29, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 29, MONUMENTED AT THE WEST END WITH A 3.25" ALUMINUM CAP IN CONCRETE STAMPED "PLS 4842" AND MONUMENTED AT THE EAST END WITH A #6 REBAR AND 3.25" ALUMINUM CAP STAMPED "PLS 38141" AND ASSUMED TO BEAR S 89°57'13" E A FIELD MEASURED DISTANCE OF 2,652.37 FEET.

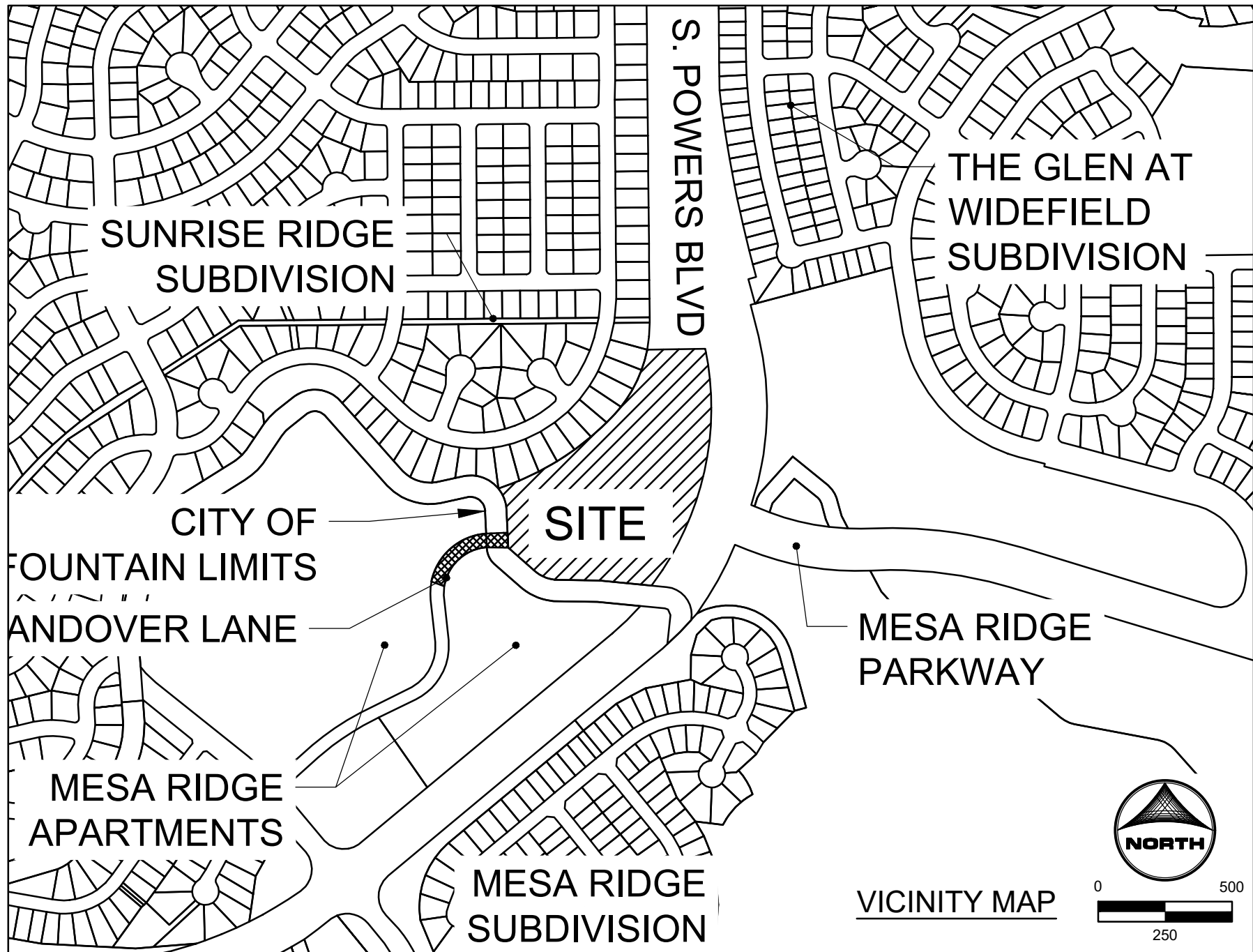
BENCHMARK: ELEVATIONS ARE BASED UPON THE FOUNTAIN SANITATION DISTRICT POINT N-1, BEING A 2" BRASS CAP IN CONCRETE AT THE NORTHEAST CORNER OF MESA RIDGE PARKWAY AND FOUNTAIN MESA ROAD. (ELEVATION=5750.57 NGVD 29).

BEGINNING AT THE NORTHWEST CORNER OF THE NORTHWEST QUARTER OF SAID SECTION 28; THENCE N 89°41'59" E ALONG THE NORTH LINE OF SAID NORTHWEST QUARTER, A DISTANCE OF 117.30 FEET TO A POINT ON THE WEST LINE OF POWERS BOULEVARD AS RECORDED UNDER BOOK 6788 AT PAGE 531 OF THE RECORDS OF THE EL PASO COUNTY CLERK AND RECORDERS OFFICE; THENCE ALONG THE WEST LINE OF SAID POWERS BOULEVARD, 933.14 FEET ALONG THE ARC OF A 1,096.98 FOOT RADIUS CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 48°44'17" AND A CHORD THAT BEARS S 12°56'23" W, 905.26 FEET TO A POINT ON THE NORTHERLY LINE OF THAT PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290 OF SAID RECORDS; THENCE OF THE FOLLOWING EIGHT (8) COURSES ALONG SAID NORTHERLY LINES AND EASTERLY LINES OF SAID PARCEL OF LAND DESCRIBED UNDER BOOK 5506 AT PAGE 1290:

- 1) N 84°16'00" W, A DISTANCE OF 198.99 FEET;
  - 2) 46.11 FEET ALONG THE ARC OF A 540.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 04°53'33" AND A CHORD THAT BEARS N 86°42'46" W, 46.10 FEET;
  - 3) N 89°09'33" W, A DISTANCE OF 124.09 FEET;
  - 4) 100.02 FEET ALONG THE ARC OF A 140.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 40°56'07" AND A CHORD THAT BEARS N 68°41'30" W, 97.91 FEET;
  - 5) N 48°13'27" W, A DISTANCE OF 126.77 FEET;
  - 6) 6.49 FEET ALONG THE ARC OF AN 8.00 FOOT RADIUS TANGENT CURVE TO THE RIGHT, HAVING A CENTRAL ANGLE OF 46°29'23" AND A CHORD THAT BEARS N 24°58'45" W, 6.31 FEET;
  - 7) N 01°44'04" W, A DISTANCE OF 137.18 FEET;
  - 8) 87.71 FEET ALONG THE ARC OF A 135.00 FOOT RADIUS TANGENT CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 37°13'35" AND A CHORD THAT BEARS N 20°21'02" W, 86.18 FEET TO THE SOUTHWEST CORNER OF LOT 15, BLOCK 3, SUNRISE RIDGE SUBDIVISION FILING NO. 8 AS RECORDED UNDER RECEPTION NO. 1722613 OF SAID RECORDS;
- THENCE THE FOLLOWING TWO (2) COURSES ALONG THE EASTERLY LINE OF SAID SUNRISE RIDGE SUBDIVISION FILING NO. 8: 1) 511.39 FEET ALONG THE ARC OF A 1,034.60 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 28°19'14" AND A CHORD THAT BEARS N 58°13'41" E, 506.20 FEET TO A POINT OF COMPOUND CURVATURE;
- 2) 283.12 FEET ALONG THE ARC OF A 500.00 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 32°26'36" AND A CHORD THAT BEARS N 27°50'47" E, 279.35 FEET TO A POINT ON THE NORTH LINE OF SAID NORTHEAST QUARTER;
- THENCE N 89°57'13" E ALONG THE NORTH LINE OF SAID NORTHEAST QUARTER, A DISTANCE OF 115.21 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 445,104 SQUARE FEET (10.218 ACRES) OF LAND, MORE OR LESS.

