

## GENERAL NOTES

- Profile design lines are based on centerline, as shown, unless otherwise noted.
- All new construction to conform to the specifications of El Paso County Planning and Community Development, Widefield Water and Sanitation District, and the Fountain Mutual Irrigation Company (FMIC). Any asphalt removed is to be replaced to meet the specifications of the El Paso County Planning and Community Development.
- For pavement design, curb and gutter, and sidewalks see individual plan and profile sheets. Pavement design to be based on Resistance Value 'R' derived from Hveem tests and are to be approved by the Engineering Division of the El Paso County Planning and Community Development prior to work above subgrade.
- At intersections, all curb returns will have 20-foot radius unless otherwise noted.
- All existing utilities have been shown according to the best available information. The contractor is responsible for field location and verification prior to beginning work. If it appears that there could be a conflict with any utilities, whether indicated on the plans or not, the contractor is to notify the engineer and owner immediately. The contractor is responsible for the protection and repair (if necessary) of all utilities.
- A Pre-Construction meeting shall be held with the El Paso County Planning and Community Development and Widefield Water and Sanitation District prior to any construction.
- Approved plans, Engineering Criteria Manual, etc. is required to be on-site at all times during construction.
- All necessary permits, such as SWMP, ESQCP, Fugitive Dust, Access, C.O.E. 404, etc. shall be obtained prior to construction.
- All handicap ramps to be per El Paso County Standard SD, 2-40.
- The contractor shall coordinate exact locations and layout with the El Paso County Planning and Community Development on the placement of any pedestrian ramps prior to construction of the curb. Pedestrian ramp locations are as shown on the plans.
- Where appropriate, neatly saw cut all existing concrete and asphalt. Repair/replace all disturbed existing items with like materials and thicknesses.
- All disturbed areas shall be revegetated with native grasses within 21 days of excavation per Erosion Control Plan.
- The prepared Erosion/Sediment Control Plan is to be considered a part of these plans and its requirements adhered to during the construction of this project.
- All storm and sanitary sewer pipe lengths and slopes are figured from center of manhole or bend. Pipe lengths are given as a horizontal length.
- All storm sewer bedding to be per CDOF Standards.
- All storm sewer pipe shall be Class III B Wall unless otherwise shown on the storm sewer plan and profile sheets.
- All vyes and bends used in construction of storm sewer facilities shall be factory fabricated, unless approved by the El Paso County Development Services Department.
- Construction and materials used in all storm and sanitary sewer manholes shall be per specifications. Storm sewer radial deflections to be grouted or installed per manufacturer's recommendations.
- Storm sewer manholes sizes as follows unless otherwise shown:  
18" thru 36" use 48" I.D. manhole  
42" thru 48" use 60" I.D. manhole  
54" thru 60" use 72" I.D. manhole  
NOTE: Manhole sizes tabulated here shall be increased, if necessary, to accommodate incoming laterals.
- Sanitary sewer manhole sizes and facilities per Widefield Water and Sanitation District Specifications. Sanitary sewers to be installed with Class 'C' bedding. Sanitary sewers deeper than 12-feet shall require Class 'B' bedding. Pipe used for construction of sanitary sewer shall be SDR 35 unless shown otherwise on plan and profiles.
- For additional utility notes, see Utility Plan and/or Service Plan.
- All horizontal stationing is based on the 'Face of Curb', unless otherwise shown.
- All vertical design and top of curb are based on the design point shown in the typical cross section.
- The curb line design point is located at the intersection of the face and top of curb for the EPC Type A Standard 6-inch vertical curb. See typical street section for design point locations.
- Water and sanitary sewer service provided by Widefield Water and Sanitation District. Telephone service provided by Qwest Communications. Gas service provided by BlackHills Energy. Electric service provided by Mountain View Electric.
- All utility construction to be conducted in conformance with the current Widefield Water and Sanitation District Specifications and/or El Paso County Specifications, whichever is greater.
- Vertical curb to be used between curb returns (CR) and at curb inlets. Transitions from ramp to vertical curb shall be 10-feet unless otherwise approved by the El Paso County Planning and Community Development. All other curb & gutter to be ramp curb & gutter.
- Cross pans to be 6' wide and per El Paso County Standard Detail SD, 2-26.
- Contractor responsible for meeting all Widefield Water and Sanitation District criteria when connecting to existing stubs.
- Curb returns shall be straight graded from CR to CR unless otherwise noted.
- Inlets are Type 'R' inlets (CDOF STD M-604-12) unless otherwise noted.
- USPS CBU Mailboxes are to be determined by USPS.

**BENCHMARK:** Monument is located at the Northwest corner of the intersection of Powers Boulevard and Fontaine Street. The monument is a 3-inch aluminum cap (FIMS ID #206). Located 51.3 feet west of the west edge of asphalt of Powers Blvd and 65.5 feet north of the north edge of asphalt of Fontaine Street. Elevation=5897.89 feet (NGVD 1929, 1960 Adj.)

**BASIS OF BEARINGS:** is based upon a portion of the Easterly boundary of the Glen at Widefield Subdivision Filing No. 5B as recorded under Reception No. 07671226 in the records of the Clerk and Recorder's Office, County of El Paso, State of Colorado; said line being also a portion of the Easterly Right-of-Way Autumn Glen Avenue as described in said subdivision, being monumented at the Point of Tangency of said boundary by a found cap and rebar marked "PLSC 25968" and at the Point of Curvature of said boundary by a found rebar and cap marked "PLSC 25968". Said line bears N29°46'44"W, a distance of 1154.12 feet.

## EL PASO COUNTY STANDARD NOTES

- All drainage and roadway construction shall meet the standards and specifications of the City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2, and the El Paso County Engineering Criteria Manual.
- Contractor shall be responsible for the notification and field notification of all existing utilities, whether shown on the plans or not, before beginning construction. Location of existing utilities shall be verified by the contractor prior to construction. Call 811 to contact the Utility Notification Center of Colorado (UNCC).
- Contractor shall keep a copy of these approved plans, the Grading and Erosion Control Plan, the Stormwater Management Plan (SWMP), the soils and geotechnical report, and the appropriate design and construction standards and specifications at the job site at all times, including the following:
  - El Paso County Engineering Criteria Manual (ECM)
  - City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2
  - Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction
  - CDOT M & S Standards
- Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations from regulations and standards must be requested, and approved, in writing. Any modifications necessary to meet criteria after-the-fact will be entirely the developer's responsibility to rectify.
- It is the design engineer's responsibility to accurately show existing conditions, both onsite and offsite, on the construction plans. Any modifications necessary due to conflicts, omissions, or changed conditions will be entirely the developer's responsibility to rectify.
- Contractor shall schedule a pre-construction meeting with El Paso County Planning and Community Development (P&CDD) - Inspections, prior to starting construction.
- It is the contractor's responsibility to understand the requirements of all jurisdictional agencies and to obtain all required permits, including but not limited to El Paso County Erosion and Stormwater Quality Control Permit (ESQCP), Regional Building Floodplain Development Permit, U.S. Army Corps of Engineers-issued 401 and/or 404 permits, and county and state fugitive dust permits.
- Contractor shall not deviate from the plans without first obtaining written approval from the design engineer and P&CDD. Contractor shall notify the design engineer immediately upon discovery of any errors or inconsistencies.
- All storm drain pipe shall be Class III RCP unless otherwise noted and approved by P&CDD.
- Contractor shall coordinate geotechnical testing per ECM standards. Pavement design shall be approved by El Paso County P&CDD prior to placement of curb and gutter and pavement.
- All construction traffic must enter/exit the site at approved construction access points.
- Sight visibility triangles as identified in the plans shall be provided at all intersections. Obstructions greater than 18 inches above flowline are not allowed within sight triangles.
- Signing and striping shall comply with El Paso County DOT and MUTCD criteria. [If applicable, additional signing and striping notes will be provided.]
- Contractor shall obtain any permits required by El Paso County DOT, including Work Within the Right-of-Way and Special Transport permits.
- The limits of construction shall remain within the property line unless otherwise noted. The owner/developer shall obtain written permission and easements, where required, from adjoining property owner(s) prior to any off-site disturbance, grading, or construction.

## INDEX OF SHEETS

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| 2 | Plan and Profile - Peaceful Valley Road Revised (05+60.00 to Marksheffel Rd) (Sidewalks and Pedestrian Ramps Only) | 11 | Storm Sewer Sedimentation Basin Plan (Basin D) |
| 3 | Plan and Profile - Pennycress Drive (13+81.16 to 21+00)  | 12 | Storm Sewer Basin D Outlet Structure           |
| 4 | Plan and Profile - Pennycress Drive (21+00 to 29+19.91)  | 13 | Sedimentation Basin Details                    |
| 5 | Plan and Profile - Buffalo Bur Trail (0+00 to 3+44)  | 14 | Site Details                                   |
| 6 | Overall Signage and Striping Plan  | 15 | Utility Details                                |
| 7 | Grading and Erosion Control Plan   |    |  |
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| 9 | Utility Plan   |    |  |

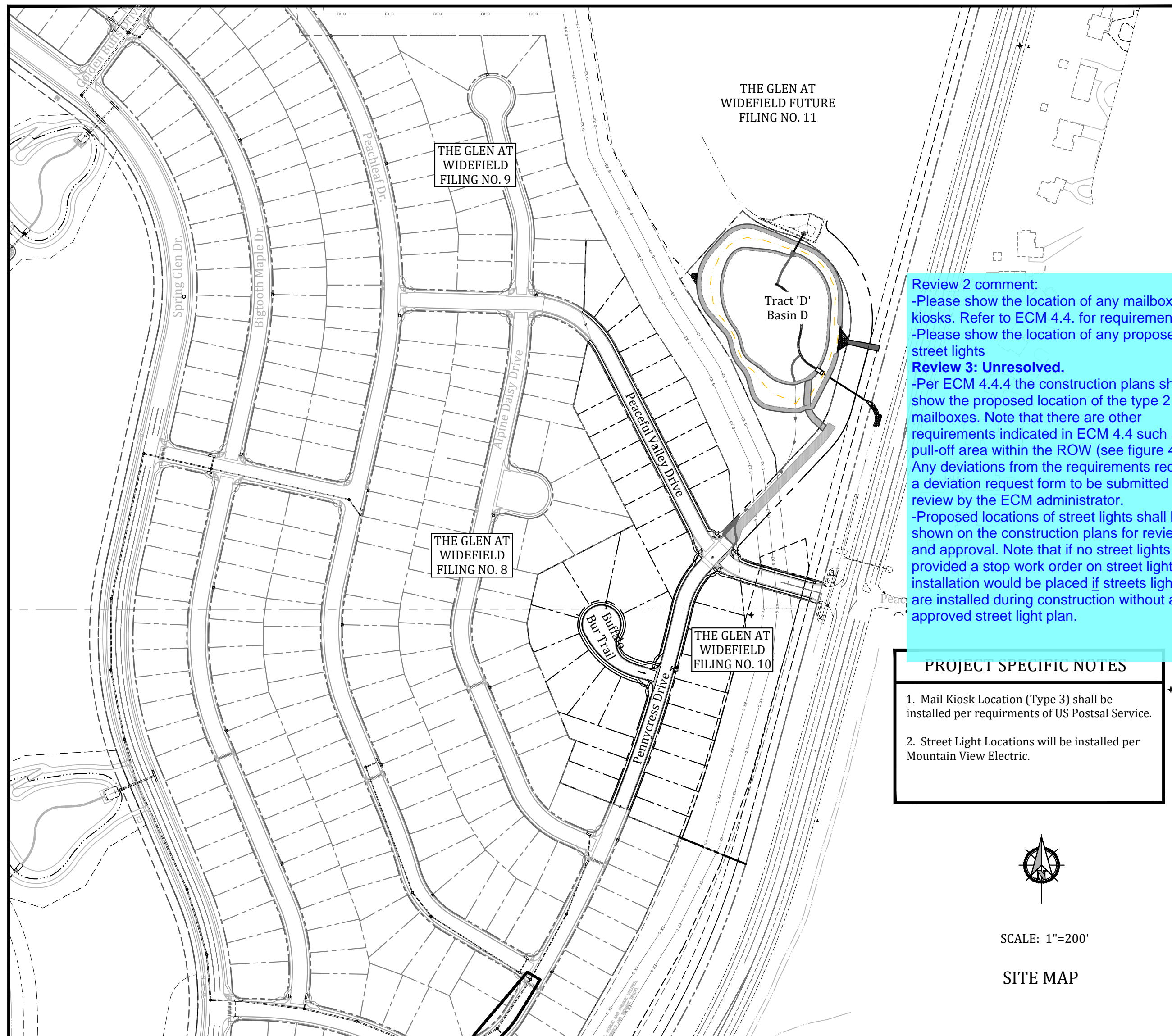


Know what's below.  
Call before you dig.

# THE GLEN AT WIDEFIELD FILING NO. 10

## RESIDENTIAL SUBDIVISION CONSTRUCTION DRAWINGS

### PREPARED FOR WIDEFIELD INVESTMENT GROUP



## PROJECT SPECIFIC NOTES

- Mail Kiosk Location (Type 3) shall be installed per requirements of US Postal Service.
- Street Light Locations will be installed per Mountain View Electric.



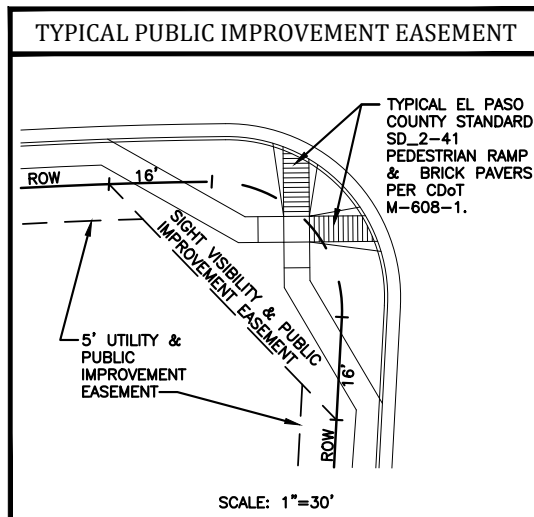
SCALE: 1"=200'

SITE MAP

## ABBREVIATIONS

ASSY = ASSEMBLY	NTS = NOT TO SCALE
BNDY = BOUNDARY	OD = OUTSIDE DIAMETER
BOP = BOTTOM OF PIPE	PC = POINT OF HORIZONTAL CURVATURE
CL = CENTERLINE	PP = PROPOSED
CRA = CONCRETE REVERSE ANCHOR	PT = POINT OF HORIZONTAL TANGENCY
CTRB = CONCRETE THRUST BLOCK	PVC = POLY VINYL CHLORIDE PIPE
CR = POINT OF CURB RETURN	PVC = POINT OF VERTICAL CURVATURE
DIP = DUCTILE IRON PIPE	PVI = POINT OF VERTICAL INTERSECTION
EL = ELEVATION	PVT = POINT OF VERTICAL TANGENCY
ESMT = EASEMENT	RCB = REINFORCED CONCRETE BOX
EX. = EXISTING	RCP = REINFORCED CONCRETE PIPE
FC = FACE OF CURB	ROW = RIGHT OF WAY
FES = FLARED END SECTION	RT = RIGHT
FLG = FLANGE	SHT = SHEET
FL = FLOWLINE	SS = SANITARY SEWER
GB = GRADE BREAK	STA = STATION
HP = HIGH POINT	STD = STANDARD
HORIZ = HORIZONTAL	TA = TOP OF ASPHALT
HYD = HYDRANT	TC = TOP OF CURB
I.D. = INSIDE DIAMETER	LT = LEFT
LP = LOW POINT	TOP = TOP OF PIPE
MAX = MAXIMUM	TYP = TYPICAL
MH = MANHOLE	VC = VERTICAL CURVE
	VERT = VERTICAL

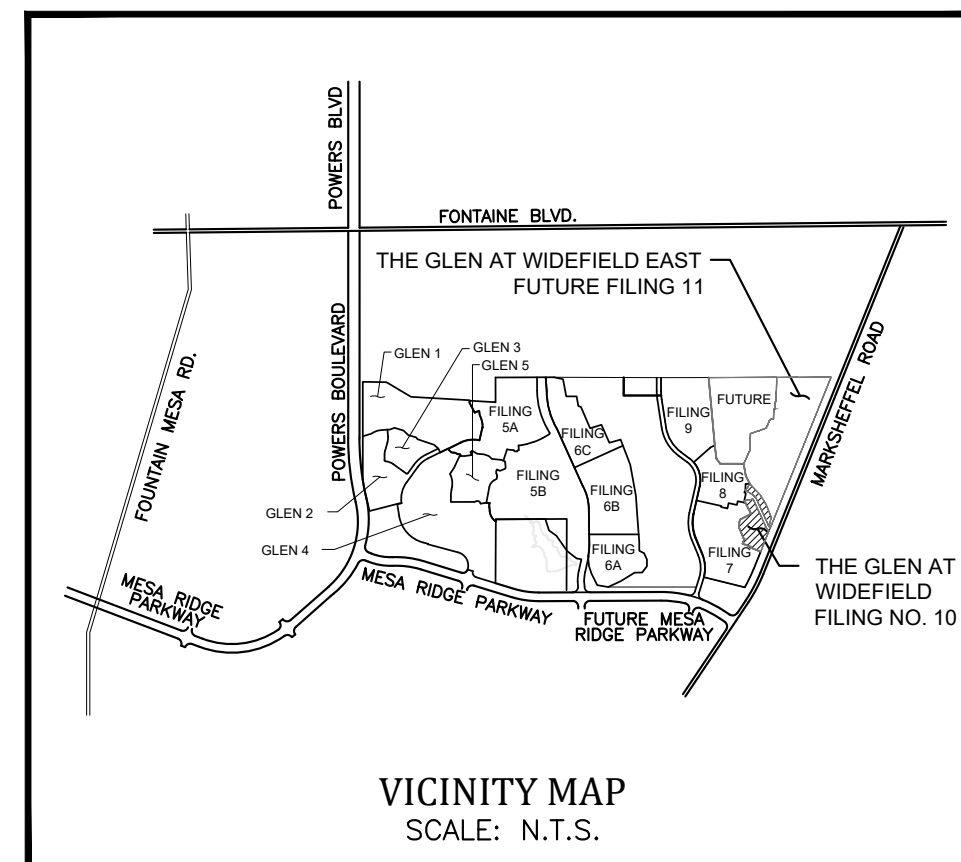
Review 2 comment:  
The TIS provides recommendations for improvements at these intersections. Coordinate with the traffic engineer as to the timing of these improvements and provide the appropriate construction documents for review in the re-submittal.  
Review 3: Unresolved.  
TIS indicates that with this filing improvements are required. Please provide the appropriate documents for review with the re-submittal

WIDEFIELD WATER AND SANITATION DISTRICT  
GENERAL NOTES

- All utility construction to be conducted in conformance with the current Widefield Water and Sanitation District specifications. Compaction requirements shall be 95% Standard Proctor as determined by ASTM D698, unless otherwise approved by the Widefield Water and Sanitation District or a higher standard is imposed by another agency having right-of-way jurisdiction.
- All materials and workmanship shall be subject to inspection by the Widefield Water and Sanitation District. The Widefield Water and Sanitation District reserves the right to accept or reject any such materials and workmanship that does not conform to its standards and specifications.
- The Developer or his Engineer has located all fire hydrants and future service stubs. Any required realignment, either horizontal or vertical, shall be at the expense of the Developer.
- All ductile iron pipe, to include fittings, valves and fire hydrants will be wrapped with polyethylene tubing, and electrically isolated.
- All ductile iron pipe and fittings shall be double bonded. Specifications for cathodic protection on both Dip mains and PVC mains is specified in the Standards and Specifications.
- PVC main lines shall be installed with coated No. 12 tracer wire.
- The Contractor is required to notify the Widefield Water and Sanitation District (390-7111) a minimum of 48 hours and a maximum of 96 hours prior to the start of construction. The Contractor shall also notify affected utility companies 48 hours prior to construction adjacent to the known utility lines.
- The location of all utilities as shown on these drawings are approximate only. The location of all utilities shall be verified prior to construction by the Contractor.
- The Contractor shall field excavate and verify the vertical and horizontal location of all tie-ins. Contractor shall notify the Widefield Water and Sanitation District and the Engineer of the field verified information prior to construction.
- All bends shall be field staked prior to construction.
- Any waste/utility material removed and not reused shall be returned to the Widefield Water and Sanitation District if the District so requests.
- The Contractor shall at his expense support and protect all utility mains so that they will function continuously during construction. Should a utility main fail as a result of the Contractor's operation, it will be replaced immediately by either the Contractor or the Widefield Water and Sanitation District at full cost of labor and materials to the Contractor.
- Any pumping or bypass operations must be reviewed and approved prior to execution by both the Widefield Water and Sanitation District and the Engineer.
- Contractor must replace or repair any damage to all surface improvements, including but not limited to fences, curb and gutter and/or asphalt that may be caused during construction.
- All water lines 6" and larger, and all sewer lines 8" and larger, shall have as "As-Built" plans prepared and approved prior to final acceptance by the Widefield Water and Sanitation District.
- Prior to construction, a Pre-Construction Conference is required a minimum of 72 hours in advance of commencement of work. To set the Pre-Construction conference, contact Brandon Bernard, Water Superintendent (464-2051) and/or Mark McCormick, Wastewater Superintendent (491-0128) of the Widefield Water and Sanitation District for a time. No Pre-Construction Conference times will be set until 4 sets of signed drawings are received by the Widefield W & S District.  
Pre-Construction Date \_\_\_\_\_/Initials \_\_\_\_\_

## LEGEND

LOT LINE	EX CURB & GUTTER WALK & RAMP SECTIONS
STREET R.O.W.	PRO CURB & GUTTER WALK & RAMP SECTIONS
STREET CENTER LINE	EXISTING WATER HYDRANT
PROPOSED WATER	EXISTING WATER VALVE
PROPOSED WATER HYDRANT	EXISTING SANITARY SEWER
PROPOSED WATER VALVE	EXISTING STORM INLET
PROPOSED SANITARY MH	EXISTING STORM SEWER
PROPOSED SANITARY SEWER	EXISTING 30" C.I.G. GAS MAIN
PROPOSED STORM SEWER	
PROPOSED STORM INLET	
PROPOSED STORM FES	



## STATEMENTS

## Design Engineer's Statement:

These detailed plans and specifications were prepared under my direction and supervision. Said plans and specifications have been prepared according to the criteria established by the County for detailed roadway, drainage, grading and erosion control plans and specifications, and said plans and specifications are in conformity with applicable master drainage plans and master transportation plans. Said plans and specifications meet the purposes for which the particular roadway and drainage facilities are designed and are correct to the best of my knowledge and belief. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparation of these detailed plans and specifications.

