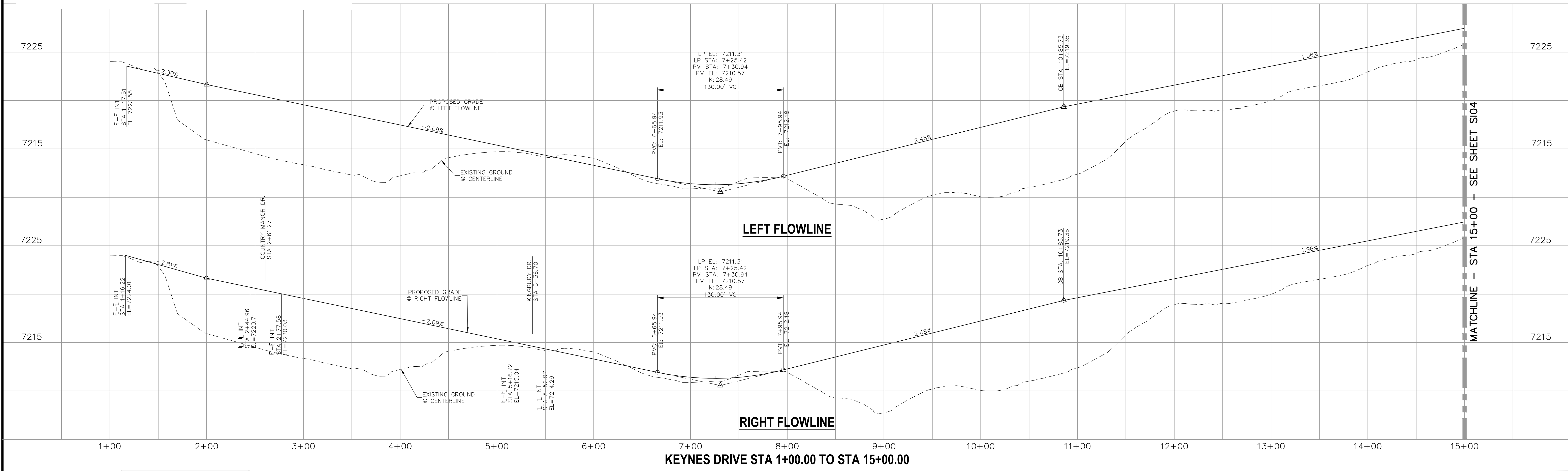
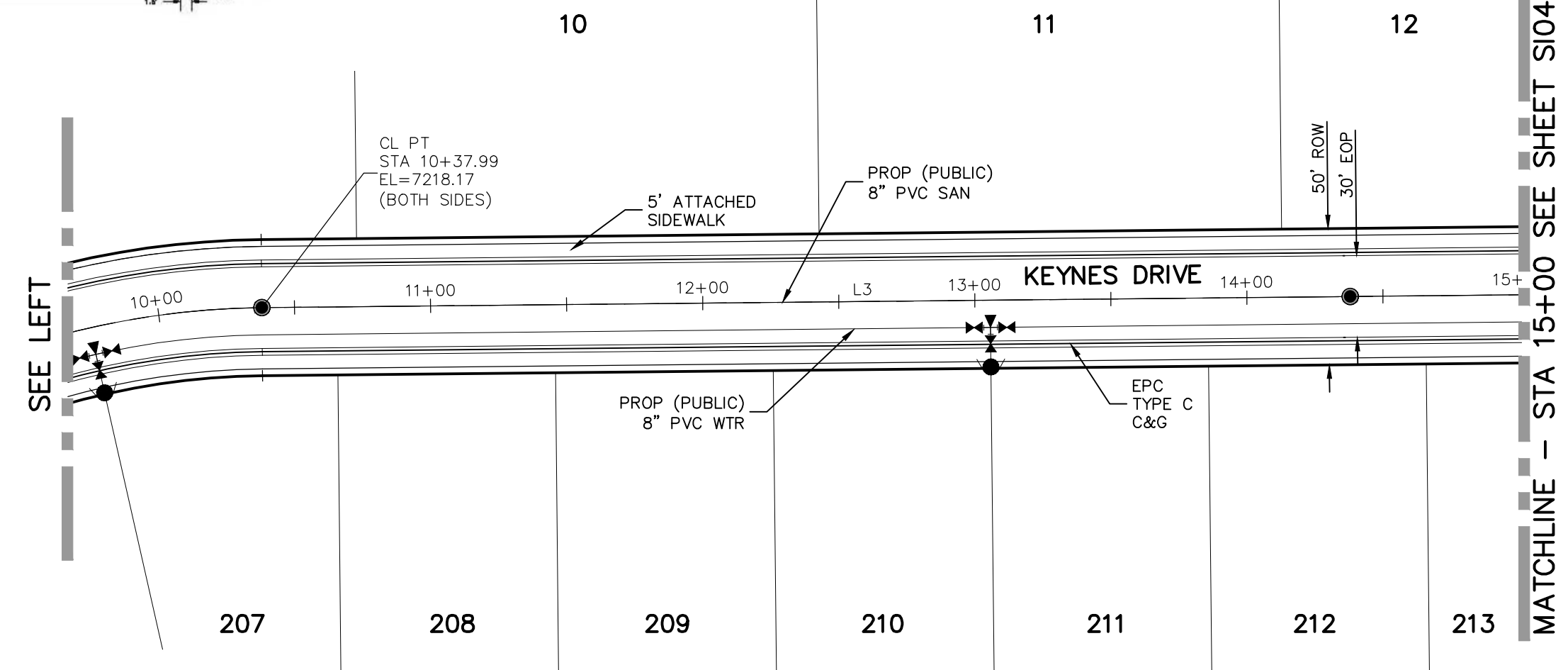
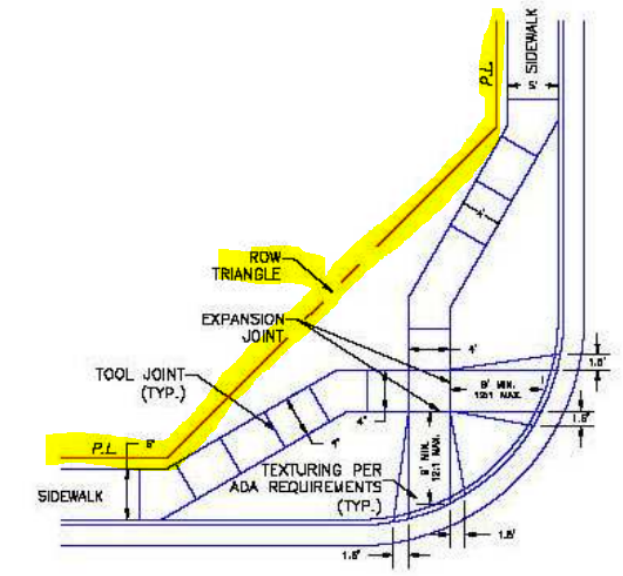


