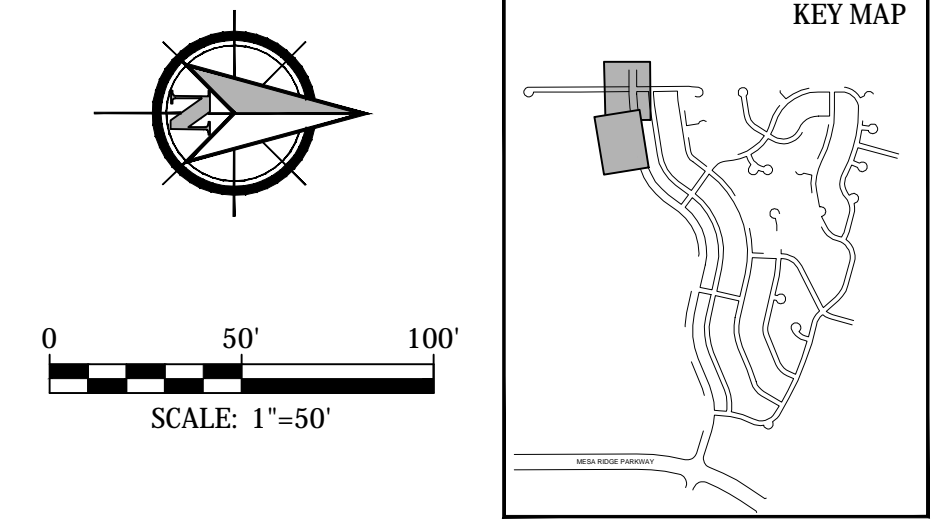
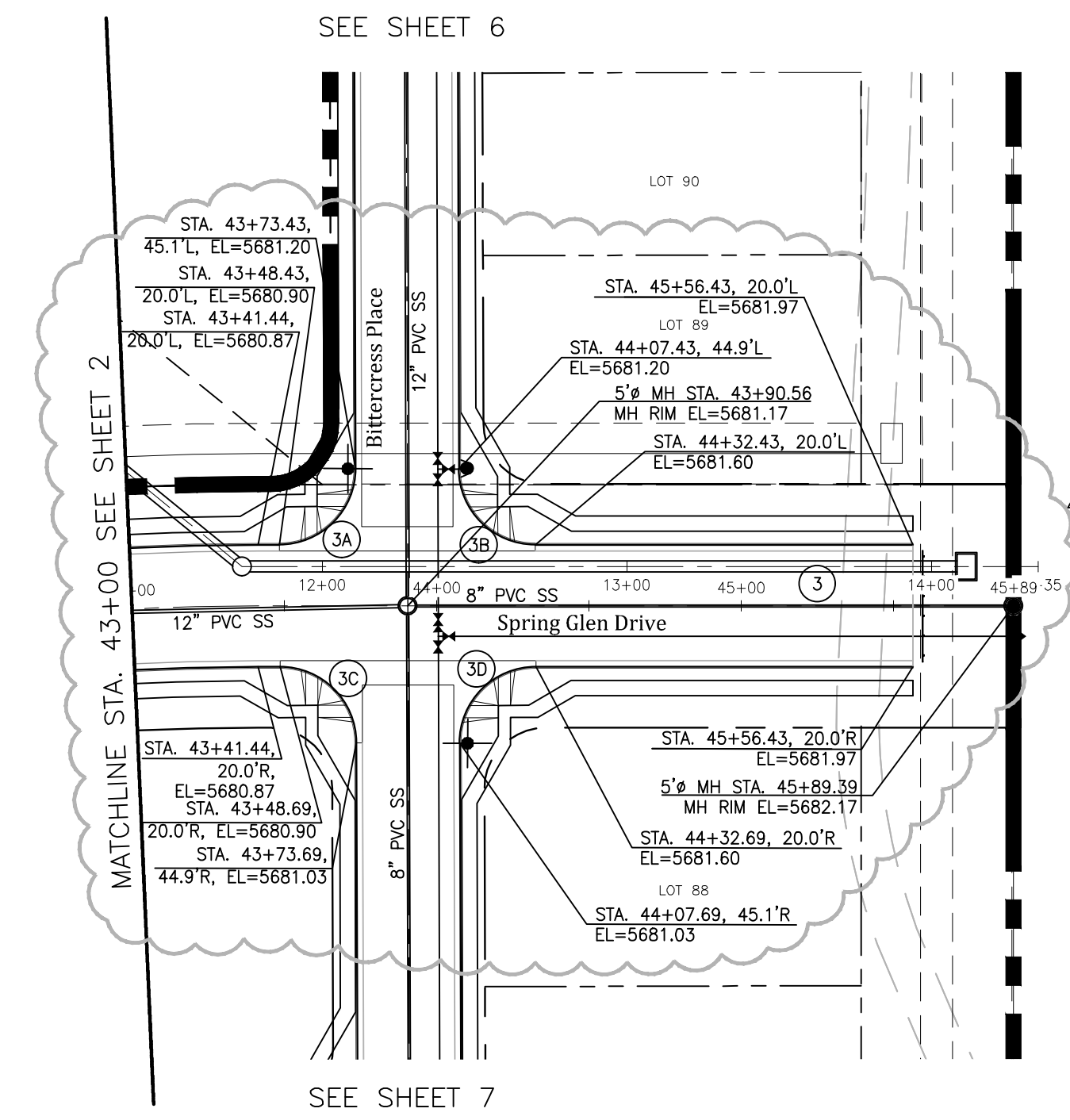
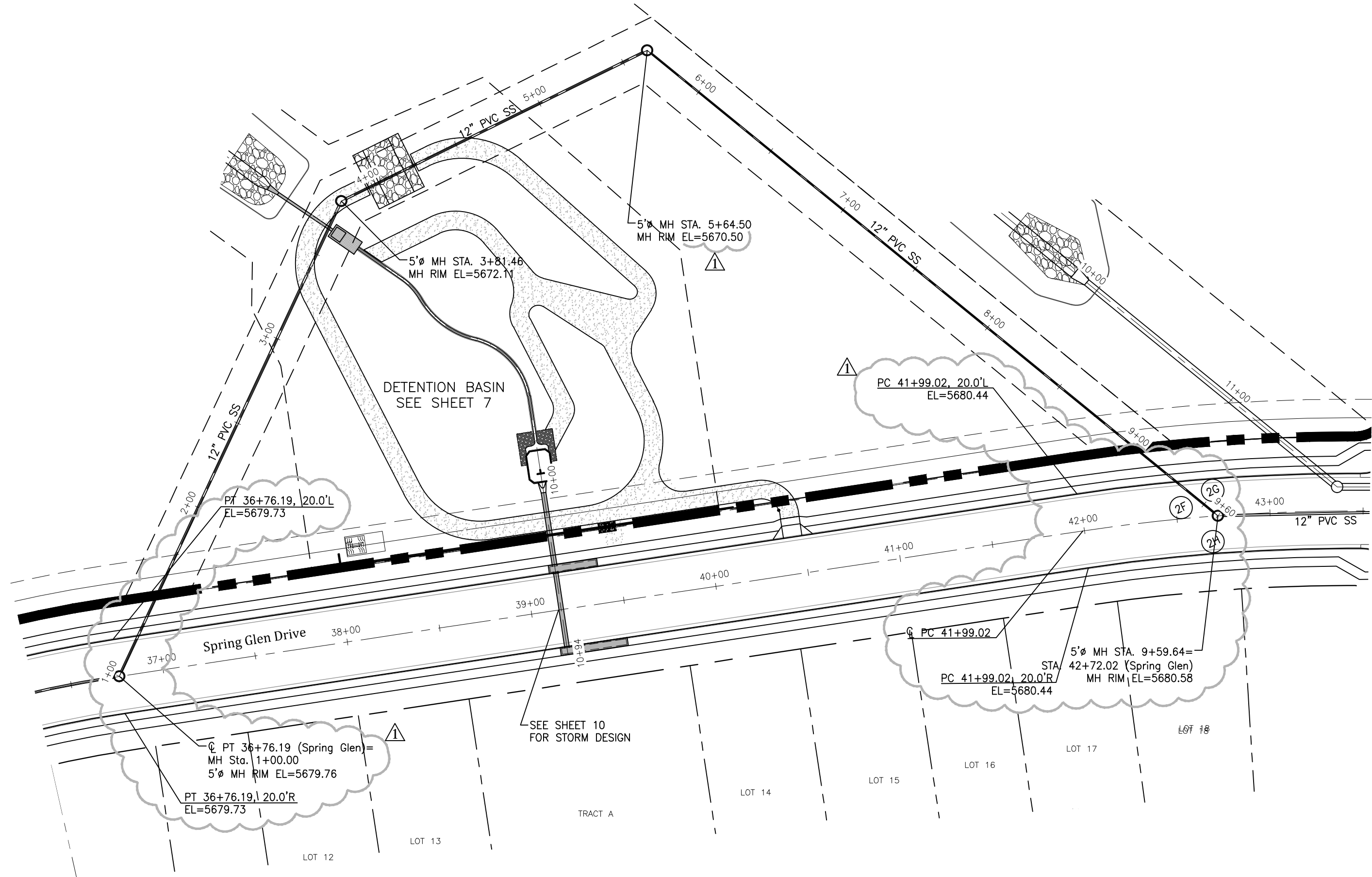


GLEN AT WIDEFIELD FILING NO. 9
SPRING GLEN DRIVE (Sta. 30+00 to Sta. 43+00)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	
	Δ 4/16/19 Profile/San. Sewer

17038-009-2-16-PP.dwg/Apr 24, 2019



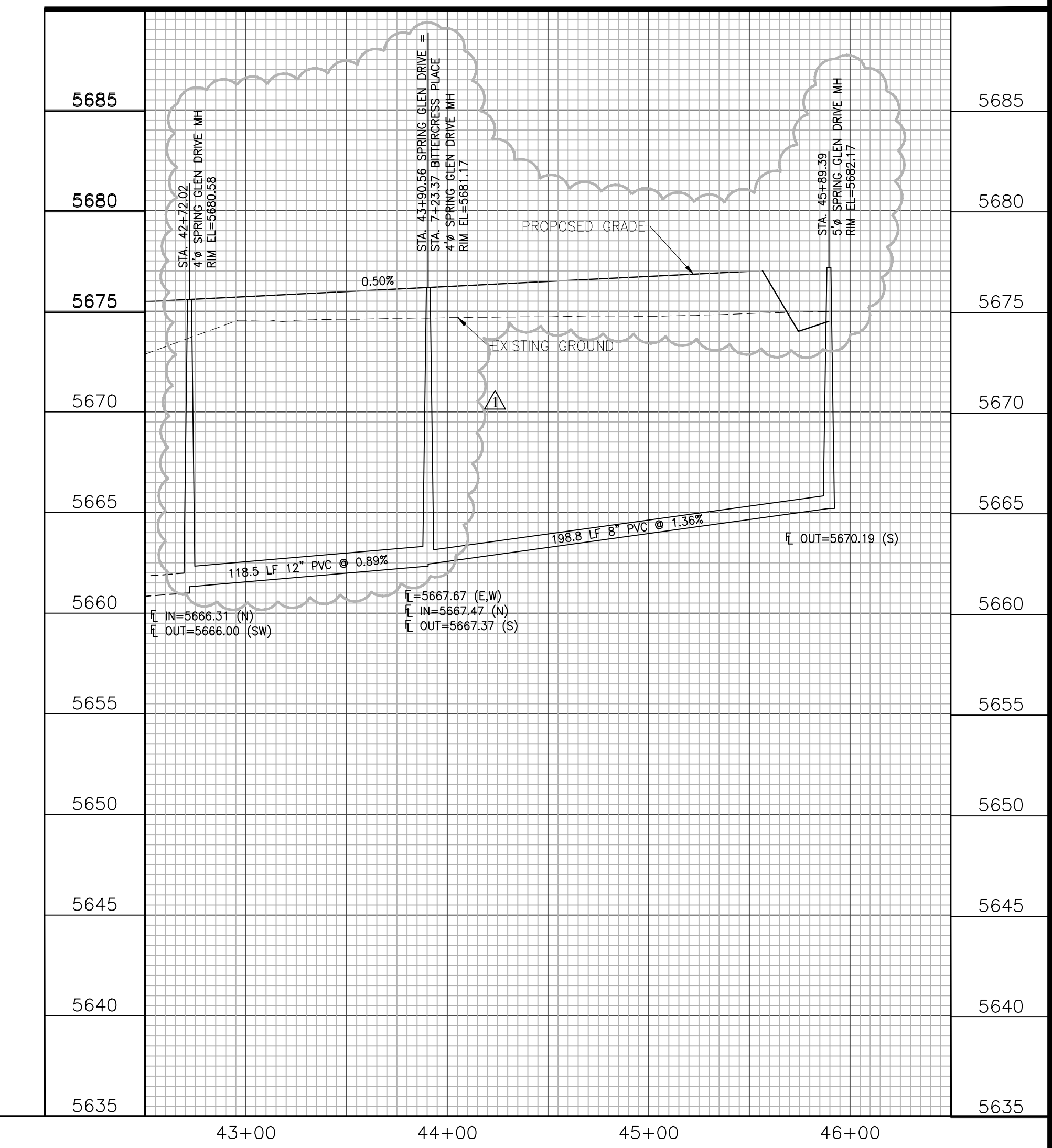
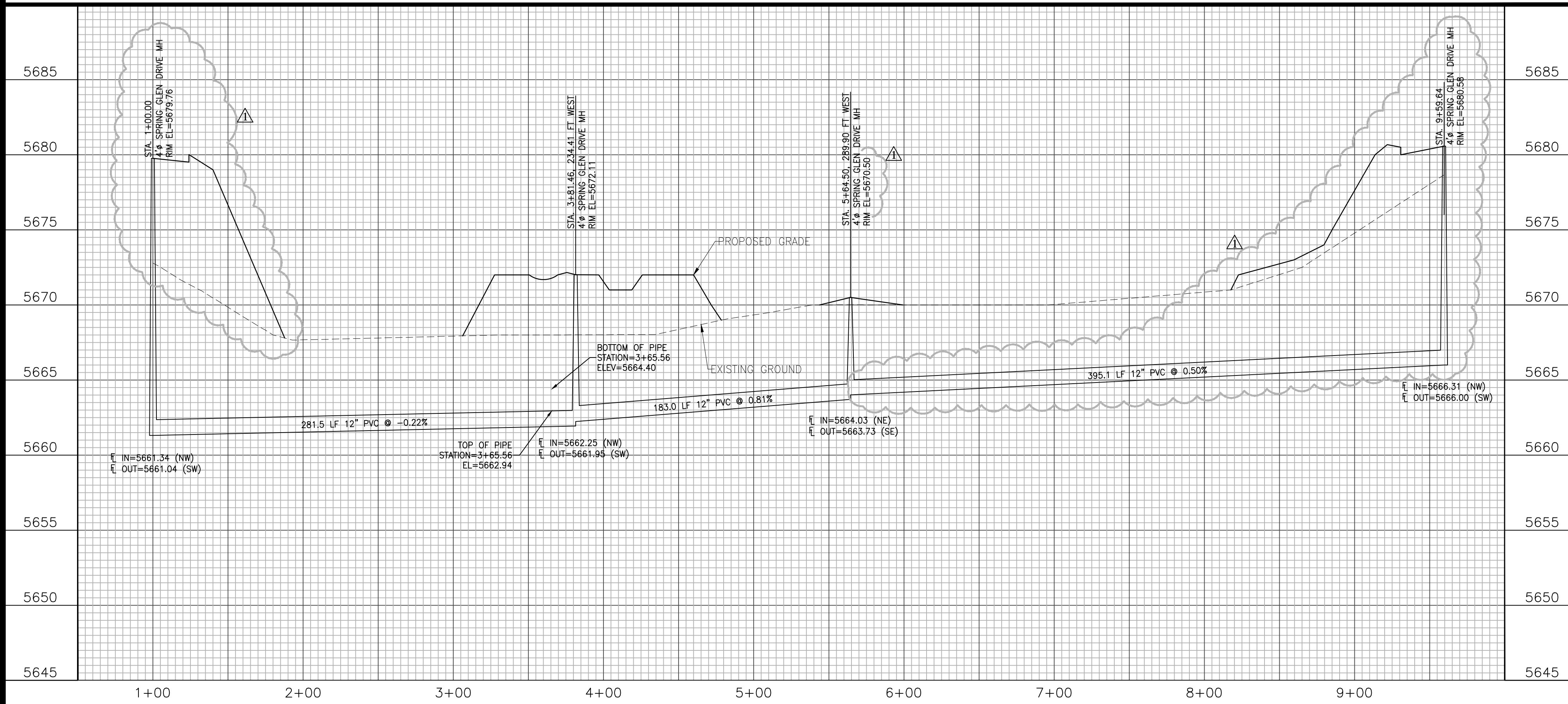
Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

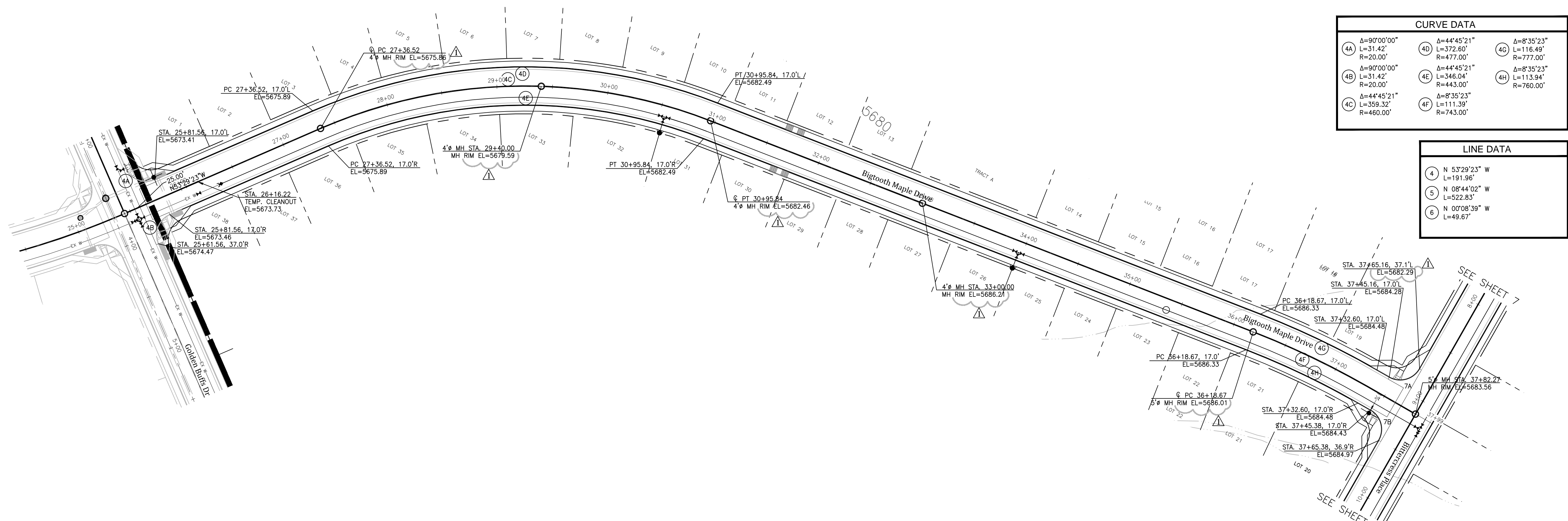
W
WIDEFIELD
Investment Group

GLEN AT WIDEFIELD FILING NO. 9
SPRING GLEN DRIVE (Sta. 43+00 to Sta. 45+89)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO

Project No.: 17038
Date: September 25, 2018
Design: AWMc
Drawn: JAK
Check: AWMc
Revisions:
4/16/19 Profile/San. Sewer

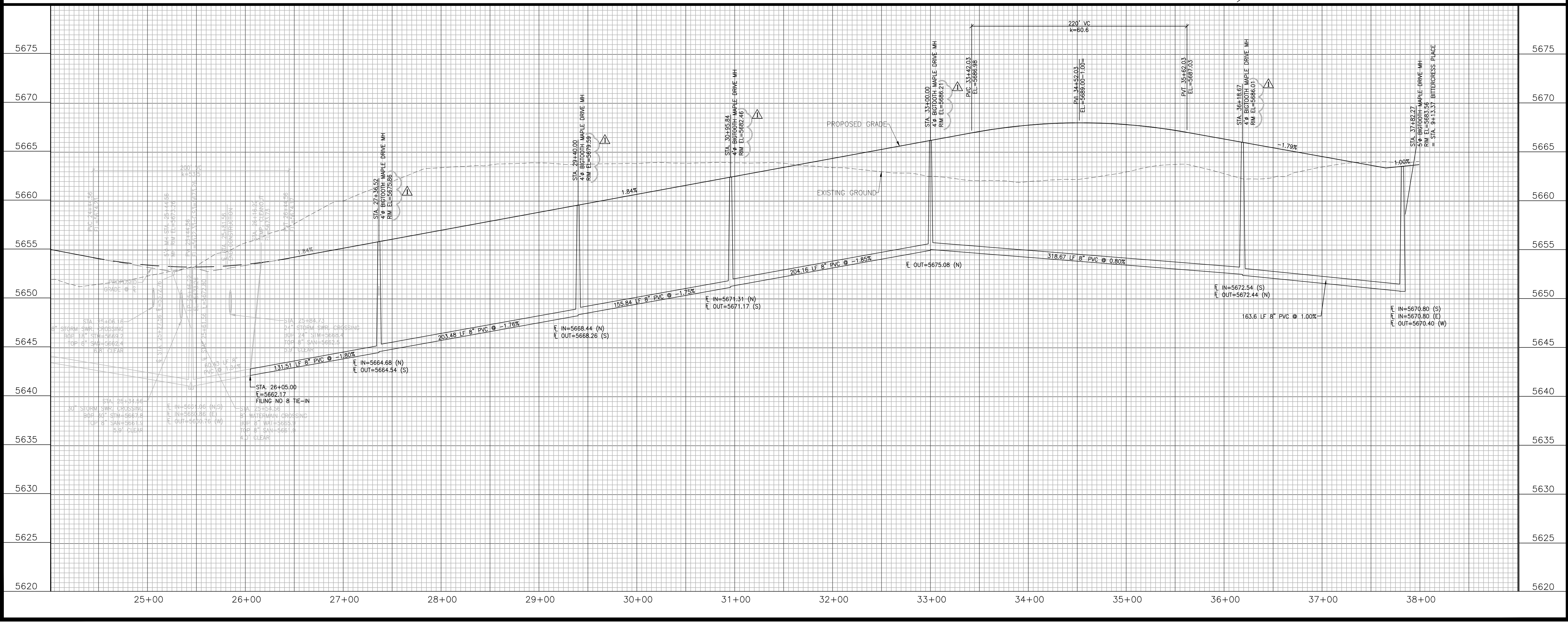
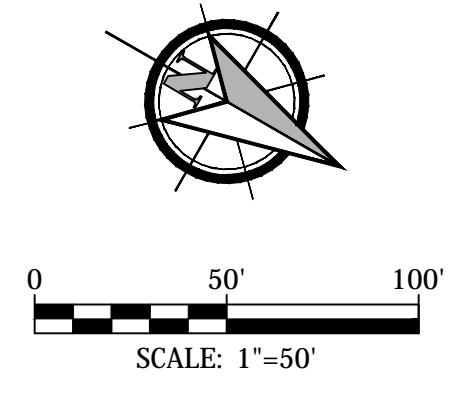
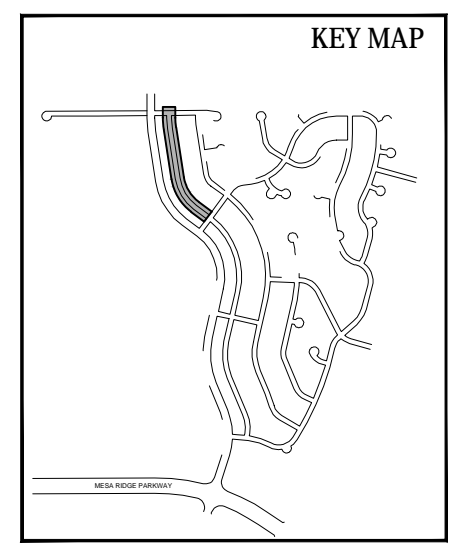
SHEET
3
3 of 20 Sheets





CURVE DATA		
4A	$\Delta=90^{\circ}00'00''$ L=31.42' R=20.00'	$\Delta=44^{\circ}45'21''$ L=372.60' R=477.00'
4B	$\Delta=90^{\circ}00'00''$ L=31.42' R=20.00'	$\Delta=44^{\circ}45'21''$ L=346.04' R=443.00'
4C	$\Delta=44^{\circ}45'21''$ L=359.32' R=460.00'	$\Delta=8^{\circ}35'23''$ L=116.49' R=777.00'
4D	$\Delta=44^{\circ}45'21''$ L=372.60' R=477.00'	$\Delta=8^{\circ}35'23''$ L=113.94' R=760.00'
4E	$\Delta=44^{\circ}45'21''$ L=346.04' R=443.00'	$\Delta=8^{\circ}35'23''$ L=111.39' R=743.00'
4F	$\Delta=8^{\circ}35'23''$ L=111.39' R=743.00'	

LINE DATA	
4	N 53°29'23" W L=191.96'
5	N 08°44'02" W L=522.83'
6	N 00°08'39" W L=49.67'



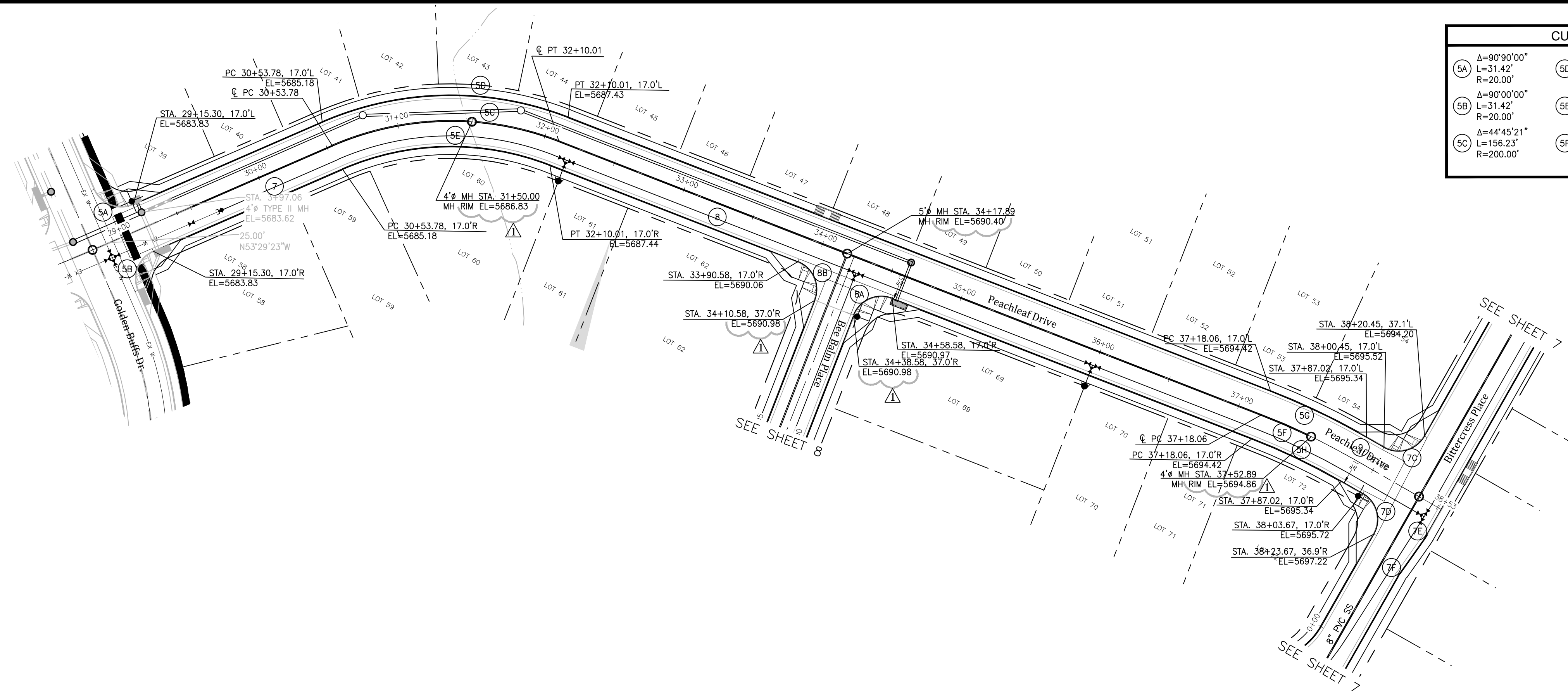
Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

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Investment Group

**GLEN AT WIDEFIELD FILING NO. 9
BIGTOOTH MAPLE DRIVE (Sta. 25+50 to Sta. 37+82)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO**

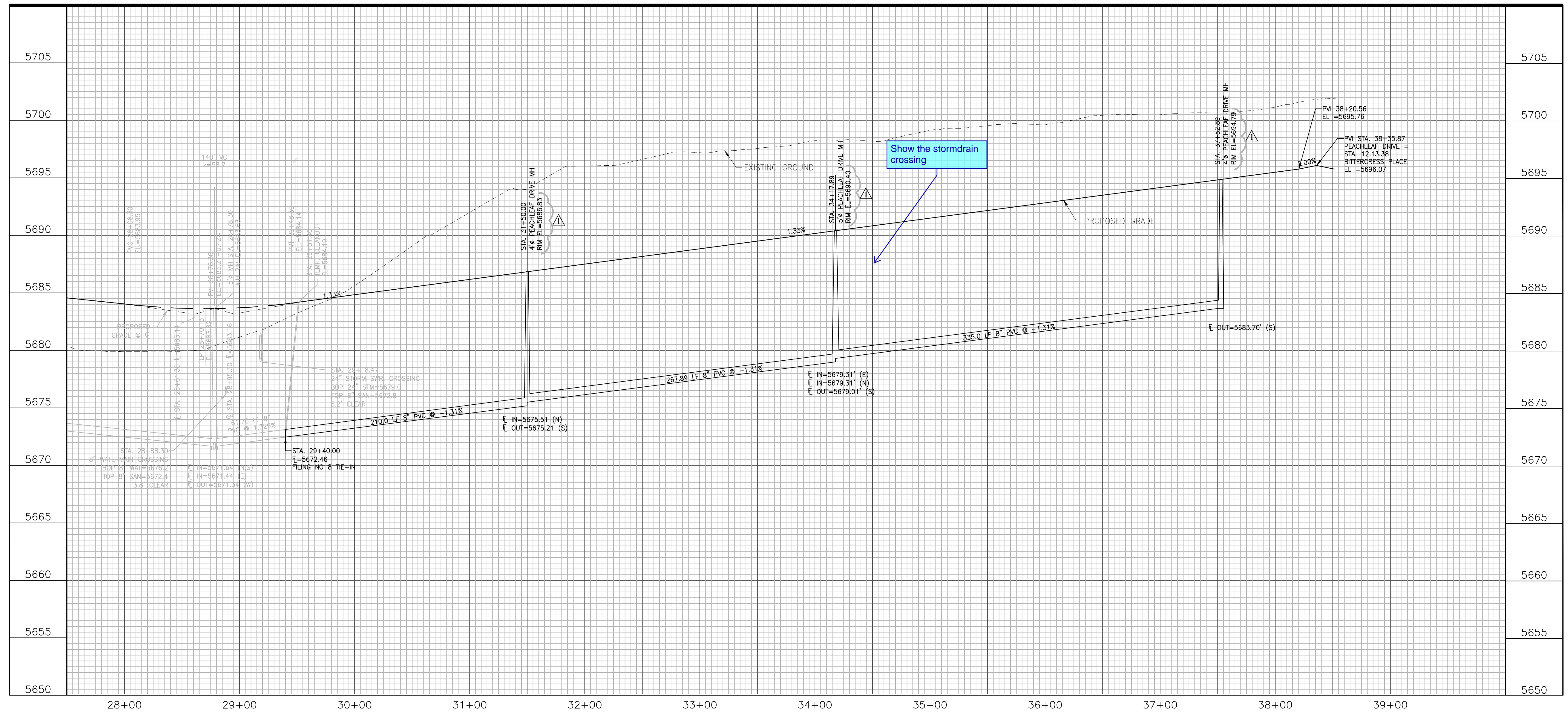
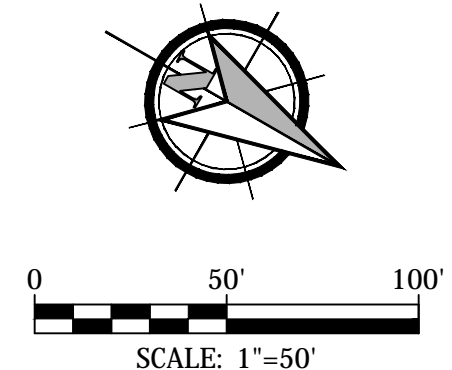
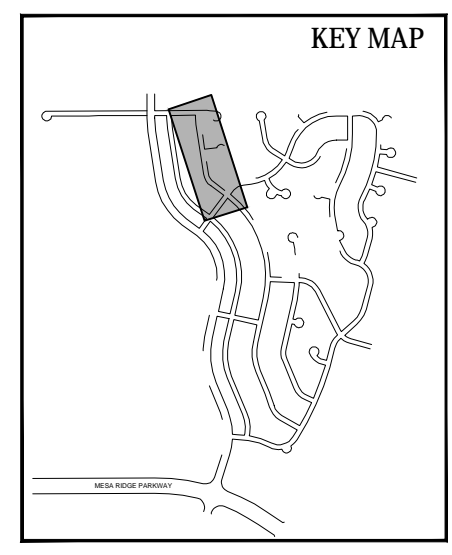
Project No.: 17038
Date: September 25, 2018
Design: AWMc
Drawn: JAK
Check: AWMc
Revisions:
4/16/19 San. Sewer Rim EL

SHEET
4
4 of 20 Sheets

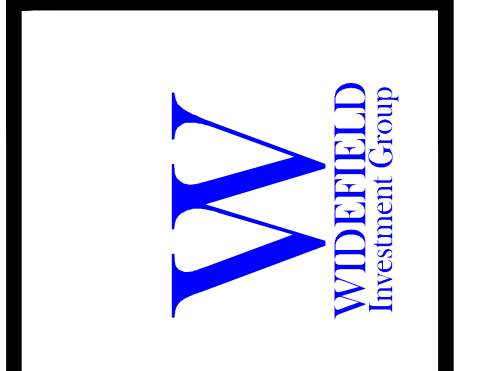


CURVE DATA		
5A	$\Delta=90^{\circ}00'00''$ L=31.42' R=20.00'	$\Delta=44^{\circ}45'21''$ L=169.51' R=217.00'
5B	$\Delta=90^{\circ}00'00''$ L=31.42' R=20.00'	$\Delta=44^{\circ}45'21''$ L=142.95' R=183.00'
5C	$\Delta=44^{\circ}45'21''$ L=156.23' R=200.00'	$\Delta=8^{\circ}35'23''$ L=71.51' R=477.00'
5D	$\Delta=44^{\circ}45'21''$ L=169.51' R=217.00'	$\Delta=8^{\circ}35'23''$ L=71.51' R=477.00'
5E	$\Delta=44^{\circ}45'21''$ L=142.95' R=183.00'	$\Delta=8^{\circ}35'23''$ L=71.51' R=477.00'
5F	$\Delta=8^{\circ}35'23''$ L=68.96' R=460.00'	$\Delta=8^{\circ}35'23''$ L=66.41' R=443.00'

LINE DATA	
7	N 53°29'23" W L=175.49'
8	N 08°44'02" W L=506.36'
9	N 07°08'39" W L=50.54'



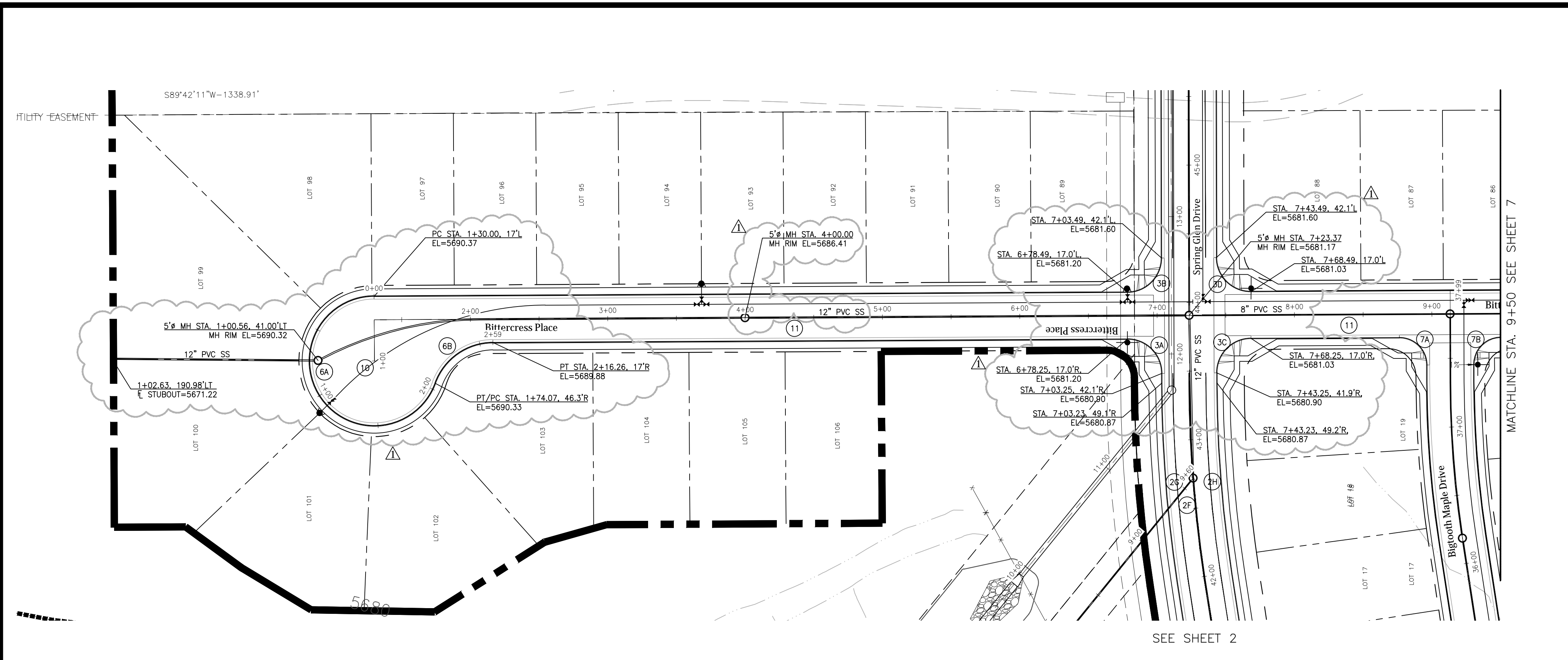
Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342