TO BE PLATTED AS "COTTAGES AT MESA RIDGE"



## LEGEND

	EXISTING	PROPOSED
MATCH LINE		
PHASE LINE		
SECTION LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
CENTERLINE		
CHAIN LINK FENCE		
WOODEN FENCE		
ROD IRON FENCE		
GUARDRAIL		
CABLE TV	TV	TV
U.G. ELECTRIC	OE	OE
OVERHEAD ELECTRIC	FO	FO
FIBER OPTIC		
GAS MAIN		
SANITARY SEWER	SS	SS
STORM DRAIN		
TELEPHONE	UT	UT
WATER MAIN	W	W
SWALE		
TRAIL		
CURB & GUTTER		
DRAINAGE BASIN		
INDEX CONTOUR		
INTER CONTOUR		
100-YR FLOODPLAIN		
FLOODWAY		
EDGE OF WETLANDS		
DRAINAGE	EXISTING	PROPOSED
DRAINAGE BASIN		
BASIN TAG		I.D. AREA
DESIGN POINT		
STORM SEWER		
MANHOLE		
STORM INLET		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
CLEAN OUT		
MANHOLE PLUG		
WATER		
FIRE HYDRANT		
FIRE DEPT. CONNECTION		
GATE VALVE		
MANHOLE		
METER		
TEE		
REDUCER		
DRY UTILITIES		
ELECTRIC METER		
ELECTRIC PEDESTAL		
ELECTRICAL CABINET		
ELECTRIC VAULT		
FIBER OPTIC PULL BOX		
FIBER OPTIC MANHOLE		
FIBER OPTIC PEDESTAL		
FIBER OPTIC SIGN		
FIBER OPTIC VAULT		
GAS METER		
GAS SIGN		
GAS VAULT		
TELEPHONE CABINET		
TELEPHONE MANHOLE		
TELEPHONE SIGNAL/MAST		
TELEPHONE SIGN		
TELEPHONE PEDESTAL		
TRANSFORMER		
LIGHT POLE		
FIBER OPTIC VAULT		
MISCELLANEOUS		
SIGN		
BOLLARD		
ACCESSIBLE PARKING		

## SHEET INDEX:

- 1 - COVER SHEET
- 2 - STORM PLAN
- 3 - STORM SEWER - PLAN & PROFILE
- 4 - CONSTRUCTION DETAILS

## STAKEHOLDERS:

OWNER:	CSJ NO 1 LLC 111 S. TEJON STREET, SUITE 222 COLORADO SPRINGS, CO 80903
DEVELOPER:	GOODWIN KNIGHT 8605 EXPLORER DRIVE, SUITE 250 COLORADO SPRINGS, CO 80920 DAVE MORRISON
ATTN:	
APPLICANT:	HR GREEN DEVELOPMENT, LLC 1975 RESEARCH PKWY, SUITE 230 COLORADO SPRINGS, CO 80920 PHIL STUEPFERT, KEN HUHN
ATTN:	
SURVEYOR:	BARRON LAND, LLC 2790 N ACADEMY BLVD #311 COLORADO SPRINGS, CO 80917 ATTN: SPENCER BARRON

## GENERAL NOTES:

1. ALL CONSTRUCTION WORK SHALL BE COORDINATED WITH FMIC PERSONNEL DURING THE SUMMER MONTHS TO NOT INTERFERE WITH OPERATION OF THE DITCH.
2. THE FOLLOWING ITEMS PROPOSED WITHIN THE FMIC RIGHT OF WAY SHALL BE PERMANENTLY MAINTAINED BY THE APPLICANT:
  - A. PRIVATE STORM SEWER
  - B. EMERGENCY ACCESS ROAD
  - C. PRIVATE ACCESS ROAD (LANDOVER LANE EXTENSION SITE ENTRANCE)
  - D. LANDSCAPING AND IRRIGATION ITEMS
  - E. FENCES & GATES
3. THE FOLLOWING ITEMS PROPOSED WITHIN THE FMIC RIGHT OF WAY SHALL BE PERMANENTLY MAINTAINED BY THE NOTED AGENCIES NOTED:
  - A. SANITARY SEWER WITHIN LANDOVER LANE (FOUNTAIN SANITATION DISTRICT)
  - B. WATER LINE WITHIN LANDOVER LANE (EXISTING WATER LINE SUBJECT TO PRIOR AGREEMENTS WITH WIDEFIELD WATER AND SANITATION DISTRICT)

## OWNER STATEMENT:

THE UNDERSIGNED OWNER/DEVELOPER AGREES TO INSTALL THE PROPOSED FACILITIES AS DEPICTED ON THESE PLANS. ANY CHANGES REQUIRED DUE TO FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF FMIC FOR THEIR REVIEW AND COMMENT.

OWNER/DEVELOPER

TITLE:

ADDRESS:

DATE:

## ENGINEER'S STATEMENT

THIS STORM SEWER PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERROR OR OMISSIONS ON MY PART IN PREPARATION OF THIS STORM SEWER PLAN.