CENTERLINE LINE TABLE			CENTERLINE CURVE TABLE			
LINE	LENGTH	DIRECTION	CURVE	RADIUS	LENGTH	DELTA
L1	18.91'	N75°00'00"W	C1	300.00'	82.73'	15°48'00"
L2	86.98'	S76°00'00"W	C2	400.00'	54.21'	7°45'52"
L3	1422.70'	N0°35'00"W	C3	400.00'	148.25'	21°14'08"
			C4	300.00'	40.20'	7°40'39"
			C5	300.00'	501.29'	95°44'21"

ABBREVIATION LEGEND			
CL	CENTERLINE INTERSECTION	LT	LEFT
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XPAN	CROSSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD
PCR	POINT OF CURB RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	POINT OF TANGENT	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL-DE-SAC	E	EAST
KN	KNUCKLE	R	RIGHT OF WAY
LP	LOOP	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
HD	HARTWOOD DRIVE	PROP	PROPOSED
GMD	GRACE MANOR DRIVE	COLL	COLLECTOR
KSD	KINGSBURY DRIVE	LPT	LOW POINT
WD	WATERLOO DRIVE	RES	RESIDENTIAL
FC	FINSBURY COURT		
DD	DEVONCOVE DRIVE		
HP	HIGH POINT		



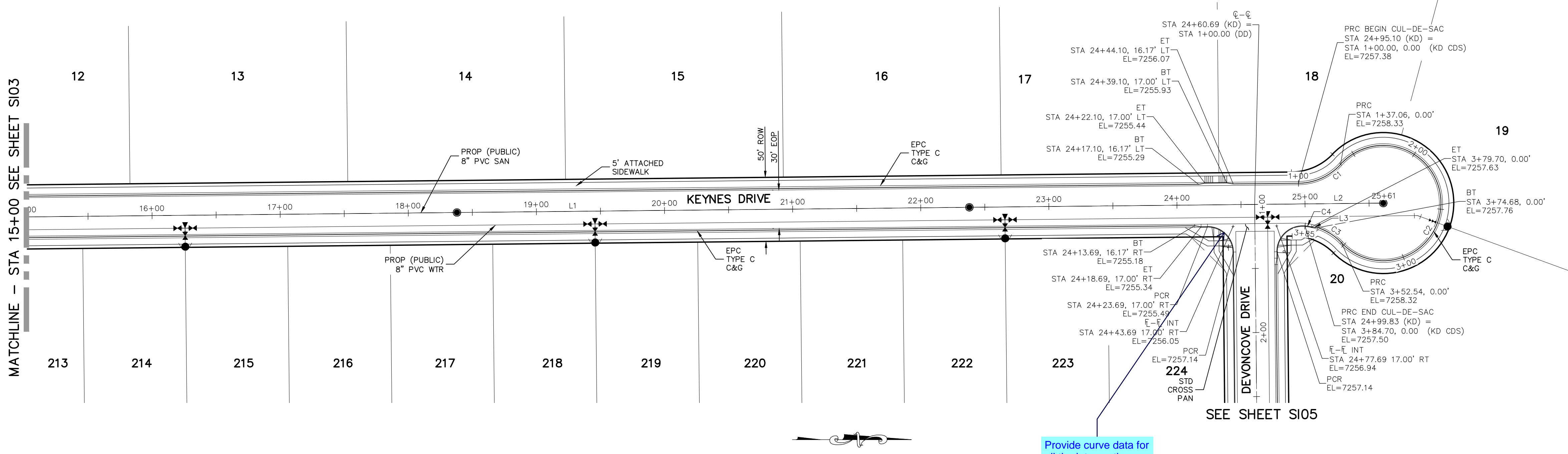
<b>STATEMENT:</b> THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER APPROVAL DATE.	 FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES FOR BURIED UTILITY INFORMATION <b>48 HRS BEFORE YOU DIG</b> CALL 1-800-922-1987	<b>STREET DESIGN:</b> REVIEW: TRAFFIC ENGINEERING: _____ DATE: _____ CURB & GUTTER: _____ DATE: _____ FINAL REVIEW: _____ DATE: _____	<b>DESIGN DATA:</b> SIDEWALKS: WIDTH 5' ASPHALT THICKNESS: _____ LOCATION: Attached <input checked="" type="checkbox"/> AC Surface _____ Detached <input type="checkbox"/> CENTERED-IN-5'-EASEMENT AB Base _____ CURB TYPE: A <input checked="" type="checkbox"/> AGG. BASE THICKNESS: _____ CURB TYPE: C <input type="checkbox"/> Class 6 _____ ROW WIDTH: 50' EOP-EOP 30' Class 5 _____ STREET TYPE: RESIDENTIAL HVEEM Class 2 _____ DESIGN SPEED: 25 MPH
		<b>DRAINAGE DESIGN:</b> DRAINAGE REVIEW: _____ DATE: _____ FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.	REVISIONS: NO. _____ DATE: _____ BY: _____ DESCRIPTION: _____

<b>PAIN T BRUSH HILLS FILING NO. 14</b> <b>STREET IMPROVEMENT PLANS</b> PROJECT NO. 10-014 DATE: 07/01/2020 SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5' DESIGNED BY: JWP DRAWN BY: JWP CHECKED BY: GW SHEET 3 OF 25 S103	
20 BOULDER CRESCENT SUITE 110 COLORADO SPRINGS, CO 80903 PHONE: 719.955.5485  <b>CIVIL CONSULTANTS, INC.</b>	
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC. VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160	
THE DESIGNER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.	