GLEN AT WIDEFIELD FILING NO. 9
PEACHLEAF DRIVE (Sta. 25+00 to Sta. 38+36)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO

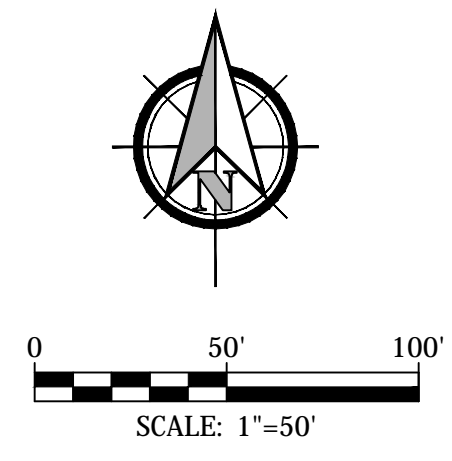
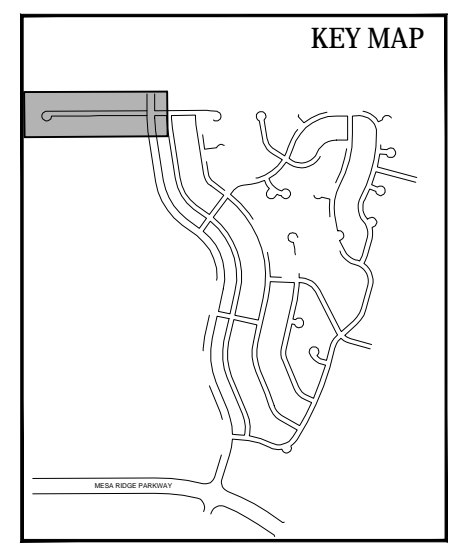
Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	
	4/16/19 San, Sew, Rim EL

SHEET
5
5 of 20 Sheets



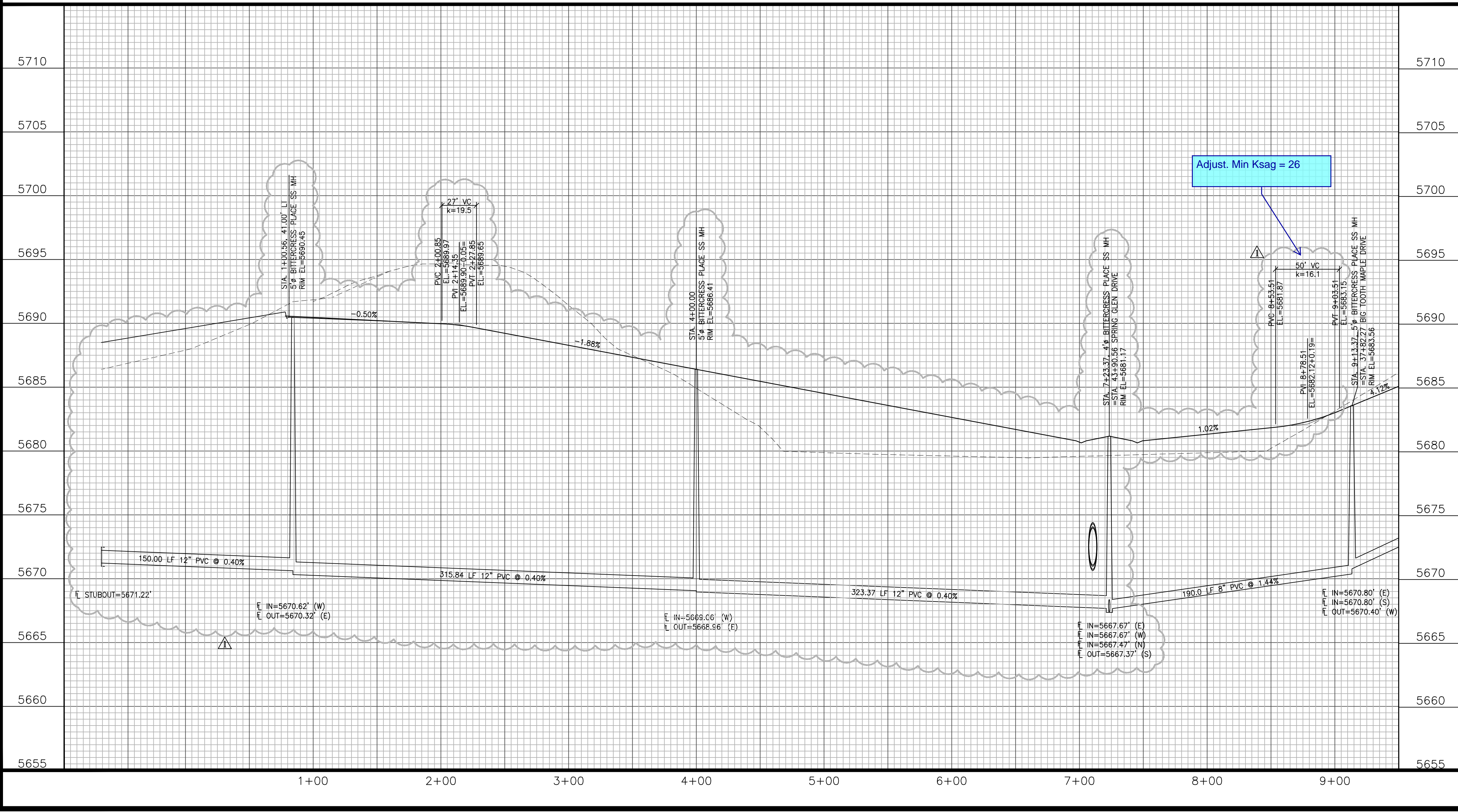
CURVE DATA	
6A	$\Delta=249^{\circ}38'44''$ $L=204.79'$ $R=47.00'$
6B	$\Delta=69^{\circ}38'44''$ $L=54.70'$ $R=45.00'$

LINE DATA	
10	N $00^{\circ}18'38''$ W $L=30.00'$
11	N $89^{\circ}41'22''$ E $L=1277.11'$

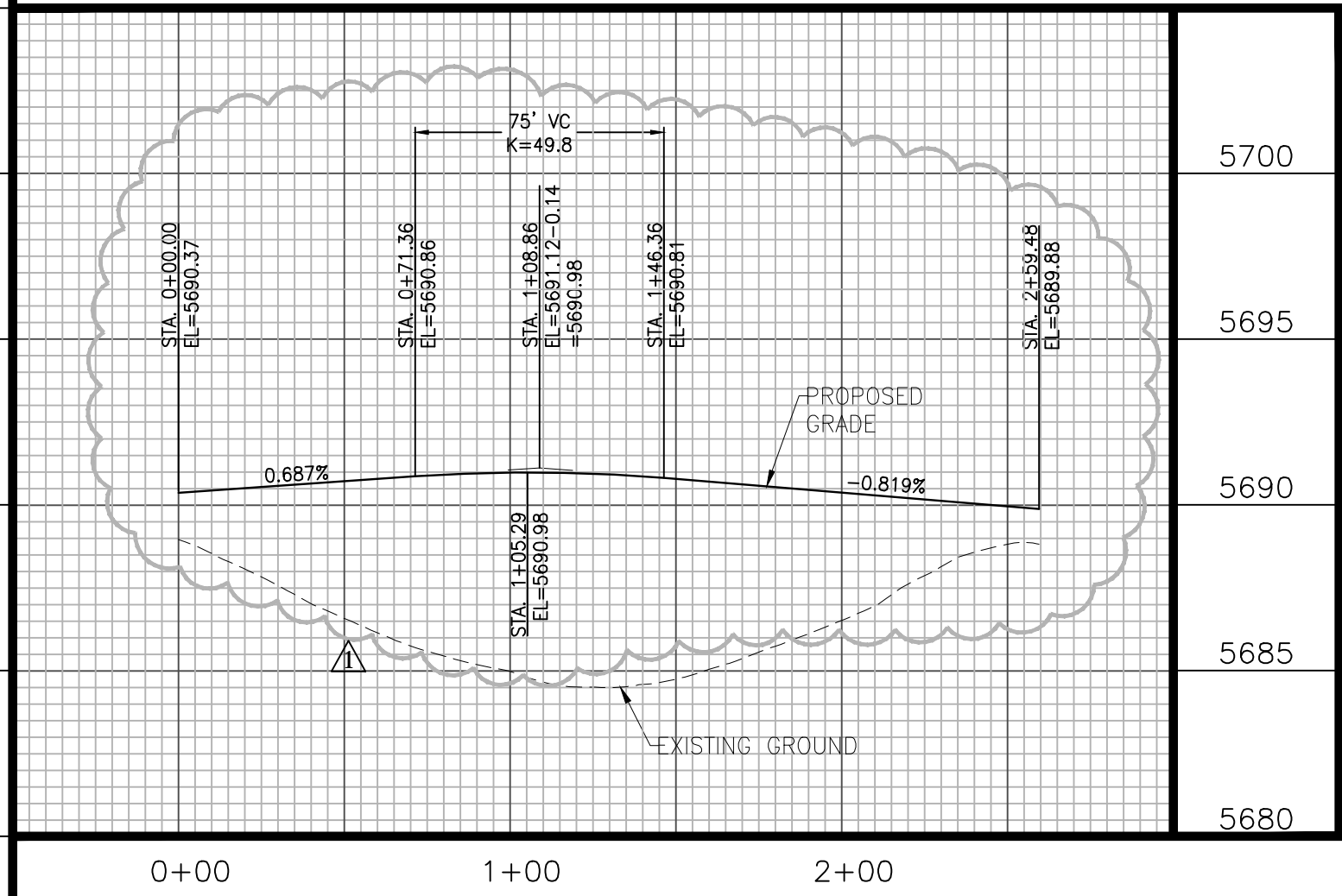


SEE SHEET 2

MATCHLINE STA. 9+50 SEE SHEET 7



CUL-DE-SAC PROFILE



Adjust. Min Ksag = 26

**GLEN AT WIDEFIELD FILING NO. 9
BITTERCRESS PLACE (Sta. 0+00 to Sta. 9+00)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO**

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	
	4/16/19 Profile/San. Sewer

SHEET

6

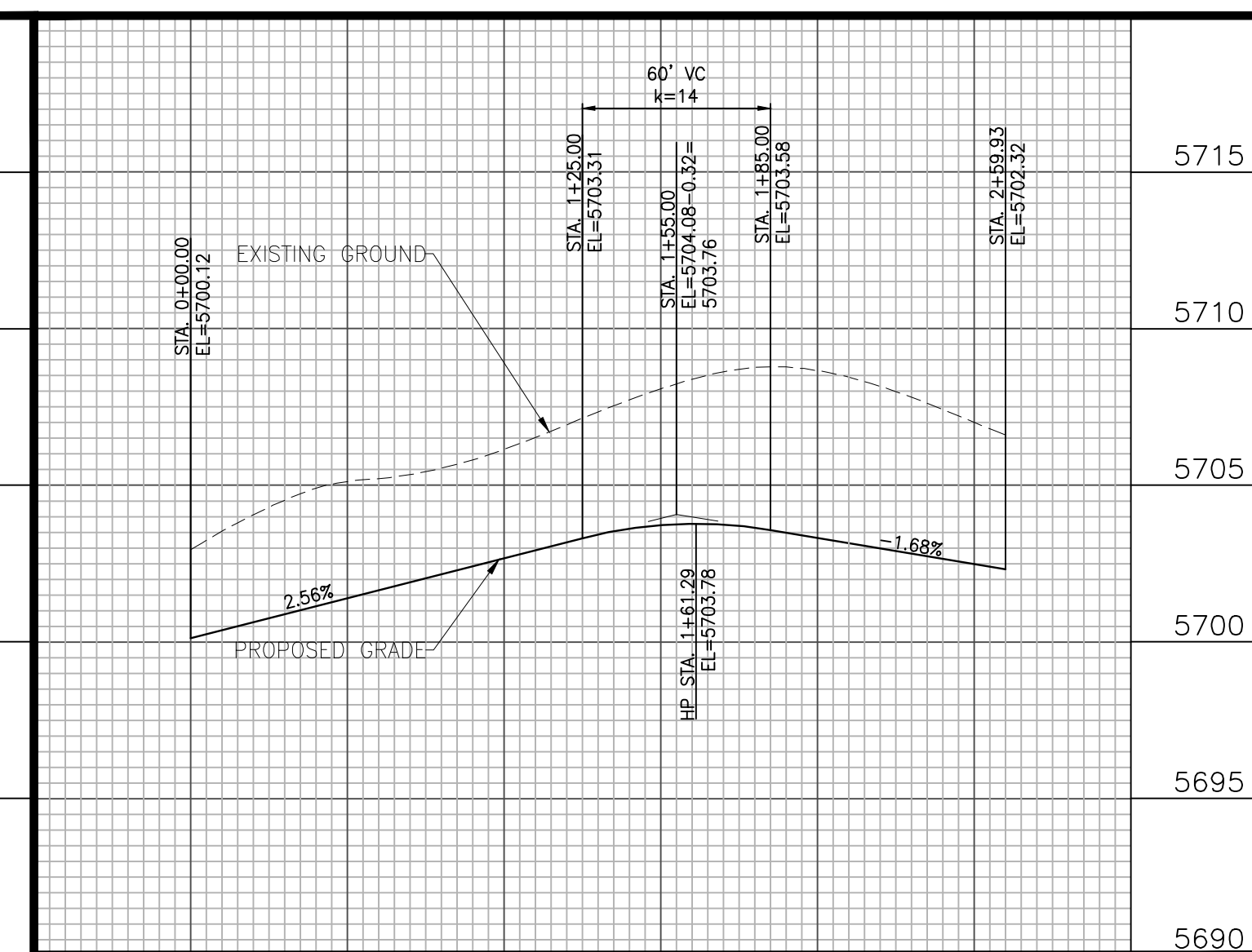
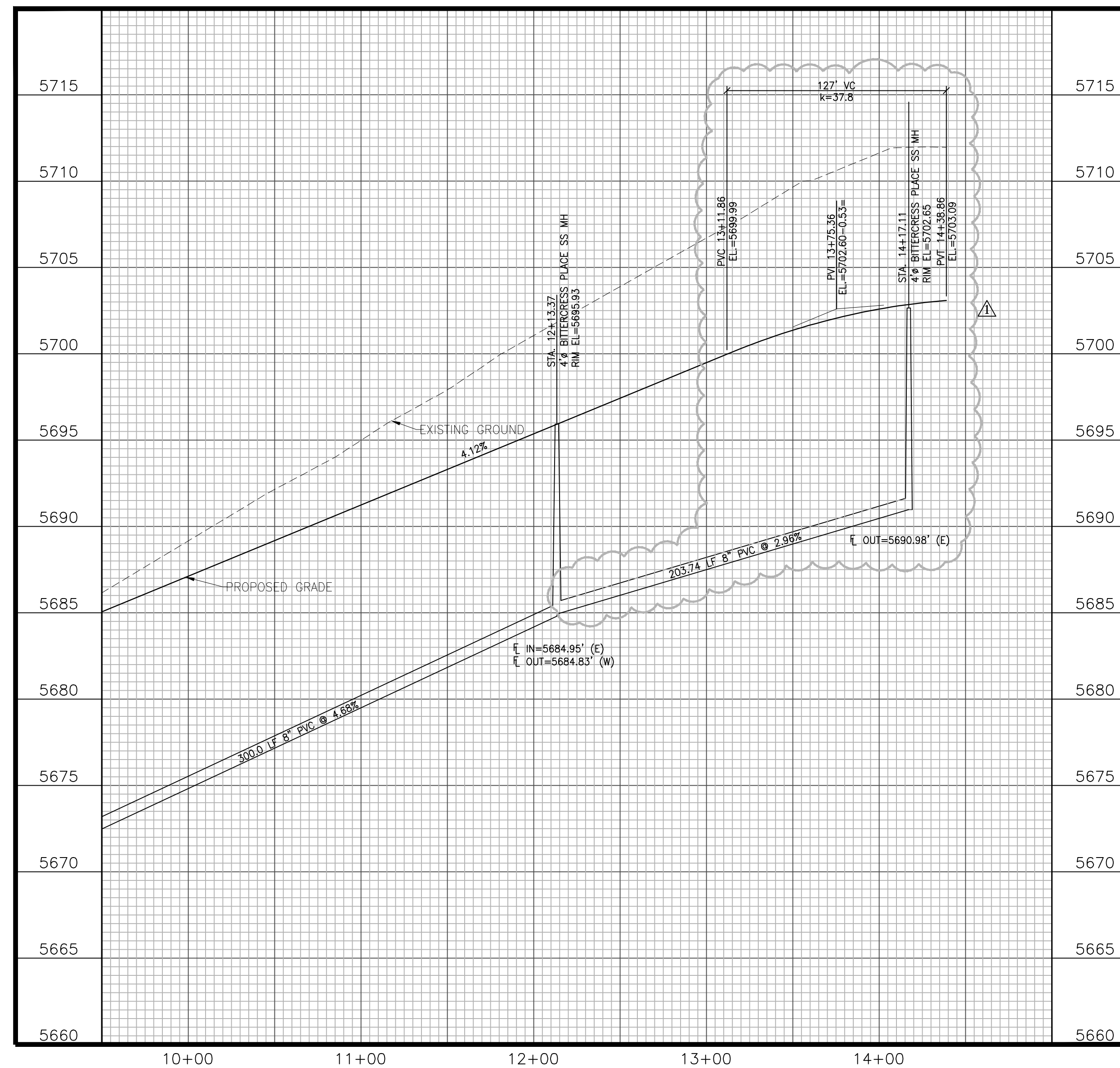
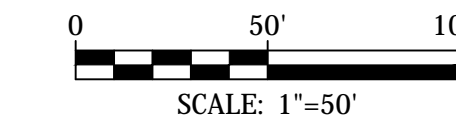
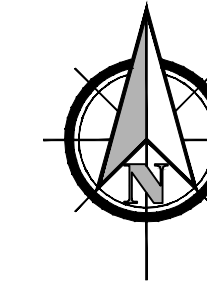
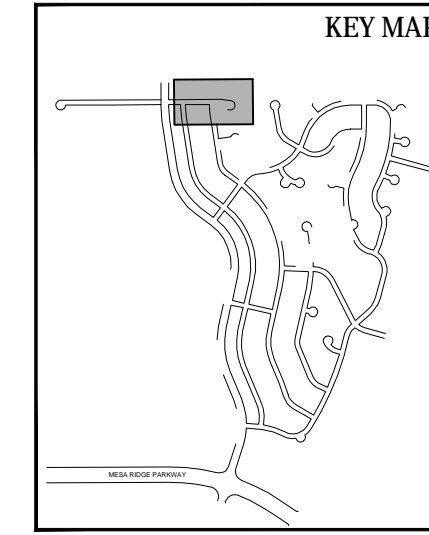
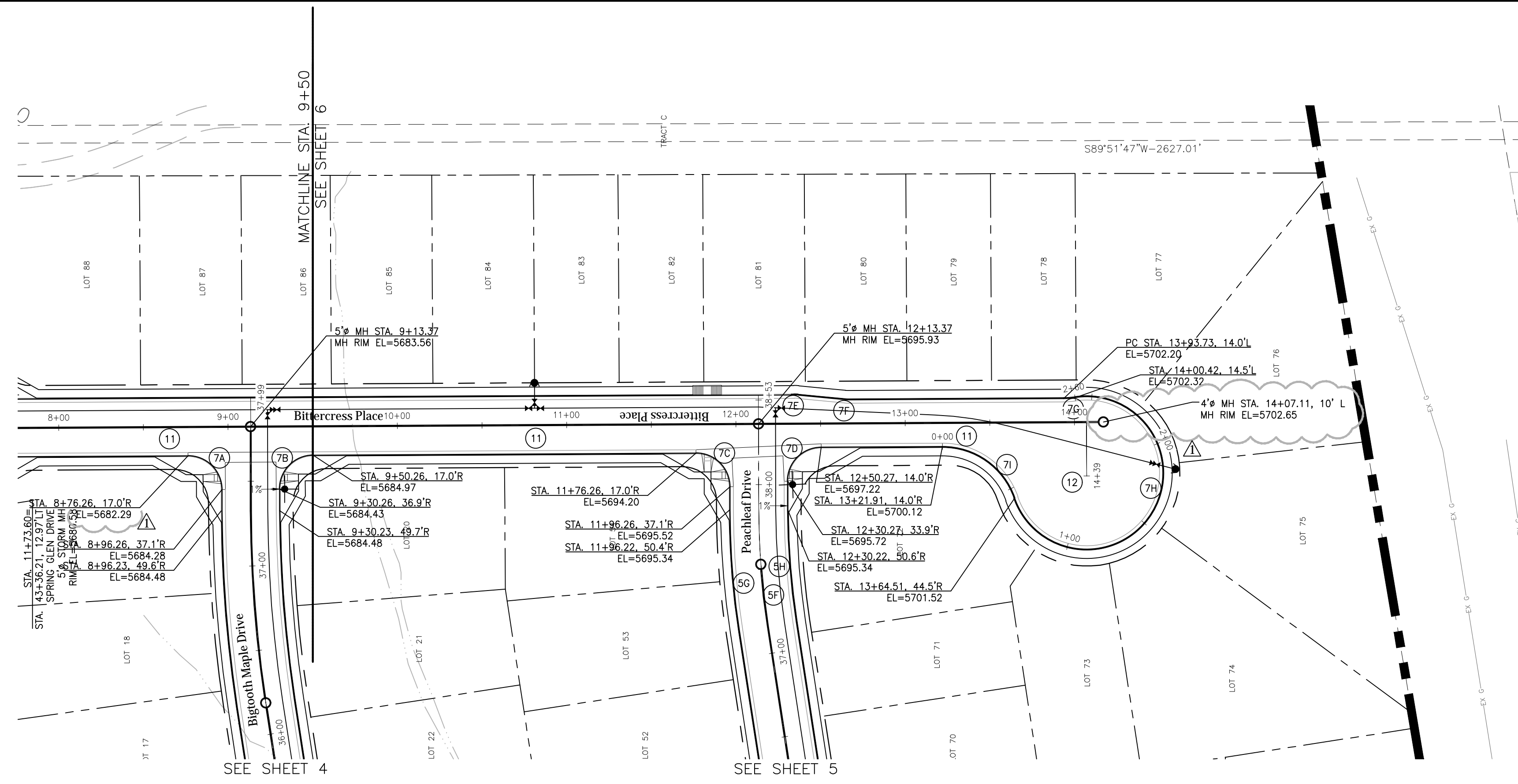
6 of 20 Sheets

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1604 South 21st Street
Colorado Springs, Colorado 80904
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W

WIDEFIELD
Investment Group

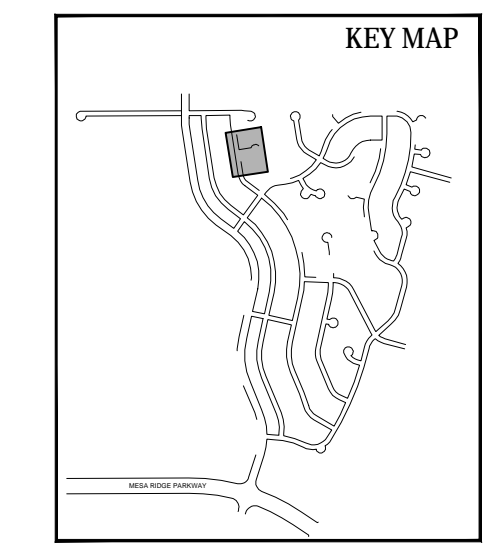


**GLEN AT WIDEFIELD FILING NO. 9
BITTERCRESS PLACE (Sta. 9+00 to Sta. 14+39)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO**

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	
▲	4/16/19 Profile/San. Sewer

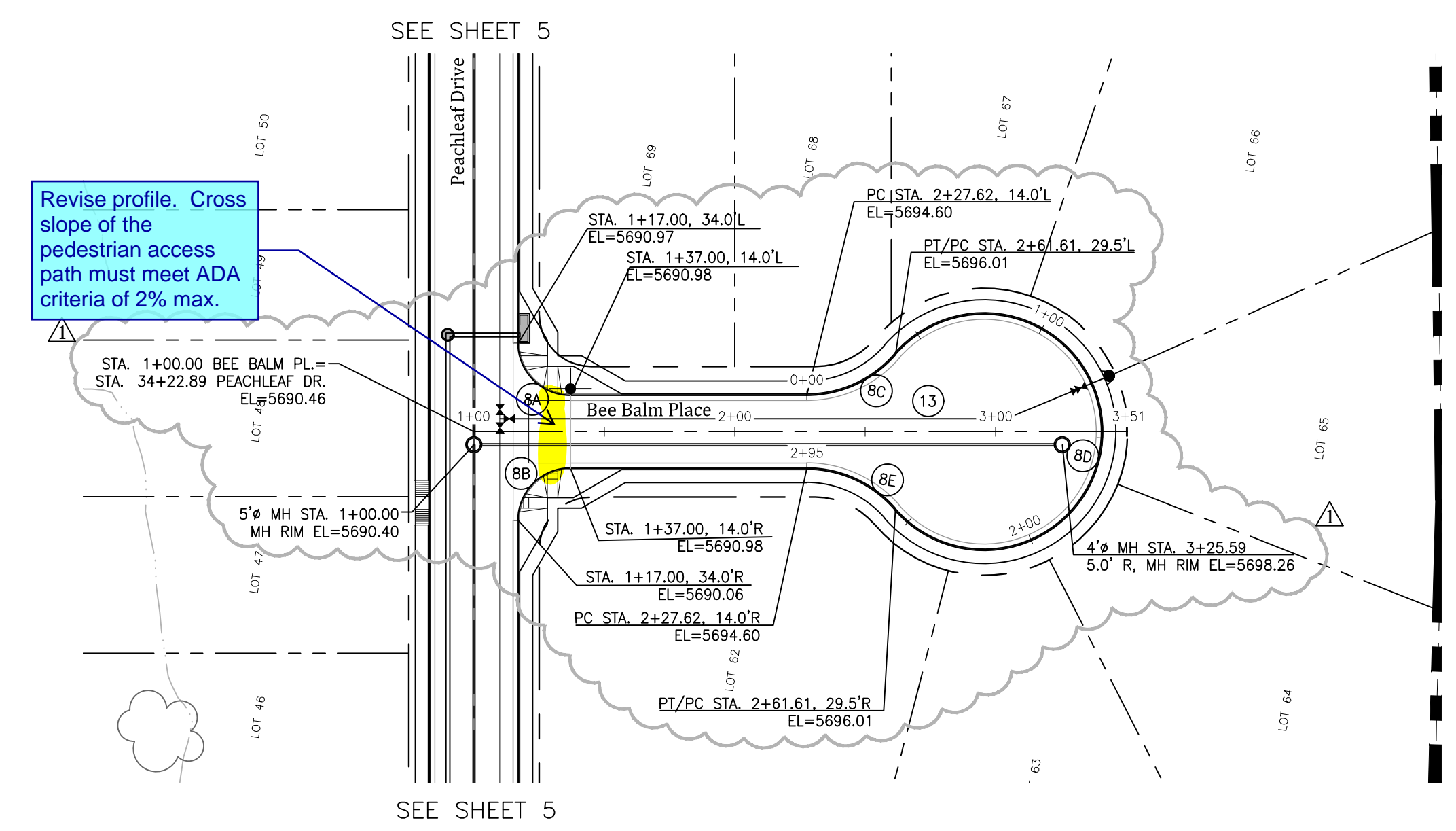
SHEET

7



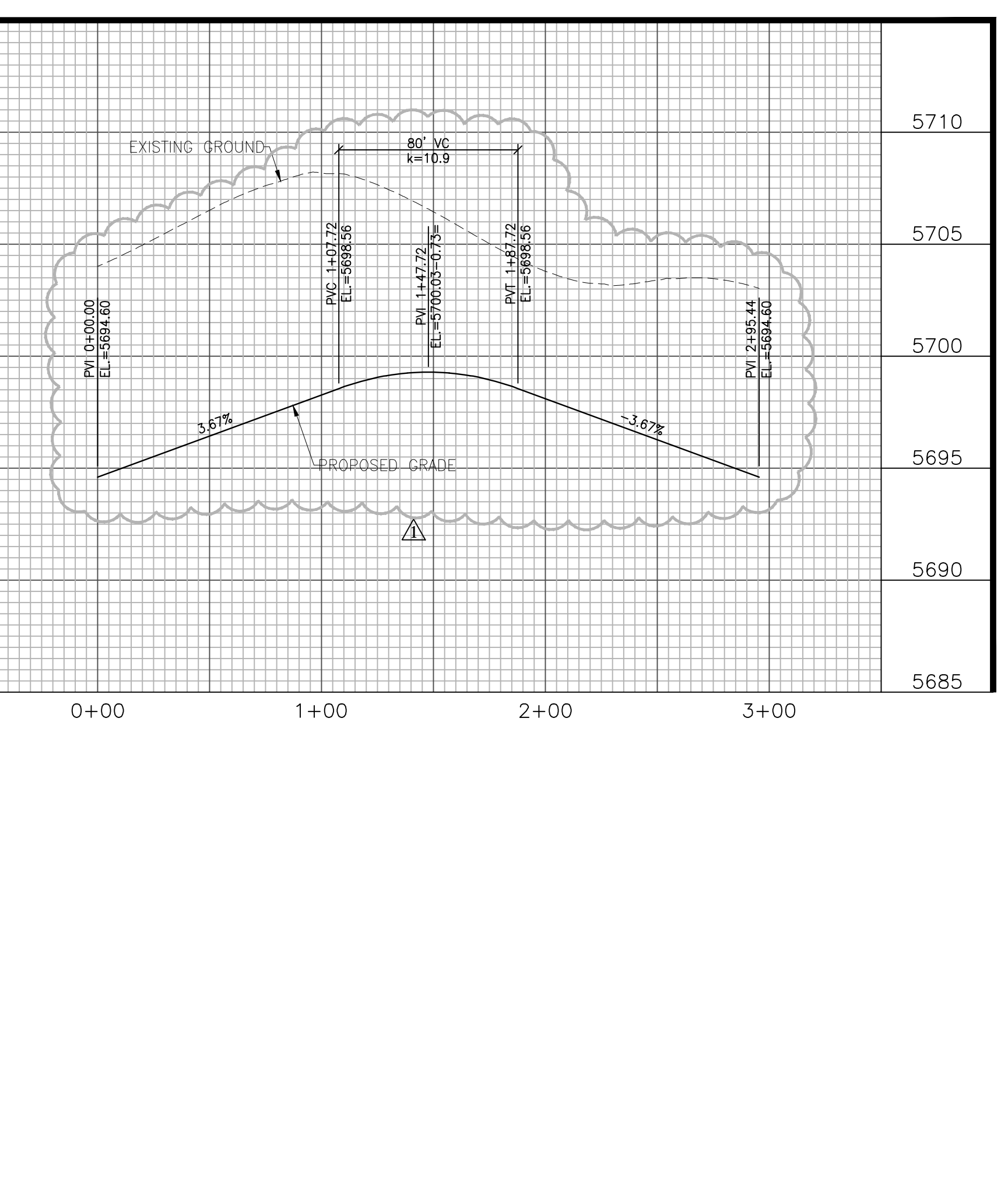
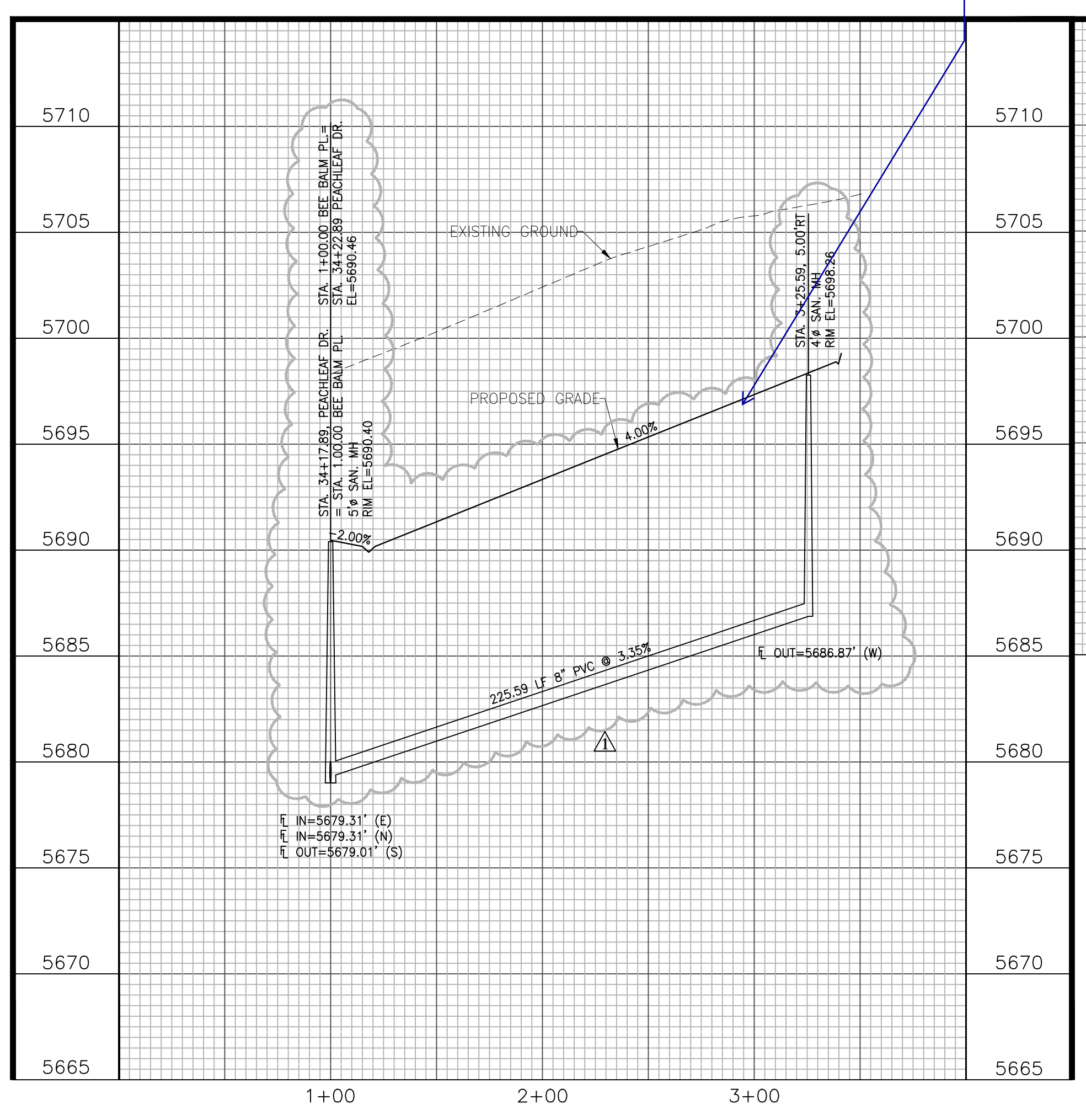
CURVE DATA	
8A	$\Delta=49^{\circ}02'18''$ $L=38.51'$ $R=45.00'$
8B	$\Delta=278^{\circ}04'35''$ $L=218.40'$ $R=45.00'$
8C	$\Delta=49^{\circ}02'18''$ $L=38.51'$ $R=45.00'$

LINE DATA	
13	S $81^{\circ}15'58''$ E $L=250.59'$



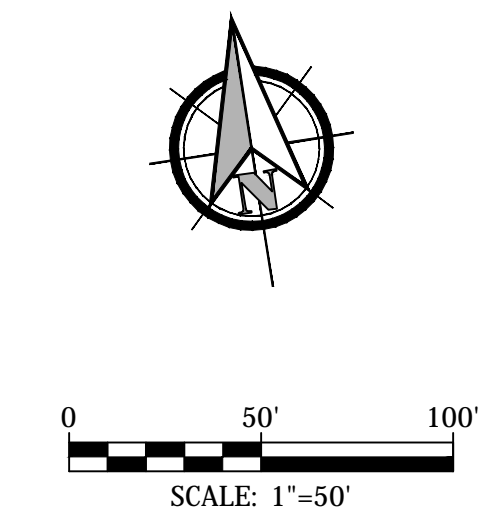
CENTERLINE PROFILE

CUL-DE-SAC PROFILE

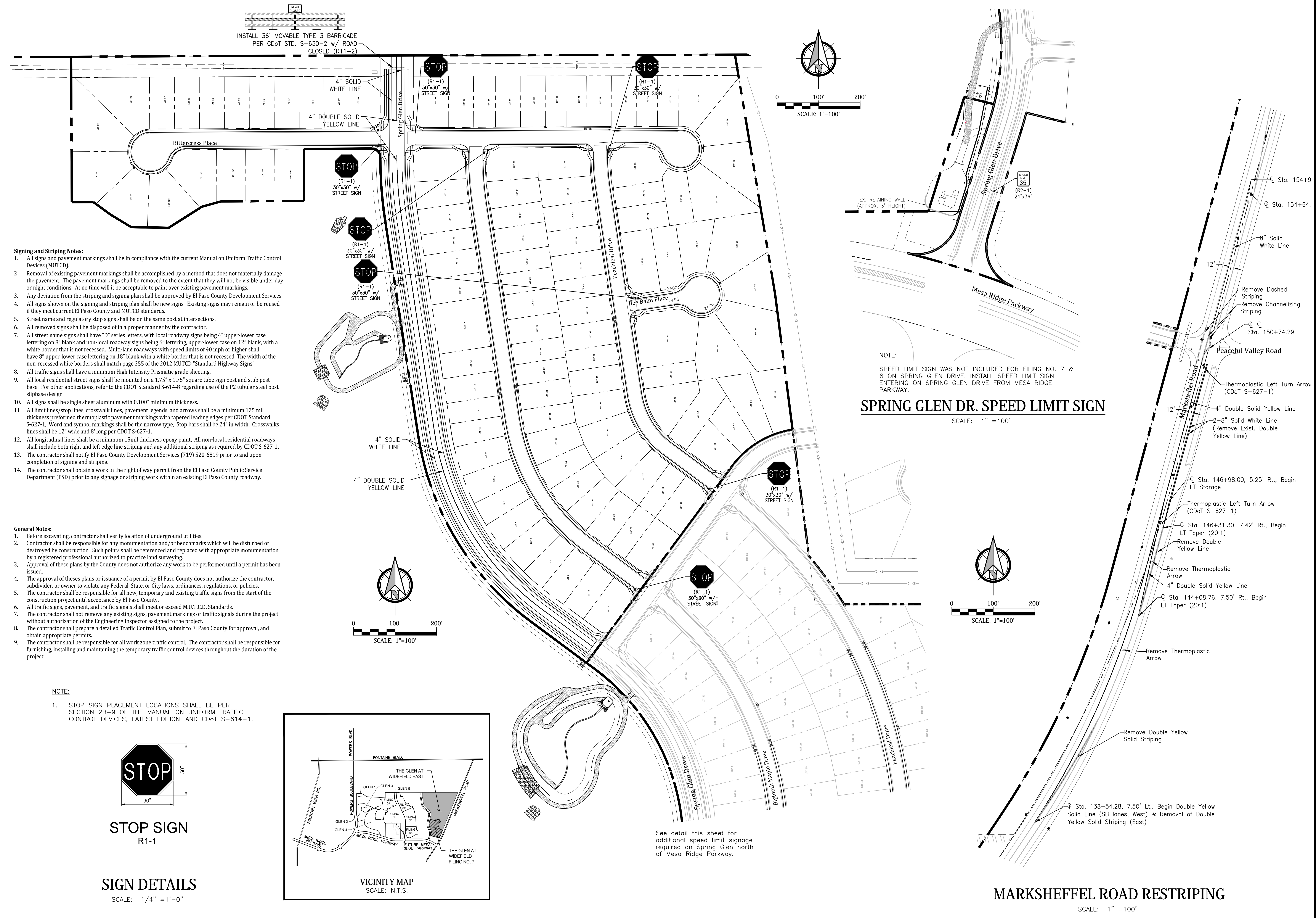


Revise profile. Cross slope of the pedestrian access path must meet ADA criteria of 2% max.