KEN M. HUHN, P.E.  
KHUHN@HRGREEN.COM  
COLORADO P.E. 0054022

DATE

NOT FOR CONSTRUCTION

DRAWN BY: NQJ	JOB DATE: 4/12/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
APPROVED: KMH	JOB NUMBER: 200541	0" 1"
CAD DATE: 8/22/2022		IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
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NO.	DATE	BY	REVISION DESCRIPTION

HR GREEN - COLORADO SPRINGS
7222 COMMERCE CENTER DR SUITE 220 COLORADO SPRINGS CO 80919
PHONE: 719.300.4140 TOLL FREE: 800.728.7805 FAX: 844.273.1057   HRGreen.com

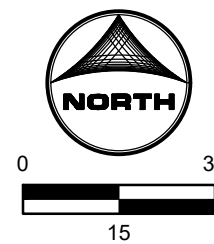
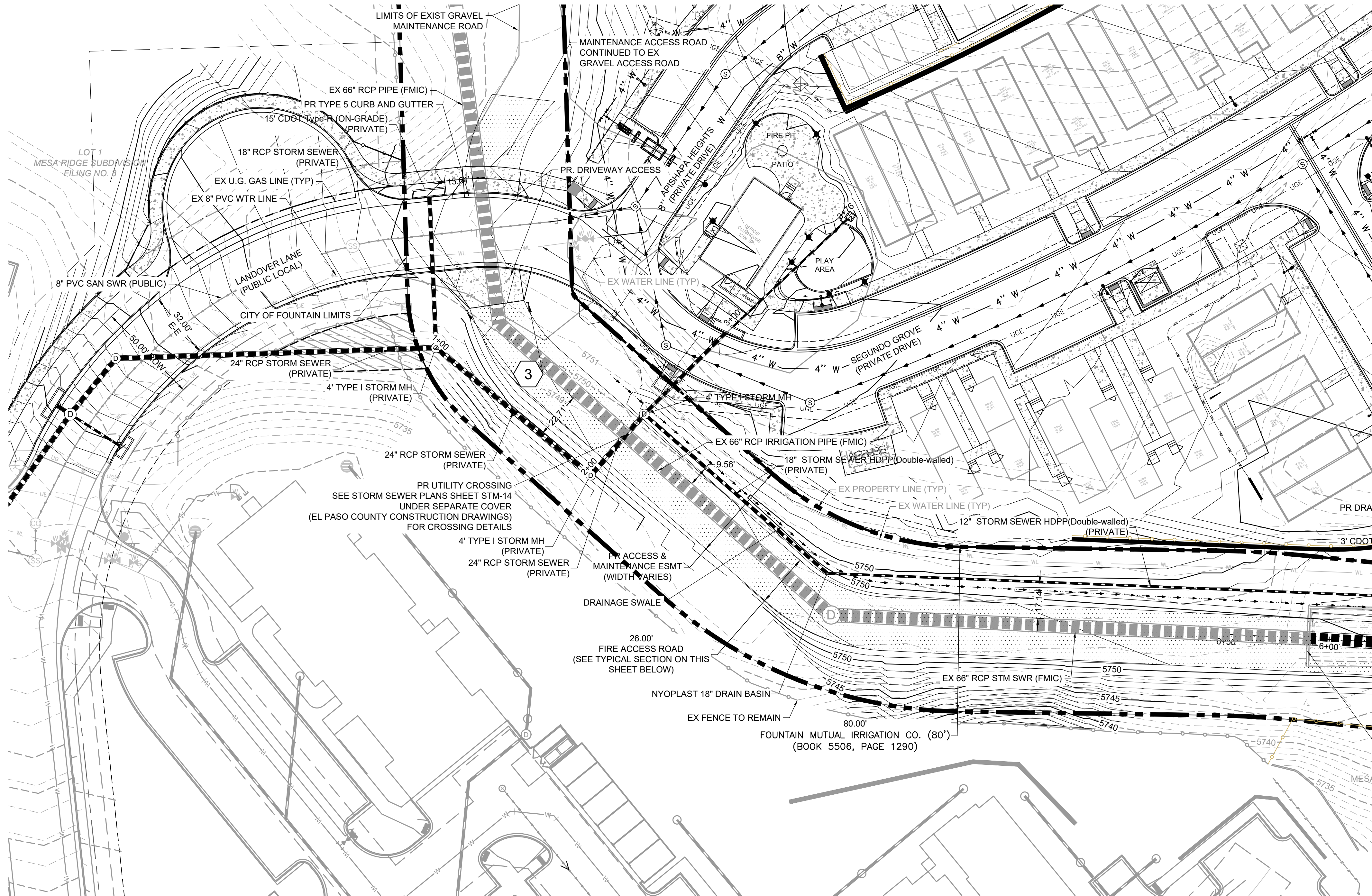
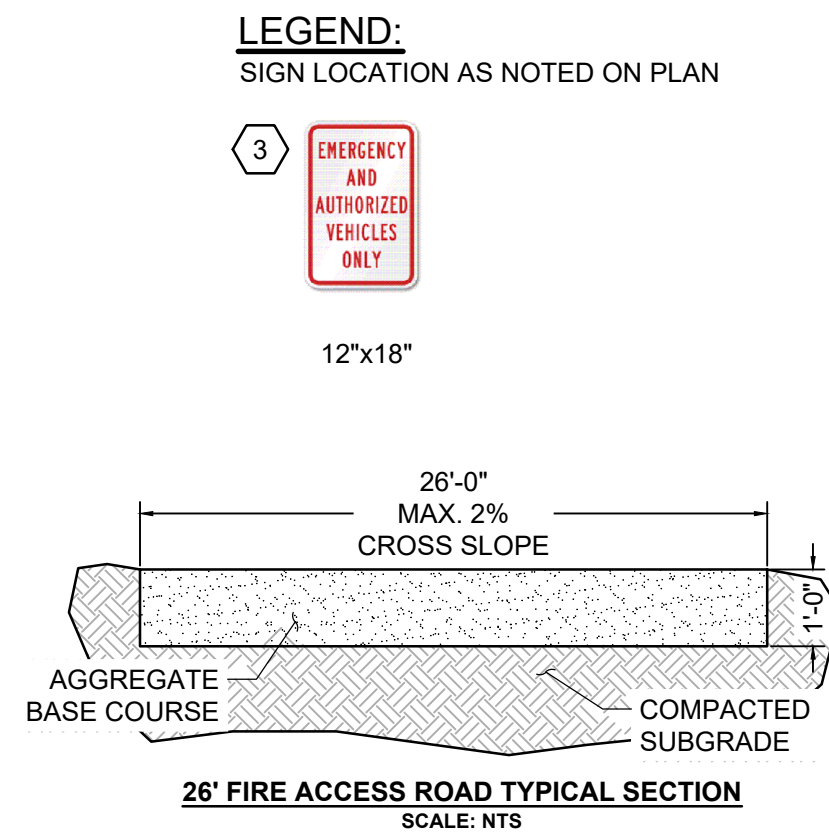
THE COTTAGES AT MESA RIDGE
GOODWIN KNIGHT
EL PASO COUNTY, COLORADO



IRRIGATION PIPE CONSTRUCTION DRAWINGS
COVER SHEET

SHEET
CV





NOT FOR CONSTRUCTION

DRAWN BY: NQJ	JOB DATE: 8/22/2022	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
APPROVED: KMH	JOB NUMBER: 200541	0 1"
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**HRGreen**