File: C:\Users\jlopez\Documents\100144-PBH 14\Draw\Corral Draw\STREET\S103.dwg Plotstamp: 7/7/2020 9:22 AM

File: C:\Users\lprince\Documents\100144-PBH 14\Draw\Corral Draw\STREET\S104.dwg Plotstamp: 7/1/2020 9:53 AM

MATCHLINE - STA 15+00 SEE SHEET S103



**KEYNES DRIVE  
STA 15+00.00 TO STA 25+61.12**

Provide curve data for all the intersection curb returns. See ECM table 2-31 for minimum curb return radius at intersections.

**ABBREVIATION LEGEND**

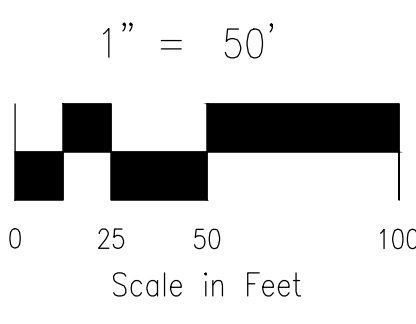
- |       |                         |      |                  |
|-------|-------------------------|------|------------------|
| CL    | CENTERLINE INTERSECTION | LT   | LEFT FLOWLINE    |
| FL-FL | FLOWLINE INTERSECTION   | RT   | RIGHT FLOWLINE   |
| BT    | BEGIN TRANSITION        | FL   | FLOWLINE         |
| ET    | END TRANSITION          | TBC  | TOP BACK OF CURB |
| PC    | POINT OF CURVE          | XPAN | CROSSSPAN        |
| PCC   | POINT OF COMPOUND CURVE | STD  | STANDARD         |
| PCR   | POINT OF CURB RETURN    | SHT  | SHEET            |
| PRC   | POINT OF REVERSE CURVE  | P&P  | PLAN AND PROFILE |
| PT    | POINT OF TANGENT        | C&G  | CURB AND GUTTER  |
| EL    | ELEVATION               | W    | WEST             |
| CDS   | CUL-DE-SAC              | E    | EAST             |
| KN    | KNUCKLE                 | ROW  | RIGHT OF WAY     |
| LP    | LOOP                    | EOP  | EDGE OF PAVEMENT |
| N     | NORTH                   | WTR  | WATER            |
| S     | SOUTH                   | SAN  | SANITARY SEWER   |
| KD    | KEYNES DRIVE            | PROP | PROPOSED         |
| HD    | HARTWOOD DRIVE          | COLL | COLLECTOR        |
| GMD   | GRACE MANOR DRIVE       | LPT  | LOW POINT        |
| CMD   | COUNTRY MANOR DRIVE     | RES  | RESIDENTIAL      |
| KBD   | KINGSBURY DRIVE         |      |                  |
| WD    | WATERLOO DRIVE          |      |                  |
| FC    | FINSBURY COURT          |      |                  |
| DD    | DEVONCOVE DRIVE         |      |                  |
| HP    | HIGH POINT              |      |                  |

**CENTERLINE LINE TABLE**

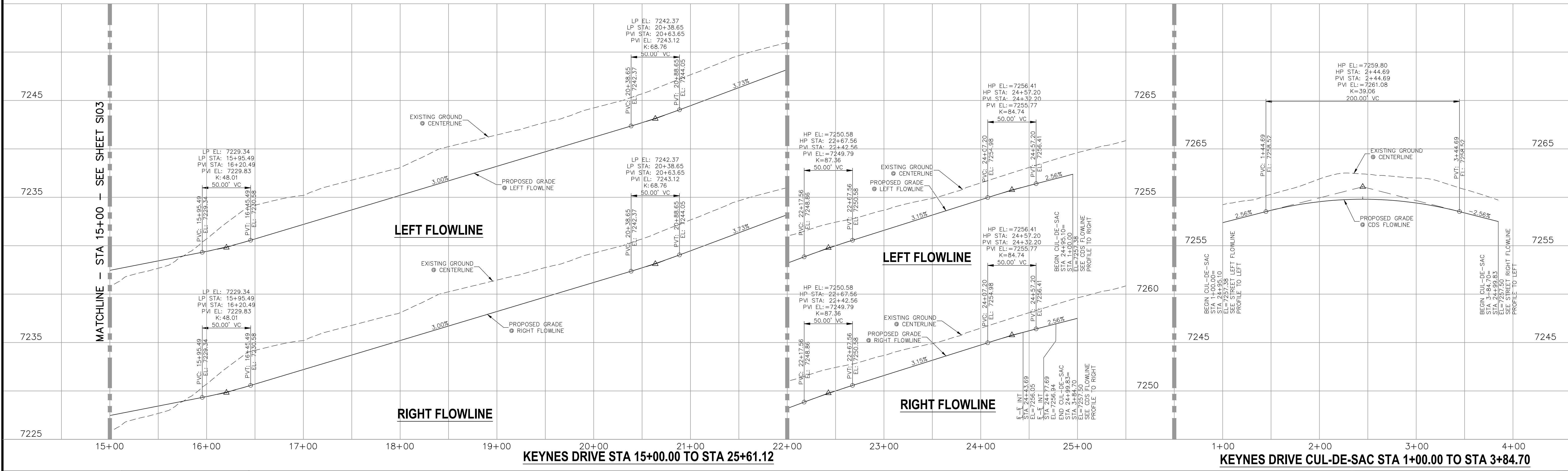
LINE	LENGTH	DIRECTION
L1	1422.70'	N0°35'00"W
L2	100.43'	N0°35'00"W
L3	5.02'	S5°43'41"W