Richard N. Wray, P.E. #19310

Date

For and on behalf of Kiowa Engineering Corp.

## Owner/Developer's Statement:

I, the owner/developer have read and will comply with all of the requirements specified in these detailed plans and specifications.

J. Ryan Watson, President

Date

Glen Development Company  
3 Widefield Boulevard  
Colorado Springs, Colorado 80911

## El Paso County:

County plan review is provided only for general conformance with County Design Criteria. The County is not responsible for the accuracy and adequacy of the design, dimensions, and/or elevations which shall be confirmed at the job site. The County through the approval of this document assumes no responsibility for completeness and/or accuracy of this document.

Filed in accordance with the requirements of the El Paso County Land Development Code, Drainage Criteria Manual, and Engineering Criteria Manual as amended.

In accordance with ECM Section 1.12, these construction documents will be valid for construction for a period of 2 years from the date signed by the El Paso County Engineer. If construction has not started within those 2 years, the plans will need to be resubmitted for approval, including payment of review fees at the Planning and Community Development Directors discretion.

Jennifer Irvine, P.E.

Date

County Engineer / ECM Administrator

## UTILITY APPROVALS

## 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

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 Fire District serving the property noted on the plans.

Security Fire Department

Signed \_\_\_\_\_ Security Fire Department \_\_\_\_\_ Date \_\_\_\_\_

## 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: \_\_\_\_\_

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: \_\_\_\_\_

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.

## GOVERNING AGENCIES

El Paso County Planning & Community  
Development Department  
2880 International Circle Suite 110  
Colorado Springs Colorado  
(719) 520-6300

Black Hills Energy  
18965 Bas Camp Road Unit A7  
Monument, Colorado  
(719) 359-0586

Widefield Water & Sanitation District  
37 Widefield Blvd.  
Colorado Springs, Colorado  
(719) 390-7111

Mountain View Electric Association  
11140 East Woodmen Road  
Falcon, Colorado  
(719) 495-2283

## DEVELOPER:



3 WIDEFIELD BOULEVARD  
COLORADO SPRINGS, CO 80911

## PREPARED BY:



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

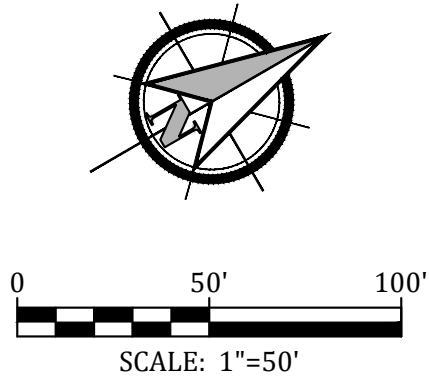
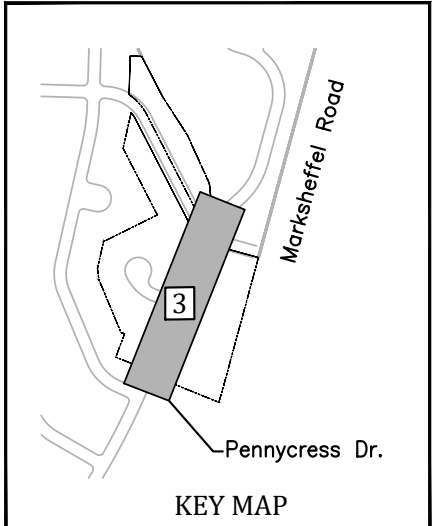
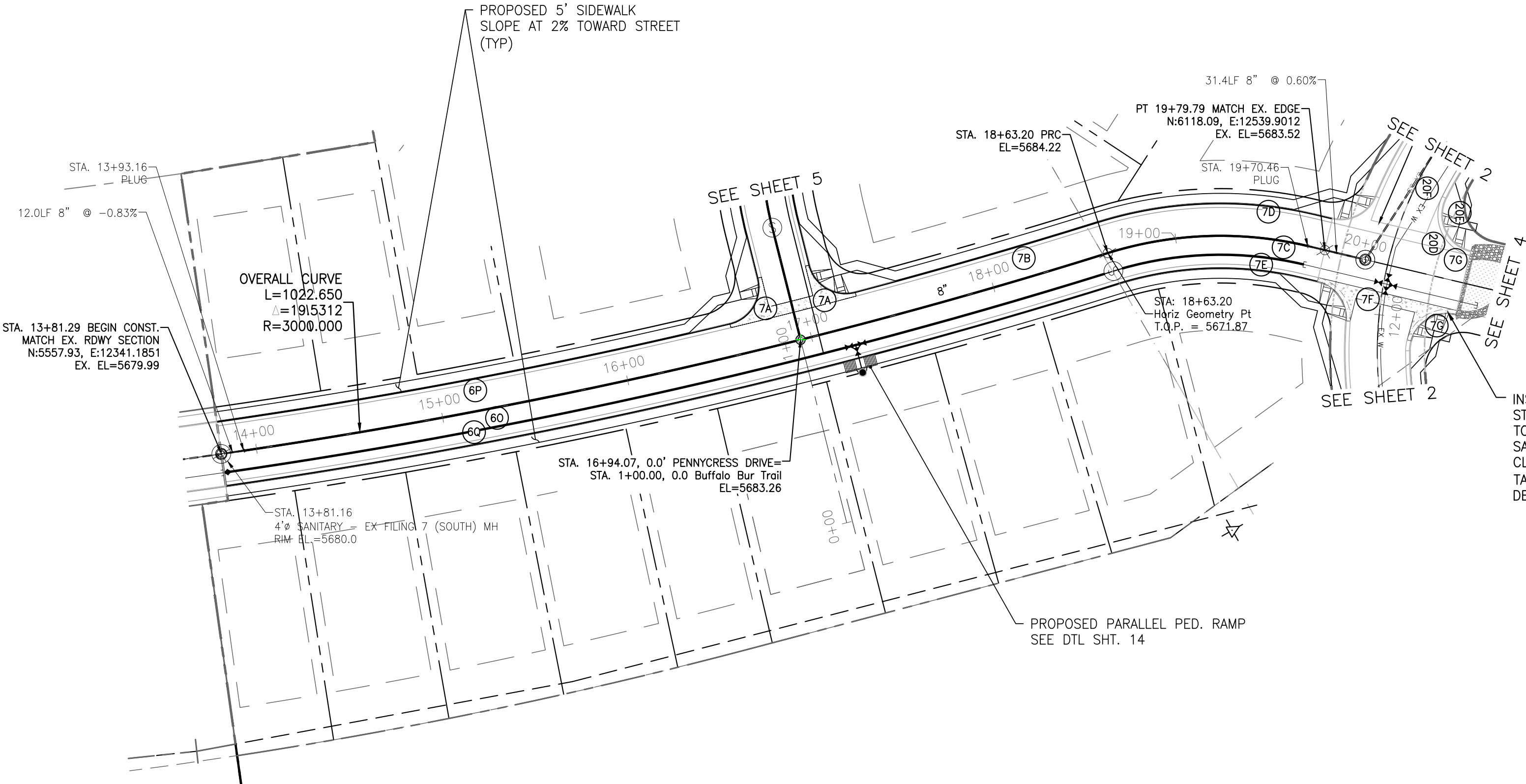
February 12, 2020  
PCD File No. SF-1921



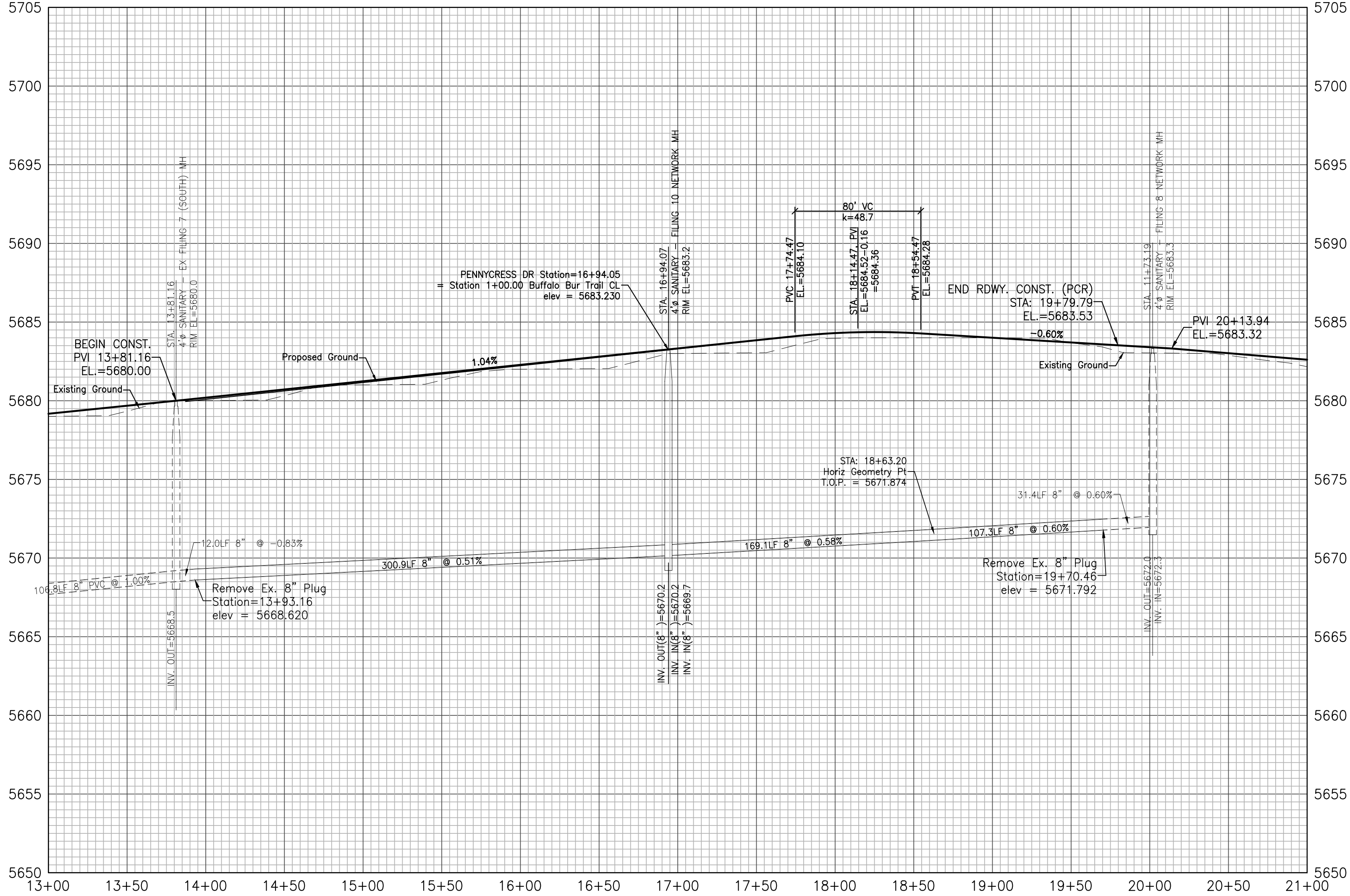




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(6O)	Δ=19°32'06" L=1022.84' R=3000.00'
(6P)	Δ=6°38'34" L=345.85' R=2983.00'
(6Q)	Δ=19°32'06" L=1028.64' R=3017.00'
(7A)	Δ=90°39'27" L=31.65' R=20.00'
(7B)	Δ=2°34'35" L=134.13' R=2983.00'
(7C)	Δ=35°47'51" L=124.96' R=200.00'
(7D)	Δ=35°47'51" L=135.58' R=217.00'
(7E)	Δ=35°47'51" L=114.34' R=183.00'
(7F)	Δ=81°10'06" L=28.28' R=20.00'
(7G)	Δ=103°07'13" L=36.00' R=20.00'
(20D)	Δ=47°14'18" L=164.89' R=200.00'
(20E)	Δ=1°14'12" L=3.95' R=183.00'
(20F)	Δ=5°22'31" L=20.36' R=217.00'



PROFILE VIEW OF PENNYCRESS DRIVE



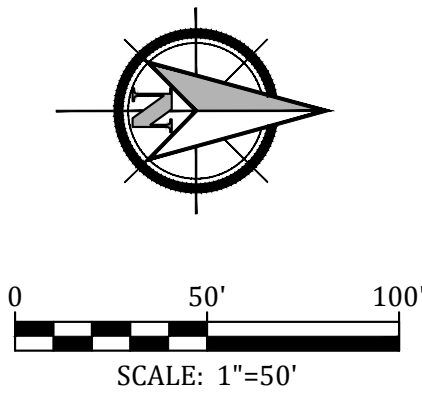
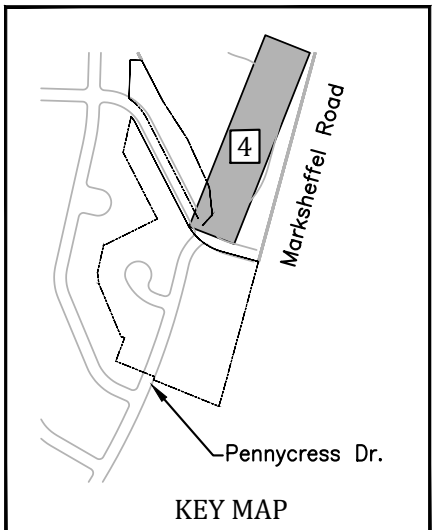
GLEN AT WIDEFIELD NO. 10  
Plan and Profile - Pennycress  
Sta: (13+81.16 to 21+00.00)  
EL PASO, COUNTY, COLORADO

Project No.:	19016
Date:	May 27, 2020
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

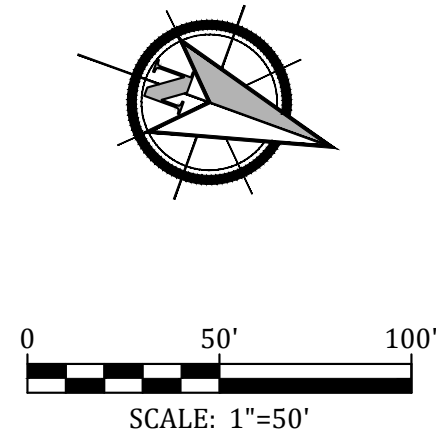
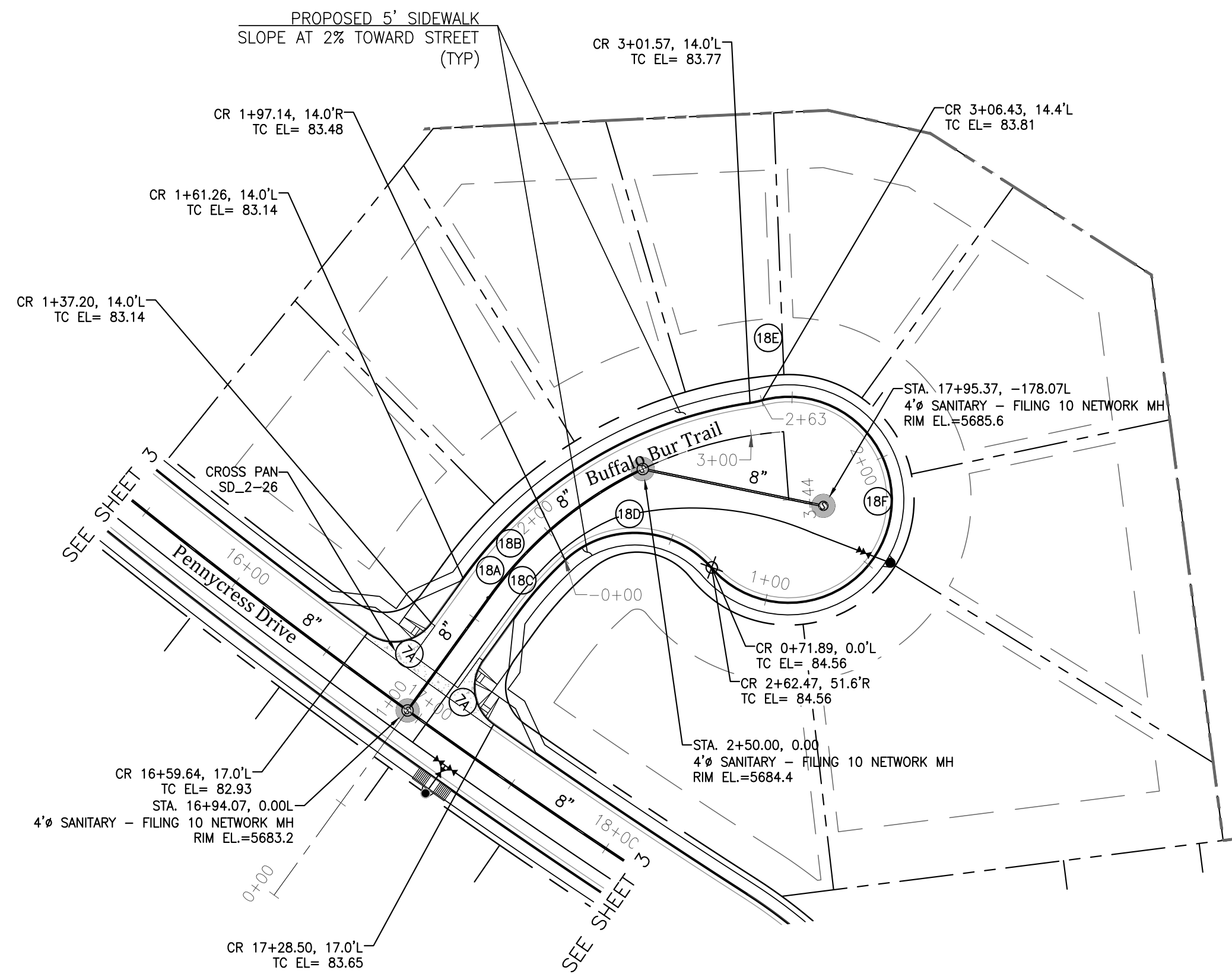
SHEET