HR GREEN - COLORADO SPRINGS  
7222 COMMERCE CENTER DR SUITE 220  
COLORADO SPRINGS CO 80919  
PHONE: 719.300.4140 TOLL FREE: 800.728.7805  
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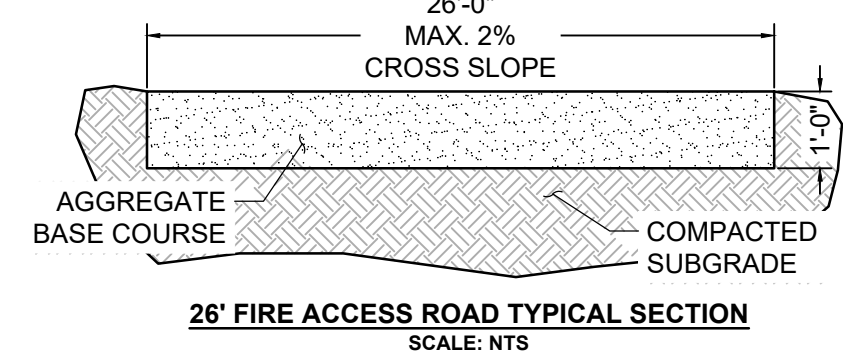
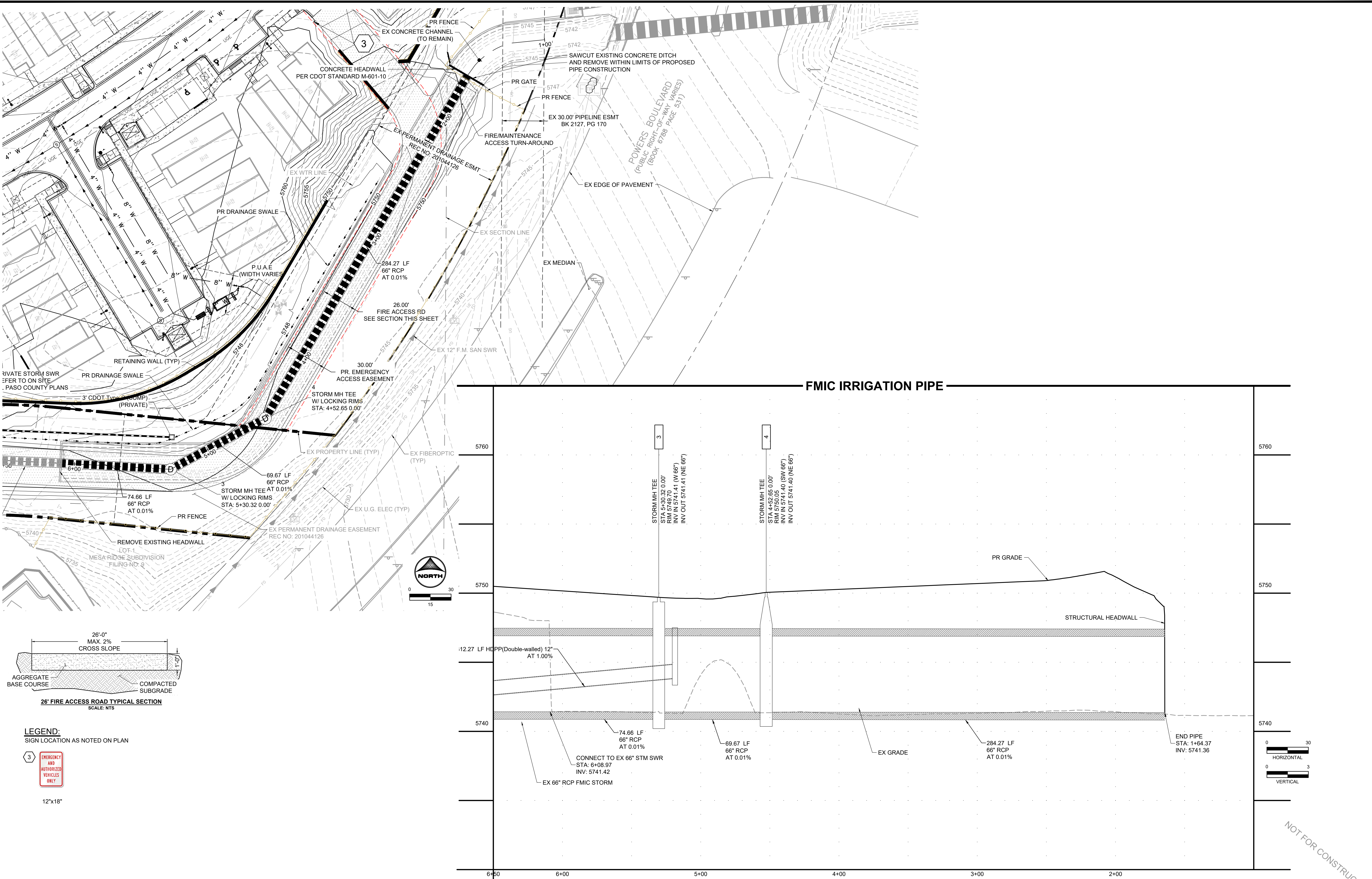
THE COTTAGES AT MESA RIDGE  
GOODWIN KNIGHT  
EL PASO COUNTY, COLORADO

**GOODWIN KNIGHT**

IRRIGATION PIPE CONSTRUCTION DRAWINGS  
STORM PLAN

SHEET  
STM  
2





LEGEND:  
SIGN LOCATION AS NOTED ON PLAN



12"x18"

DRAWN BY: NJQ JOB DATE: 8/22/2022  
APPROVED: KMH JOB NUMBER: 200541  
CAD DATE: 8/22/2022  
CAD FILE: J:\2020\200541\CAD\DWG\CD\CD\FMFC\FMFC\_Storm

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THE COTTAGES AT MESA RIDGE  
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EL PASO COUNTY, COLORADO