**CENTERLINE CURVE TABLE**

CURVE	RADIUS	LENGTH	DELTA
C1	45.00'	37.06'	47°10'57"
C2	45.00'	215.49'	274°21'53"
C3	45.00'	22.14'	28°11'11"
C4	44.17'	5.00'	6°29'09"



MATCHLINE - STA 15+00 - SEE SHEET S103



**STATEMENT:**  
THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER APPROVAL DATE.

**FOR LOCATING & MARKING**  
GAS,  
ELECTRIC,  
WATER &  
TELEPHONE  
LINES

**FOR BURIED UTILITY INFORMATION**  
**48 HRS BEFORE YOU DIG**  
**CALL 1-800-922-1987**

**STREET DESIGN:**  
TRAFFIC ENGINEERING: \_\_\_\_\_ DATE: \_\_\_\_\_  
CURB & GUTTER: \_\_\_\_\_ DATE: \_\_\_\_\_  
FINAL REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_

**DRAINAGE DESIGN:**  
DRAINAGE REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.

**DESIGN DATA:**  
SIDEWALKS: WIDTH 5' ASPHALT THICKNESS: \_\_\_\_\_  
LOCATION: Attached  AC Surface \_\_\_\_\_  
Detached  CENTERED IN 5' EASEMENT AB Base \_\_\_\_\_  
CURB TYPE: A  AGG. BASE THICKNESS: \_\_\_\_\_  
CURB TYPE: C  Class 6 \_\_\_\_\_  
ROW WIDTH: 50' EOP-EOP 30' Class 5 \_\_\_\_\_  
STREET TYPE: RESIDENTIAL HVEEM Class 2 \_\_\_\_\_  
DESIGN SPEED: 25 MPH

**REVISIONS:**

NO.	DATE:	BY:	DESCRIPTION:

FOR AND ON BEHALF OF  
M&S CIVIL CONSULTANTS, INC.

MARCIL A. SANCHEZ, COLORADO P.E. NO. 37160

THE DESIGNER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

**CAUTION**

**PAINT BRUSH HILLS FILING NO. 14**

**STREET IMPROVEMENT PLANS**

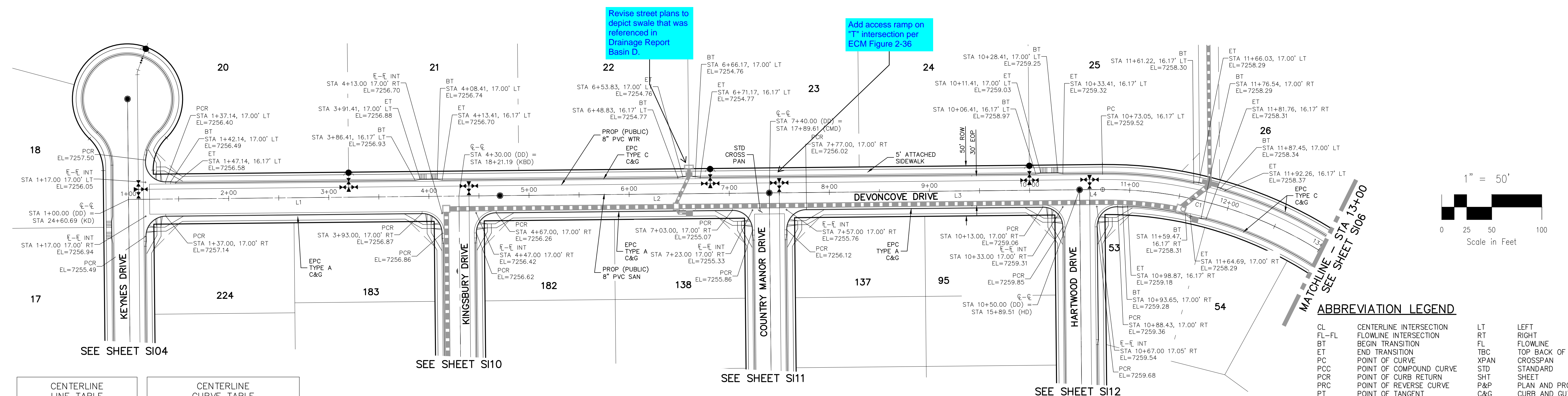
PROJECT NO. 10-014 SCALE: DATE: 06/25/2020  
DESIGNED BY: JWP HORIZONTAL: 1"=50'  
DRAWN BY: JWP VERTICAL: 1"=5'  
CHECKED BY: GW SHEET 4 OF 25 S104

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

**CIVIL CONSULTANTS, INC.**

20 BOULDER CRESCENT SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.955.5485  
**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.  
 VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160  
 DATE: \_\_\_\_\_  
 APPROVED BY: \_\_\_\_\_  
 REVISIONS: NO. DATE: BY: DESCRIPTION: \_\_\_\_\_  
 THE DESIGNER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.  
**CAUTION**