Revise centerline profile grade within the cul-de-sac bulb to 3.0% max. See ECM Section 2.3.8 Figure 2-31.



Project No.:	17038
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Revisions:	

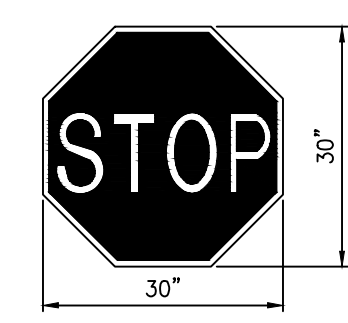


- Signing and Striping Notes:**
- All signs and pavement markings shall be in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).
 - Removal of existing pavement markings shall be accomplished by a method that does not materially damage the pavement. The pavement markings shall be removed to the extent that they will not be visible under day or night conditions. At no time will it be acceptable to paint over existing pavement markings.
 - Any deviation from the striping and signing plan shall be approved by El Paso County Development Services.
 - All signs shown on the signing and striping plan shall be new signs. Existing signs may remain or be reused if they meet current El Paso County and MUTCD standards.
 - Street name and regulatory stop signs shall be on the same post at intersections.
 - All removed signs shall be disposed of in a proper manner by the contractor.
 - All street name signs shall have "D" series letters, with local roadway signs being 4" upper-lower case lettering on 8" blank and non-local roadway signs being 6" lettering, upper-lower case on 12" blank, with a white border that is not recessed. Multi-lane roadways with speed limits of 40 mph or higher shall have 8" upper-lower case lettering on 18" blank with a white border that is not recessed. The width of the non-recessed white borders shall match page 255 of the 2012 MUTCD "Standard Highway Signs".
 - All traffic signs shall have a minimum High Intensity Prismatic grade sheeting.
 - All local residential street signs shall be mounted on a 1.75" x 1.75" square tube sign post and stub post base. For other applications, refer to the CDOT Standard S-614-8 regarding use of the P2 tubular steel post slipbase design.
 - All signs shall be single sheet aluminum with 0.100" minimum thickness.
 - All limit lines/stop lines, crosswalk lines, pavement legends, and arrows shall be a minimum 125 mil thickness preformed thermoplastic pavement markings with tapered leading edges per CDOT Standard S-627-1. Word and symbol markings shall be the narrow type. Stop bars shall be 24" in width. Crosswalk lines shall be 12" wide and 8' long per CDOT S-627-1.
 - All longitudinal lines shall be a minimum 15mil thickness epoxy paint. All non-local residential roadways shall include both right and left edge line striping and any additional striping as required by CDOT S-627-1.
 - The contractor shall notify El Paso County Development Services (719) 520-6819 prior to and upon completion of signing and striping.
 - The contractor shall obtain a work in the right of way permit from the El Paso County Public Service Department (PSD) prior to any signage or striping work within an existing El Paso County roadway.

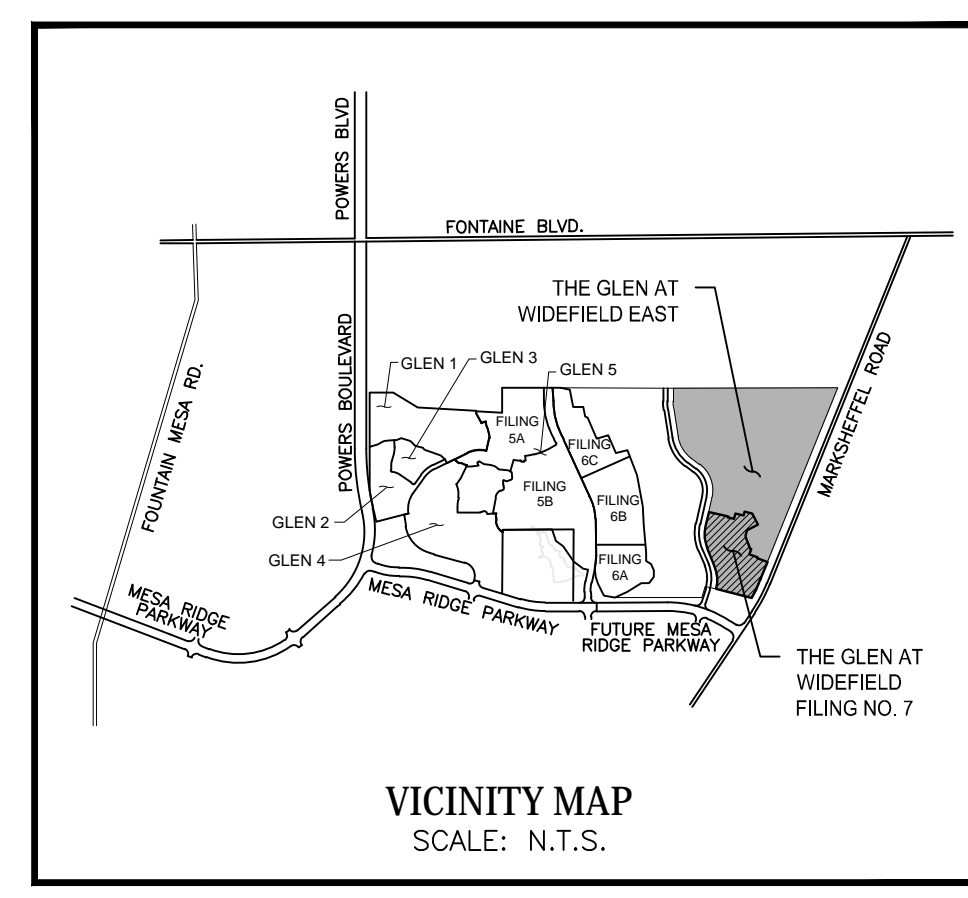
- General Notes:**
- Before excavating, contractor shall verify location of underground utilities.
 - Contractor shall be responsible for any monumentation and/or benchmarks which will be disturbed or destroyed by construction. Such points shall be referenced and replaced with appropriate monumentation by a registered professional authorized to practice land surveying.
 - Approval of these plans by the County does not authorize any work to be performed until a permit has been issued.
 - The approval of these plans or issuance of a permit by El Paso County does not authorize the contractor, subcontractor, or owner to violate any Federal, State, or City laws, ordinances, regulations, or policies.
 - The contractor shall be responsible for all new, temporary and existing traffic signs from the start of the construction project until acceptance by El Paso County.
 - All traffic signs, pavement, and traffic signals shall meet or exceed M.U.T.C.D. Standards.
 - The contractor shall not remove any existing signs, pavement markings or traffic signals during the project without authorization of the Engineering Inspector assigned to the project.
 - The contractor shall prepare a detailed Traffic Control Plan, submit to El Paso County for approval, and obtain appropriate permits.
 - The contractor shall be responsible for all work zone traffic control. The contractor shall be responsible for furnishing, installing and maintaining the temporary traffic control devices throughout the duration of the project.

NOTE:

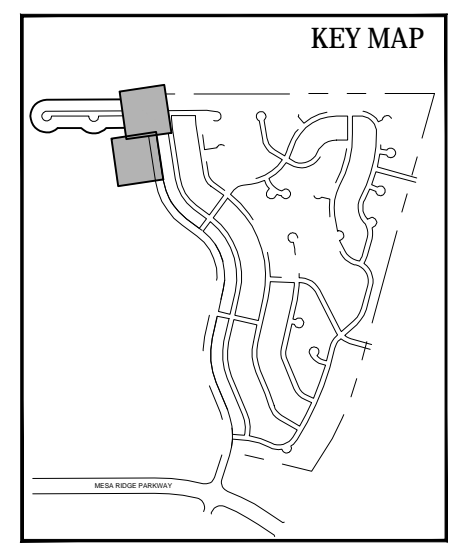
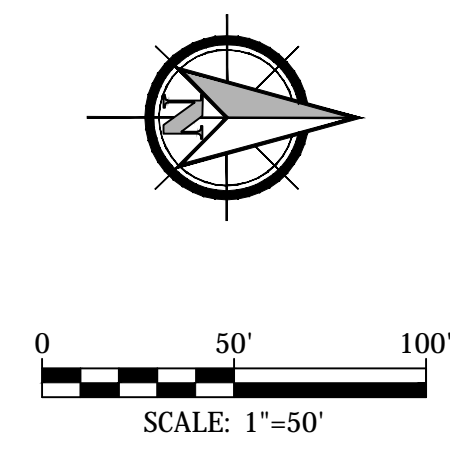
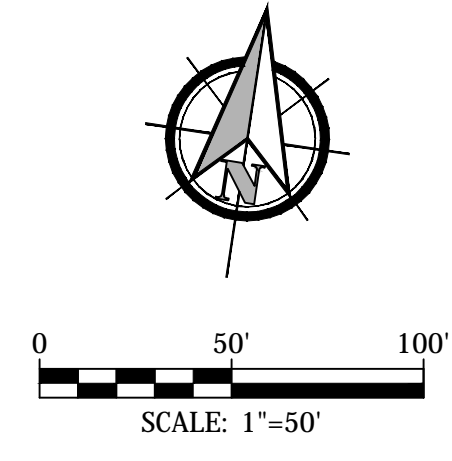
- STOP SIGN PLACEMENT LOCATIONS SHALL BE PER SECTION 2B-9 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND CDOT S-614-1.



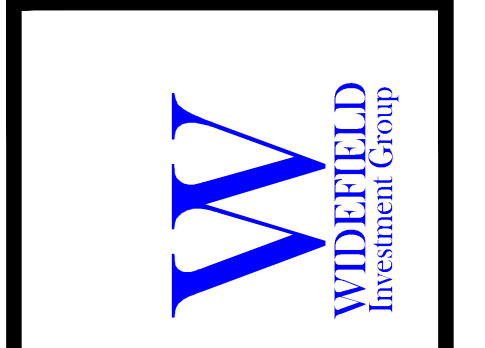
STOP SIGN R1-1
SCALE: 1/4"=1'-0"



See detail this sheet for additional speed limit signage required on Spring Glen north of Mesa Ridge Parkway.



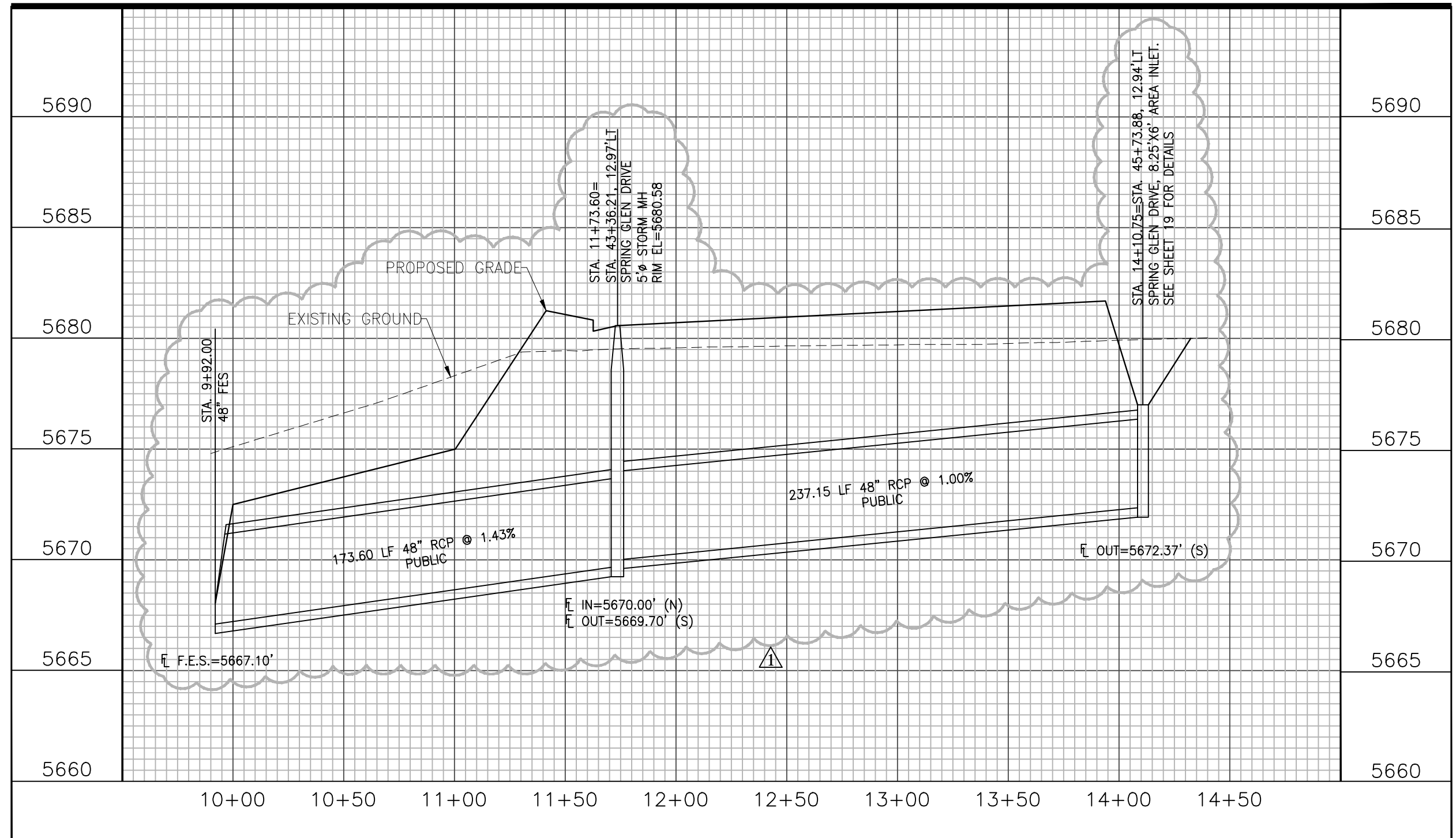
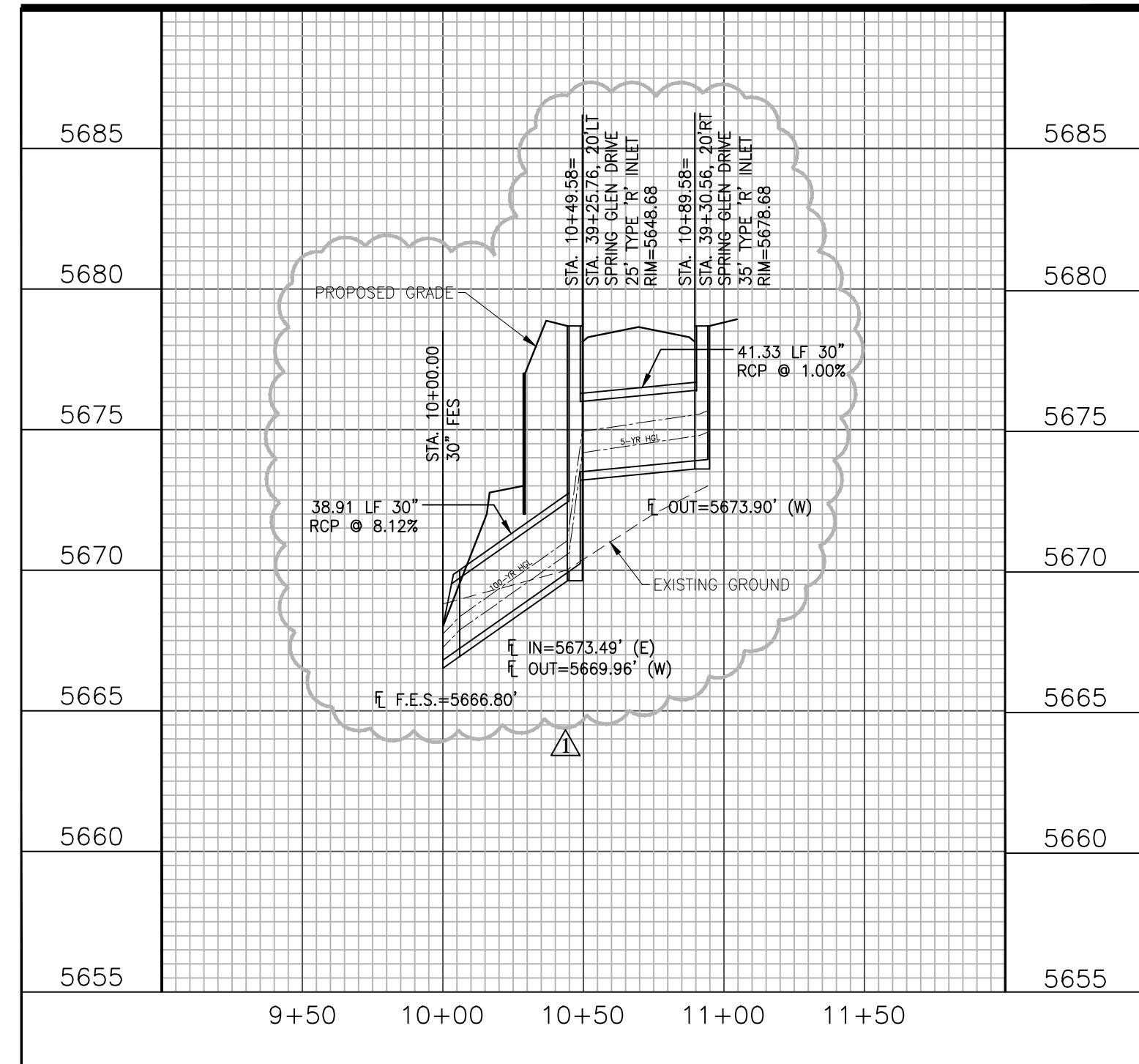
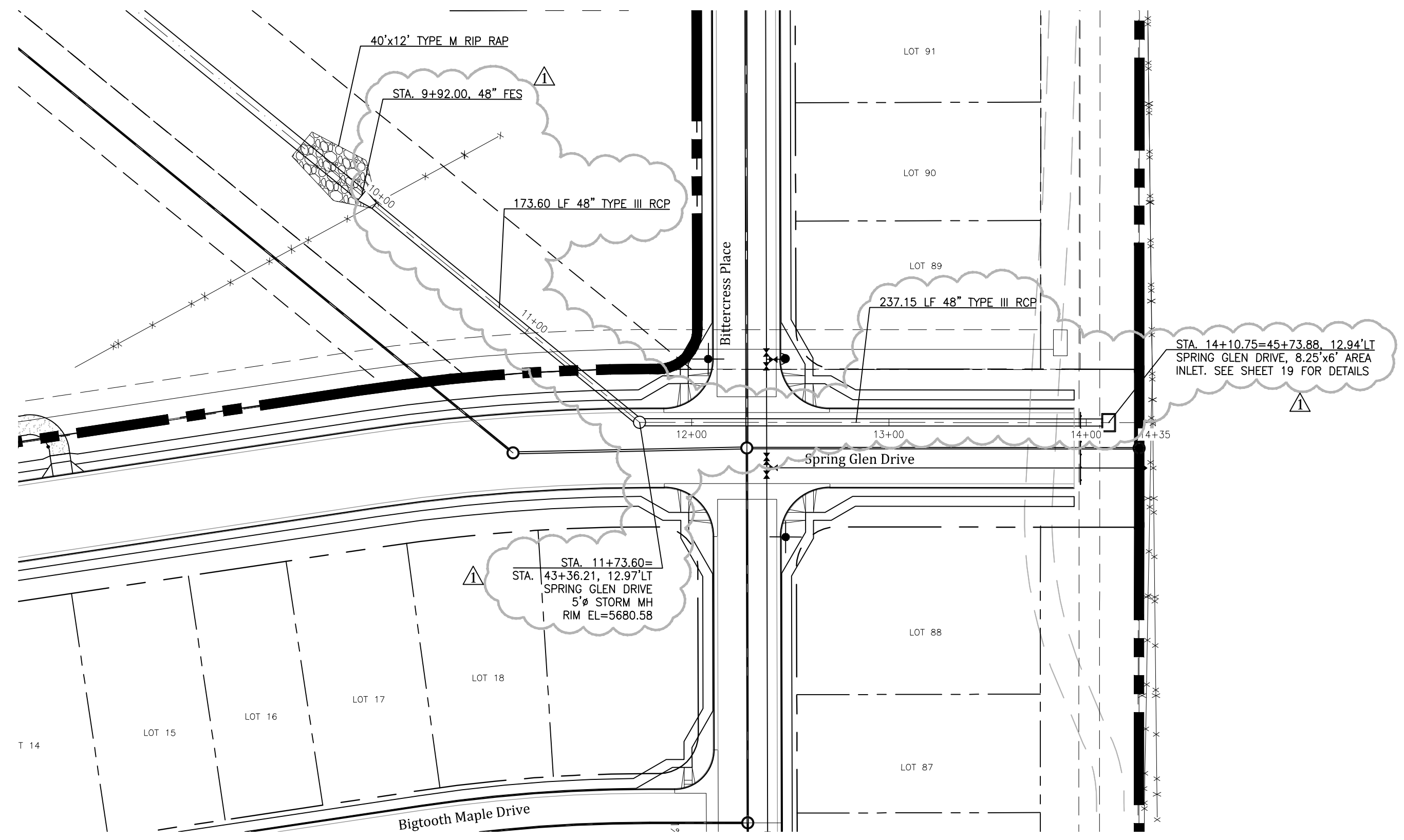
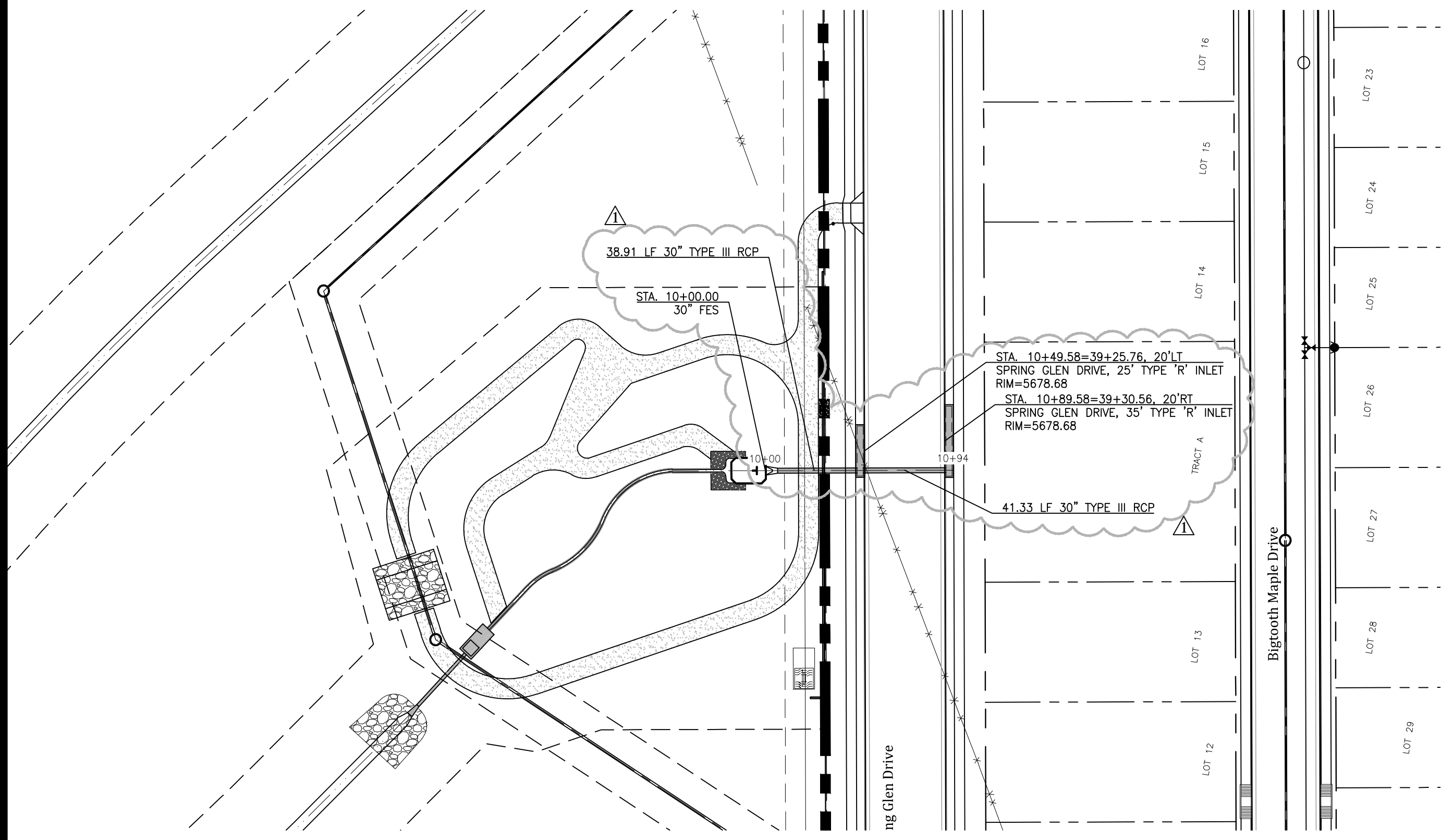
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Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

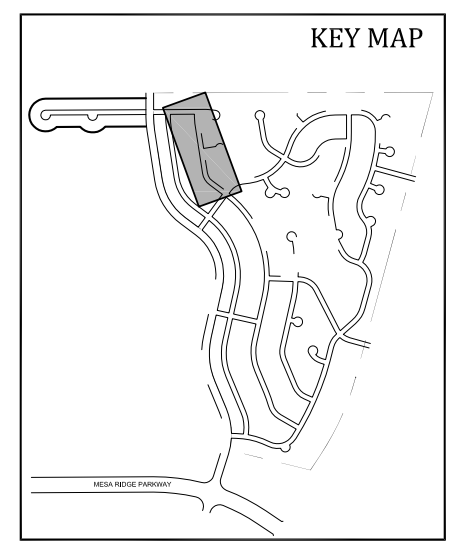
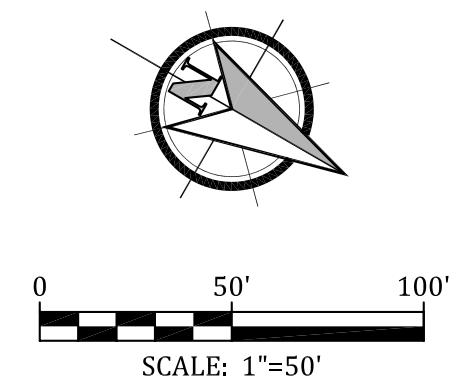
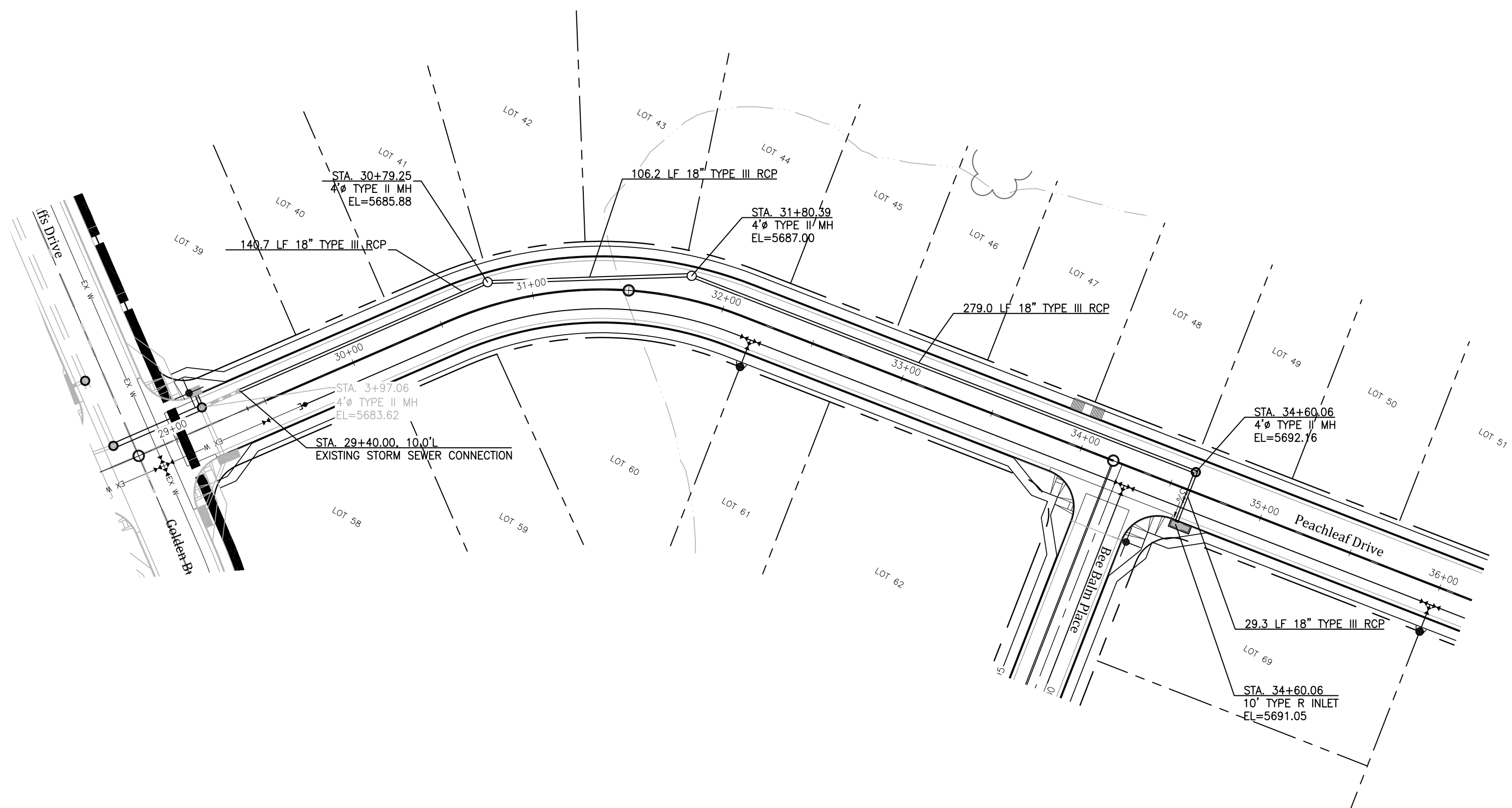


**GLEN AT WIDEFIELD FILING NO. 9
STORM SEWER PLAN (Outfall & Offsite)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO**

Project No.: 17038
Date: September 25, 2018
Design: AWMc
Drawn: JAK
Check: AWMc
Revisions:
4/16/19 Profile/Stm Sewer

SHEET
10
10 of 20 Sheets

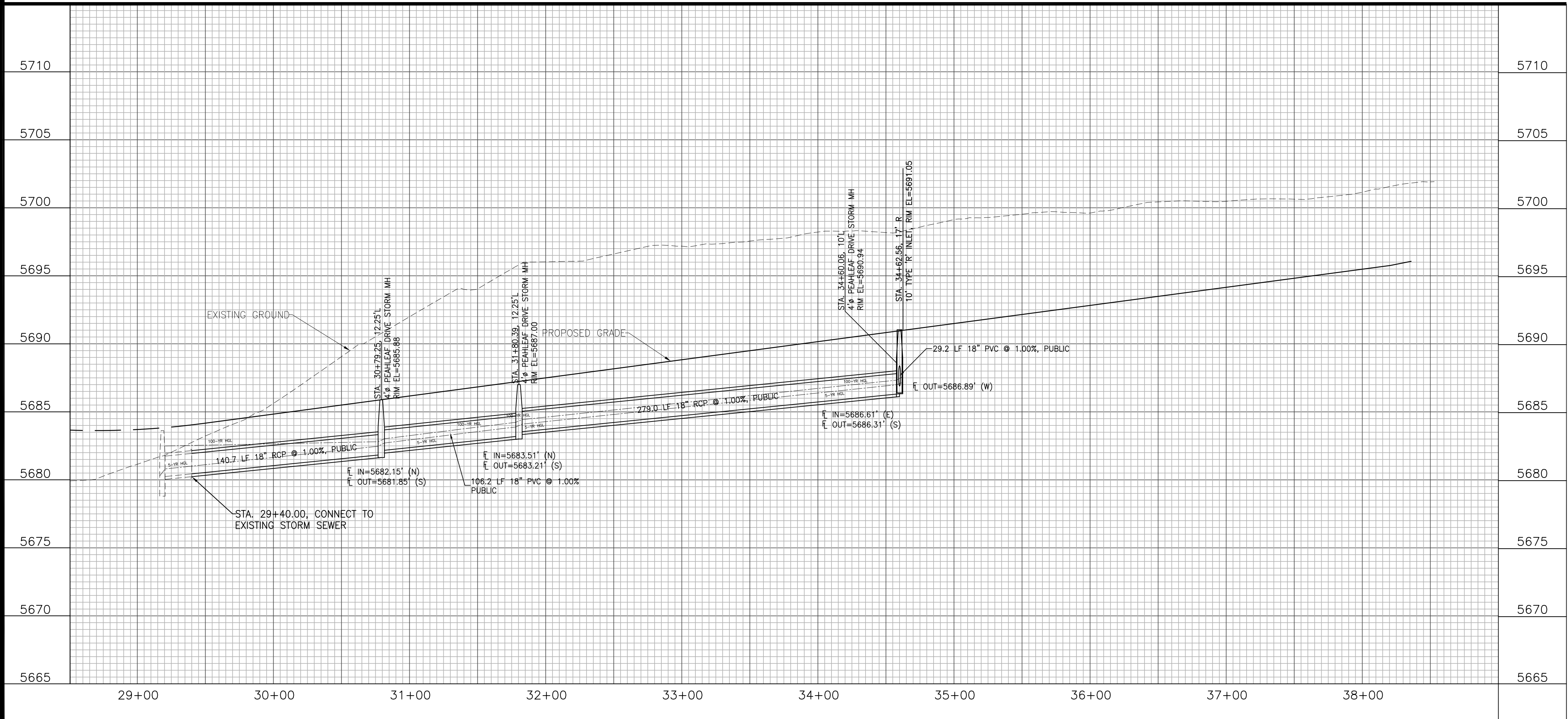




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1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7942

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WIDEFIELD
Investment Group

**GLEN AT WIDEFIELD FILING NO. 9
STORM SEWER PLAN (PEACHLEAF DRIVE)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO**



Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	

SHEET
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11 of 20 Sheets
17038-GW9-2-18-PP.dwg/Apr 16, 2019

SEED MIX

AREAS DISTURBED BY THE EARTHWORK ACTIVITIES AND NOT RECEIVING OTHER TREATMENT SHALL BE PERMANENTLY REVEGETATED WITH THE FOLLOWING SEED MIX.

SPECIES	VARIETY	lbs/acre
SIDCOATS GRAMA	<i>El Reno</i>	3.0
WESTERN WHEAT GRASS	<i>Bartons</i>	2.5
SLENDER WHEAT GRASS	<i>Natfue</i>	2.0
LITTLE BLUESTEM	<i>Pastura</i>	2.0
SAND DROPSIED	<i>Natfue</i>	0.5
SWITCH GRASS	<i>Nebraska 2B</i>	3.0
WEEPING LOVE GRASS	<i>Morpha</i>	1.0

14.0 lbs

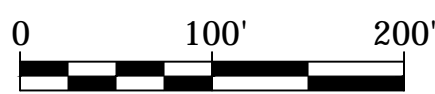
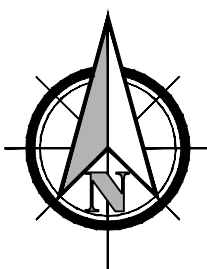
SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL. IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBLE THE RATE AND RAKE 1/4" TO 1/2" INTO THE TOPSOIL. MULCHING APPLICATION: 1-1/2 TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL.