3

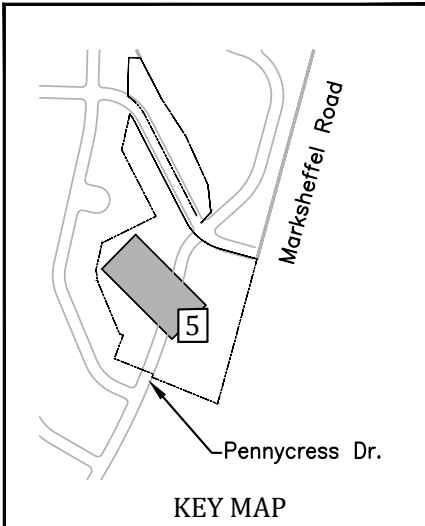




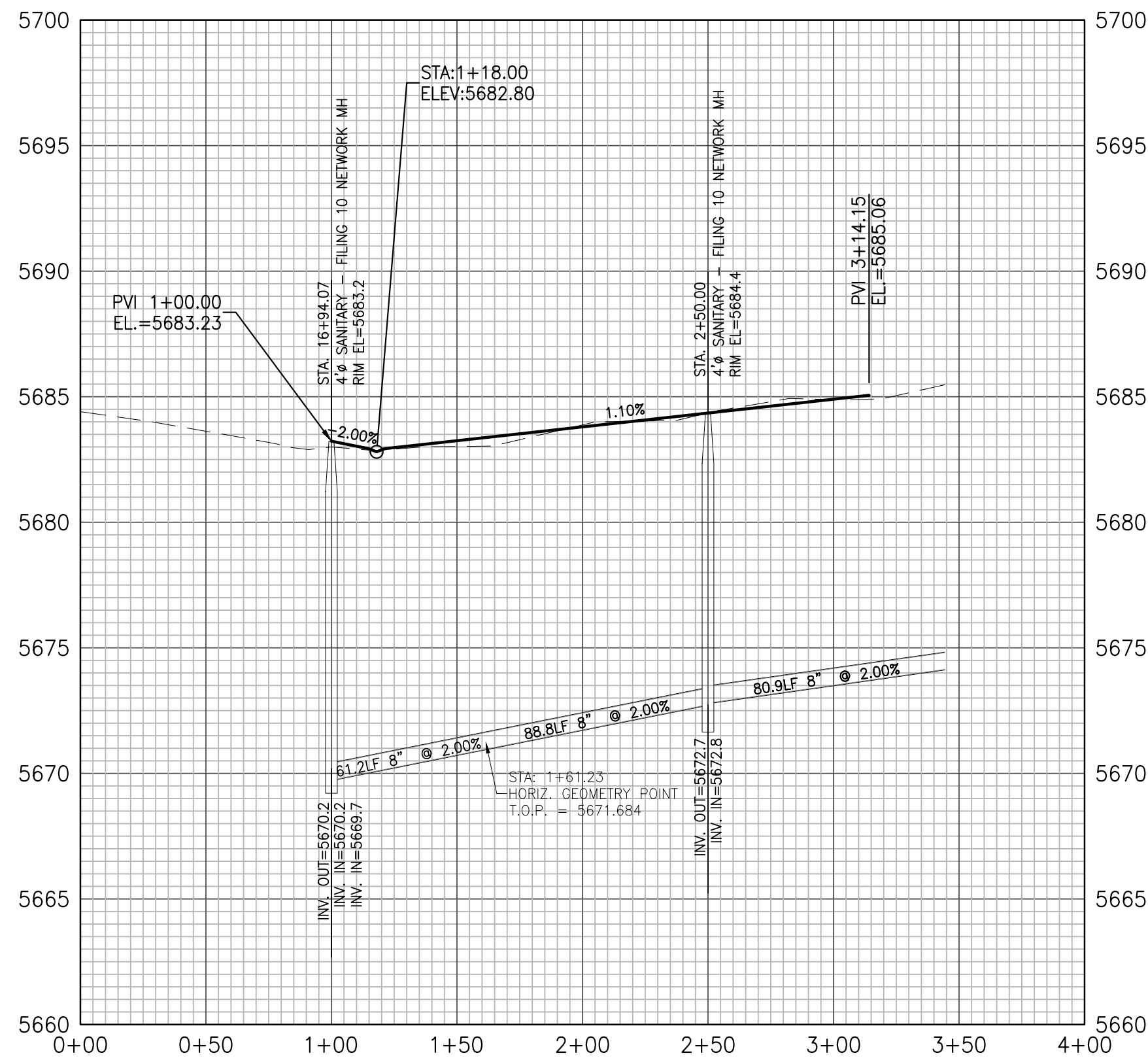




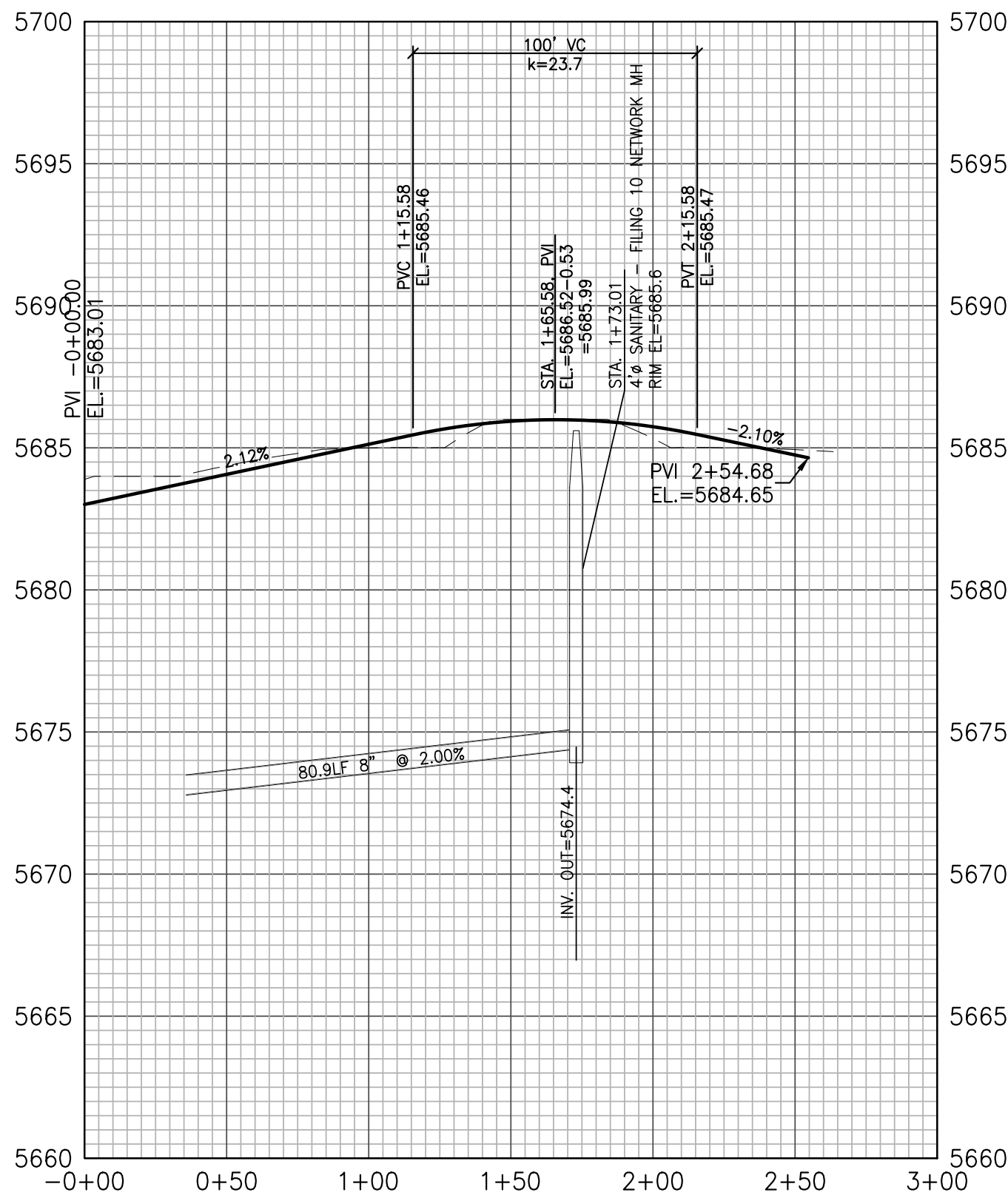
CURVE DATA	
7A	$\Delta=90^{\circ}39'27''$ $L=31.65'$ $R=20.00'$
7B	$\Delta=2^{\circ}34'35''$ $L=134.13'$ $R=2983.00'$
8A	$\Delta=50^{\circ}06'35''$ $L=153.05'$ $R=175.00'$
8B	$\Delta=45^{\circ}56'06''$ $L=151.52'$ $R=189.00'$
8C	$\Delta=11^{\circ}46'17''$ $L=33.08'$ $R=161.00'$
8D	$\Delta=91^{\circ}27'26''$ $L=71.83'$ $R=45.00'$
8E	$\Delta=6^{\circ}42'57''$ $L=5.27'$ $R=45.00'$
8F	$\Delta=243^{\circ}59'01''$ $L=191.62'$ $R=45.00'$



PROFILE VIEW OF BUFFALO BUR TRAIL



PROFILE VIEW OF BUFFALO BUR TRAIL CDS



GLEN AT WIDEFIELD NO. 9  
Plan and Profile - Buffalo Bur Trail  
Sta: (0+00 to 3+44.00)  
EL PASO, COUNTY, COLORADO

Project No.:	19016
Date:	May 27, 2020
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

SHEET

5



Signing and Striping Notes:

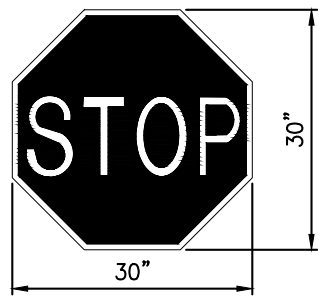
- All signs and pavement markings shall be in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).
- Removal of existing pavement markings shall be accomplished by a method that does not materially damage the pavement. The pavement markings shall be removed to the extent that 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 Planning and Community Development.
- 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. Crosswalks 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 Planning & Community Development (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 Department o Public Works (DPW) 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 theses 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:

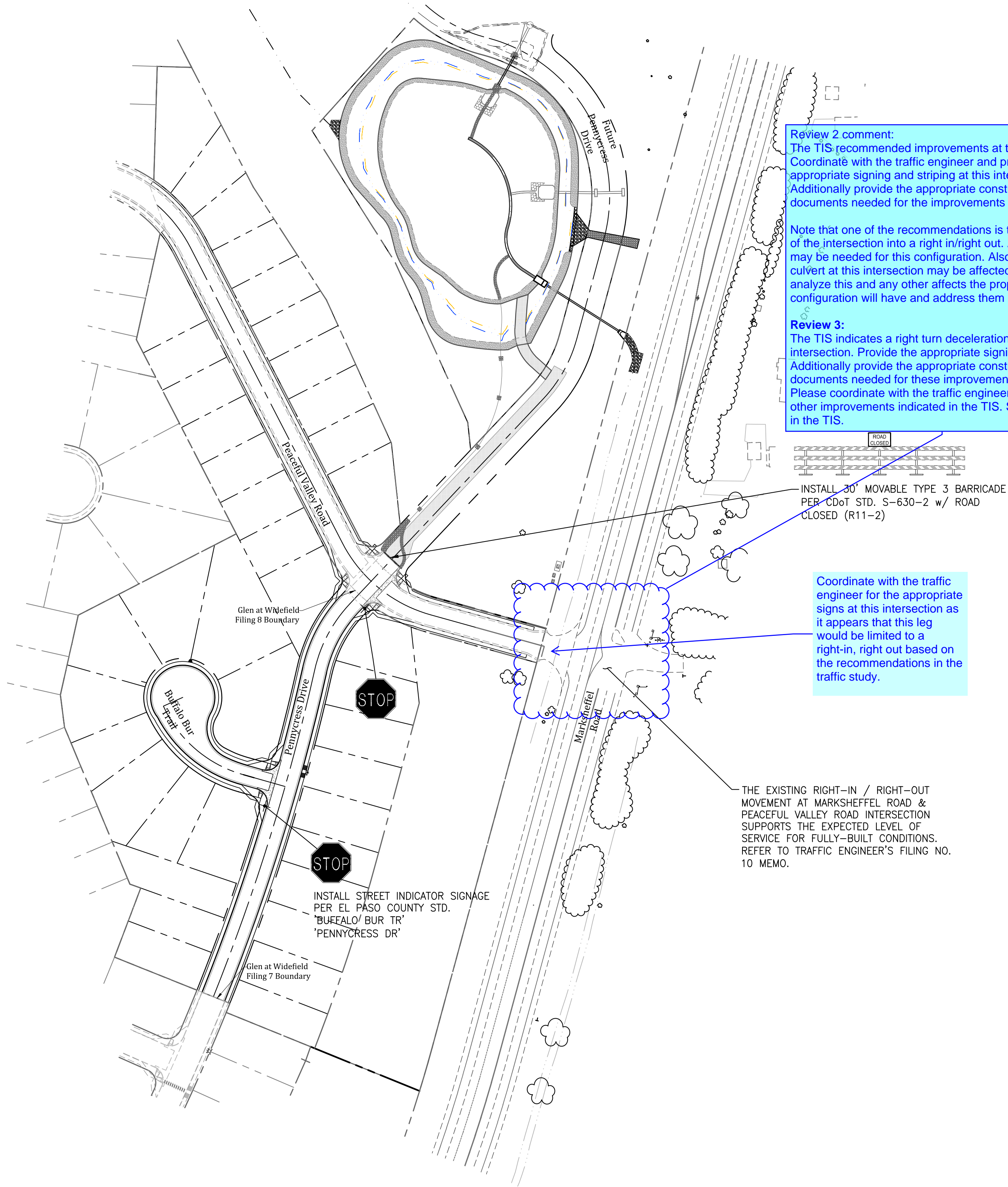
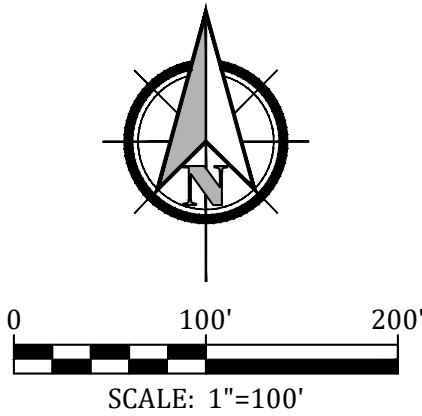
- STOP SIGN PLACEMENT LOCATIONS SHALL BE PER SECTION 2B-9 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND CDOT S-614-1.



STOP SIGN  
R1-1

SIGN DETAILS

SCALE: 1/4" = 1'-0"



**Review 2 comment:**  
The TIS recommended improvements at this intersection. Coordinate with the traffic engineer and provide the appropriate signing and striping at this intersection. Additionally provide the appropriate construction documents needed for the improvements recommended.

Note that one of the recommendations is to revise this leg of the intersection into a right in/right out. Additional ROW may be needed for this configuration. Also the current culvert at this intersection may be affected. Be sure to analyze this and any other affects the proposed configuration will have and address them accordingly.

**Review 3:**  
The TIS indicates a right turn deceleration lane at this intersection. Provide the appropriate signing/striping. Additionally provide the appropriate construction documents needed for these improvements for review. Please coordinate with the traffic engineer regarding other improvements indicated in the TIS. See comments in the TIS.

INSTALL 30' MOVABLE TYPE 3 BARRICADE  
PER CDOT STD. S-630-2 w/ ROAD  
CLOSED (R11-2)

Coordinate with the traffic engineer for the appropriate signs at this intersection as it appears that this leg would be limited to a right-in, right out based on the recommendations in the traffic study.

THE EXISTING RIGHT-IN / RIGHT-OUT  
MOVEMENT AT MARKSHEFFEL ROAD &  
PEACEFUL VALLEY ROAD INTERSECTION  
SUPPORTS THE EXPECTED LEVEL OF  
SERVICE FOR FULLY-BUILT CONDITIONS.  
REFER TO TRAFFIC ENGINEER'S FILING NO.  
10 MEMO.

GLEN AT WIDEFIELD NO. 10  
SIGNING & STRIPING PLAN

EL PASO, COUNTY

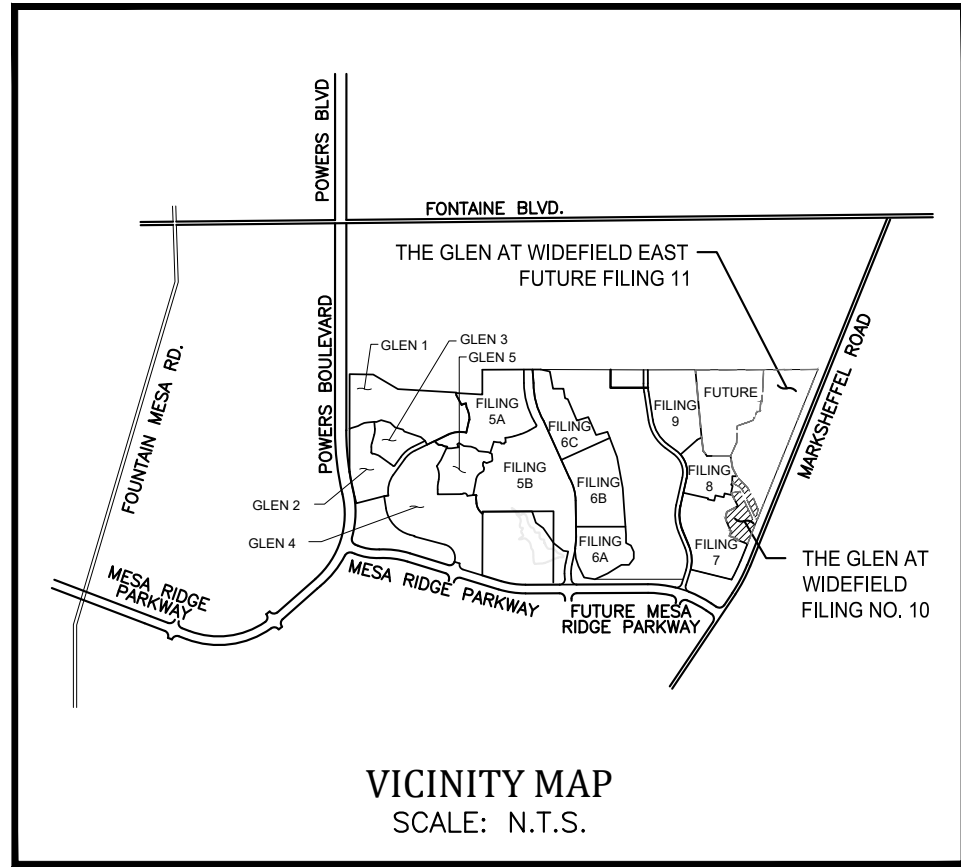
Project No.:	19016
Date:	May 27, 2020
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

SHEET

6

6 of 15 Sheets





EXISTING PEACEFUL VALLEY ROAD IS INSTALLED TO MARKSCHEFFEL ROAD, BUT WITHOUT SIDEWALKS AND RAMPS. MATCH SIDEWALK ASSEMBLY LEFT & RIGHT AND INSTALL 5' CONCRETE SIDEWALKS @ 2% SLOPE TOWARDS STREET SECTION FEATHER GRADING AT OVERLOT AREAS TO BACK OF WALK TO AVOID RETAINING STORMWATER ON INDIVIDUAL LOTS (TYP.) SEE SHEET 2 FOR STREET PLAN & PROFILE DESIGN DATA