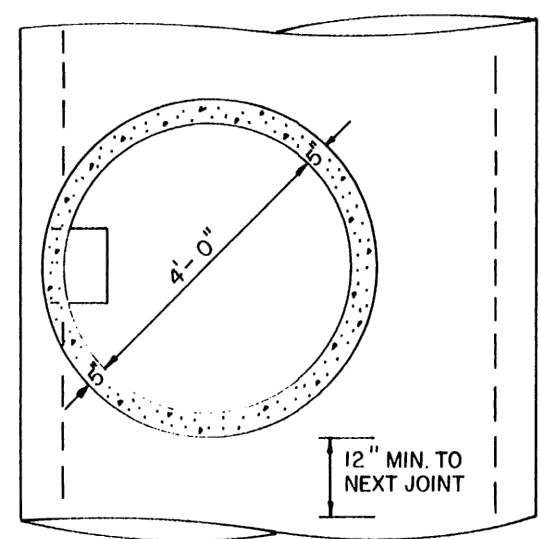
IRRIGATION PIPE CONSTRUCTION DRAWINGS  
STORM SEWER - PLAN & PROFILE

SHEET  
STM

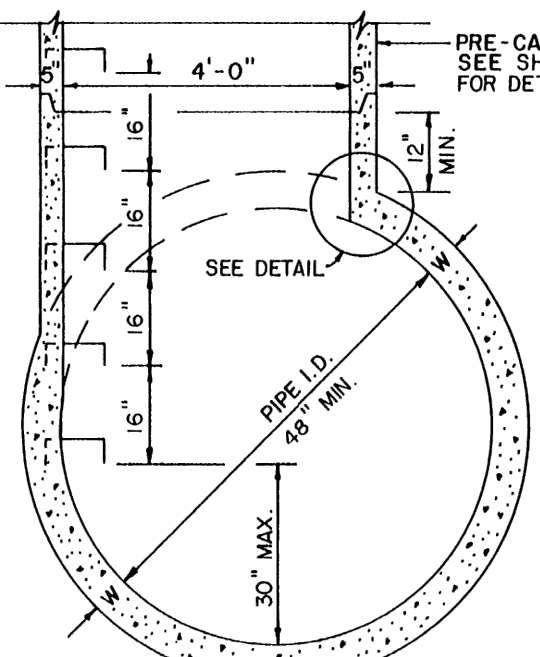
3

NOT FOR CONSTRUCTION

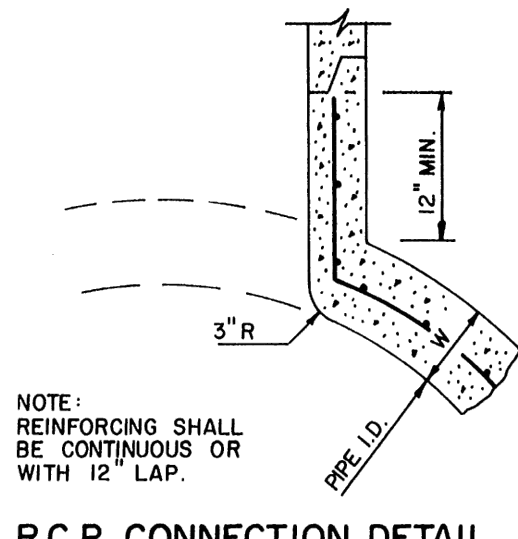




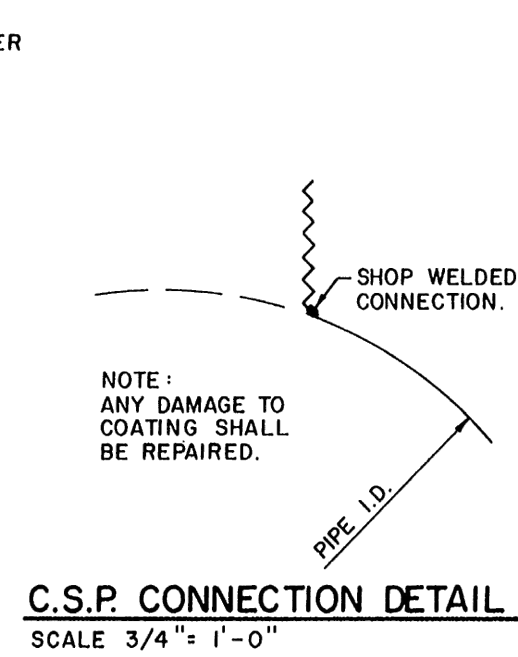
PLAN VIEW  
SCALE 3/8" = 1'-0"



SECTION VIEW  
SCALE 3/8" = 1'-0"



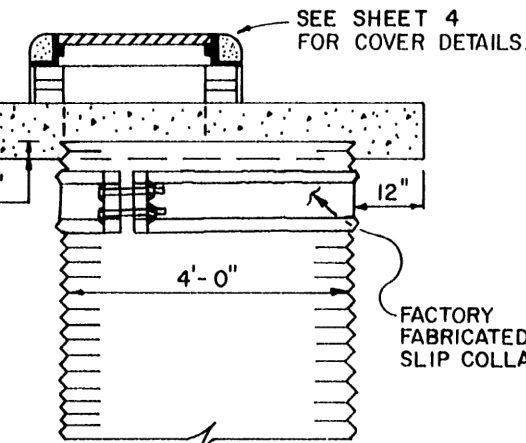
R.C.P. CONNECTION DETAIL  
SCALE 3/4" = 1'-0"



C.S.P. CONNECTION DETAIL  
SCALE 3/4" = 1'-0"

NOTES:

- Type III manholes shall be used only with approval by the city engineer and only when all of the following conditions are met:
  - Pipe is 48" or larger inside diameter.
  - No change in pipe size.
  - No change in pipe material.
  - No change in horizontal alignment.
  - Slope is flat and continuous.
- Type III manholes shall be fabricated by the manufacturer/supplier and delivered to the site as a single unit. Field fabrication shall not be permitted.
- Either ladder or steps shall be installed. Lowest step shall be a maximum of 30" above the invert of the pipe.



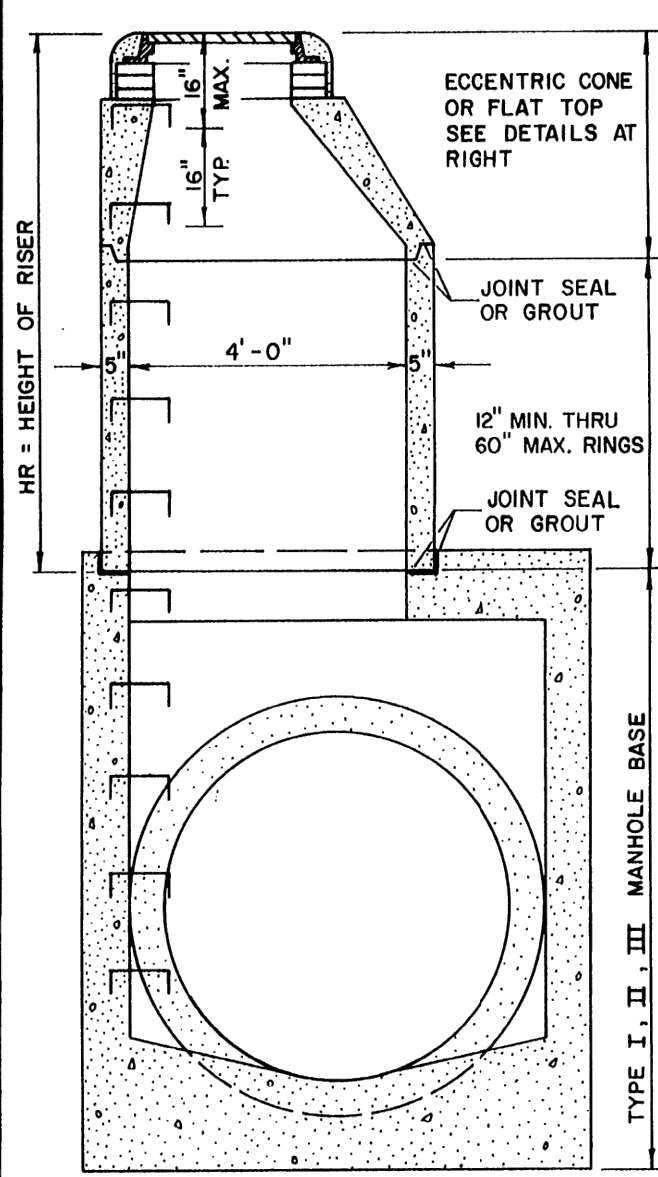
SPECIAL LID FOR USE WITH C.S.P. RISER  
SCALE 3/8" = 1'-0"