EROSION CONTROL INSPECTION AND MAINTENANCE

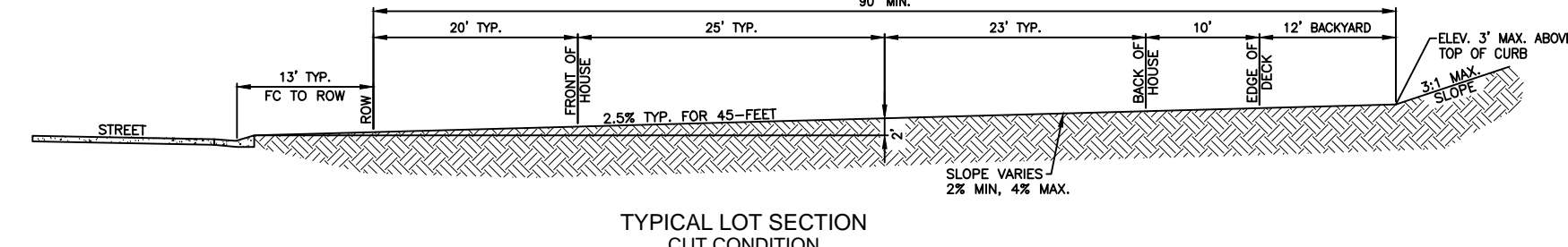
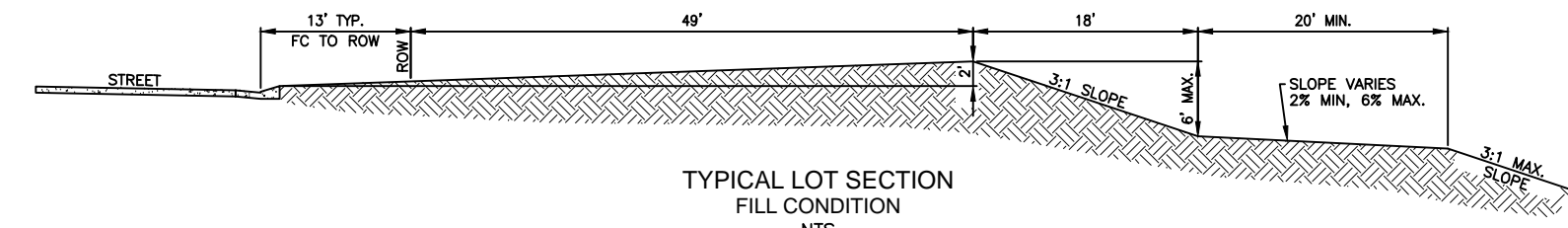
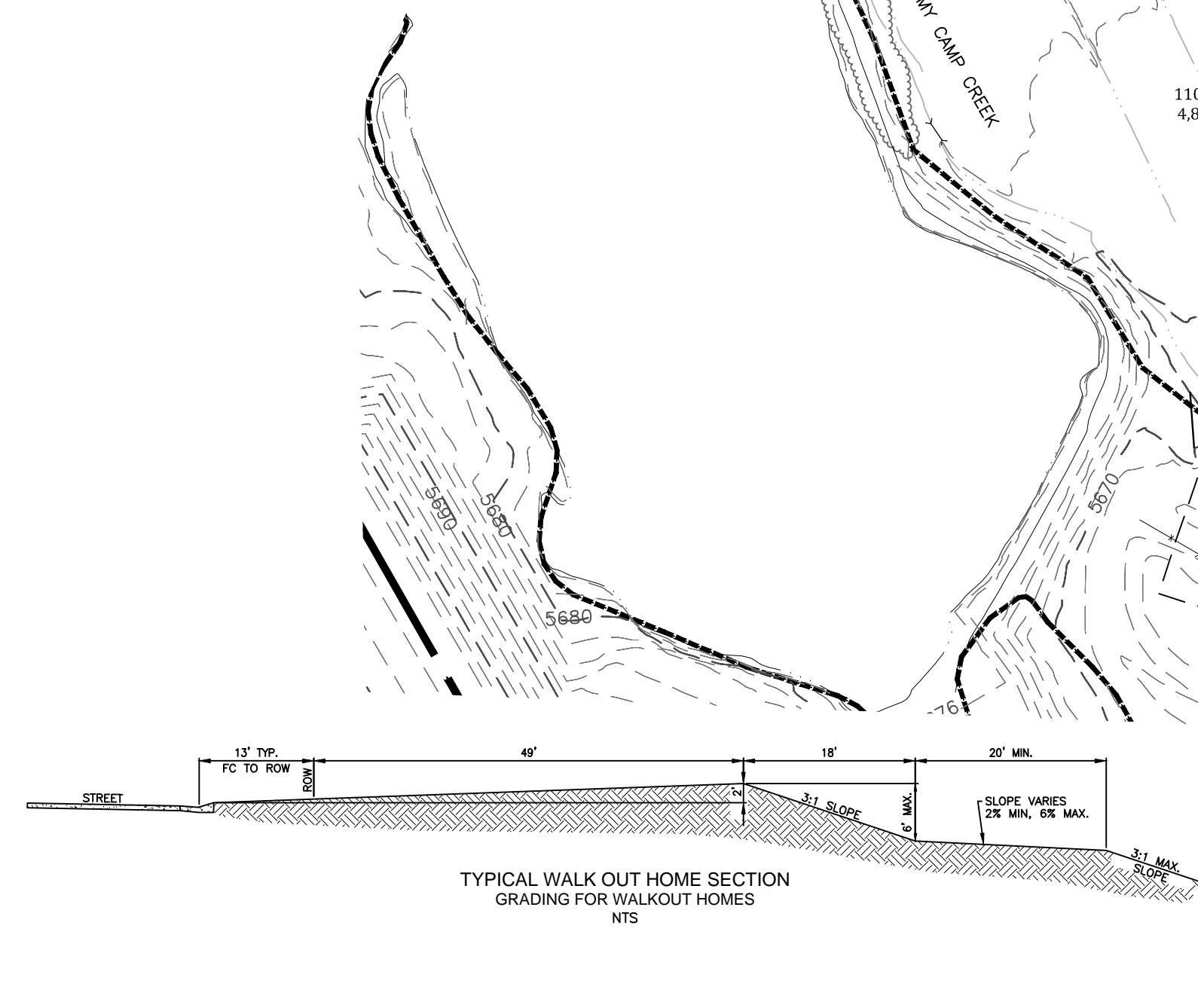
A THOROUGH INSPECTION OF THE EROSION CONTROL PLAN/STORMWATER MANAGEMENT SYSTEM SHALL BE PERFORMED EVERY 14 DAYS AS WELL AS AFTER ANY RAIN OR SNOWMELT EVENT THAT CAUSES SURFACE EROSION.

- WHEN STRAW BALE BARRIERS HAVE SILTED UP TO HALF THEIR HEIGHT, THE SILT SHALL BE REMOVED, FINAL GRADE REESTABLISHED AND SLOPES RESEDED IF NECESSARY. ANY STRAW BALES THAT HAVE SHIFTED OR DECAYED SHALL BE REPAIRED OR REPLACED.
- ANY ACCUMULATED TRASH OR DEBRIS SHALL BE REMOVED FROM OUTLETS.
- AN INSPECTION AND MAINTENANCE LOG SHALL BE KEPT.

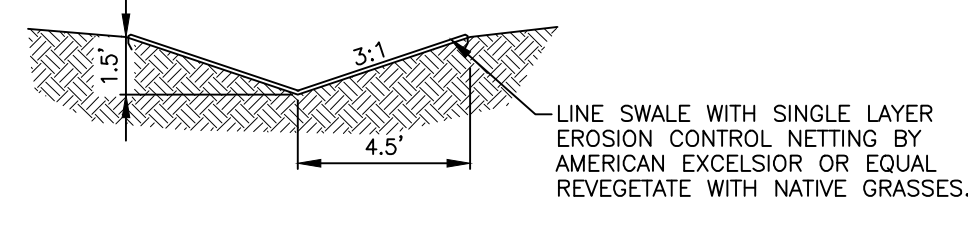
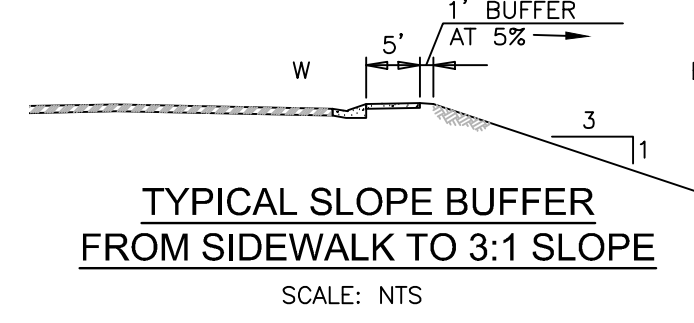
SHADED AREA DENOTES PERMANENT EROSION CONTROL BLANKET BY AMERICAN EXCELSIOR OR EQUAL SHALL BE USED.



SCALE: 1" = 100'



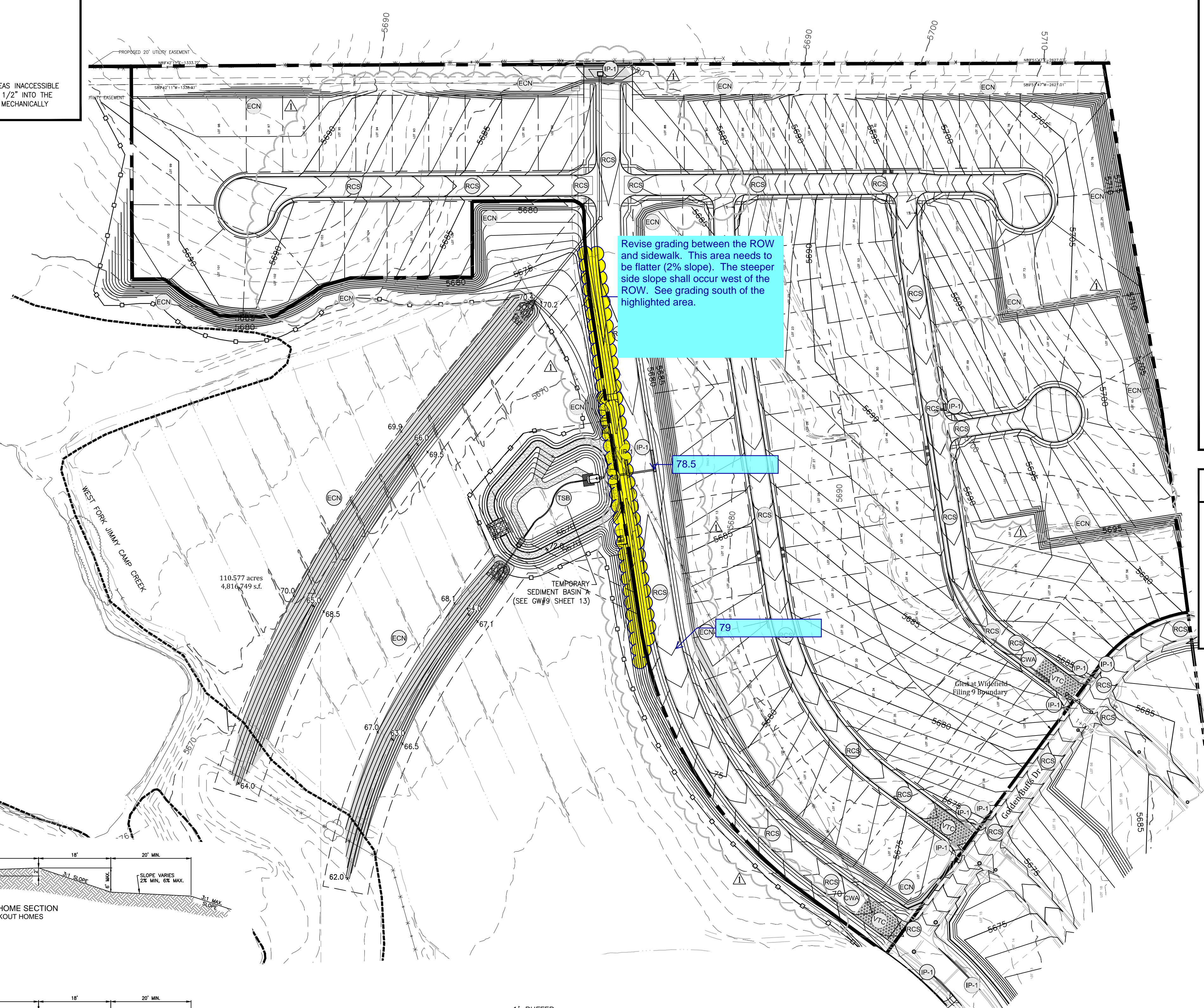
TYPICAL LOT CROSS SECTIONS



LEGEND

[Symbol]	SILT FENCE
[Symbol]	VEHICLE TRACKING CONTROL
[Symbol]	INLET PROTECTION
[Symbol]	TEMPORARY SLOPE DRAIN
[Symbol]	EROSION CONTROL NETTING
[Symbol]	ROUGH-CUT STREET CONTROL
[Symbol]	CONCRETE WASHOUT AREA
[Symbol]	TEMPORARY SEDIMENT BASIN

SEE DETAILS SHEET 15



PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES

- All earthwork required of this construction shall be completed in accordance with all applicable sections of the Project Specifications and Soil Investigation Report (Geotechnical Report).
- Rubbish including timber, concrete rubble, trees, brush, and asphalt shall not be backfilled adjacent to any of the structures or be in the placement of any unclassified fill. The Contractor shall be responsible for the removal and hauling of such materials to a suitable spoil area. Costs associated with the removal of such materials shall be paid for as documented in the Project Specifications.
- Excess excavation shall become the property of the Contractor and shall be disposed of at the Contractor's expense. The cost of haulage and spoiling of excess excavated materials shall be paid for as documented in the Project Specifications.
- Water shall be used as a dust palliative as required and shall be included in the cost for earthwork item(s). No separate payment will be made for dust control associated with the site construction.
- The road grades shall be cleared of vegetation and the topsoil stockpiled for later use.
- All grading shall be in conformance with the Geotechnical Report for the area.
- Placement of fill for roadway embankments shall be completed in conformance with the Geotechnical Report.
- Grading contours shown on this plan are to final grade.
- Contractor is responsible for reviewing the site prior to bidding to verify site conditions.
- Contractor is responsible for providing erosion control measures as approved by the El Paso County DSD Engineering Division and as may be required by the El Paso County Inspector.
- All slopes equal to or greater than 3:1 shall require anchored soil retention blanket (SRB), Geocoi 700 or equal.
- The Developer is responsible for maintaining erosion control measures until a mature stage of vegetation is established.
- All soils used for fill must be approved by a representative of the Geotechnical Engineer.
- All natural ground to receive fill must be properly scarified, watered and compacted prior to placing fill.
- The Contractor is solely responsible for the design, maintenance and operation of any required dewatering system. The Contractor shall perform such independent investigation as he deems necessary to satisfy himself as to the subsurface groundwater conditions and unstable soil conditions to be encountered throughout the construction. Contractor shall coordinate the dewatering system with El Paso County when associated with public facilities.
- No fill shall be placed, spread or rolled while it is frozen, thawing or during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until a representative of the Geotechnical Engineer indicates that the moisture content and density of the previously placed fill are as specified. Fill surfaces may be scarified and recompacted after rainfall if necessary, to obtain proper moisture density relation.
- Additional erosion control structures and/or grading may be required at the time of construction.
- Sediment removal for erosion control facilities shall be performed continuously for proper function.
- Base mapping was provided by Pinnacle Land Surveying. The date of the last survey update was January 2014.
- Proposed Construction Schedule:
Begin Construction: Autumn 2015
End Construction: Autumn 2018
Total Site Area = 292.29 Acres
- Area to be disturbed = 172.8 Acres (est.).
Existing 100-year runoff coefficient = 0.50
Proposed 100-year runoff coefficient = 0.51
Existing Hydrologic Soil Groups: B & C
(B-Nelson-Tassel fine sandy loams; B-Stonham sandy loam; C-Nunn clay loam)
- Site is currently undeveloped and covered with native grasses on moderate to steep slopes (3%-18%).
- Site is located in the West Fork Jimmy Camp Creek Drainage Basin.

**OPINION OF COST FOR EROSION CONTROL REQUIREMENTS
Additional Erosion Control for Glen at Widefield Filing No. 9**

ITEM	QUANTITY	UNITS	PRICE	AMOUNT
PERMANENT SEEDING	0.1	AC	\$582	\$58.20
PERMANENT E.C. BLANKET	7,655	SY	\$6	\$45,930.00
VEHICLE TRACKING CONTROL	3	EA	\$1,625	\$4,875.00
INLET PROTECTION	11	EA	\$153	\$1,683.00
CONCRETE WASHOUT BASIN	2	EA	\$776	\$1,552.00
ROUGH CUT STREET CONTROL	670	LF	\$2	\$1,340.00
SILT FENCING	2,450	LF	\$2.50	\$6,125.00
			TOTAL	\$61,563.20

**GLEN AT WIDEFIELD FILING NO. 9
GRADING AND EROSION CONTROL PLAN
GRADING AND EROSION CONTROL
EL PASO COUNTY, COLORADO**

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	
	4/16/19 Grading

SHEET
12
12 of 20 Sheets

Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

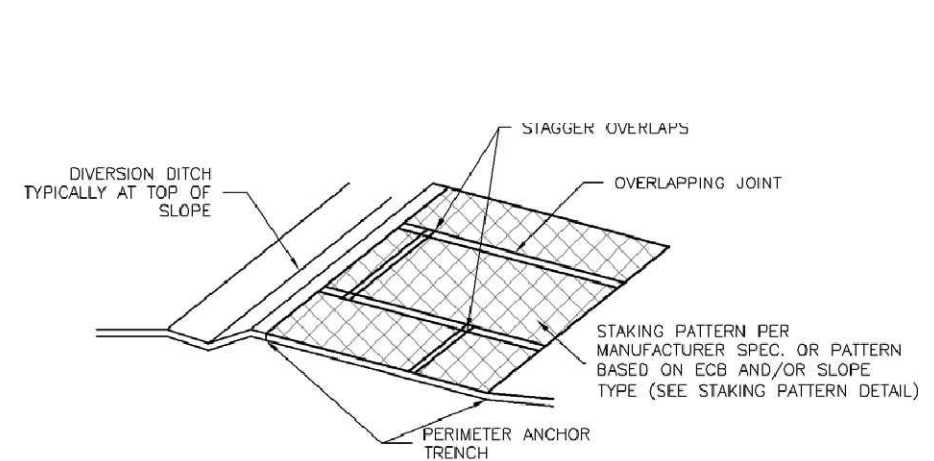
W
WIDEFIELD
Investment Group

17038-CWB-2-16-PP.dwg/Apr 24, 2019

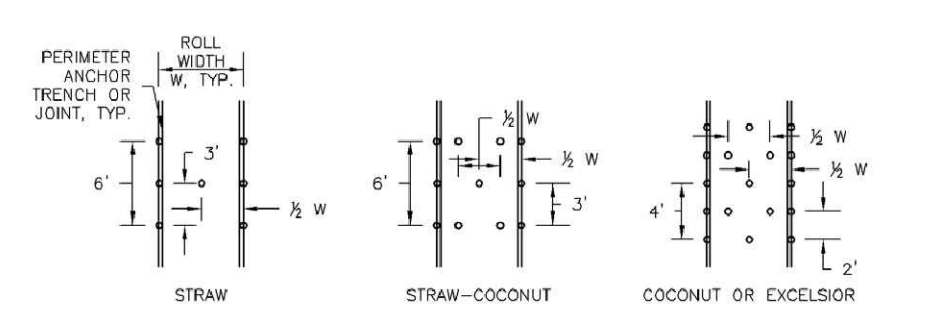
TABLE ECB-1. ECB MATERIAL SPECIFICATIONS

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

STAKING PATTERNS BY SLOPE



ECB-3. OUTSIDE OF DRAINAGEWAY



STAKING PATTERNS BY ECB TYPE

EROSION CONTROL BLANKET (ECB)

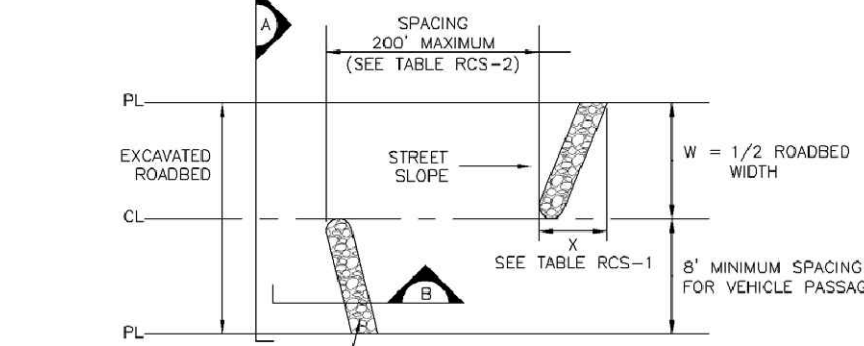
NTS

ROUGH CUT STREET CONTROL INSTALLATION NOTES

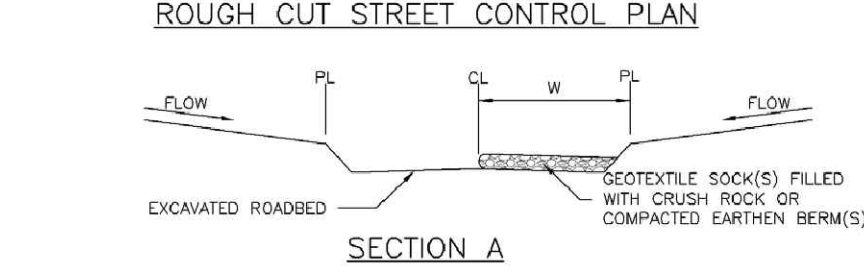
- SEE PLAN VIEW FOR LOCATION OF ROUGH CUT STREET CONTROL MEASURES.
- ROUGH CUT STREET CONTROL SHALL BE INSTALLED AFTER A ROAD HAS BEEN CUT IN AND WILL NOT BE PAVED FOR MORE THAN 14 DAYS OR FOR TEMPORARY CONSTRUCTION ROADS THAT HAVE NOT RECEIVED ROAD BASE.

ROUGH CUT STREET CONTROL INSPECTION AND MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.



ROUGH CUT STREET CONTROL PLAN



SECTION A

SECTION B

TABLE RCS-1

W (FT)	X (FT)
20-30	5
31-40	7
41-50	9
51-60	10.5
61-70	12

TABLE RCS-2

LONGITUDINAL STREET SLOPE (%)	SPACING (FT)
<2	NOT TYPICALLY NEEDED
2	200
3	200
4	150
5	100
6	50
7	25
8	25

ROUGH-CUT STREET CONTROL (RCS)

NTS

CONCRETE WASHOUT AREA (CWA)

EPC STD SD_3-84

NTS



VEHICLE TRACKING CONTROL (VTC)

NTS

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S). TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
- CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY BRANCHED FROM A WALK TO A WORK) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, USE DOT SECT. #703, ASPHTL #3 COURSE AGGREGATE OR #3 MINUS ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED CONSTRUCTION ENTRANCE/EXIT TO MAINTAIN A CONSISTENT BERTH.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

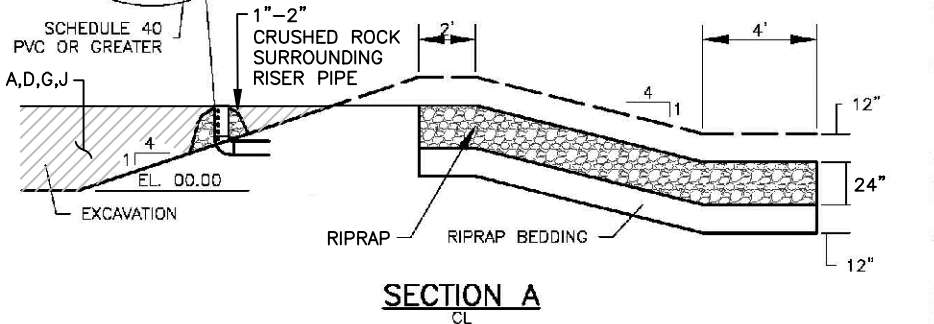
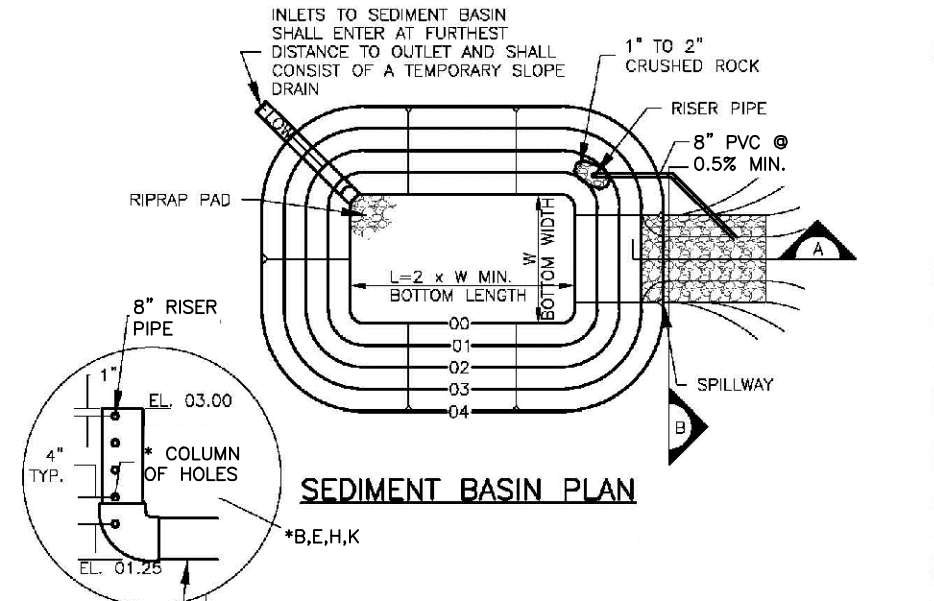
STANDARD EPC GRADING AND EROSION CONTROL NOTES

STANDARD EPC GRADING AND EROSION CONTROL NOTES

- Construction may not commence until a Construction Permit is obtained from Development Services and a Preconstruction Conference is held with Development Services Inspectors.
- Stormwater discharges from construction sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters. All work and earth disturbance shall be done in a manner that minimizes pollution of any on-site or off-site waters, including wetlands.
- Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to stormwater management 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 to regulations and standards must be requested, and approved in writing.
- A separate Stormwater Management Plan (SWMP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction. During construction the SWMP is the responsibility of the designated Stormwater Manager. The SWMP shall be located on site at all times and shall be kept up to date with work progress and changes in the field.
- Once the ESQCP has been issued, the contractor may install the initial stage erosion and sediment control BMPs as indicated on the DEC. A preconstruction meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting time and place with County DSD inspections staff.
- Soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within 21 calendar days after final grading, or earth disturbance, has been completed. Disturbed areas and stockpiles, which are not at final grade but will remain dormant for longer than 30 days, shall also be mulched within 21 days after interim grading. Any areas that are going to remain an interim for more than 60 days shall also be seeded. All temporary soil erosion control measures and BMPs shall be maintained until permanent soil erosion control measures are implemented and established.
- Temporary soil erosion control facilities shall be removed and earth disturbance areas graded and stabilized with permanent soil erosion control measures pursuant to standards and specification prescribed in the DCM Volume II and the Engineering Criteria Manual (ECM) appendix I.
- All persons engaged with earth disturbance shall implement and maintain acceptable soil erosion and sediment control measures including BMPs in conformance with the erosion control technical standards of the Drainage Criteria Manual (DCM) Volume II and in accordance with the Stormwater Management Plan (SWMP).
- All temporary erosion control facilities including BMPs and all permanent facilities intended to control erosion of any earth disturbance operations shall be installed as defined in the approved plans, the SWMP and the DCM Volume II and maintained throughout the duration of the earth disturbance operation.
- Any earth disturbance shall be conducted in such a manner so as to effectively reduce 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.
- Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be designed to limit the discharge to a non-erosive velocity.
- Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to runoff to State Waters, including any surface or subsurface storm drainage system or facilities.
- Erosion control blanketing is to be used on slopes steeper than 3:1.
- Building, construction, excavation, or other 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. BMPs may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.
- Vehicle tracking of soils and construction debris off-site shall be minimized. Materials tracked offsite shall be cleaned up and properly disposed of immediately.
- Contractor shall be responsible for the removal of all wastes from the construction site for disposal in accordance with local and State regulatory requirements. No construction debris, tree slash, building material wastes or unused building materials shall be buried, dumped, or discharged at the site.
- The owner, site developer, contractor, and/or their authorized agents shall be responsible for the removal of all construction debris, dirt, trash, rock, sediment, and sand that may accumulate in the storm sewer or other drainage conveyance and stormwater appurtenances as a result of site development.
- The quantity of materials stored on the project site shall be limited, as much as practical, to that quantity required to perform the work in an orderly sequence. All materials stored on-site shall be stored in a neat, orderly manner, in their original containers, with original manufacturer's labels.
- No chemicals are to be used by the contractor, which have the potential to be released in stormwater unless permission for the use of a specific chemical is granted in writing by the ECM Administrator. In granting the use of such chemicals, special conditions and monitoring may be required.
- Bulk storage structures for petroleum products and other chemicals shall have adequate protection so as to contain all spills and prevent any spilled material from entering State Waters, including any surface or subsurface storm drainage system or facilities.
- No person shall cause the impediment of stormwater flow in the flow line of the curb and gutter or in the ditches.
22. Individuals 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 included in the DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the Contractor prior to the construction (NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and laws, rules, or regulations of other Federal, State, or County Agencies, the more restrictive laws, rules, or regulations shall apply.
- All construction traffic must enter/exit the site at approved construction access points.
- Prior to actual construction the permittee shall verify the location of existing utilities.
- A water source shall be available on site during earthwork operations and utilized as required to minimize dust from earthwork equipment and vehicles.
- The soils report for this site entitled *Subsurface Soil Investigation The Glen at Widefield, Filing #6, Widefield, Colorado* has been prepared by Soil Testing and Engineering, Inc. and shall be considered a part of these plans.
- At least ten days prior to the anticipated start of construction, for projects that will disturb 1 acre or more, the owner or operator of construction activity shall submit a permit application for stormwater discharge to the Colorado Department of Public Health and Environment, Water Quality Division. The application contains certification of completion of a stormwater management plan (SWMP), of which this grading and erosion control plan may be a part. For information or application materials contact:
Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD - Permits
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530
Attn: Permits Unit

TEMPORARY SEDIMENT BASIN (TSB)

NTS



TEMPORARY SLOPE DRAIN (TSD)

NTS

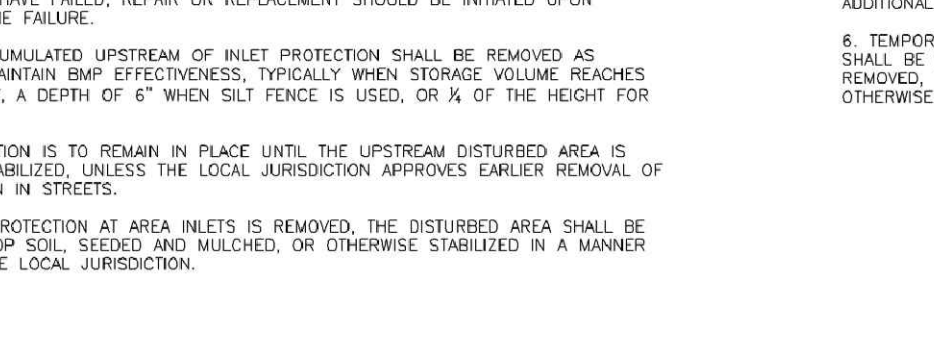
ROUGH-CUT STREET CONTROL (RCS)

NTS

- SEE PLAN VIEW FOR LOCATION OF INLET PROTECTION.
- CONCRETE "CHOKER" BLOCKS SHALL BE LAD ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
- GRAVEL BARS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAILS.

INLET PROTECTION (IP-1)

NTS



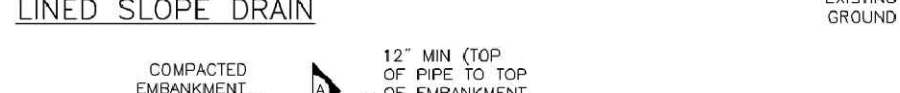
TEMPORARY SLOPE DRAIN (TSD)

NTS

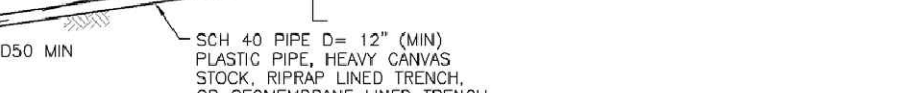
TERMINATION OF RIPRAP LINED SLOPE DRAIN



TEMPORARY SLOPE DRAIN PROFILE



SILT FENCE DETAIL



TEMPORARY SLOPE DRAIN (TSD)

NTS

SILT FENCE DETAIL

NTS



TEMPORARY SEDIMENT BASIN (TSB)

NTS



INLET PROTECTION (IP-1)

NTS



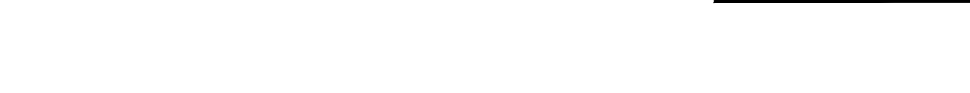
TEMPORARY SLOPE DRAIN (TSD)

NTS



SILT FENCE DETAIL

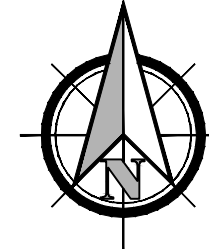
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Know what's below.
Call before you dig.

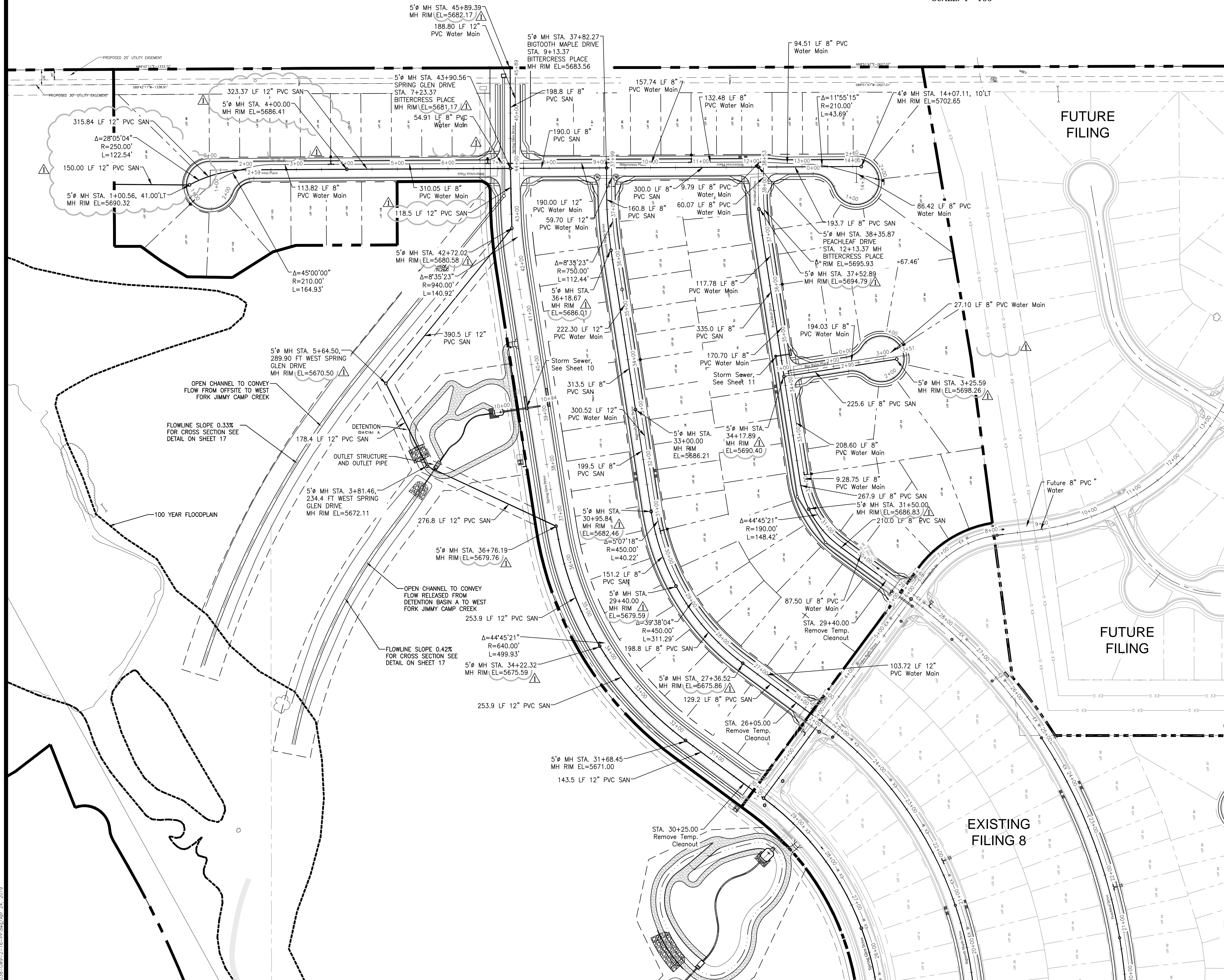
FOR STORM SEWER DESIGN
SEE SHEETS 10-11



0 100' 200'
SCALE: 1"=100'

SUBSEQUENT TO STRIPPING AND GRUBBING THE FOLLOWING OVERLOT/PIPE INSTALLATION PROCEDURES ARE ANTICIPATED FOR THE SANITARY SEWER LOCATED ON PROPOSED EMBANKMENTS:

- THE REMOVAL AND REPLACEMENT OF METASTABLE SOIL.
- TESTING OF THE FILL SUBSEQUENT TO THE PENETRATION OF THE METASTABLE SOIL WILL CONTINUE UNTIL A MINIMUM OF 7 FEET OF STRUCTURAL FILL HAS BEEN PLACED ABOVE THE PROPOSED SEWER LINE ELEVATION.
- UTILITY TRENCHES SHALL BE EXCAVATED AND SANITARY SEWER LINE INSTALLED. THE PIPE SHALL BE PROPERLY BEDDED AND STRUCTURAL FILL PLACED AND TESTED TO THE PREVIOUS GRADE.
- THE OVERLOT AND EMBANKMENT FILL CAN BE COMPLETED.
- WHERE THE SANITARY SEWER IS PLACED IN EMBANKMENT FILL DURING THE OVERLOT PROCESS, STE SHALL MONITOR AND TEST ALL WORK ASSOCIATED WITH THE AFFECTED PORTIONS.



ADDITIONAL UTILITY NOTES

GAS - ALL GAS MAINS AND SERVICES ARE TO BE INSTALLED PER THE CITY OF COLORADO SPRINGS.
ELECTRIC - ALL ELECTRIC SERVICES ARE TO BE INSTALLED PER THE CITY OF FOUNTAIN ELECTRIC DIVISION.
UTILITY CONTACTS
SEWER: WIDEFIELD W&S DISTRICT (WWSO) 390-7111
WATER: WIDEFIELD W&S DISTRICT (WWSO) 390-7111
ELECTRIC: MOUNTAIN VIEW ELECTRIC 495-2283
GAS: PEOPLE'S NATURAL GAS 800-303-0752
PHONE: US WEST 636-4632

LEGEND

PROPOSED 8" PVC WATER MAIN (DR 18) WITH MJ FITTINGS (UNLESS OTHERWISE NOTED)
WIDEFIELD WATER & SANITATION DISTRICT STANDARD FIRE HYDRANT ASSEMBLY. INSTALL PER WIDEFIELD WATER AND SANITATION DISTRICT CONSTRUCTION SPECIFICATIONS
8" GATE VALVE (UNLESS OTHERWISE NOTED)
TEE w/ CONCRETE THRUST BLOCK
MINIMUM RADIUS SHOWN FOR WATER MAIN = 290' PER WWSO SPECIFICATIONS AND EL PASO COUNTY ECM 4.3.6.A.1&2. THE MINIMUM COVER OVER WATER MAIN & SERVICES AND SANITARY SEWER MAINS & SERVICES IS 5 FEET.