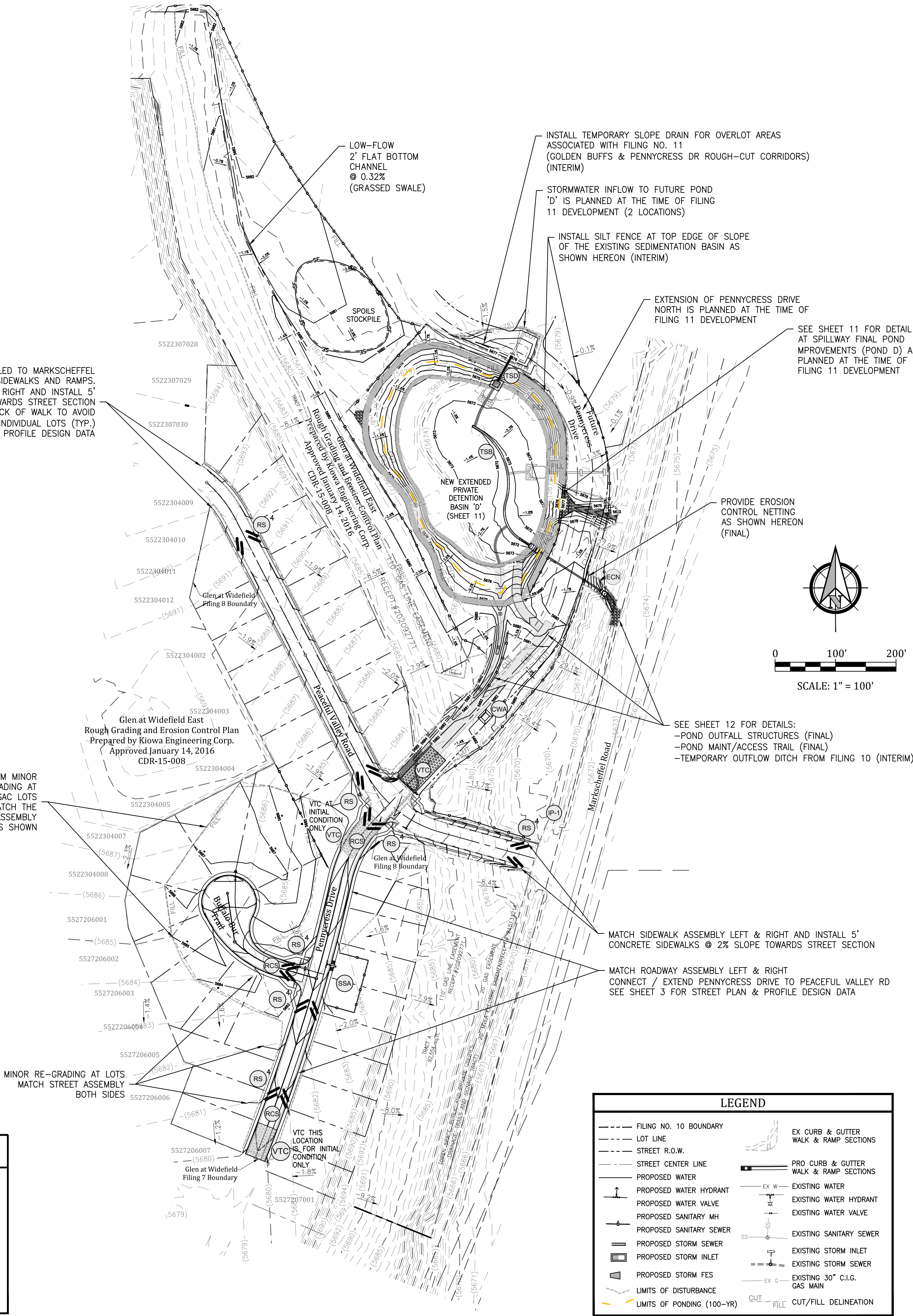
SEED MIX		
AREAS DISTURBED BY THE EARTHWORK ACTIVITIES AND NOT RECEIVING OTHER TREATMENT SHALL BE PERMANENTLY REVEGETATED WITH THE FOLLOWING SEED MIX.		
SPECIES	VARIETY	pls./acre
SIDEOTS GRAMA	<i>El Reno</i>	3.0
WESTERN WHEAT GRASS	<i>Barton</i>	2.5
SLENDER WHEAT GRASS	<i>Native</i>	2.0
LITTLE BLUESTEM	<i>Pastura</i>	2.0
SAND DROPSEED	<i>Native</i>	0.5
SWITCH GRASS	<i>Nebraska 28</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 RE-ESTABLISHED AND SLOPES RESEEDED 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.	

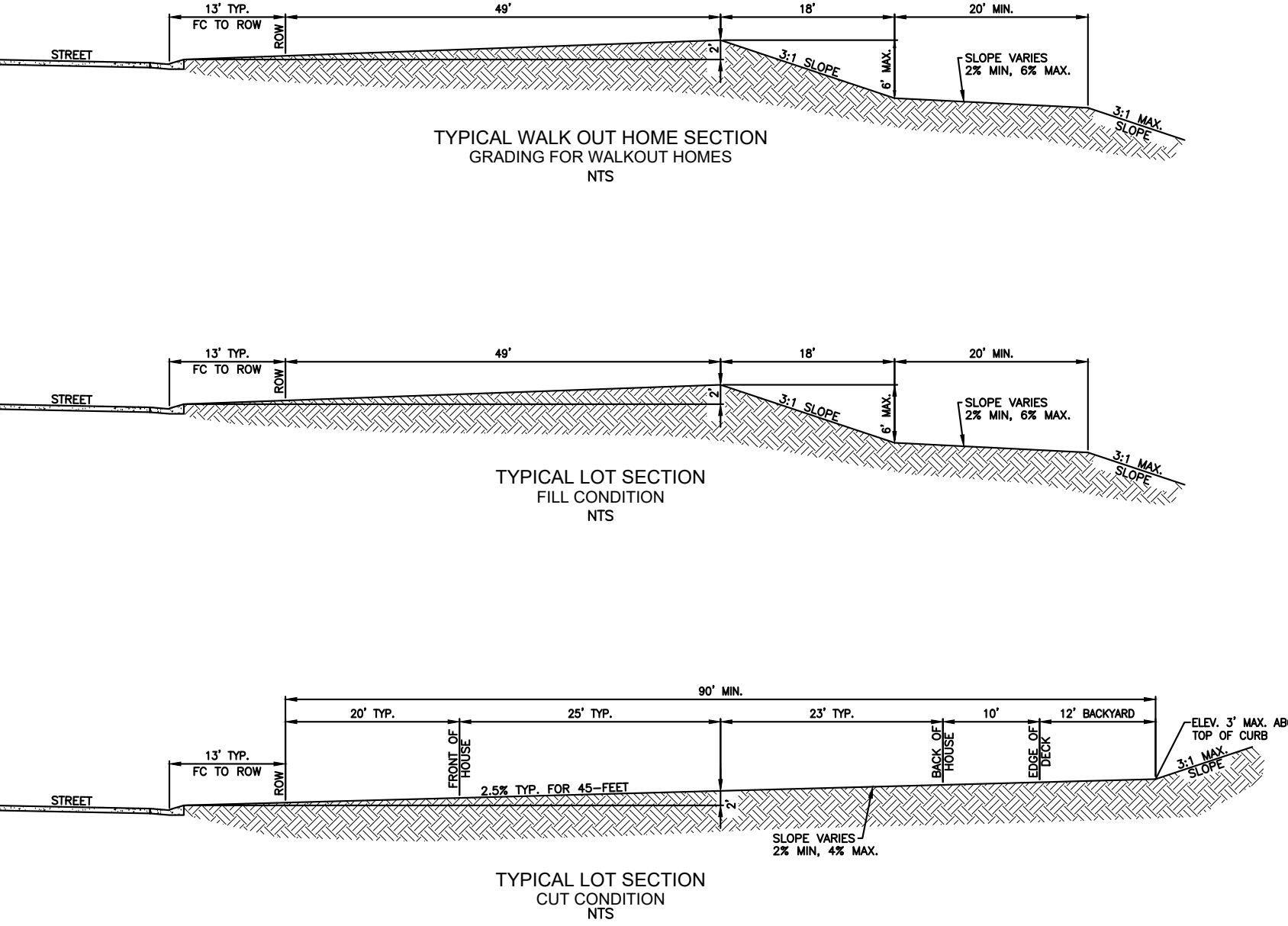
SHADED AREA DENOTES PERMANENT EROSION BLANKET. CURLEX HEAVY DUTY EROSION CONTROL BLANKET BY AMERICAN EXCELSIOR OR EQUAL SHALL BE USED.

EROSION CONTROL LEGEND	PHASE
SILT FENCE	(INITIAL)
VEHICLE TRACKING CONTROL	(INITIAL)
INLET PROTECTION	(INITIAL) / (INTERIM)
TEMPORARY SLOPE DRAIN	(INITIAL) / (INTERIM)
EROSION CONTROL NETTING	(INTERIM) / (FINAL)
ROUGH-CUT STREET CONTROL	(INITIAL) / (INTERIM)
CONCRETE WASHOUT AREA	(INITIAL) / (INTERIM)
ROCK SOCK(S) (COUNT)	(INITIAL) / (INTERIM)
STABILIZED STAGING AREA	(INITIAL) / (INTERIM)

OPINION OF COST FOR EROSION CONTROL REQUIREMENTS Additional Erosion Control for Glen at Widefield Filing No. 10				
ITEM	QUANTITY	UNITS	PRICE	AMOUNT
PERMANENT SEEDING	3.0	AC	\$800	\$2,400.00
PERMANENT E.C. BLANKET	1,196	SY	\$6	\$7,160.00
VEHICLE TRACKING CONTROL	3	EA	\$2,370	\$7,110.00
INLET PROTECTION	2	EA	\$167	\$334.00
CONCRETE WASHOUT BASIN	1	EA	\$900	\$900.00
ROUGH CUT STREET CONTROL	1,170	LF	\$2	\$2,340.00
SILT FENCING	3,122	LF	\$2.50	\$7,805.00
TOTAL				\$25,679.00



- PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES
- 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 roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations from regulations and standards must be requested, and approved, in writing.
  - A separate Stormwater Management Plan (SMWP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction. Management of the SMWP during construction is the responsibility of the designated Qualified Stormwater Manager or Certified Erosion Control Inspector. The SMWP shall be located on site at all times during construction and shall be kept up to date with work progress and changes in the field.
  - Once the ESQCP is approved and a "Notice to Proceed" has been issued, the contractor may install the initial stage erosion and sediment control measures as indicated on the approved GEC. A Preconstruction Meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting time and place with County staff.
  - Control measures must be installed prior to commencement of activities that could contribute pollutants to stormwater. Control measures for all slopes, channels, ditches, and disturbed land areas shall be installed immediately upon completion of the disturbance.
  - All temporary sediment and erosion control measures shall be maintained and remain in effective operating condition until permanent soil erosion control measures are implemented and final stabilization is established. All persons engaged in land disturbance activities shall assess the adequacy of control measures at the site and identify if changes to those control measures are needed to ensure the continued effective performance of the control measures. All changes to temporary sediment and erosion control measures must be incorporated into the Stormwater Management Plan.
  - Temporary stabilization shall be implemented on disturbed areas and stockpiles where ground disturbing construction activity has permanently ceased or temporarily ceased for longer than 14 days.
  - Final stabilization must be implemented at all applicable construction sites. Final stabilization is achieved when all ground disturbing activities are complete and all disturbed areas either have a uniform vegetative cover with individual plant density of 70 percent of pre-disturbance levels established or equivalent permanent alternative stabilization method is implemented. All temporary sediment and erosion control measures shall be removed upon final stabilization and before permit closure.
  - All permanent stormwater management facilities shall be installed as designed in the approved plans. Any proposed changes that affect the design or function of permanent stormwater management structures must be approved by the ECM Administrator prior to implementation.
  - Earth disturbances shall be conducted in such a manner so as to effectively minimize accelerated soil erosion and resulting sedimentation. All disturbances shall be designed, constructed, and completed so that the exposed area of any disturbed land shall be limited to the shortest practical period of time. Pre-existing vegetation shall be protected and maintained within 50 horizontal feet of a waters of the state unless shown to be infeasible and specifically requested and approved.
  - Compaction of soil must be prevented in areas designated for infiltration control measures or where final stabilization will be achieved by vegetative cover. Areas designated for infiltration control measures shall also be protected from sedimentation during construction until final stabilization is achieved. If compaction prevention is not feasible due to site constraints, all areas designated for infiltration and vegetation control measures must be loosened prior to installation of the control measure(s).
  - Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be a stabilized conveyance designed to minimize erosion and the discharge of sediment off site.
  - Concrete wash water shall be contained and disposed of in accordance with the SMWP. No wash water shall be discharged to or allowed to enter State Waters, including any surface or subsurface storm drainage system or facilities. Concrete washouts shall not be located in an area where shallow groundwater may be present, or within 50 feet of a surface water body, creek or stream.
  - During dewatering operations of uncontaminated ground water may be discharged on site, but shall not leave the site in the form of surface runoff unless an approved State dewatering permit is in place.
  - Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.
  - 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.
  - Waste materials shall not be temporarily placed or stored in the street, alley, or other public way, unless in accordance with an approved Traffic Control Plan. Control measures may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.
  - Tracking of soils and construction debris off-site shall be minimized. Materials tracked off-site shall be cleaned up and properly disposed of immediately.
  - The owner/developer shall be responsible for the removal of all construction debris, dirt, trash, rock, sediment, soil, and sand that may accumulate in roads, storm drains and other drainage conveyance systems and stormwater apertures 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 chemical(s) having the potential to be released in stormwater are to be stored or used onsite unless permission for the use of such chemical(s) is granted in writing by the ECM Administrator. In granting approval for the use of such chemical(s), special conditions and monitoring may be required.
  - Bulk storage of allowed petroleum products or other allowed liquid chemicals in excess of 55 gallons shall require adequate secondary containment protection to contain all spills onsite and to prevent any spilled materials from entering State Waters, any surface or subsurface storm drainage system or other facilities.
  - No person shall cause the impeding of stormwater flow in the curb and gutter or ditch except with approved sediment control measures.
  - Owner/developer and their agents shall comply with the "Colorado Water Quality Control Act" (Title 25, Article 8, CRS), and the "Clean Water Act" (33 USC 1344), in addition to the requirements of the Land Development Code, DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (1041, NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and other laws, rules, or regulations of other Federal, State, local, or County agencies, the most restrictive laws, rules, or regulations shall apply.
  - All construction traffic must enter/exit the site only at approved construction access points.
  - Prior to construction the permittee shall verify the location of existing utilities.
  - A water source shall be available on site during earthwork operations and shall be utilized as required to minimize dust from earthwork equipment and wind.
  - The soils report for this site has been prepared by Vivid Engineering Group, Inc. and shall be considered a part of these plans.
  - At least ten (10) days prior to the anticipated start of construction, for projects that will disturb one (1) acre or more, the owner or operator of construction activity shall submit a permit application for stormwater discharge to the Colorado Department of Public Health and Environment, Water Quality Division. The application contains certification of completion of a stormwater management plan (SMWP), of which this Grading and Erosion Control Plan may be a part. For information or application materials contact: Colorado Department of Public Health and Environment Water Quality Control Division WQCD - Permits 4300 Cherry Creek Drive South Denver, CO 80246-1530 Attn: Permits Unit
  - Base mapping was provided by Pinnacle Land Surveying. The date of the last survey update was May 2019.
  - Proposed Construction Schedule:
    - Begin Construction: Summer 2020
    - End Construction: Winter 2020
    - Total Site Area = 292.29 Acres
  - Area to be disturbed = 10.1 Acres (Filing 10 and minor ditch grading at Filing No. 11).
    - 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-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.

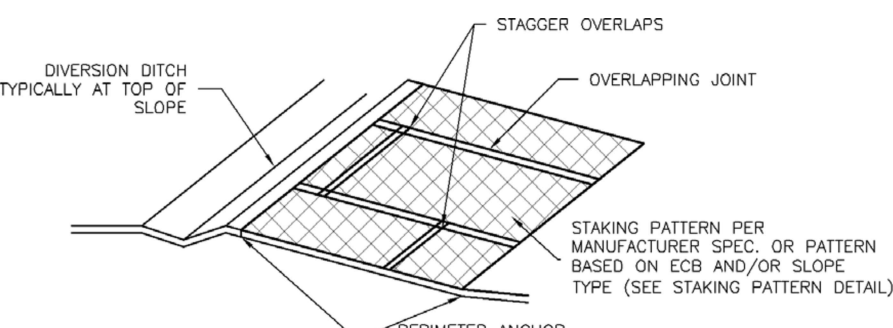


TYPICAL LOT CROSS SECTIONS

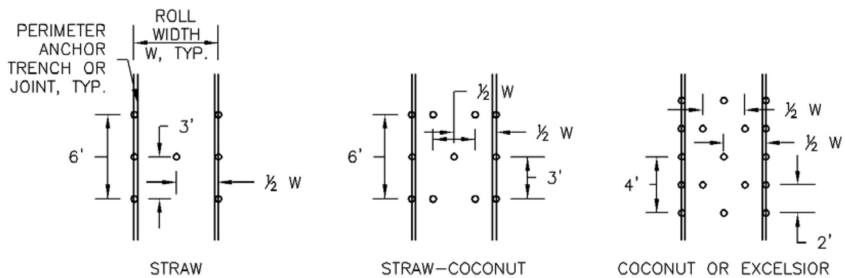


TABLE ECB-1. ECB MATERIAL SPECIFICATIONS					
TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**	
STRAW*	-	100%	-	DOUBLE/ NATURAL	
STRAW-COCONUT	30% MIN	70% MAX	-	DOUBLE/ NATURAL	
COCONUT	100%	-	-	DOUBLE/ NATURAL	
EXCELSIOR	-	-	100%	DOUBLE/ NATURAL	

## STAKING PATTERNS BY SLOPE



## ECB-3. OUTSIDE OF DRAINAGEWAY

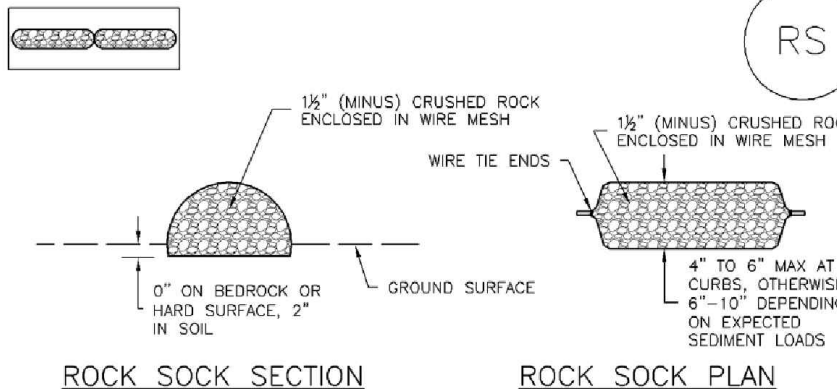


## STAKING PATTERNS BY ECB TYPE

## EROSION CONTROL BLANKET

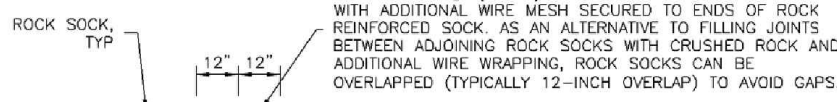
NTS

ECN



## ROCK SOCK SECTION

## ROCK SOCK PLAN



## ROCK SOCK JOINTING



1. SEE PLAN VIEW FOR LOCATIONS OF ROCK SOCKS.

2. CRUSHED ROCK SHALL BE 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1/2" MINUS).

3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY WIRE, OR EQUIVALENT, WITH A MAXIMUM OPENING OF 1/2". RECOMMENDED MINIMUM ROLL WIDTH OF 48".

4. WIRE MESH SHALL BE SECURED USING "NOD RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2' CENTERS ON ENDS OF SOCKS.

5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE JOINTS.

