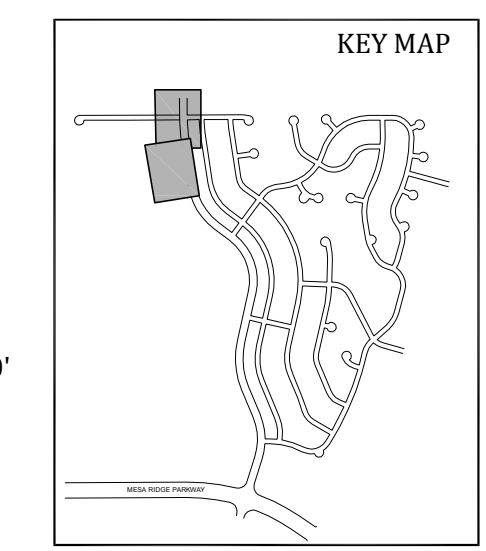
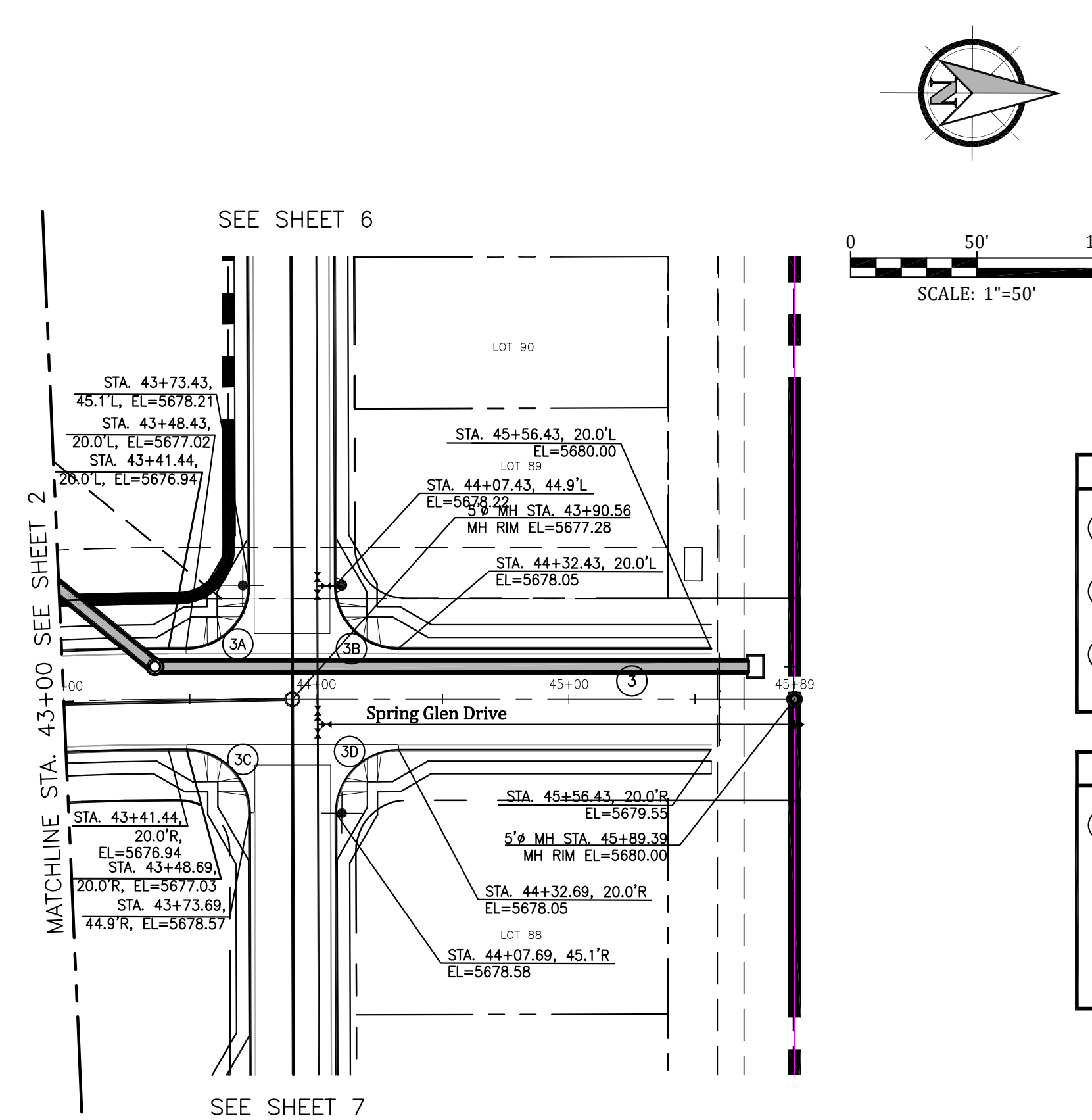
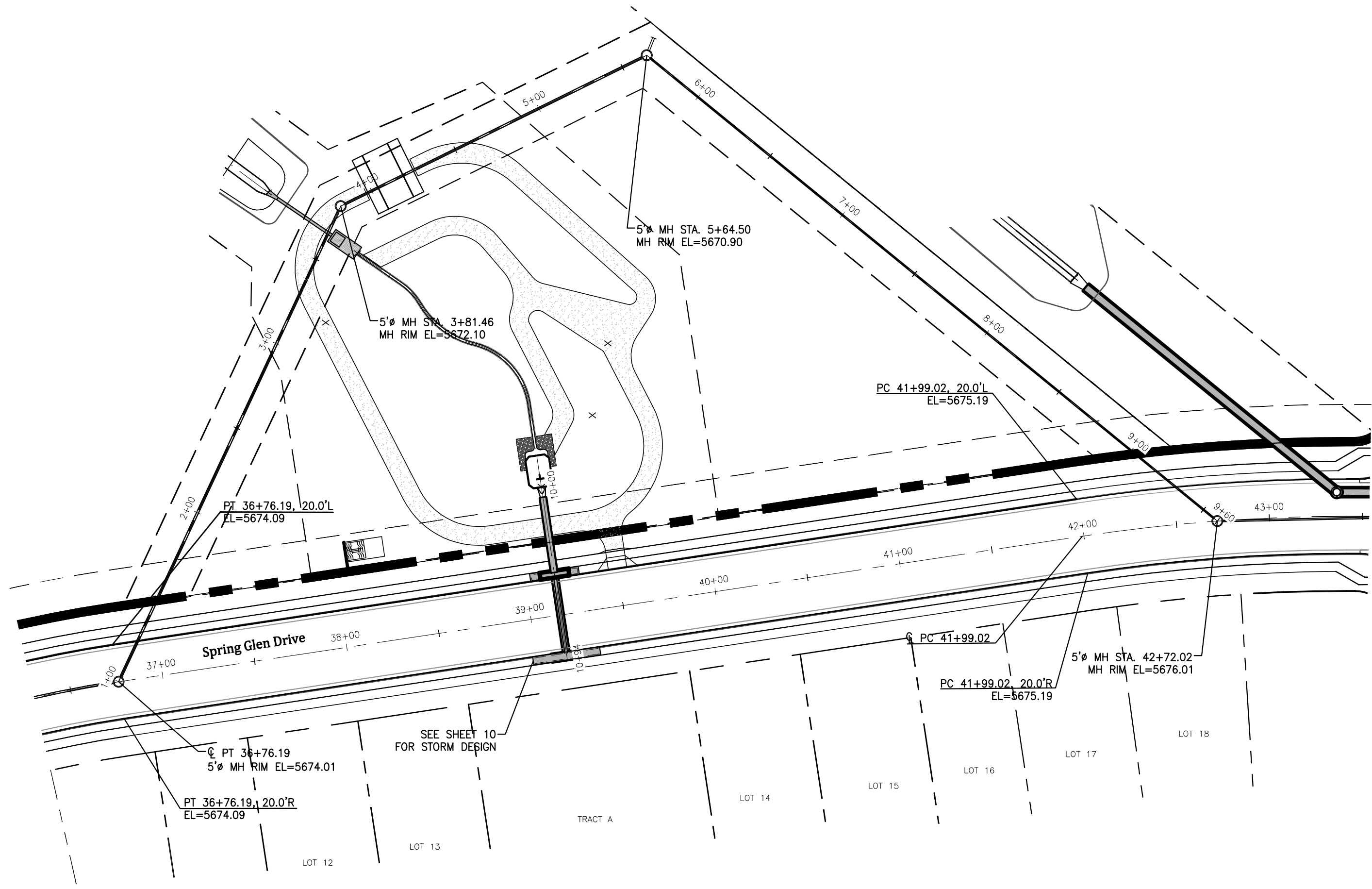


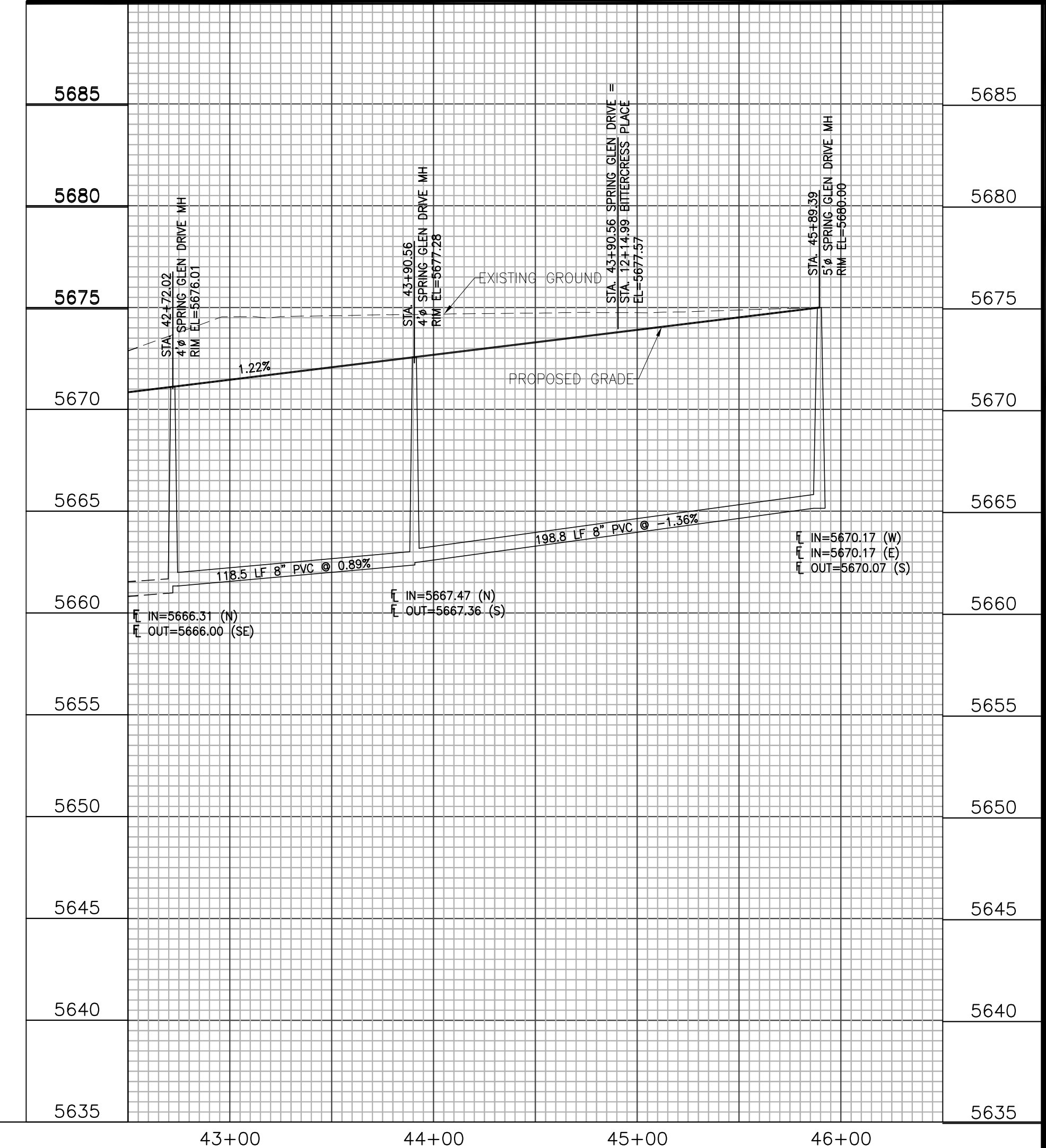
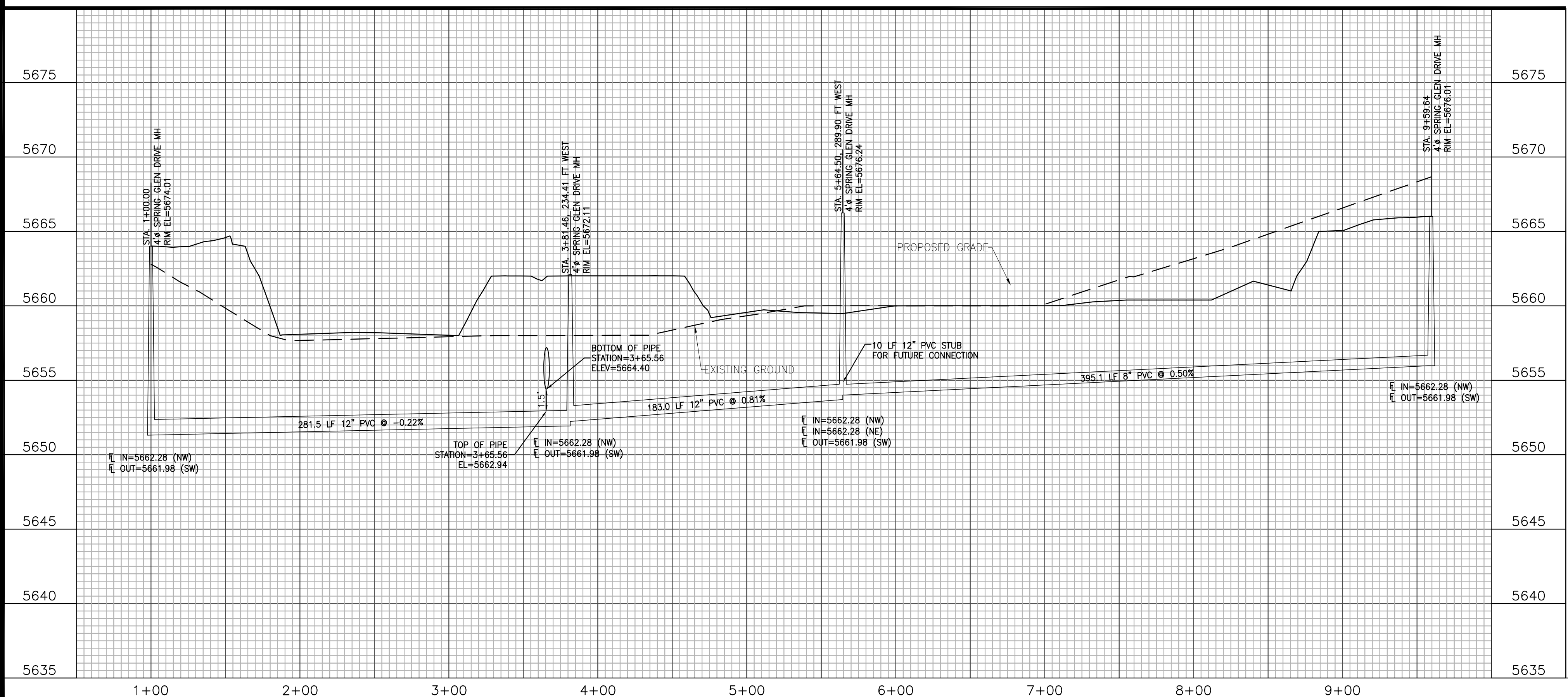
**GLEN AT WIDEFIELD FILING NO. 9**  
**SPRING GLEN DRIVE (Sta. 30+00 to Sta. 43+00)**  
**PLAN AND PROFILE**  
**EL PASO COUNTY, COLORADO**

|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |



| CURVE DATA  |   |
|---|---|
| (3A) $\Delta=89^{\circ}50'01''$<br>$L=39.20'$<br>$R=25.00'$ | (3D) $\Delta=89^{\circ}50'01''$<br>$L=39.20'$<br>$R=25.00'$ |
| (3B) $\Delta=90^{\circ}09'59''$<br>$L=39.34'$<br>$R=25.00'$ |   |
| (3C) $\Delta=90^{\circ}09'59''$<br>$L=39.34'$<br>$R=25.00'$ |   |

| LINE DATA                                  |  |
|--|--|
| (3) N $00^{\circ}08'39''$ W<br>$L=214.98'$ |  |



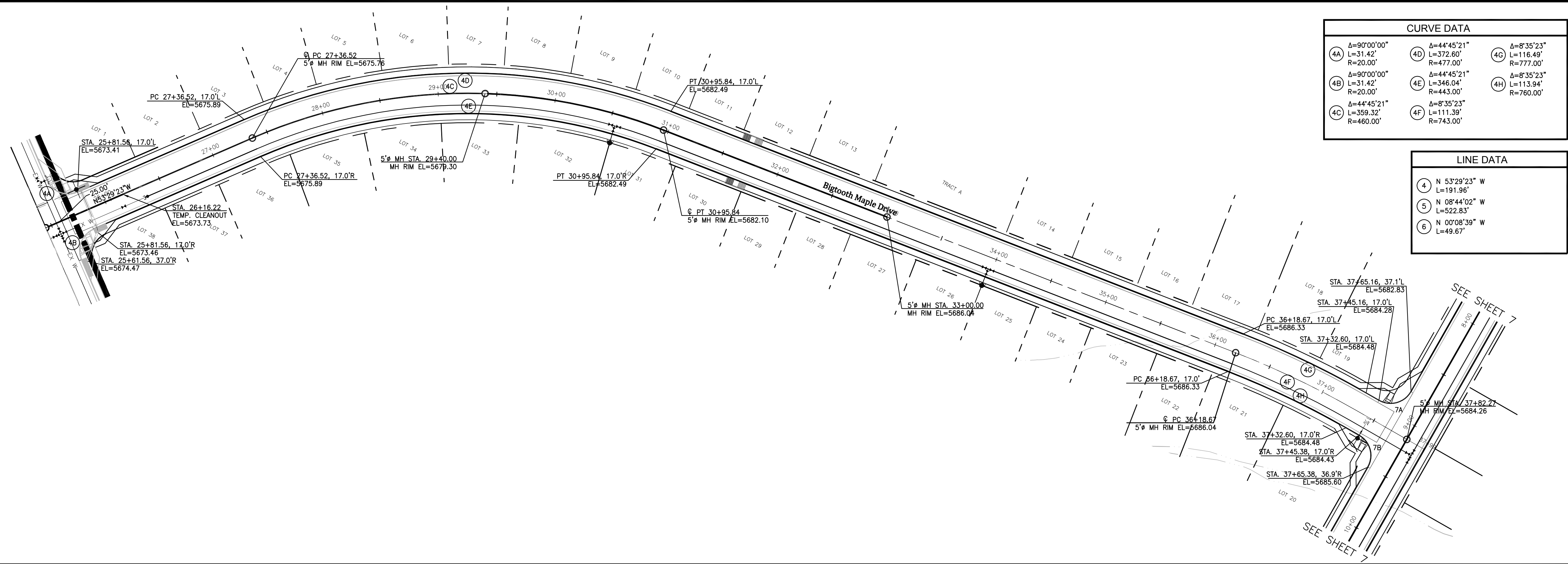
**Kiowa**  
Engineering Corporation  
1604 South 2 1st Street  
Colorado Springs, Colorado 80904  
(719) 630-7342

**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**

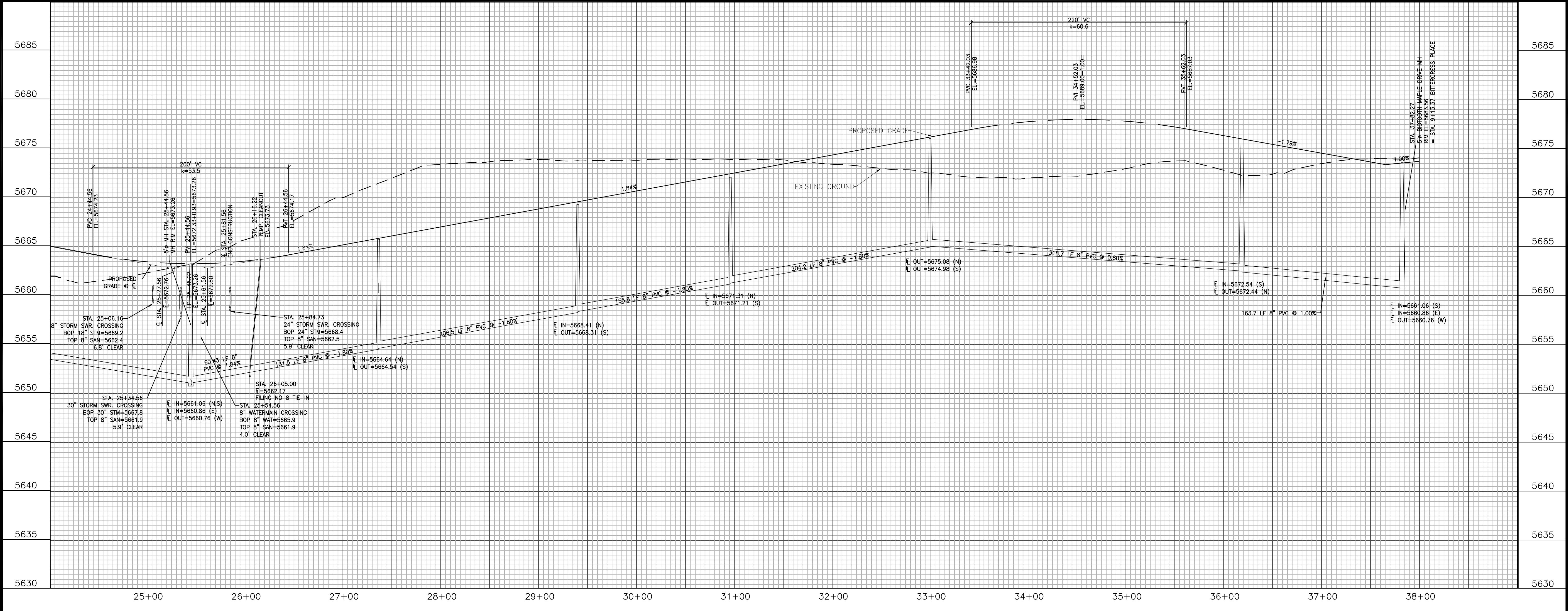
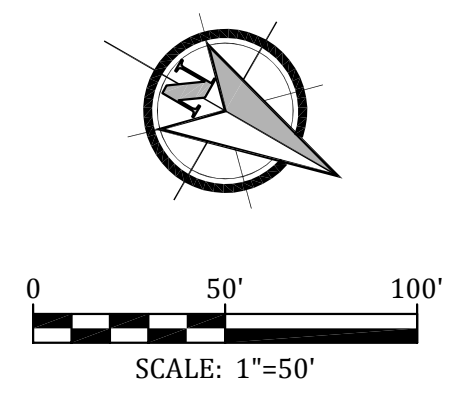
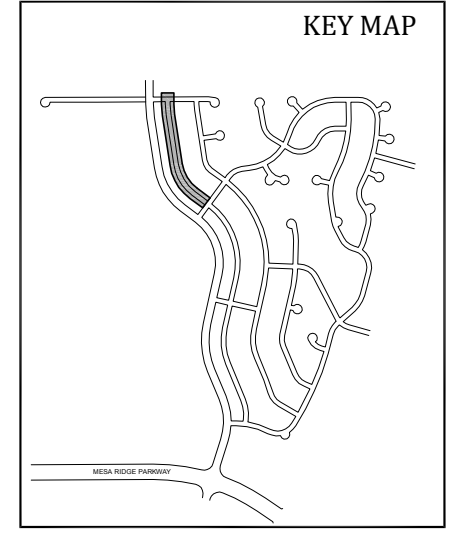
|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

SHEET  
**3**  
3 of 20 Sheets



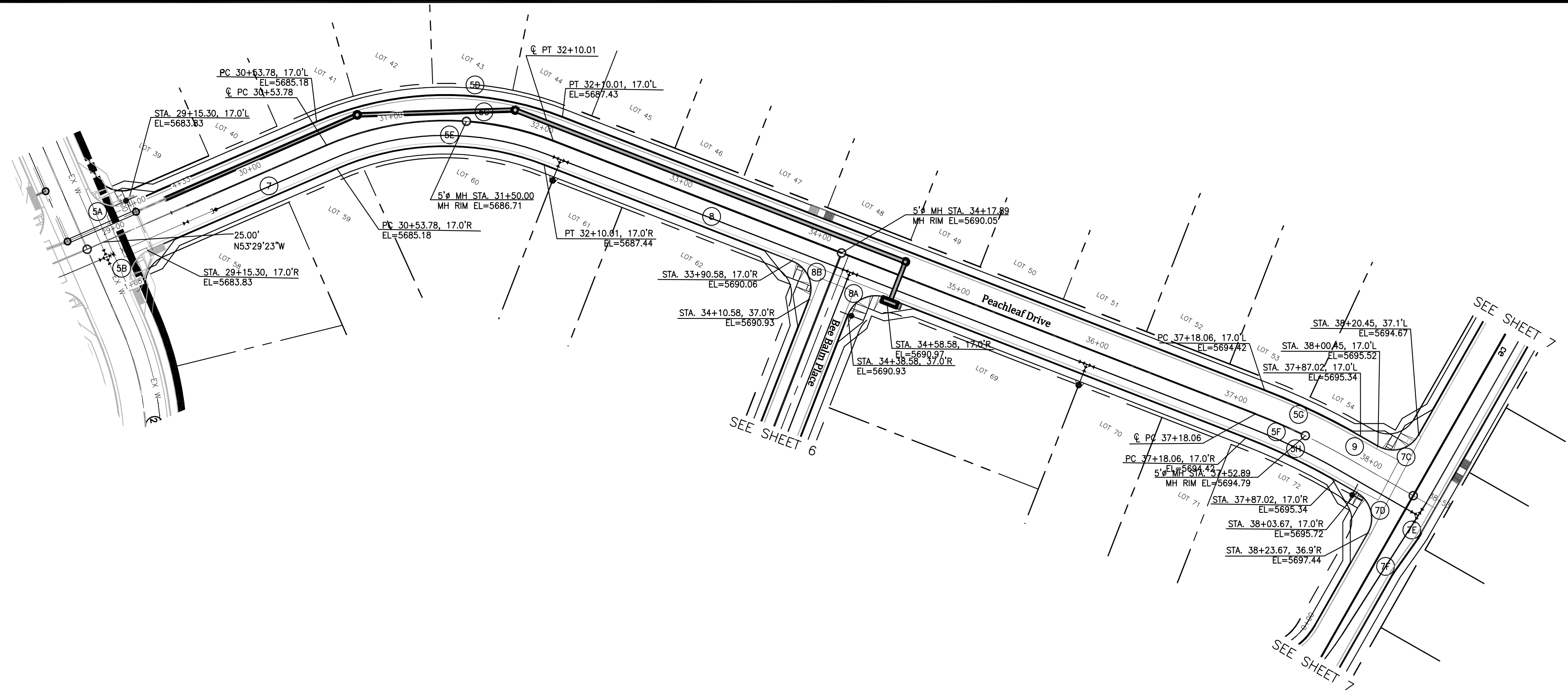
| CURVE DATA |                                       |    |                                       |    |                                      |
|------------|---------------------------------------|----|---------------------------------------|----|--------------------------------------|
| 4A         | Δ=90°00'00"<br>L=31.42'<br>R=20.00'   | 4D | Δ=44°45'21"<br>L=372.60'<br>R=477.00' | 4G | Δ=8°35'23"<br>L=116.49'<br>R=777.00' |
| 4B         | Δ=90°00'00"<br>L=31.42'<br>R=20.00'   | 4E | Δ=44°45'21"<br>L=346.04'<br>R=443.00' | 4H | Δ=8°35'23"<br>L=113.94'<br>R=760.00' |
| 4C         | Δ=44°45'21"<br>L=359.32'<br>R=460.00' | 4F | Δ=8°35'23"<br>L=111.39'<br>R=743.00'  |    |                                      |

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



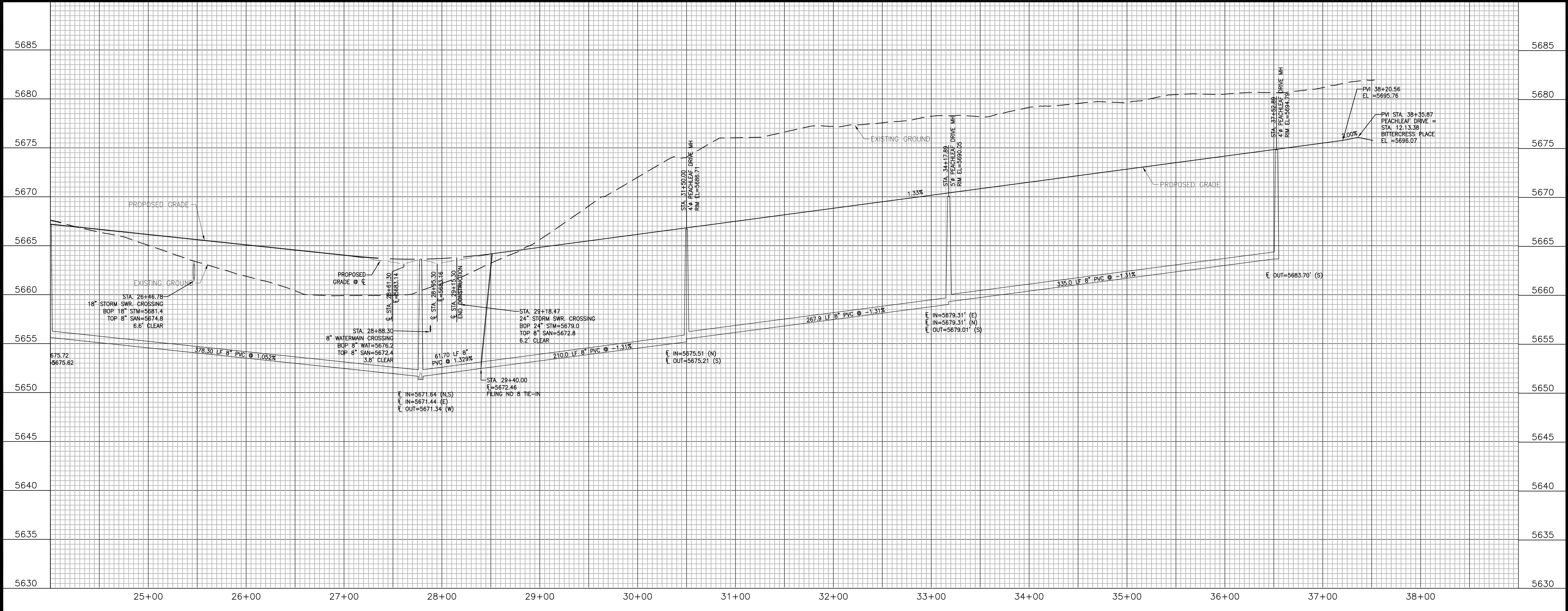
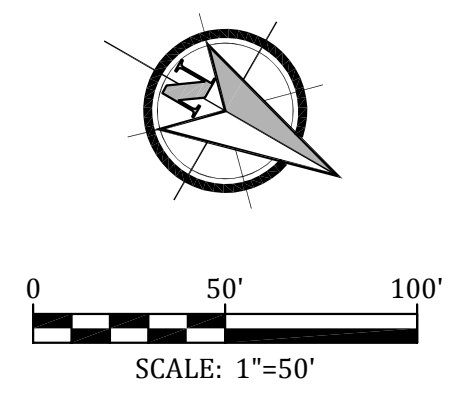
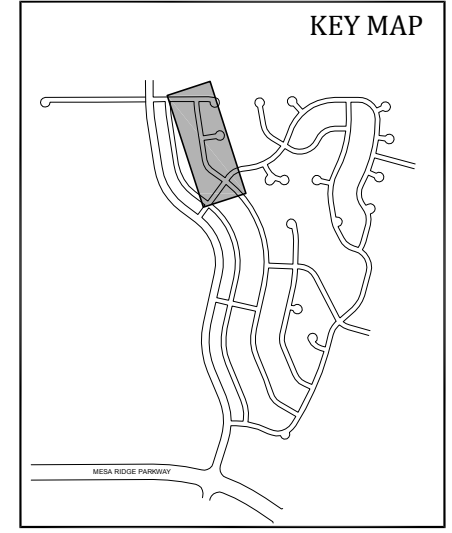
**GLEN AT WIDEFIELD FILING NO. 9  
BIGTOOTH MAPLE DRIVE (Sta. 25+50 to Sta. 37+82)  
PLAN AND PROFILE  
EL PASO COUNTY, COLORADO**

|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

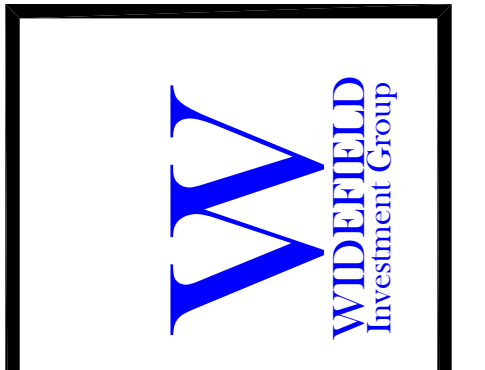


| CURVE DATA |                                       |    |                                       |    |                                     |
|------------|---------------------------------------|----|---------------------------------------|----|-------------------------------------|
| 5A         | Δ=90°00'00"<br>L=31.42'<br>R=20.00'   | 5D | Δ=44°45'21"<br>L=169.51'<br>R=217.00' | 5G | Δ=8°35'23"<br>L=71.51'<br>R=477.00' |
| 5B         | Δ=90°00'00"<br>L=31.42'<br>R=20.00'   | 5E | Δ=44°45'21"<br>L=142.95'<br>R=183.00' | 5H | Δ=8°35'23"<br>L=66.41'<br>R=443.00' |
| 5C         | Δ=44°45'21"<br>L=156.23'<br>R=200.00' | 5F | Δ=8°35'23"<br>L=68.96'<br>R=460.00'   |    |                                     |

| LINE DATA |                            |
|-----------|----------------------------|
| 7         | N 53°29'23" W<br>L=175.49' |
| 8         | N 08°44'02" W<br>L=506.36' |
| 9         | N 00°08'39" W<br>L=50.54'  |