WATER AND SEWER MAIN EXTENSIONS

Any changes or alterations affecting the grade, alignment, elevation and/or depth of cover of any water or sewer mains or other appurtenance shown on this drawing shall be the responsibility of the Owner/Developer. The Owner/Developer shall be responsible for all operational damages and defects in installation and material for mains and services from the date of approval until final acceptance is issued.

Signed _____ Date _____

Print Name J. Ryan Watson, President

DBA: GLEN DEVELOPMENT COMPANY

Address: 3 Widefield Boulevard
Colorado Springs, CO 80911
(719) 392-0194

FIRE AUTHORITY APPROVAL

The number of fire hydrants and hydrant locations shown on this water installation plan are correct and adequate to satisfy the fire protection requirements as specified by the Security Fire District.

Security Fire Department

Signed _____ Date _____

UTILITY APPROVALS

DISTRICT APPROVALS

The Widefield Water and Sanitation District recognizes the design engineer as having responsibility for the design. The Widefield Water and Sanitation District has limited its scope of review accordingly.

WIDEFIELD WATER AND SANITATION DISTRICT
WASTEWATER DESIGN APPROVAL

Date: _____ By: _____

PROJECT NO. _____

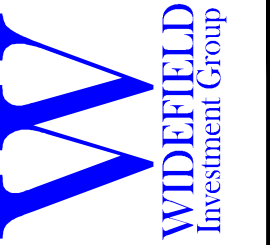
In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.

WIDEFIELD WATER AND SANITATION DISTRICT
WATER DESIGN APPROVAL

Date: _____ By: _____

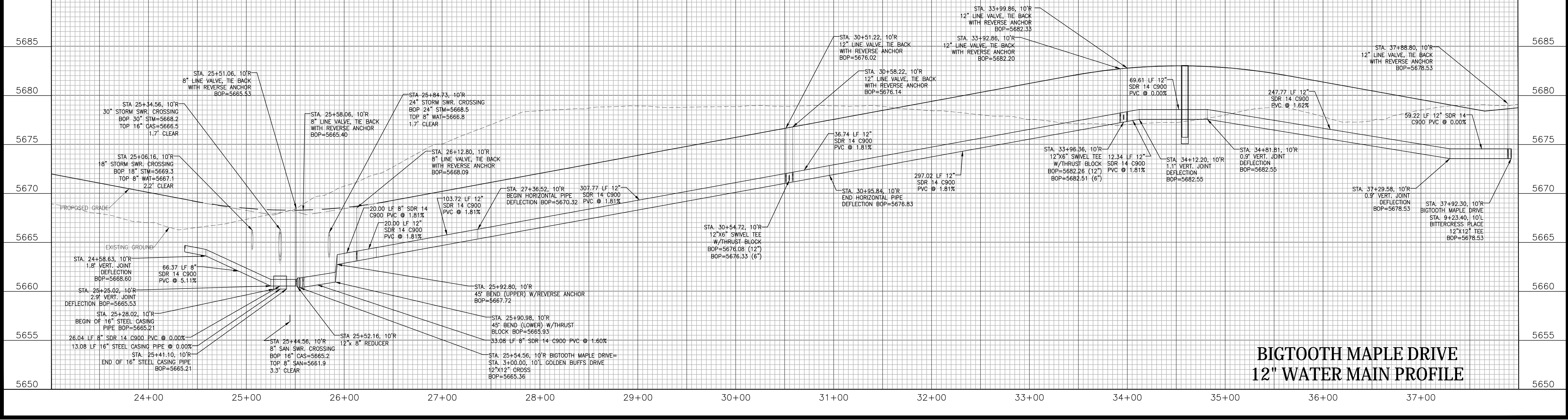
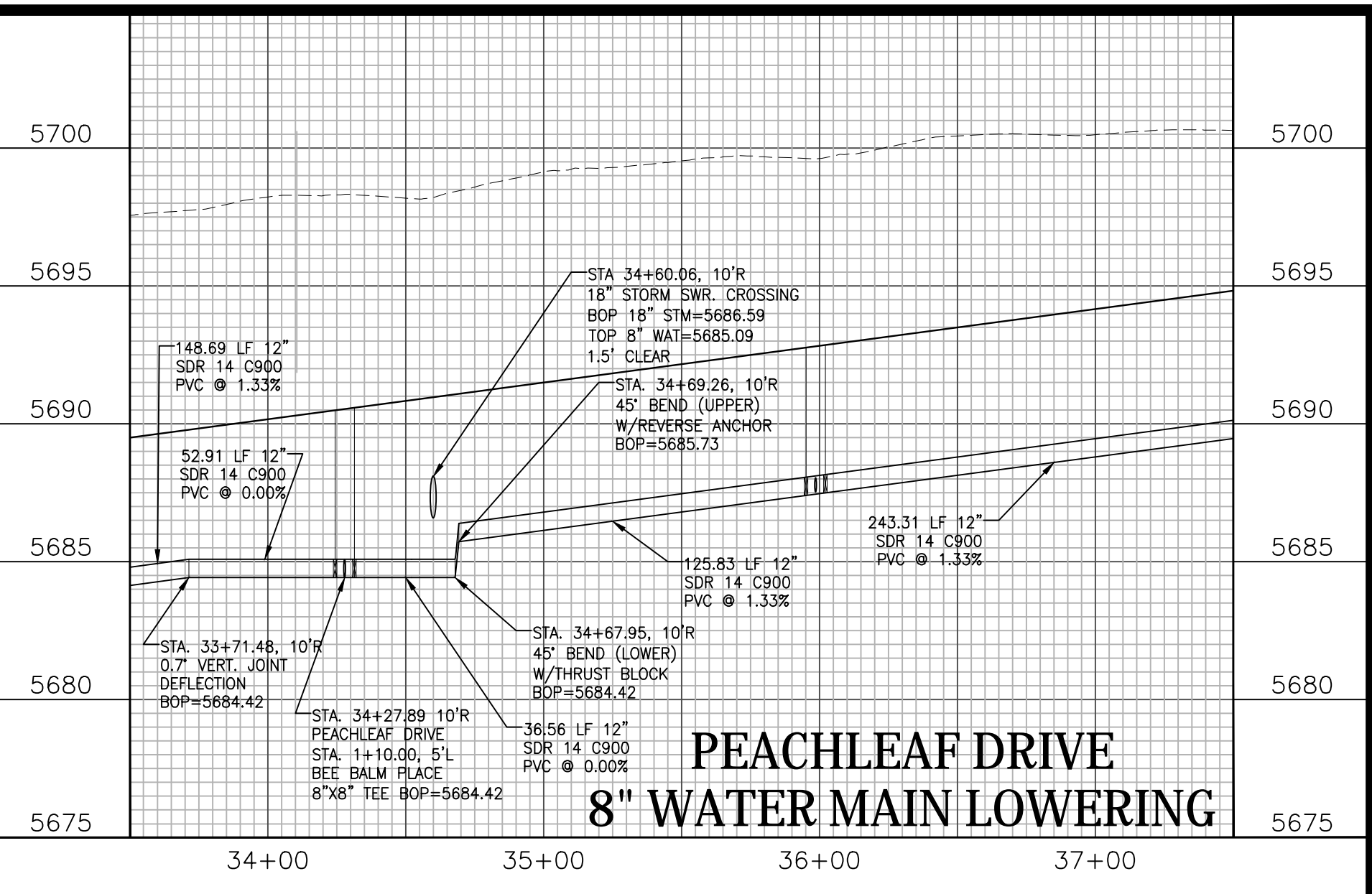
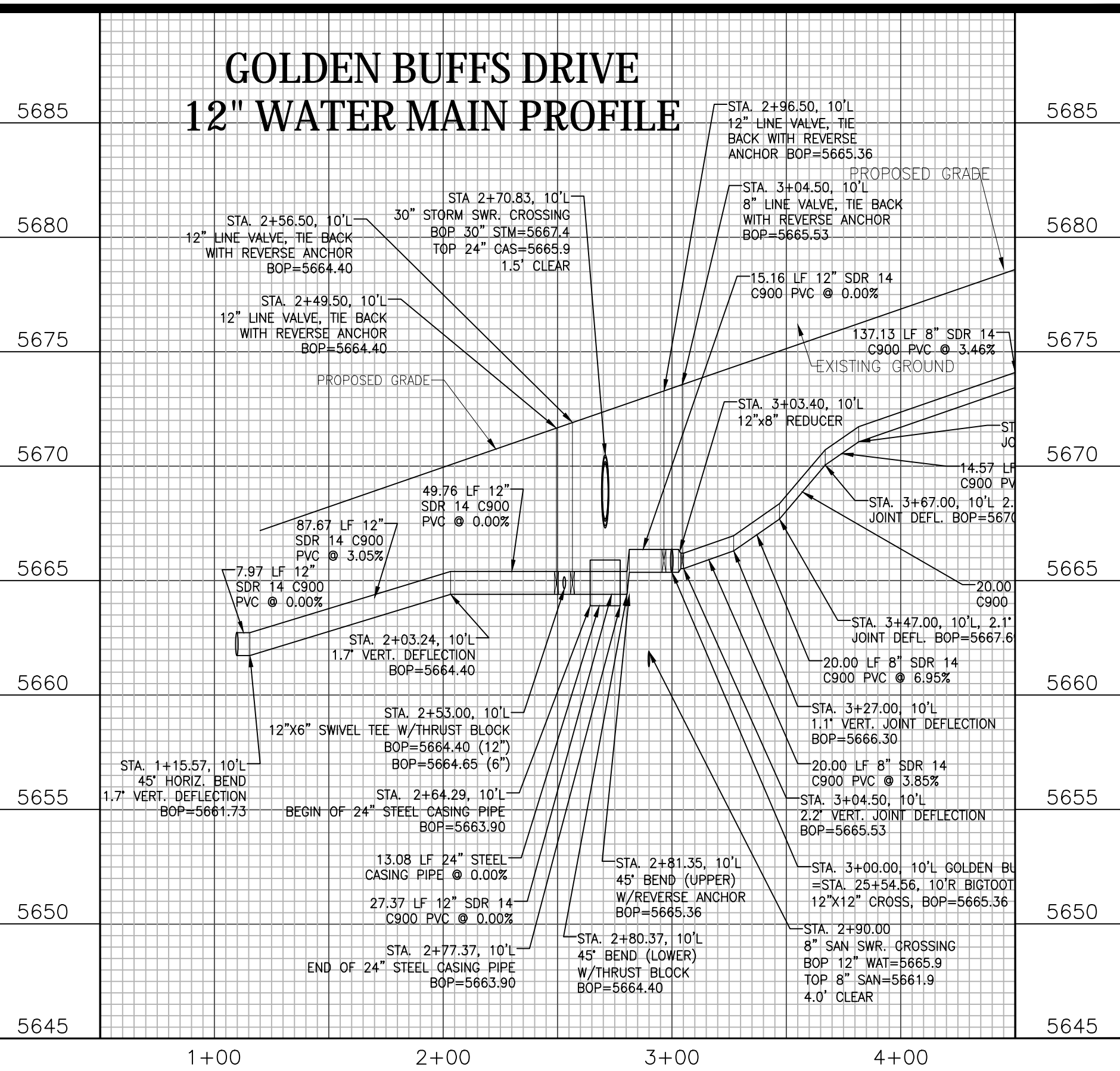
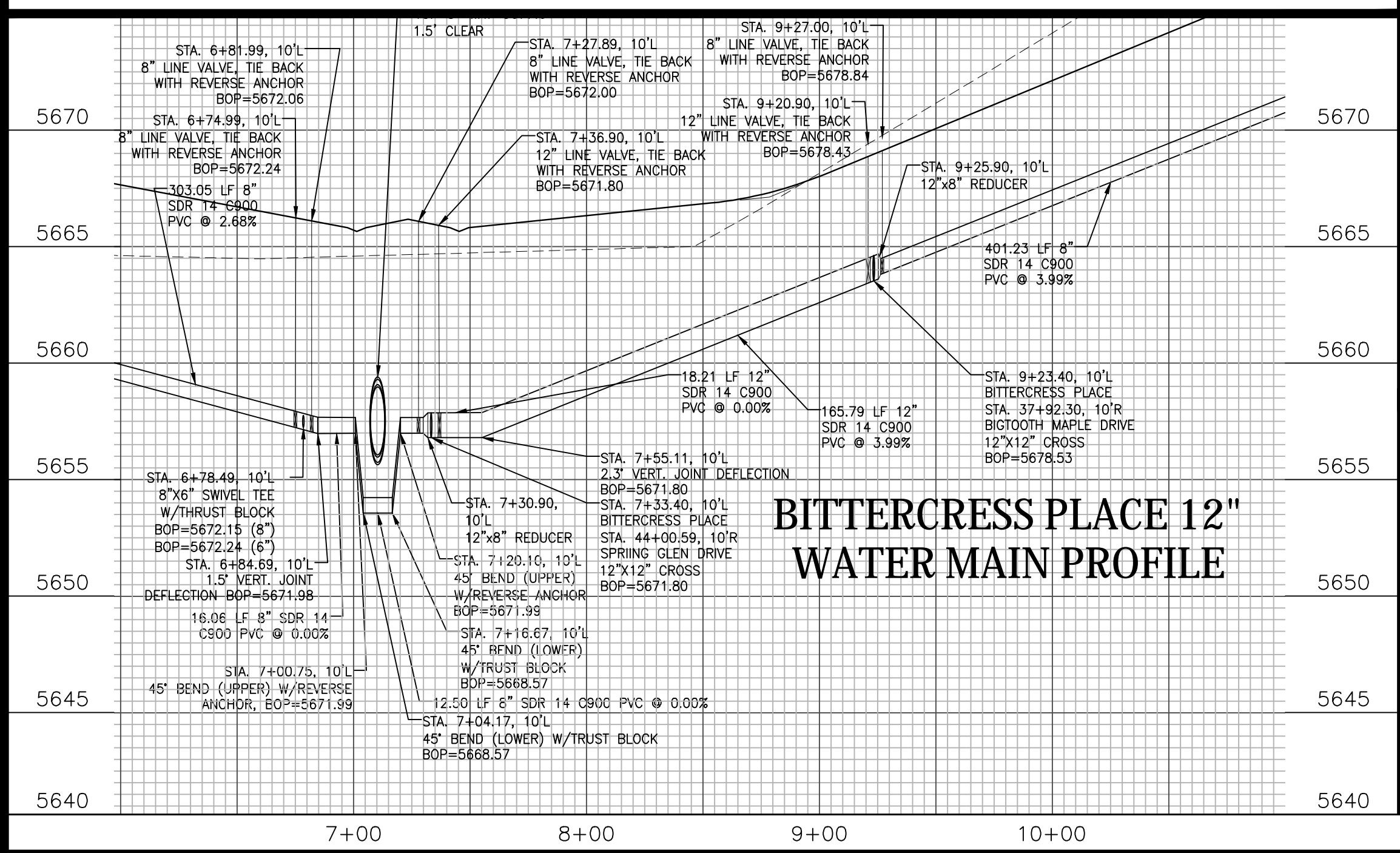
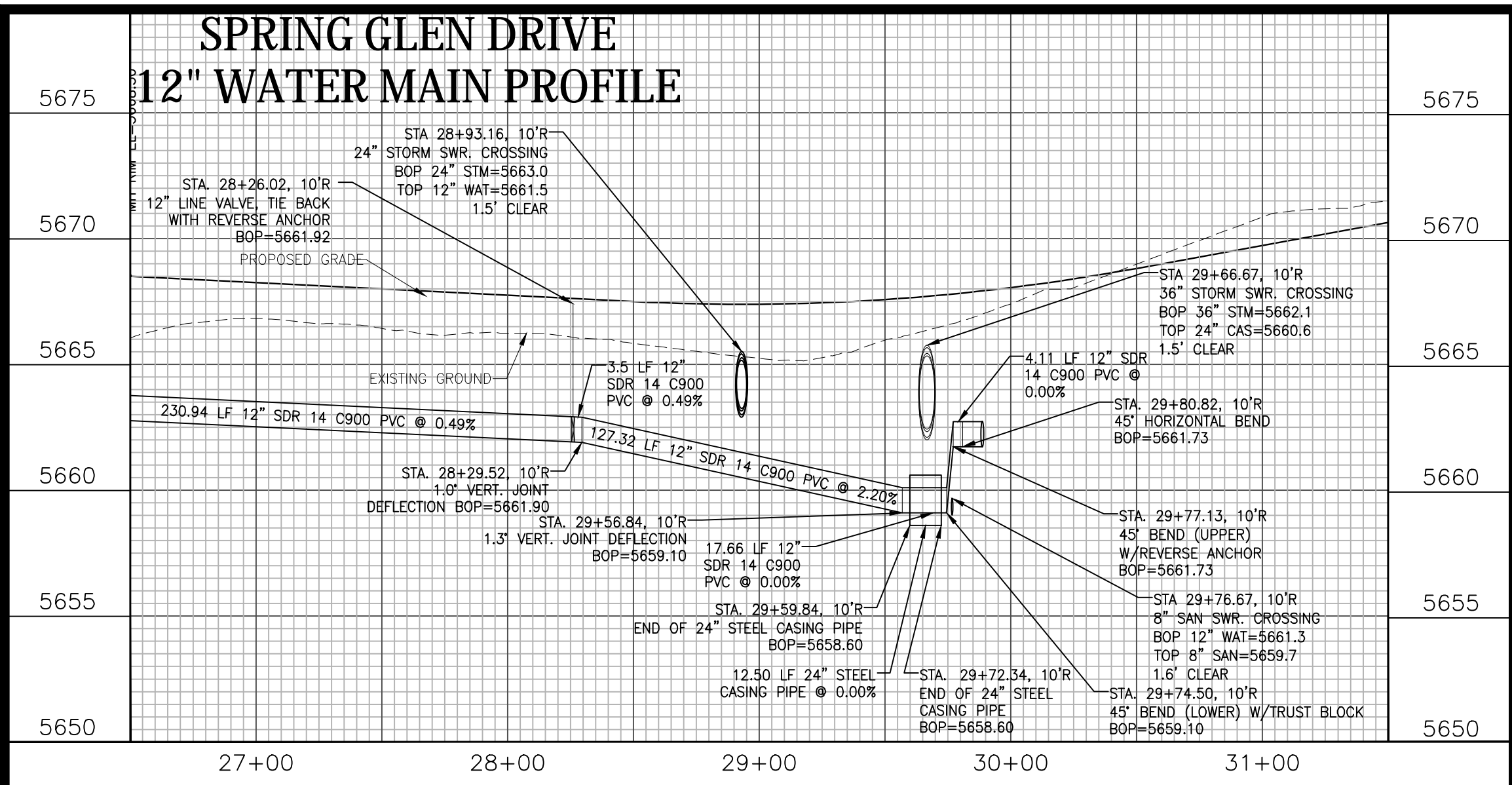
PROJECT NO. _____

In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.



Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	4/16/19 Water/San. Elev.

SHEET



Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

W
WIDEFIELD
Investment Group

GLEN AT WIDEFIELD FILING NO. 9
UTILITY PLAN
WATER LINE LOWERING DETAILS
EL PASO COUNTY, COLORADO

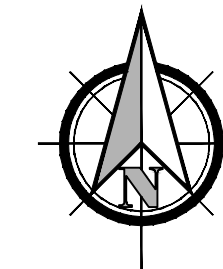
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 Check: AWMc
 Revisions:

SHEET
15
 15 of 20 Sheets

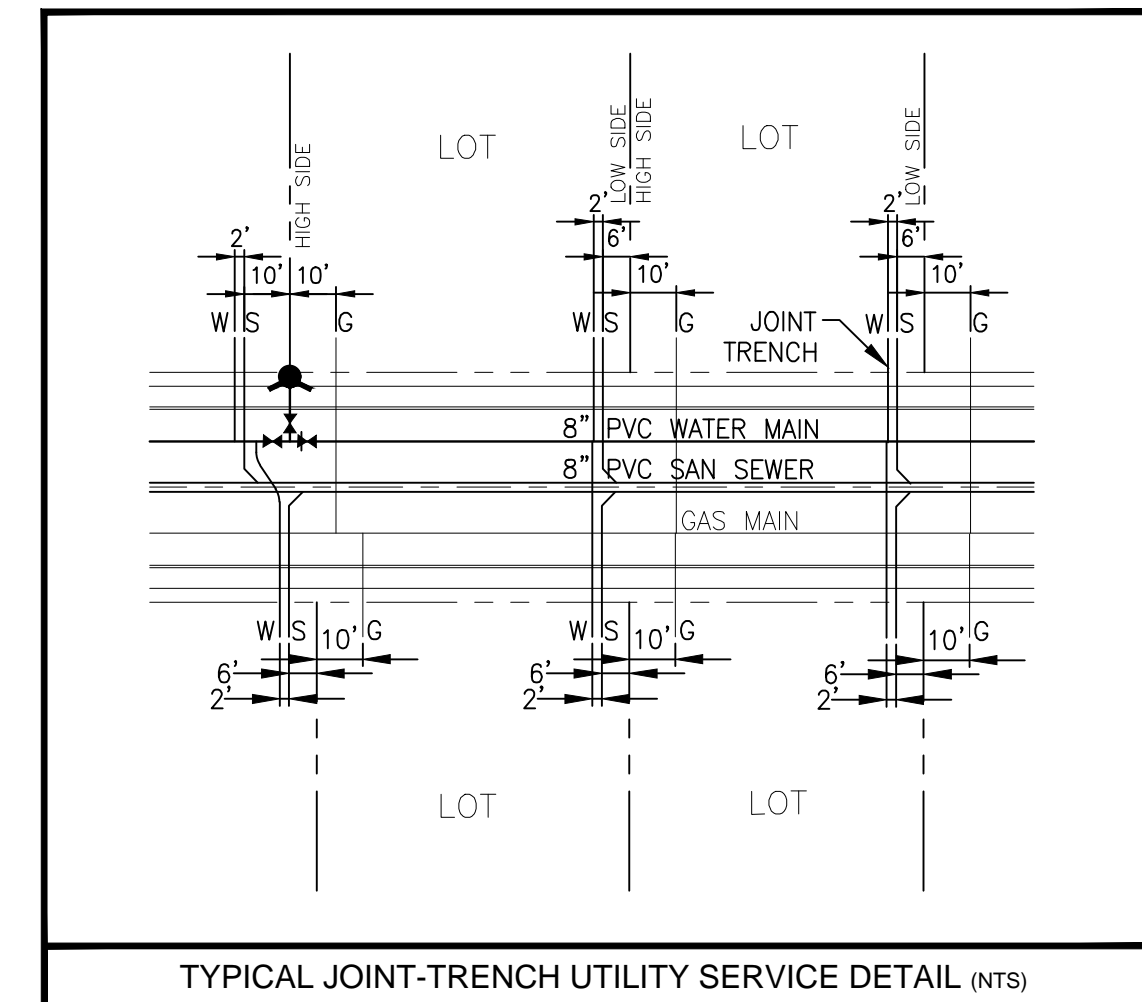
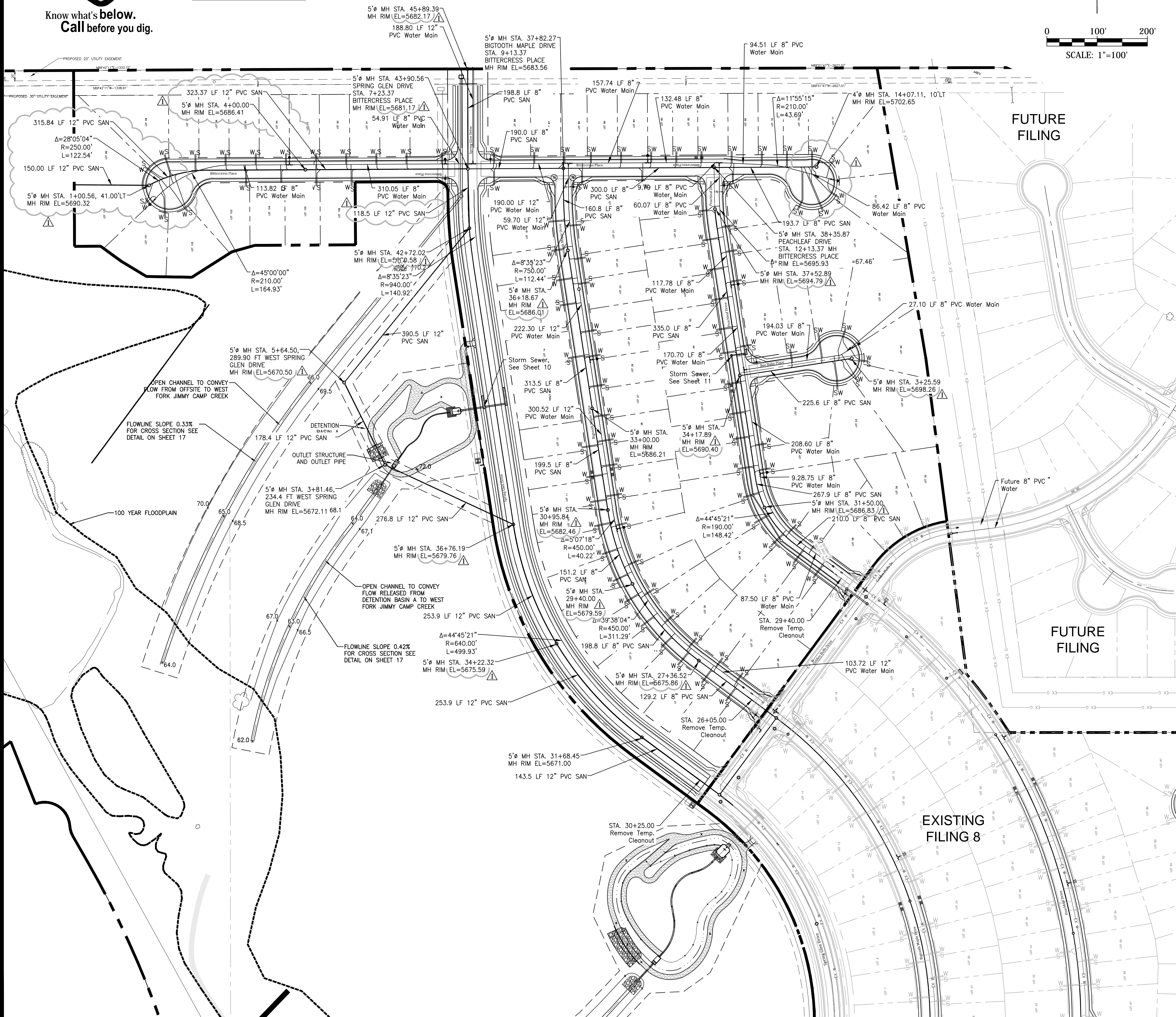


Know what's below.
Call before you dig.

FOR STORM SEWER DESIGN
SEE SHEETS 10-11



0 100' 200'
SCALE: 1"=100'



TYPICAL JOINT-TRENCH UTILITY SERVICE DETAIL (NTS)

ADDITIONAL UTILITY NOTES

GAS - ALL GAS MAINS AND SERVICES ARE TO BE INSTALLED PER THE CITY OF COLORADO SPRINGS.

ELECTRIC - ALL ELECTRIC SERVICES ARE TO BE INSTALLED PER MOUNTAINVIEW ELECTRIC ASSOCIATION.

UTILITY CONTACTS

SEWER:	WIDEFIELD W&S DISTRICT (WUSD)	390-7111
WATER:	WIDEFIELD W&S DISTRICT (WUSD)	390-7111
ELECTRIC:	MOUNTAIN VIEW ELECTRIC	495-2283
GAS:	BLACKHILLS ENERGY	800-363-0752
PHONE:	US WEST	636-4632

LEGEND

PROPOSED 8" PVC WATER MAIN (DR 18) WITH MJ FITTINGS (UNLESS OTHERWISE NOTED)

WIDEFIELD WATER & SANITATION DISTRICT STANDARD FIRE HYDRANT ASSEMBLY. INSTALL PER WIDEFIELD WATER AND SANITATION DISTRICT CONSTRUCTION SPECIFICATIONS

GATE VALVE (UNLESS OTHERWISE NOTED)

TEE w/ CONCRETE THRUST BLOCK

MINIMUM RADIUS SHOWN FOR WATER MAIN = 290' PER WUSD SPECIFICATIONS AND EL PASO COUNTY ECM 4.3.6.A.1&2. THE MINIMUM COVER OVER WATER MAIN & SERVICES AND SANITARY SEWER MAINS & SERVICES IS 5 FEET.

SUBSEQUENT TO STRIPPING AND GRUBBING THE FOLLOWING OVERLOT/PIPE INSTALLATION PROCEDURES ARE ANTICIPATED FOR THE SANITARY SEWER LOCATED ON PROPOSED EMBANKMENTS:

- THE REMOVAL AND REPLACEMENT OF METASTABLE SOIL.
- TESTING OF THE FILL SUBSEQUENT TO THE PENETRATION OF THE METASTABLE SOIL WILL CONTINUE UNTIL A MINIMUM OF 7 FEET OF STRUCTURAL FILL HAS BEEN PLACED ABOVE THE PROPOSED SEWER LINE ELEVATION.
- UTILITY TRENCHES SHALL BE EXCAVATED AND SANITARY SEWER LINE INSTALLED. THE PIPE SHALL BE PROPERLY BEDDED AND STRUCTURAL FILL PLACED AND TESTED TO THE PREVIOUS GRADE.
- THE OVERLOT AND EMBANKMENT FILL CAN BE COMPLETED.
- WHERE THE SANITARY SEWER IS PLACED IN EMBANKMENT FILL DURING THE OVERLOT PROCESS, SITE SHALL MONITOR AND TEST ALL WORK ASSOCIATED WITH THE AFFECTED PORTIONS.

UTILITY APPROVALS

DISTRICT APPROVALS
The Widefield Water and Sanitation District recognizes the design engineer as having responsibility for the design. The Widefield Water and Sanitation District has limited its scope of review accordingly.

WIDEFIELD WATER AND SANITATION DISTRICT WASTEWATER DESIGN APPROVAL

Date: _____ By: _____

PROJECT NO. _____

In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.

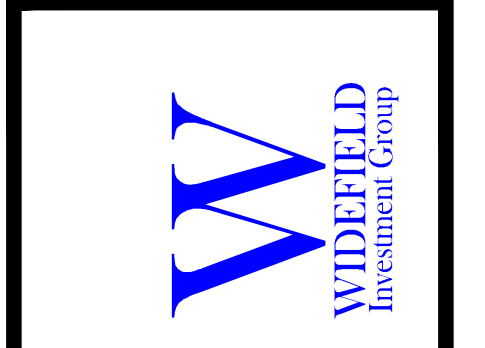
WIDEFIELD WATER AND SANITATION DISTRICT WATER DESIGN APPROVAL

Date: _____ By: _____

PROJECT NO. _____

In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.

Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

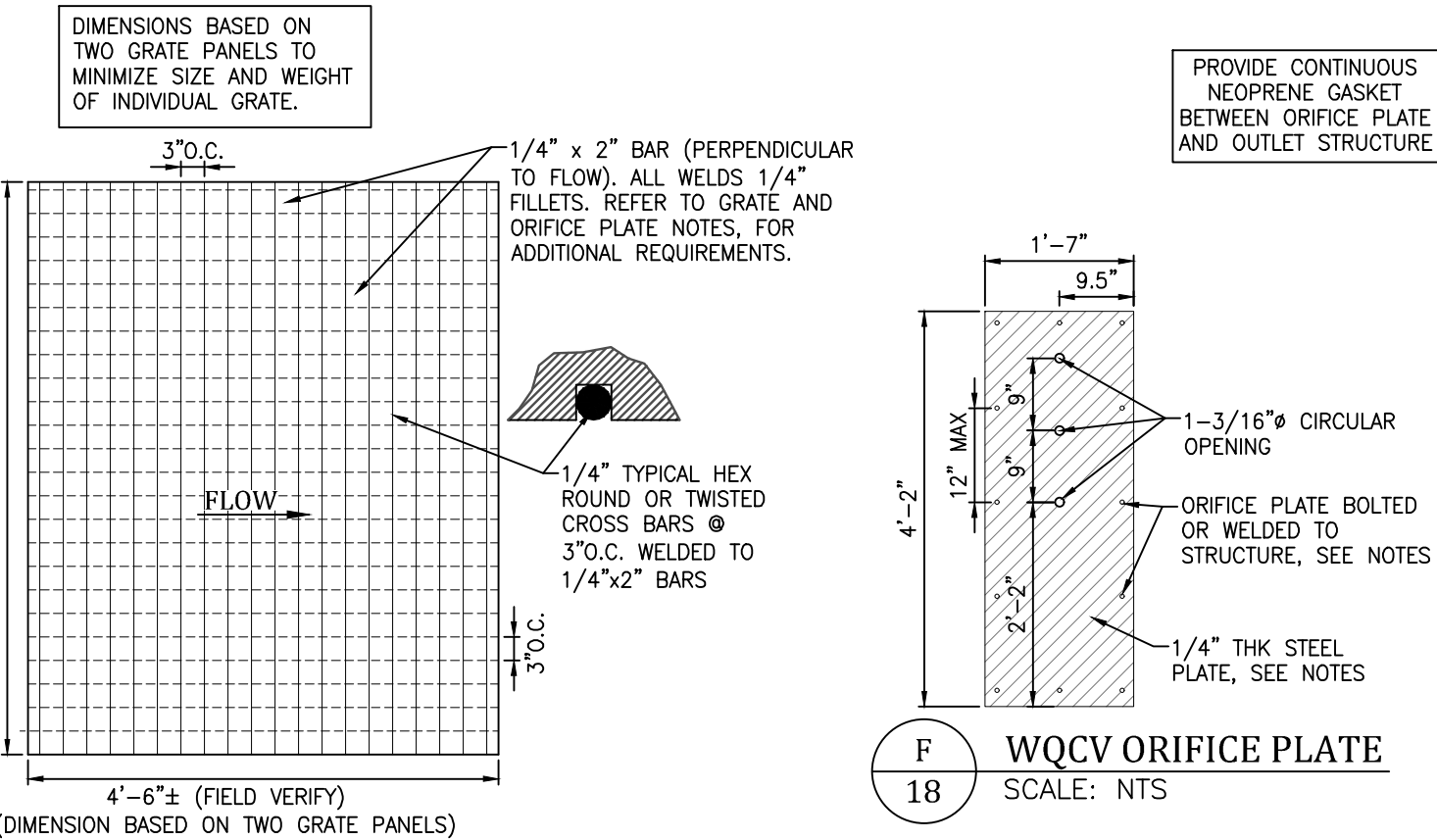


GLEN AT WIDEFIELD FILING NO. 9
UTILITY SERVICES PLAN
UTILITY SERVICES
EL PASO COUNTY, COLORADO

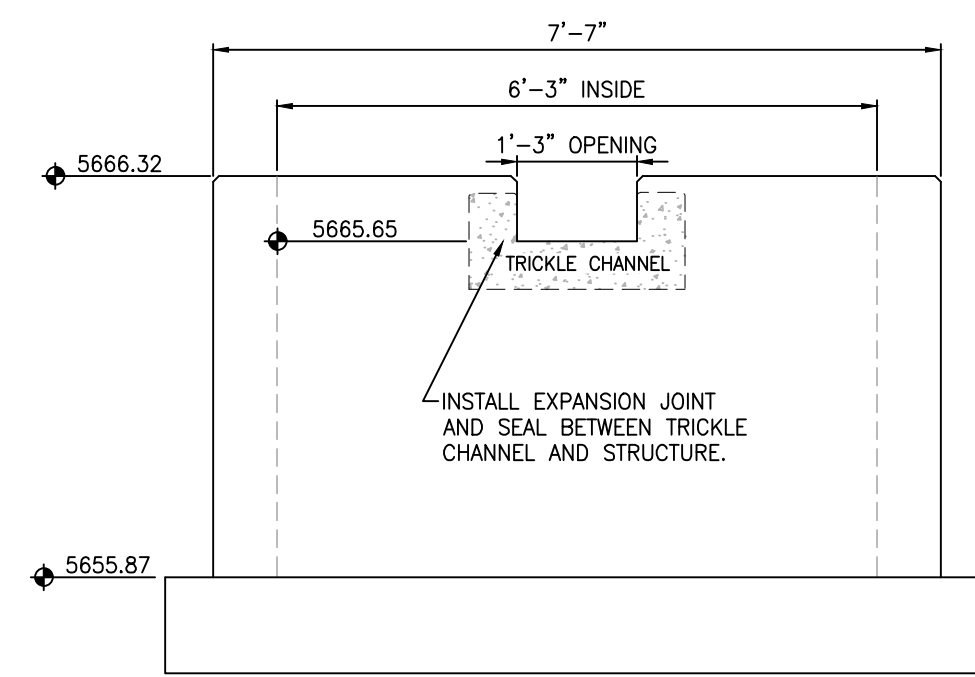
Project No.: 17038
Date: September 25, 2018
Design: AWMC
Drawn: JAK
Check: AWMC
Revisions:
4/16/19 Water/San. Elev.
Bittercress Pl. Service Locations