## RS-1. ROCK SOCK PERIMETER CONTROL

## ROCK SOCK PERIMETER CONTROL

NTS  
EPC STD RS-2

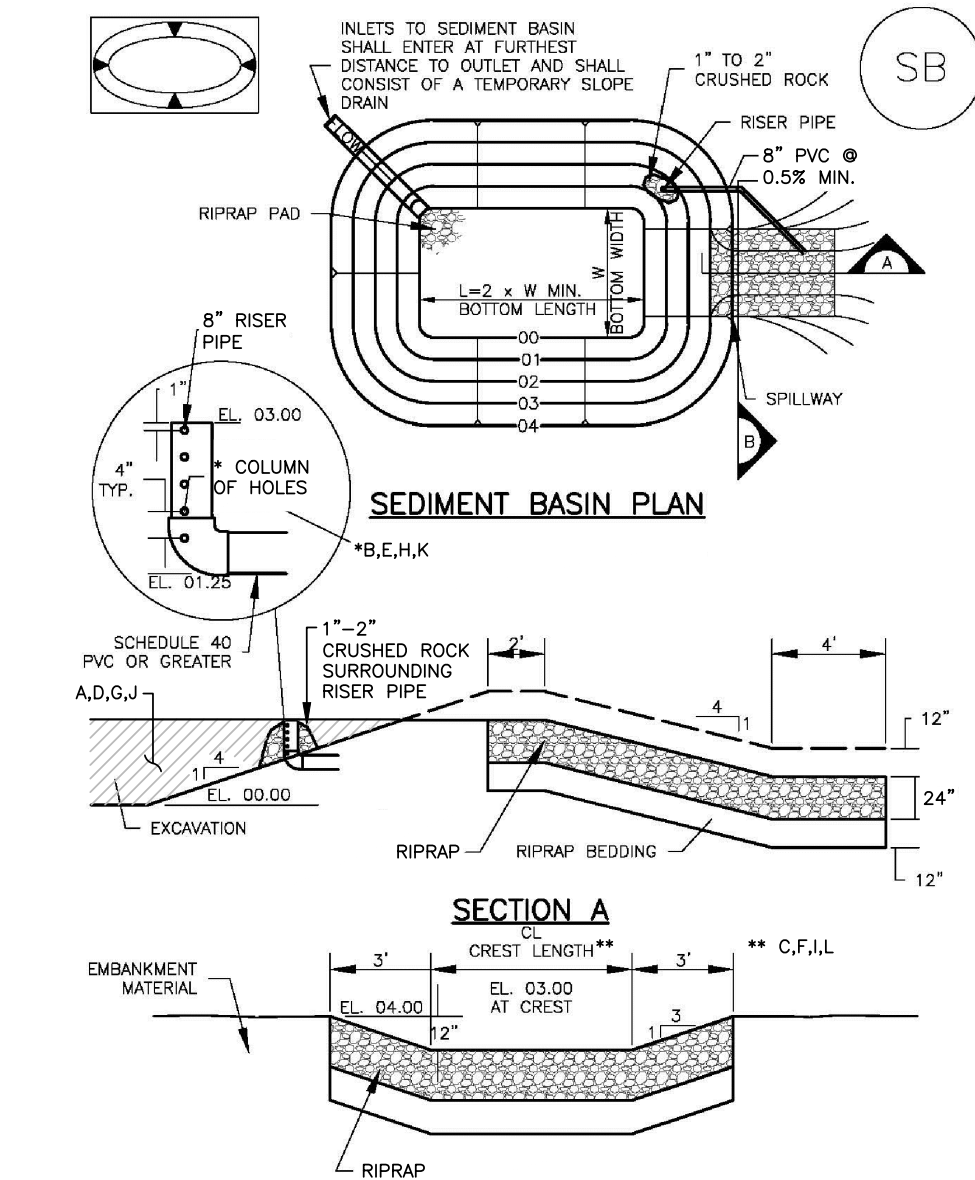
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## Sediment Basin (SB)

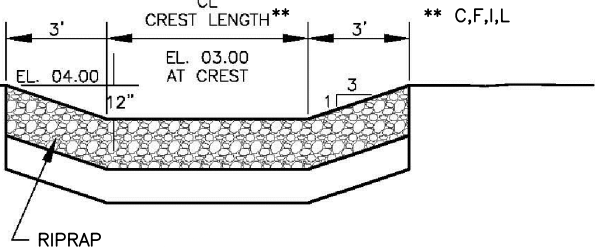
SC-7

SC-7

## Sediment Basin (S



## SECTION A



## TEMPORARY SEDIMENT BASIN DETAIL

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**Kiowa**  
Engineering Corporation  
1604 South 21st Street  
Colorado Springs, Colorado 80904  
(719)630-7942

GLEN AT WIDEFIELD NO. 10  
UTILITY PLAN  
WATER & WASTEWATER MAIN  
EL PASO, COUNTY

Project No.:	19016
Date:	May 27, 2020
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	
SHEET	
<div style="font-size: 48pt; font-weight: bold;">9</div> <div style="font-size: 18pt; font-weight: bold;">9 of 15 Sheets</div>	

19016-GW10-09-UT.dwg/Jun 04, 2020



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

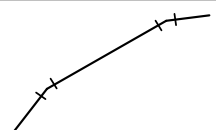
GAS - ALL GAS MAINS AND SERVICES ARE TO BE INSTALLED PER THE CITY OF COLORADO SPRINGS.

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	465-2283
GAS:	PEOPLES NATURAL GAS	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



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. 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 \_\_\_\_\_  
Security Fire Department

#### 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. \_\_\_\_\_

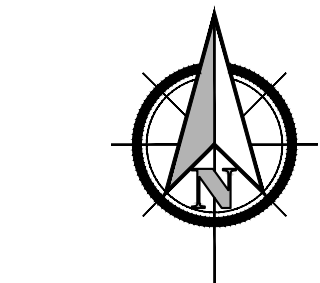
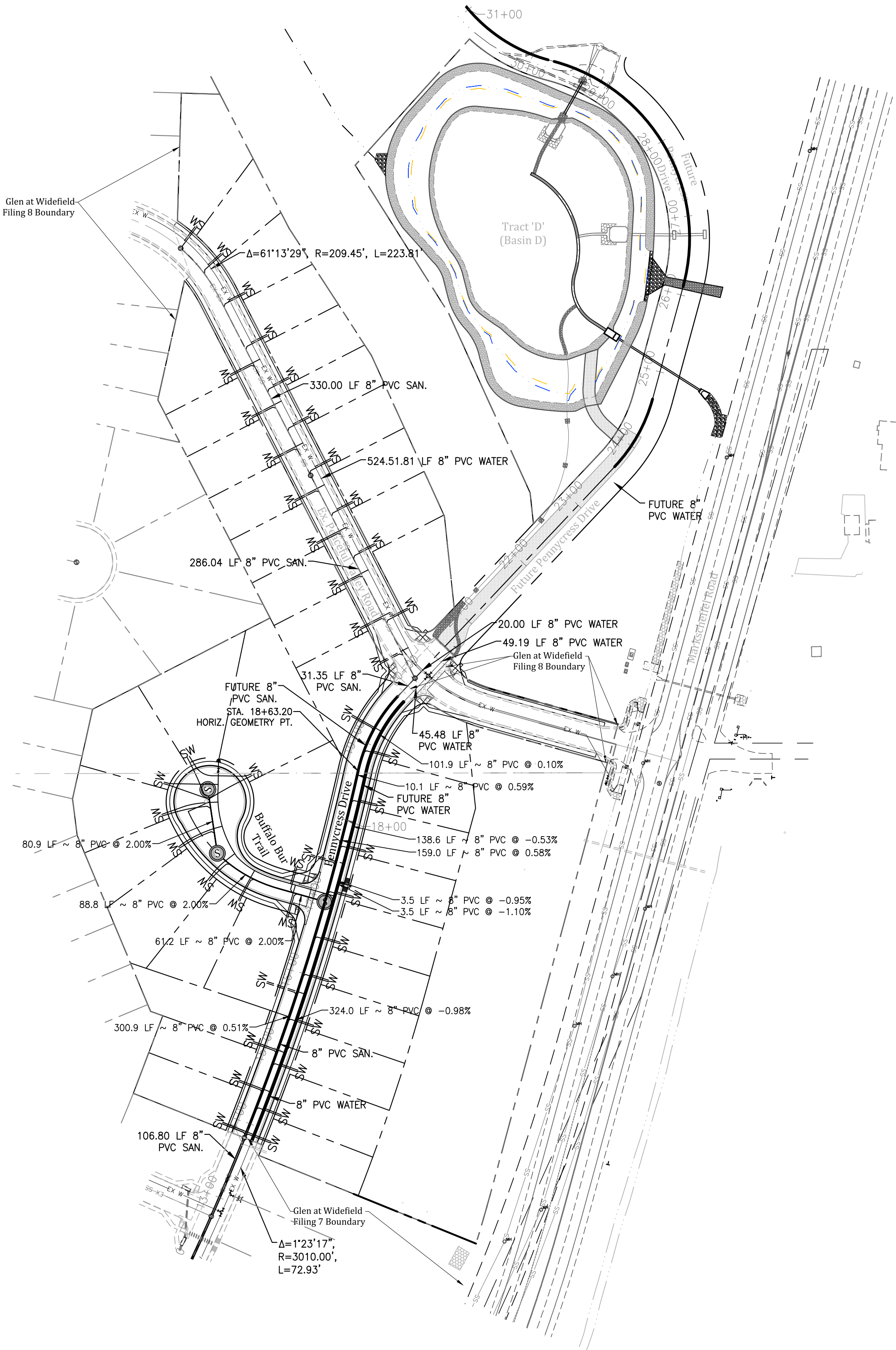
In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.

WIDEFIELD WATER AND SANITATION DISTRICT  
WATER DESIGN APPROVAL

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

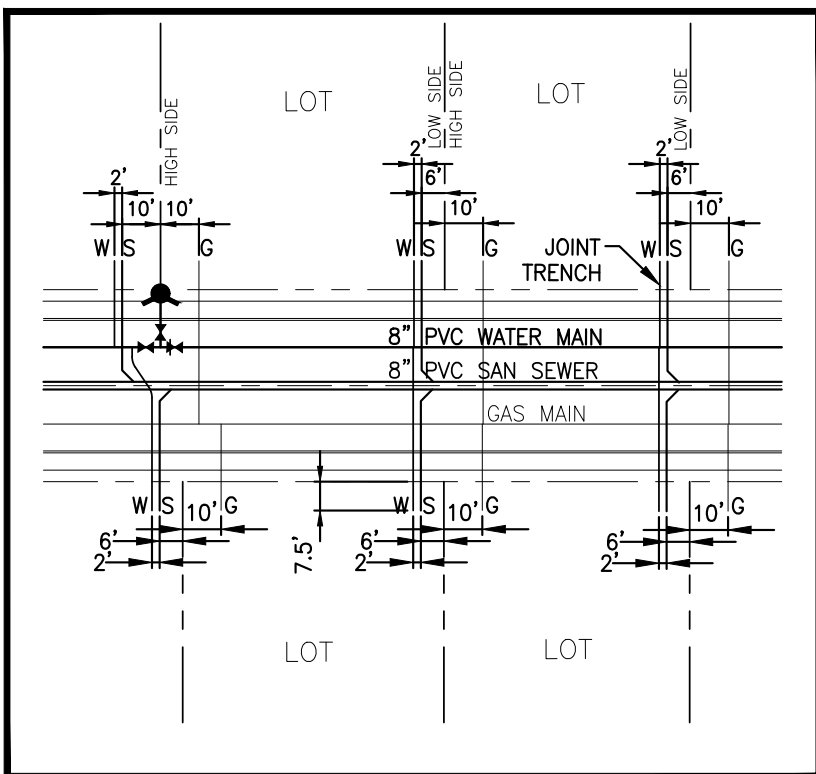
PROJECT NO. \_\_\_\_\_

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.



0 100' 200'

SCALE: 1" = 100'



WATER AND SEWER SERVICE EXTENSIONS  
TYPICAL CONNECTION EXAMPLES



Know what's below.  
Call before you dig.

FOR STORM SEWER DESIGN  
SEE SHEET 6

Project No.: 19016

Date: May 27, 2020

Design: MK

Drawn: MJK

Check: AWMc

Revisions:

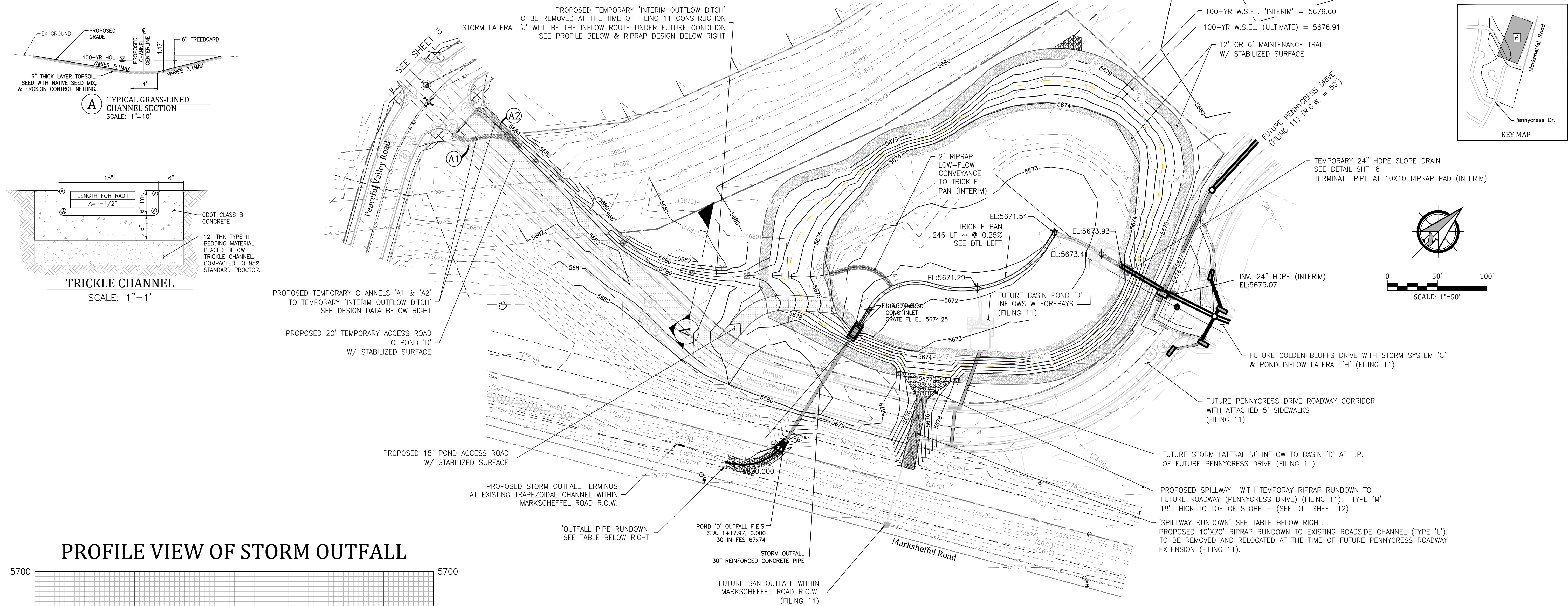
SHEET

10

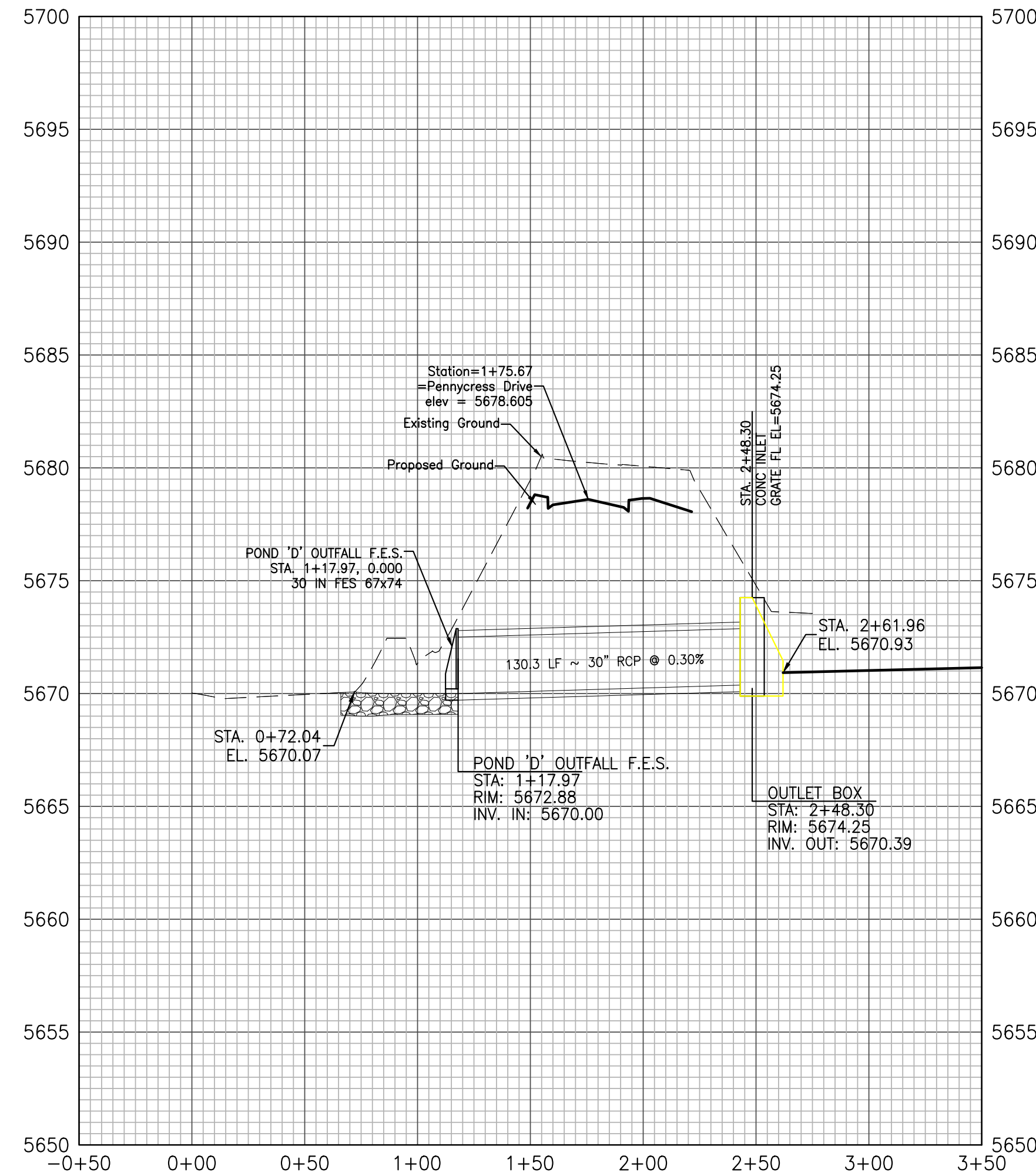
10 of 15 Sheets

19016-GW10-10-UT.dwg/Jun 04, 2020

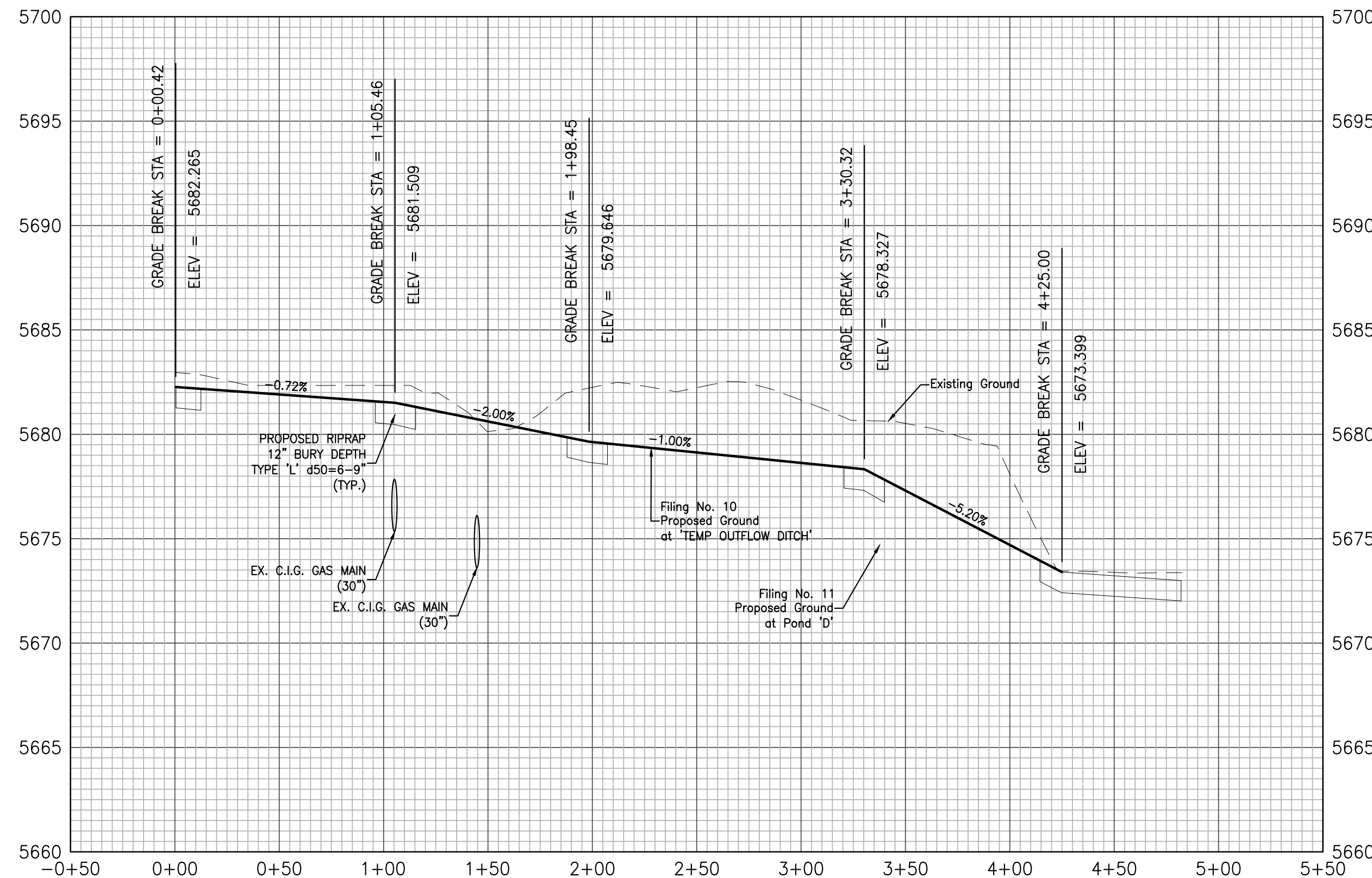




PROFILE VIEW OF STORM OUTFALL



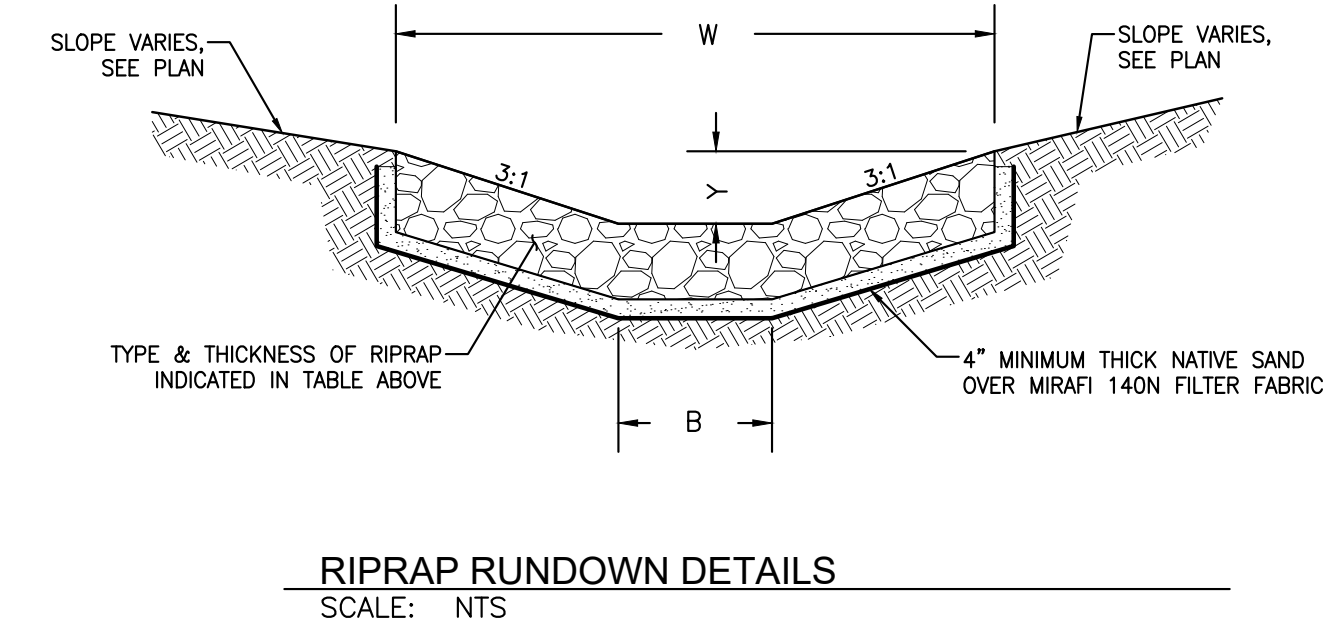
PROFILE VIEW OF TEMP OUTFLOW DITCH



CLASSIFICATION AND GRADATION OF RIPRAP			
RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIMENSION (INCHES)	d50* (INCHES)
TYPE VL	70-100	12	
	50-70	9	
	35-50	6	6**
	2-10	2	
TYPE L	70-100	15	
	50-70	12	
	35-50	9	9**
	2-10	3	
TYPE M	70-100	21	
	50-70	18	
	35-50	12	
	2-10	4	12**

\* d50=MEAN PARTICLE SIZE (INTERMEDIATE DIMENSION) BY WEIGHT.  
 \*\* MIX VL, L AND M RIPRAP WITH 35% TOPSOIL (BY VOLUME) AND BURY WITH 4-6 INCHES OF TOPSOIL, ALL VIBRATION COMPACTED & REVEGETATE. (TABLE MD-7: CLASSIFICATION AND GRADATION OF ORDINARY RIPRAP. UDFCD, DRAINAGE CRITERIA MANUAL, VOL. 1)

LOCATION	B	W	Y	TYPE	DEPTH
'SPILLWAY RUNDOWN'	9'	27'	1.6'	'M'	18"
'OUTFALL PIPE RUNDOWN'	4'	10'	1.3'	'M'	18"
'INTERIM OUTFLOW DITCH'	4'	10'	1.2'	'L'/Soil	12"
'INTERIM POND BOTTOM 'SOUTH CURBLINE FLOWS'	0'	4.6'	0.57'	'L'/Soil	12"
'INTERIM POND BOTTOM 'NORTH CURBLINE FLOWS'	4'	9.3'	0.67'	'L'/Soil	12"
'INTERIM POND BOTTOM 'LOW-FLOW CONVEYANCE'	0'	4'	0.5'	'L'/Soil	6"



GLEN AT WIDEFIELD NO. 10  
 Proposed Basin 'D'  
 Filing 10 Portions Only  
 EL PASO, COUNTY, COLORADO

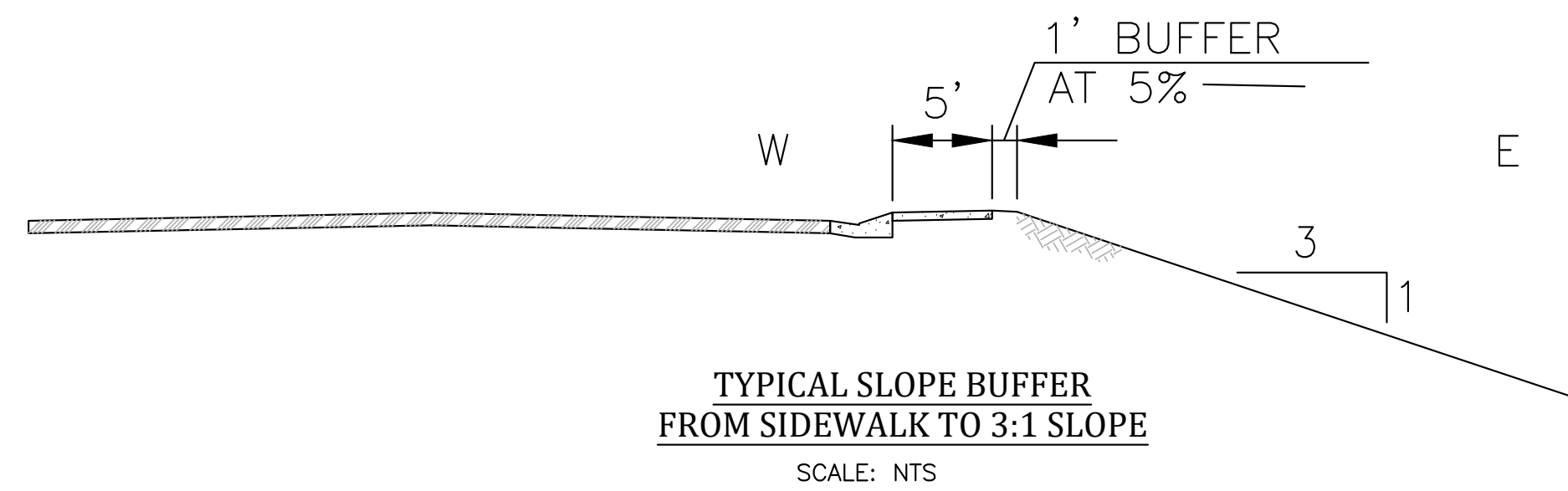
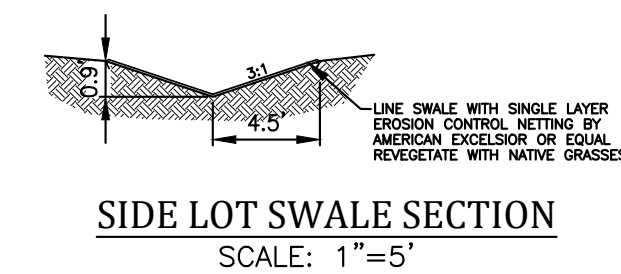
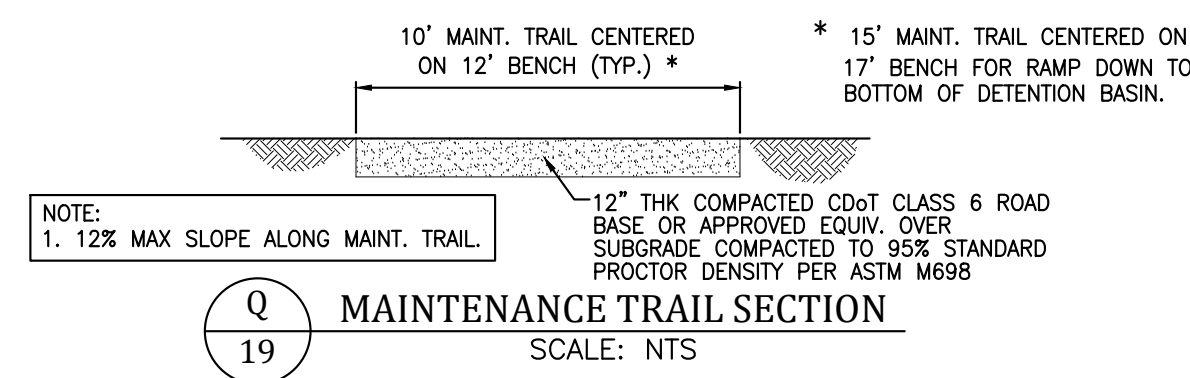
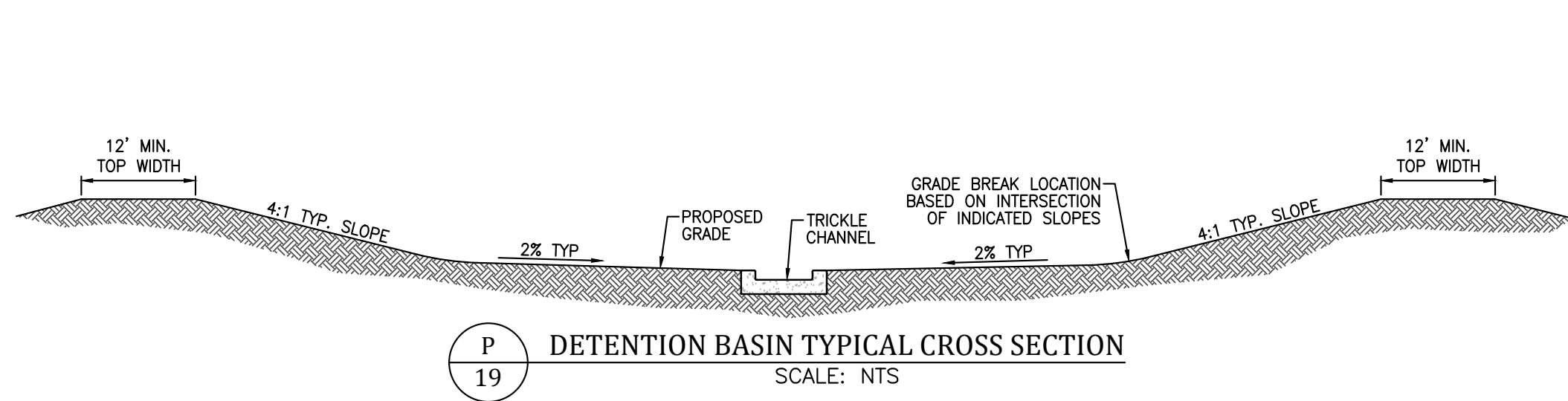
Project No.: 19016  
 Date: May 27, 2020  
 Design: MK  
 Drawn: MJK  
 Check: AWMc  
 Revisions:

SHEET  
 11  
 11 of 15 Sheets









GLEN AT WIDEFIELD NO. 10  
DETENTION BASIN & MISC DETAILS  
BASIN D  
EL PASO, COUNTY

Project No.:	19016
Date:	May 27, 2020
Design:	MJK
Drawn:	MJK
Check:	AWMc
Revisions:	