CITY OF COLORADO SPRINGS

STORM SEWER MANHOLE-TYPE III

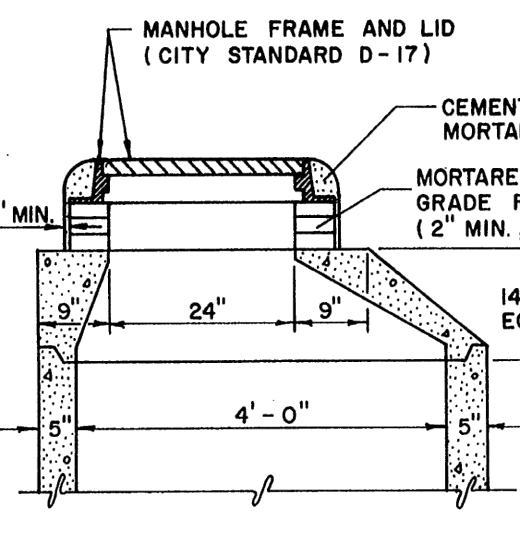
APPROVED BY: *Ray R. Haynes*  
CITY ENGINEER

SCALE: AS SHOWN DATE: JAN. 89 DRAWN: PL. B SHEET: D-20C 3 OF 4

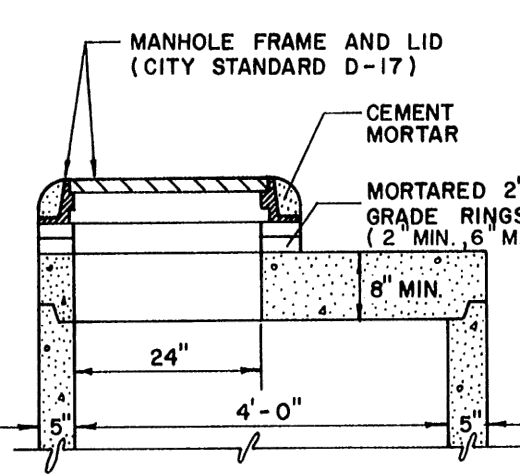


SECTION VIEW  
SCALE 3/8" = 1'-0"

STORM SEWER MANHOLE PRECAST RISER



ECCENTRIC CONE TOP  
(FOR HR > 3') SCALE: 1/2" = 1'-0"



ECCENTRIC FLAT TOP  
(FOR HR < 3') SCALE: 1/2" = 1'-0"

NOTES:

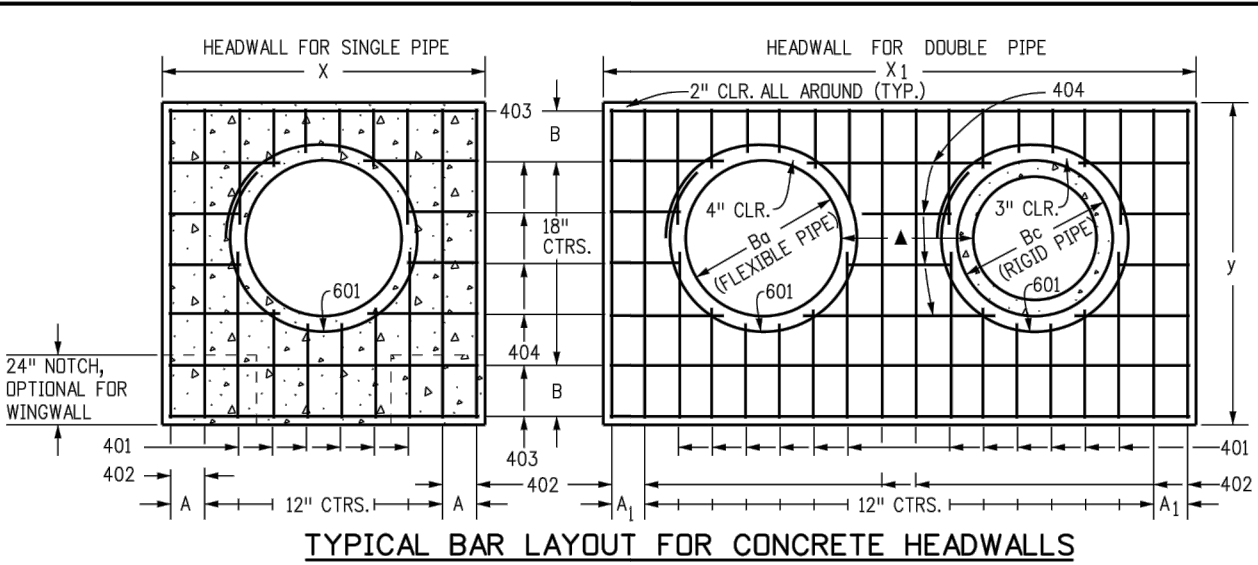
- All work shall be done in accordance with the standard and supplemental specifications applicable to the project.
- Precast risers shall conform to ASTM C-478.
- Steps shall be installed when manhole depth exceeds 30". Steps shall be cast iron or extruded aluminum, 1000 lb. capacity, 12" wide with non-skid grooves and drop front on safety noses, in accordance with approved OSHA requirements.