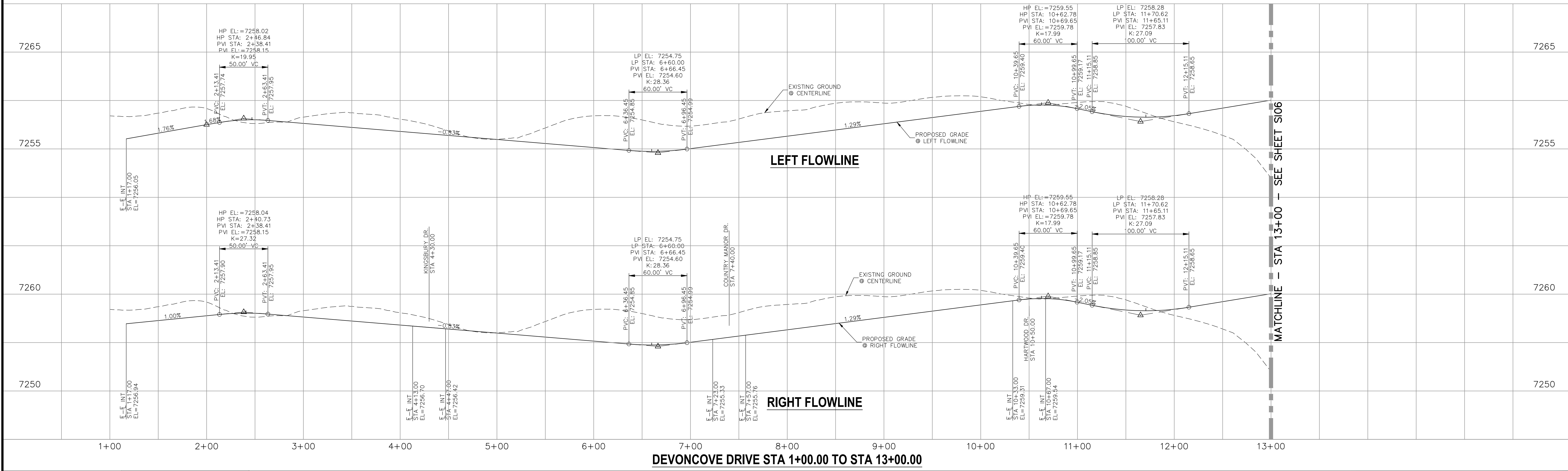


CENTERLINE LINE TABLE			CENTERLINE CURVE TABLE			
LINE	LENGTH	DIRECTION	CURVE	RADIUS	LENGTH	DELTA
L1	330.00'	N89°25'00"E	C1	400.00'	328.70'	47°05'00"
L2	310.00'	N89°25'00"E				
L3	310.00'	N89°25'00"E				
L4	23.05'	N89°25'00"E				

**DEVONCOVE DRIVE**  
**STA 1+00.00 TO STA 13+00.00**

**ABBREVIATION LEGEND**

CL	CENTERLINE INTERSECTION	LT	LEFT FLOWLINE
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT FLOWLINE
BT	BEGIN TRANSITION	TBC	TOP BACK OF CURB
ET	END TRANSITION	XPAN	CROSSSPAN
PC	POINT OF CURVE	STD	STANDARD SHEET
PCC	POINT OF COMPOUND CURVE	SHT	PLAN AND PROFILE
PCR	POINT OF CURB RETURN	P&P	CURB AND GUTTER
PRC	POINT OF REVERSE CURVE	C&G	WEST
PT	POINT OF TANGENT	W	EAST
EL	ELEVATION	E	EDGE OF PAVEMENT
CDS	CUL-DE-SAC	ROW	RIGHT OF WAY
KN	KNUCKLE	EOP	EDGE OF PAVEMENT
LP	LOOP	WTR	WATER
N	NORTH	SAN	SANITARY SEWER
S	SOUTH	COLL	COLLECTOR
KD	KEYNES DRIVE	LFT	LOW POINT
HD	HARTWOOD DRIVE	RES	RESIDENTIAL
GMD	GRACE MANOR DRIVE		
CMD	COUNTRY MANOR DRIVE		
KBD	KINGSBURY DRIVE		
WD	WATERLOO DRIVE		
FC	FINSBURY COURT		
DD	DEVONCOVE DRIVE		
HP	HIGH POINT		

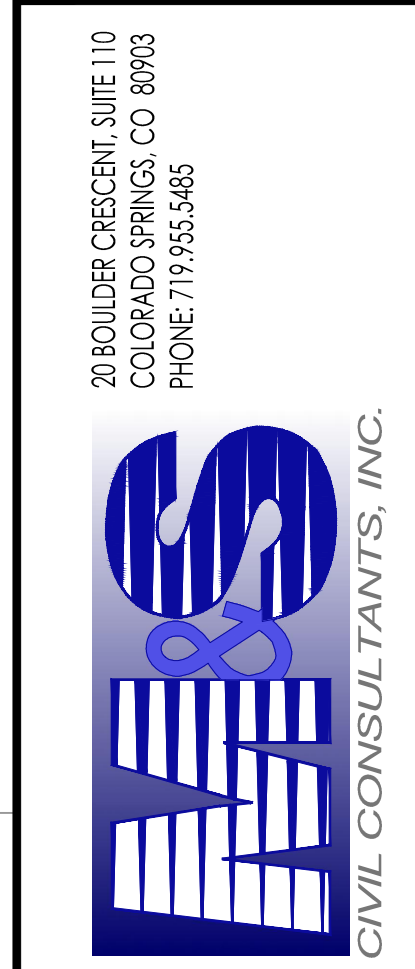


**STATEMENT:**  
 THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER APPROVAL DATE.

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
**FOR BURIED UTILITY INFORMATION**  
**48 HRS BEFORE YOU DIG**  
**CALL 1-800-922-1987**