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13

13 of 15 Sheets

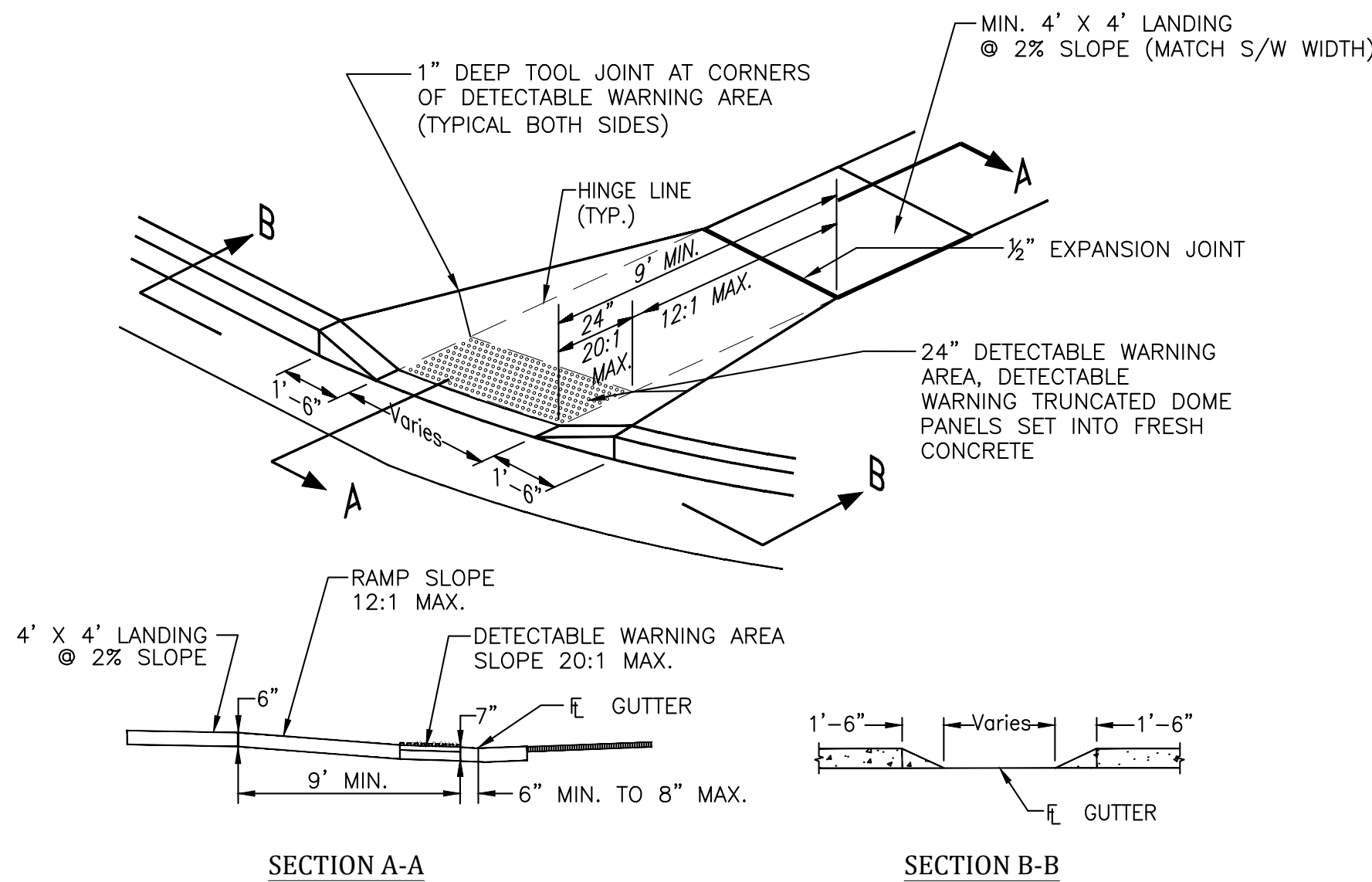
19016-GW10-13-ST.dwg/Jun 04, 2020



## 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.

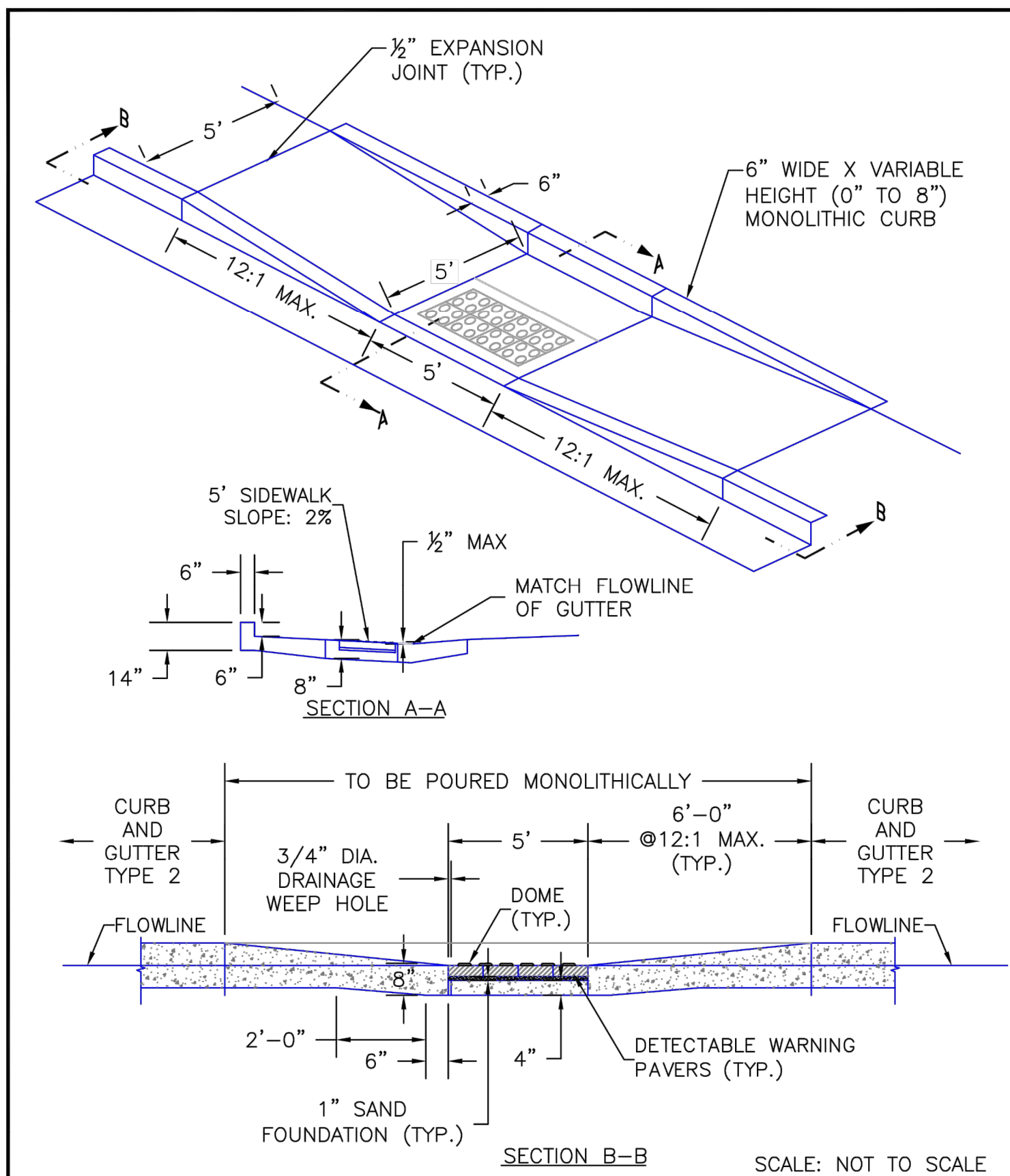


## PEDESTRIAN RAMP DETAILS

EPC STD. SD\_2-40  
NOT TO SCALE

## GENERAL NOTES

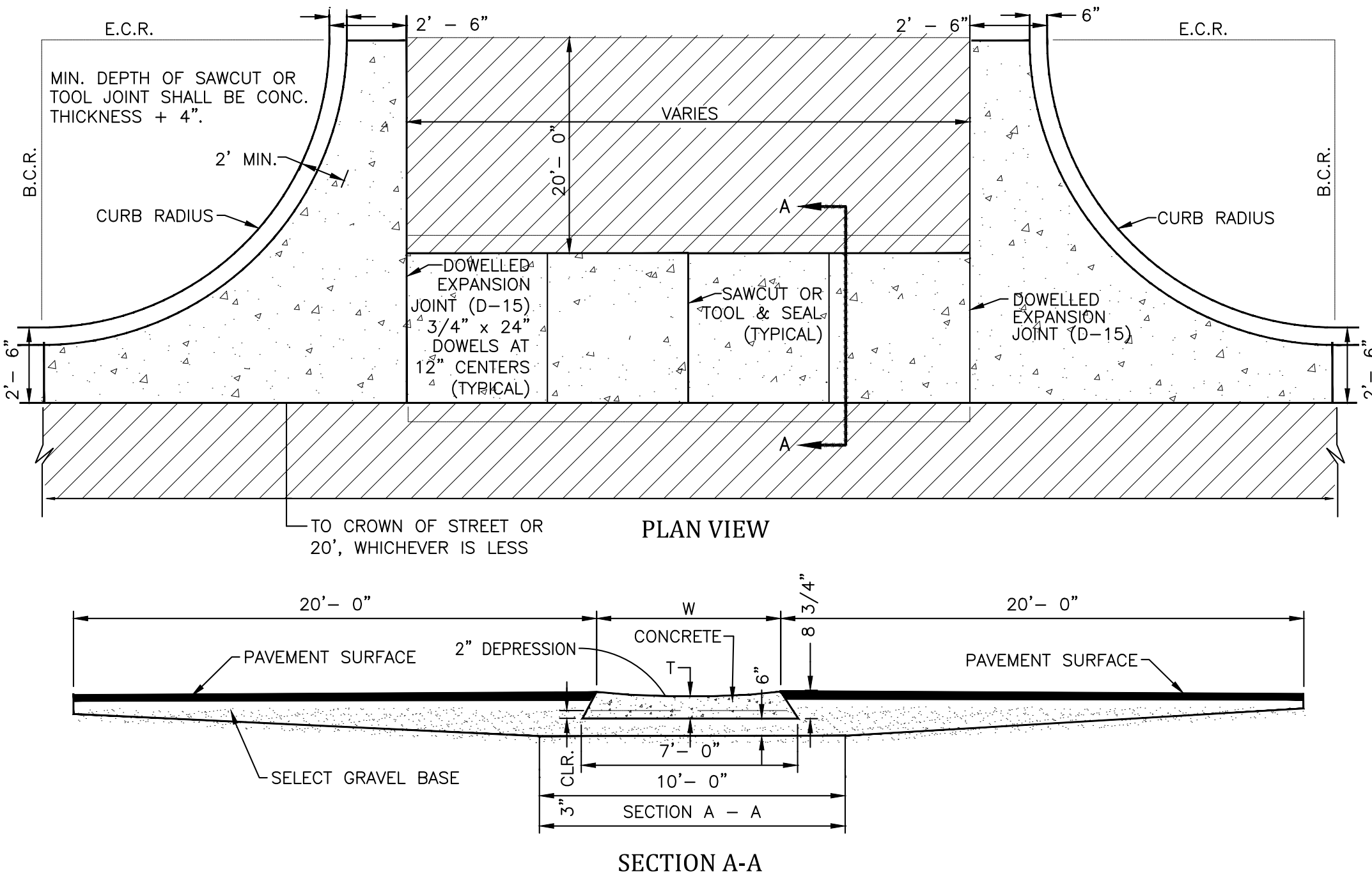
- All work shall be done in accordance with current Engineering Manual and ADA requirements.
- Contractor to notify Engineering Division inspection staff 48 hours prior to concrete placement.
- Pedestrian ramp construction shall be a minimum 4500 psi concrete, minimum 4" thick, non-colored, non-scored, 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 palcing 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 = 4,500 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.)



8/11/11	Parallel Pedestrian Ramp Detail Standard Drawing	
DATE APPROVED:	REVISION DATE:	FILE NAME:
André P. Brackin	12/8/15	SD_2-50
DEPARTMENT OF TRANSPORTATION	EPC STD. SD_2.50	

## PARALLEL PEDESTRIAN RAMP DETAIL

NOT TO SCALE

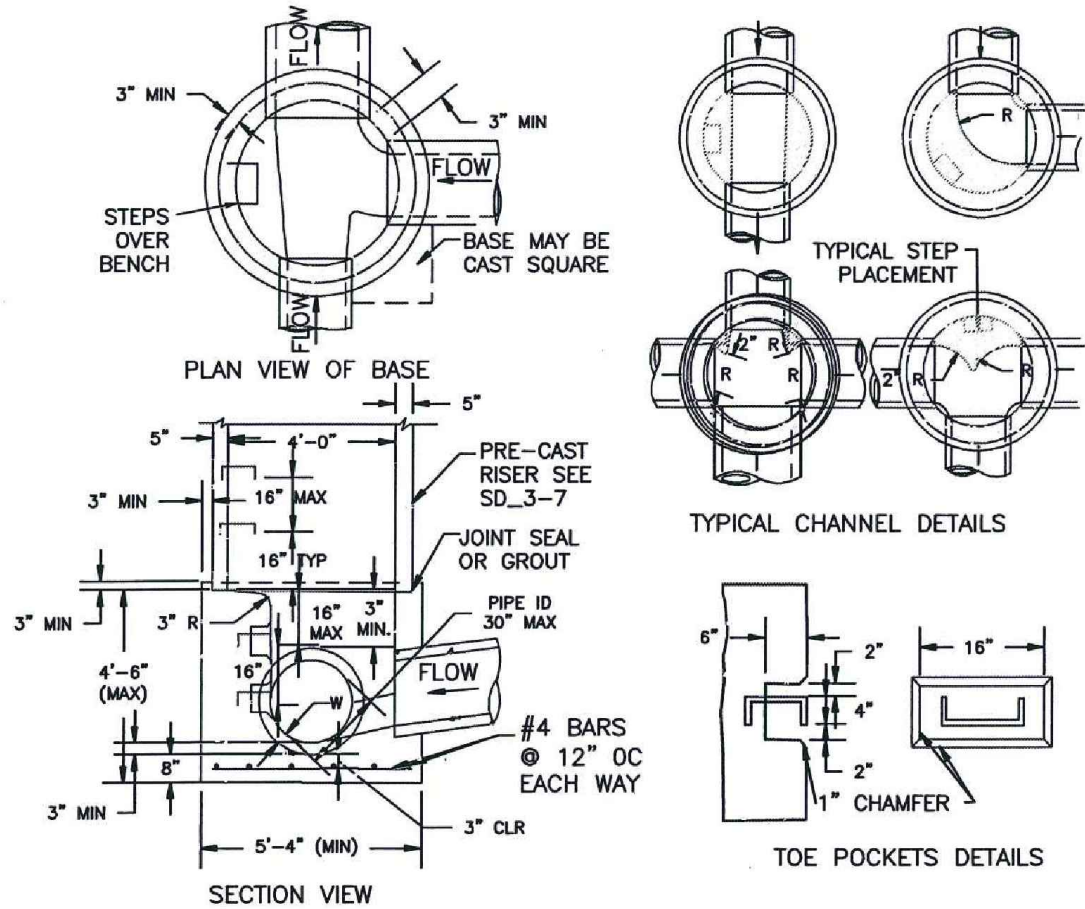


## NOTES

- 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.
- = 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



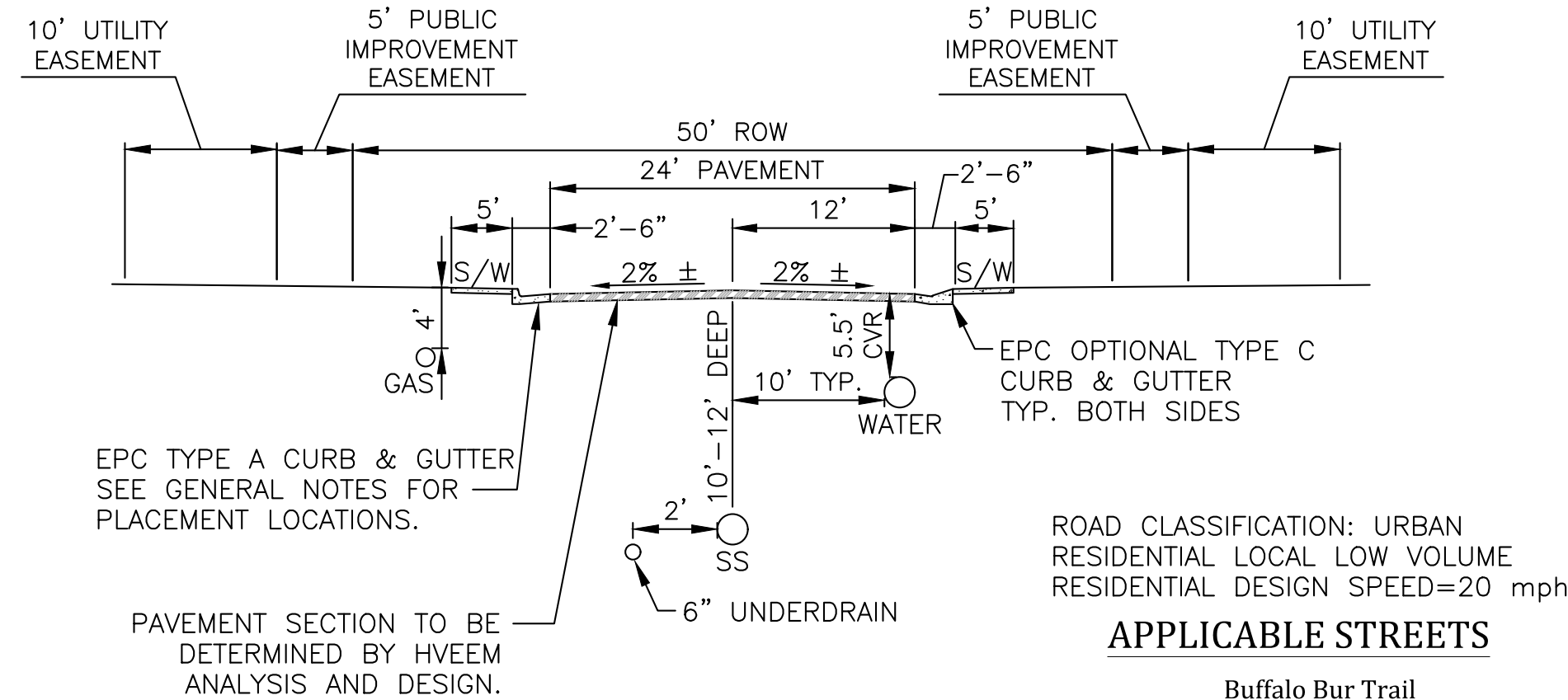
## NOTES

- TYPE II MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE PIPE SIZES ARE 30" OR LESS INSIDE DIAMETER.
- VIEW AND DETAILS ARE TYPICAL. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.
- 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.
- PIPES SHALL BE TRIMMED TO FINAL SHAPE AND SET BEFORE MANHOLE IS POURED.
- BENCH SHALL BE SLOPED TOWARD CENTER OF MANHOLE BASE (4:1 MAX., 1/2" PER FOOT. MIN.).
- 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 CHANNELLED; SEE DETAILS THIS SHEET.

SCALE: NOT TO SCALE

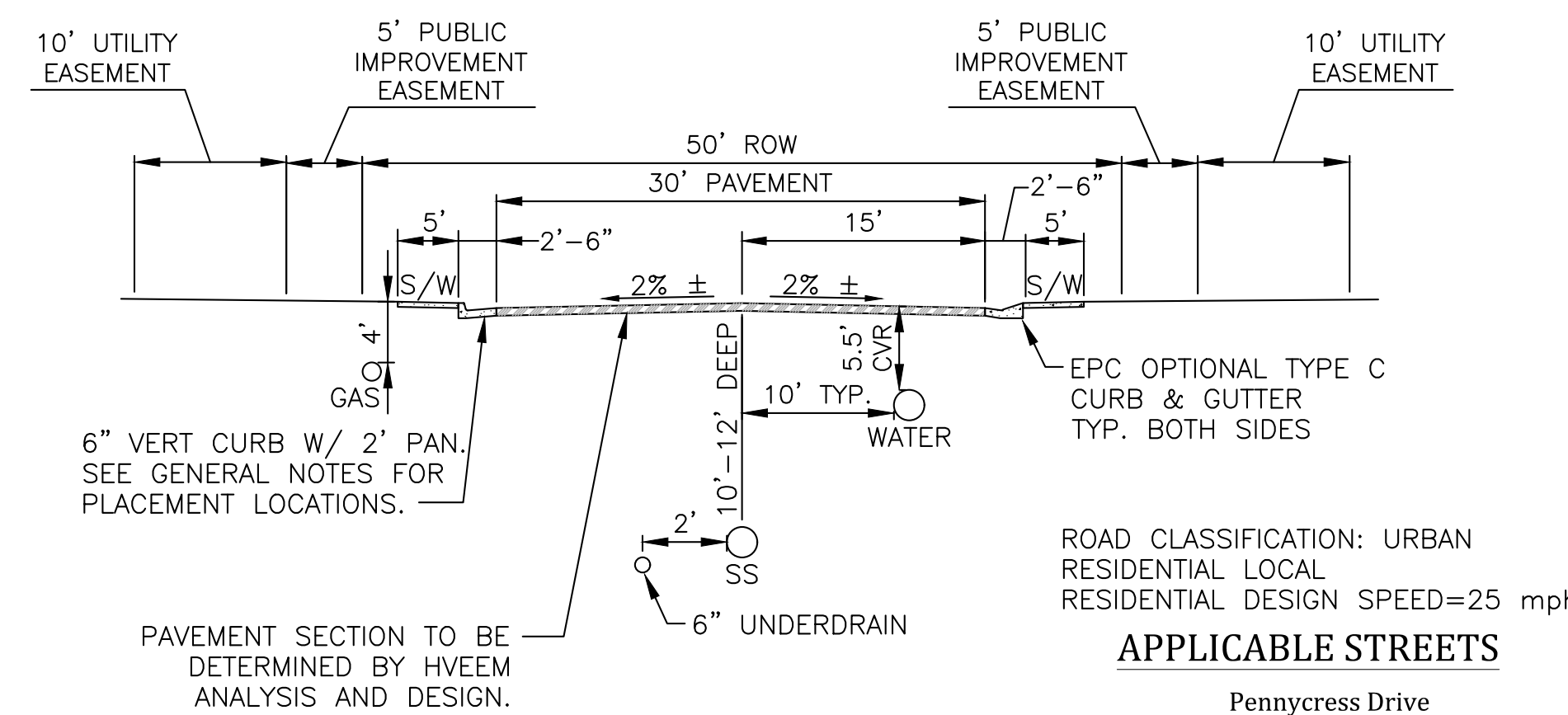
## STORM MANHOLE DETAIL TYPE II

EPC STD. SD\_3-2



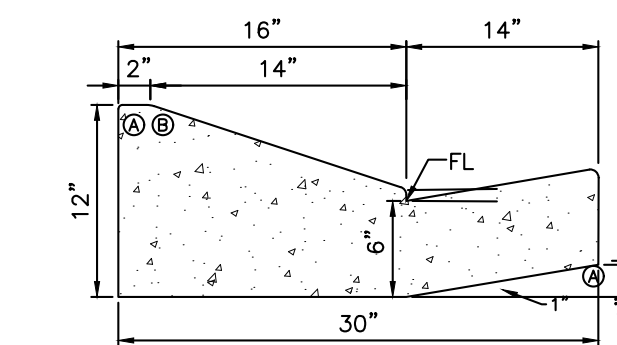
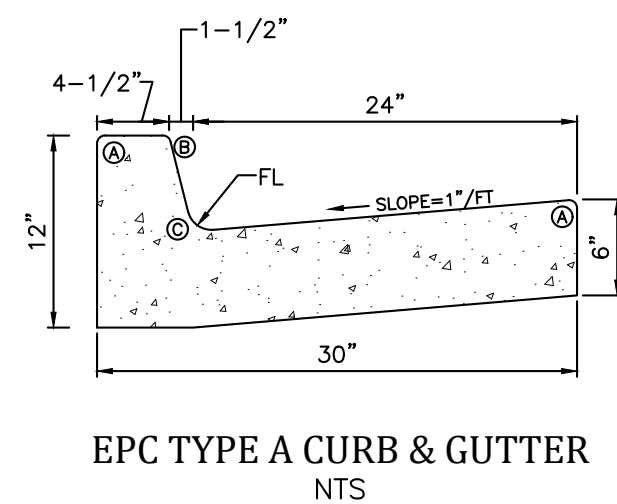
## TYPICAL STREET SECTION

NOT TO SCALE



## TYPICAL STREET SECTION

NOT TO SCALE



## EPC OPTIONAL TYPE C CURB & GUTTER

NTS

LENGTH FOR RADII
A=1/8"-1/4" B=1-1/2" C=1-1/2"-2"