SHEET
16
16 of 20 Sheets

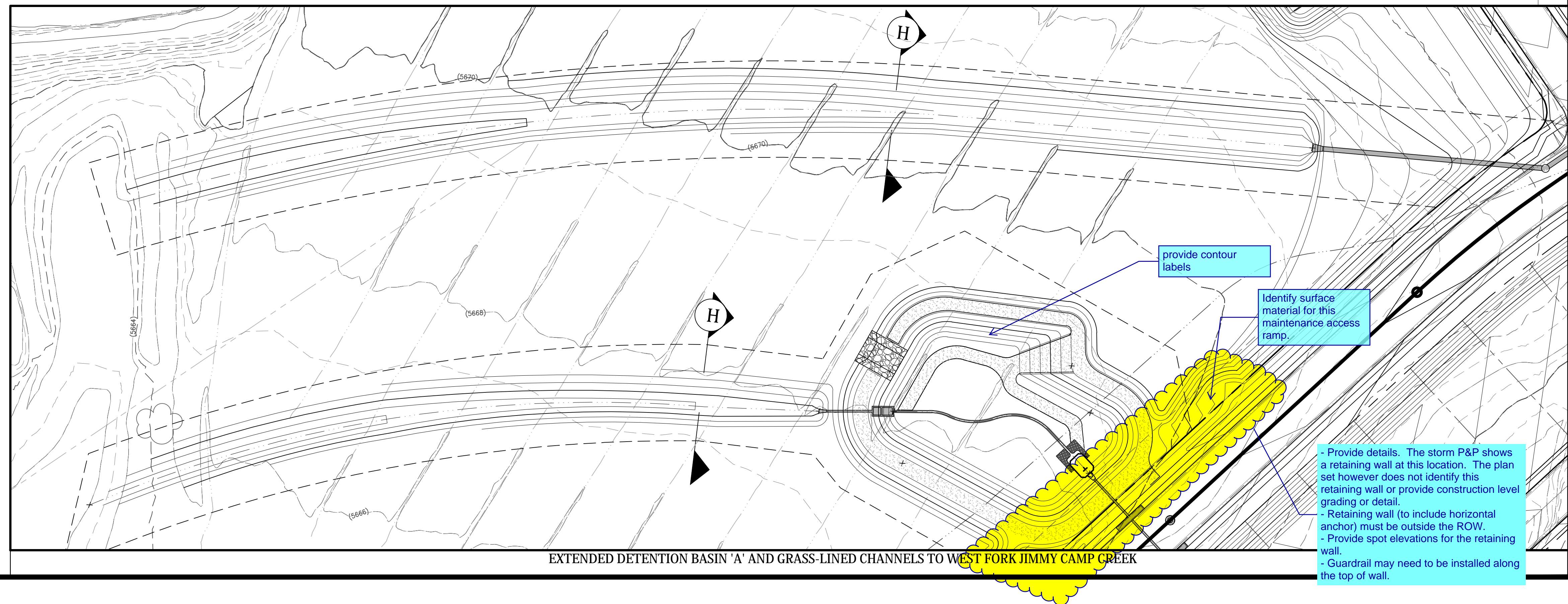
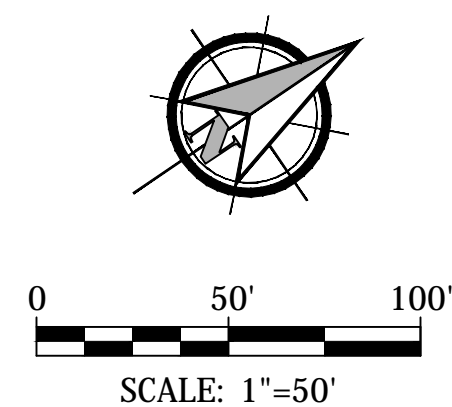
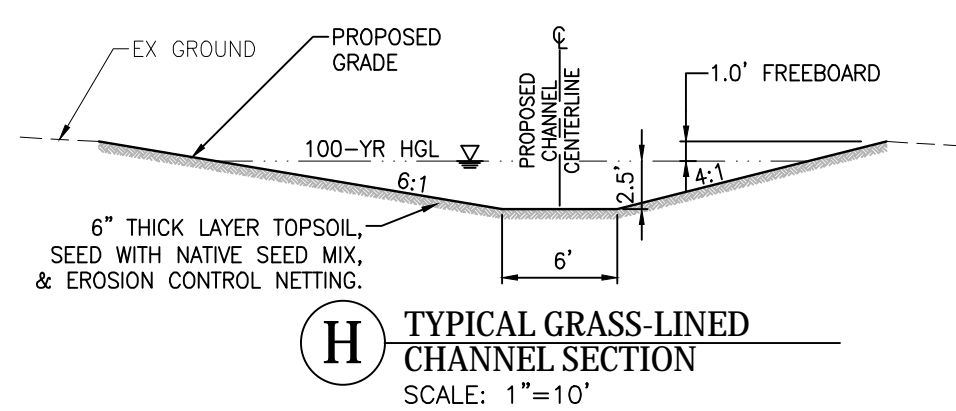
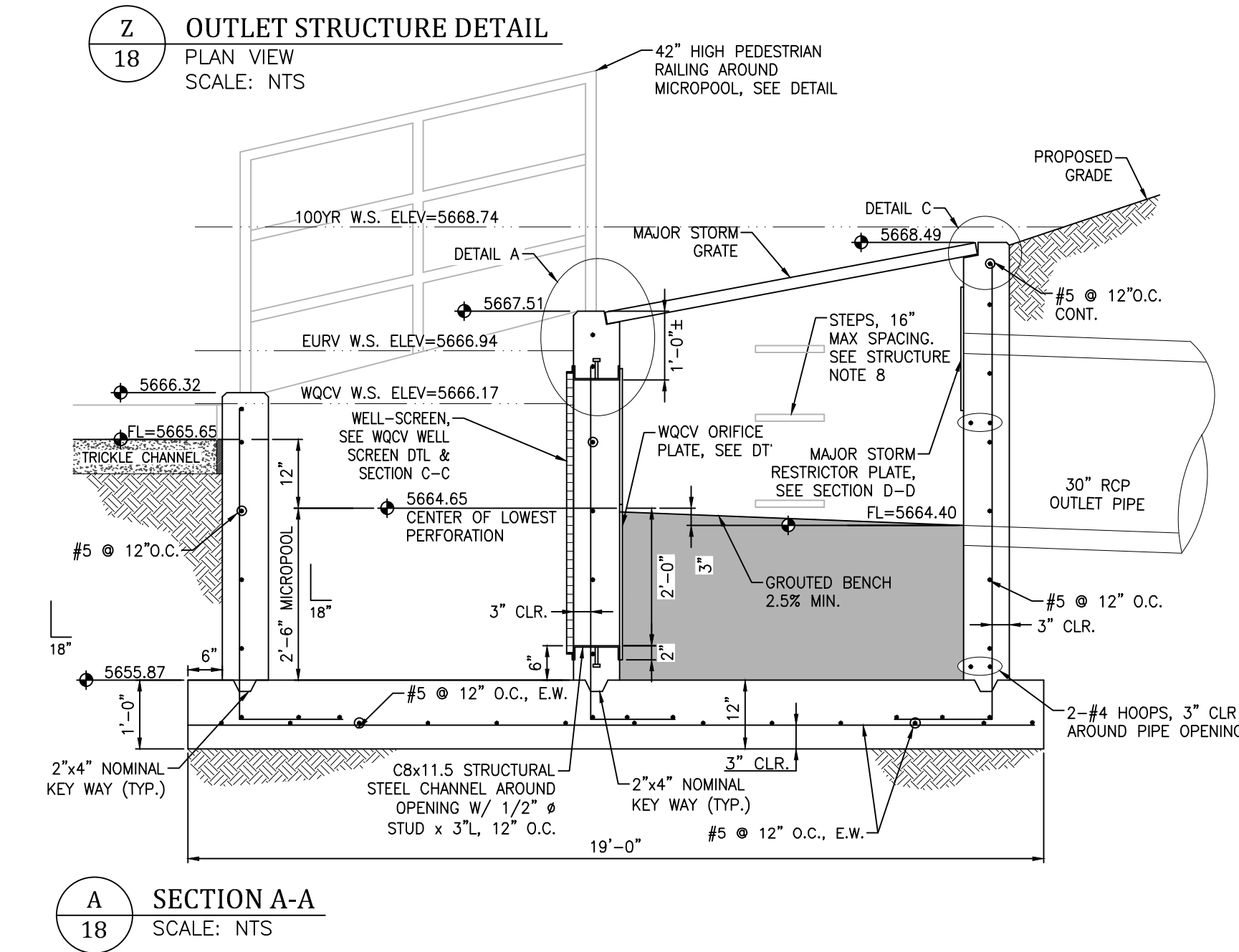
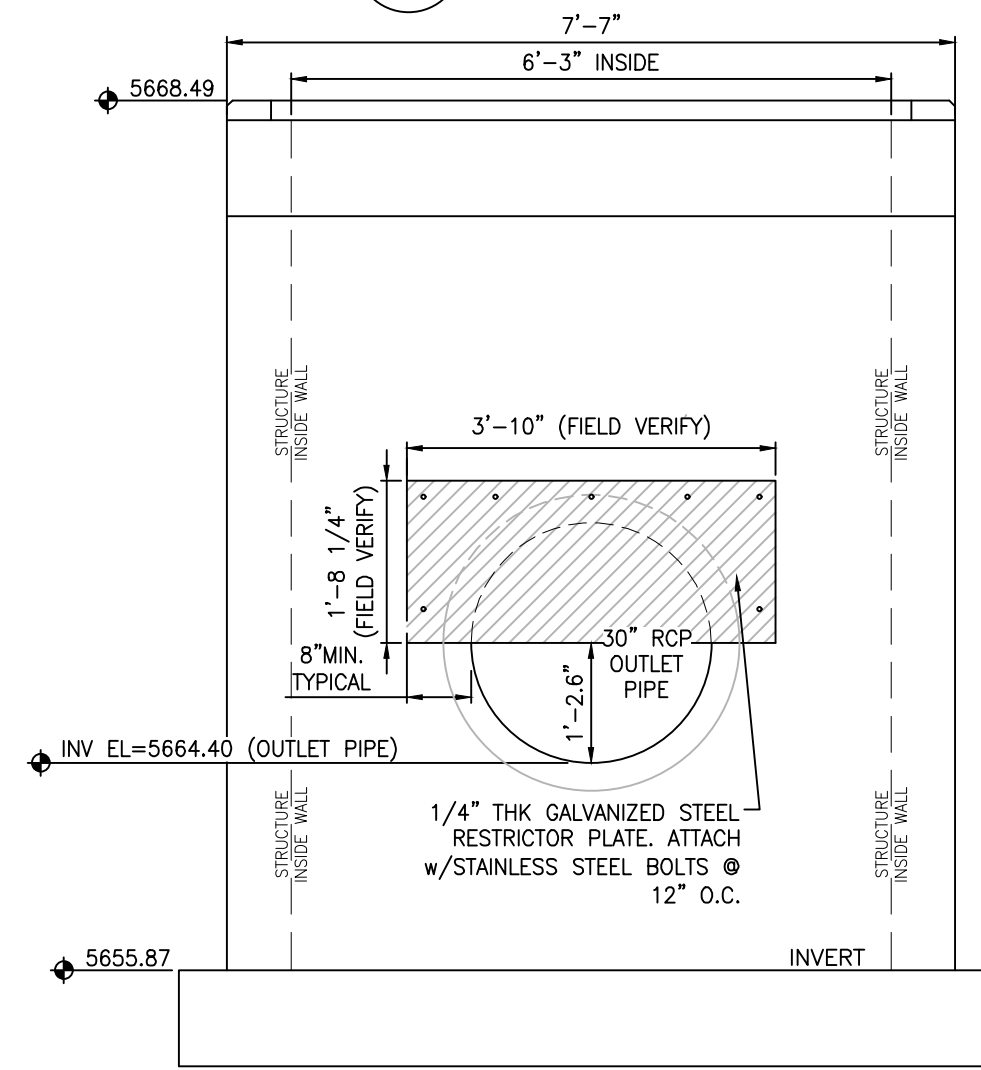
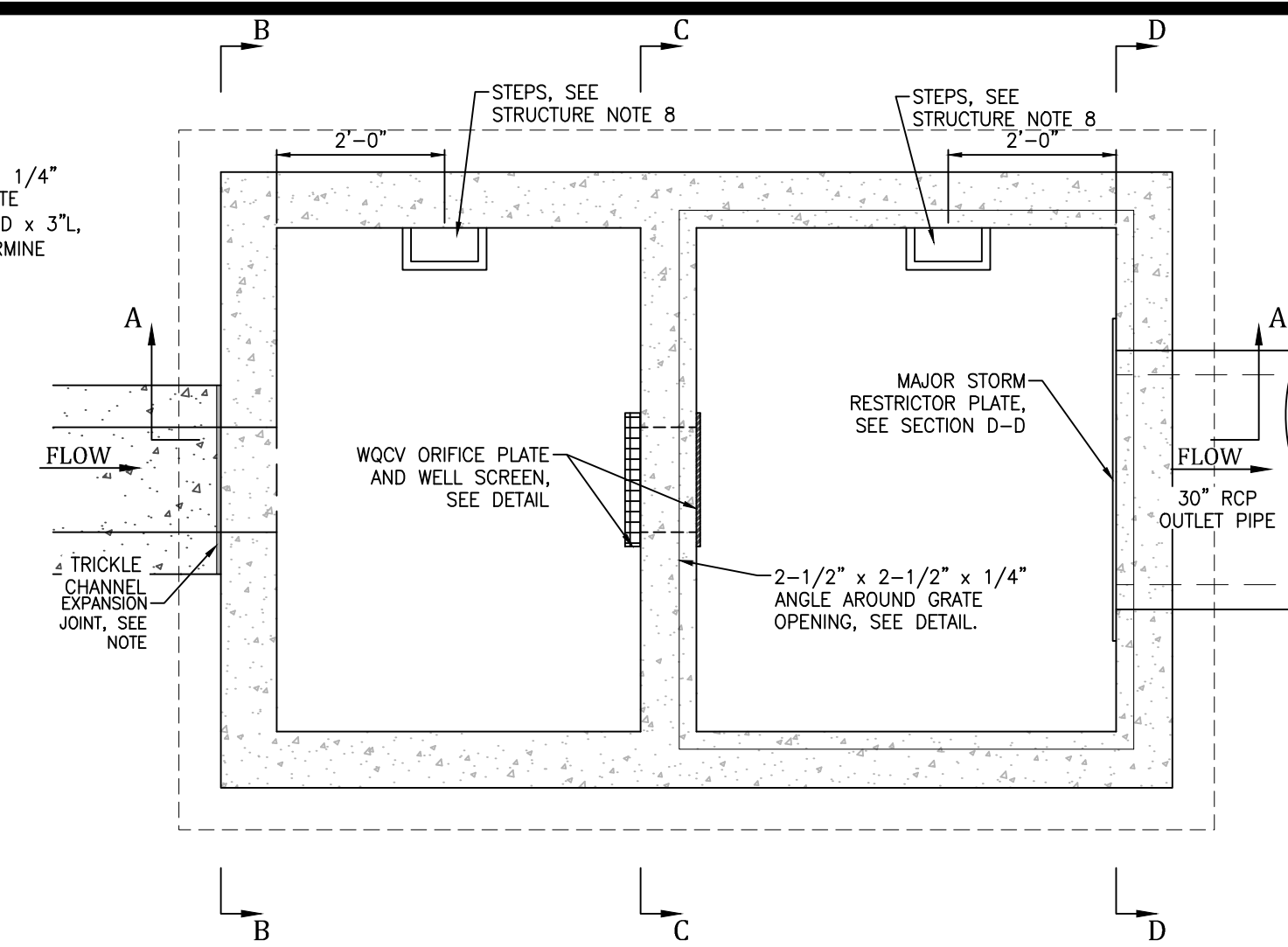
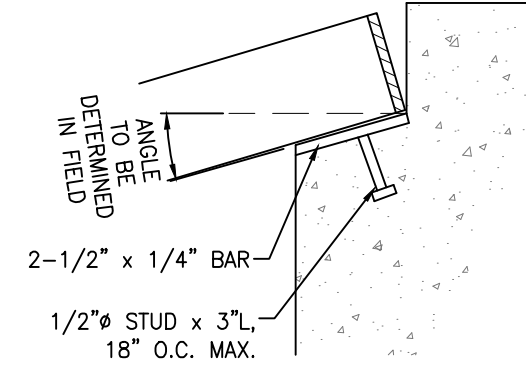
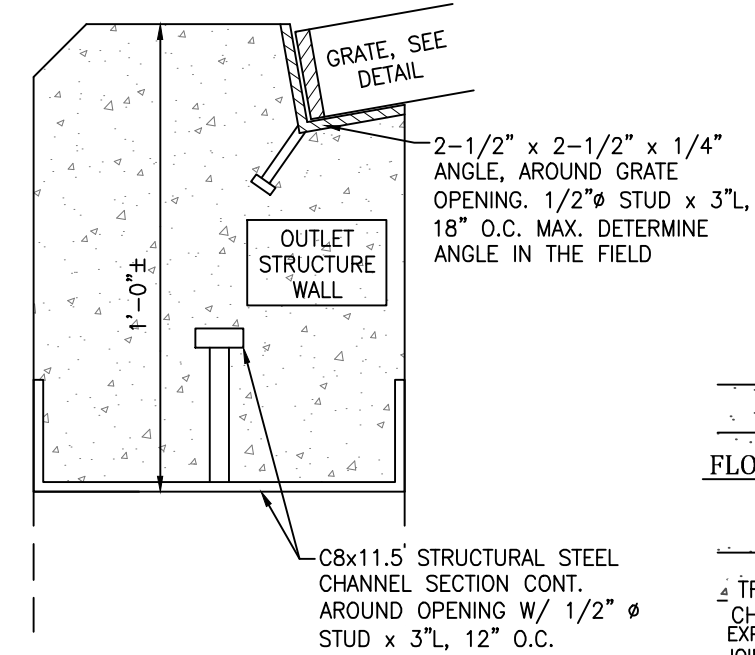
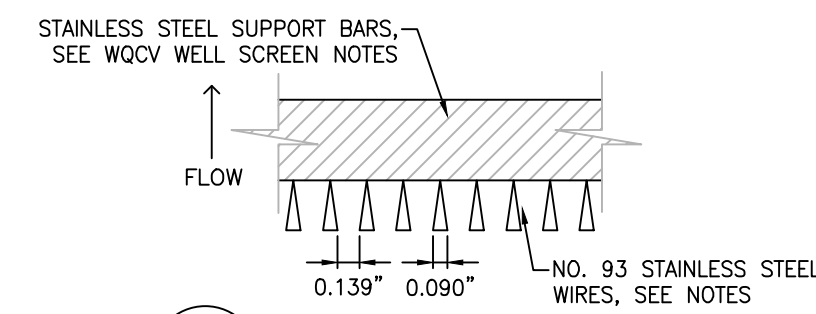
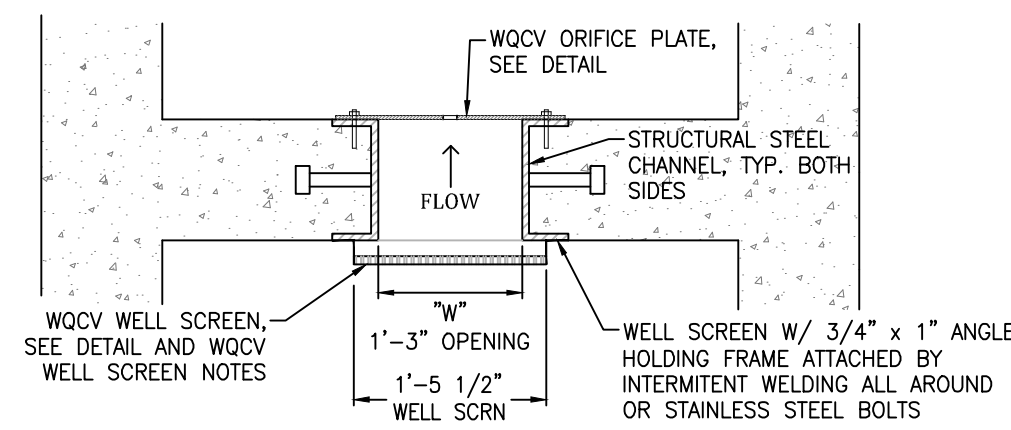
- STRUCTURE NOTES:**
- PRIOR TO CONSTRUCTION, CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
 - GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE 2-INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE AND 3-INCH MIN CLEARANCE TO EDGE OF CONCRETE PLACED AGAINST SOIL, UNLESS OTHERWISE NOTED.
 - CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAYS SHALL BE CDOT CLASS D CONCRETE.
 - EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213. EXPANSION JOINT MATERIAL SHALL BE 1/2" THICK, SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE AND THE JOINT SHALL BE SEALED. REFER TO DETAILS.
 - ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/4-INCH CHAMFER UNLESS OTHERWISE NOTED.
 - BACKFILLING AGAINST WALLS SHALL NOT COMMENCE UNTIL CONCRETE HAS OBTAINED ITS FULL SEVEN DAY STRENGTH.
 - SUBGRADE TO BE 12" THK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURES.
 - OUTLET STRUCTURE STEPS SHALL CONFORM TO AASHTO M199.
 - FOREBAY: CONSTRUCTION JOINTS SHALL BE INSTALLED AT 10' O.C. MAXIMUM. THE JOINTS SHALL BE SEALED WITH A JOINT SEALANT.



- GRATE AND ORIFICE PLATE NOTES:**
- GRATES AND ORIFICE PLATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE. GRATES TO BE BOLTED DOWN TO OUTLET STRUCTURE 18" O.C.
 - GRATES AND ORIFICE PLATES SHALL BE STAINLESS STEEL, ALUMINUM OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND HOT POWDER PAINTED AFTER GALVANIZED.
 - FIELD VERIFY GRATE DIMENSION PRIOR TO FABRICATION.

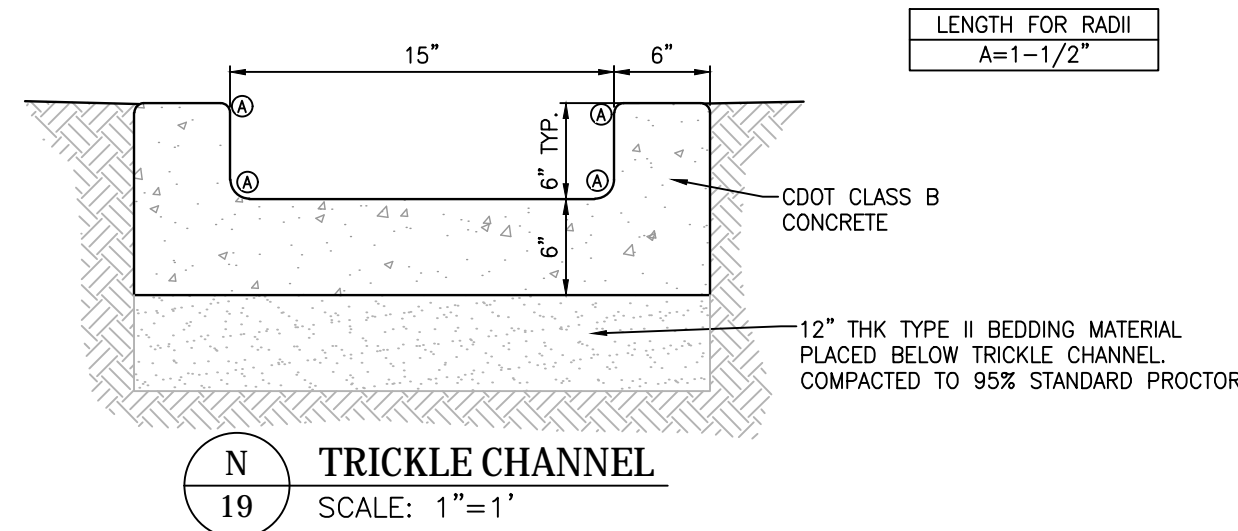
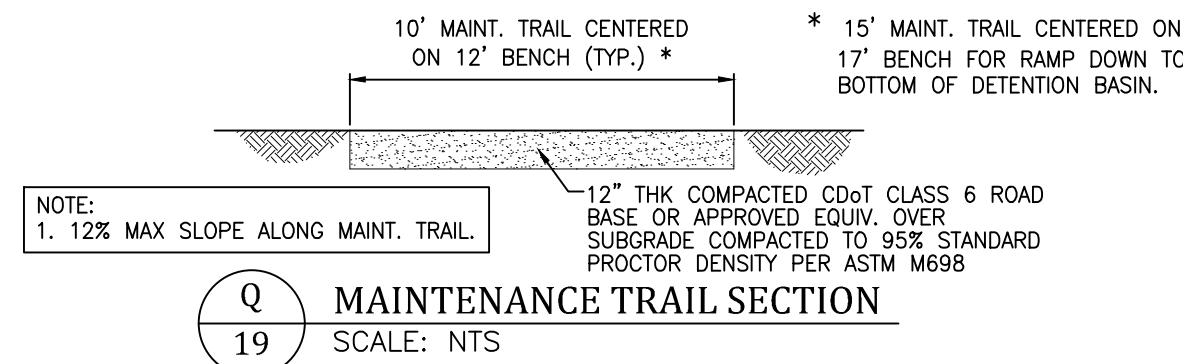
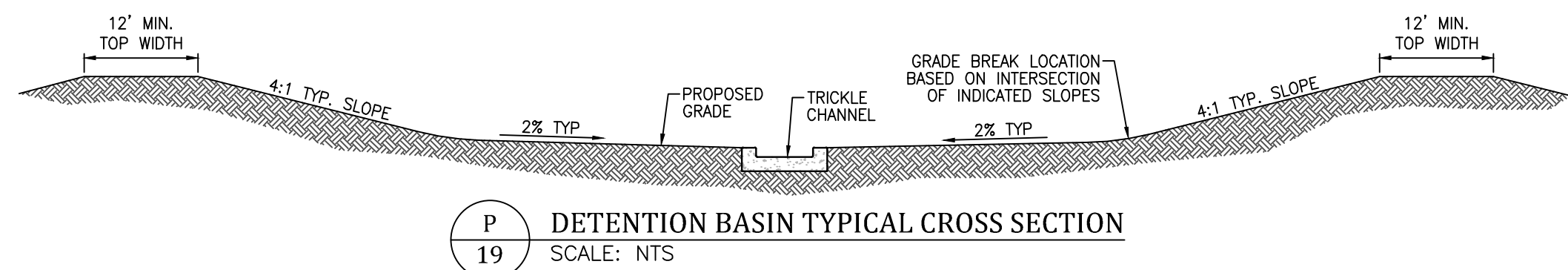


- WQCV WELL-SCREEN NOTES:**
- WELL-SCREEN SHALL BE STAINLESS STEEL AND ATTACHED BY INTERMITTANT WELDS OR STAINLESS STEEL BOLTS ALONG EDGE OF THE MOUNTING FRAME.
 - WQCV WELL-SCREEN
 - TYPE OF SCREEN: STAINLESS STEEL #93 VEE WIRE (JOHNSON VEE WIRE TM STAINLESS STEEL SCREEN OR EQUIVALENT WITH 60% OPEN AREA)
 - SCREEN SLOT OPENING DIMENSION: 0.139" (SCREEN #93 VEE WIRE SLOT OPENING)
 - TYPE AND SIZE OF SUPPORT ROD: TE 0.074"x0.50"
 - SPACING OF SUPPORT ROD (O.C.): 1.0 INCH
 - TOTAL SCREEN THICKNESS: 0.655"
 - CARBON STEEL HOLDING FRAME TYPE: 3/4" x 1.0" ANGLE



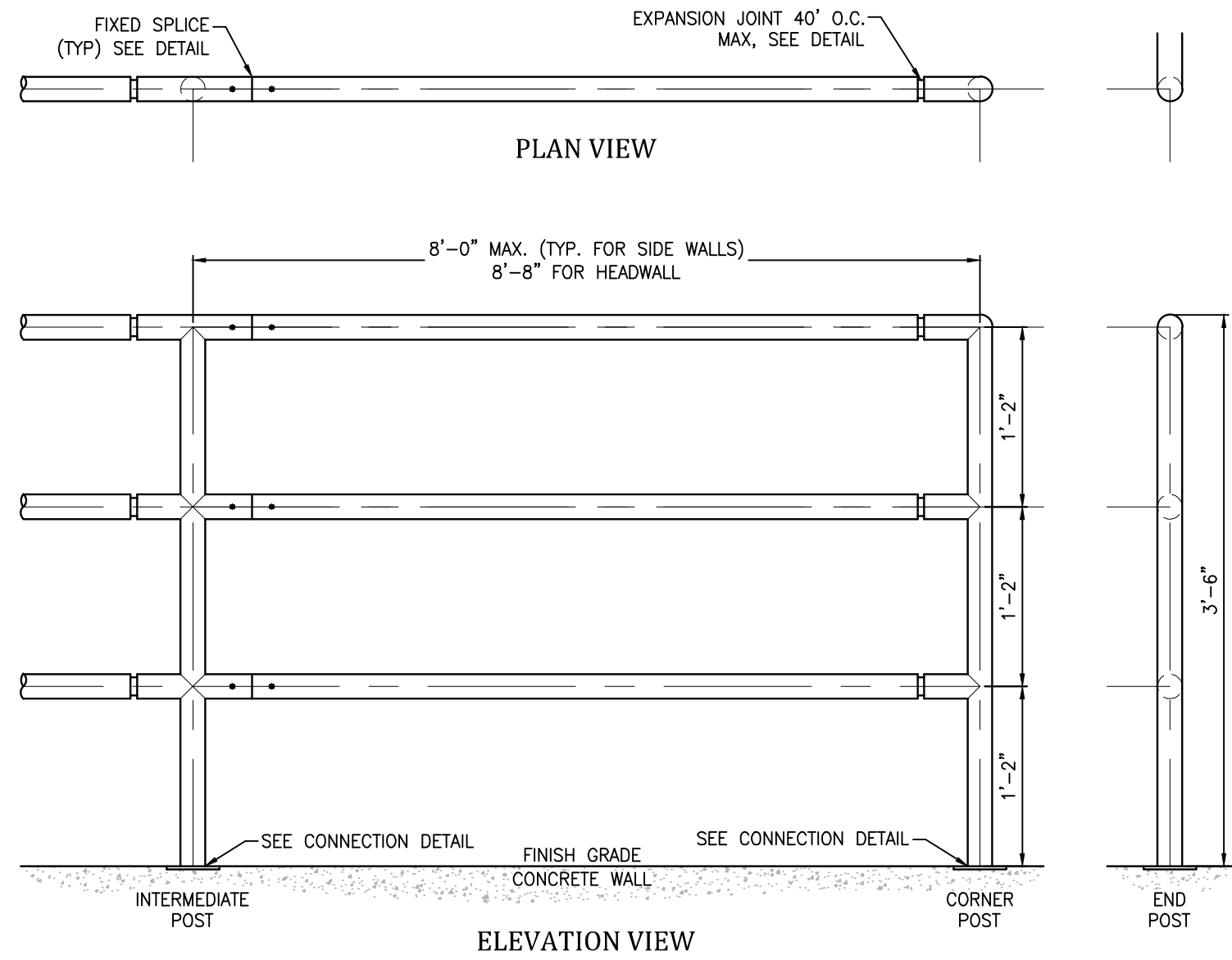
GLEN AT WIDEFIELD FILING NO. 9
SITE DETAIL PLAN
DETENTION BASIN DETAILS
EL PASO COUNTY, COLORADO

Project No.:	17038
Date:	September 25, 2018
Design:	JAK
Drawn:	JAK
Check:	AWMc
Revisions:	

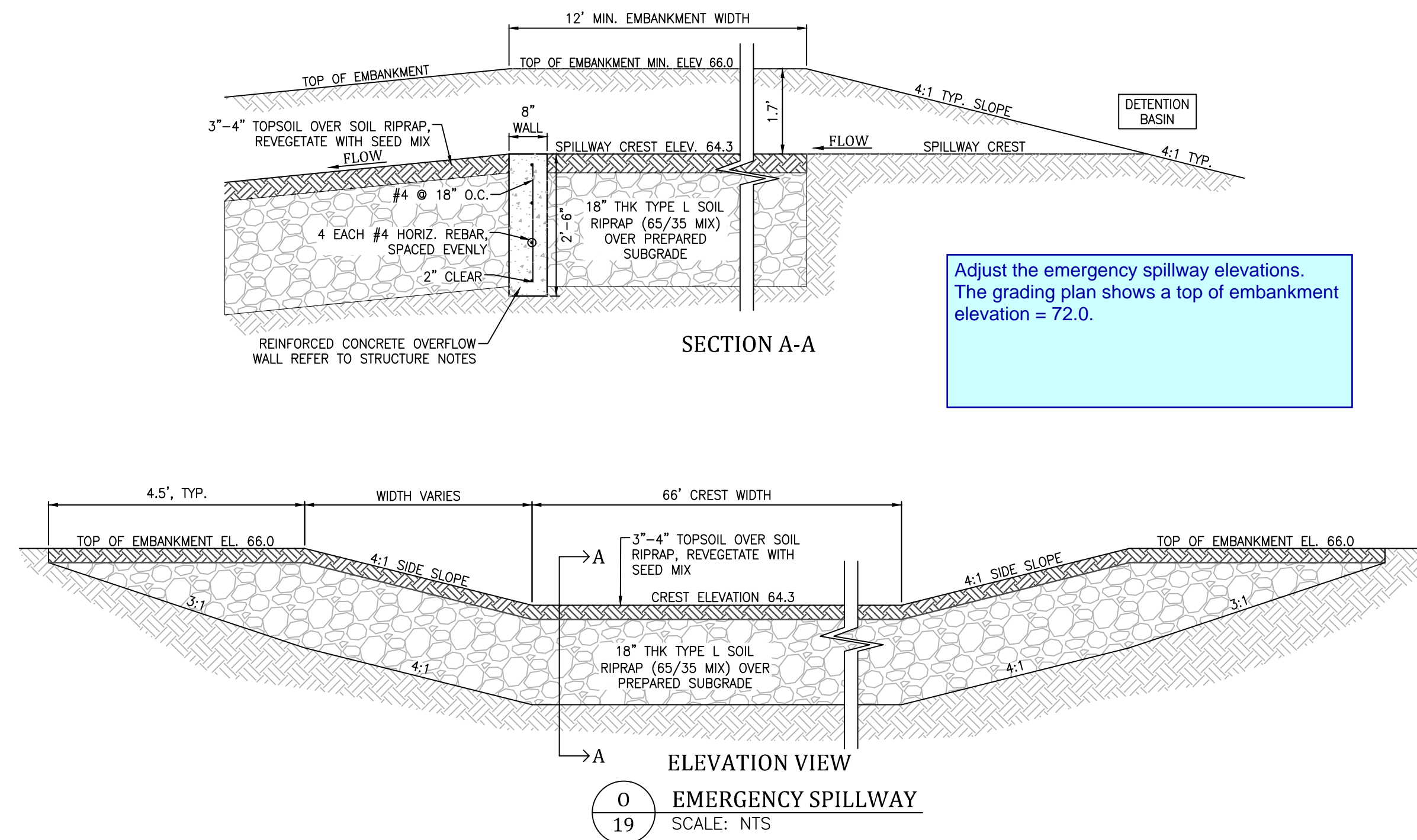
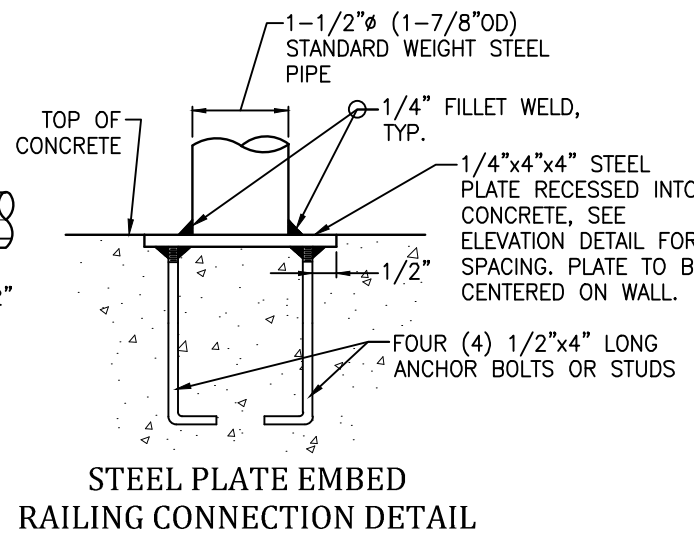
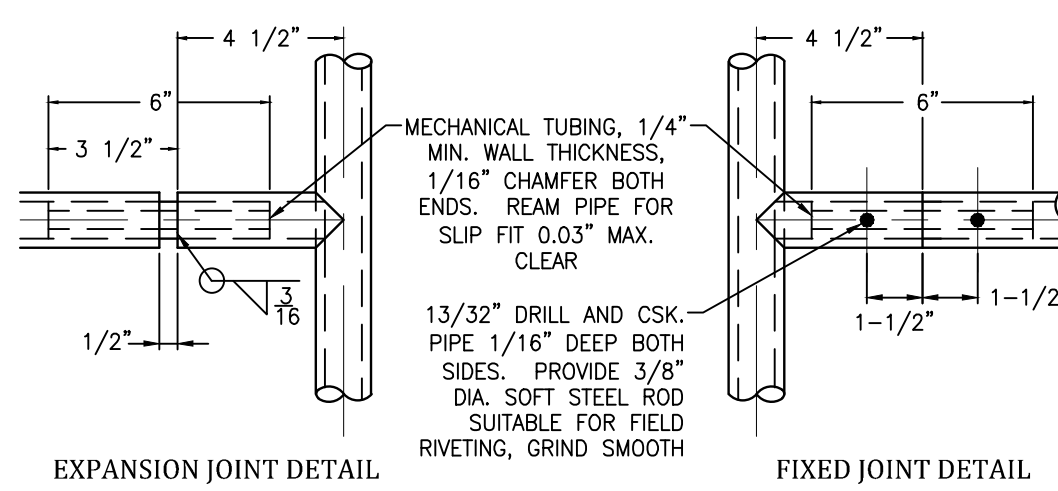
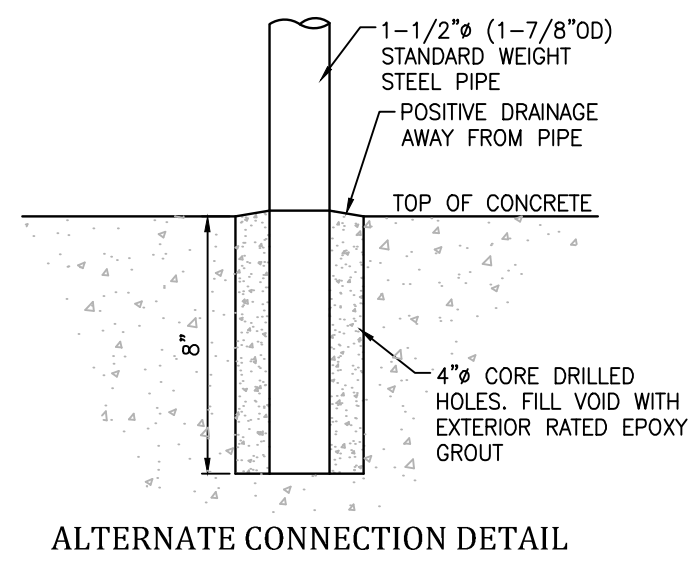


CLASSIFICATION AND GRADATION OF RIPRAP			
Rip-Rap Designation	% Smaller than Given Size by Weight	Intermediate Rock Dimension (Inches)	d ₅₀ * (Inches)
Type VL	70-100	12	6**
	50-70	9	
	35-50	6	
Type L	70-100	15	9**
	50-70	12	
	35-50	9	
Type M	70-100	21	12**
	50-70	18	
	35-50	12	
Type L	70-100	4	18
	50-70	30	
	35-50	24	
	2-10	6	

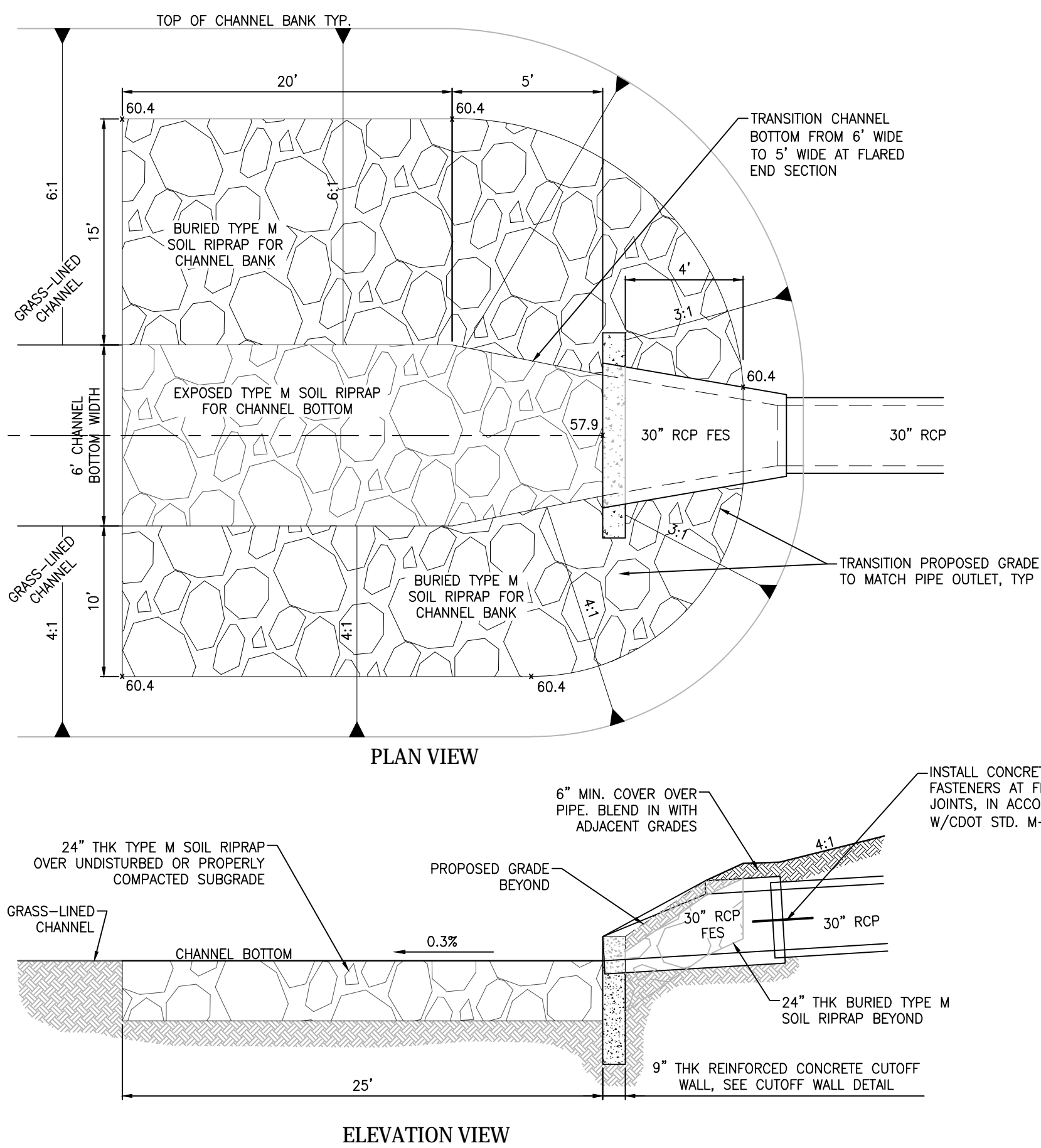
* d₅₀ = Mean particle size (Intermediate Dimension) by weight.
 ** Mix VL, L and M Rip-rap with 35% topsoil (by volume) and bury with 4-6 inches of topsoil, all vibration compacted and revegetate. (Figure B-34: Riprap and Soil Riprap Placement and Gradation, UDFCD, Drainage Criteria Manual, Volume 1)



- PEDESTRIAN RAILING/HANDRAIL NOTES:**
- ALL HANDRAIL SHALL BE FABRICATED WITH NEW 1-1/2" (1-7/8" OD) DIAMETER STANDARD WEIGHT STEEL PIPE.
 - WELD ALL PIPE JOINTS WITH 1/8" REINFORCED WELDS AND DRESS SMOOTH. CORNERS AND EDGES OF ALL BARS, PLATES AND PIPE ENDS SHALL BE Sanded SMOOTH AND FREE OF BURRS.
 - ALL HANDRAIL MATERIAL REQUIRED FOR COMPLETE INSTALLATION SHALL BE PROVIDED.
 - HANDRAIL FINISH SHALL BE ONE COAT METAL PRIMER AND TWO COATS SHERWIN WILLIAMS BRIDGE GREEN. COLOR SHALL BE VERIFIED BY COUNTY. CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION.
 - RAILING BETWEEN HEADWALL AND WINGWALL SHALL BE SEPARATE OR AN EXPANSION JOINT SHALL BE PROVIDED TO ALLOW FOR DIFFERENTIAL MOVEMENT.