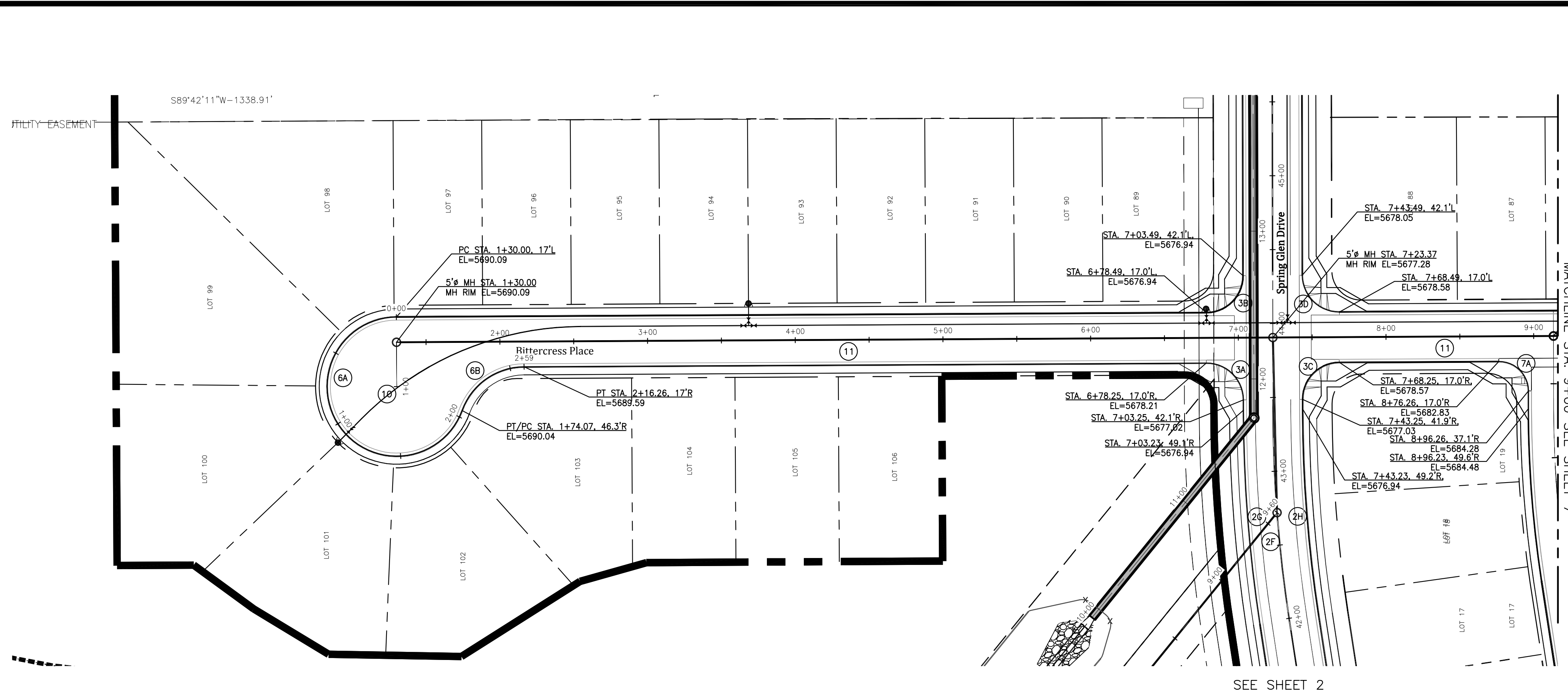
**Kiowa**  
Engineering Corporation  
1604 South 2 1st Street  
Colorado Springs, Colorado 80904  
(719) 630-7342



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

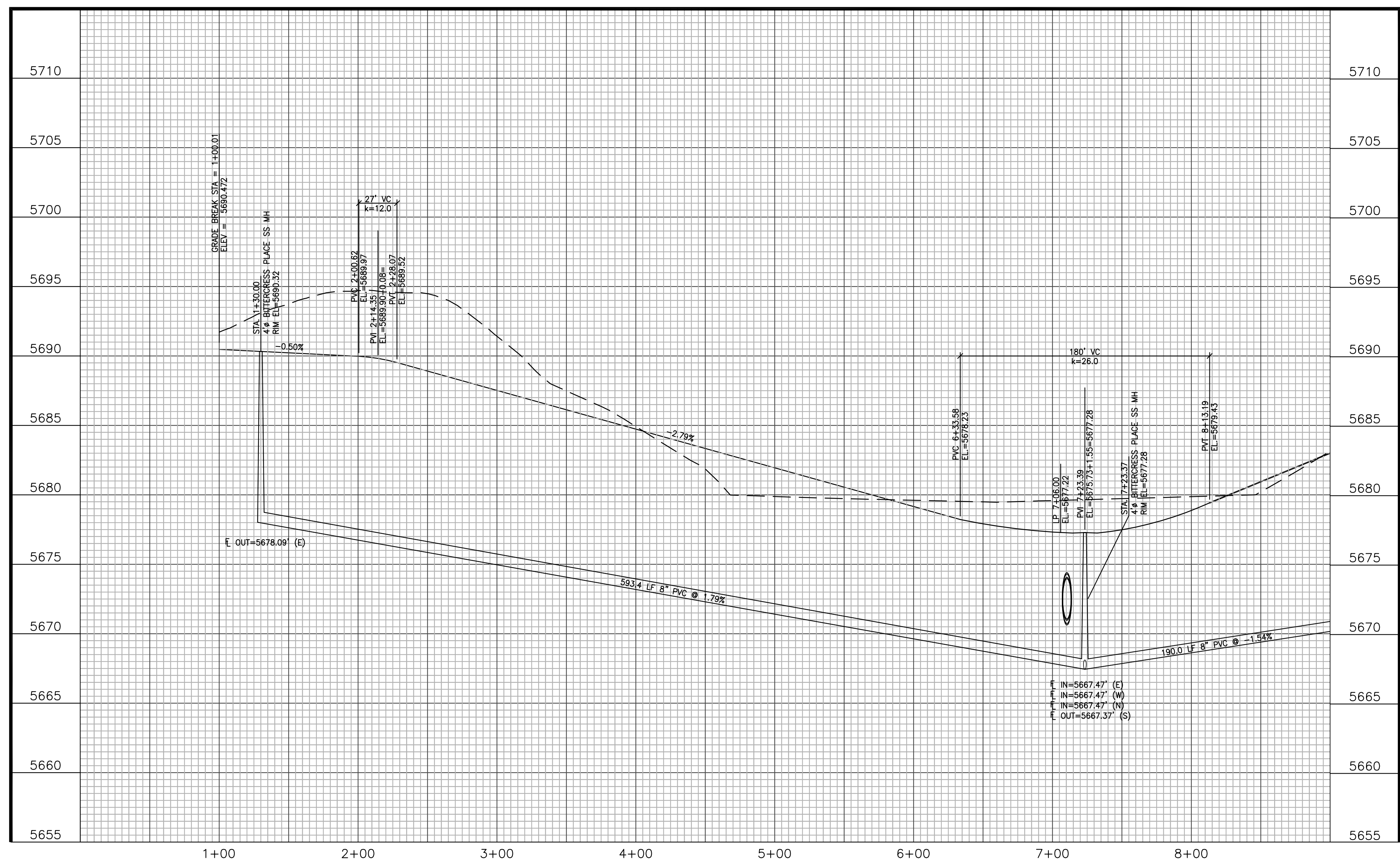
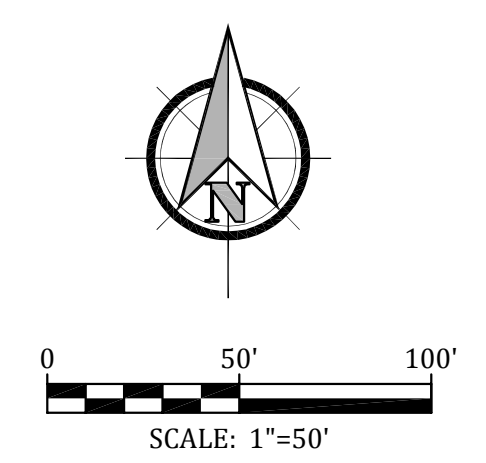
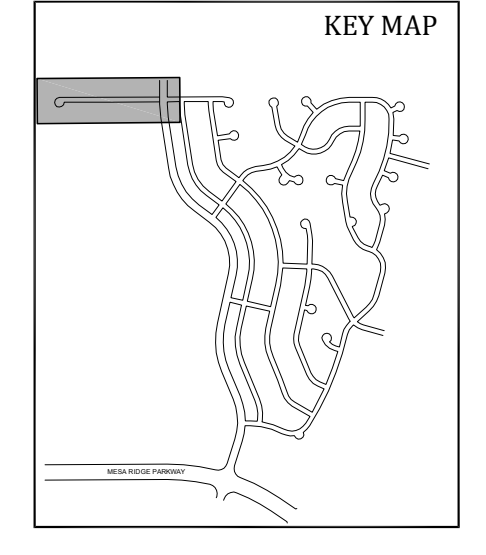
|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

SHEET  
**5**  
5 of 20 Sheets

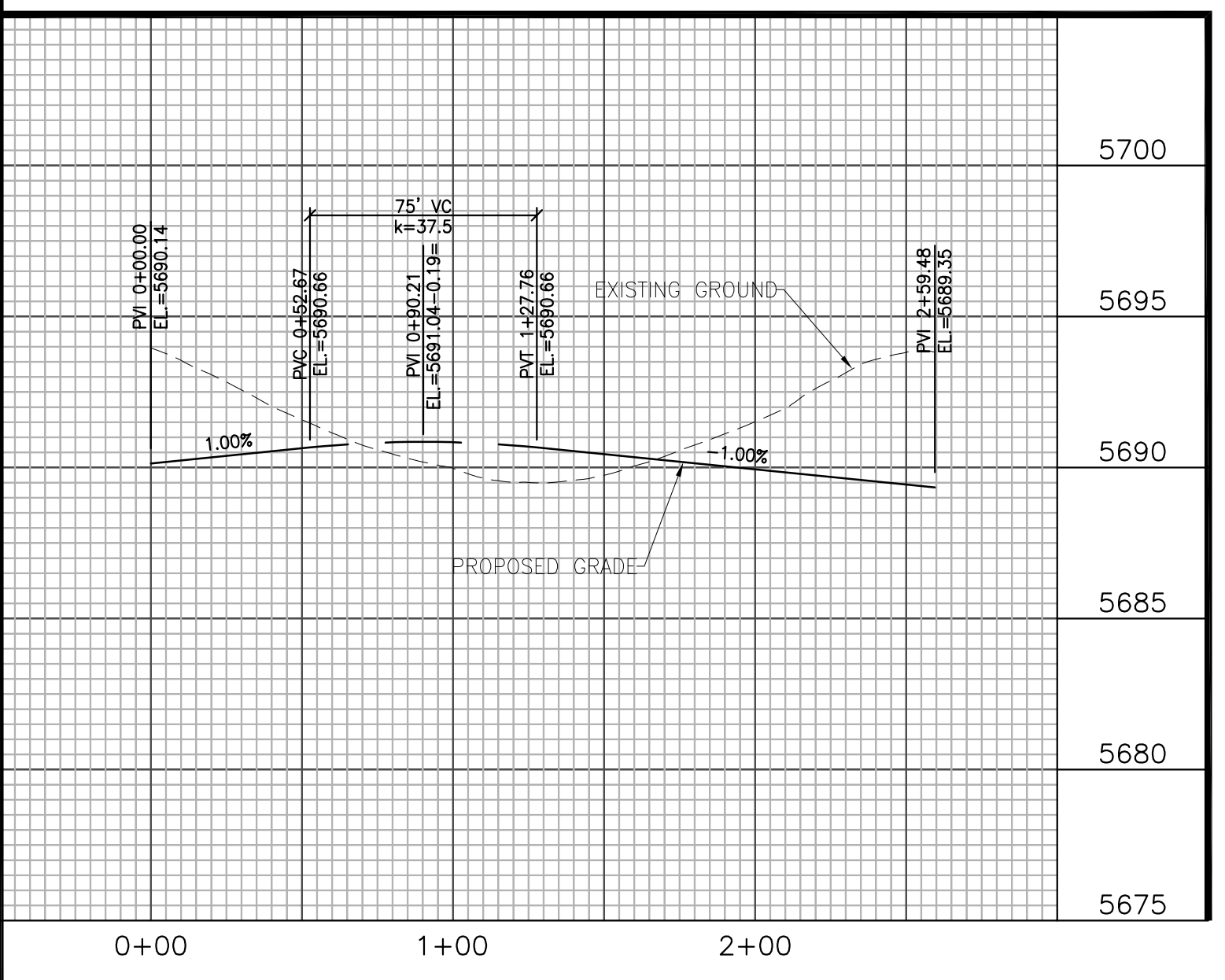


| CURVE DATA |  |
|------------|--|
| BA         | $\Delta=249^{\circ}38'44''$<br>$L=204.79'$<br>$R=47.00'$ |
| BB         | $\Delta=69^{\circ}38'44''$<br>$L=54.70'$<br>$R=45.00'$   |

| LINE DATA |  |
|-----------|--|
| 10        | N $00^{\circ}18'38''$ W<br>$L=30.00'$  |
| 11        | N $89^{\circ}41'22''$ E<br>$L=127.11'$ |



CUL-DE-SAC PROFILE



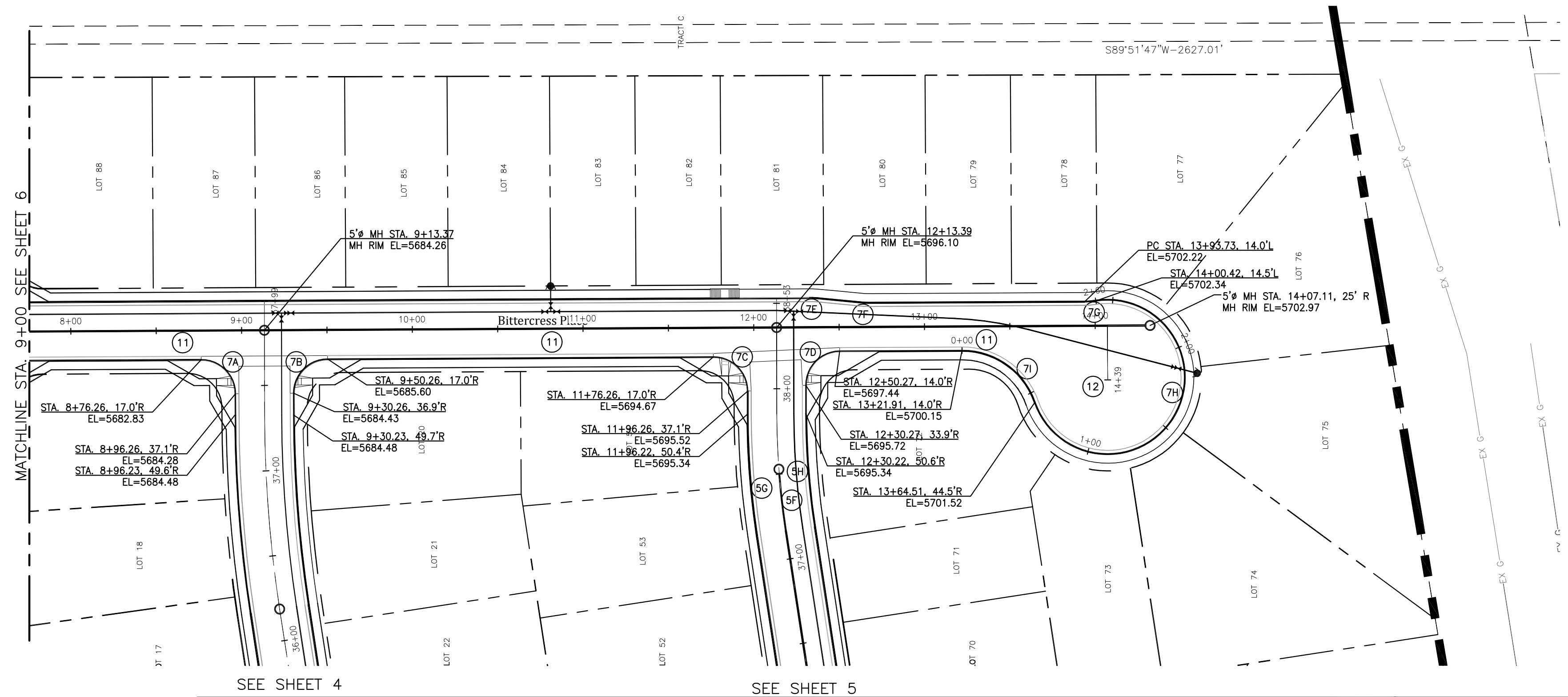
**Kiowa**  
Engineering Corporation  
1604 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 630-7342

**W**  
WIDEFIELD  
INVESTMENT GROUP

**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 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

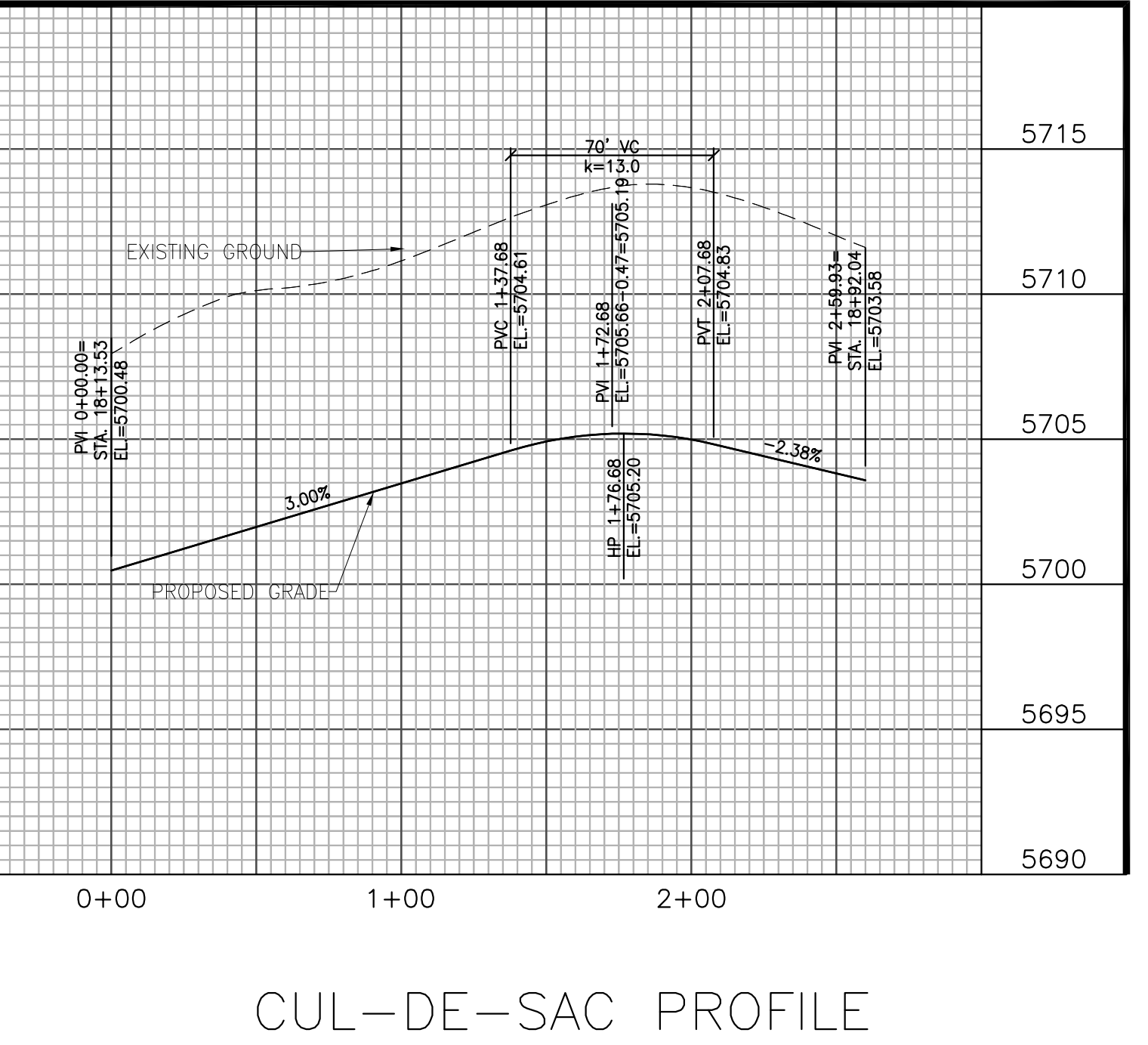
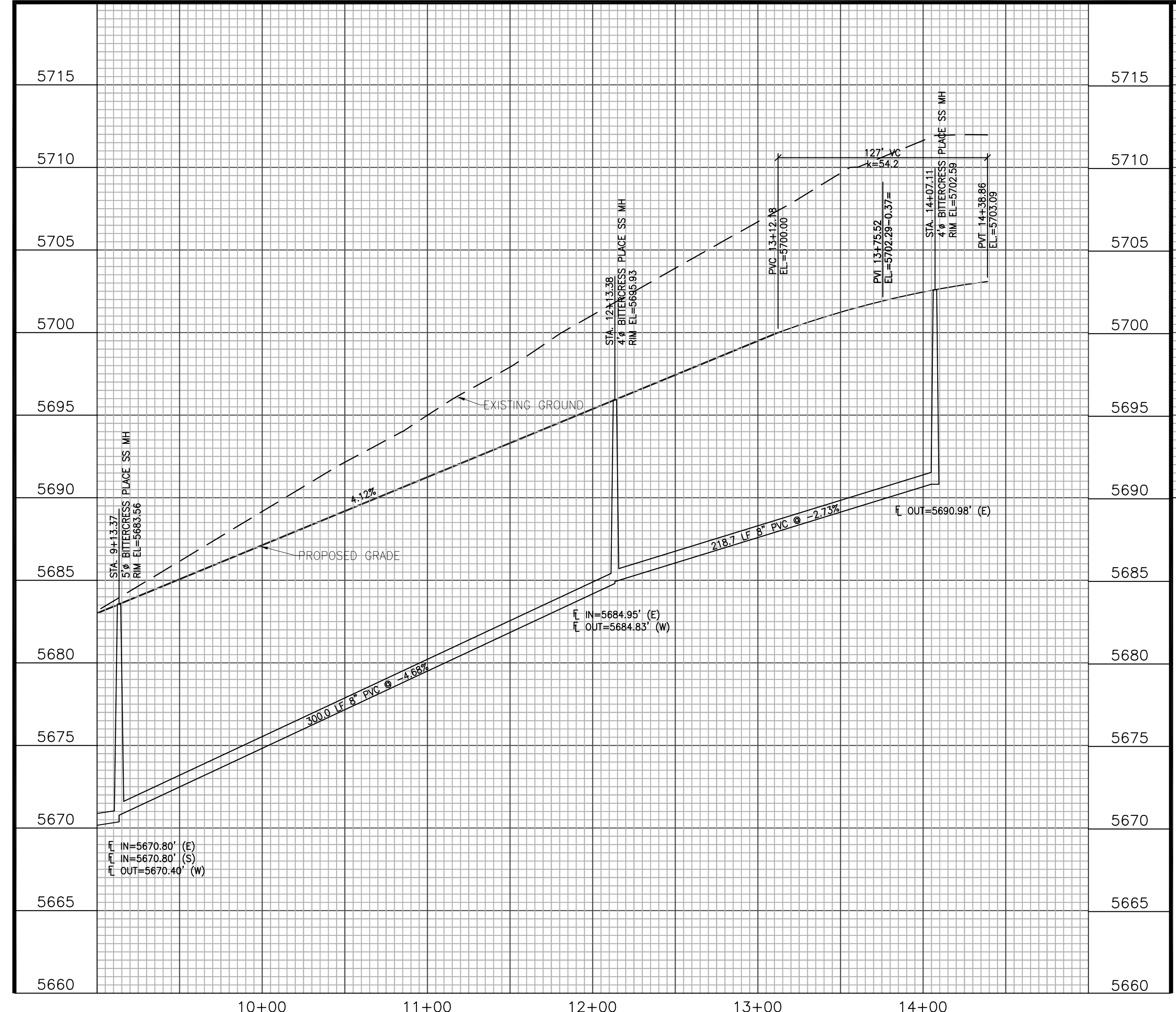
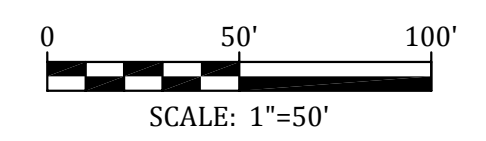
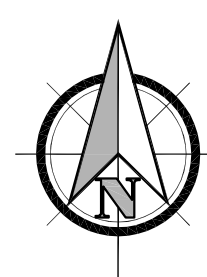
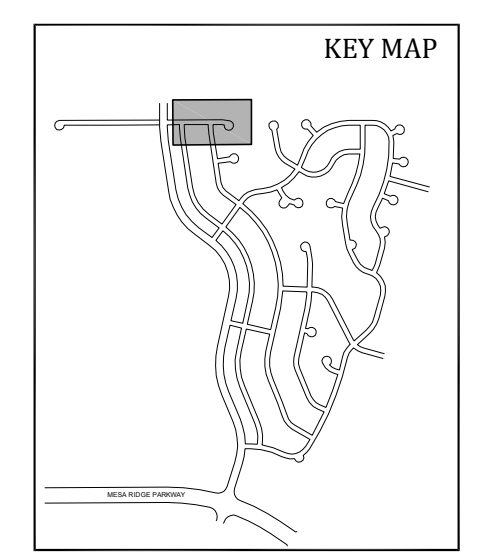
SHEET  
**6**  
6 of 20 Sheets



| CURVE DATA |   |   |
|------------|---|---|
| 7A         | $\Delta=90^{\circ}09'59"$<br>L=31.47'<br>R=20.00'   | $\Delta=89^{\circ}50'01"$<br>L=31.36'<br>R=20.00'   |
| 7B         | $\Delta=89^{\circ}50'01"$<br>L=31.36'<br>R=20.00'   | $\Delta=5^{\circ}42'38"$<br>L=2.49'<br>R=25.00'     |
| 7C         | $\Delta=90^{\circ}09'59"$<br>L=31.47'<br>R=20.00'   | $\Delta=5^{\circ}42'38"$<br>L=2.49'<br>R=25.00'     |
| 7D         | $\Delta=89^{\circ}50'01"$<br>L=31.36'<br>R=20.00'   | $\Delta=8^{\circ}32'57"$<br>L=6.71'<br>R=45.00'     |
| 7E         | $\Delta=5^{\circ}42'38"$<br>L=2.49'<br>R=25.00'     | $\Delta=259^{\circ}45'06"$<br>L=204.01'<br>R=45.00' |
| 7F         | $\Delta=5^{\circ}42'38"$<br>L=2.49'<br>R=25.00'     | $\Delta=71^{\circ}12'09"$<br>L=55.92'<br>R=45.00'   |
| 7G         | $\Delta=8^{\circ}32'57"$<br>L=6.71'<br>R=45.00'     |   |
| 7H         | $\Delta=259^{\circ}45'06"$<br>L=204.01'<br>R=45.00' |   |
| 7I         | $\Delta=71^{\circ}12'09"$<br>L=55.92'<br>R=45.00'   |   |

| LINE DATA |                             |
|-----------|-----------------------------|
| 11        | N 89°41'22" E<br>L=1277.11' |
| 12        | S 00°18'38" E<br>L=31.76'   |



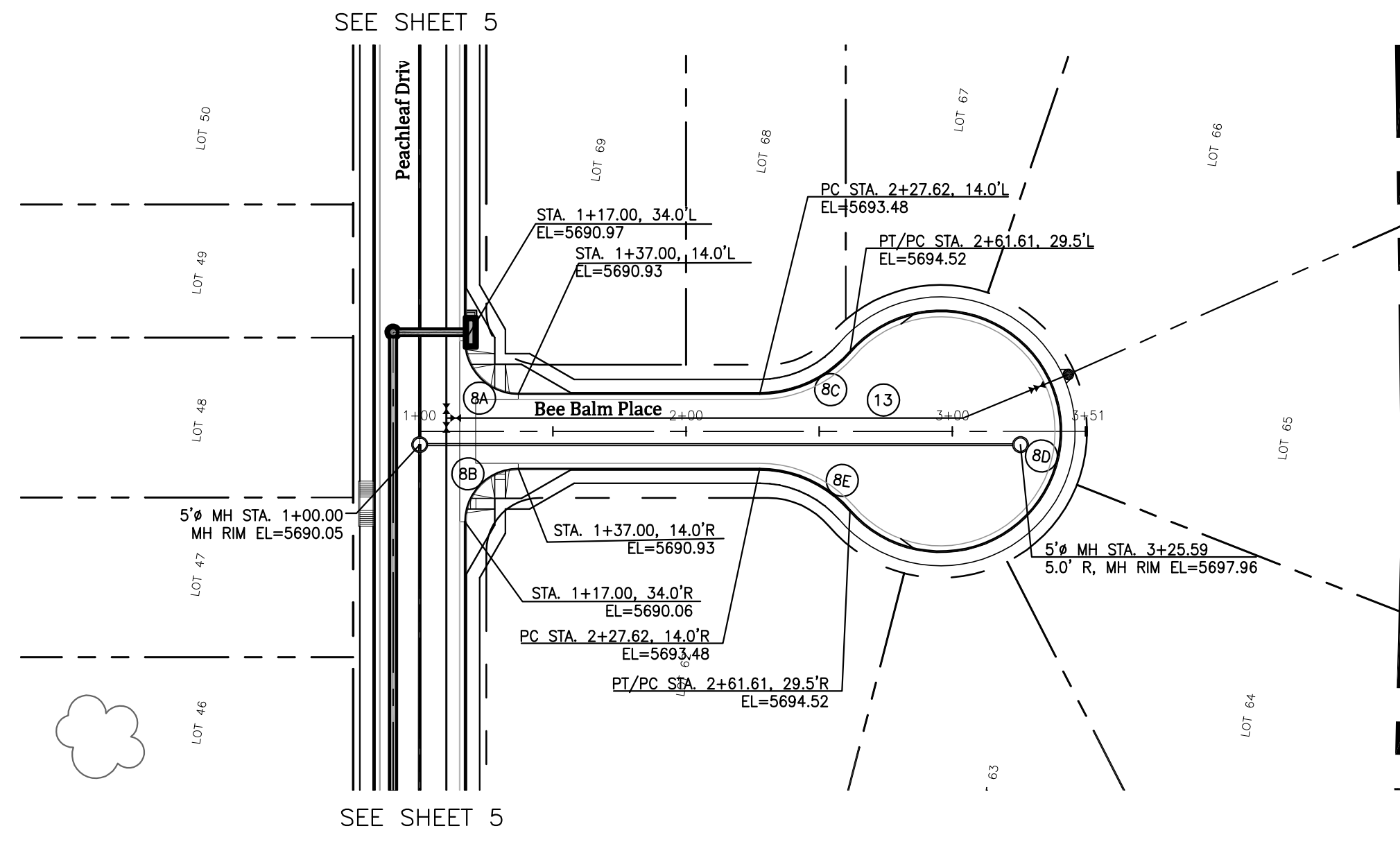
**Kiowa**  
Engineering Corporation  
1604 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 630-7342

**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

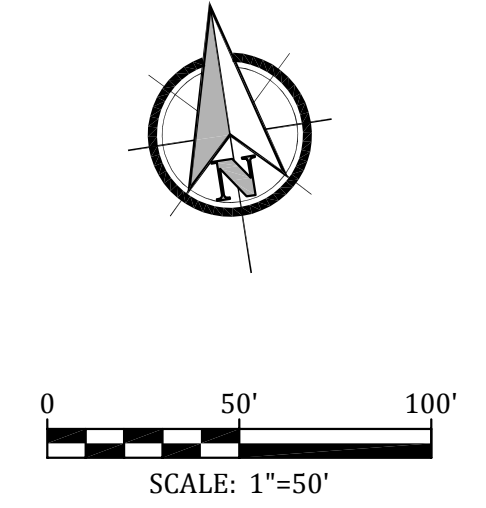
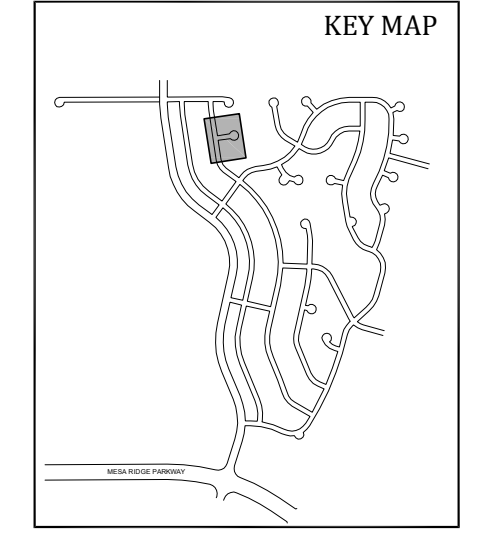
|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

SHEET  
**7**  
7 of 20 Sheets



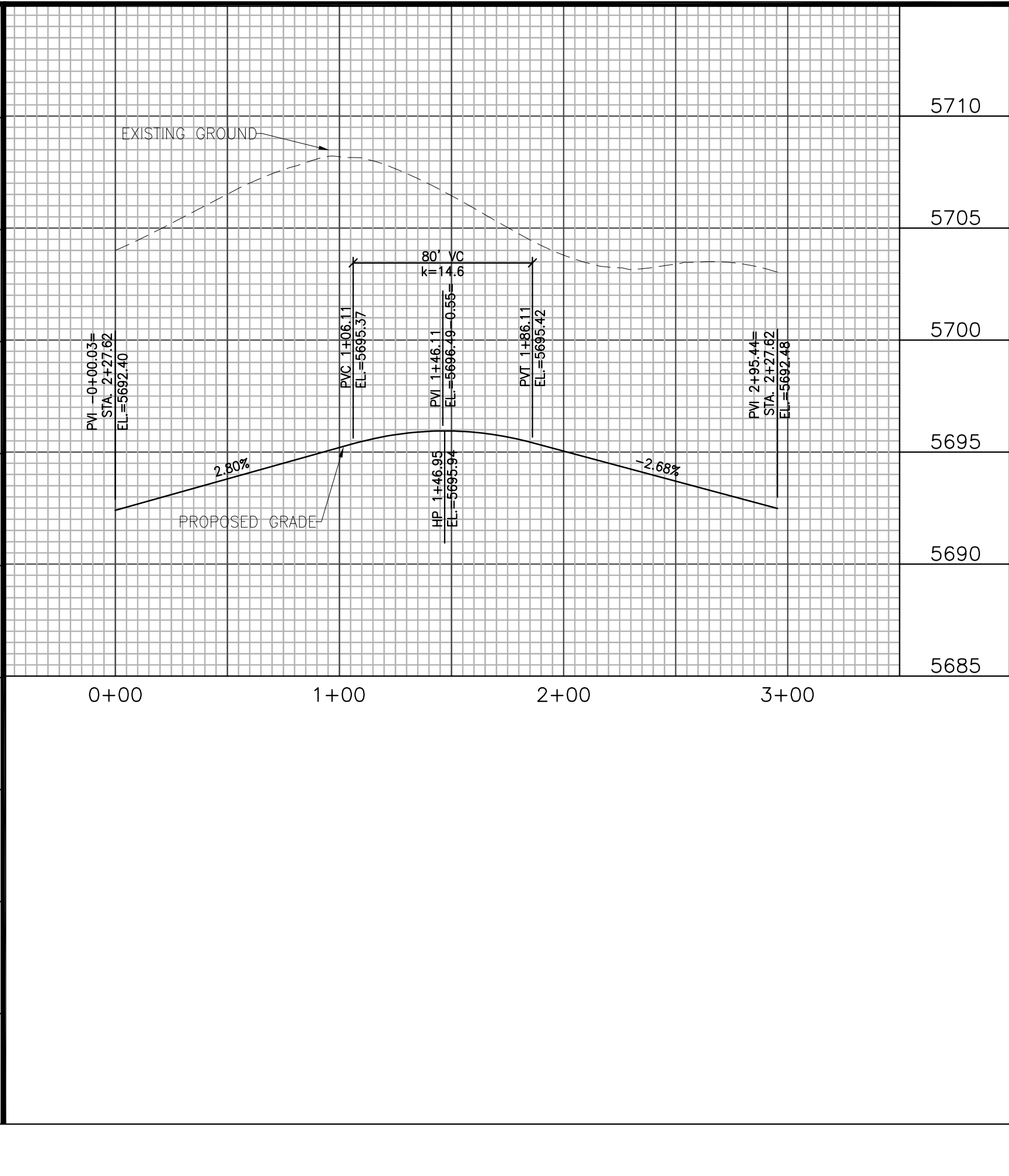
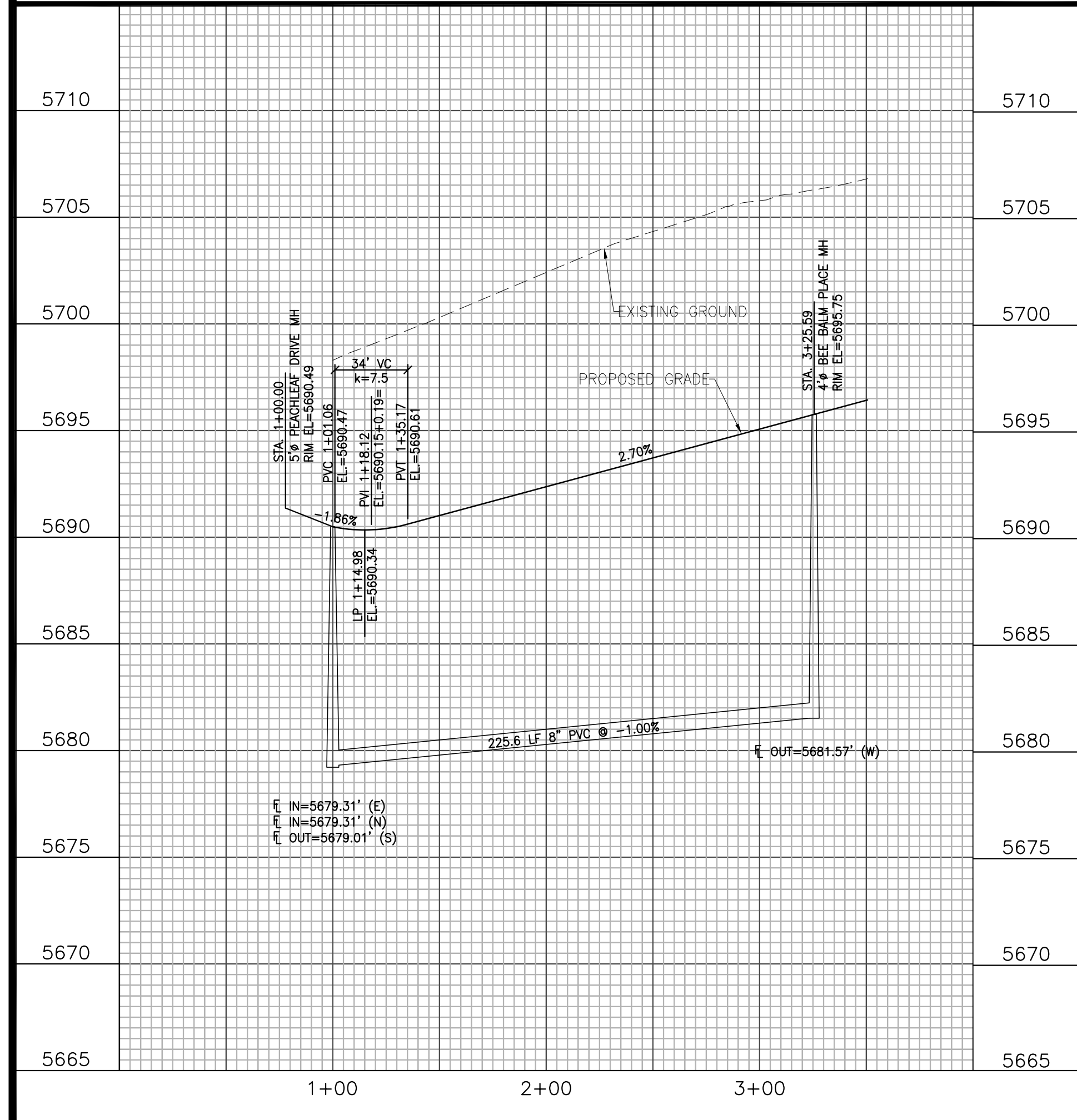
| CURVE DATA |                                      |
|------------|--------------------------------------|
| Ⓐ          | Δ=49°02'18"<br>L=38.51'<br>R=45.00'  |
| Ⓑ          | Δ=27°04'35"<br>L=218.40'<br>R=45.00' |
| Ⓒ          | Δ=49°02'18"<br>L=38.51'<br>R=45.00'  |

| LINE DATA |                            |
|-----------|----------------------------|
| ⑬         | S 81°15'58" E<br>L=250.59' |