## CURB & GUTTER DETAILS

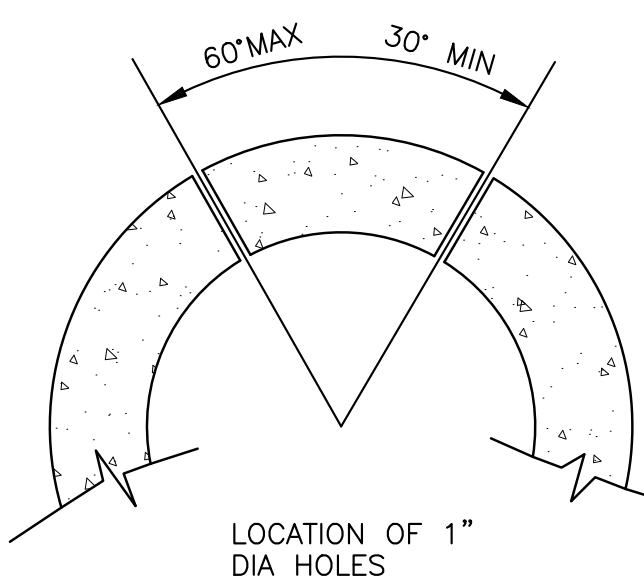
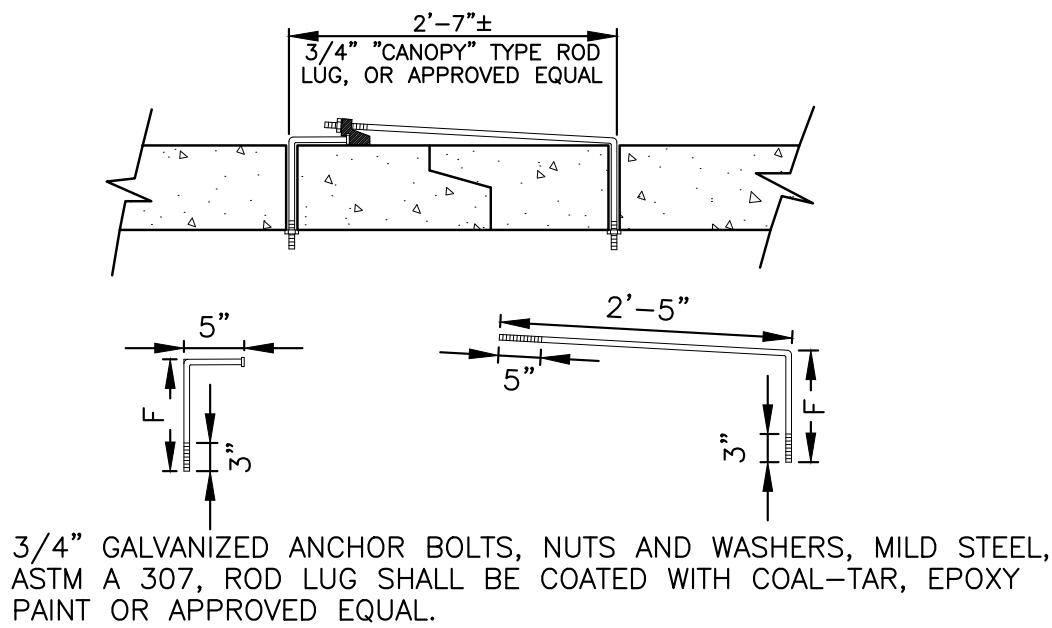
EPC STD. SD\_2-20  
NOT TO SCALE

Project No.:	19016
Date:	May 27, 2020
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	



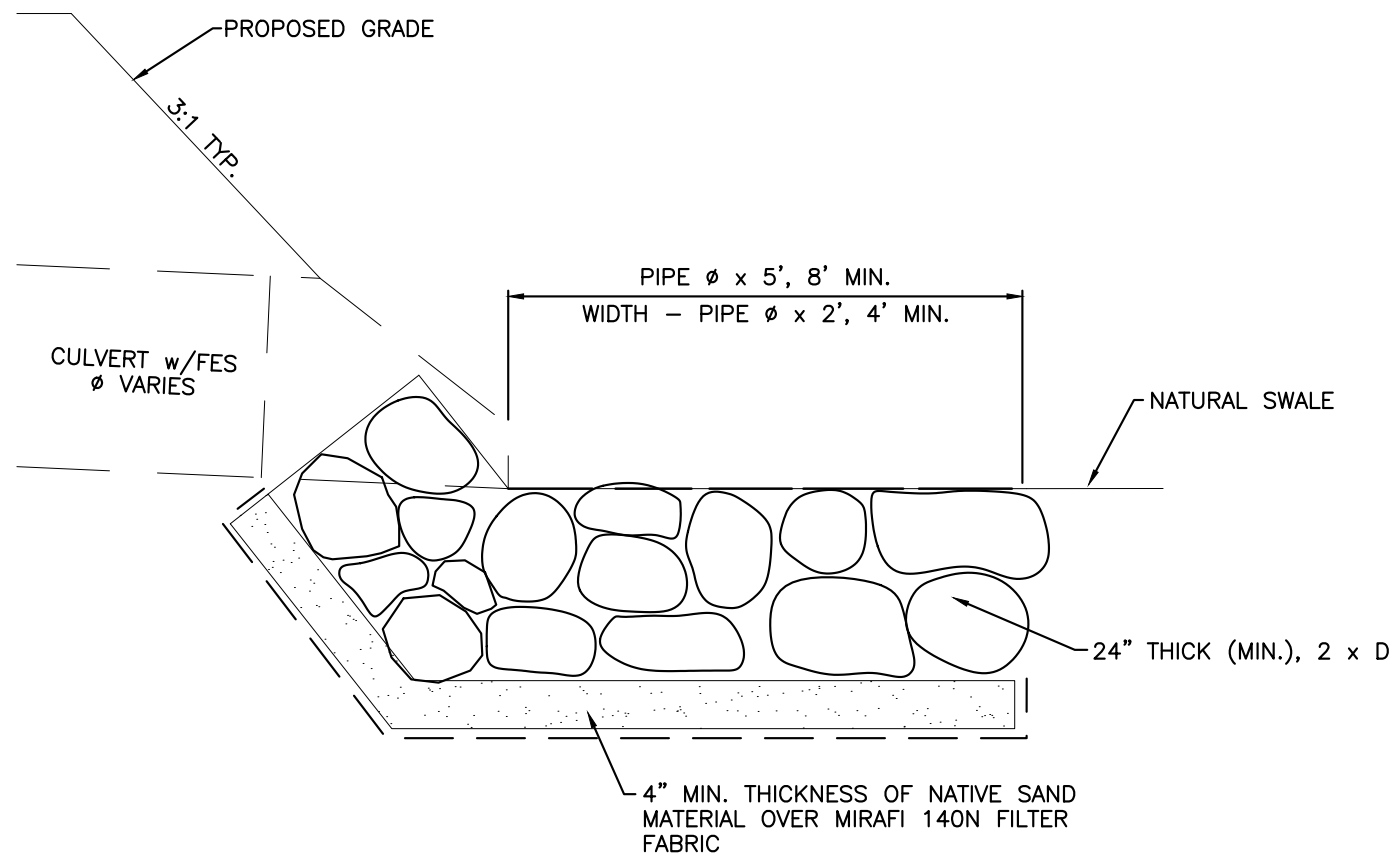
UNDERDRAIN NOTES

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.

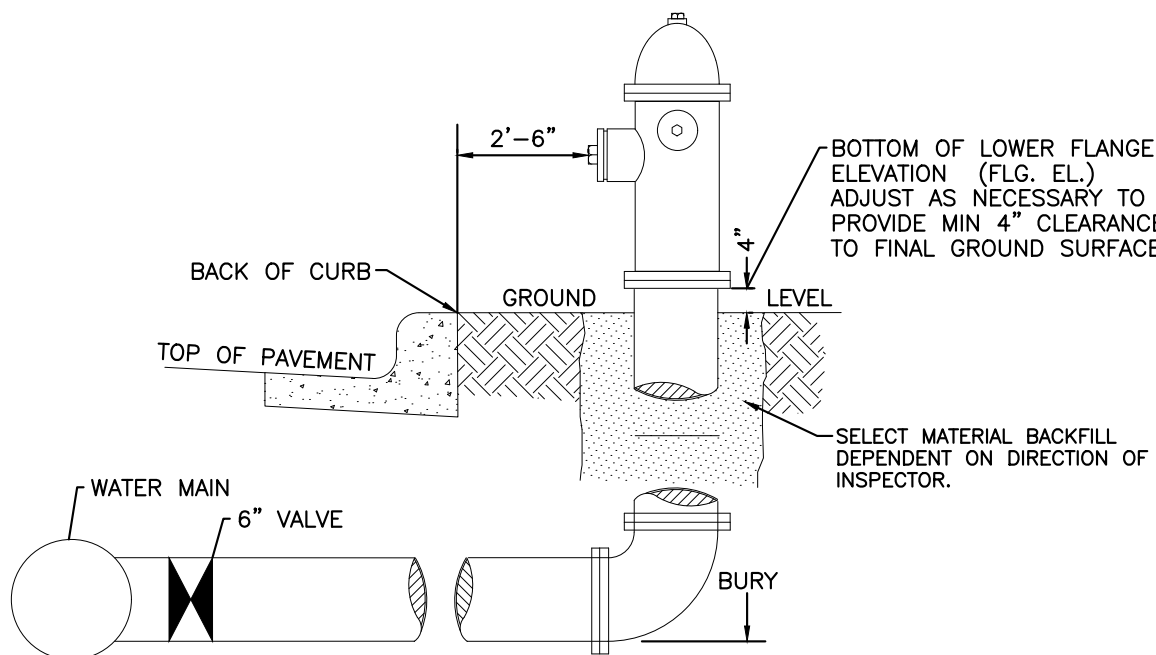


NOTE:  
CONCRETE JOINT FASTENERS REQUIRED  
ON THE FIRST TWO PIPE JOINTS FROM  
A FLARED END SECTION.

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



TYPICAL CULVERT OUTLET PROTECTION  
NOT TO SCALE



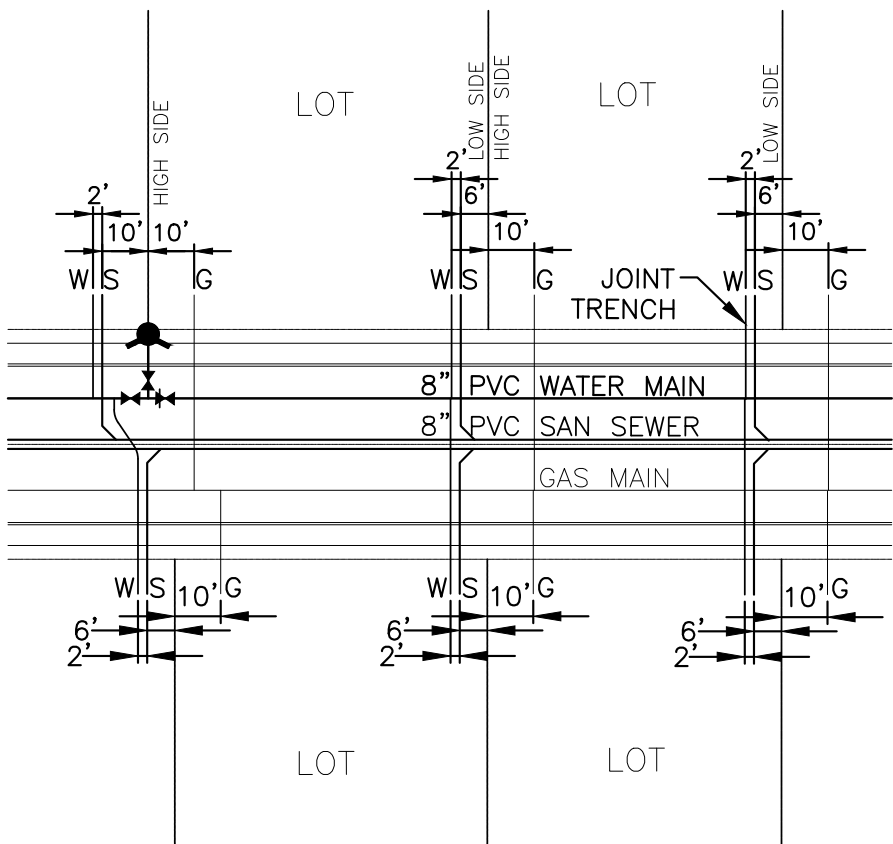
GENERAL NOTES:

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.

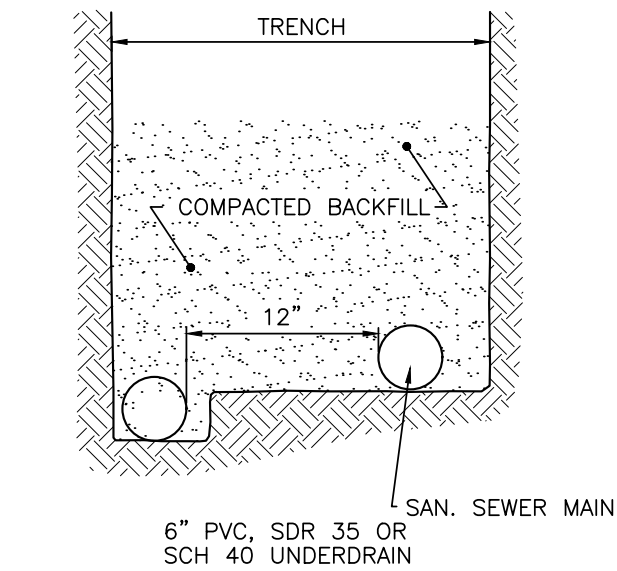
FIRE HYDRANT DETAIL  
NOT TO SCALE

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

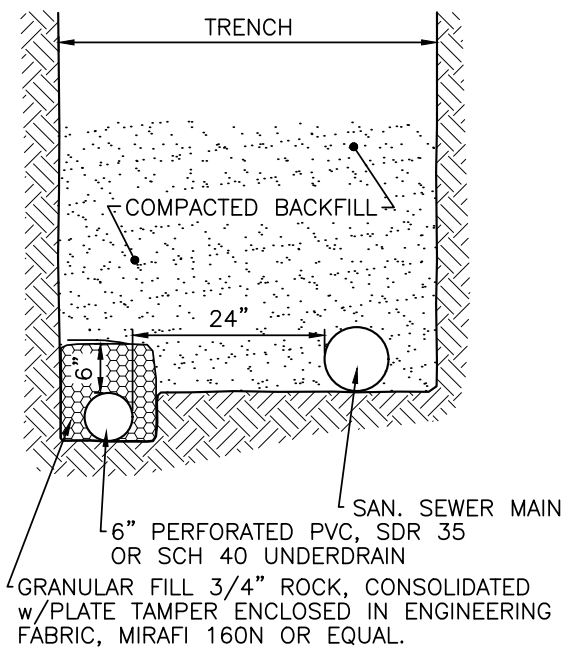
- THE REMOVAL AND REPLACEMENT OF METASTABLE SOIL.
- TESTING OF THE FILL SUBSEQUENT TO THE PENETRATION OF THE METASTABLE SOIL WILL CONTINUE UNTIL A MINIMUM OF 7 FEET OF STRUCTURAL FILL HAS BEEN PLACED ABOVE THE PROPOSED SEWER LINE ELEVATION.
- UTILITY TRENCHES SHALL BE EXCAVATED AND SANITARY SEWER LINE 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.



TYPICAL JOINT-TRENCH UTILITY SERVICE DETAIL  
NOT TO SCALE



PASSIVE UNDERDRAIN DETAIL  
NOT TO SCALE

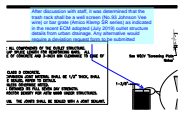


ACTIVE UNDERDRAIN DETAIL  
NOT TO SCALE



# Construction Drawings\_V3.pdf Markup Summary

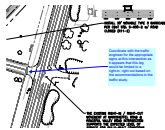
After discussion with staff, it was determined that the trash rack shall be a well screen (No.93 Johnson Vee wire) or bar grate (Amico Klemp SR series) as indicated in the recent ECM adopted (July 2019) outlet structure details from urban drainage. Any alternative would require a deviation request form to be submitted



**Subject:** Callout  
**Page Label:** [12] 12 19016-GW10-12-ST  
**Lock:** Locked  
**Author:** Daniel Torres  
**Date:** 7/14/2020 11:06:17 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

After discussion with staff, it was determined that the trash rack shall be a well screen (No.93 Johnson Vee wire) or bar grate (Amico Klemp SR series) as indicated in the recent ECM adopted (July 2019) outlet structure details from urban drainage. Any alternative would require a deviation request form to be submitted

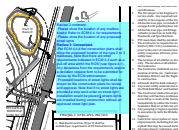
Coordinate with the traffic engineer for the appropriate signs at this intersection as it appears that this leg would be limited to a right-in, right out based on the recommendations in the traffic study.



**Subject:** Callout  
**Page Label:** [6] 6 19016-GW10-06-SP  
**Lock:** Locked  
**Author:** Daniel Torres  
**Date:** 7/14/2020 11:06:19 AM  
**Status:**  
**Color:** ■  
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**Space:**

Coordinate with the traffic engineer for the appropriate signs at this intersection as it appears that this leg would be limited to a right-in, right out based on the recommendations in the traffic study.

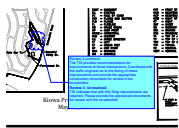
Review 2 comment: -Please show the location of any mailbox kiosks. Refer to ECM 4.4. for requirements. -Please show the location of any proposed street lights



**Subject:** Text Box  
**Page Label:** [1] 1 19016-GW10-01-CV  
**Lock:** Locked  
**Author:** Daniel Torres  
**Date:** 7/14/2020 11:06:27 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Review 2 comment:  
-Please show the location of any mailbox kiosks. Refer to ECM 4.4. for requirements.  
-Please show the location of any proposed street lights  
Review 3: Unresolved.  
-Per ECM 4.4.4 the construction plans shall show the proposed location of the type 2 or 3 mailboxes. Note that there are other requirements indicated in ECM 4.4 such as a pull-off area within the ROW (see figure 4-1). Any deviations from the requirements require a deviation request form to be submitted for review by the ECM administrator.  
-Proposed locations of street lights shall be shown on the construction plans for review and approval. Note that if no street lights are provided a stop work order on street light installation would be placed if streets lights are installed during construction without an approved street light plan.

Review 2 comment: The TIS provides recommendations for improvements at these intersections. Coordinate with the traffic engineer as to the timing of these improvements and provide the appropriate construction documents for review in the re-submittal.

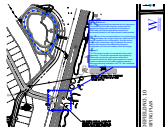


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**Author:** Daniel Torres  
**Date:** 7/14/2020 11:06:29 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Review 2 comment:  
The TIS provides recommendations for improvements at these intersections. Coordinate with the traffic engineer as to the timing of these improvements and provide the appropriate construction documents for review in the re-submittal.  
Review 3: Unresolved.  
TIS indicates that with this filing improvements are required. Please provide the appropriate documents for review with the re-submittal



Review 2 comment: The TIS recommended improvements at this intersection. Coordinate with the traffic engineer and provide the



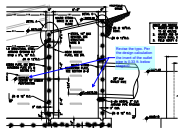
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**Lock:** Locked  
**Author:** Daniel Torres  
**Date:** 7/14/2020 11:06:33 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Review 2 comment:  
The TIS recommended improvements at this intersection. Coordinate with the traffic engineer and provide the appropriate signing and striping at this intersection. Additionally provide the appropriate construction documents needed for the improvements recommended.

Note that one of the recommendations is to revise this leg of the intersection into a right in/right out. Additional ROW may be needed for this configuration. Also the current culvert at this intersection may be affected. Be sure to analyze this and any other affects the proposed configuration will have and address them accordingly.

Review 3:  
The TIS indicates a right turn deceleration lane at this intersection. Provide the appropriate signing/striping. Additionally provide the appropriate construction documents needed for these improvements for review. Please coordinate with the traffic engineer regarding other improvements indicated in the TIS. See comments in the TIS.

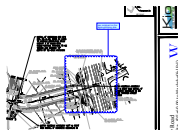
Revise the typo. Per the design calculation the invert of the outlet pipe is 0.33 ft. below stage=0. (1)



**Subject:** Callout  
**Page Label:** [12] 12 19016-GW10-12-ST  
**Lock:** Locked  
**Author:** Daniel Torres  
**Date:** 7/14/2020 11:06:39 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Revise the typo. Per the design calculation the invert of the outlet pipe is 0.33 ft. below stage=0.

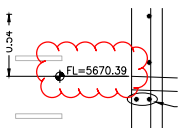
see comment on the signing/striping plan (1)



**Subject:** Cloud+  
**Page Label:** [2] 2 19016-GW10-02-PP  
**Lock:** Locked  
**Author:** Daniel Torres  
**Date:** 7/14/2020 11:06:40 AM  
**Status:**  
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**Layer:**  
**Space:**

see comment on the signing/striping plan

(1)



**Subject:** Cloud  
**Page Label:** [12] 12 19016-GW10-12-ST  
**Lock:** Locked  
**Author:** Daniel Torres  
**Date:** 7/14/2020 11:06:17 AM  
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