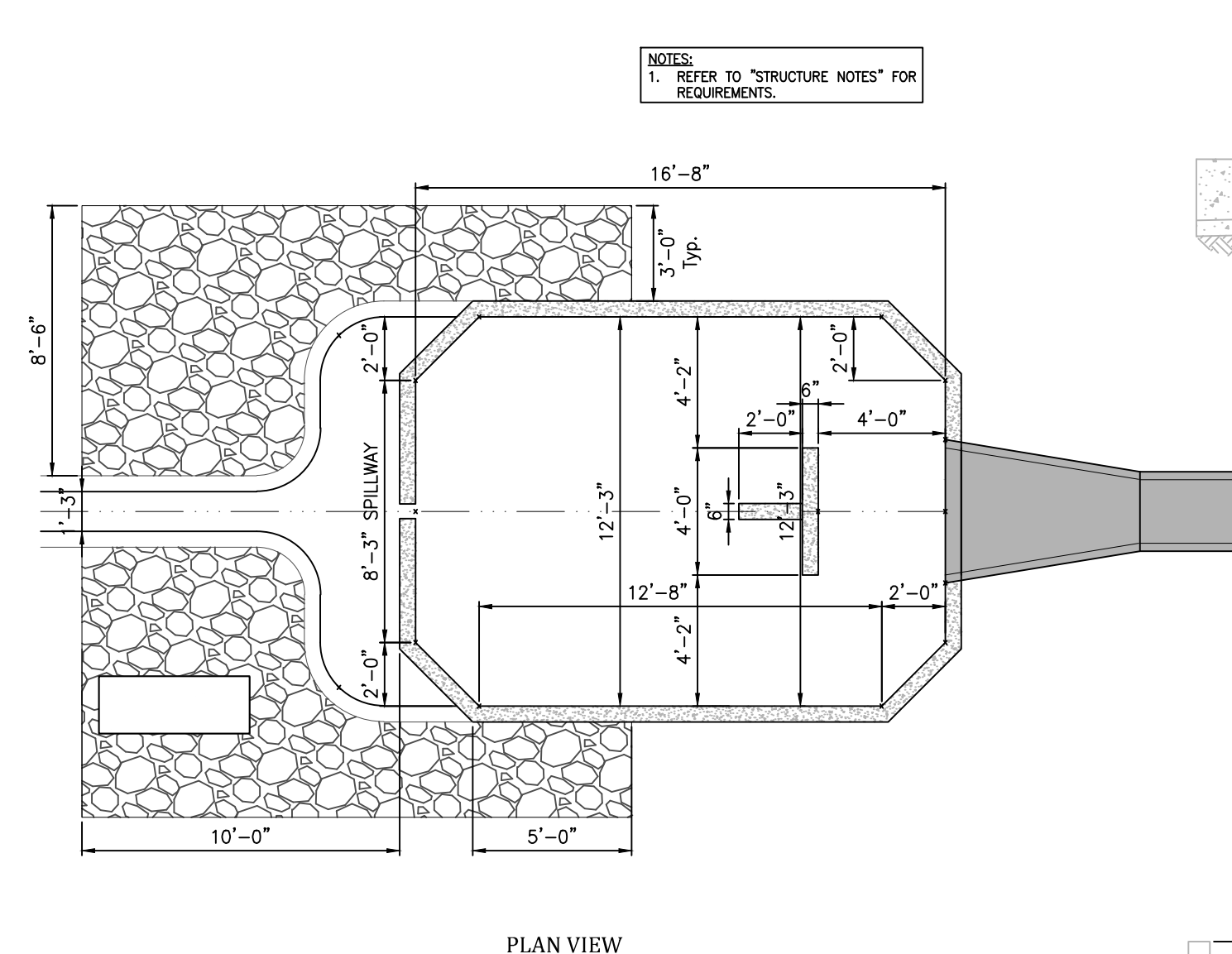
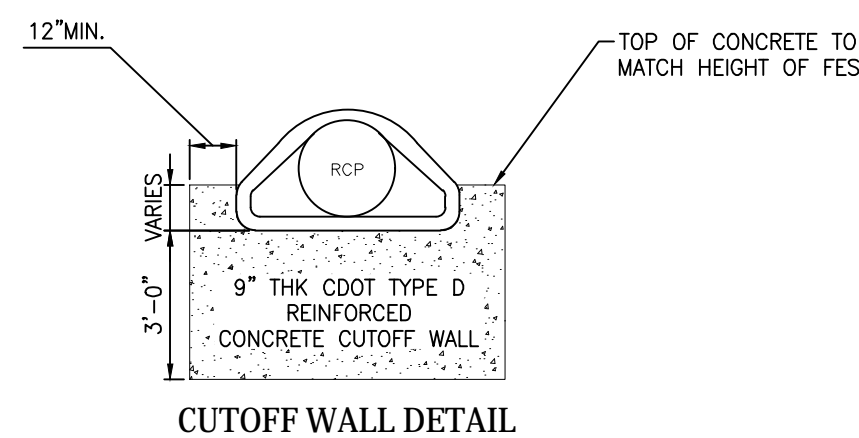


Adjust the emergency spillway elevations. The grading plan shows a top of embankment elevation = 72.0.

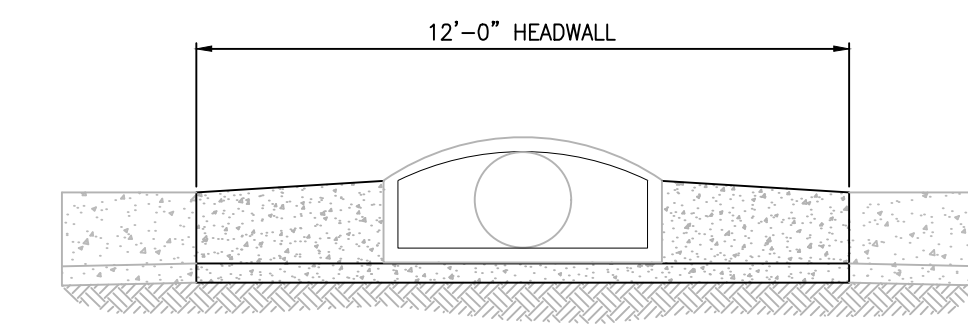


D 19 30" RCP FES PIPE OUTLET w/ CONCRETE CUTOFF WALL AND JOINT RESTRAINTS
SCALE: NTS

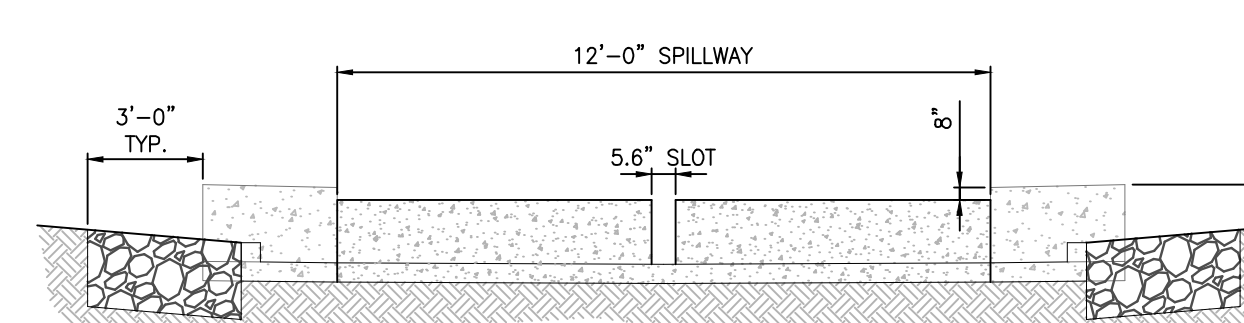
- NOTE:**
- STEEL REINFORCEMENT FOR CUTOFF WALL SHALL BE #4 BARS AT 12" O.C. EACH WAY. STEEL REINFORCEMENT CLEARANCES SHALL BE 2" TO FORMED SURFACES AND FES, AND 3" TO SOIL.



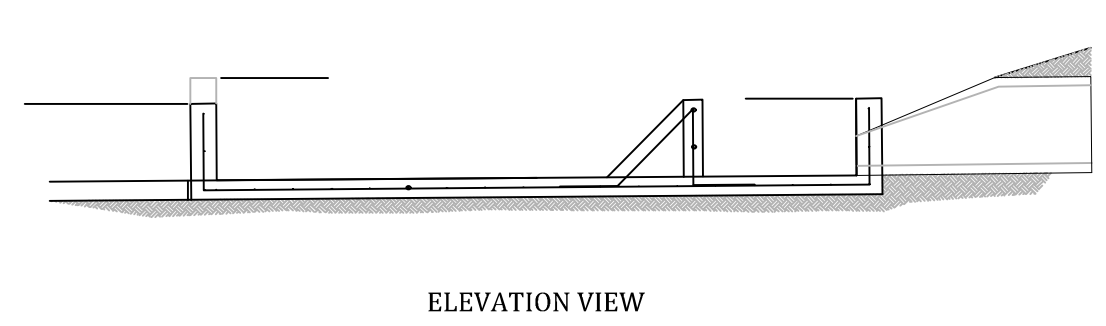
R 19 PRESEDIMENTATION FOREBAY
SCALE: NTS



SECTION C-C



SECTION B-B



ELEVATION VIEW

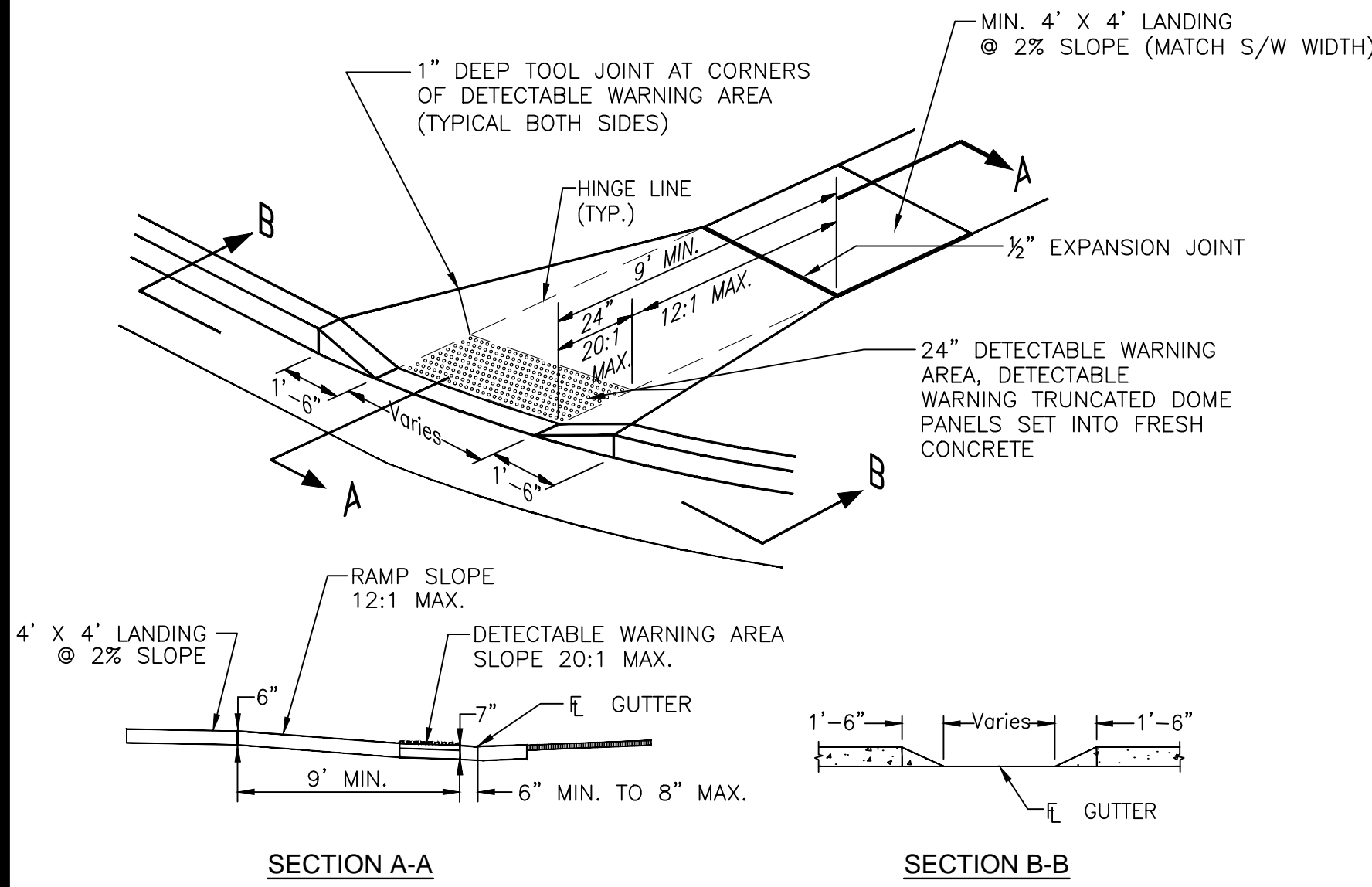
GLEN AT WIDEFIELD FILING NO. 9
SITE DETAIL PLAN
DETENTION BASIN DETAILS
EL PASO COUNTY, COLORADO

Project No:	17038
Date:	September 25, 2018
Design:	JAK
Drawn:	JAK
Check:	AWMc
Revisions:	

GENERAL NOTES

EXPANSION JOINTS SHALL BE INSTALLED WHEN ABUTTING EXISTING CONCRETE OR FIXED STRUCTURE. EXPANSION JOINT MATERIAL SHALL BE 1/2" THICK AND SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE.

CONCRETE SHALL BE PER EL PASO COUNTY ENGINEERING DIVISION SPECIFICATIONS.

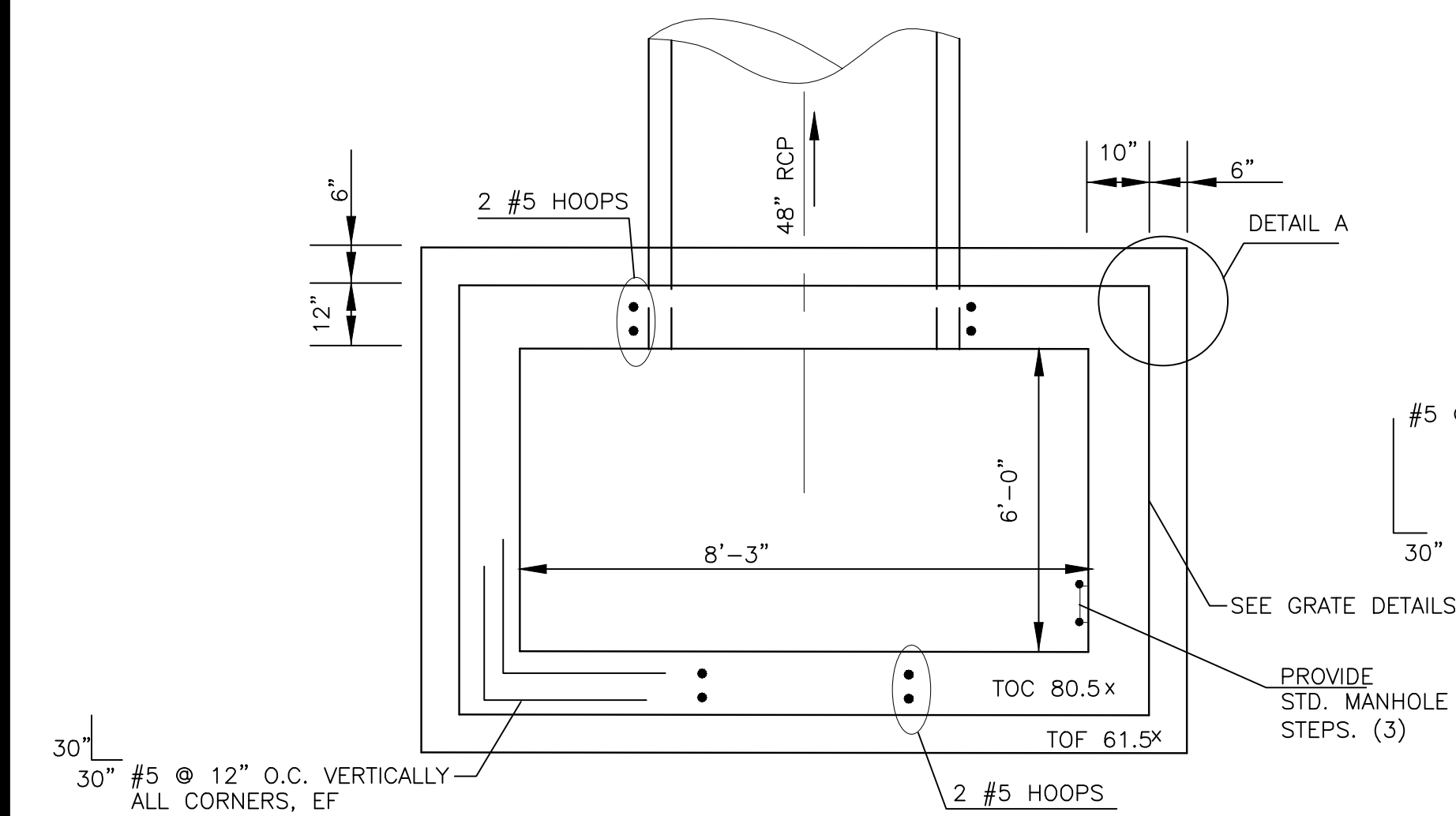


PEDESTRIAN RAMP DETAILS

EPC STD. SD_2-40
NOT TO SCALE

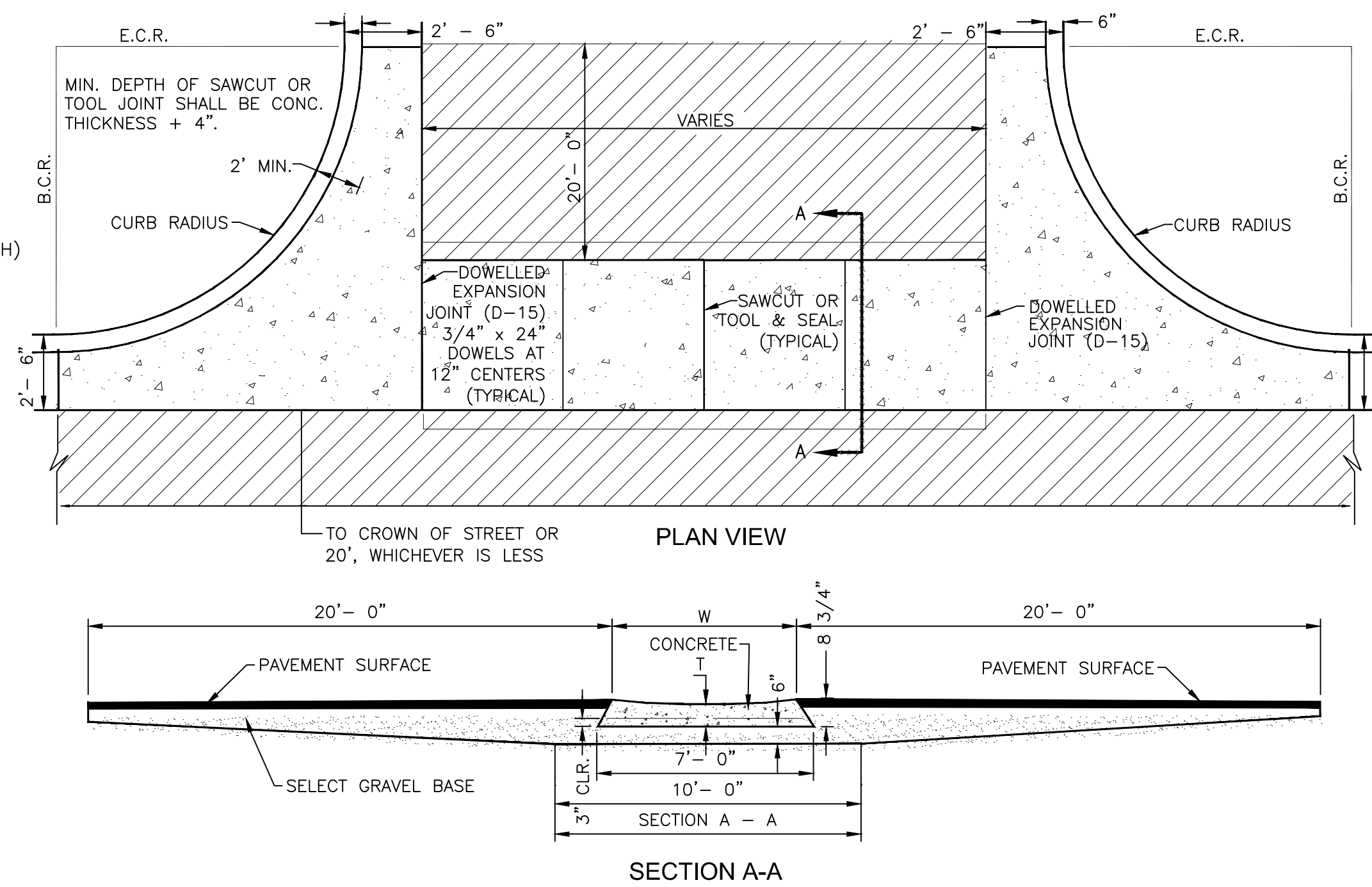
GENERAL NOTES

- All work shall be done in accordance with current Engineering Manual and ADA requirements.
- Contractor to notify Engineering Division inspection staff 48 hours prior to concrete placement.
- Pedestrian ramp construction shall be a minimum 3000 psi concrete, minimum 4" thick, non-colored, non-scored, coarse broom finish.
- Ramp location and length may require modification to maintain the 12:1 maximum running ramp slope and 20:1 detectable warning area due to street intersection grades and / or alignment.
- Detectable warning area shall start a minimum of 6" but not more than 8" from the flow line of the curb at any point.
- Detectable warning area shall be prefabricated reddish integrally colored truncated-dome surfaced thermoplastic.
- The detectable warning area shall be 24" in length and the full width of the ramp.
- Ramp width required is the same as approaching sidewalk, 4" minimum.
- all ramps will be perpendicular to traffic with the exception of mid-block or terminal ramps which may be parallel subject to approval.
- Avoid placing drainage structures, traffic signal / signage, utilities / junction boxes, or other obstructions within proposed ramp areas.
- Where the 1'-6" flared side(s) of a perpendicular curb ramp is (are) contiguous with a pedestrian or hard surface area, the flare width shall be increased to 8' minimum and the maximum flare slope shall not exceed 10:1.
- Pedestrian walkway and / or location of existing or future pedestrian ramps on opposite corners shall be reviewed before construction new ramps. New ramps shall align with existing ramps and pedestrian walkway.
- At marked pedestrian crossings, the bottom of the ramps, exclusive of the flare sides, shall be totally contained within the markings.
- Sidewalk cross-slope: 1/4"/ft.
- Concrete mix design shall conform to the requirements of the color admixture manufacturer and the following:
 - 28-day compressive strength = 4,000 PSI (min.)
 - Water/cement ratio = 0.45 (max.)
 - Cement content = 6-1/2 sacks/C.Y. (min.) (Type II cement)
 - Maximum aggregate size = 3/4"
 - Entrained air content = 6% - 10%
 - Slump = 1 inch (min.) - 4 inches (max.)



**AREA INLET STA. 14+10.75, 12.94'LT
SPRING GLEN DRIVE**

NTS

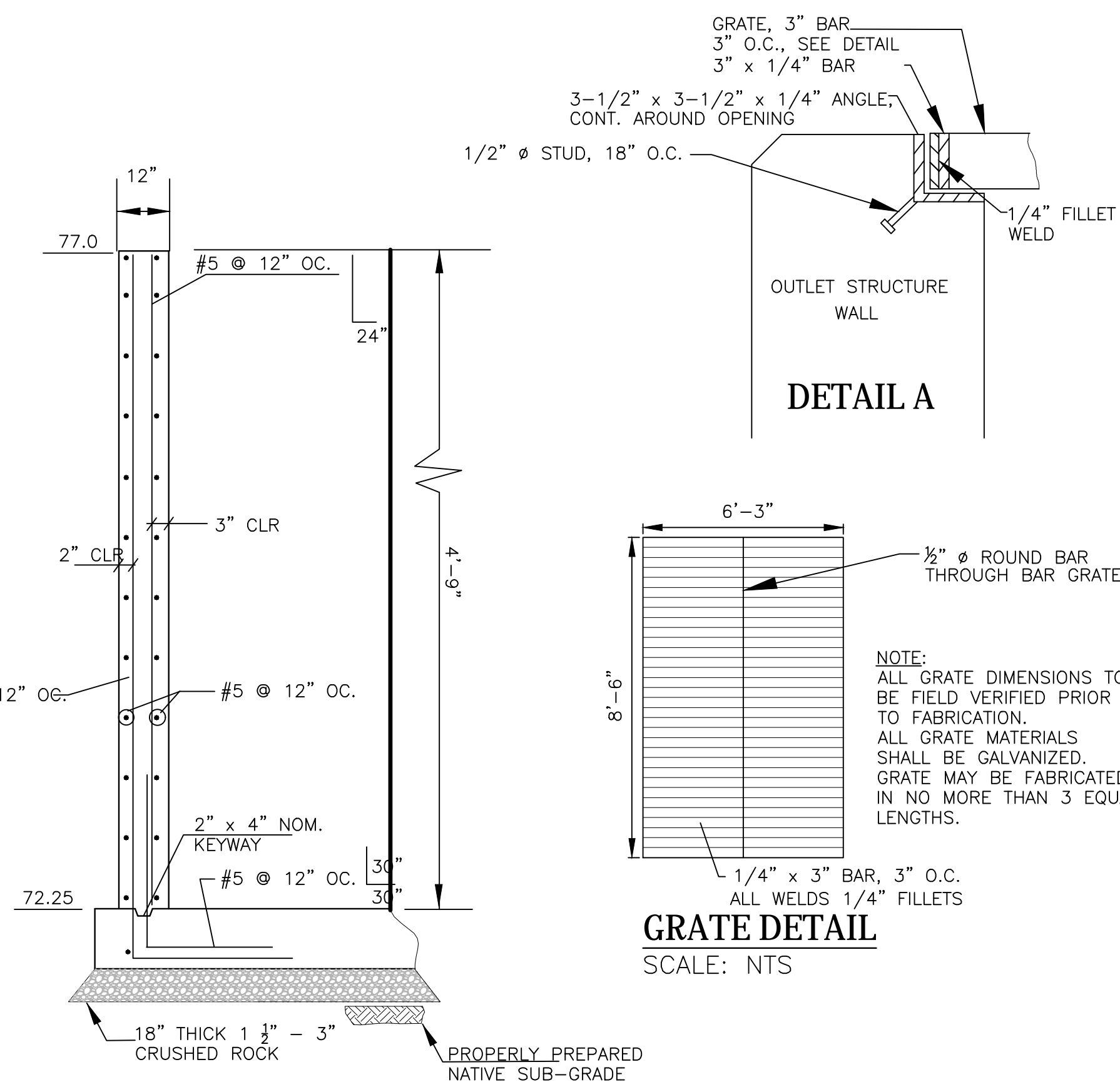


NOTES

- W - WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.
- T - SQUARED-OFF RETURN TO BE POURED MONOLITHIC 8" P.C.C. MINIMUM WITH 6x6 - 4.4 W.W.F. OR #4 @ 18" E.W.
- [Hatched symbol] = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).
- DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR

CROSS PAN DETAIL

EPC STD. SD_2-26
NOT TO SCALE

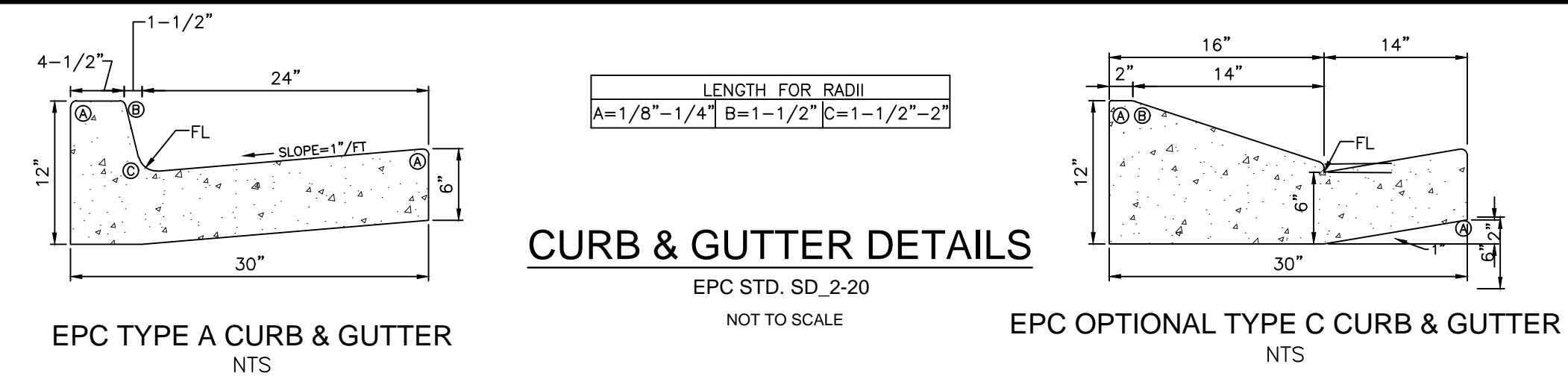


GRATE DETAIL

SCALE: NTS

TYPICAL WALL SECTION

1"=2'