CENTERLINE PROFILE

CUL-DE-SAC PROFILE



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

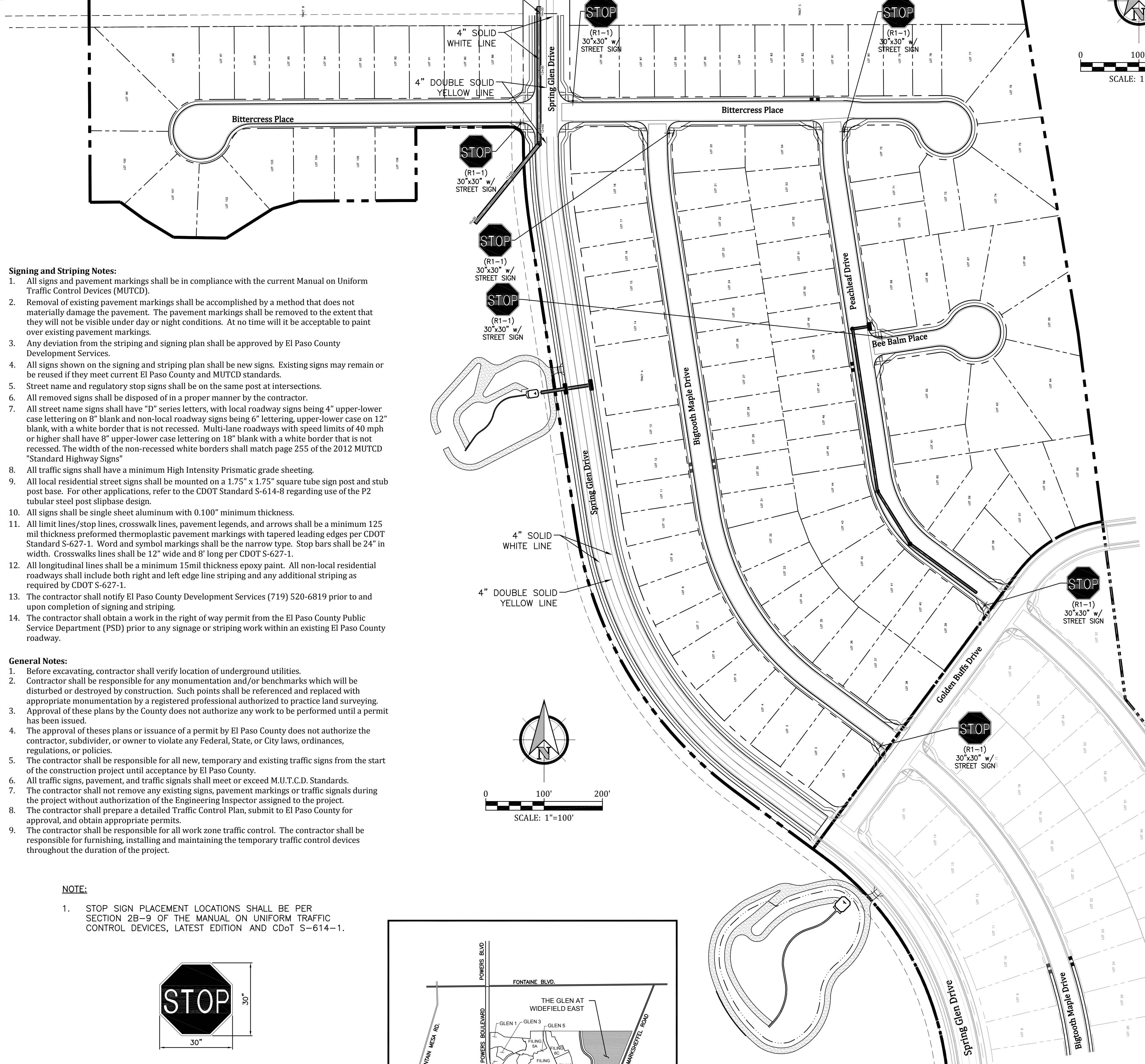
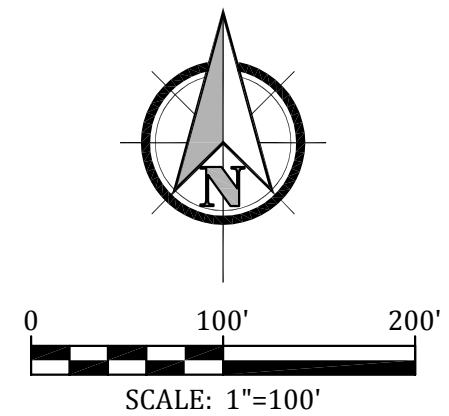
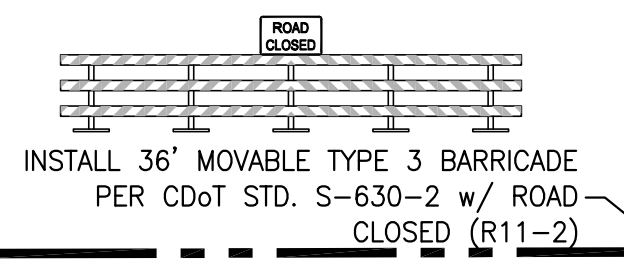
**W**  
WIDEFIELD  
INVESTMENT GROUP

**GLEN AT WIDEFIELD FILING NO. 9**  
**BEE BALM PLACE (Sta. 1+00 to Sta. 3+51)**  
**PLAN AND PROFILE**  
EL PASO COUNTY, COLORADO

|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

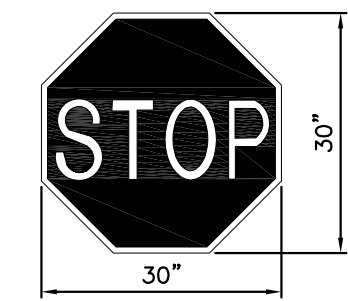
SHEET  
**8**  
8 of 20 Sheets



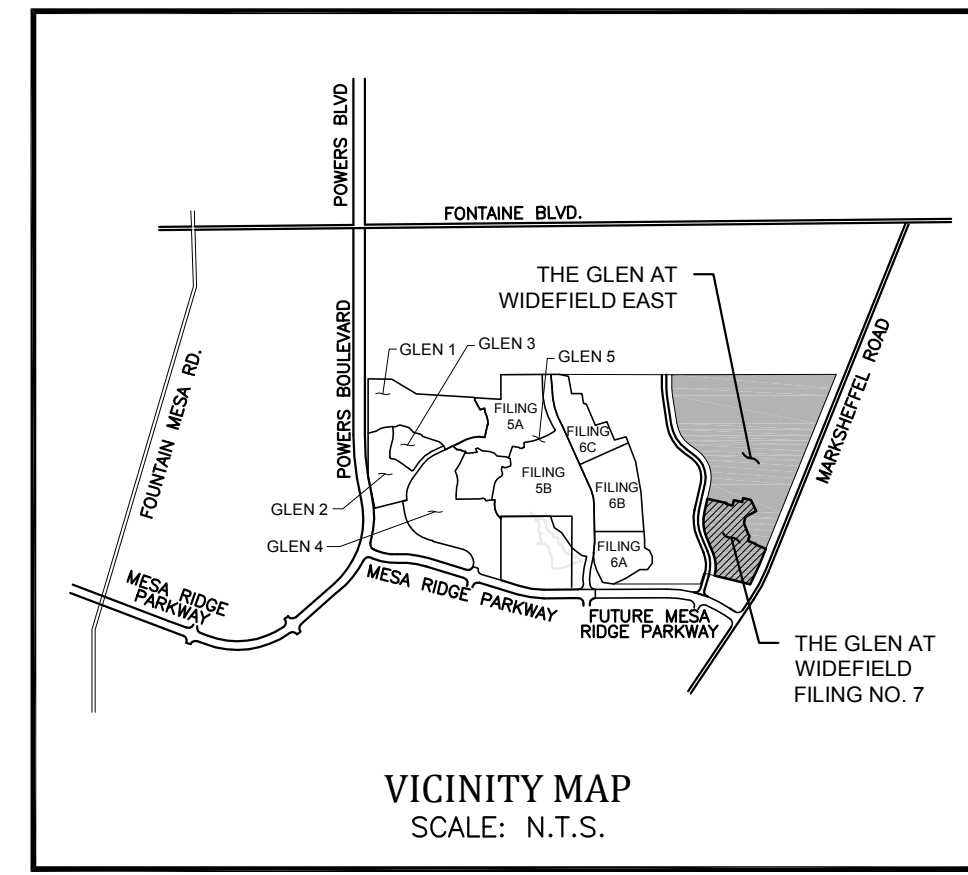


- Signing and Striping Notes:**
- All signs and pavement markings shall be in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).
  - Removal of existing pavement markings shall be accomplished by a method that does not materially damage the pavement. The pavement markings 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-B regarding use of the P2 tubular steel post slphbase 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, subdivider, 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.

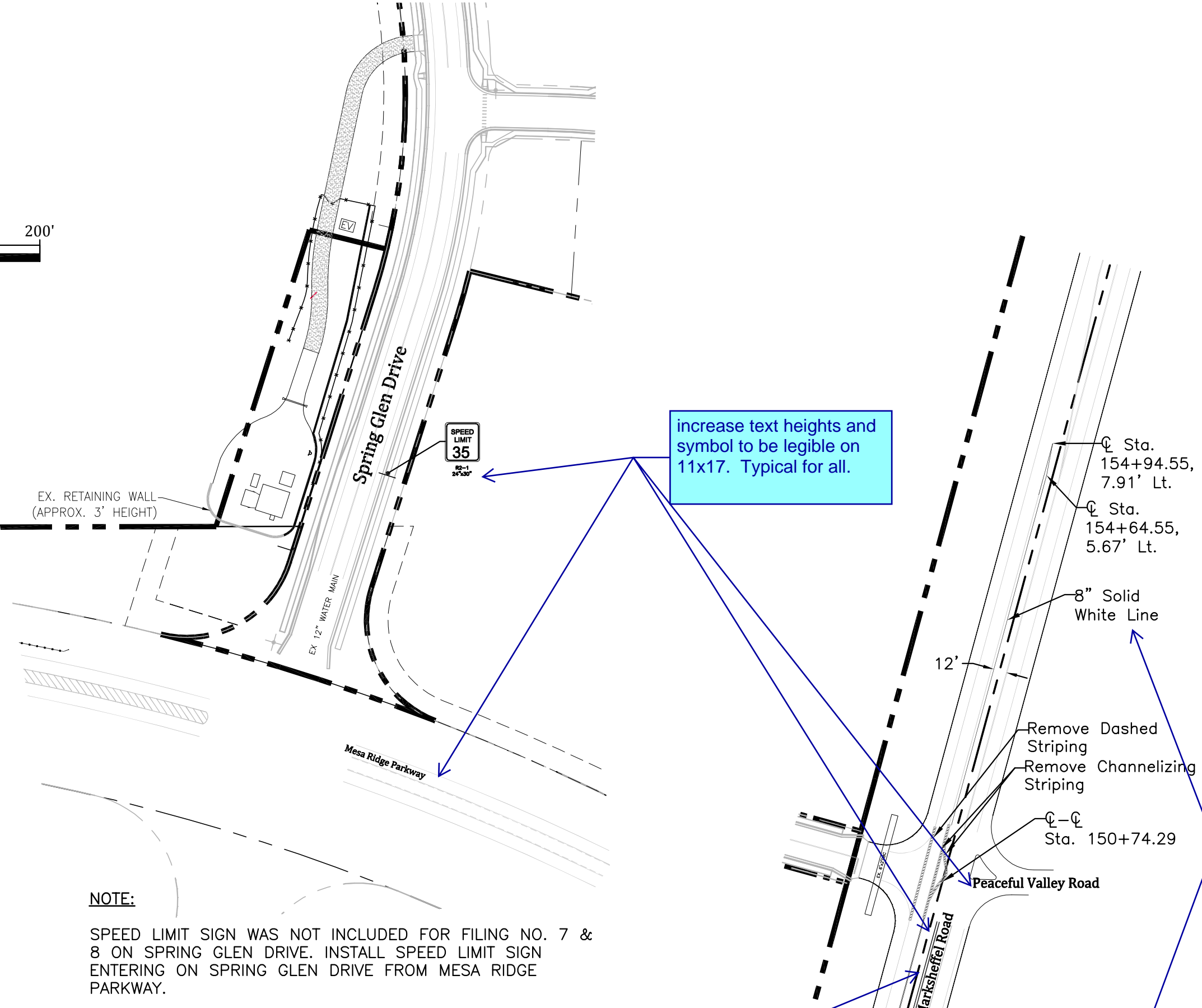
- NOTE:**
- STOP SIGN PLACEMENT LOCATIONS SHALL BE PER SECTION 2B-9 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND CDOT S-614-1.



**SIGN DETAILS**  
SCALE: 1/4" = 1'-0"

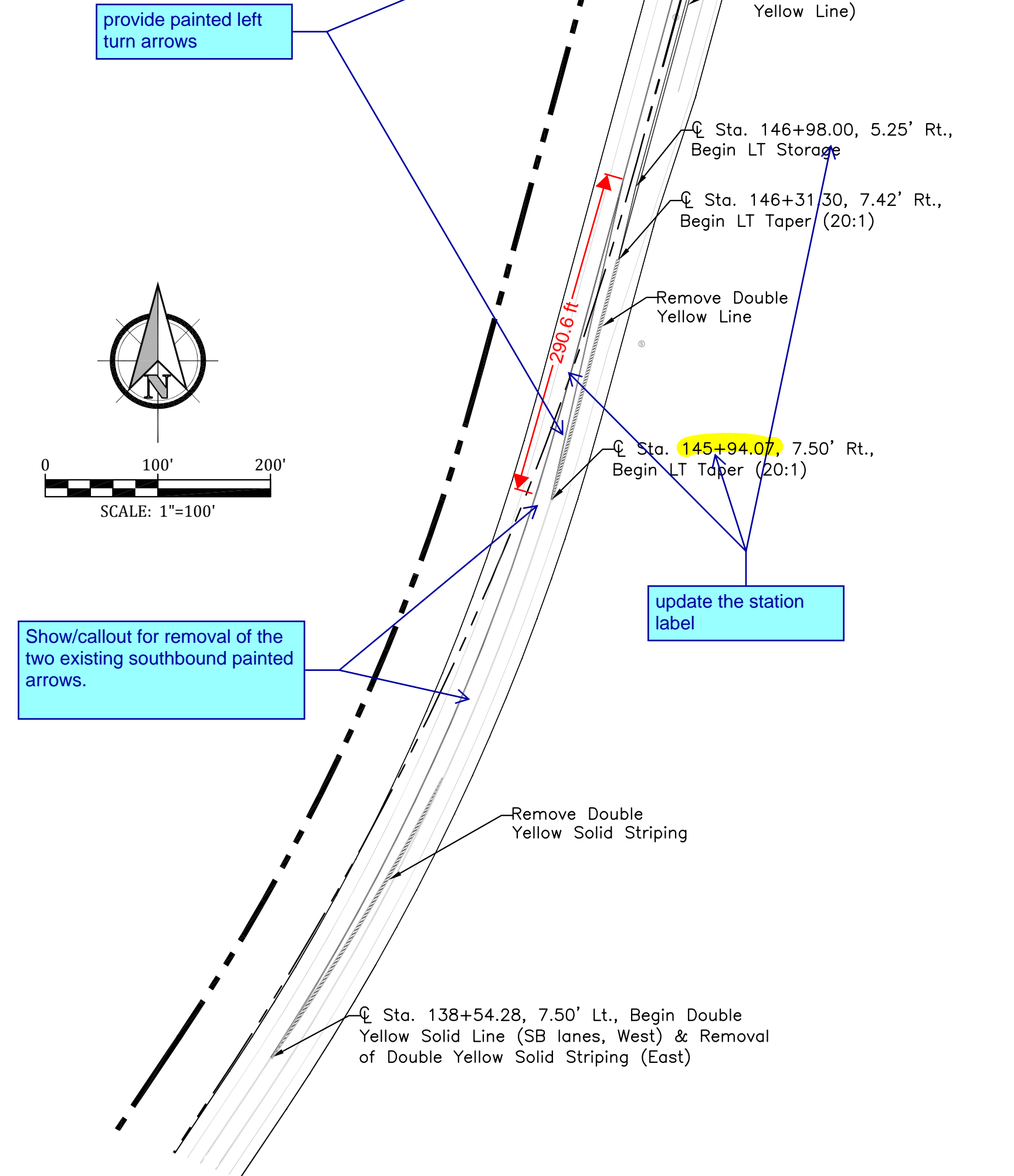
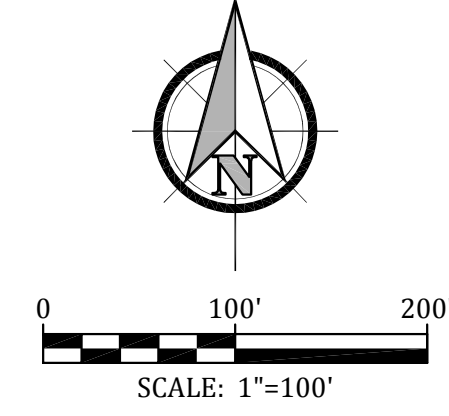


See detail this sheet for additional speed limit signage required on Spring Glen north of Mesa Ridge Parkway.



**SPRING GLEN DR. SPEED LIMIT SIGN**

SCALE: 1"=100'



Increase text heights and symbol to be legible on 11x17. Typical for all.

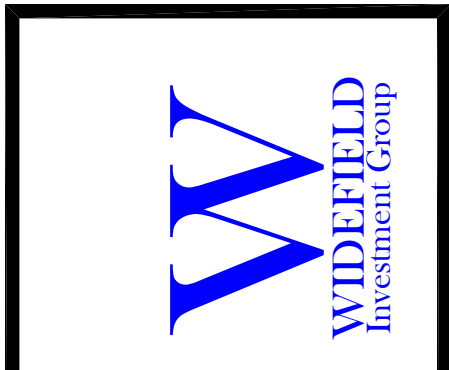
provide painted left turn arrows

Show/callout for removal of the two existing southbound painted arrows.

update the station label

Why (2) solid white line? This should just be a single solid white line. May need to provide a typical cross section for clarification.

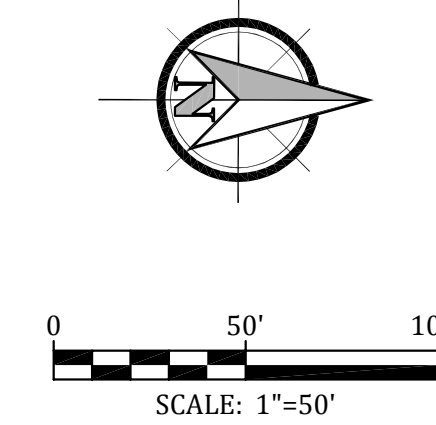
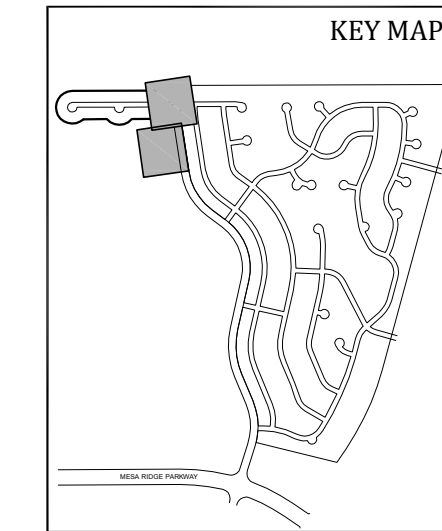
**GLEN AT WIDEFIELD FILING NO. 9  
OVERALL SIGNAGE AND STRIPING PLAN**



EL PASO COUNTY, COLORADO

|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

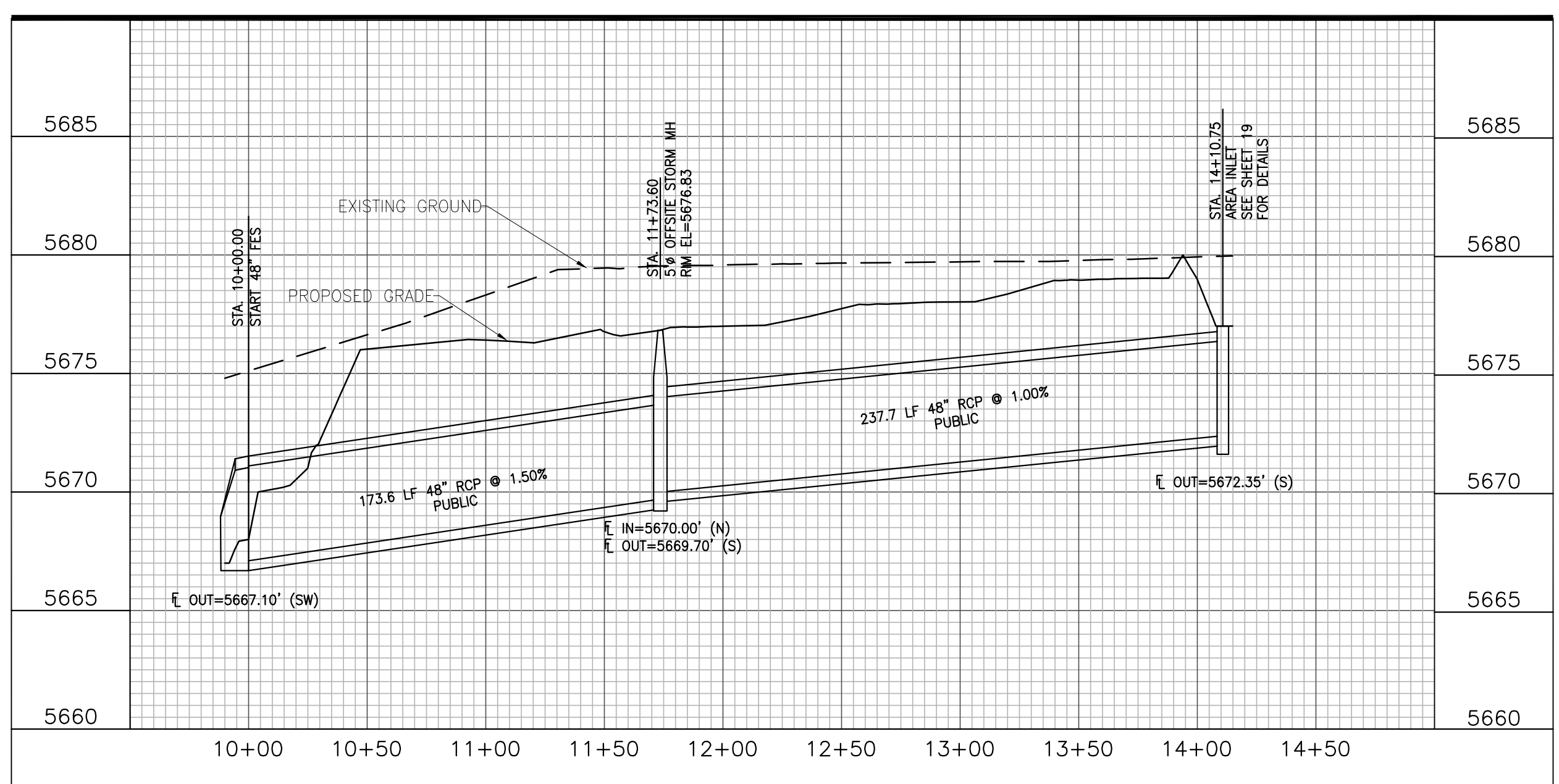
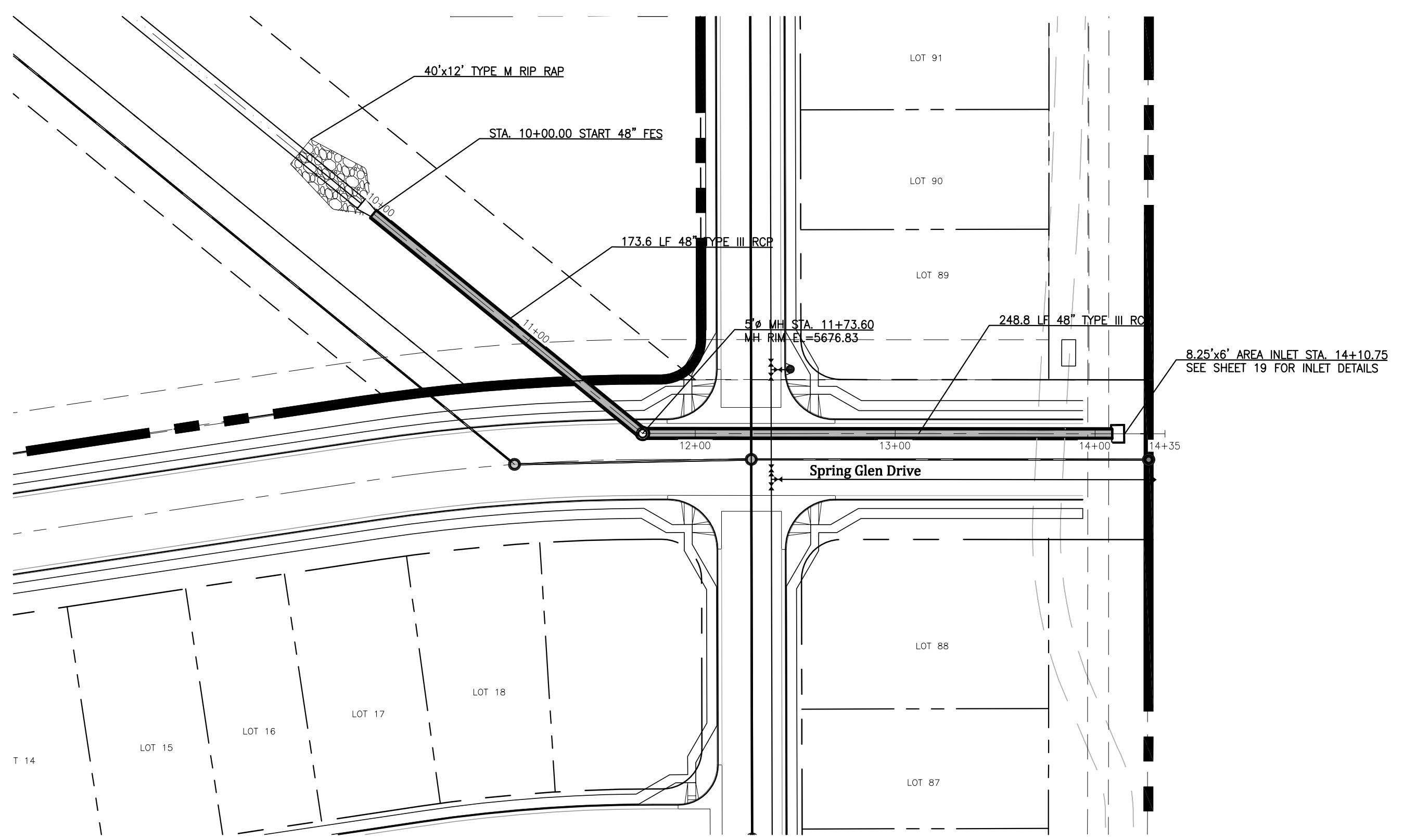
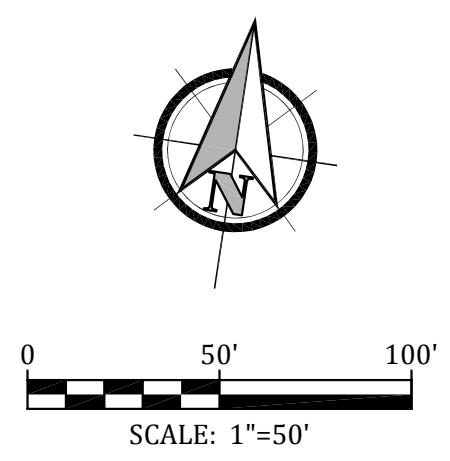
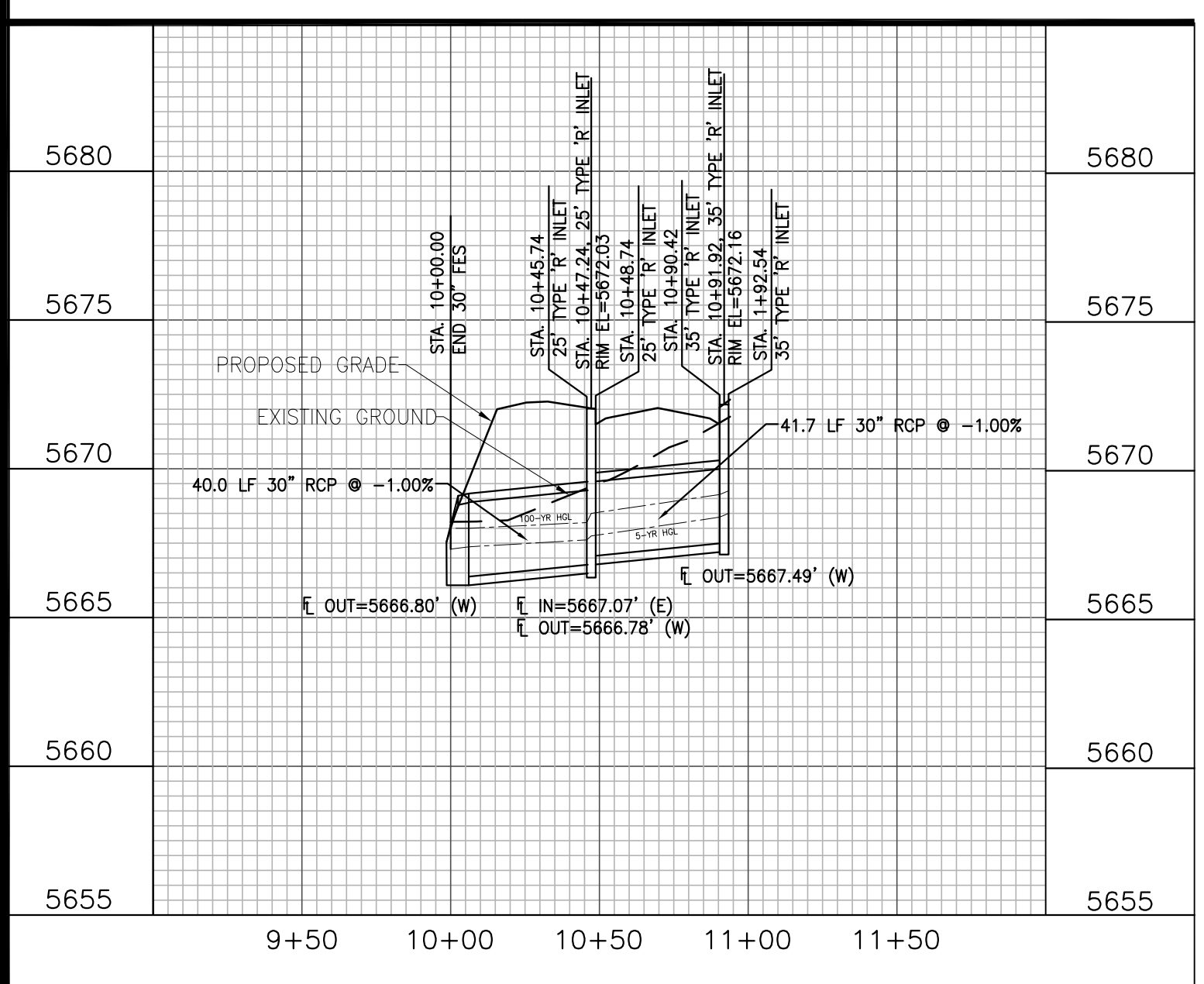
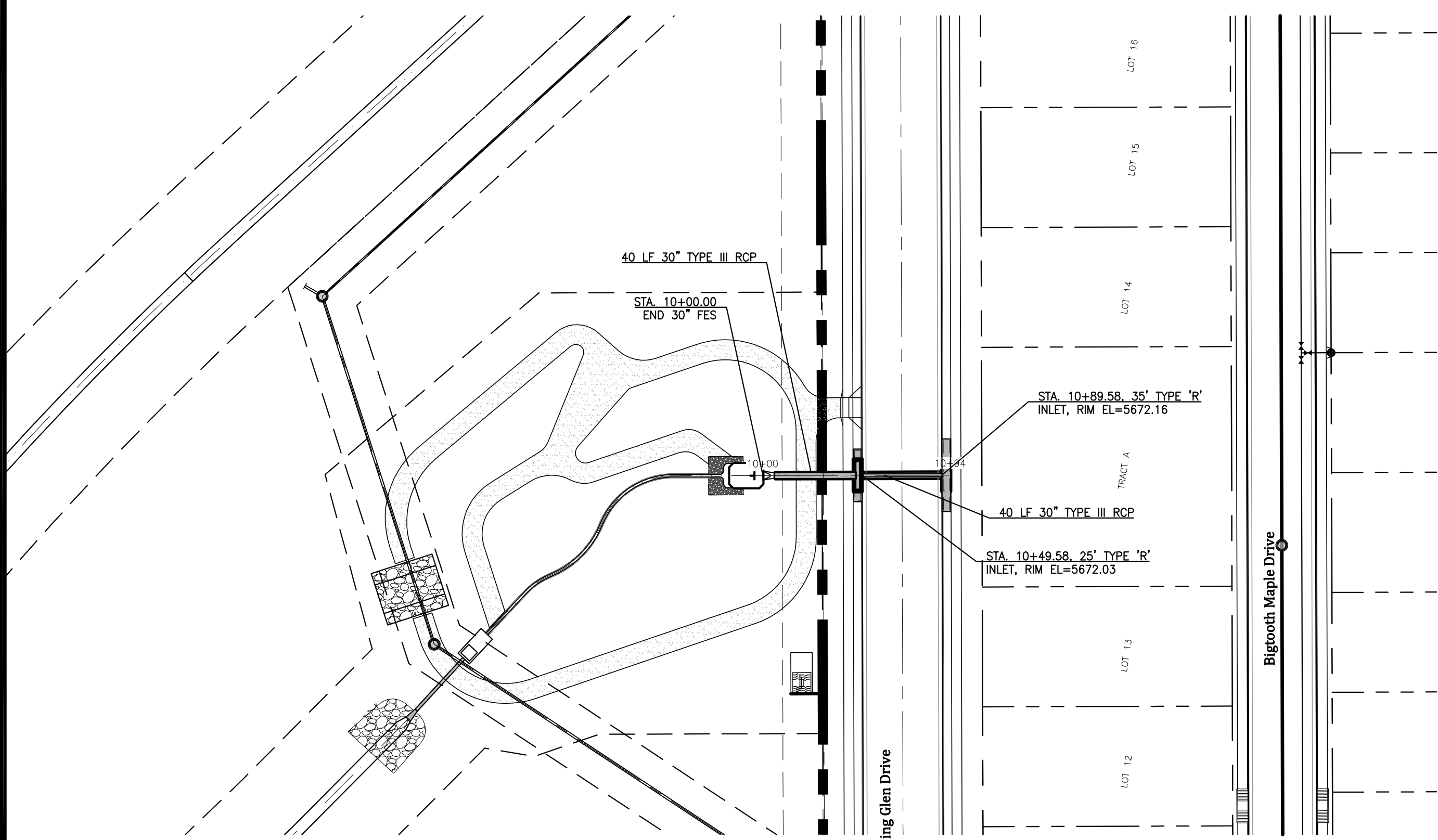
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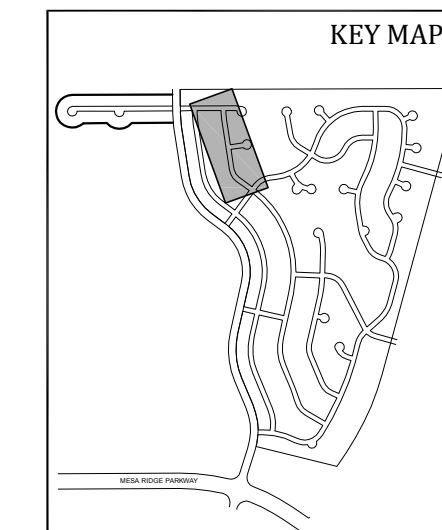
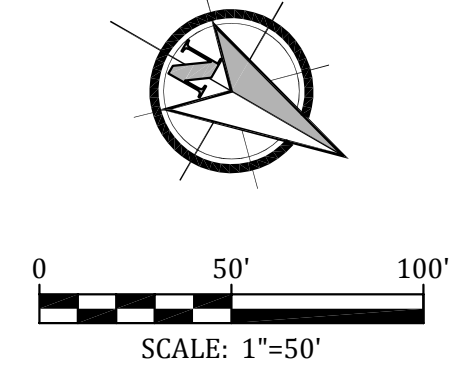
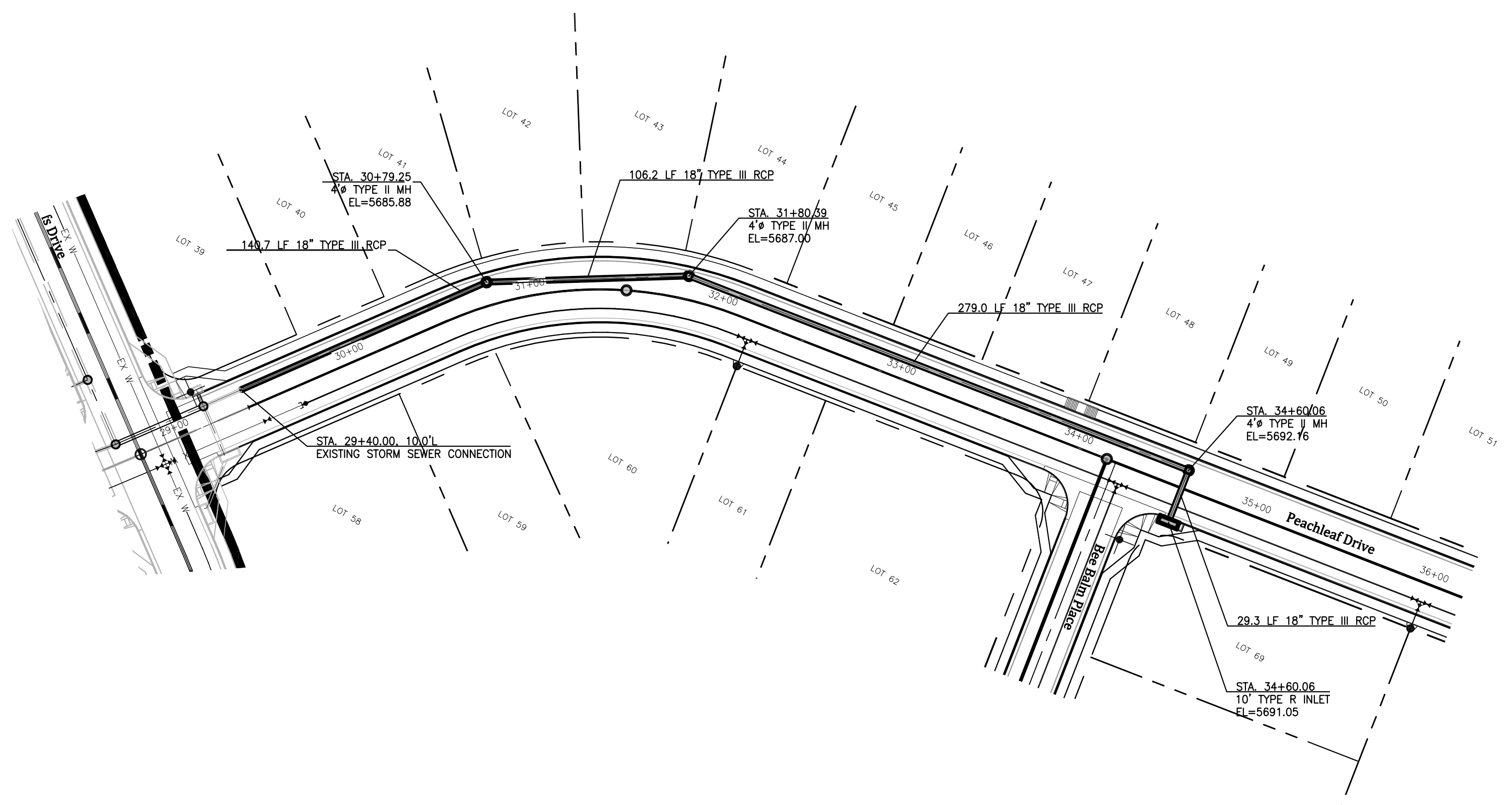