CITY OF COLORADO SPRINGS

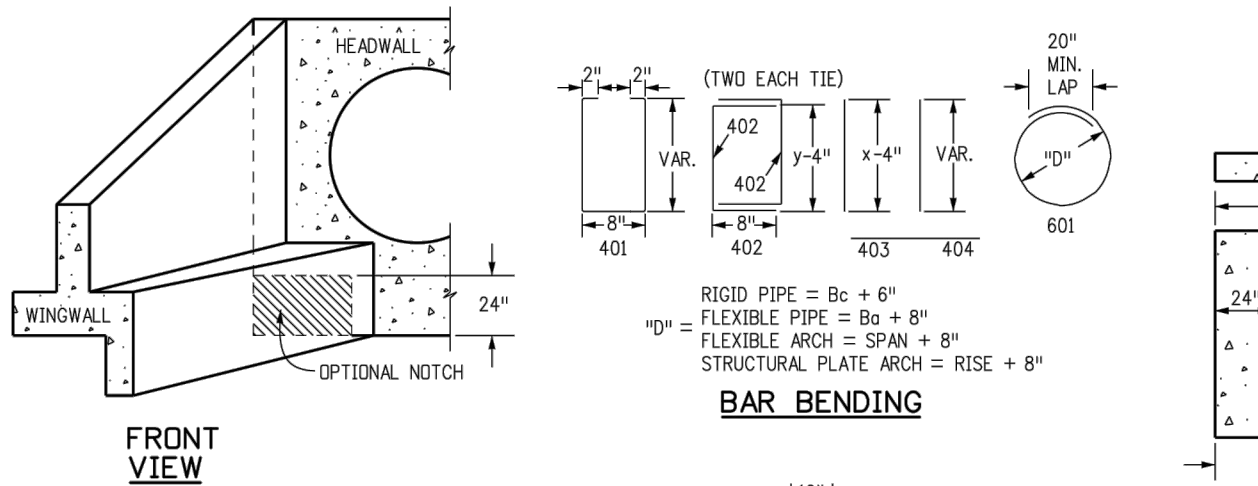
STORM SEWER-COVER & RISER

APPROVED BY: *Ray R. Haynes*  
CITY ENGINEER

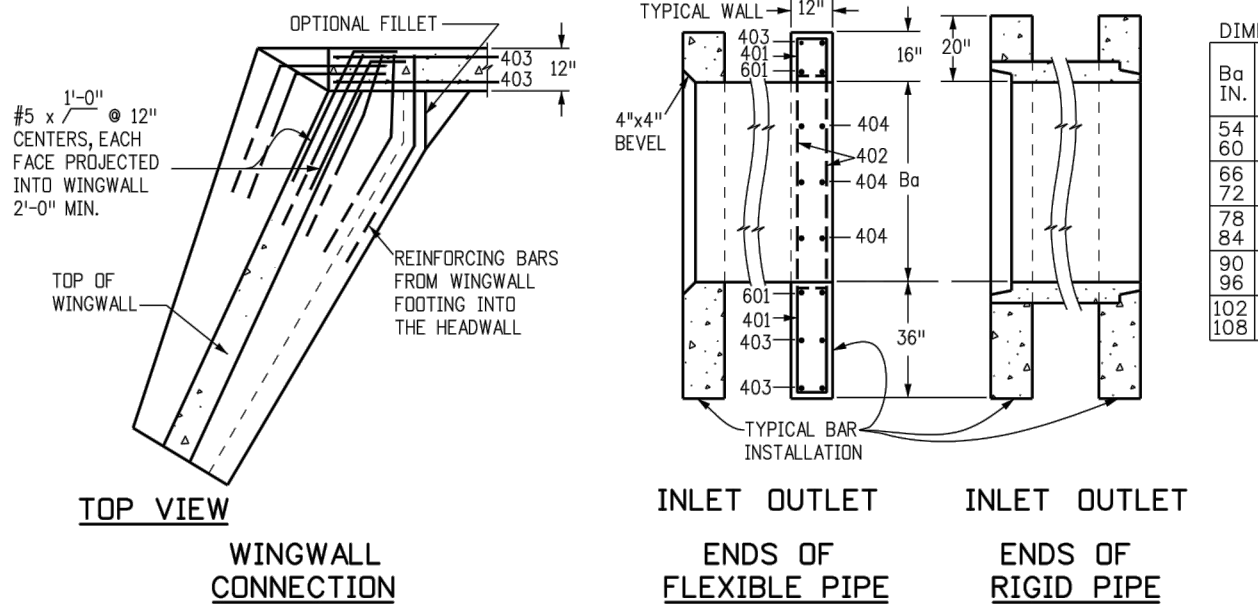
SCALE: AS SHOWN DATE: JAN. 89 DRAWN: PL. B SHEET: D-20D 1 OF 4



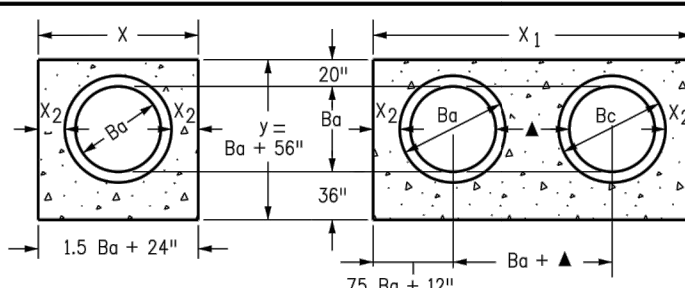
TYPICAL BAR LAYOUT FOR CONCRETE HEADWALLS



FRONT VIEW

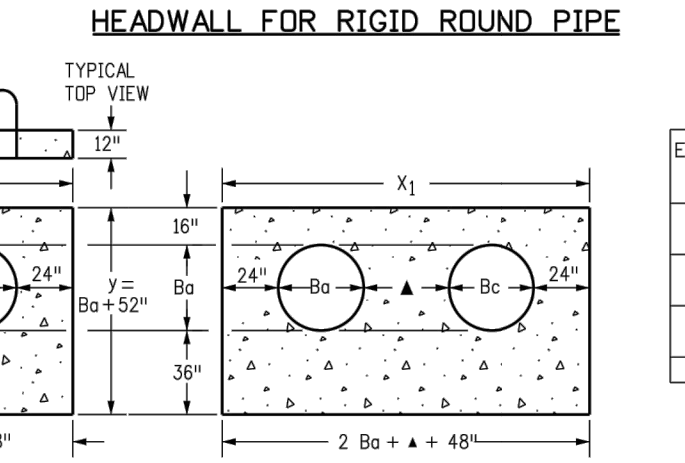


TOP VIEW

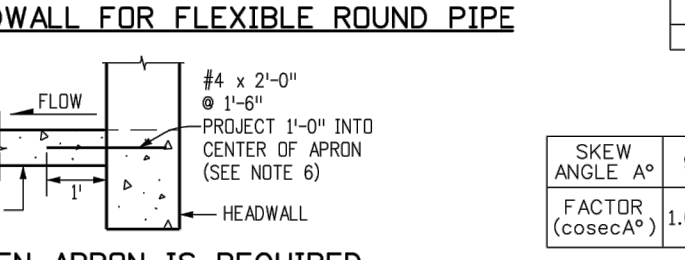


HEADWALL FOR RIGID ROUND PIPE

DIMENSIONS										QUANTITIES									
B <sub>o</sub>	X	A	X <sub>1</sub>	A <sub>1</sub>	Y	B	CONCRETE	STEEL		B <sub>o</sub>	X	A	X <sub>1</sub>	A <sub>1</sub>	Y	B	CONCRETE	STEEL	
IN.	IN.	IN.	IN.	IN.	IN.	IN.	CU. YD.	DBL. LBS.		IN.	IN.	IN.	IN.	IN.	IN.	IN.	CU. YD.	DBL. LBS.	
54	65	8-9	8 1/2	15-6	7	9-2	17	20	2.12	3.55	209	364							
60	72	9-0	9	16-6	10	9-8	11	21	2.35	3.99	236	414							
66	79	10-3	11 1/2	18-6	7	10-2	14	22	2.60	4.44	249	453							
72	86	11-0	12	20-0	10	10-8	17	23	2.85	4.91	270	476							
78	93	11-9	12 1/2	21-3	11	11-2	11	24	3.11	5.29	306	527							
84	100	12-6	13 1/2	22-6	11	11-8	14	25	3.38	5.68	333	572							
90	107	13-3	14 1/2	23-9	12	12-2	17	26	3.68	6.08	355	603							
96	114	14-0	15	25-0	10	12-8	11	27	3.94	6.48	379	649							
102	121	14-9	15 1/2	26-3	11	13-2	14	28	4.24	6.89	400	664							
108	128	15-6	16 1/2	27-6	12	13-8	17	29	4.54	7.30	424	707							