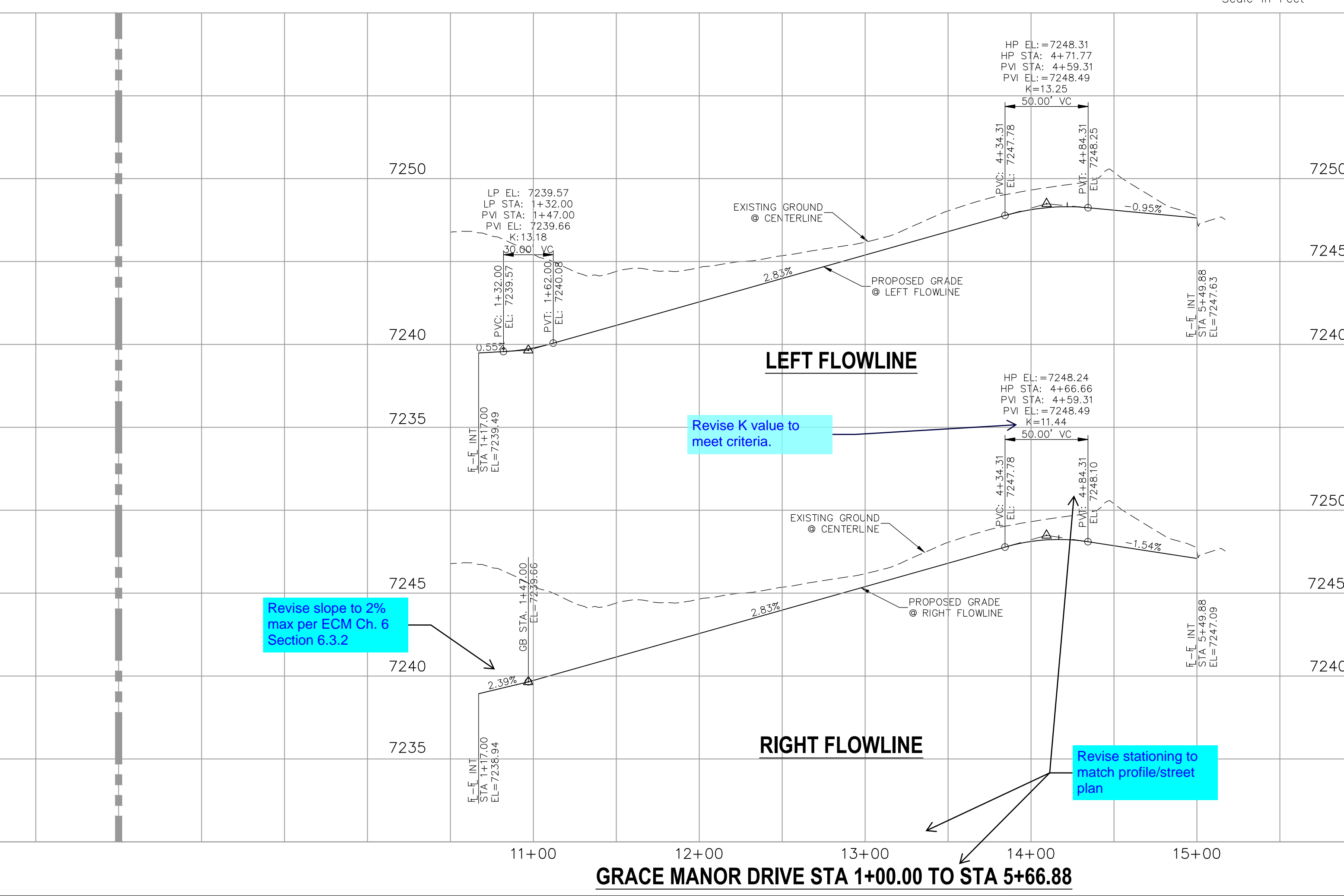
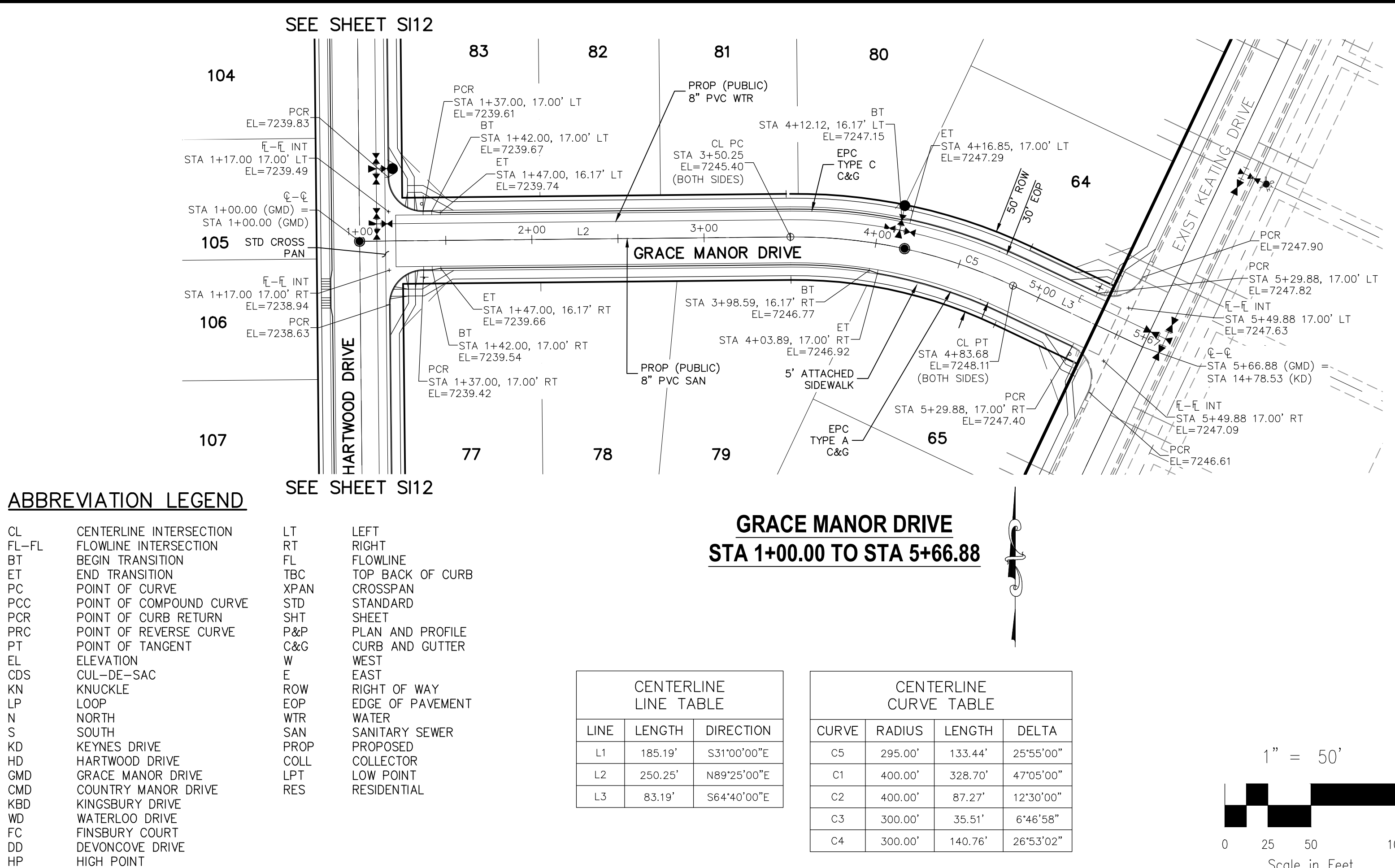
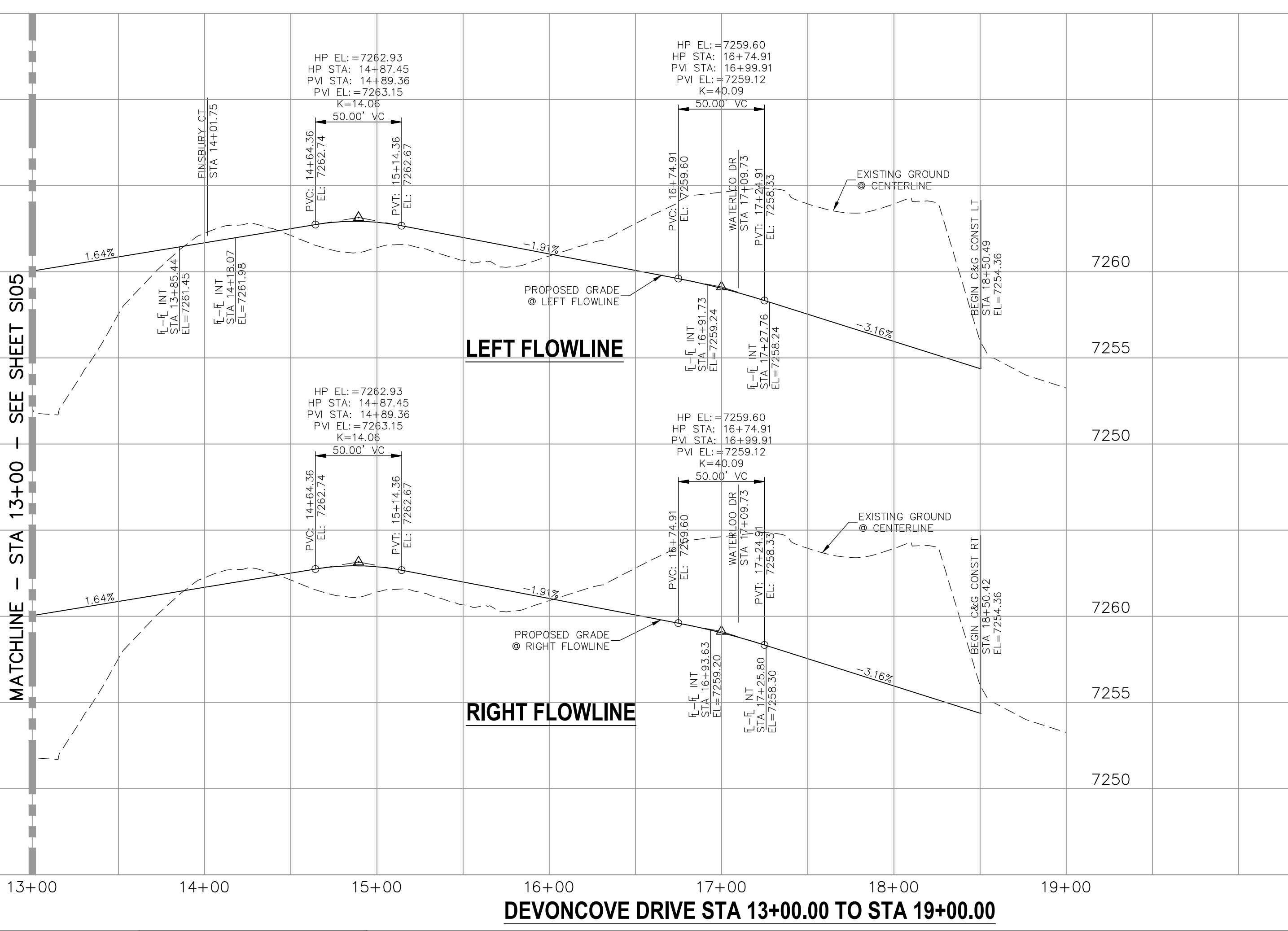
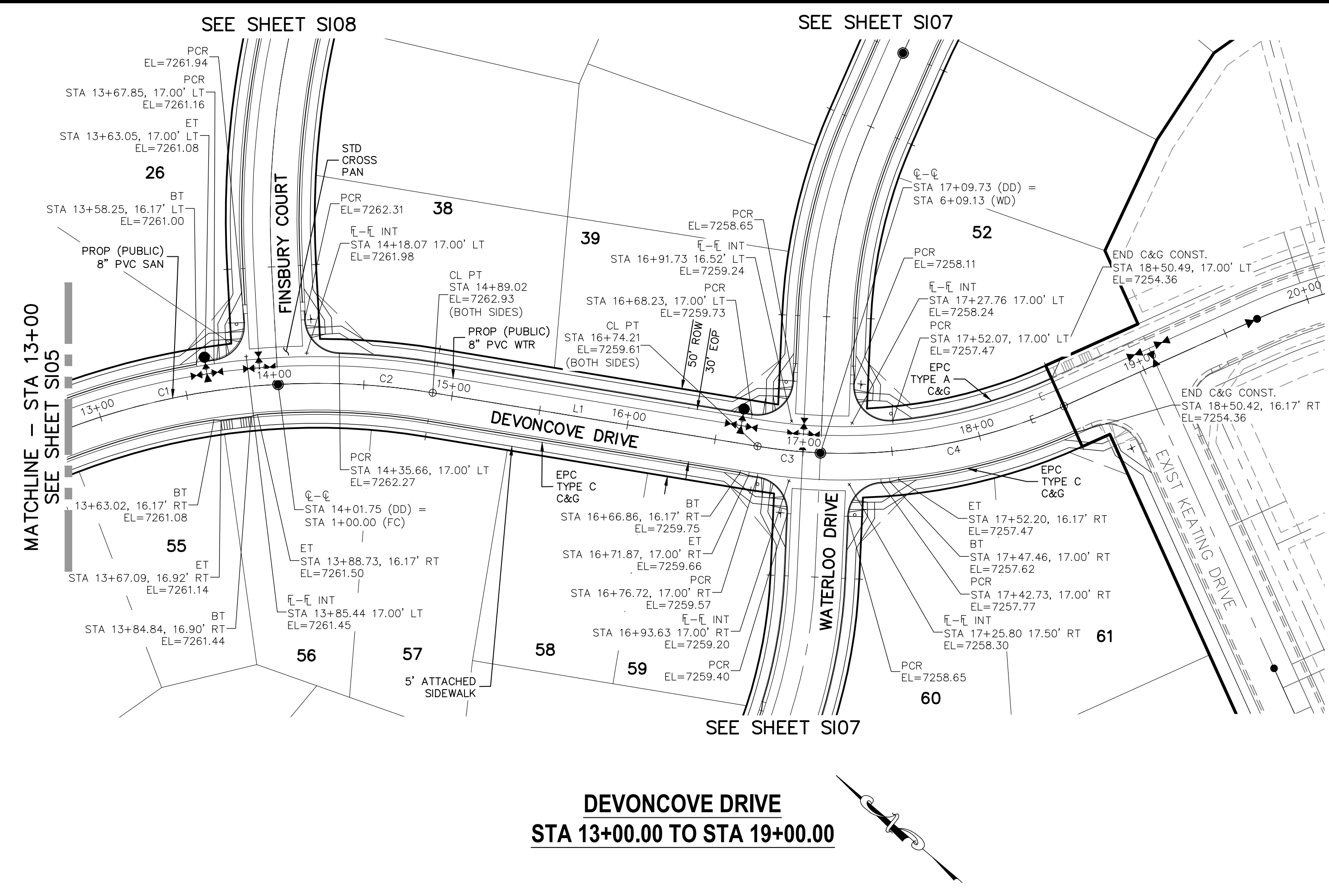
**STREET DESIGN:**  
 REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
 TRAFFIC ENGINEERING: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CURB & GUTTER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FINAL REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
**DRAINAGE DESIGN:**  
 DRAINAGE REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.