**W** **WIDEFIELD**  
Investment Group

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

|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

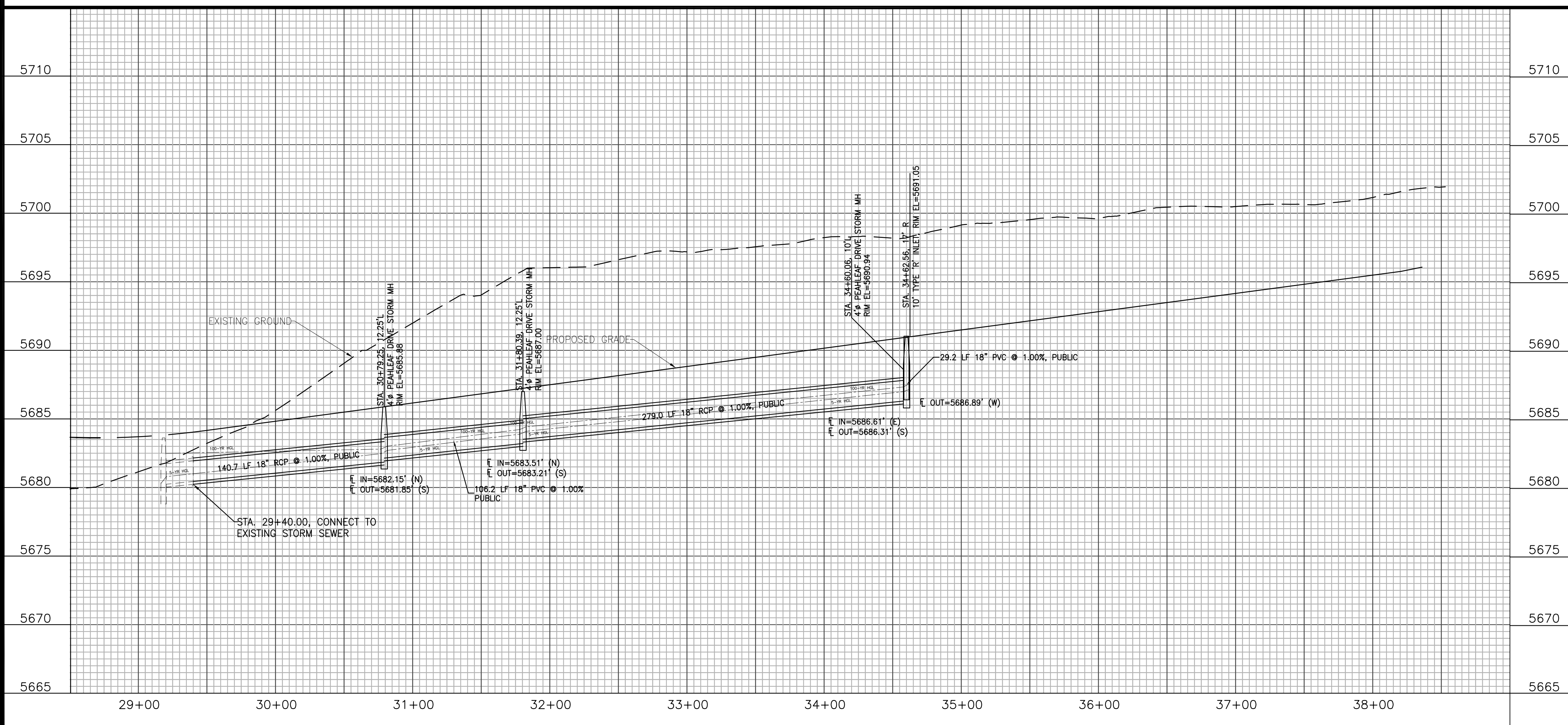




**Kiowa**  
Engineering Corporation  
1604 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 530-7342



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



|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

SHEET  
**11**  
11 of 20 Sheets

| 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 |
| SIDEOTS GRAMA   | El Reno     | 3.0       |
| WESTERN WHEAT GRASS   | Barton      | 2.5       |
| SLENDER WHEAT GRASS   | Native      | 2.0       |
| LITTLE BLUESTEM   | Fasture     | 2.0       |
| SAND DROPSSEED  | Native      | 0.5       |
| SWITCH GRASS  | Nebraska 28 | 3.0       |
| WEERING LOVE GRASS  | Morpheus    | 1.0       |
|   |             | 14.0 lbs  |

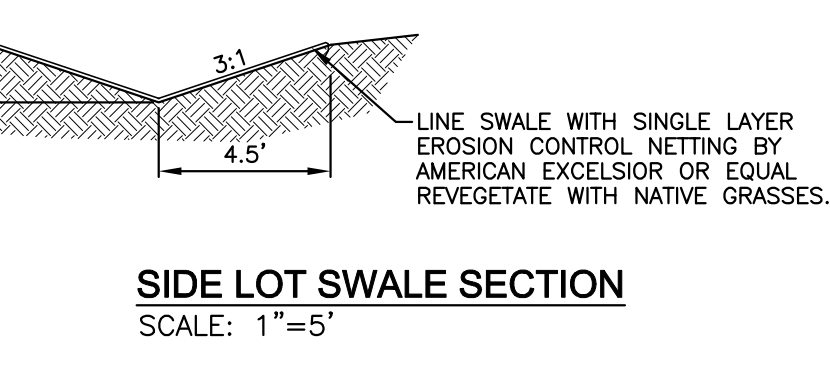
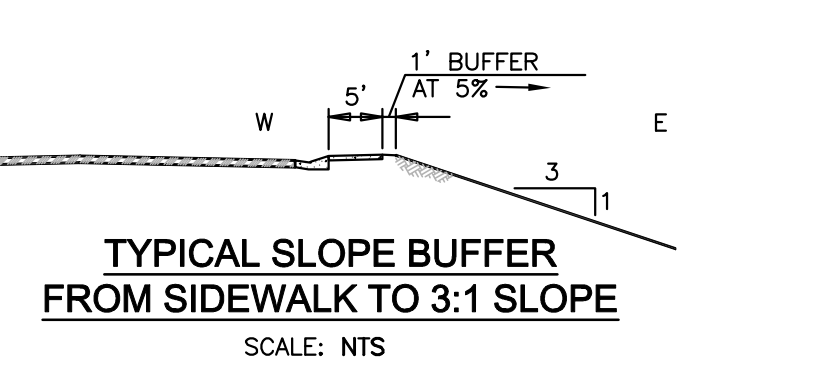
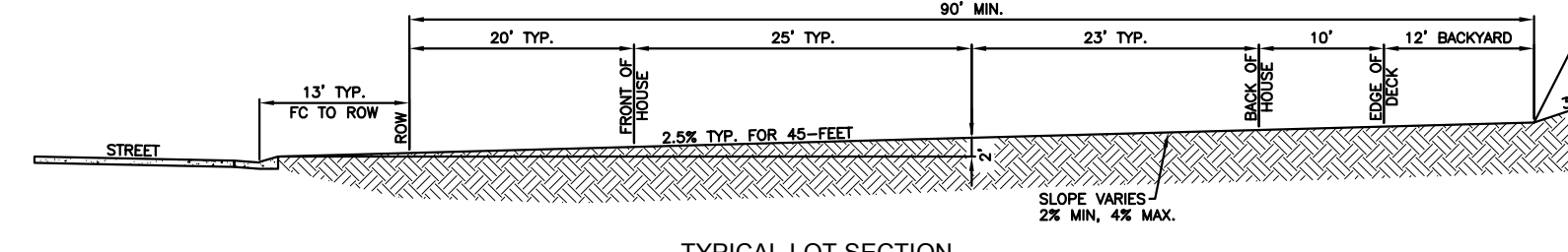
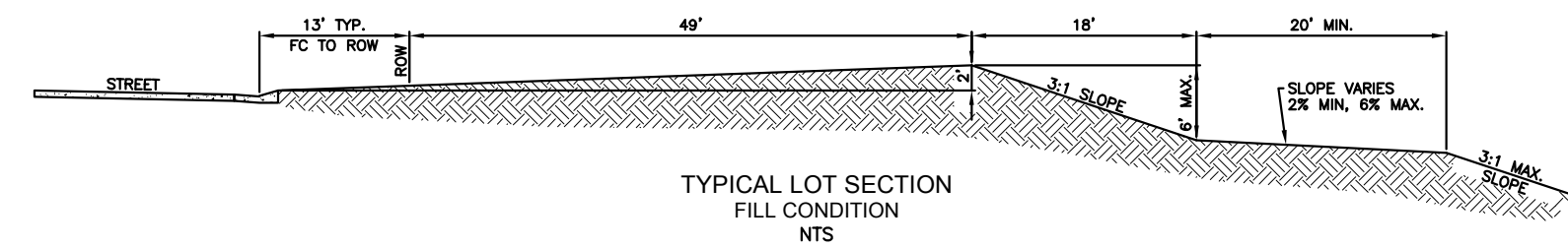
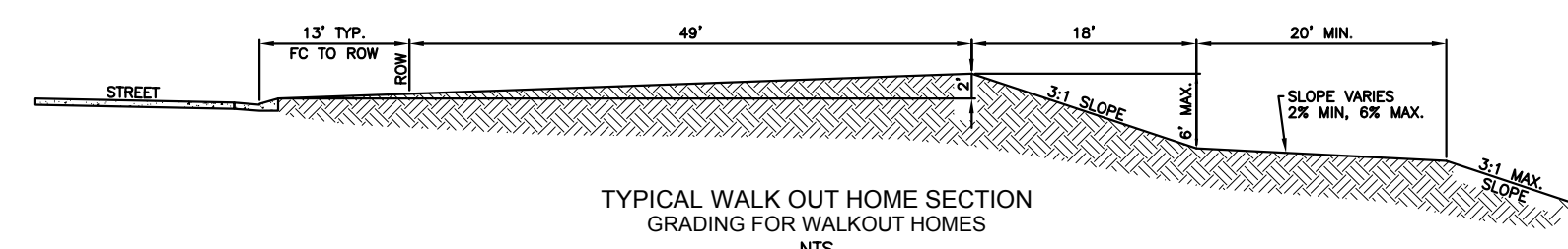
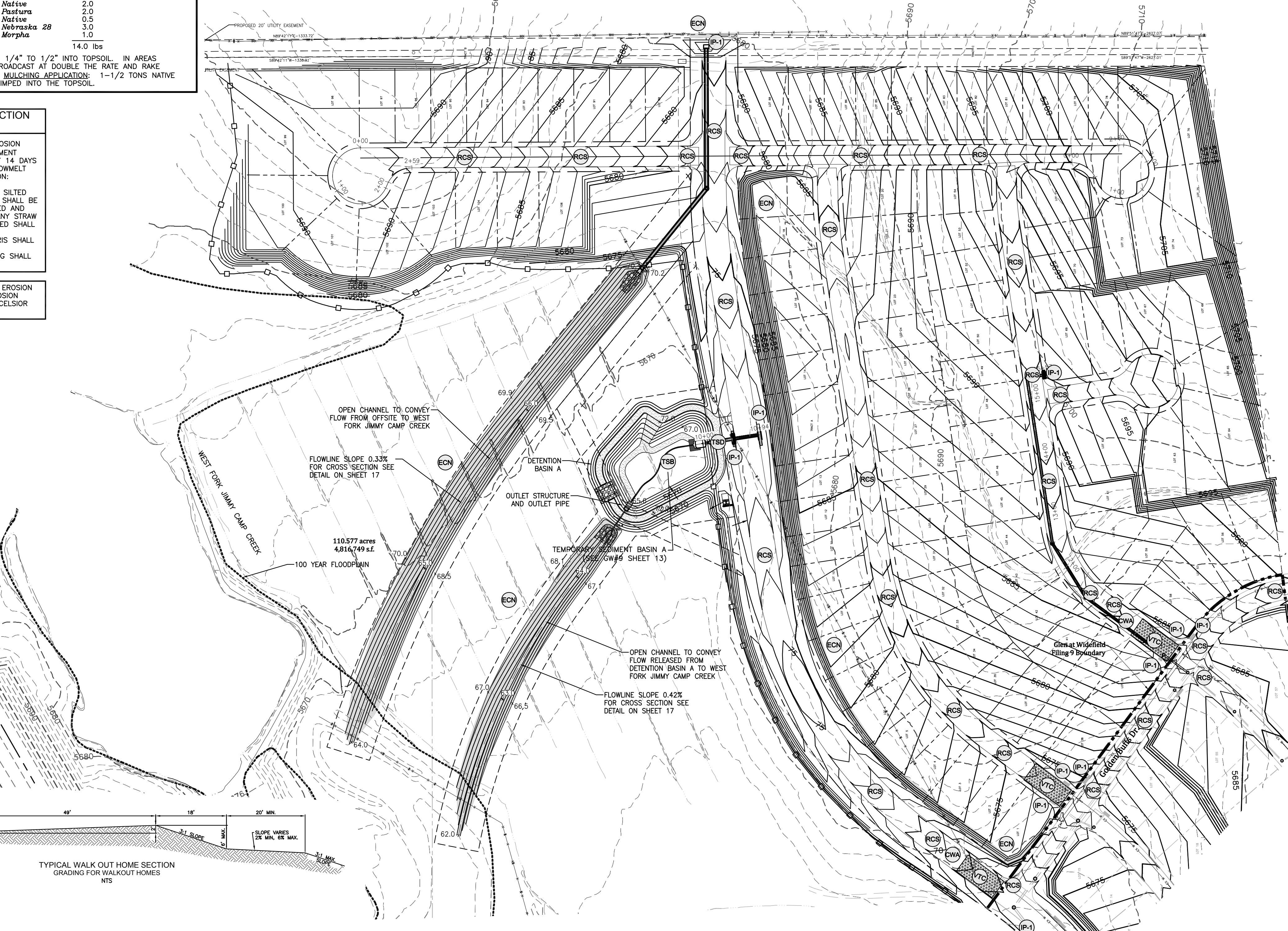
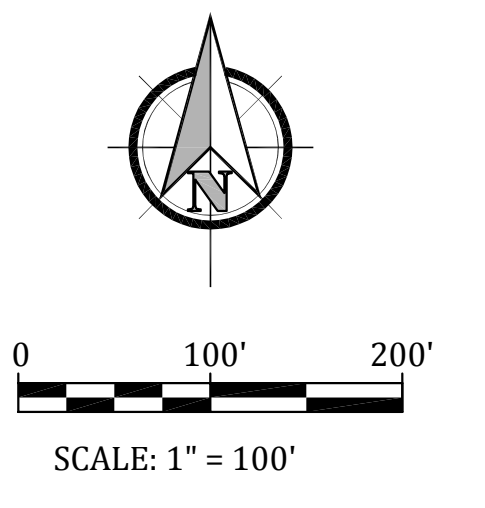
SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL. IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBLE THE RATE AND RAKE 1/4" TO 1/2" INTO THE TOPSOIL. MULCHING APPLICATION: 1-1/2 TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL.

**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 SIFTED 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 BLANKET. CURLEX HEAVY DUTY EROSION CONTROL BLANKET BY AMERICAN EXCELSIOR OR EQUAL SHALL BE USED.



| LEGEND |                          |
|--------|--------------------------|
|        | SILT FENCE               |
|        | VEHICLE TRACKING CONTROL |
|        | INLET PROTECTION         |
|        | TEMPORARY SLOPE DRAIN    |
|        | EROSION CONTROL NETTING  |
|        | ROUGH-CUT STREET CONTROL |
|        | CONCRETE WASHOUT AREA    |
|        | 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.
  - Compaction under filled areas, including roadway and detention basin embankments, shall be 95 percent of the maximum Standard Proctor Density (ASTM D698) at two (2) percent of optimum moisture content.
  - No rubble or debris shall be placed in the backfill under any of the proposed buildings, streets, curb & gutter, sidewalk and drainage structures or within five (5) feet of a building footprint. Properly graded rubble may be used in some locations as specified and verified by the Geotechnical Engineer.
  - 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), Geocor 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 recompact 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 loam; B--Stoneham 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 |

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

**WIDEFIELD**  
Investment Group

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

Project No.: 17038  
Date: September 7, 2018  
Design: AWMc  
Drawn: JAK  
Check: AWMc  
Revisions:

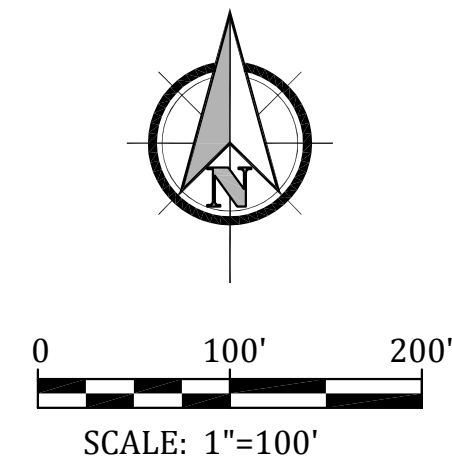
SHEET  
**12**  
12 of 20 Sheets





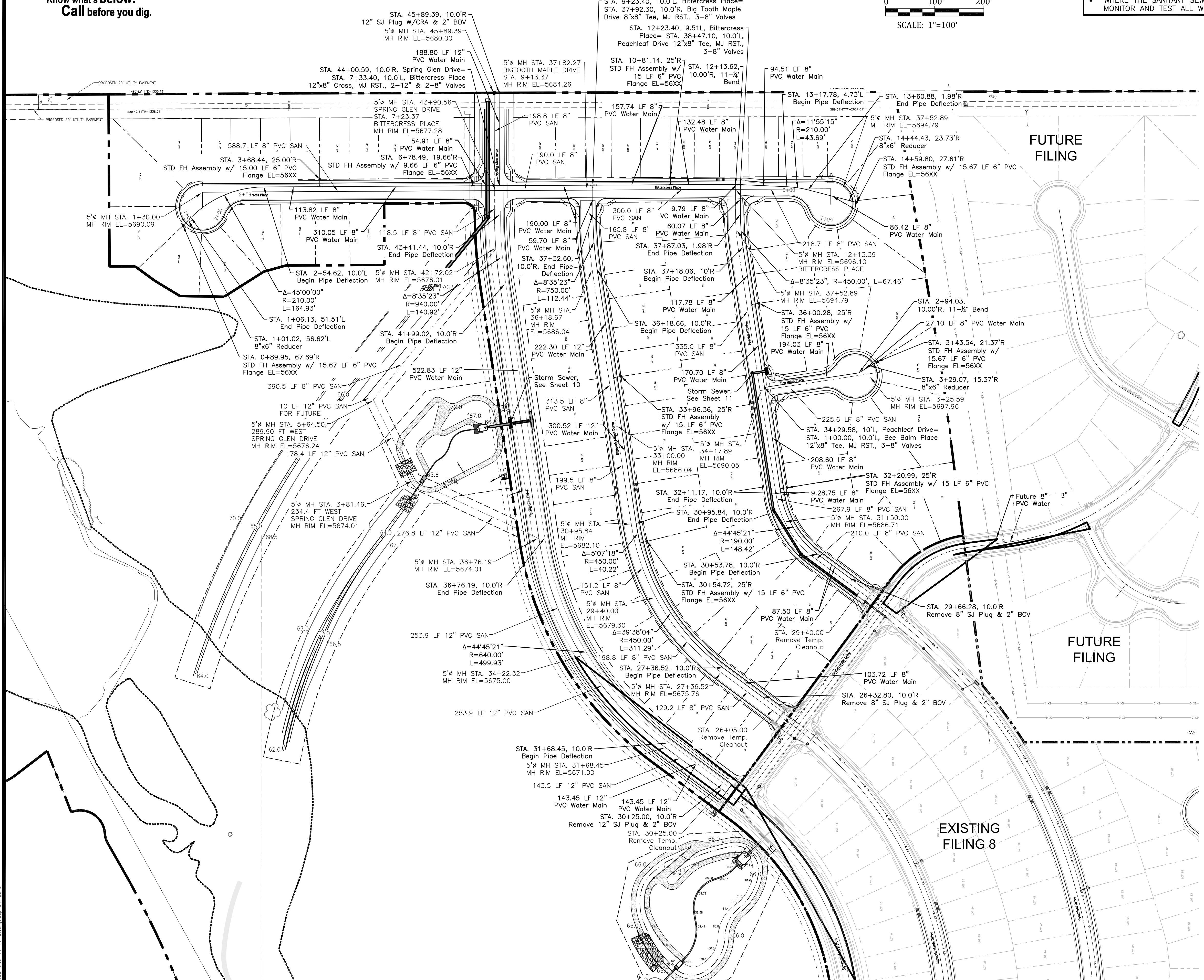
Know what's below.  
Call before you dig.

FOR STORM SEWER DESIGN  
SEE SHEETS 10-11



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 (WWS) | 390-7111     |
| WATER:    | WIDEFIELD W&S DISTRICT (WWS) | 390-7111     |
| ELECTRIC: | MOUNTAIN VIEW ELECTRIC       | 435-2283     |
| GAS:      | PEOPLES NATURAL GAS          | 860-303 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 WWS 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. Mark 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.