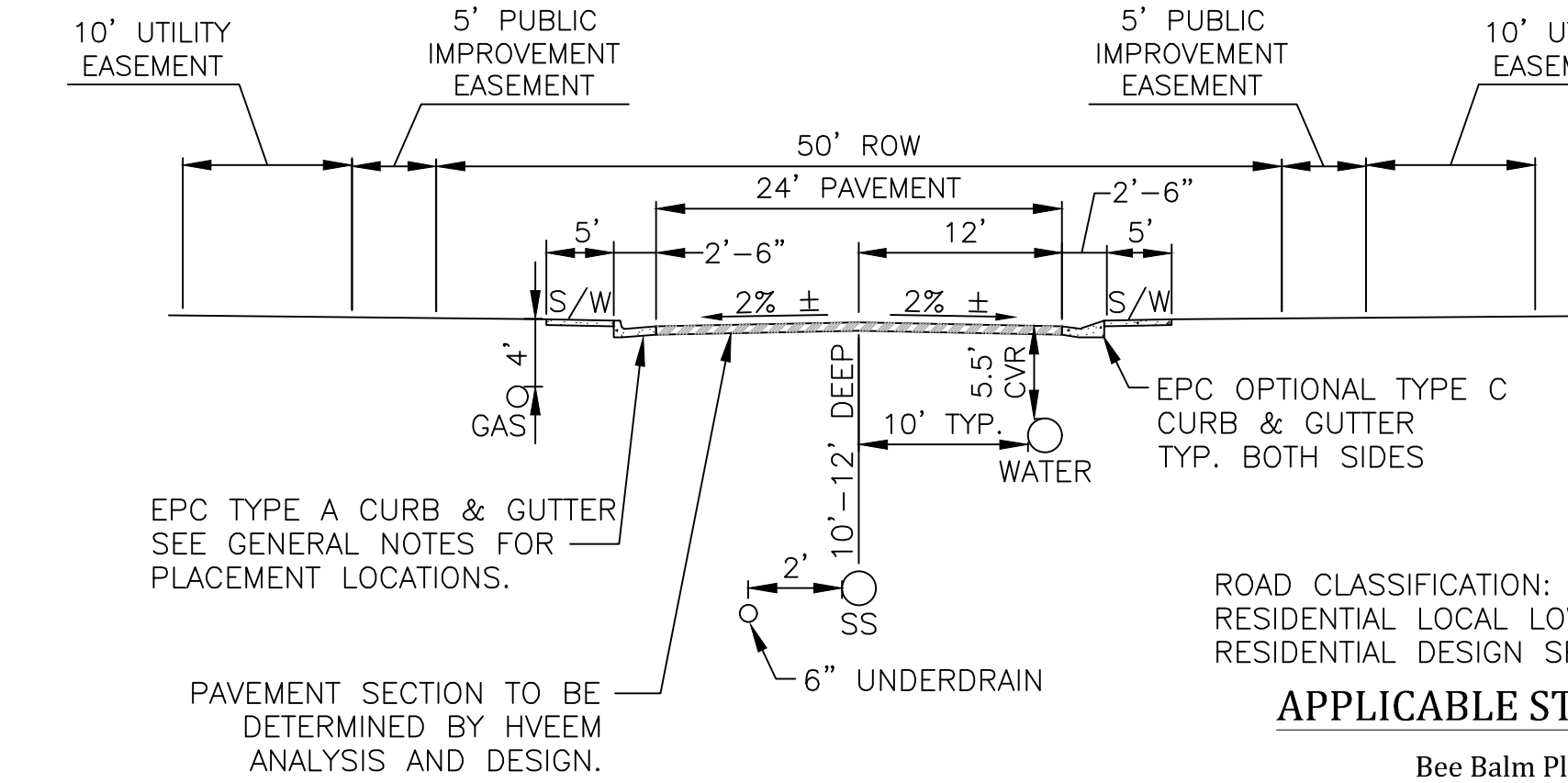


EPC TYPE A CURB & GUTTER

NTS

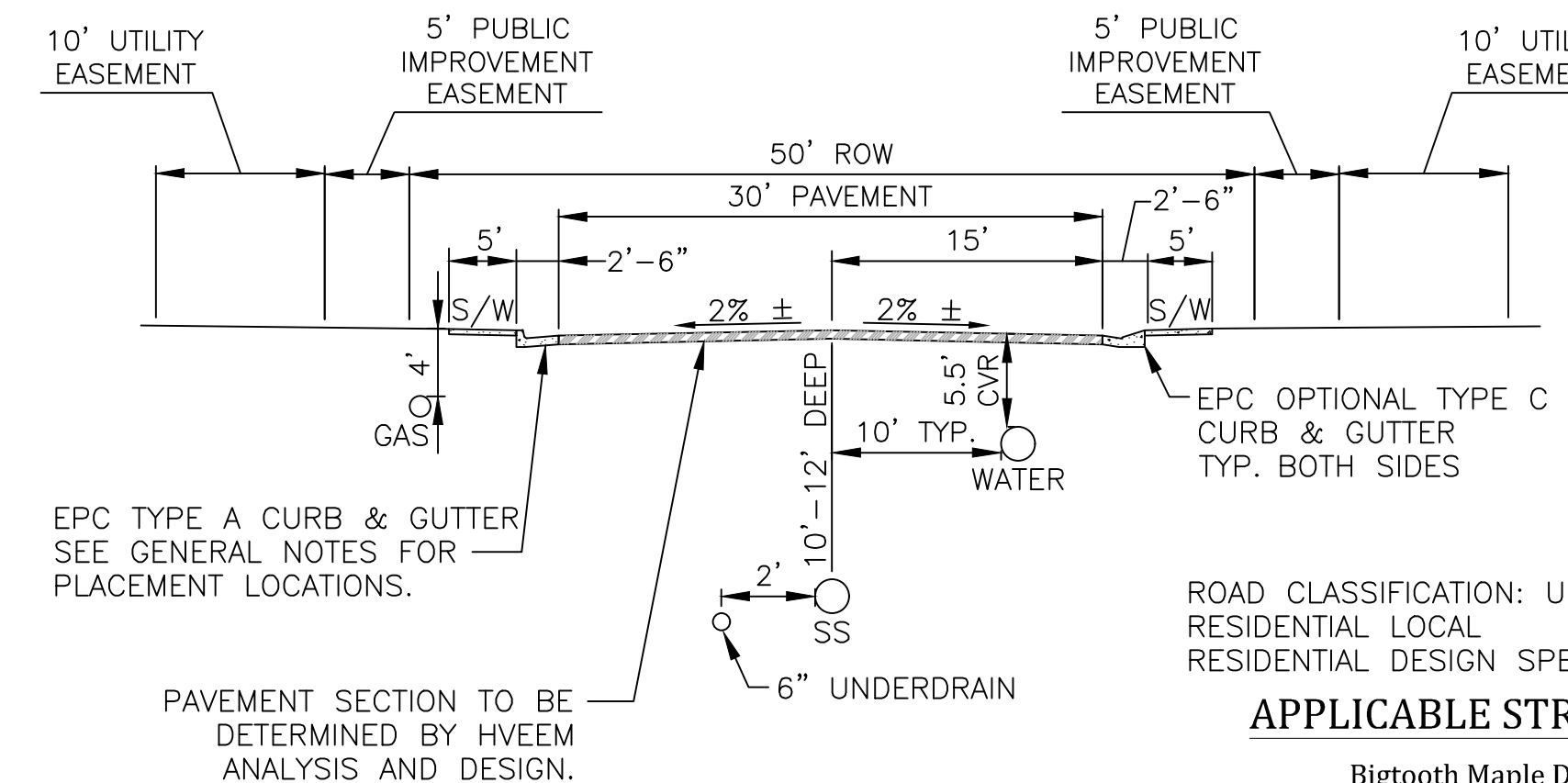
EPC OPTIONAL TYPE C CURB & GUTTER

NTS



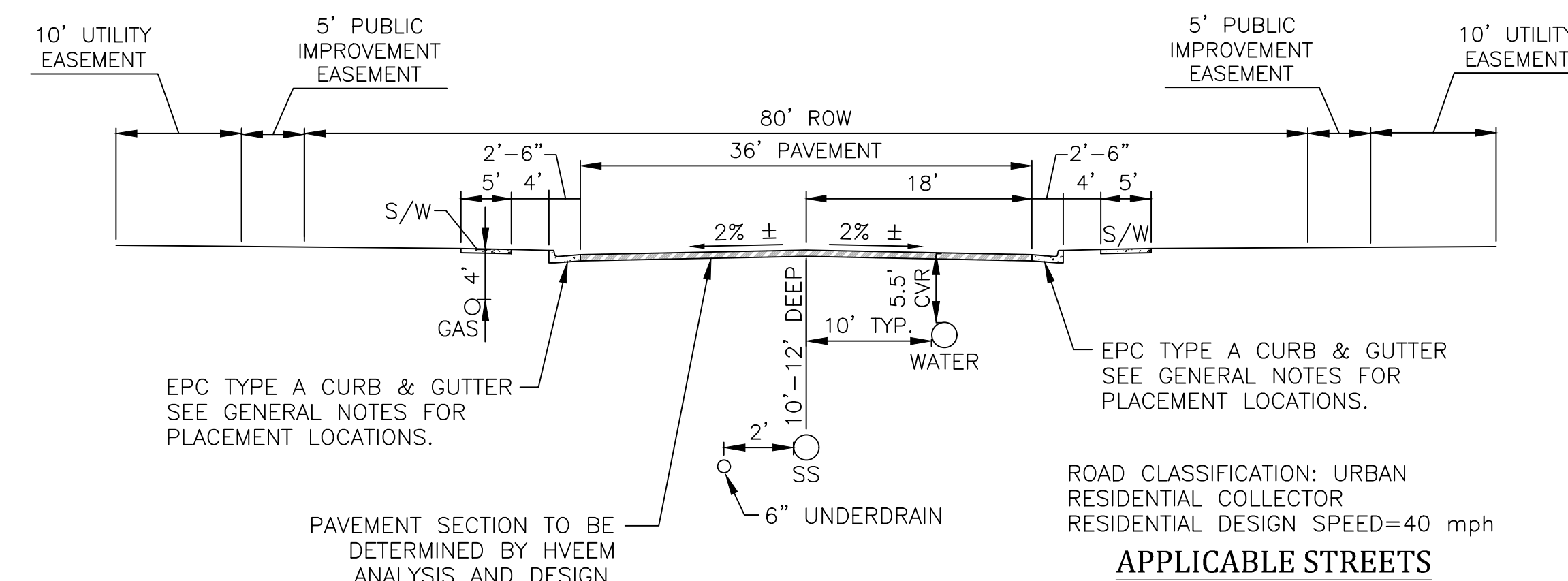
**TYPICAL STREET SECTION
GLEN AT WIDEFIELD FILING NO. 9**

NOT TO SCALE



**TYPICAL STREET SECTION
GLEN AT WIDEFIELD FILING NO. 9**

NOT TO SCALE



**TYPICAL STREET SECTION
GLEN AT WIDEFIELD FILING NO. 9**

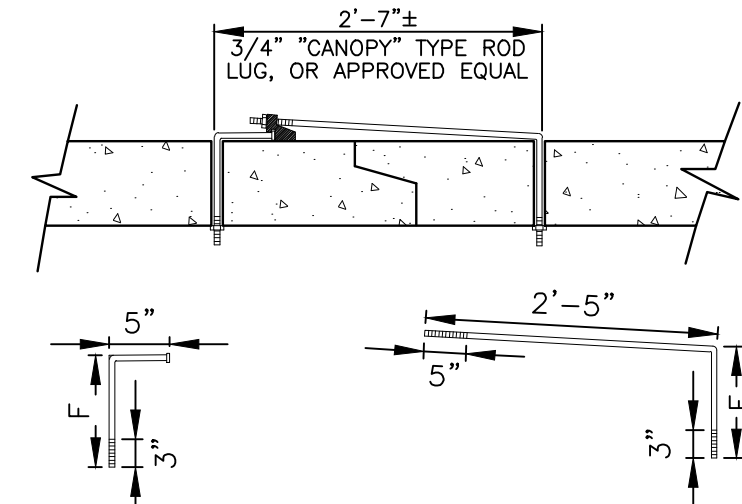
NOT TO SCALE

Project No.:	17038
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Revisions:	

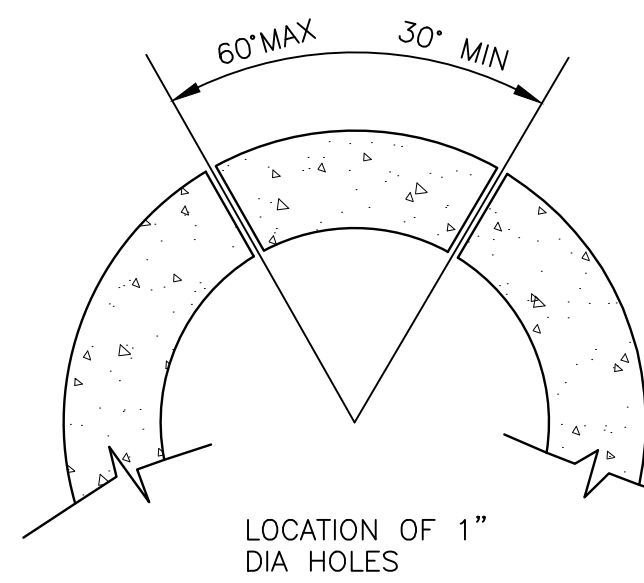
SHEET

UNDERDRAIN NOTES

1. UNDERDRAIN TO BE CONSTRUCTED WHERE INDICATED BY A DASHED LINE (---).
2. SOLID DRAIN PIPE WILL BE USED IN AREAS AS SHOWN ON THE PLANS AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
3. ALL UNDERDRAIN CONSTRUCTION SHALL CONFORM WITH THE LATEST CITY OF COLORADO SPRINGS STANDARDS.
4. ENGINEERING FABRIC TO HAVE A MINIMUM 12-INCH OVERLAP ABOVE UNDERDRAIN GRANULAR FILL.
5. UNDERDRAIN PIPE TO BE CONSTRUCTED WITH THE TOP OF PIPE EQUAL TO OR BELOW THE BOTTOM OF THE SANITARY SEWER PIPE.
6. GEOTECHNICAL ENGINEER TO DETERMINE EXTENT OF ACTIVE/PASSIVE UNDERDRAIN DEPENDING UPON CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
7. THE CONNECTION BETWEEN THE ACTIVE AND PASSIVE PORTIONS OF THE UNDERDRAIN SYSTEM IS TO BE CONSTRUCTED WITH A NON-PERMEABLE BARRIER SO THAT ALL COLLECTED GROUNDWATER IS DIRECTED INTO THE PASSIVE PIPE SECTION.



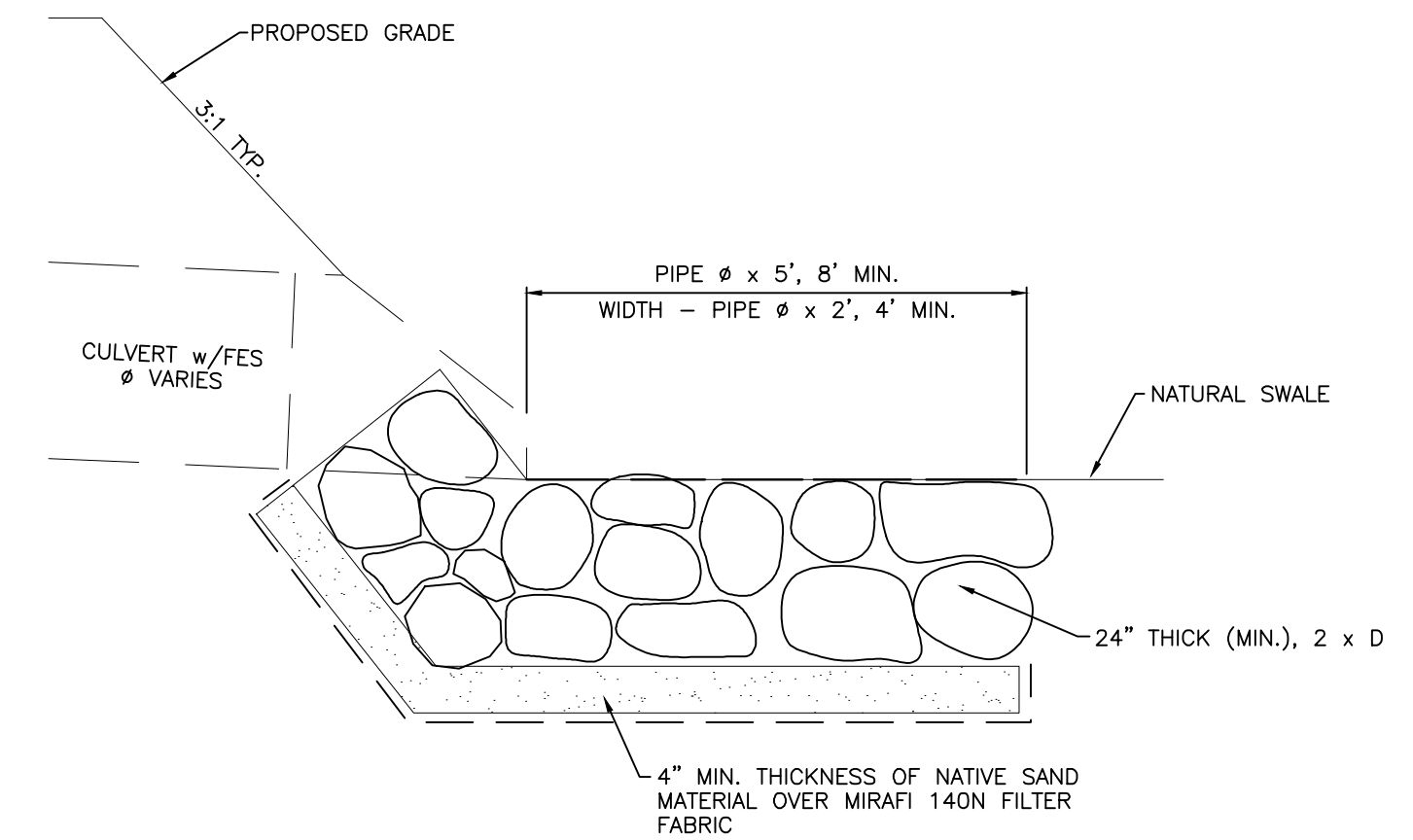
3/4" GALVANIZED ANCHOR BOLTS, NUTS AND WASHERS, MILD STEEL, ASTM A 307, ROD LUG SHALL BE COATED WITH COAL-TAR, EPOXY PAINT OR APPROVED EQUAL.



LOCATION OF 1" DIA HOLES

NOTE:
CONCRETE JOINT FASTENERS REQUIRED ON THE FIRST TWO PIPE JOINTS FROM A FLARED END SECTION.

PIPE DIAMETER	F
18"-30"	5"
36"-42"	6"
48"-60"	7"
72"-84"	9"

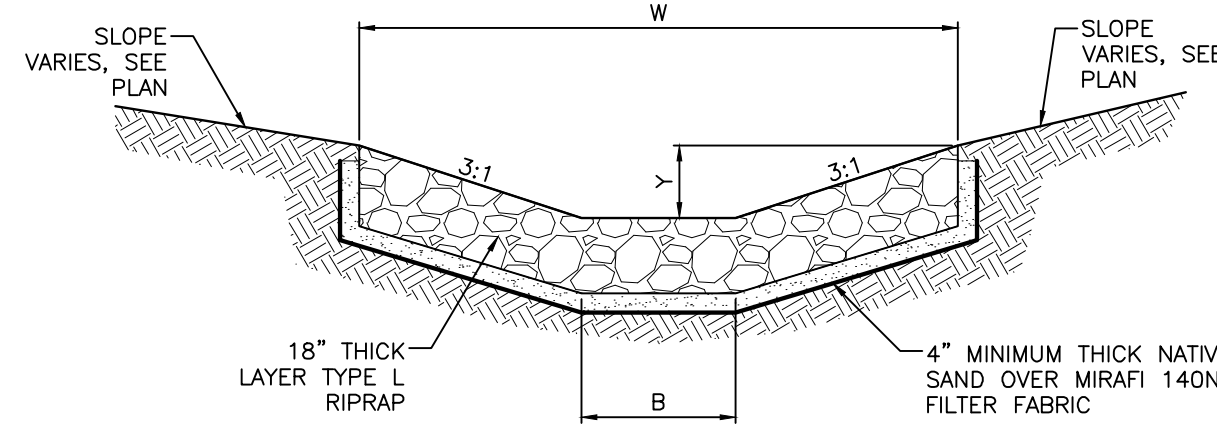


TYPICAL CULVERT OUTLET PROTECTION
NOT TO SCALE

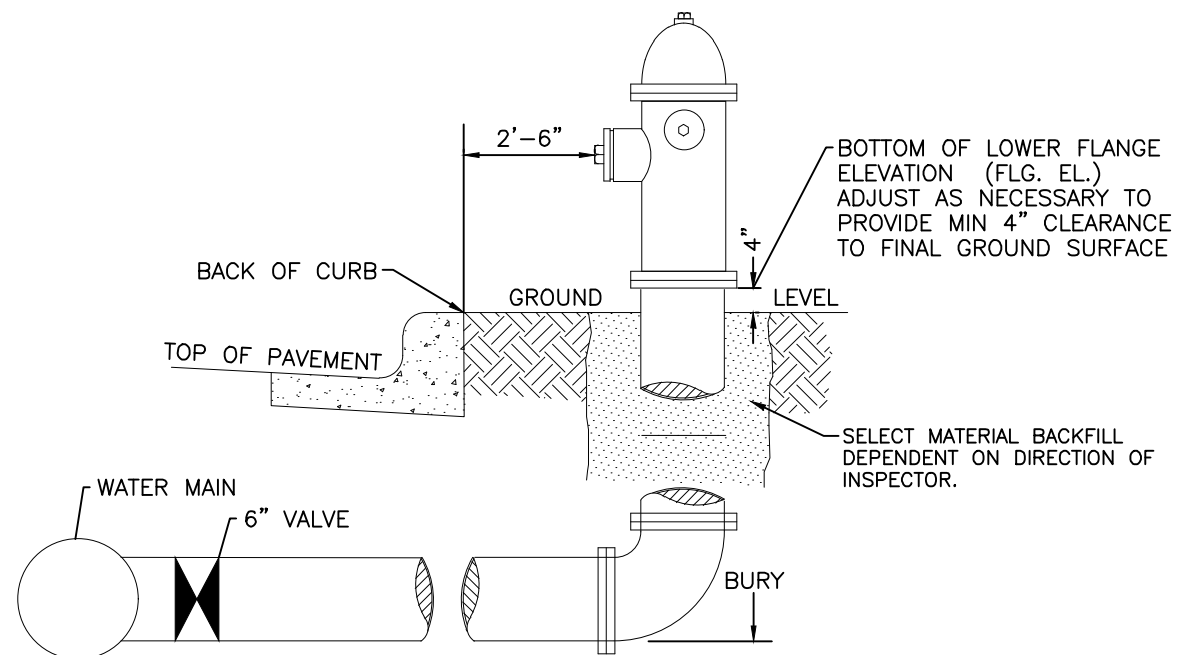
CONCRETE PIPE JOINT FASTENER DETAIL

NOT TO SCALE

LOCATION	B	W	Y
NORTH RUNDOWN	1'	7'	1'
SOUTH RUNDOWN	1'	7'	1'



RIPRAP RUNDOWN DETAIL - PEACEFUL VALLEY ROAD AT MARKSHEFFEL ROAD
SCALE: NTS



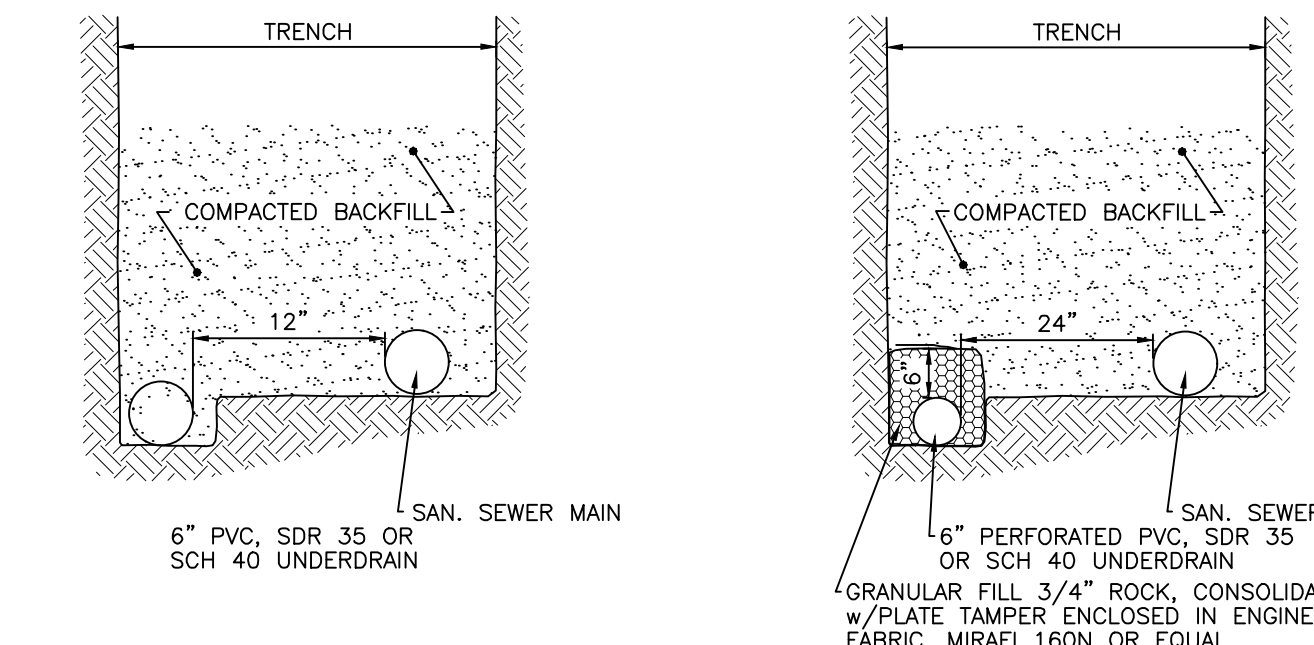
GENERAL NOTES:

1. Hydrant nozzles shall be positioned at right angles to curb, if no curb or sidewalk exists, nozzles shall be placed at right angle to street or alley.
2. Hydrants shall be placed a minimum of 5.0 feet from any utility or drainage structure.
3. Any hydrant being installed with conditions other than those mentioned and/or detailed below will require signed approval from the Widefield Water District and Security Fire District.
4. See Site Utility Plan for hydrant locations and flange elevations.
5. The upper exposed section of the hydrant above ground shall be painted rustoleum 659 yellow or equal. The buried portion of the hydrant shall be given a bituminous coating in accordance with Section 10-8.1 of AWWA Standard C110.

FIRE HYDRANT DETAIL
NOT TO SCALE

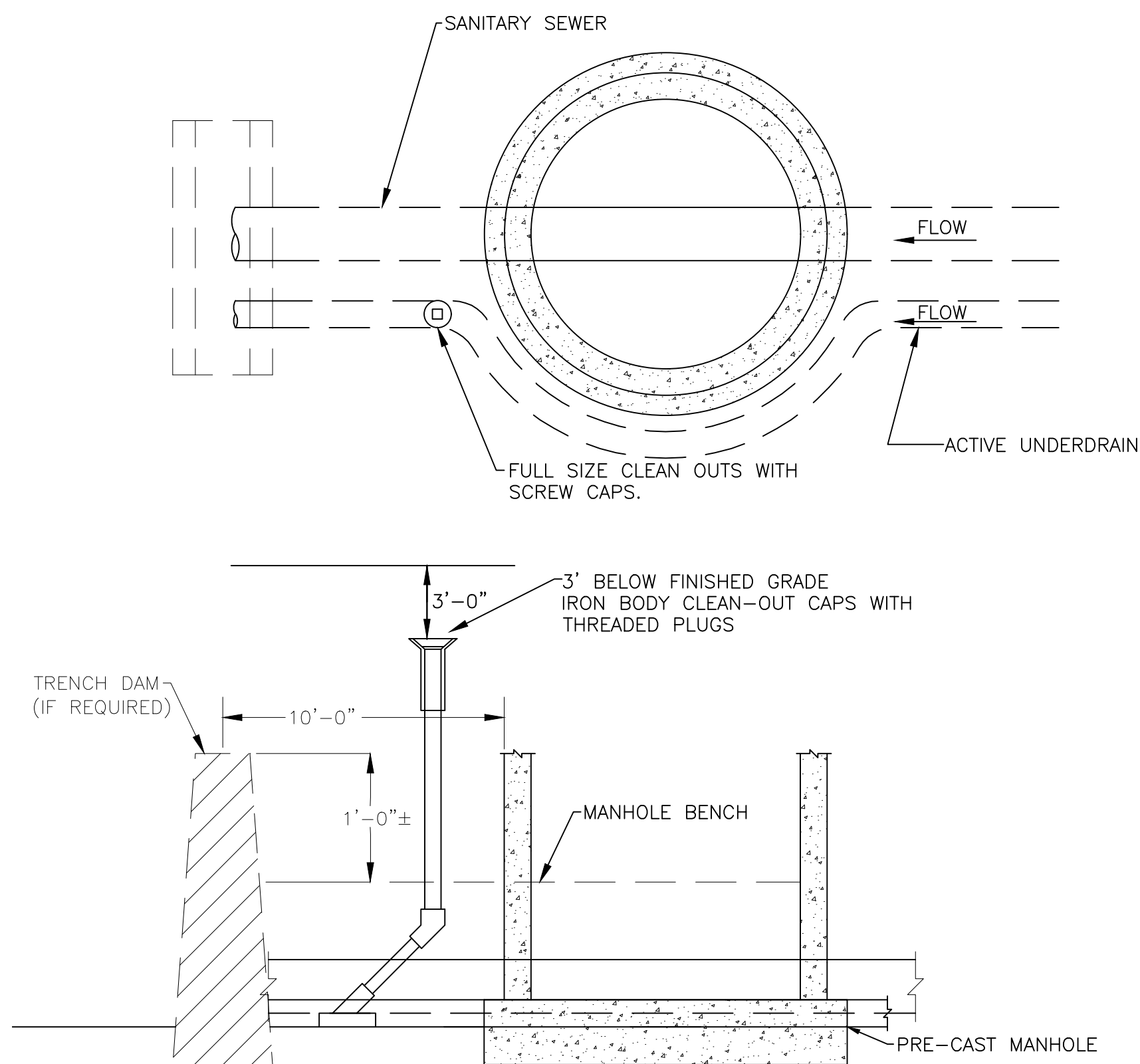
SUBSEQUENT TO STRIPPING AND GRUBBING THE FOLLOWING OVERLOT/PIPE INSTALLATION PROCEDURES ARE ANTICIPATED FOR THE SANITARY SEWER LOCATED ON PROPOSED EMBANKMENTS:

- THE REMOVAL AND REPLACEMENT OF METASTABLE SOIL.
- TESTING OF THE FILL SUBSEQUENT TO THE PENETRATION OF THE METASTABLE SOIL WILL CONTINUE UNTIL A MINIMUM OF 7 FEET OF STRUCTURAL FILL HAS BEEN PLACED ABOVE THE PROPOSED SEWER LINE ELEVATION.
- UTILITY TRENCHES SHALL BE EXCAVATED AND SANITARY SEWER LINE INSTALLED. THE PIPE SHALL BE PROPERLY BEDDED AND STRUCTURAL FILL PLACED AND TESTED TO THE PREVIOUS GRADE.
- THE OVERLOT AND EMBANKMENT FILL CAN BE COMPLETED.
- WHERE THE SANITARY SEWER IS PLACED IN EMBANKMENT FILL DURING THE OVERLOT PROCESS, STE SHALL MONITOR AND TEST ALL WORK ASSOCIATED WITH THE AFFECTED PORTIONS.

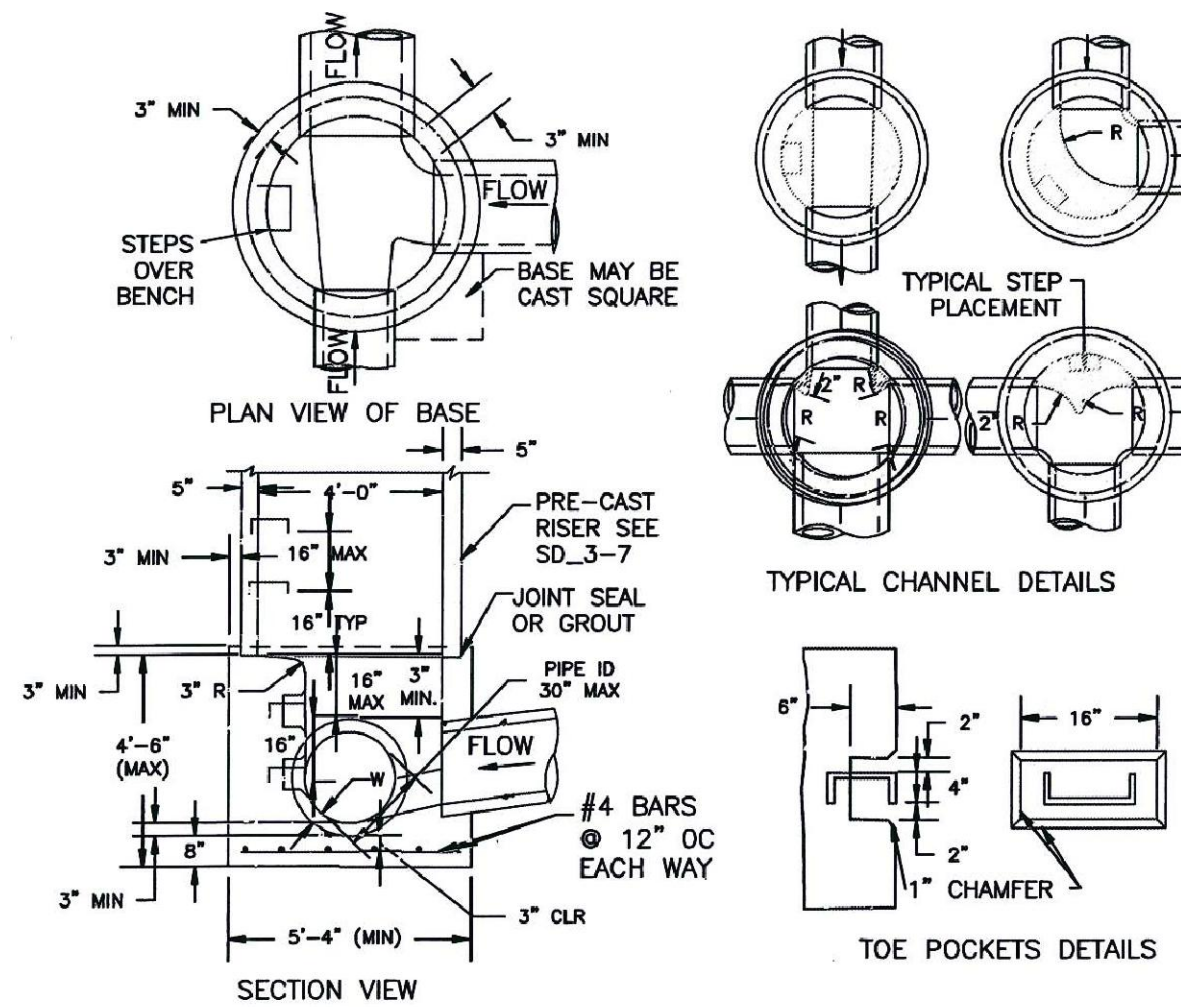


PASSIVE UNDERDRAIN DETAIL
NOT TO SCALE

ACTIVE UNDERDRAIN DETAIL
NOT TO SCALE



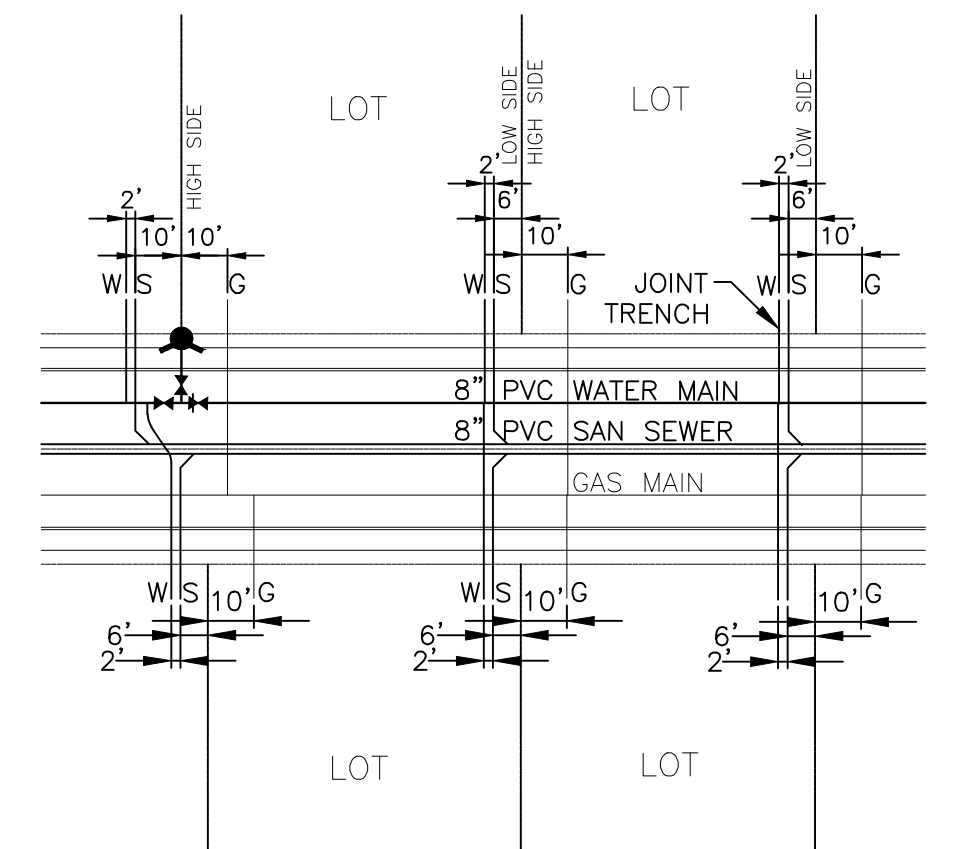
GROUNDWATER UNDERDRAIN DETAIL
CLEANOUT LOCATIONS OUTSIDE MANHOLE
NOT TO SCALE



NOTES

1. TYPE II MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE PIPE SIZES ARE 30" OR LESS INSIDE DIAMETER.
2. VIEW AND DETAILS ARE TYPICAL. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.
3. EITHER LADDER OF STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". STEPS IN BASE SHALL BE INSTALLED IN "TOE POCKETS" (SEE DETAIL THIS SHEET). LOWEST STEP SHALL BE A MAXIMUM OF 16" ABOVE THE FLOOR.
4. PIPES SHALL BE TRIMMED TO FINAL SHAPE AND SET BEFORE MANHOLE IS POURED.
5. BENCH SHALL BE SLOPED TOWARD CENTER OF MANHOLE BASE (4:1 MAX., 1/2" PER FOOT. MIN.).
6. FLOOR OF MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1, 1/2" PER FT. MIN.). FLOOR SHALL BE SHAPED AND CHANNLED; SEE DETAILS THIS SHEET.

STORM SEWER MANHOLE DETAIL TYPE II
EPC STD. SD_3-2
NOT TO SCALE



TYPICAL JOINT-TRENCH UTILITY SERVICE DETAIL
NOT TO SCALE

GLEN AT WIDEFIELD FILING NO. 9
SITE DETAIL PLAN
UTILITY DETAILS
EL PASO COUNTY, COLORADO

Project No.: 17038
Date: September 25, 2018
Design: AWMc
Drawn: JAK
Check: AWMc
Revisions:

SHEET

20

20 of 20 Sheets

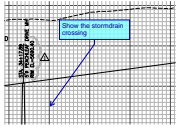
17038-G99-19-20-01.dwg/Apr 24, 2019

Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

W
WIDEFIELD
Investment Group

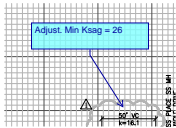
Markup Summary 6-18-2019

dsdlaforce (12)



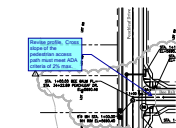
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Author: dsdlaforce
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Show the stormdrain crossing



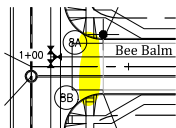
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Adjust. Min Ksag = 26

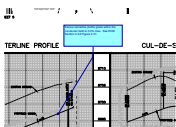


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Revise profile. Cross slope of the pedestrian access path must meet ADA criteria of 2% max.

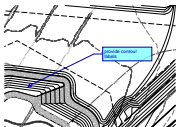


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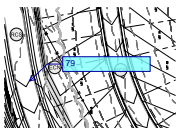
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Author: dsdlaforce
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Revise centerline profile grade within the cul-de-sac bulb to 3.0% max. See ECM Section 2.3.8 Figure 2-31.



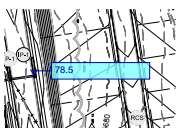
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Date: 5/7/2019 4:15:06 PM
Color: ■

provide contour labels



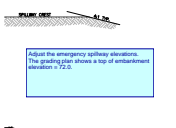
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79



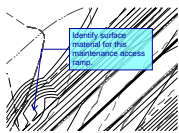
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78.5



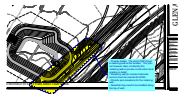
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Page Label: 18
Author: dsdlaforce
Date: 5/7/2019 4:19:04 PM
Color: ■

Adjust the emergency spillway elevations. The grading plan shows a top of embankment elevation = 72.0.



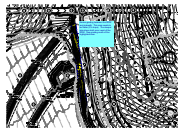
Subject: Callout
Page Label: 17
Author: dsdlaforce
Date: 5/7/2019 4:28:01 PM
Color: ■

Identify surface material for this maintenance access ramp.



Subject: Cloud+
Page Label: 17
Author: dsdlaforce
Date: 5/7/2019 4:29:34 PM
Color: ■

- Provide details. The storm P&P shows a retaining wall at this location. The plan set however does not identify this retaining wall or provide construction level grading or detail.
- Retaining wall (to include horizontal anchor) must be outside the ROW.
- Provide spot elevations for the retaining wall.
- Guardrail may need to be installed along the top of wall.



Subject: Cloud+
Page Label: 12
Author: dsdlaforce
Date: 5/8/2019 7:55:32 AM
Color: ■

Revise grading between the ROW and sidewalk. This area needs to be flatter (2% slope). The steeper side slope shall occur west of the ROW. See grading south of the highlighted area.