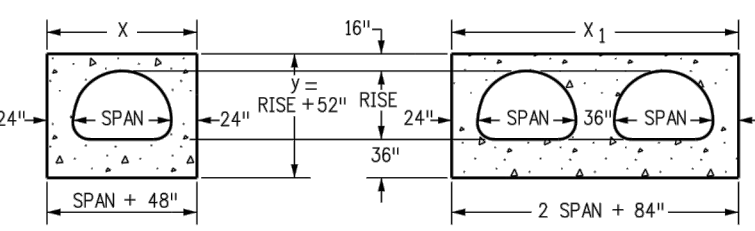


DIMENSIONS										QUANTITIES									
B <sub>o</sub>	X	A	X <sub>1</sub>	A <sub>1</sub>	Y	B	CONCRETE	STEEL		B <sub>o</sub>	X	A	X <sub>1</sub>	A <sub>1</sub>	Y	B	CONCRETE	STEEL	
IN.	IN.	IN.	IN.	IN.	IN.	IN.	CU. YD.	DBL. LBS.		IN.	IN.	IN.	IN.	IN.	IN.	IN.	CU. YD.	DBL. LBS.	
54	8-6	7	15-3	11 1/2	8-10	15	2.19	3.81	211	358									
60	9-0	10	16-6	12	8-10	18	2.58	4.25	217	396									
66	9-6	7	17-9	12 1/2	9-10	12	2.58	4.70	252	454									
72	10-0	10	19-0	10	10-4	15	2.78	5.17	255	472									
78	10-6	7	20-0	10	10-10	18	2.98	5.56	275	499									
84	11-0	10	21-0	11-4	12	3.19	5.95	297	553										
90	11-6	7	22-0	10	11-10	15	3.40	6.36	317	517									
96	12-0	10	23-0	12-4	18	3.62	6.79	320	597										
102	12-6	7	24-0	10	12-10	12	3.84	7.21	364	663									
108	13-0	10	25-0	10	13-4	15	4.06	7.63	362	678									



HEADWALL FOR FLEXIBLE ROUND PIPE

- GENERAL NOTES:
- CONCRETE SHALL BE CLASS B.
  - HEADWALL SHALL BE PERPENDICULAR TO THE PIPE & UNLESS OTHERWISE SHOWN ON THE PLANS, TABULATED DIMENSIONS AND QUANTITIES MUST BE ADJUSTED FOR SKEWED INSTALLATIONS.
  - FOR WINGWALL DETAILS, SEE STANDARD PLAN M-601-20.
  - VOLUME OCCUPIED BY PIPE HAS BEEN DEDUCTED FROM STEEL AND CONCRETE QUANTITIES.
  - EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4" IN.
  - ALL REINFORCING BARS SHALL HAVE A 2 IN. MINIMUM CLEARANCE.
- ▲ WHEN TWO OR MORE PIPES ARE LAID SIDE BY SIDE, THEY SHALL BE PLACED SO THAT THE ADJACENT PIPES WILL BE 1/2" INSIDE DIAMETER APART, OR 1/2" INSIDE SPAN APART, OR 3 FT. APART (INCLUDING WALL THICKNESS), WHICHEVER IS LESS.
- ADD 0.69 x (X OR X<sub>1</sub>) (LBS.) WHEN APRON IS REQUIRED.



DIMENSIONS										QUANTITIES			
N	R	X	A	X <sub>1</sub>	A <sub>1</sub>	Y	B	CONCRETE	STEEL				
RISE	IN.	FT.-IN.	IN.	FT.-IN.	IN.	FT.-IN.	IN.	CU. YD.	DBL. YD.	LBS.	DBL. LBS.		
59	10	9-8	21	20-6	7	9-3	17 1/2	2.72	5.10	250	467		
63	11	3	11 1/2	21-6	7	9-7	19 1/2	2.85	5.34	275	531		
67	11	9	12	22-10	9	9-11	21 1/2	3.08	5.79	290	547		
71	12	7	12 7/8	24-2	11	10-3	15	3.30	6.21	321	591		
75	13	4	12	25-8	8	10-7	16 1/2	3.52	6.65	314	606		
79	13	9	12	26-6	8	10-11	17 1/2	3.63	6.86	356	672		
83	14	8	8	28-4	12	11-3	17 1/2	3.96	7.51	376	699		

HEADWALL FOR FLEXIBLE PIPE ARCH																					
DIMENSIONS										QUANTITIES											
N	RISE	X	A	X <sub>1</sub>	A <sub>1</sub>	Y	B	IN	CONCRETE	STEEL	N	RISE	X	A	X <sub>1</sub>	A <sub>1</sub>	Y	B	IN	CONCRETE	STEEL
66	4-7	10-1	10 1/2	19-2	11	8-11	15 1/2	9-5	2.52	4.70	232	424									
75	5-1	11-0	10	21-0	10	9-5	16 1/2	10-5	2.80	5.25	282	509									
84	5-7	11-11	9 1/2	22-10	9	9-11	12 1/2	10-5	3.08	5.79	291	547									
93	6-1	12-10	9	24-8	8	10-5	15 1/2	11-5	3.36	6.33	309	622									
102	6-7	13-9	8 1/2	26-6	7	10-11	16 1/2	12-10	3.63	6.86	379	673									
111	7-1	14-11	9 1/2	28-10	9	11-5	17 1/2	13-10	4.05	7.67	377	711									
120	7-7	15-10	9	30-8	8	11-11	18 1/2	14-10	4.36	8.28	395	731									
132	8-4	16-10	9	32-8	8	12-8	11	15-10	4.75	9.03	441	839									
141	8-9	18-1	10 1/2	35-2	11	13-1	13 1/2	16-10	5.17	9.86	448	931									
150	9-3	19-4	12	37-8	8	13-7	14 1/2	17-10	5.59	10.88	490	953									
159	9-10	19-10	9	38-8	8	14-2	11	18-10	5.89	11.25	534	1019									

0	9-3	19-4	12	37-8	8	13-7	16 1/2	5.69	10.88	490	95
4	9-10	19-10	9	38-8	8	14-2	11	5.89	11.25	534	101

HEADWALL FOR STRUCTURAL PLATE ARCH

80	75	70	65	60	55	50	45	40	35	30
1.015	1.035	1.064	1.103	1.155	1.221	1.305	1.414	1.556	1.743	2.000

HEADWALL FOR PIPES

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.

M-601-10

Standard Sheet No. 1 of 1

Project Sheet Number:

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Sheet Revisions

Date: Comments

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