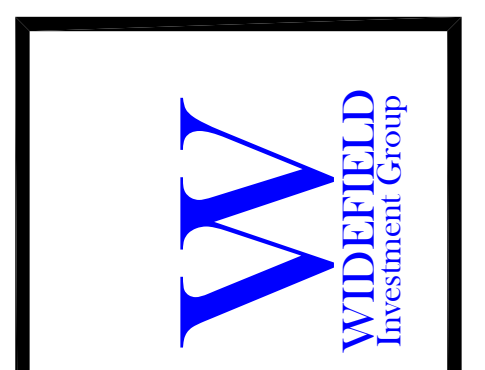
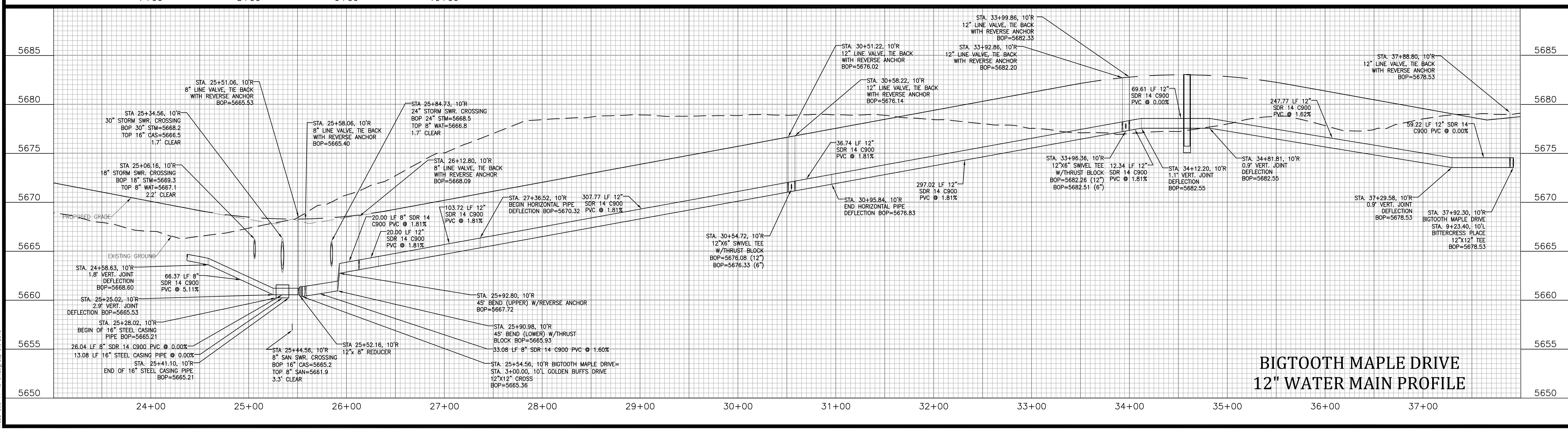
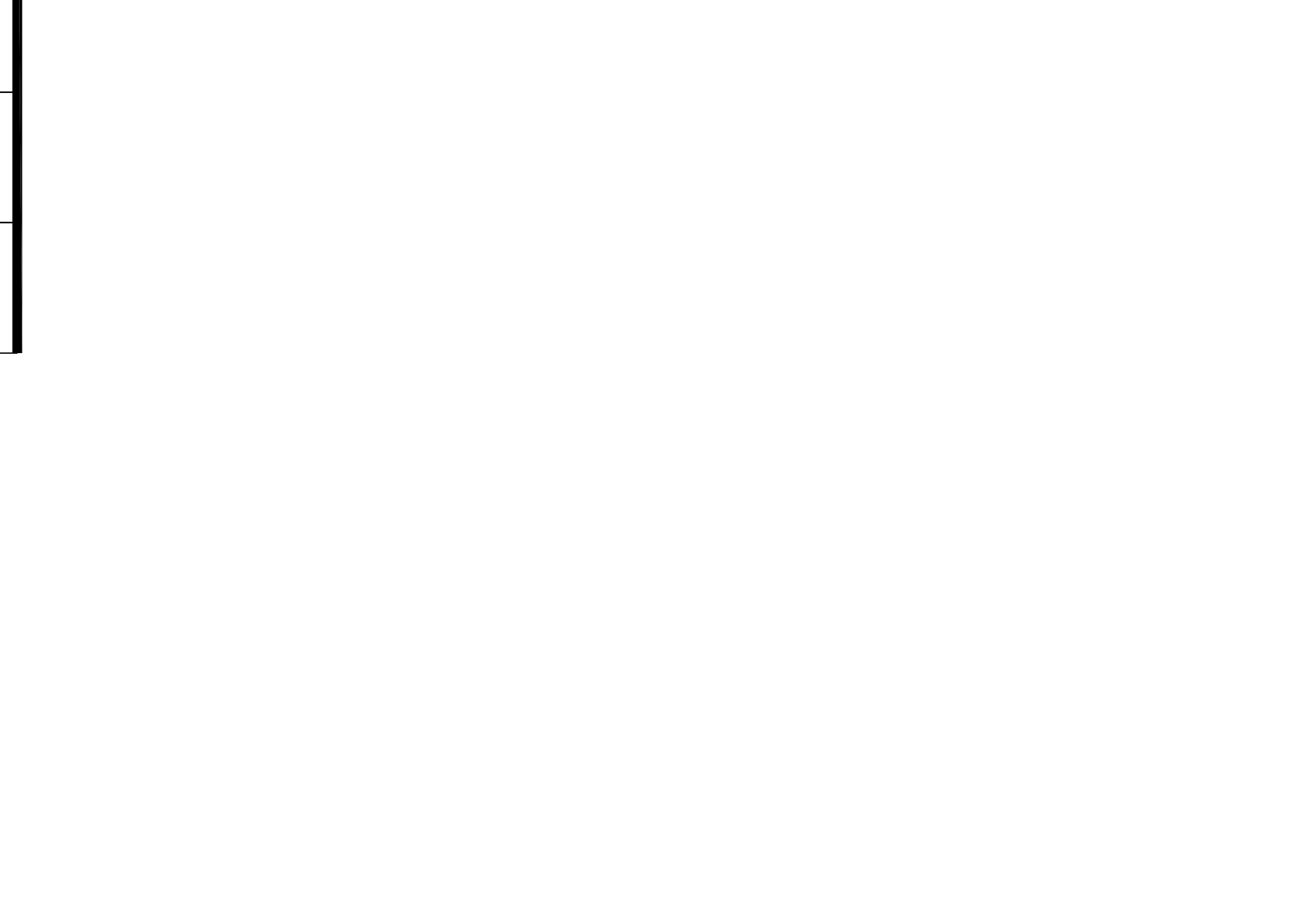
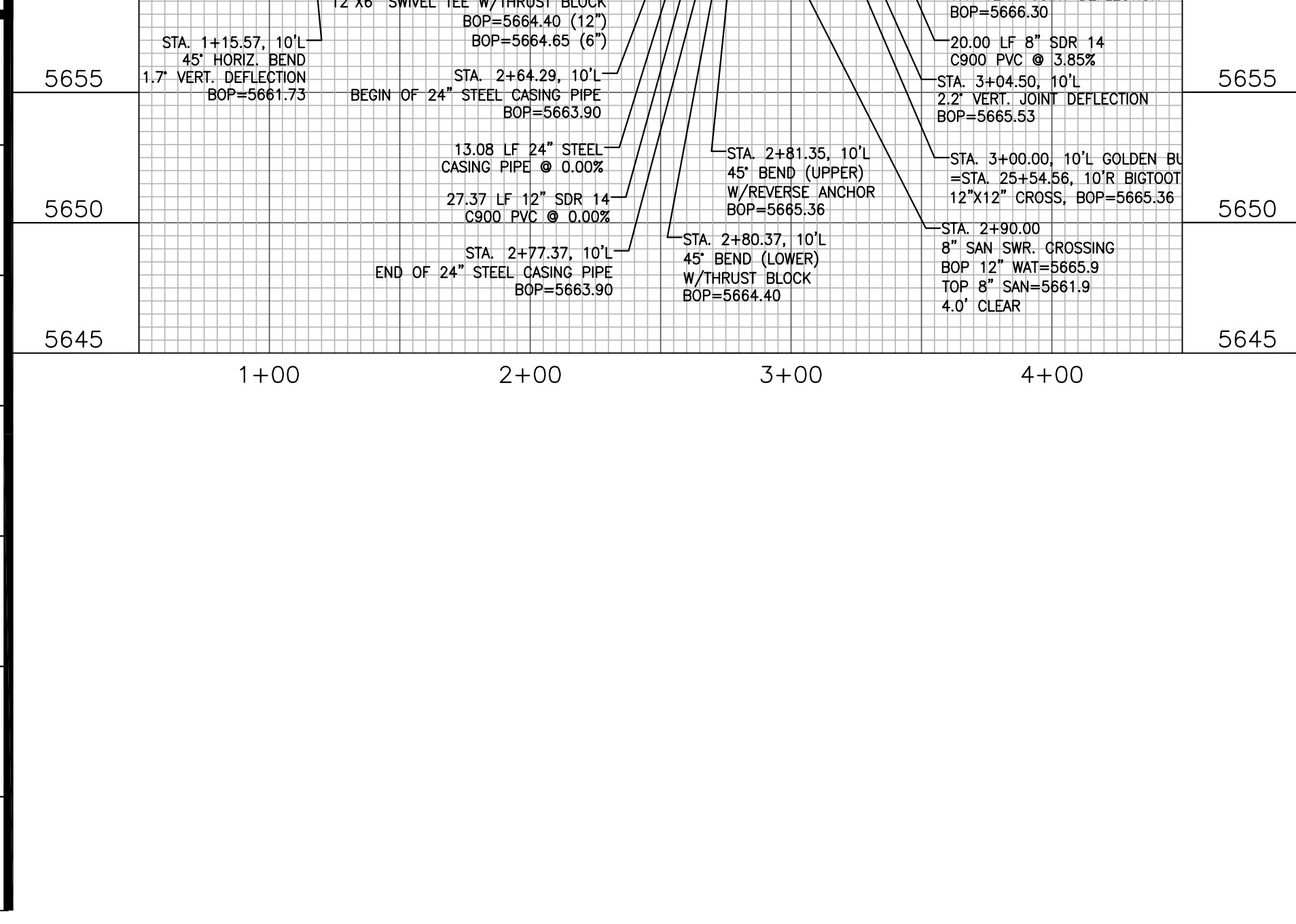
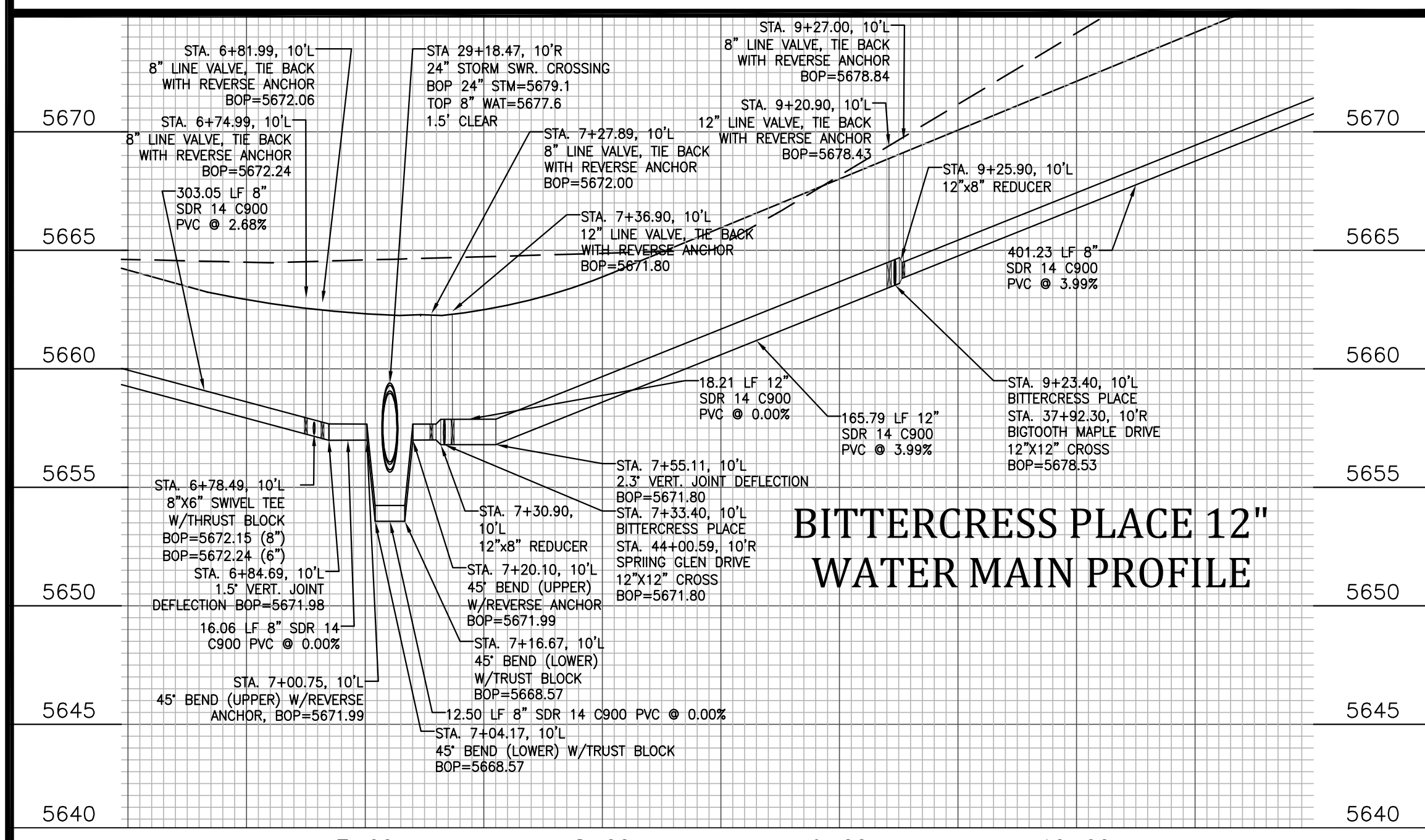
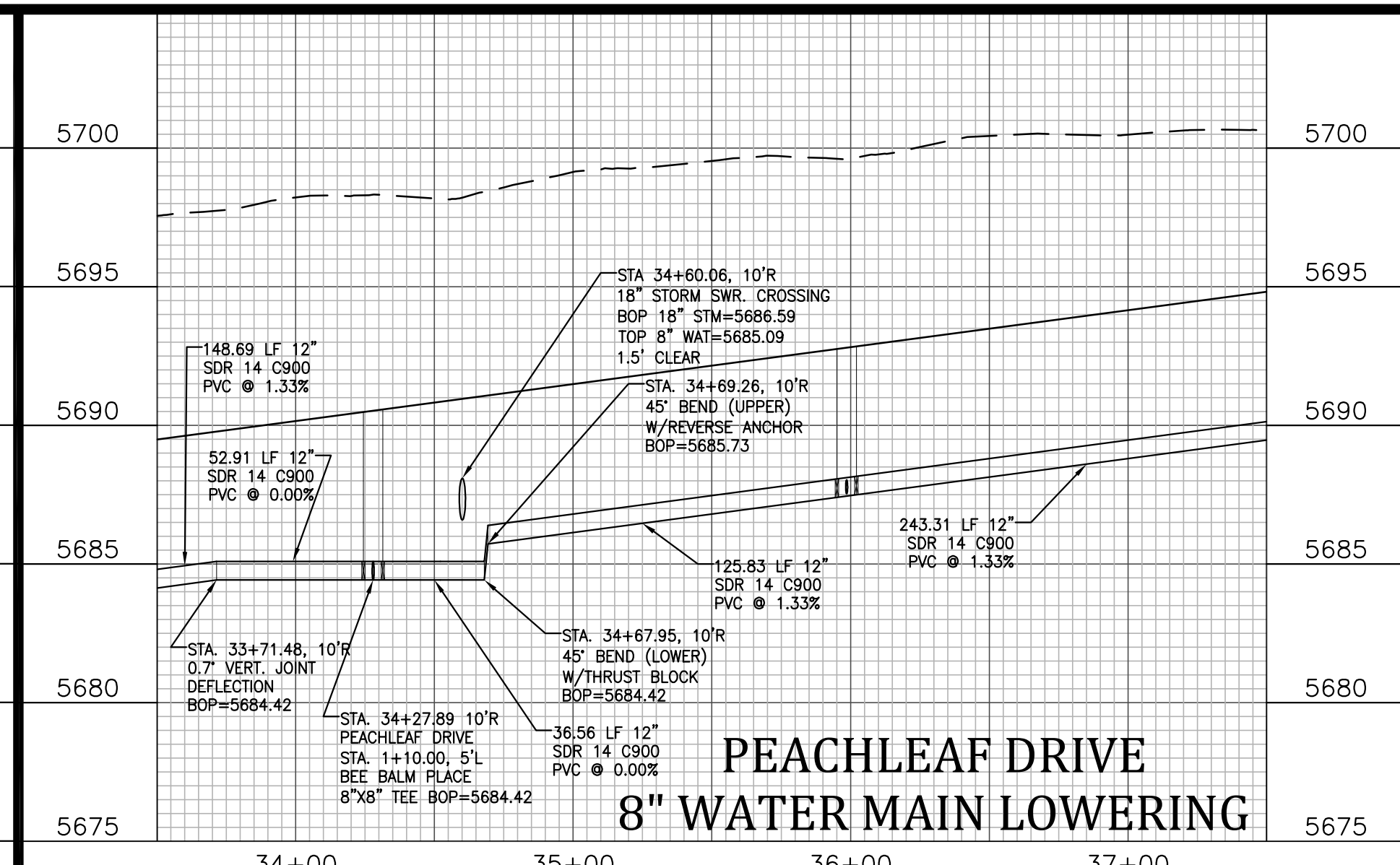
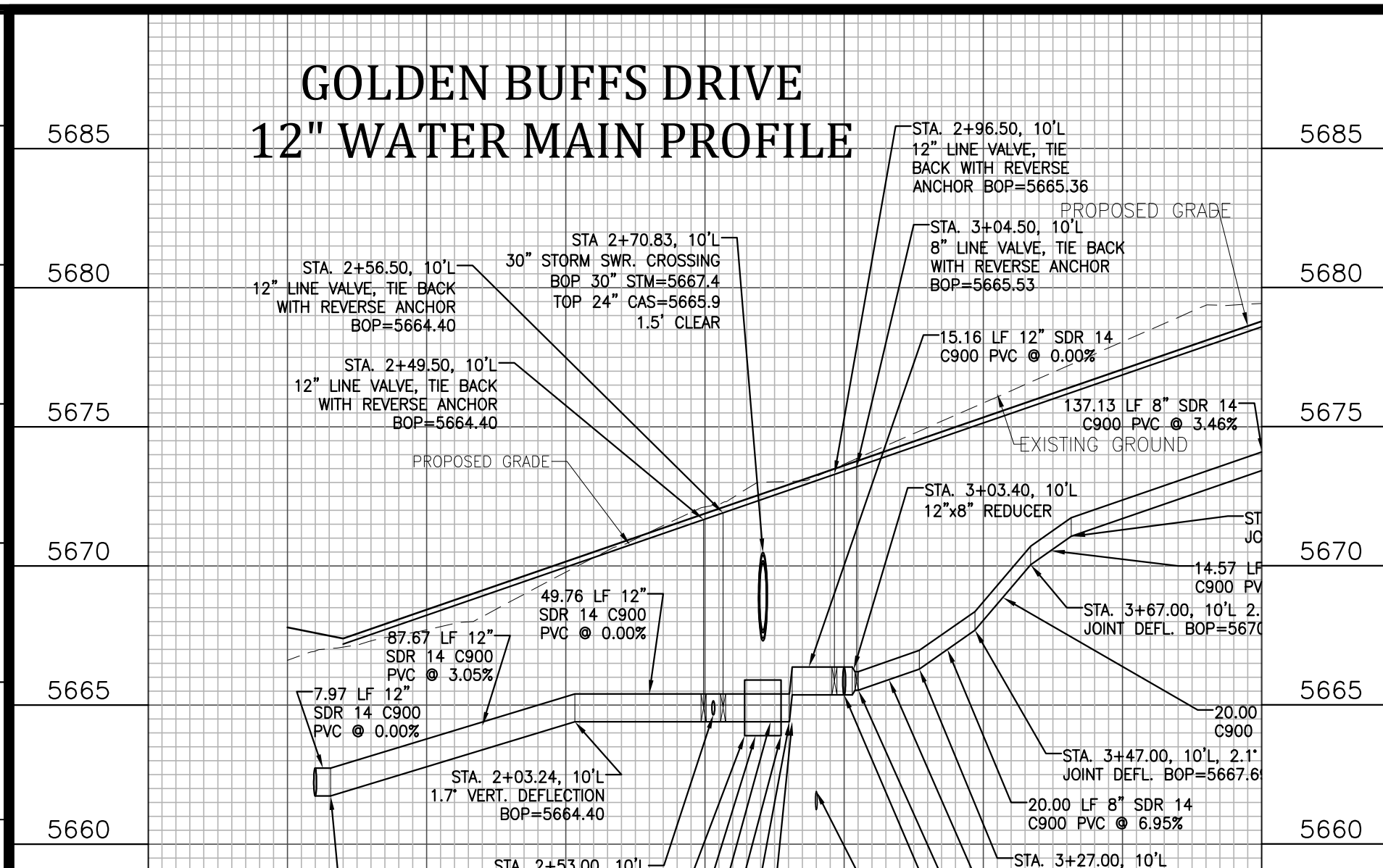
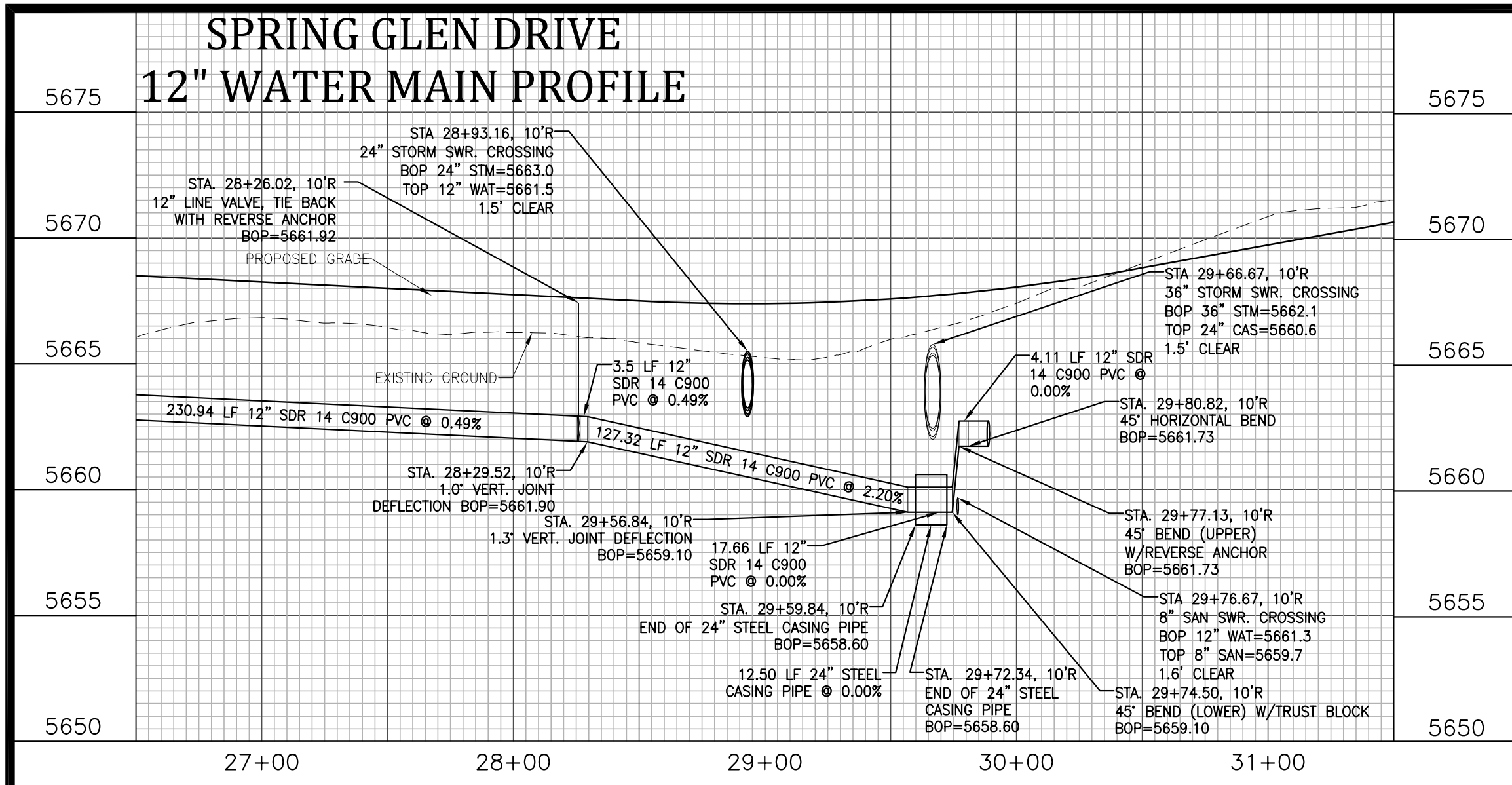
**WIDEFIELD WATER AND SANITATION DISTRICT WATER DESIGN APPROVAL**

Date: \_\_\_\_\_ By: \_\_\_\_\_

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

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| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | AWMc              |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |



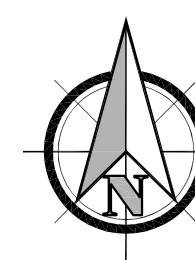
**GLEN AT WIDEFIELD FILING NO. 9**  
**UTILITY PLAN**  
**WATER LINE LOWERING DETAILS**  
**EL PASO COUNTY, COLORADO**

|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
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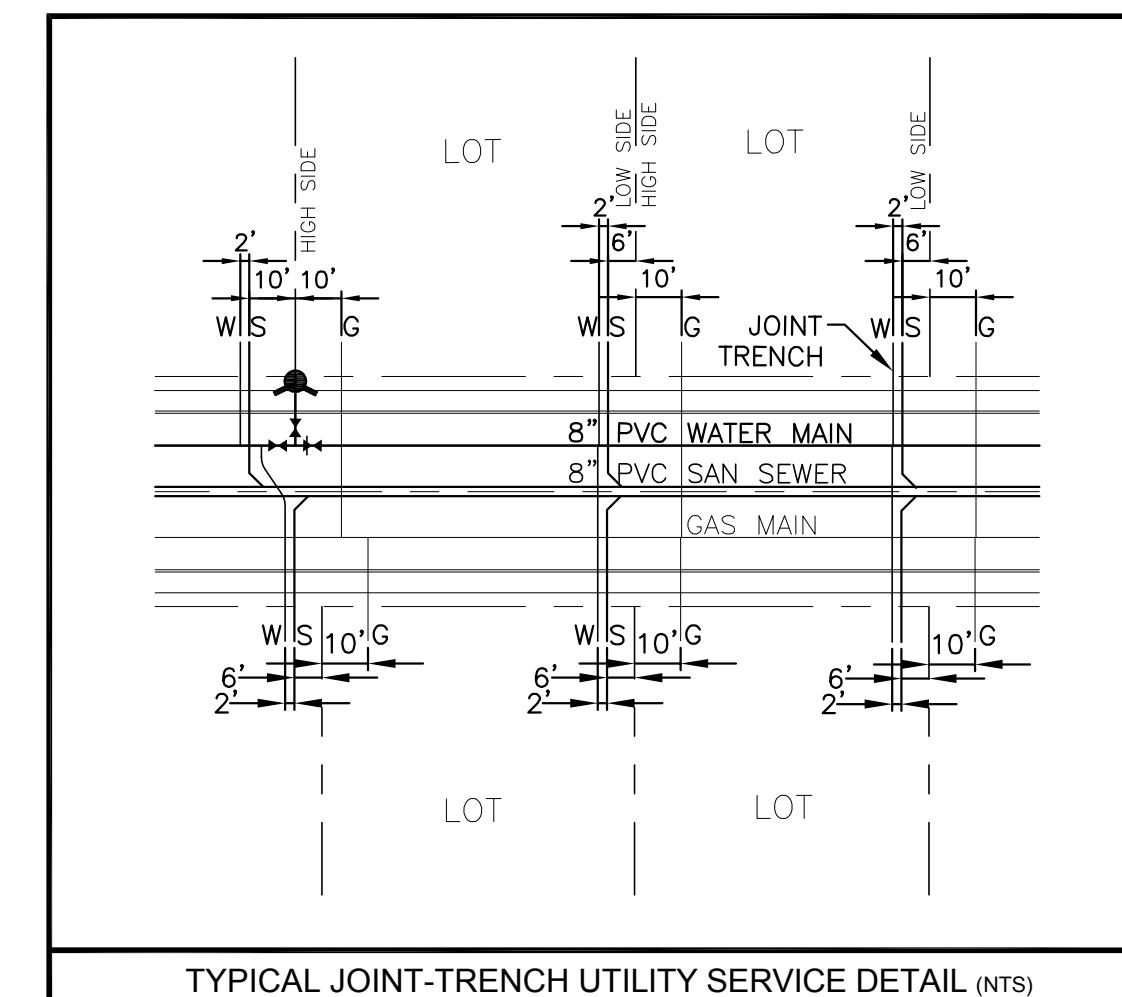
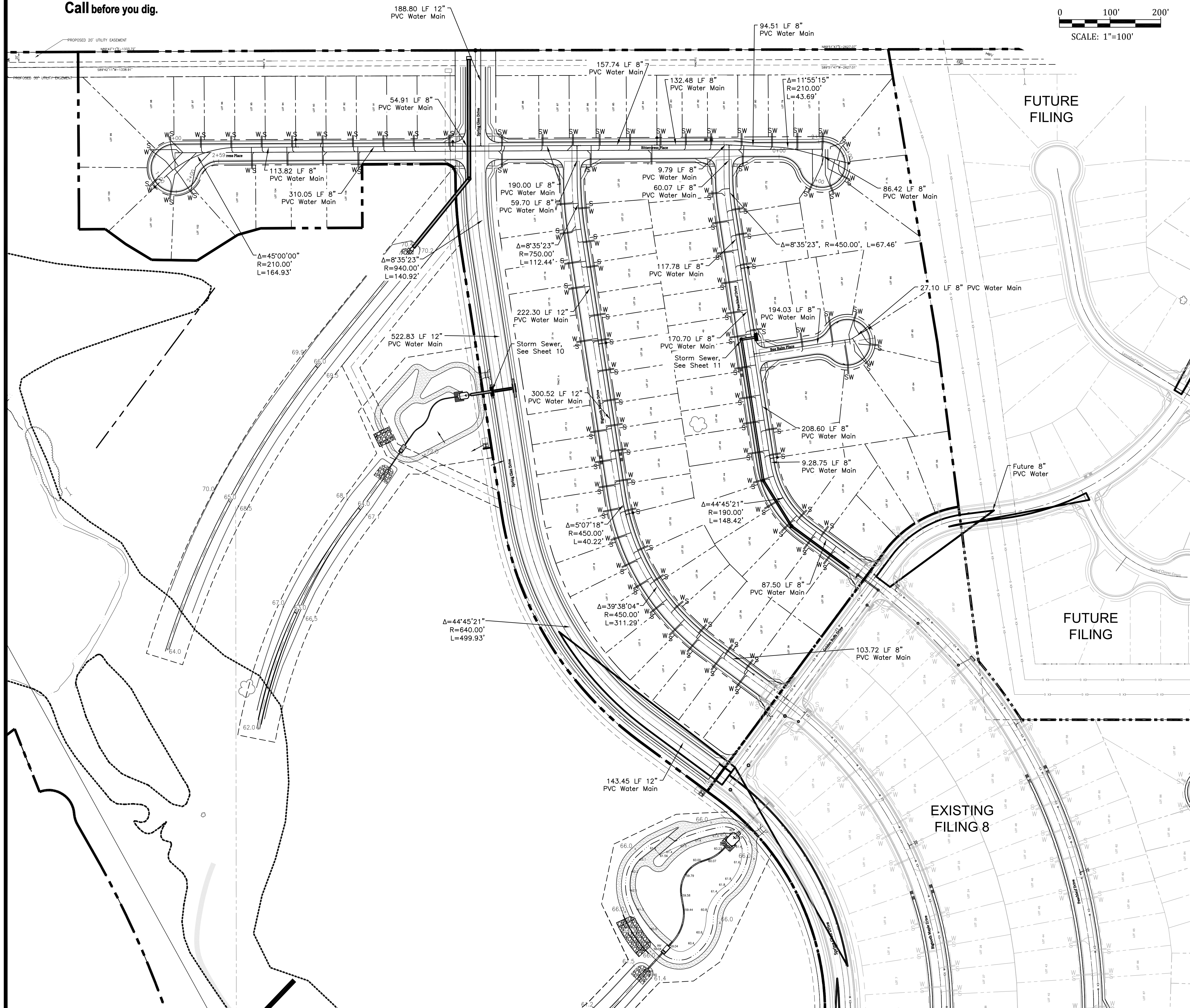


Know what's below.  
Call before you dig.

FOR STORM SEWER DESIGN  
SEE SHEETS 10-11



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



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 (WWS&S) | 390-7111     |
| WATER:    | WIDEFIELD W&S DISTRICT (WWS&S) | 390-7111     |
| ELECTRIC: | MOUNTAINVIEW ELECTRIC          | 495-2283     |
| GAS:      | BLACKHILLS ENERGY              | 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

GATE VALVE (UNLESS OTHERWISE NOTED)

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**UTILITY APPROVALS**

**DISTRICT APPROVALS**

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**WIDEFIELD WATER AND SANITATION DISTRICT  
WASTEWATER DESIGN APPROVAL**

Date: \_\_\_\_\_ By: \_\_\_\_\_

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

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**WIDEFIELD WATER AND SANITATION DISTRICT  
WATER DESIGN APPROVAL**

Date: \_\_\_\_\_ By: \_\_\_\_\_

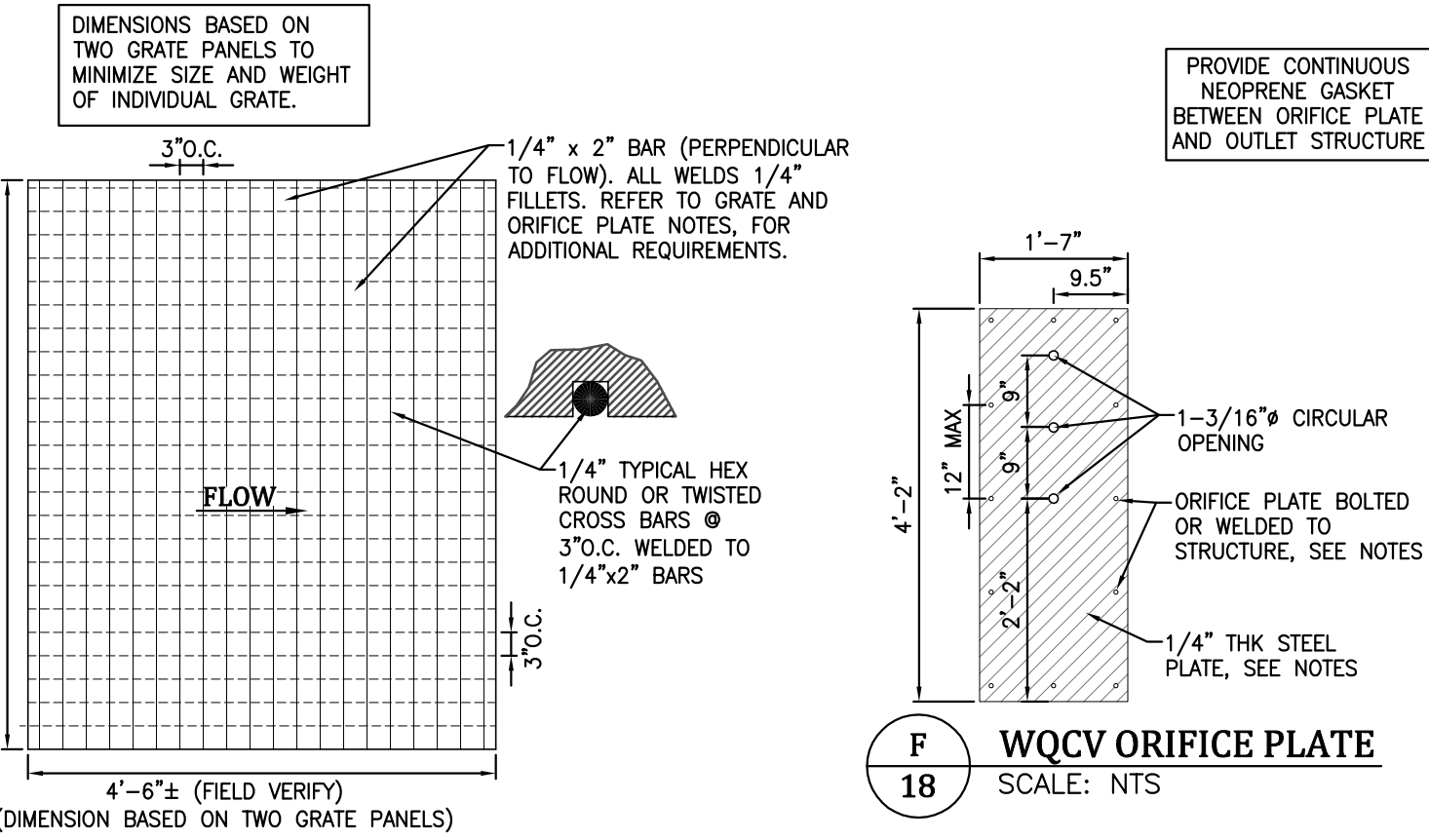
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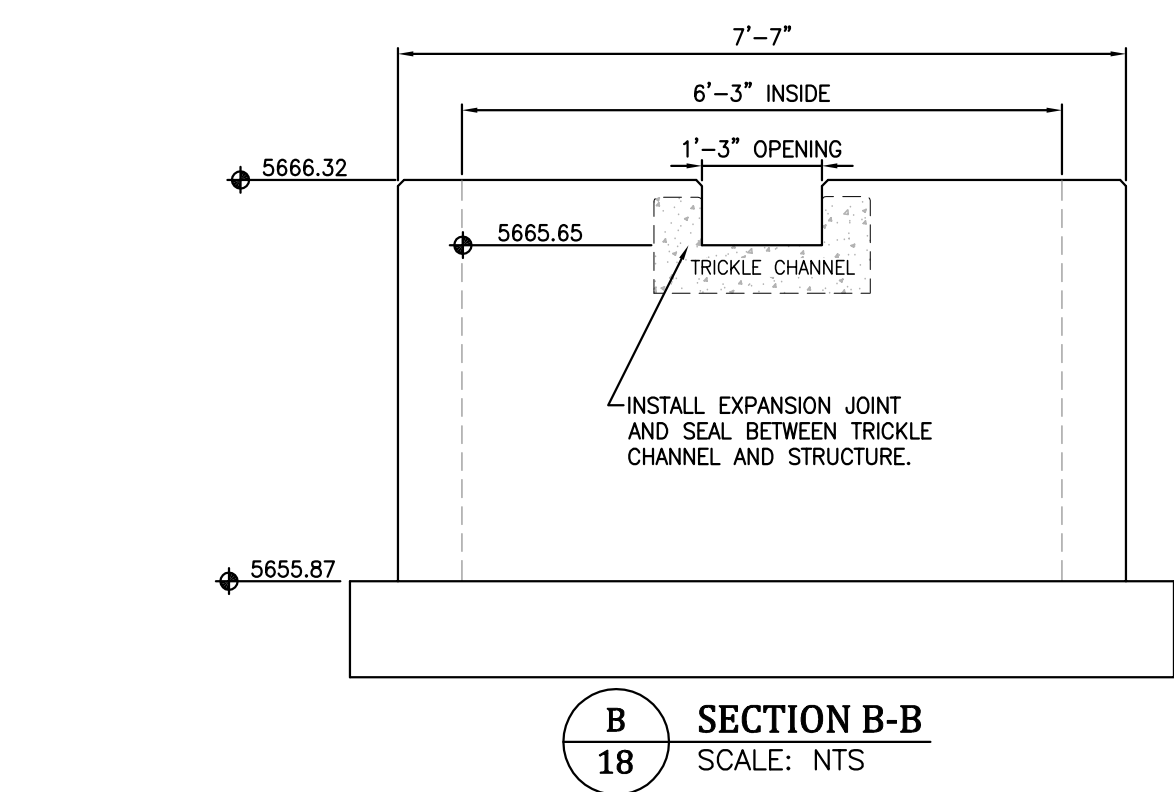
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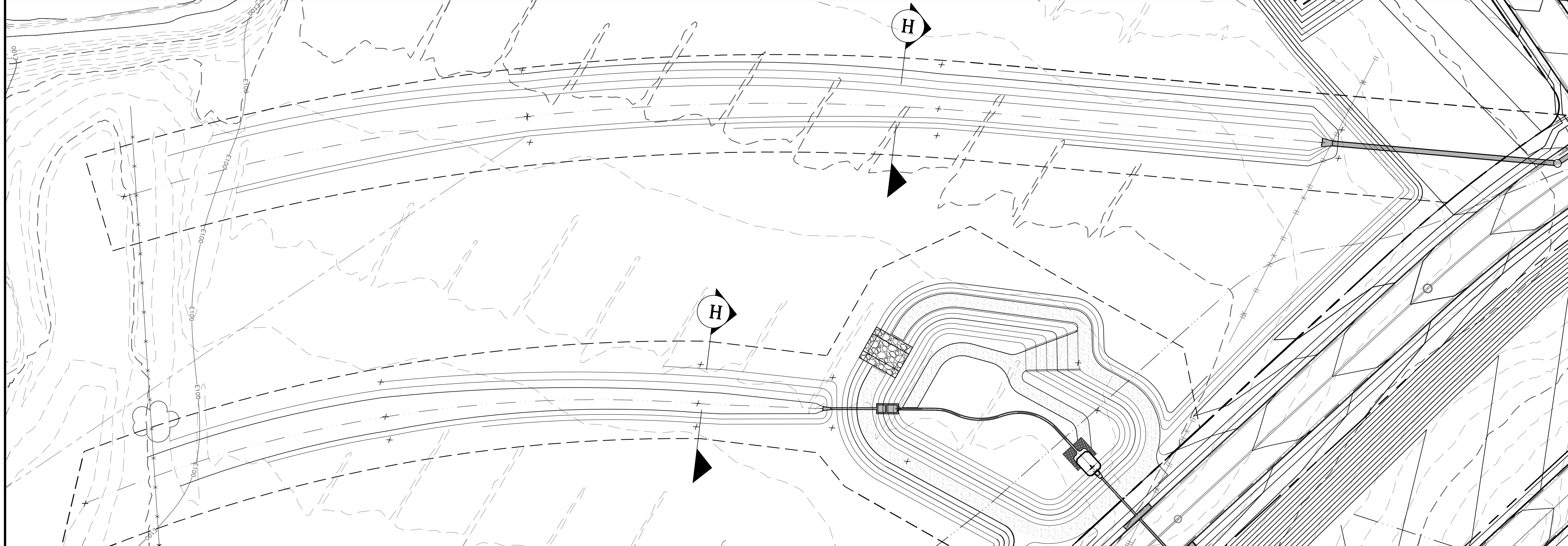
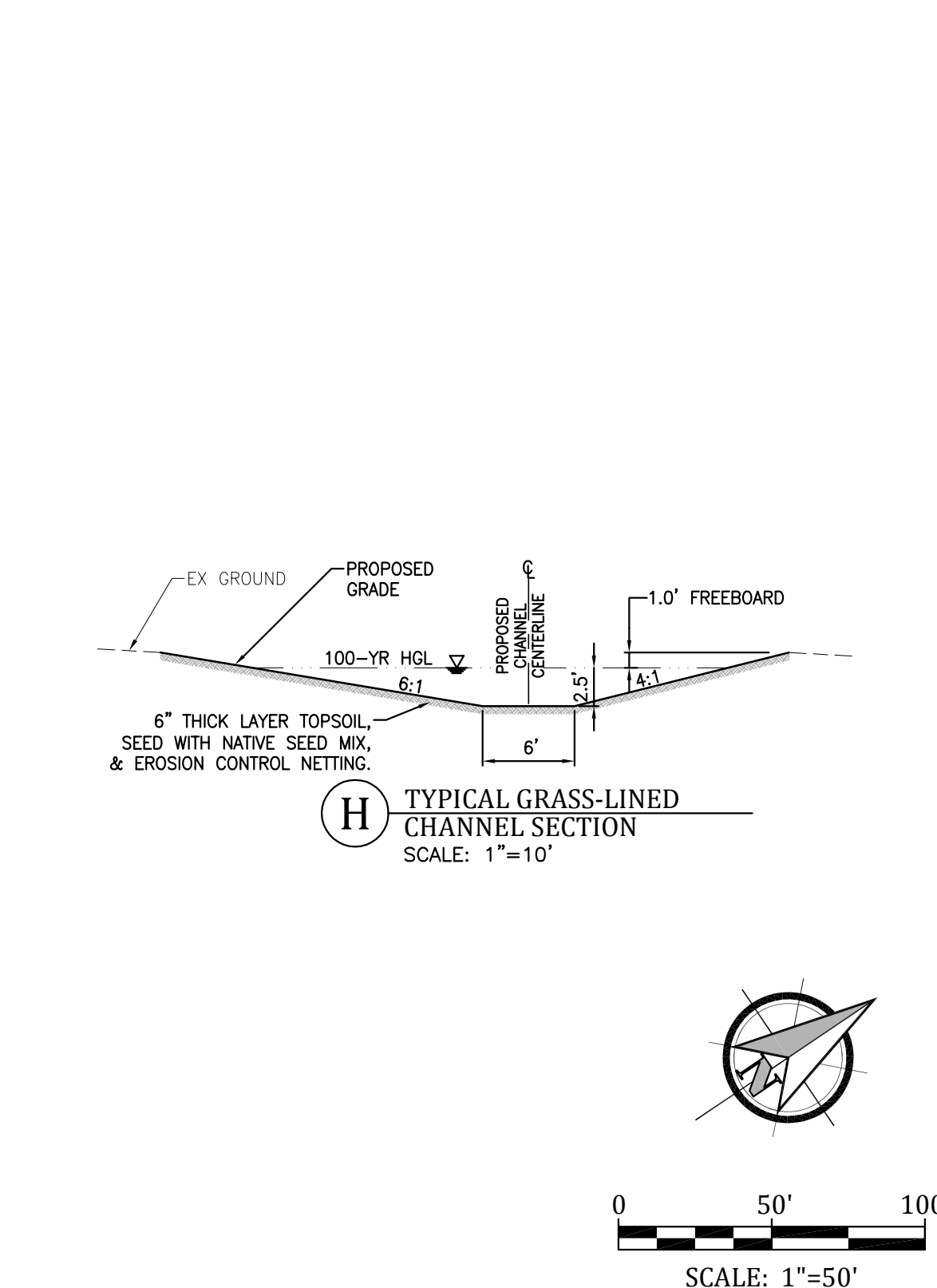
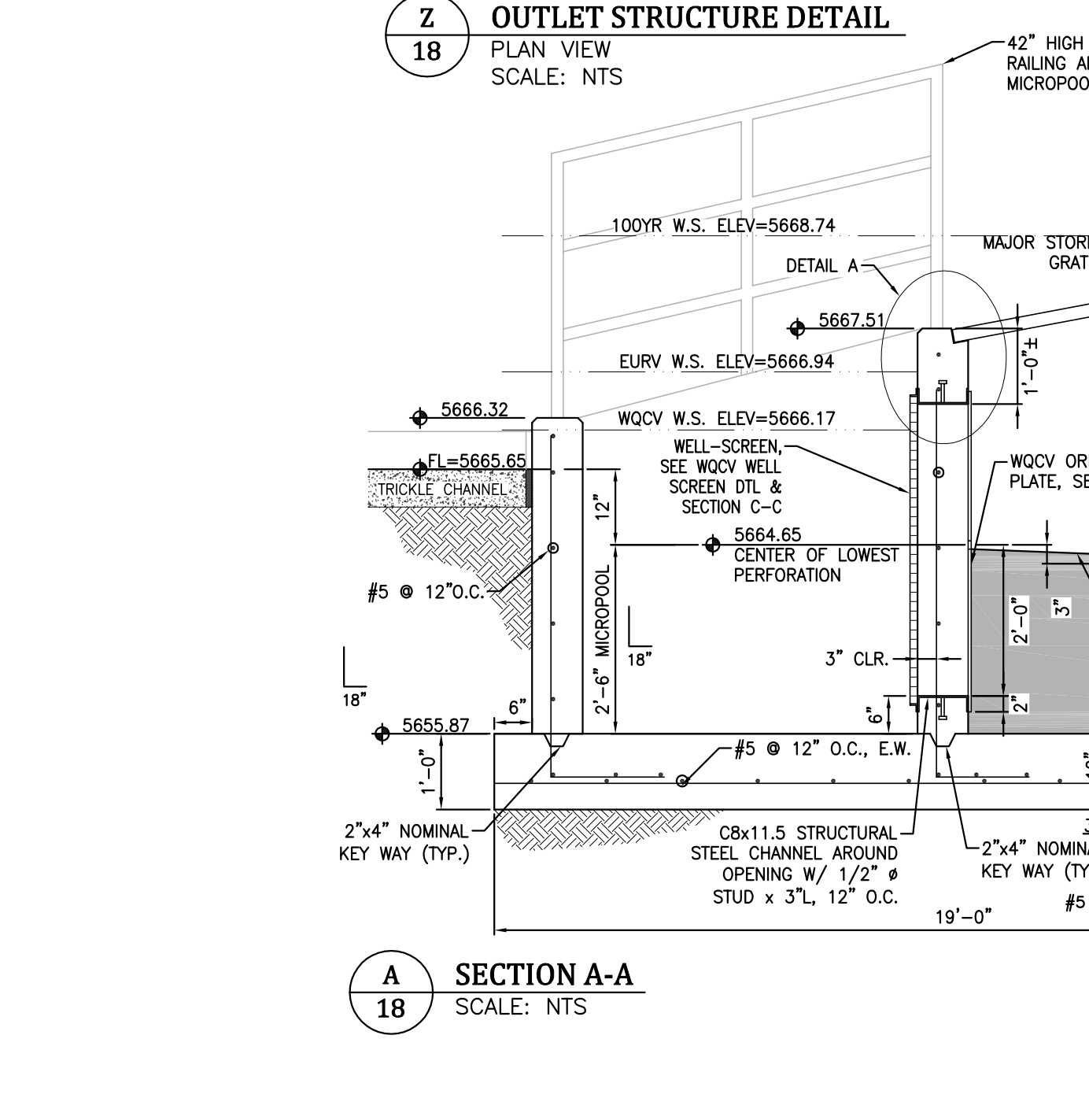
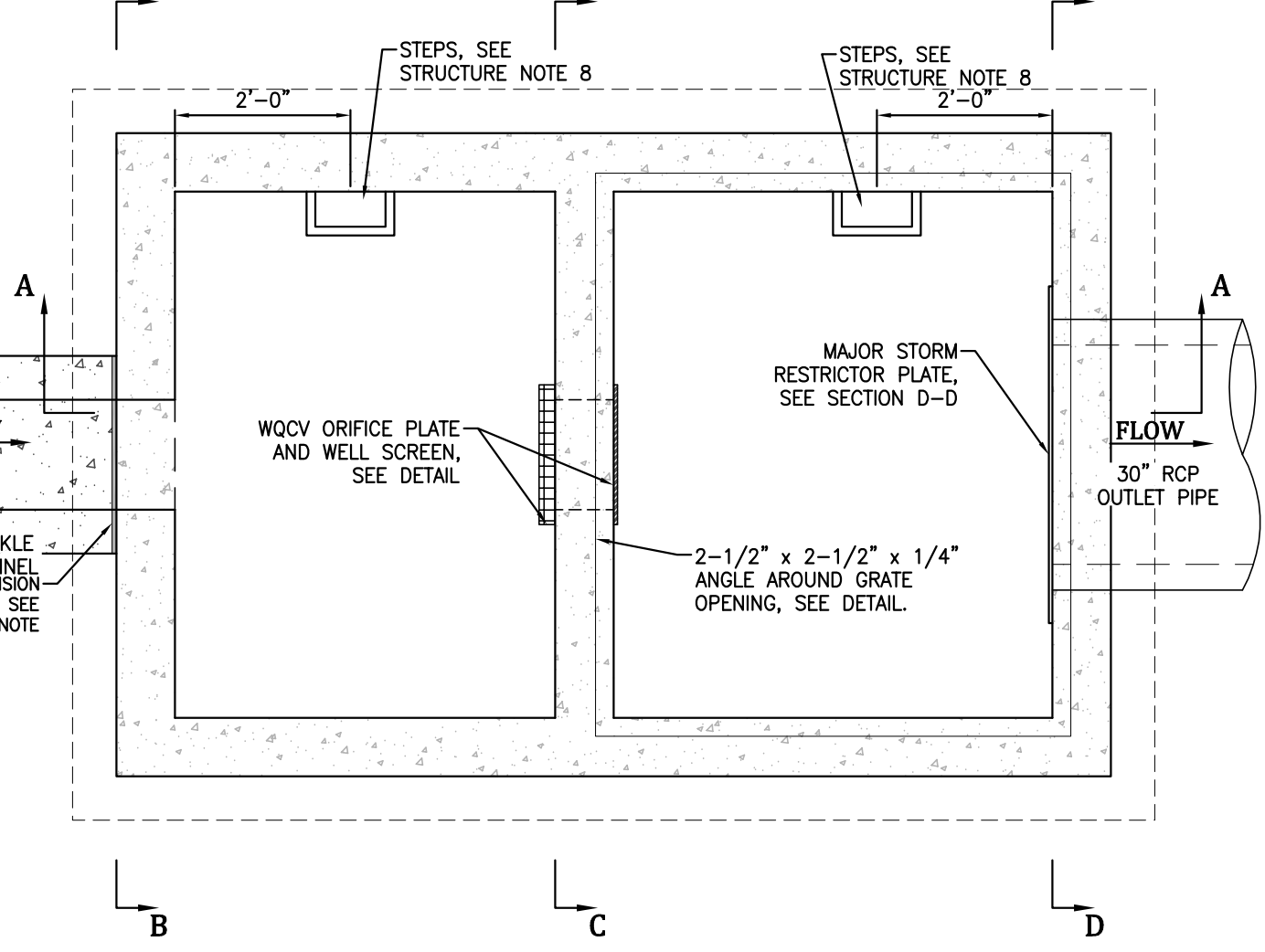
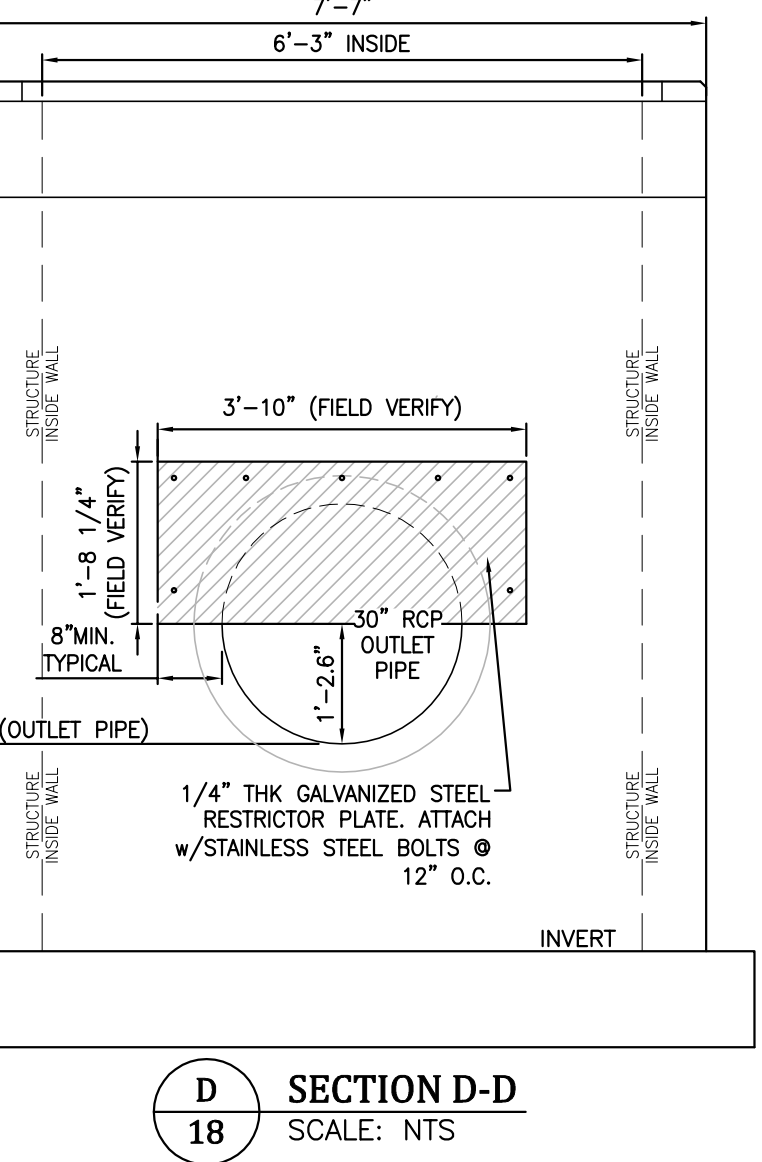
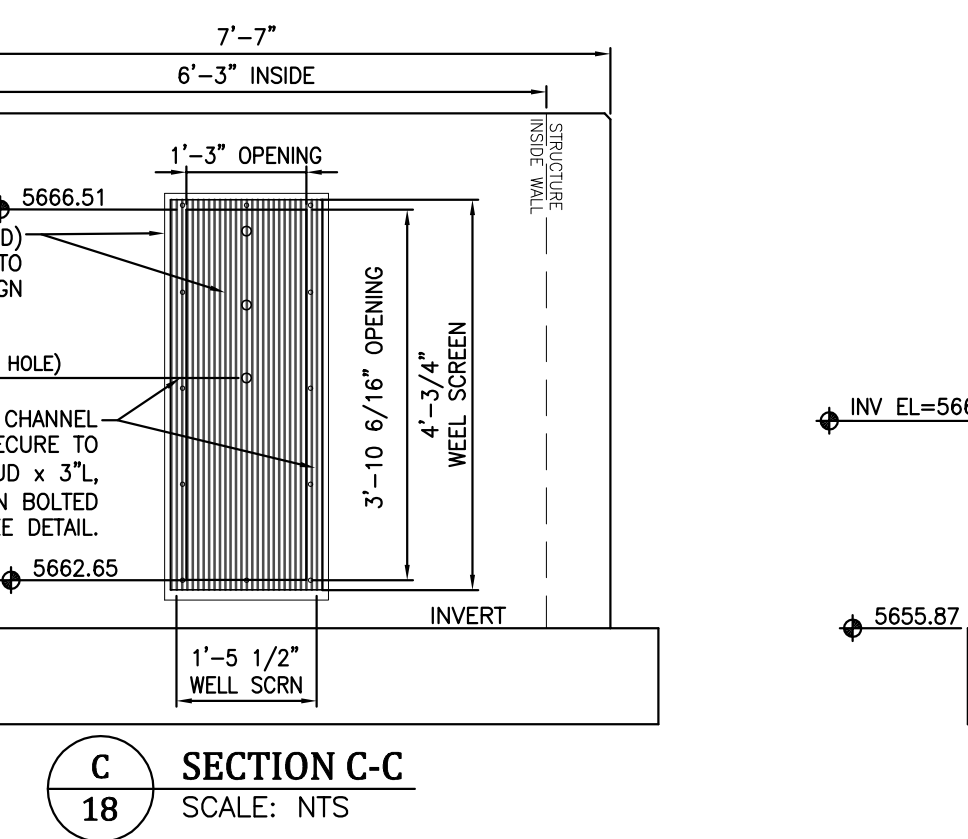
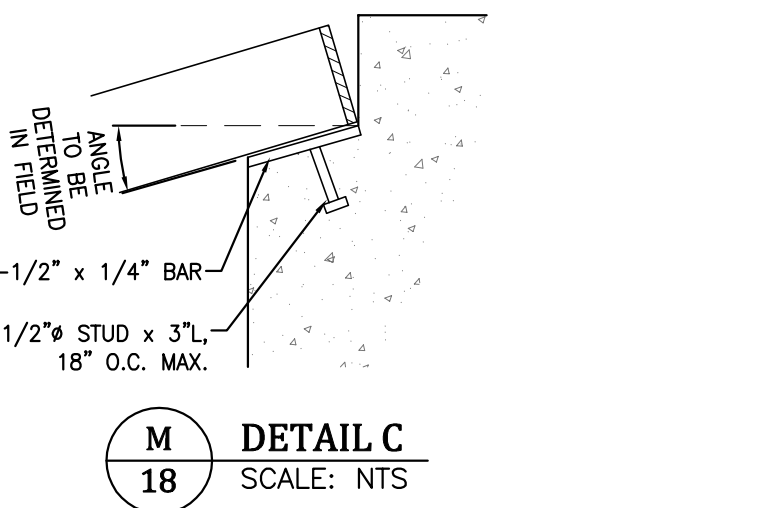
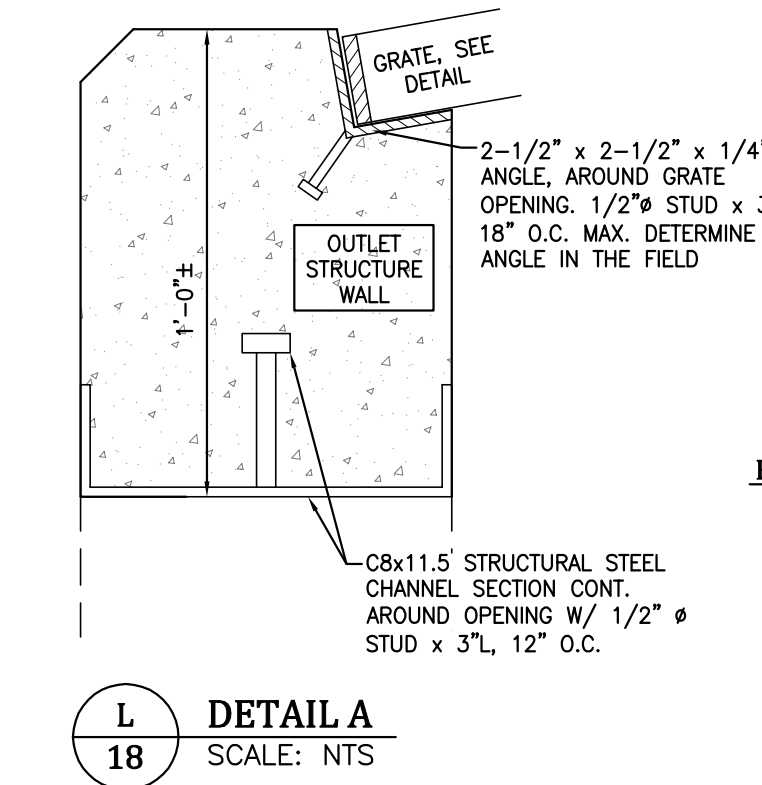
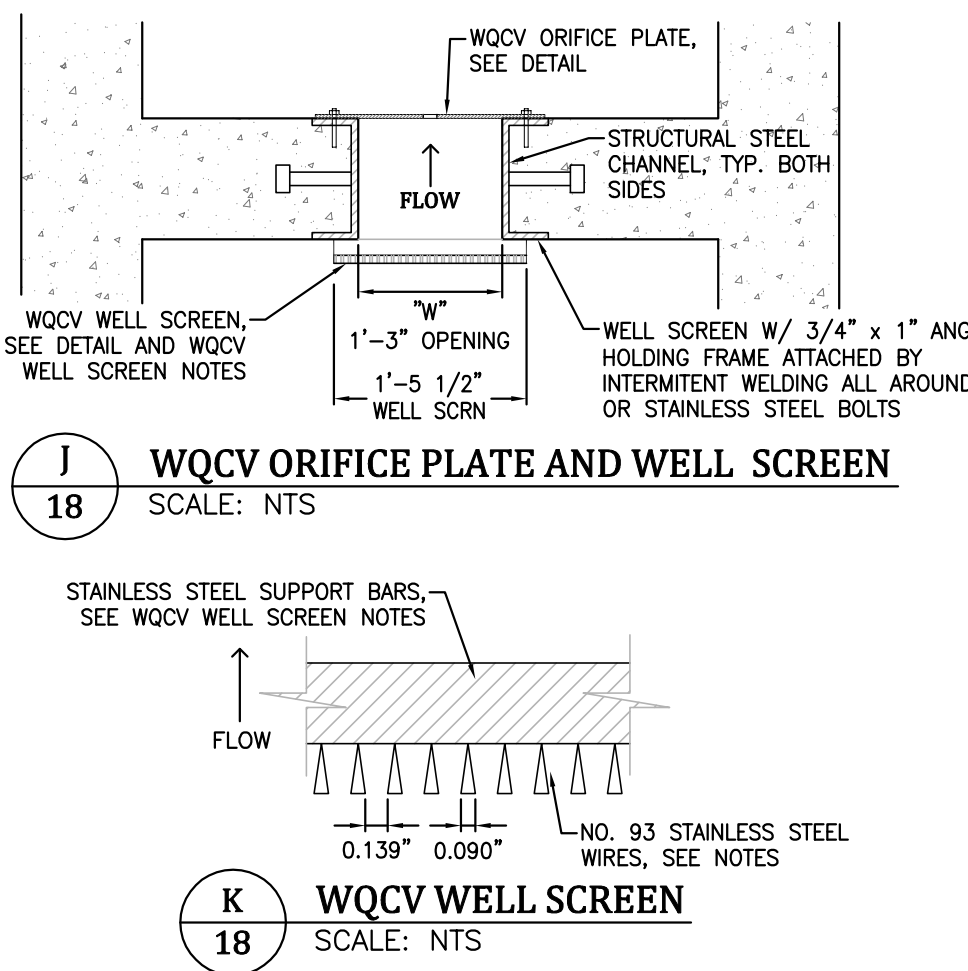
- STRUCTURE NOTES:**
- PRIOR TO CONSTRUCTION, CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
  - GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE 2-INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE AND 3-INCH MIN CLEARANCE TO EDGE OF CONCRETE PLACED AGAINST SOIL, UNLESS OTHERWISE NOTED.
  - MIN. SPICE LENGTH: #4: 1'-3", #5: 1'-7", #6: 2'-0"
  - 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.

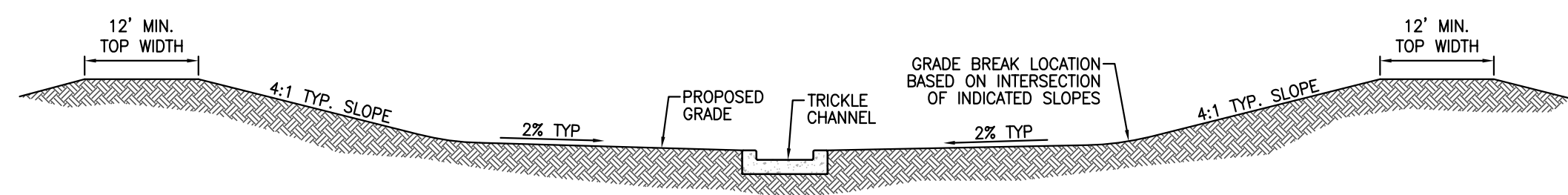


- WQCV WELL-SCREEN NOTES:**
- WELL-SCREEN SHALL BE STAINLESS STEEL AND ATTACHED BY INTERMITTANT WELDS OR STAINLESS STEEL BOLTS ALONG EDGE OF THE MOUNTING FRAME.
  - WQCV WELL-SCREEN:
    - TYPE OF SCREEN: STAINLESS STEEL #93 VEE WIRE (JOHNSON VEE WIRE TM STAINLESS STEEL SCREEN OR EQUIVALENT WITH 80% 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: 0.855"
    - CARBON STEEL HOLDING FRAME TYPE: 3/4" x 1.0" ANGLE

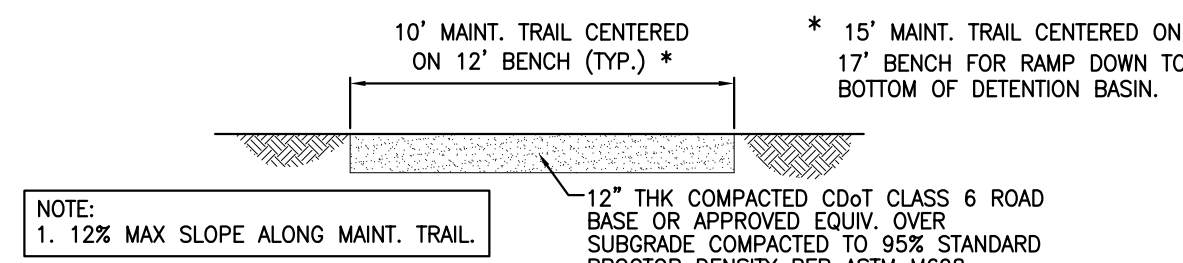


EXTENDED DETENTION BASIN 'A' AND GRASS-LINED CHANNELS TO WEST FORK JIMMY CAMP CREEK

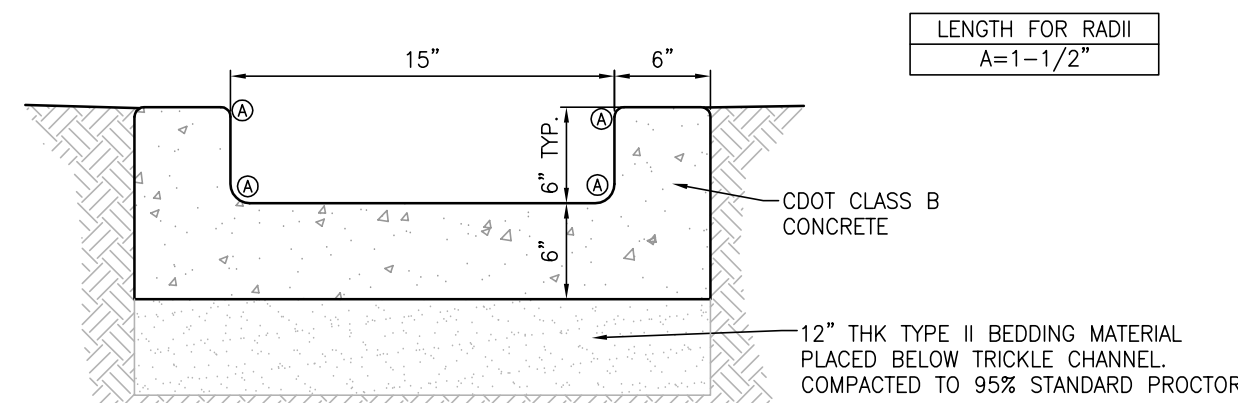
|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | JAK               |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |



**P**  
19 **DETENTION BASIN TYPICAL CROSS SECTION**  
SCALE: NTS



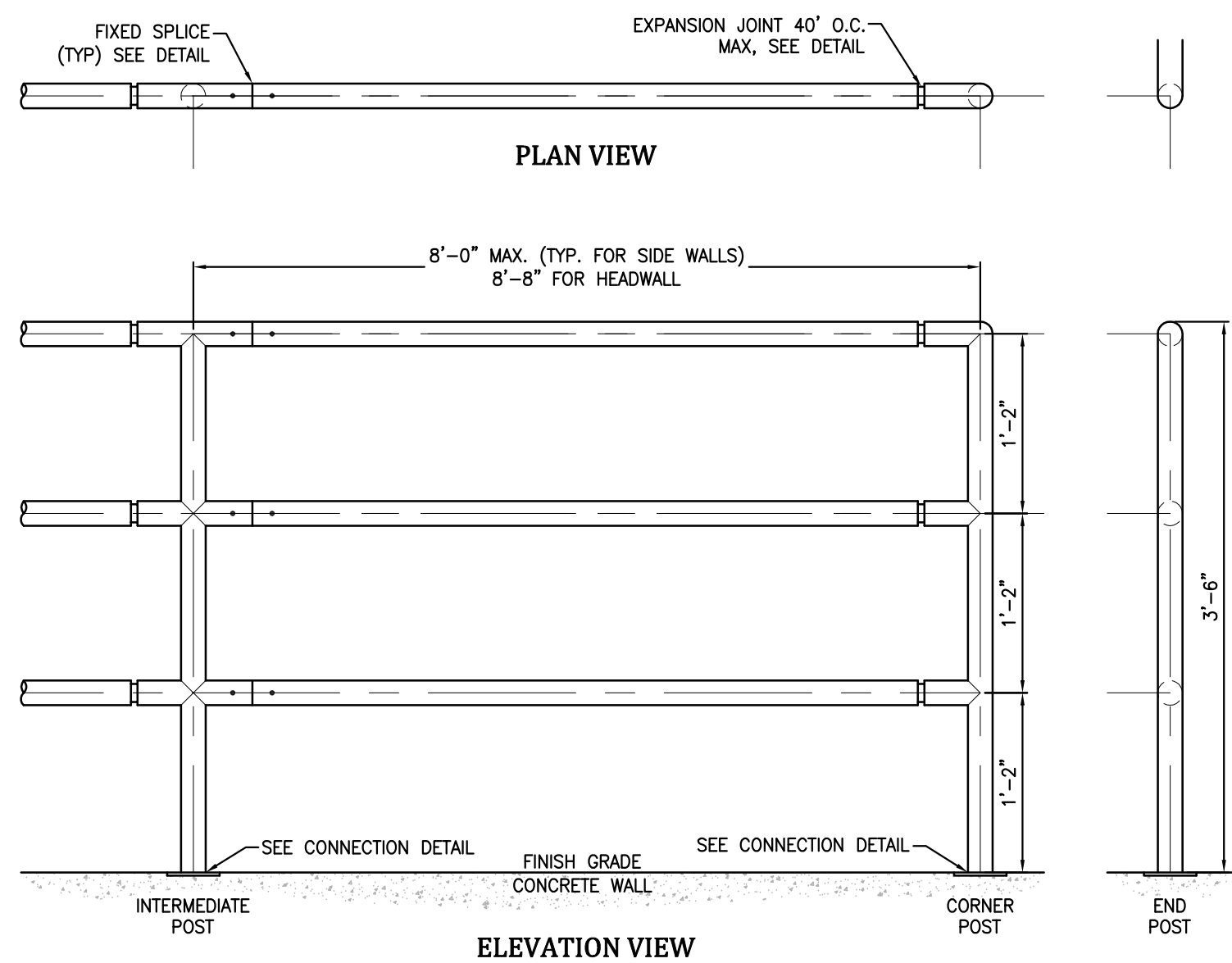
**Q**  
19 **MAINTENANCE TRAIL SECTION**  
SCALE: NTS



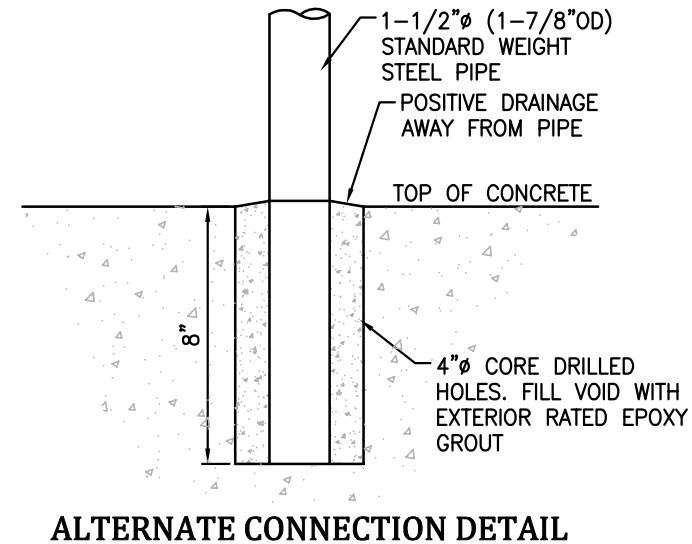
**N**  
19 **TRICKLE CHANNEL**  
SCALE: 1"=1'

| CLASSIFICATION AND GRADATION OF RIPRAP |                                     |                                      |                            |
|--|-------------------------------------|--------------------------------------|----------------------------|
| Rip-Rap Designation                    | % Smaller than Given Size by Weight | Intermediate Rock Dimension (Inches) | d <sub>50</sub> * (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                              | 30                                   | 18                         |
|  | 50-70                               | 24                                   |                            |
|  | 35-50                               | 18                                   |                            |

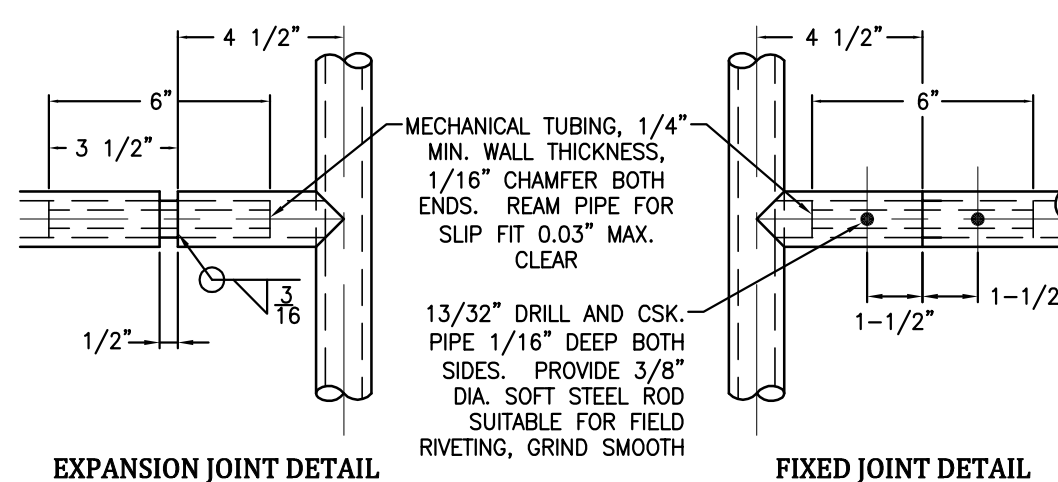
\* d<sub>50</sub>=Mean particle size (Intermediate Dimension) by weight.  
 \*\* Mix VL, L and M Rip-rap with 35% topsoil (by volume) and bury with 4-6 inches of topsoil, all vibration compacted and revegetate.  
 (Figure 8-34: Riprap and Soil Riprap Placement and Gradation, UDFCD, Drainage Criteria Manual, Volume 1)



- PEDESTRIAN RAILING/HANDRAIL NOTES:**
1. ALL HANDRAIL SHALL BE FABRICATED WITH NEW 1-1/2" (1-7/8" OD) DIAMETER STANDARD WEIGHT STEEL PIPE.
  2. 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.
  3. ALL HANDRAIL MATERIAL REQUIRED FOR COMPLETE INSTALLATION SHALL BE PROVIDED.
  4. 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.
  5. RAILING BETWEEN HEADWALL AND WINGWALL SHALL BE SEPARATE OR AN EXPANSION JOINT SHALL BE PROVIDED TO ALLOW FOR DIFFERENTIAL MOVEMENT.

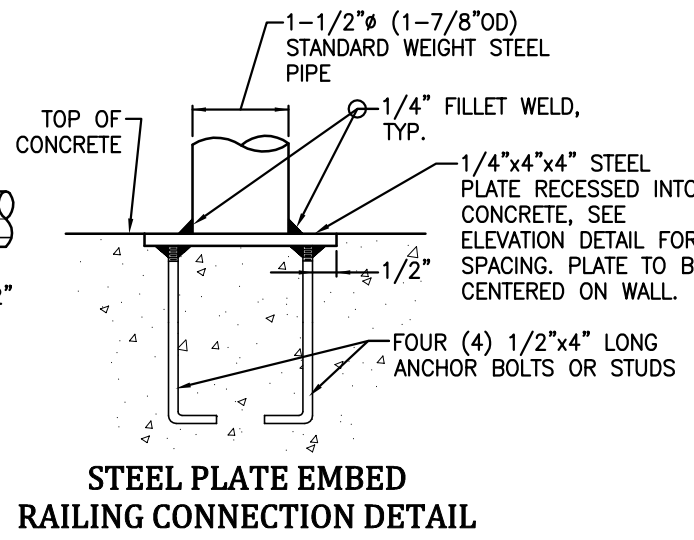


**ALTERNATE CONNECTION DETAIL**

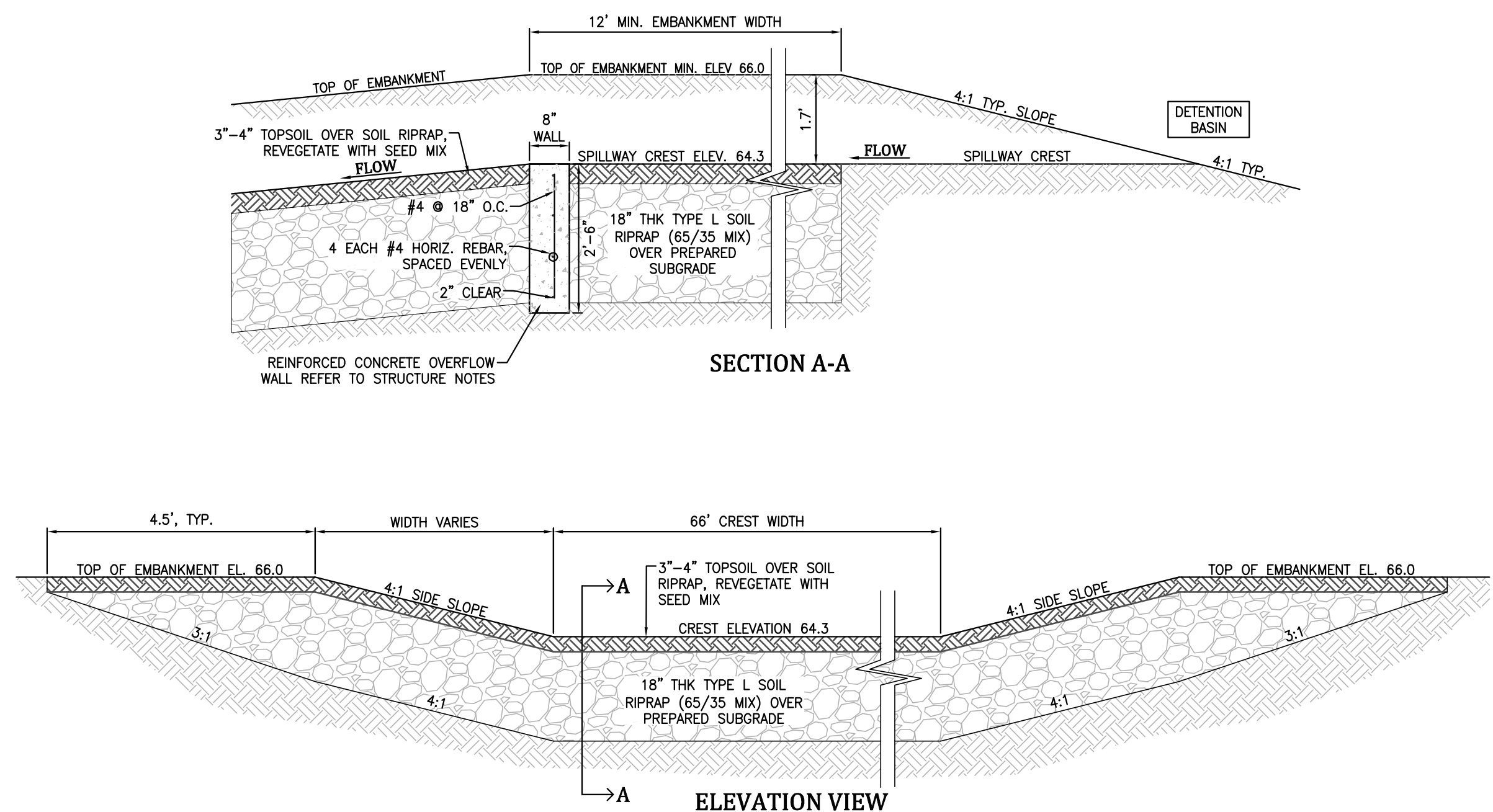


**EXPANSION JOINT DETAIL**

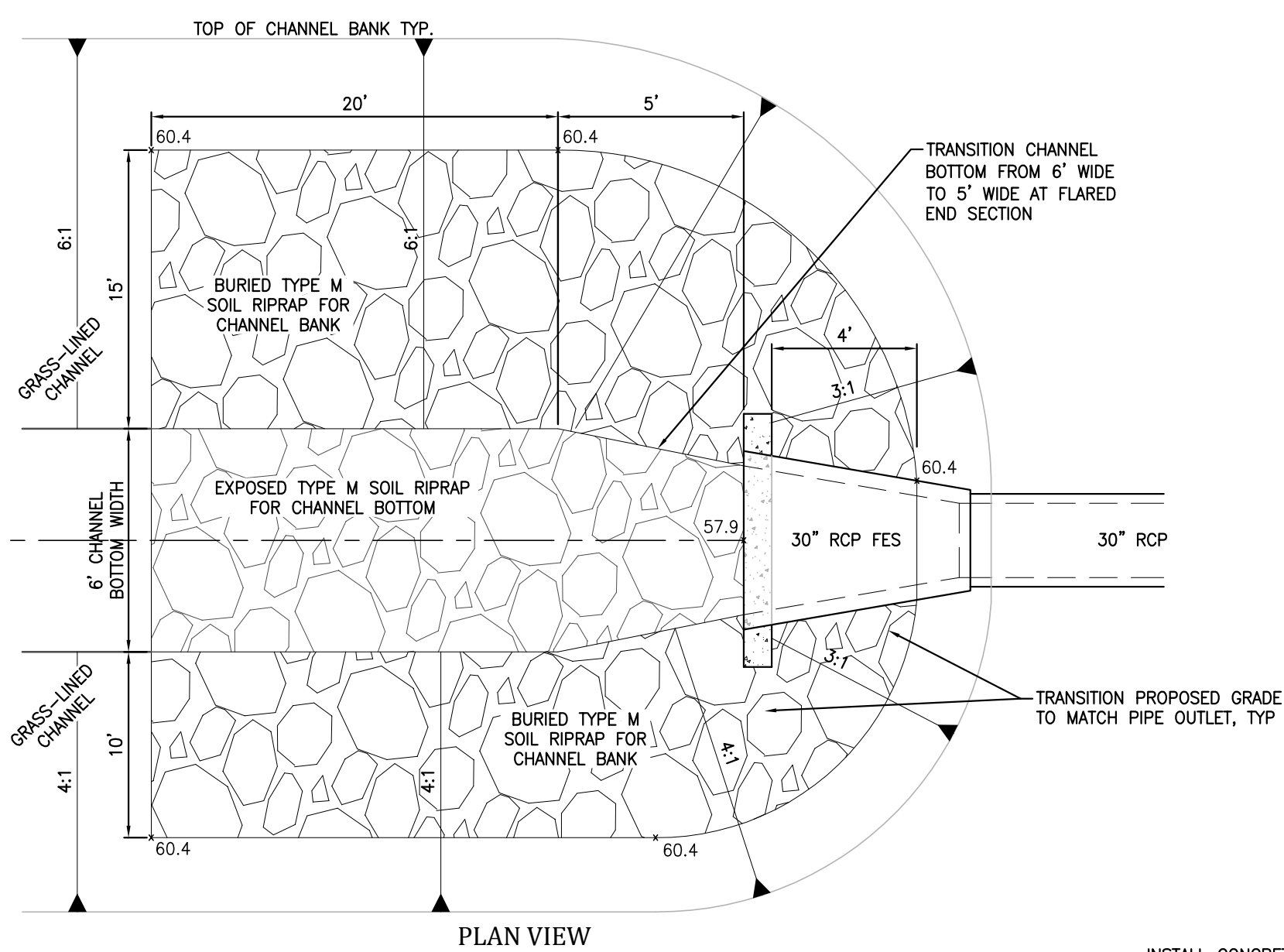
**FIXED JOINT DETAIL**



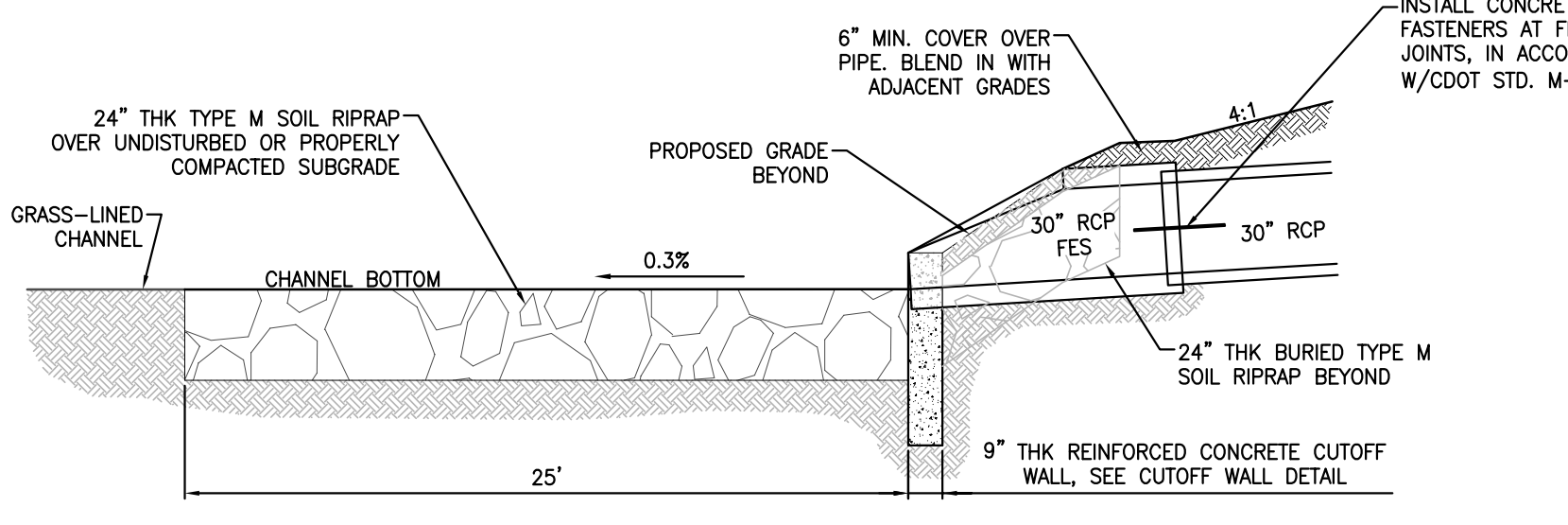
**STEEL PLATE EMBED RAILING CONNECTION DETAIL**



**O**  
19 **EMERGENCY SPILLWAY**  
SCALE: NTS



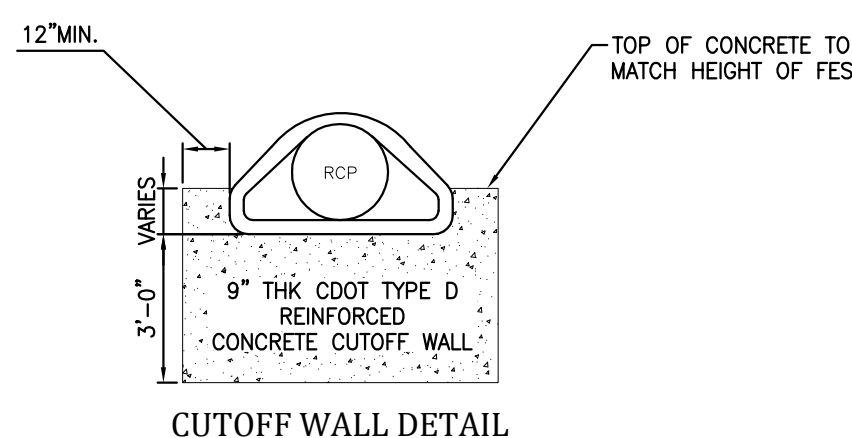
**PLAN VIEW**



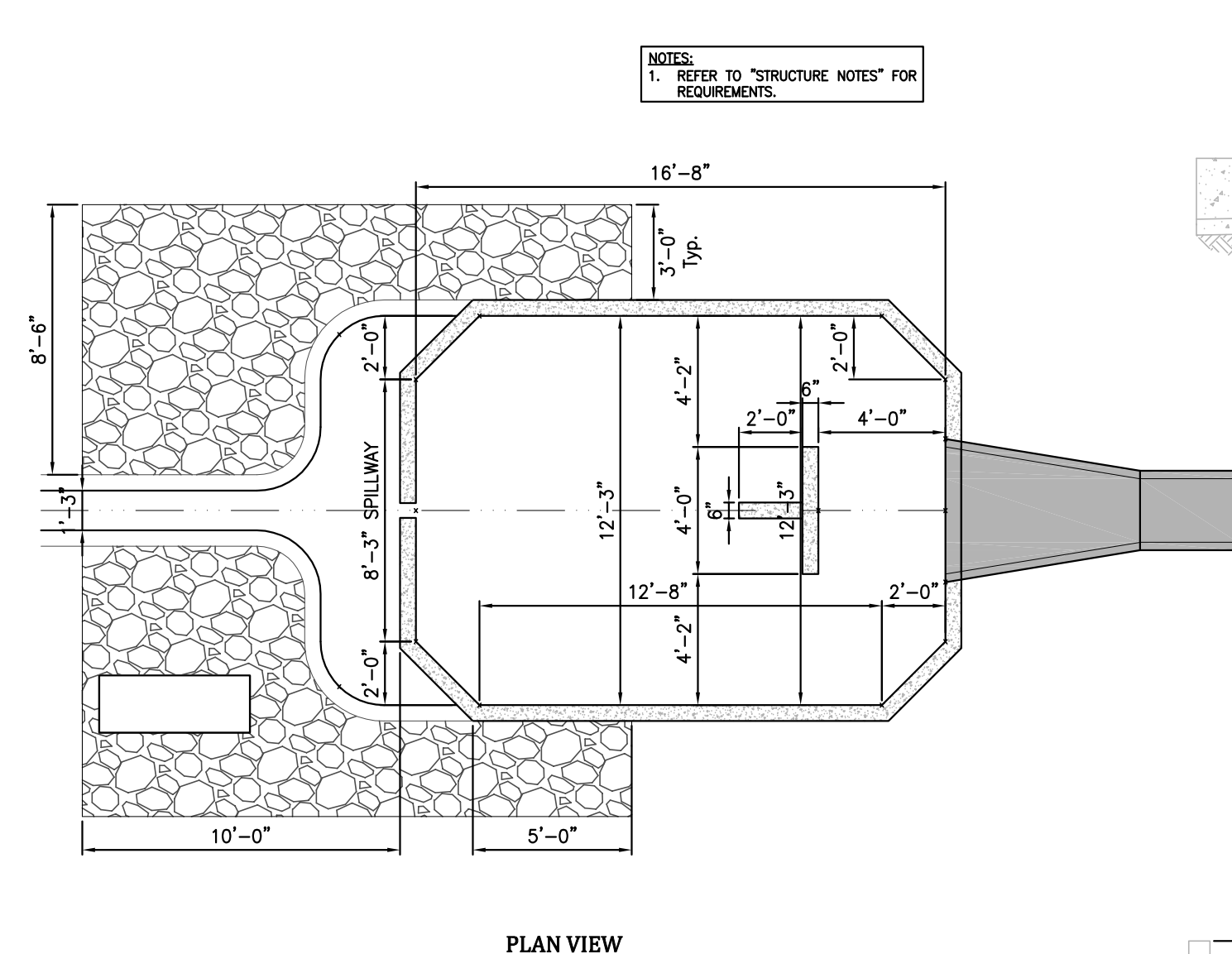
**ELEVATION VIEW**

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

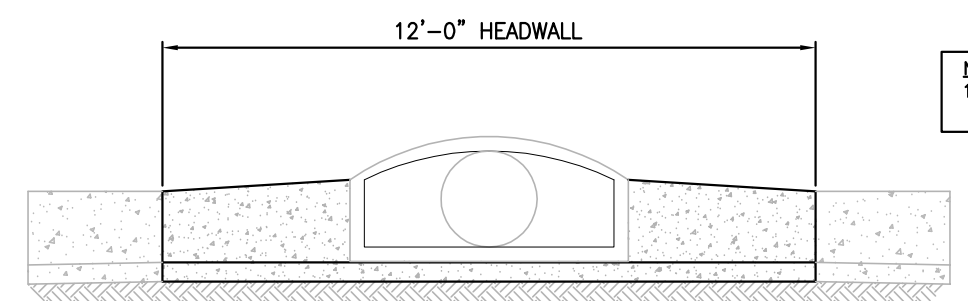
- NOTE:**
1. STEEL REINFORCEMENT FOR CUTOFF WALL SHALL BE #4 BARS AT 12" O.C. EACH WAY. STEEL REINFORCEMENT CLEARANCES SHALL BE 2" TO FORMED SURFACES AND FES, AND 3" TO SOIL.



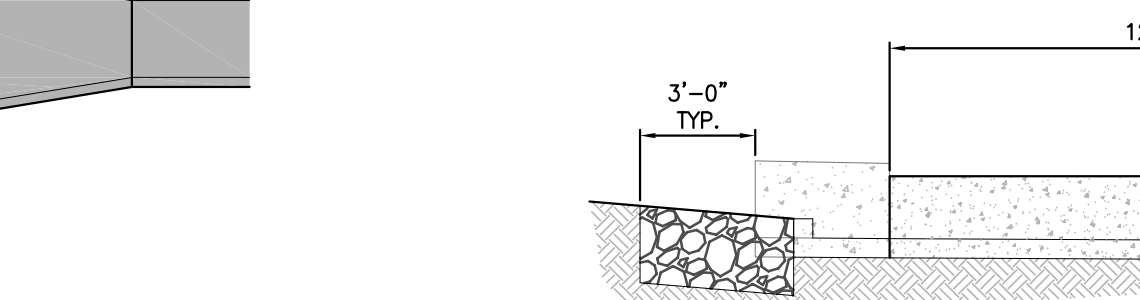
**CUTOFF WALL DETAIL**



**PLAN VIEW**



**SECTION C-C**



**SECTION B-B**

**R**  
19 **PRESEDIMENTATION FOREBAY**  
SCALE: NTS

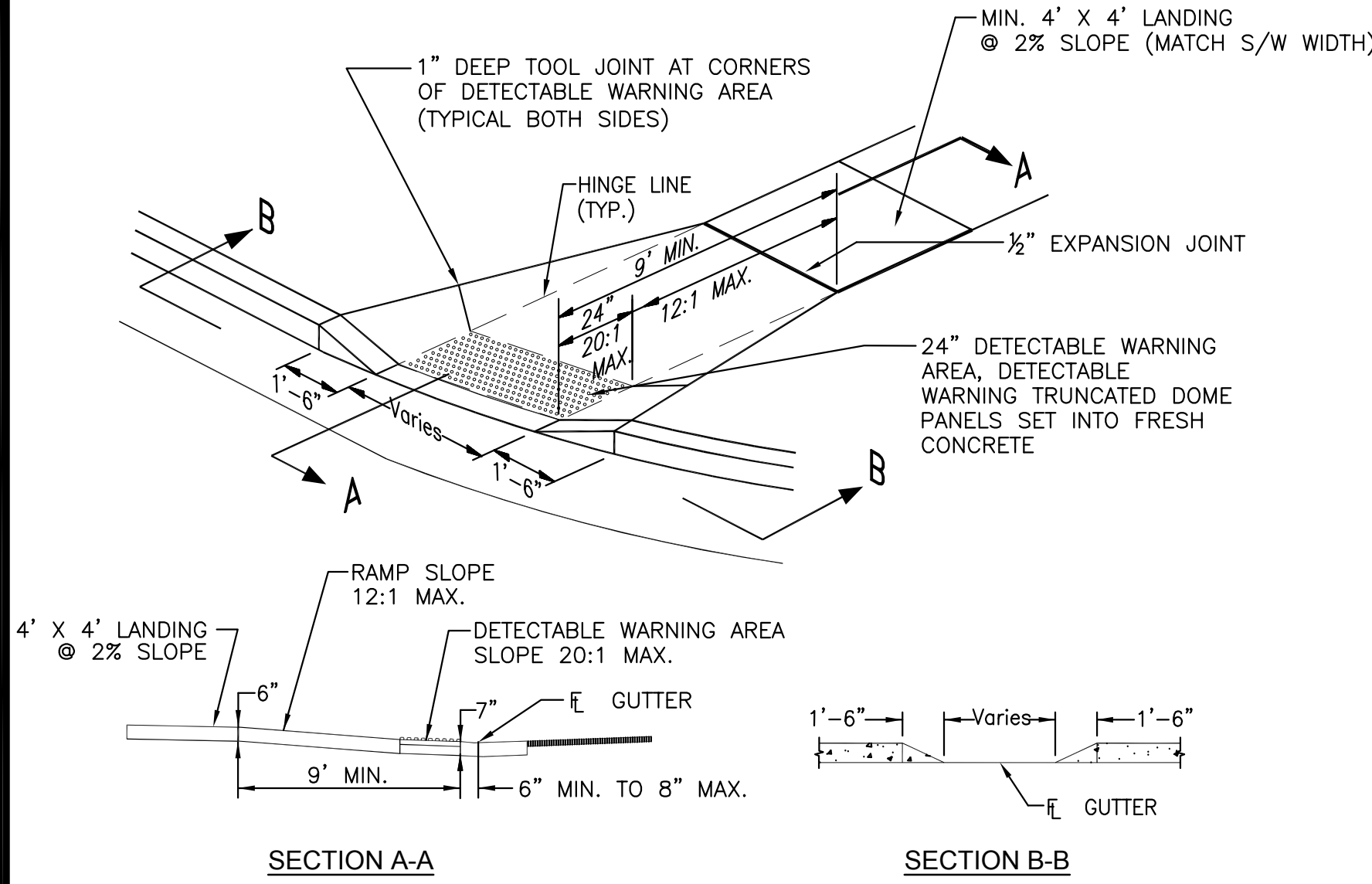
**GLEN AT WIDEFIELD FILING NO. 9**  
**SITE DETAIL PLAN**  
**DETENTION BASIN DETAILS**  
**EL PASO COUNTY, COLORADO**

|              |                   |
|--------------|-------------------|
| Project No.: | 17038             |
| Date:        | September 7, 2018 |
| Design:      | JAK               |
| Drawn:       | JAK               |
| Check:       | AWMc              |
| Revisions:   |                   |

SHEET  
**18**  
 18 of 20 Sheets

**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.

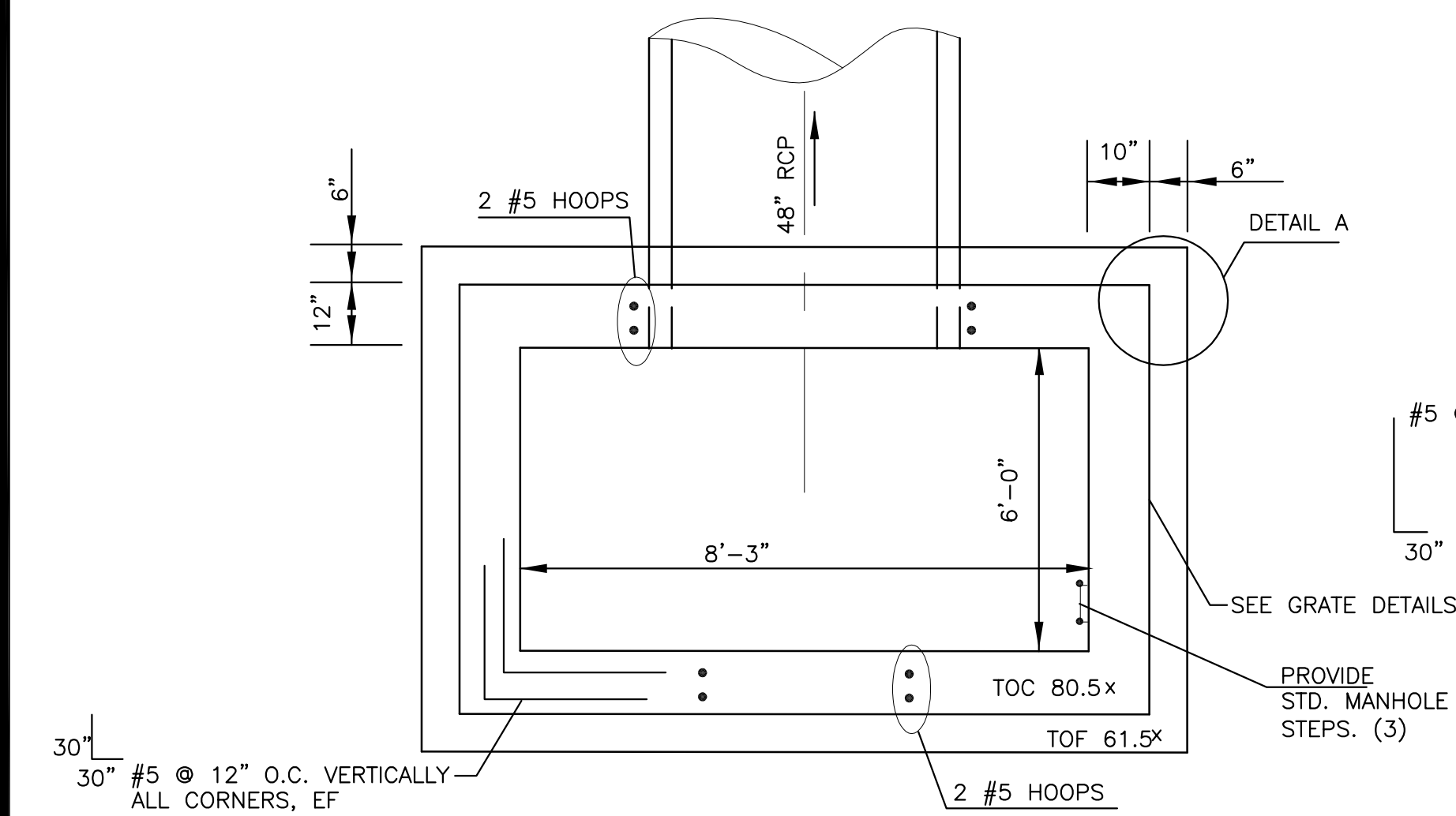


**PEDESTRIAN RAMP DETAILS**

EPC STD. SD\_2-40  
NOT TO SCALE

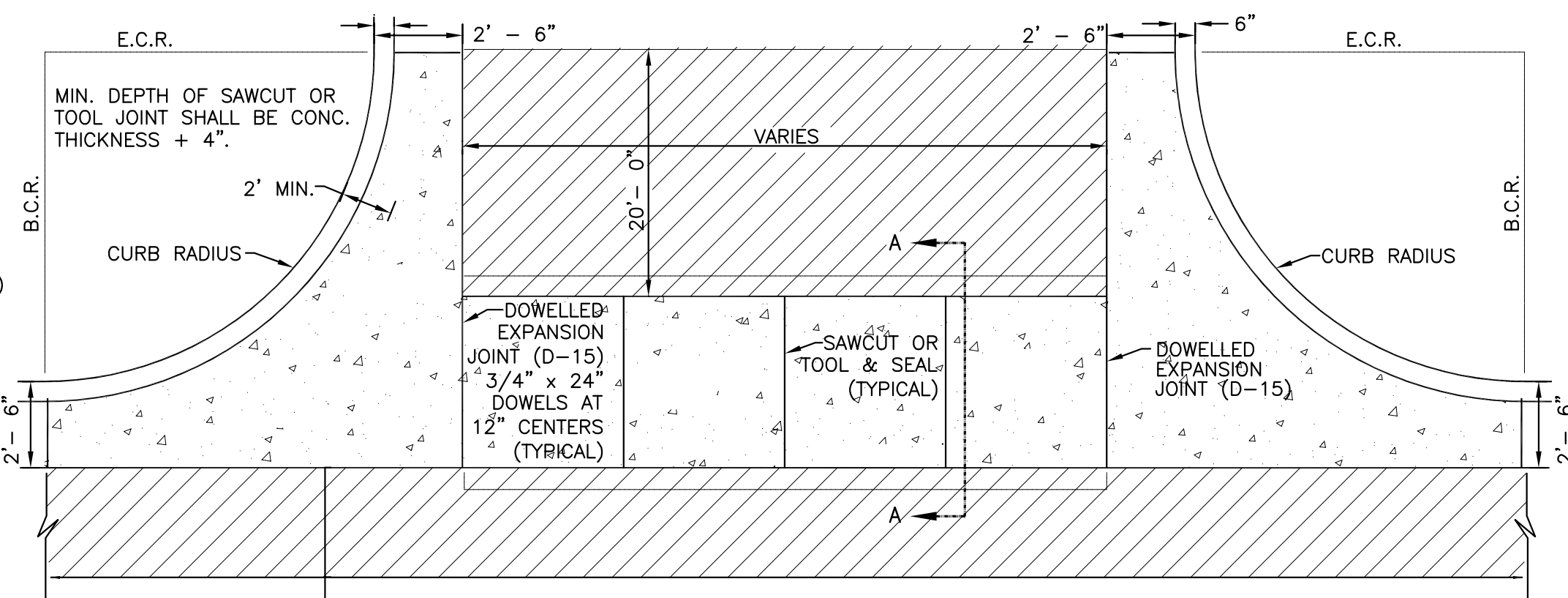
**GENERAL NOTES**

- 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.)

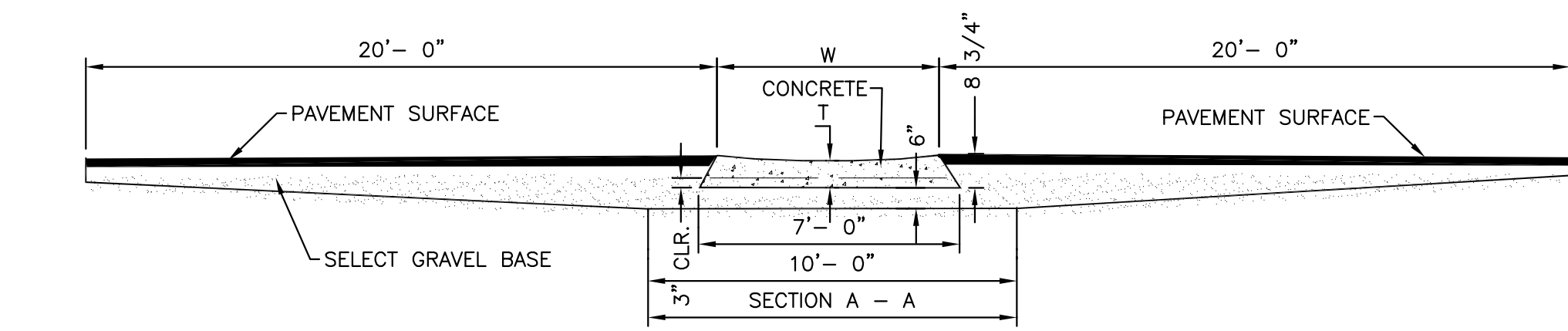


**100 YEAR OUTLET STRUCTURE PLAN**

NTS



**PLAN VIEW**



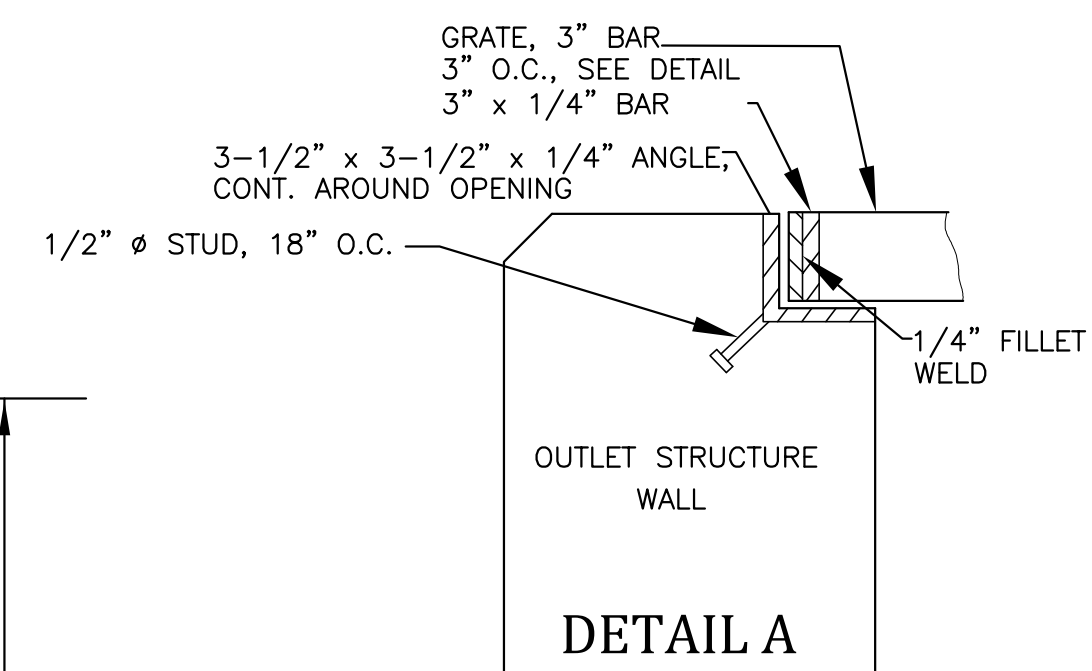
**SECTION A-A**

**NOTES**

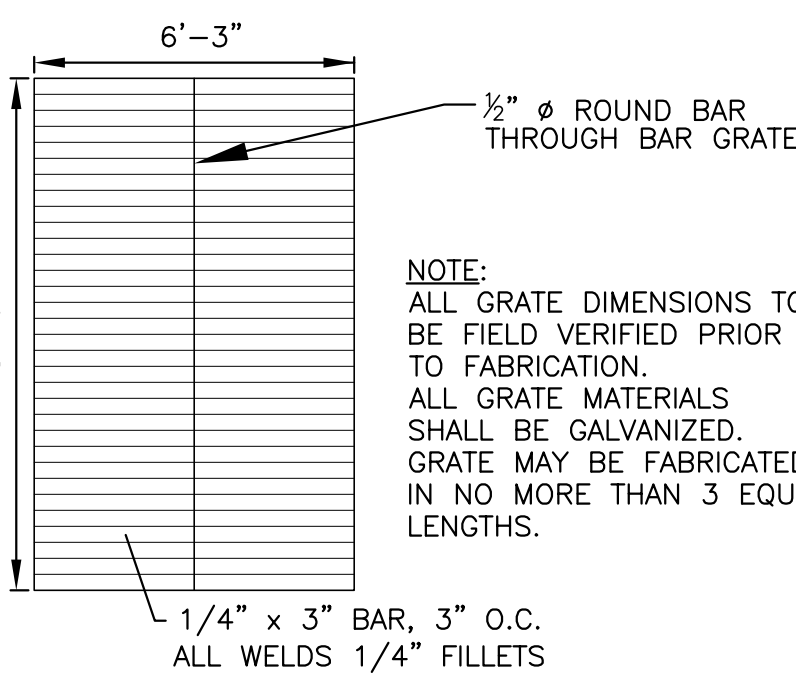
- W - WIDTH SHALL BE 6" FOR LOCAL, 8" FOR COLLECTORS, AND 10" FOR ARTERIAL ROADS.
- T - SQUARED-OFF RETURN TO BE POURED MONOLITHIC 8" P.C.C. MINIMUM WITH 6x6 - 4.4 W.W.F. OR #4 @ 18" E.W.
- [Hatched symbol] = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).
- DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR

**CROSS PAN DETAIL**

EPC STD. SD\_2-26  
NOT TO SCALE

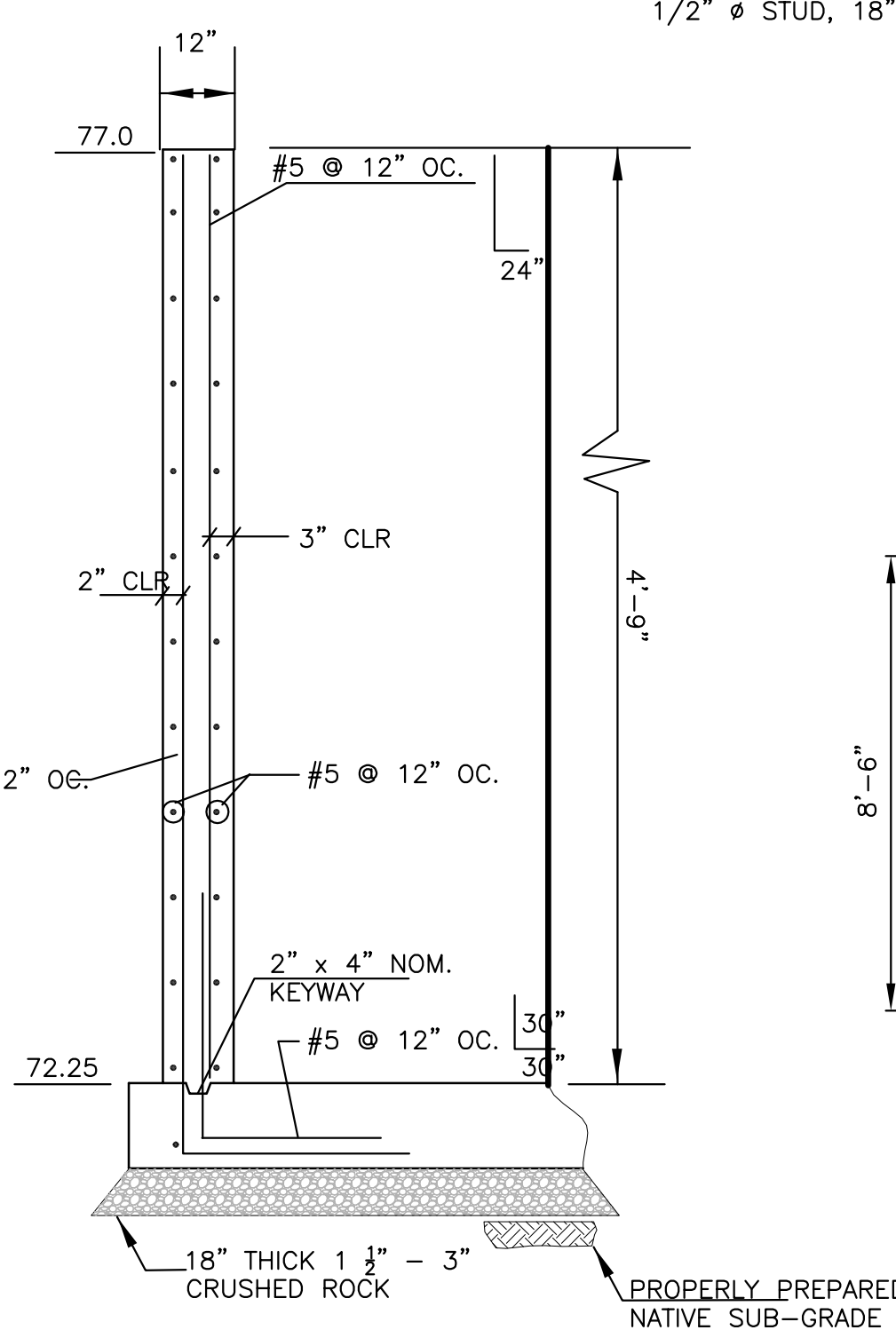


**DETAIL A**



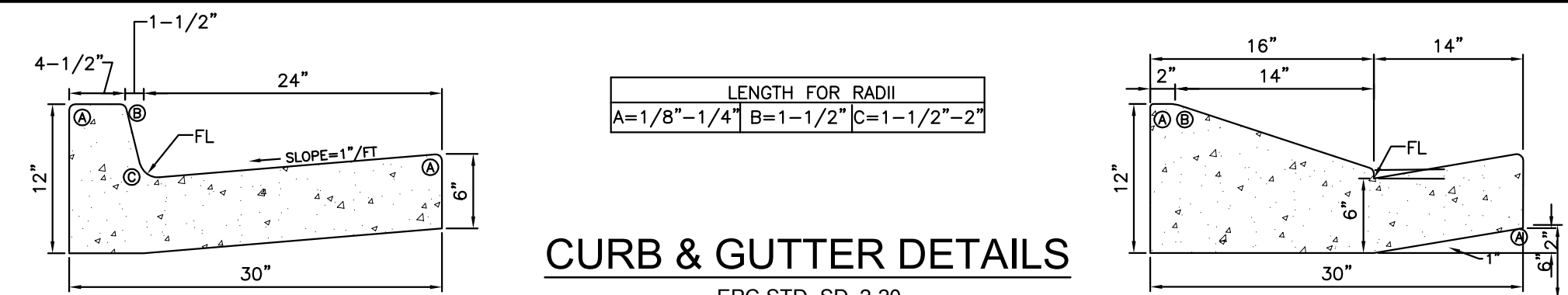
**GRATE DETAIL**

SCALE: NTS



**TYPICAL WALL SECTION**

1"=2'

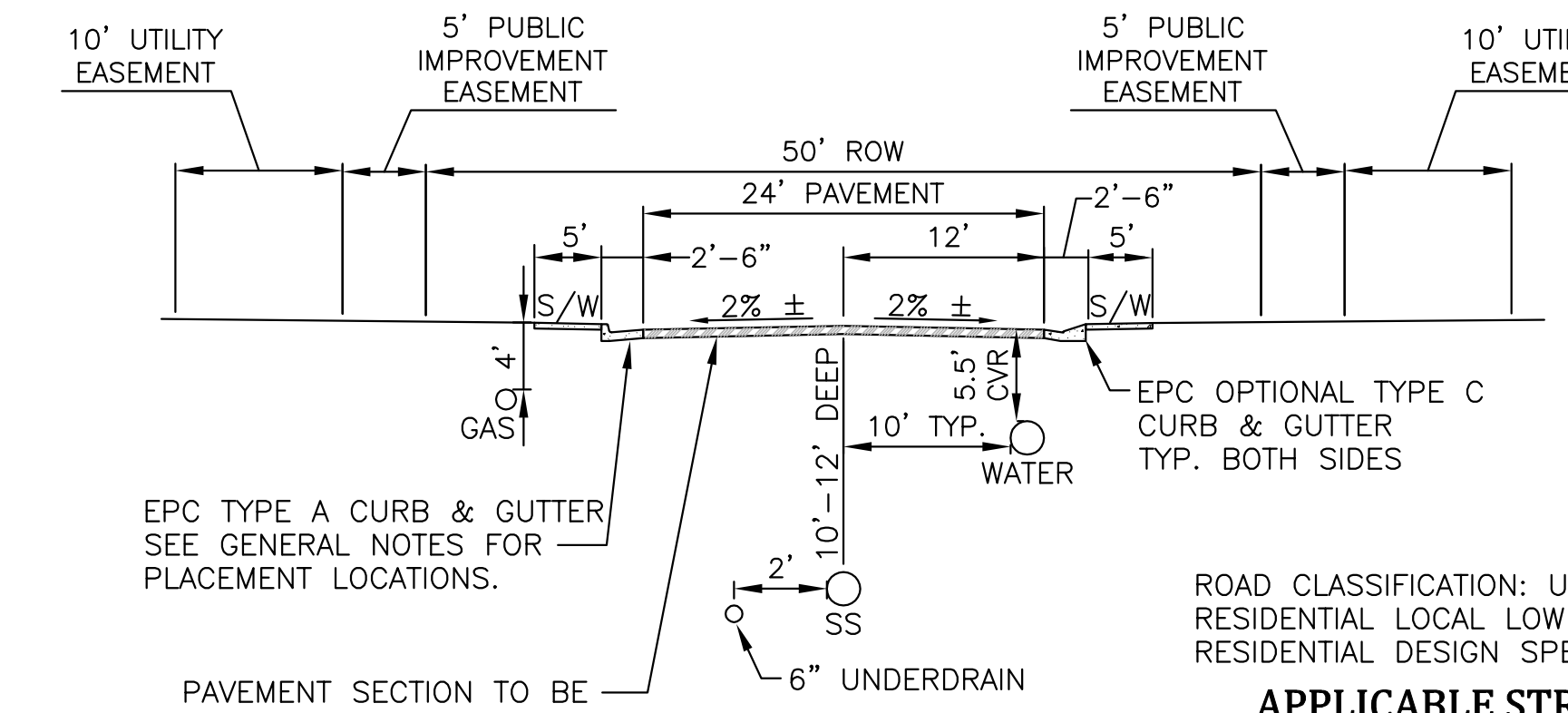


**EPC TYPE A CURB & GUTTER**

NTS

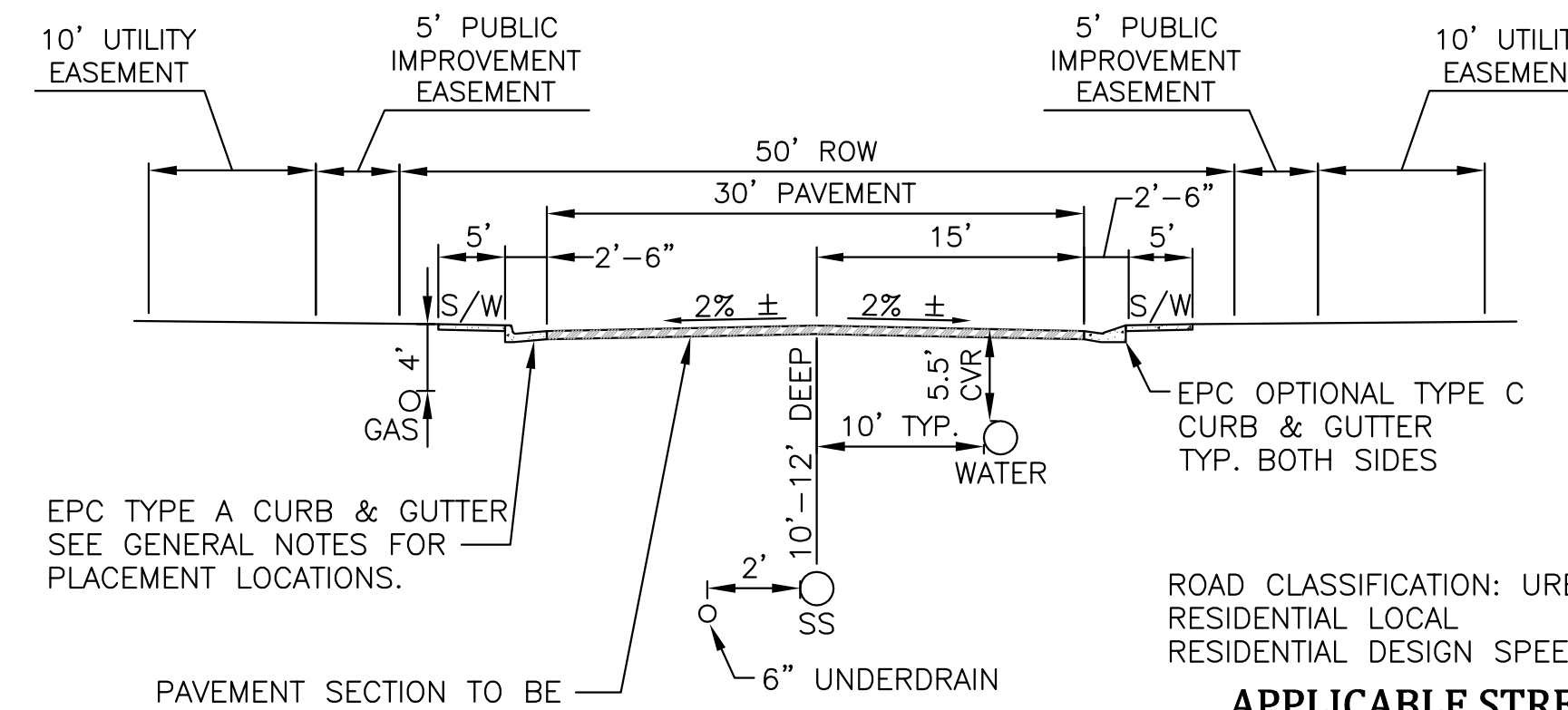
**EPC OPTIONAL TYPE C CURB & GUTTER**

NTS



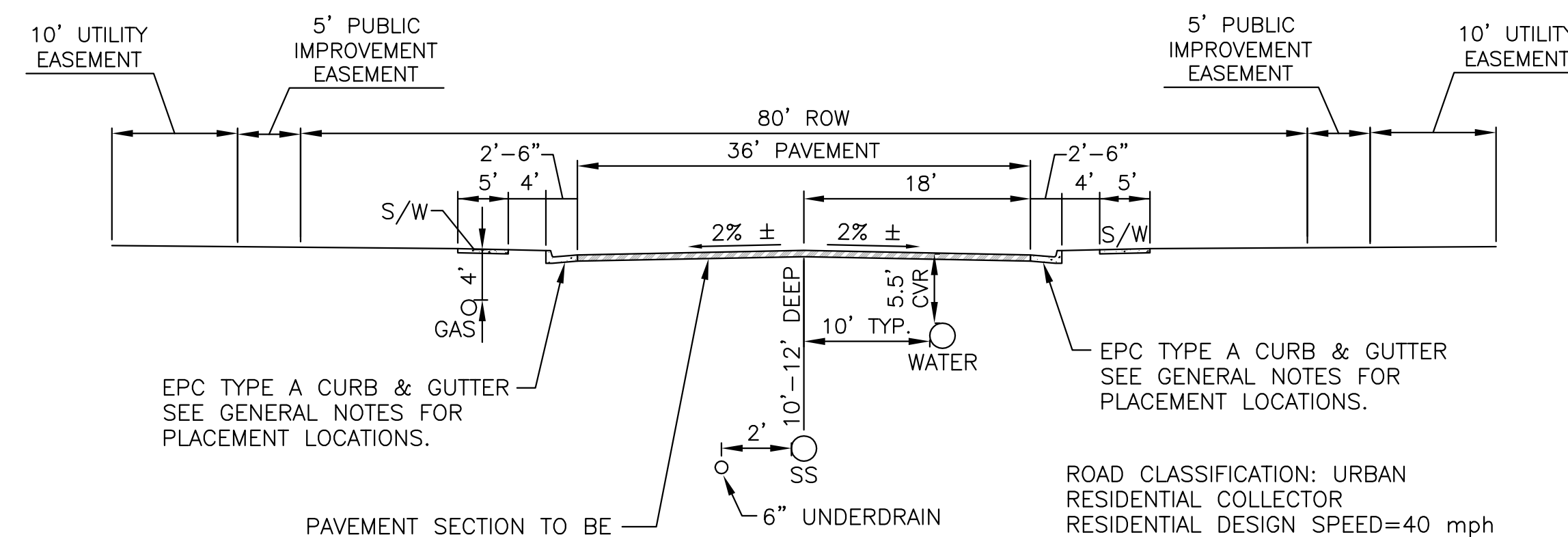
**TYPICAL STREET SECTION  
GLEN AT WIDEFIELD FILING NO. 9**

NOT TO SCALE



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

NOT TO SCALE



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

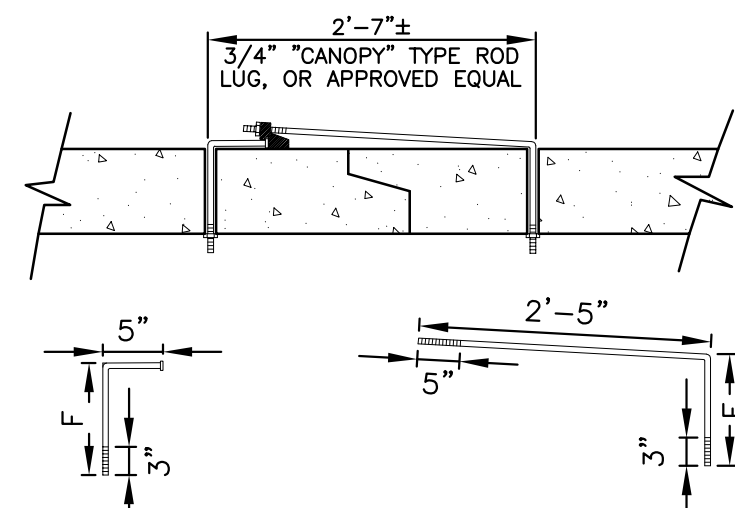
NOT TO SCALE

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| Revisions:   |                   |

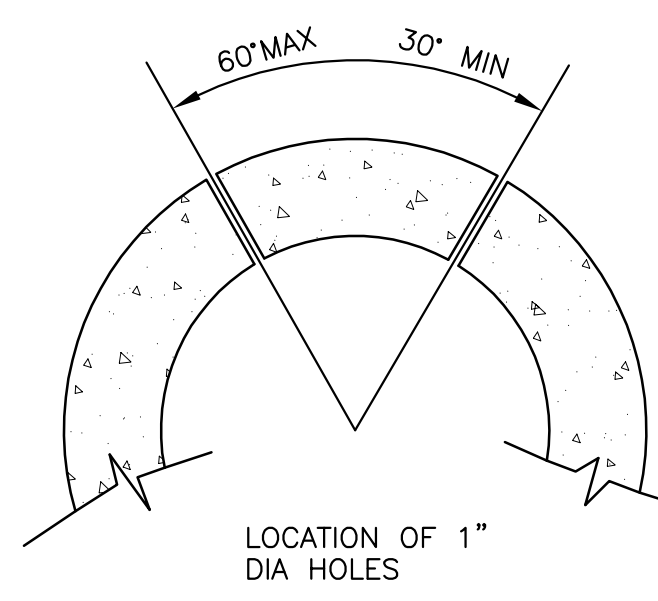
SHEET

**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

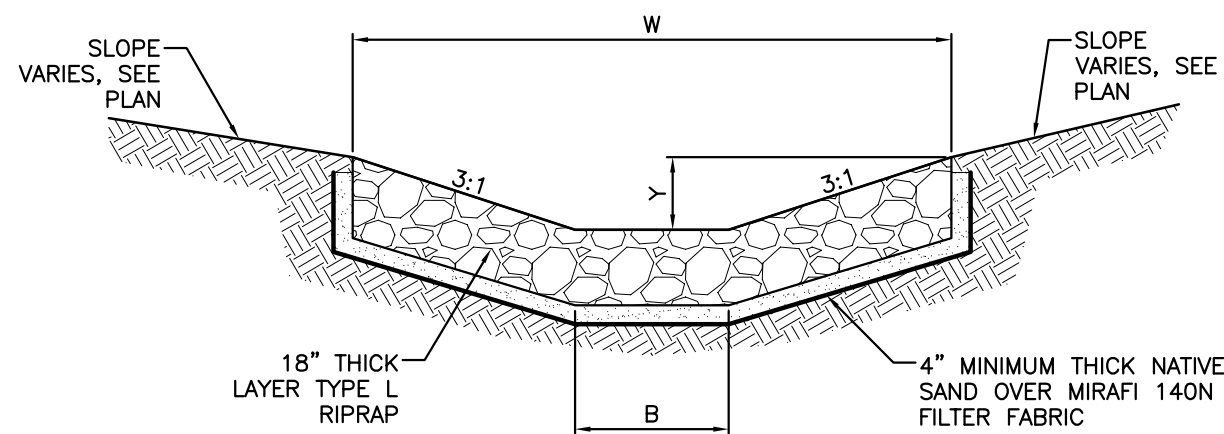
NOTE: CONCRETE JOINT FASTENERS REQUIRED ON THE FIRST TWO PIPE JOINTS FROM A FLARED END SECTION.

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

**CONCRETE PIPE JOINT FASTENER DETAIL**

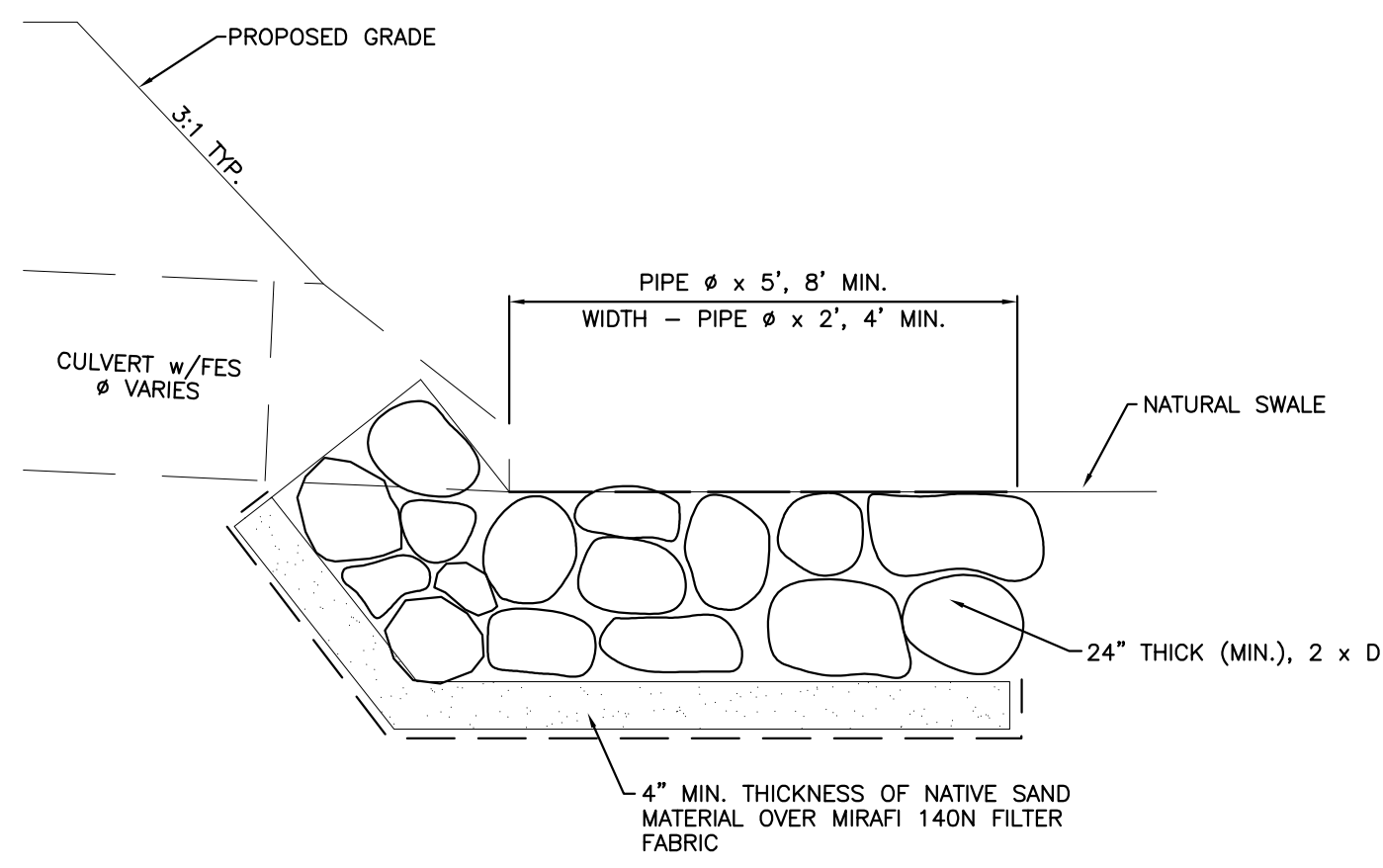
NOT TO SCALE

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



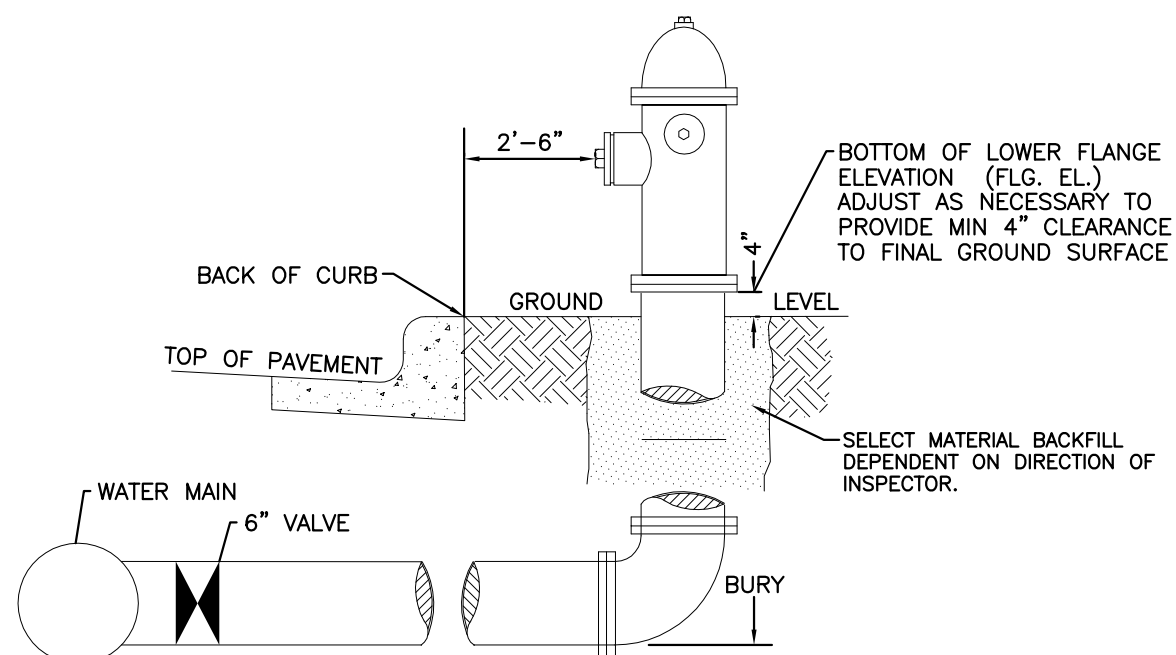
**RIPRAP RUNDOWN DETAIL - PEACEFUL VALLEY ROAD AT MARKSHEFFEL ROAD**

SCALE: NTS



**TYPICAL CULVERT OUTLET PROTECTION**

NOT TO SCALE



**GENERAL NOTES:**

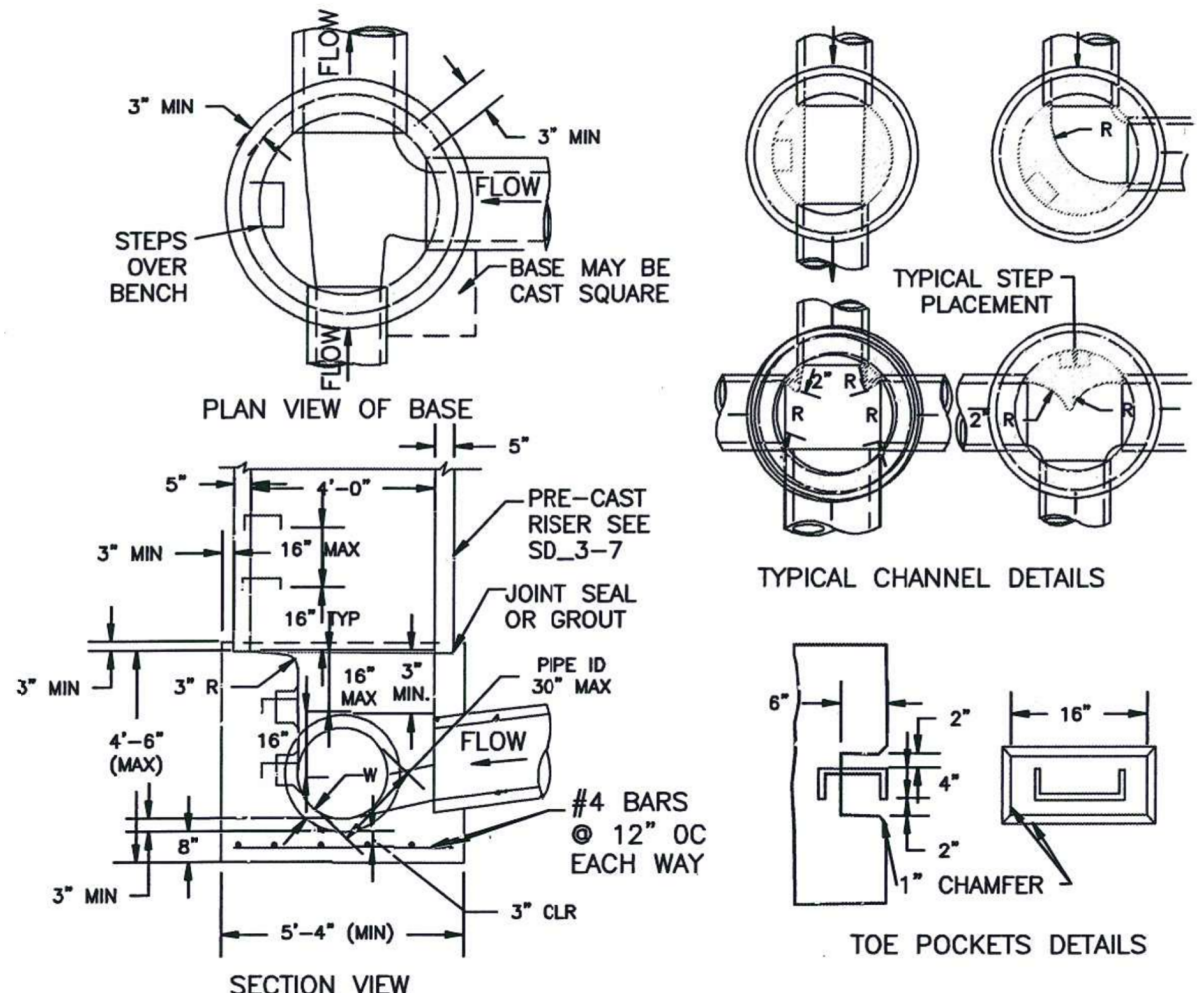
1. Hydrant nozzles shall be positioned at right angles to curb, if no curb or sidewalk exists, nozzles shall be placed at right angle to street or alley.
2. Hydrants shall be placed a minimum of 5.0 feet from any utility or drainage structure.
3. Any hydrant being installed with conditions other than 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.

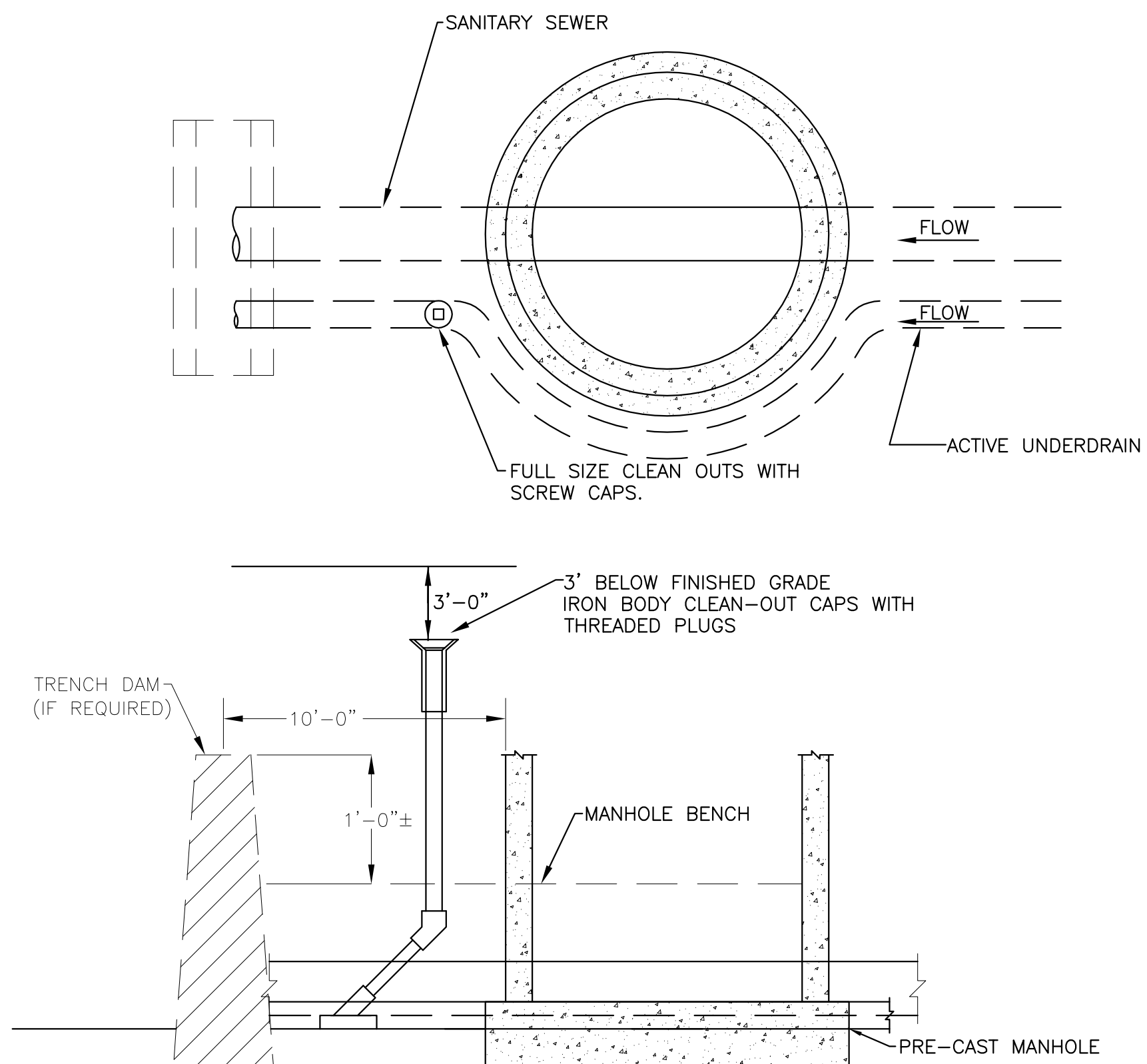


**NOTES**

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.

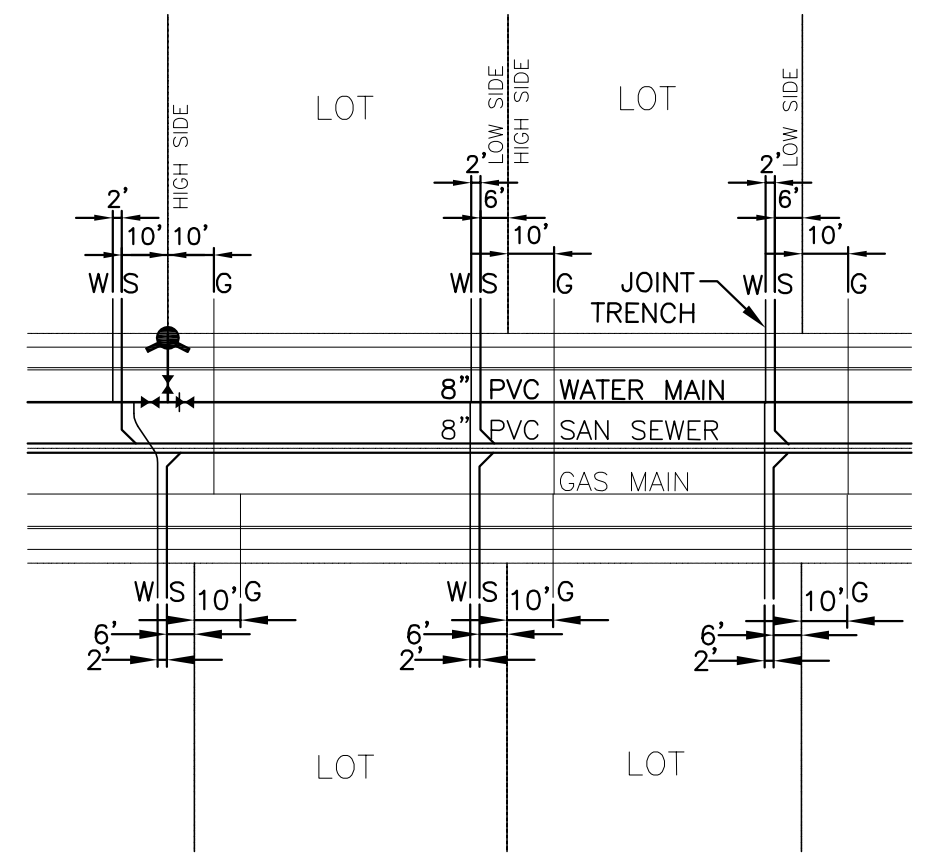
**STORM SEWER MANHOLE DETAIL TYPE II**

EPC STD. SD\_3-2  
NOT TO SCALE



**GROUNDWATER UNDERDRAIN DETAIL**

CLEANOUT LOCATIONS OUTSIDE MANHOLE  
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 7, 2018  
Design: AWMc  
Drawn: JAK  
Check: AWMc  
Revisions:

SHEET

20

20 of 20 Sheets