**DESIGN DATA:**  
 SIDEWALKS: WIDTH 5' ASPHALT THICKNESS: \_\_\_\_\_  
 LOCATION: Attached  AC Surface \_\_\_\_\_  
 Detached  CENTERED IN 5' EASEMENT AB Base \_\_\_\_\_  
 CURB TYPE: A  AGG. BASE THICKNESS: \_\_\_\_\_  
 CURB TYPE: C  Class 6 \_\_\_\_\_  
 ROW WIDTH: 50' EOP-EOP 30' Class 5 \_\_\_\_\_  
 STREET TYPE: RESIDENTIAL HVEEM Class 2 \_\_\_\_\_  
 DESIGN SPEED: 25 MPH



FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.  
 VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160

NO.	DATE	DESCRIPTION



**ABBREVIATION LEGEND**

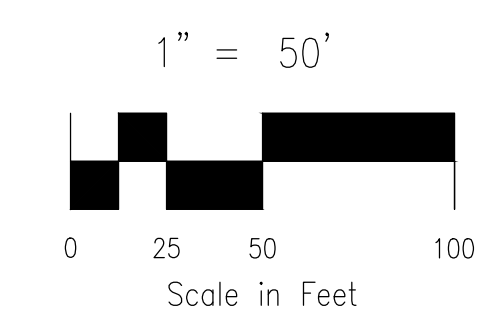
CL	CENTERLINE INTERSECTION	LT	LEFT FLOWLINE
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT FLOWLINE
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XSPAN	CROSSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD SHEET
PCR	POINT OF CURB RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	ELEVATION	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL-DE-SAC	E	EAST
KN	KNUCKLE	ROW	RIGHT OF WAY
LP	LOOP	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
KD	KEYNES DRIVE	PROP	PROPOSED
HD	HARTWOOD DRIVE	COLL	COLLECTOR
GMD	GRACE MANOR DRIVE	LPT	LOW POINT
CMD	COUNTRY MANOR DRIVE	RES	RESIDENTIAL
KBD	KINGSBURY DRIVE		
WDR	WATERLOO DRIVE		
FC	FINSBURY COURT		
DD	DEVONCOVE DRIVE		
HP	HIGH POINT		

**CENTERLINE LINE TABLE**

LINE	LENGTH	DIRECTION
L1	185.19'	S31°00'00"E
L2	250.25'	N89°25'00"E
L3	83.19'	S64°40'00"E

**CENTERLINE CURVE TABLE**

CURVE	RADIUS	LENGTH	DELTA
C5	295.00'	133.44'	25°55'00"
C1	400.00'	328.70'	47°05'00"
C2	400.00'	87.27'	12°30'00"
C3	300.00'	35.51'	6°46'58"
C4	300.00'	140.76'	26°53'02"



**STATEMENT:**  
 THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER APPROVAL DATE.

**FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES**

**FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987**

**STREET DESIGN:**  
 REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
 TRAFFIC ENGINEERING: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CURB & GUTTER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FINAL REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_

**DRAINAGE DESIGN:**  
 DRAINAGE REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.

**DESIGN DATA:**  
 SIDEWALKS: WIDTH 5' ASPHALT THICKNESS: \_\_\_\_\_  
 LOCATION: Attached  AC Surface \_\_\_\_\_  
 Detached  CENTERED IN 5' EASEMENT AB Base \_\_\_\_\_  
 CURB TYPE: A  AGG. BASE THICKNESS: \_\_\_\_\_  
 CURB TYPE: C  Class 6 \_\_\_\_\_  
 ROW WIDTH: 50' EOP-EOP 30' Class 5 \_\_\_\_\_  
 STREET TYPE: Residential HVEEM Class 2 \_\_\_\_\_  
 DESIGN SPEED: 25 MPH \_\_\_\_\_

**CAUTION**

20 BOULDER CRESCENT, SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.555.5485

M&S CIVIL CONSULTANTS, INC.

FOR AND ON BEHALF OF  
 M&S CIVIL CONSULTANTS, INC.

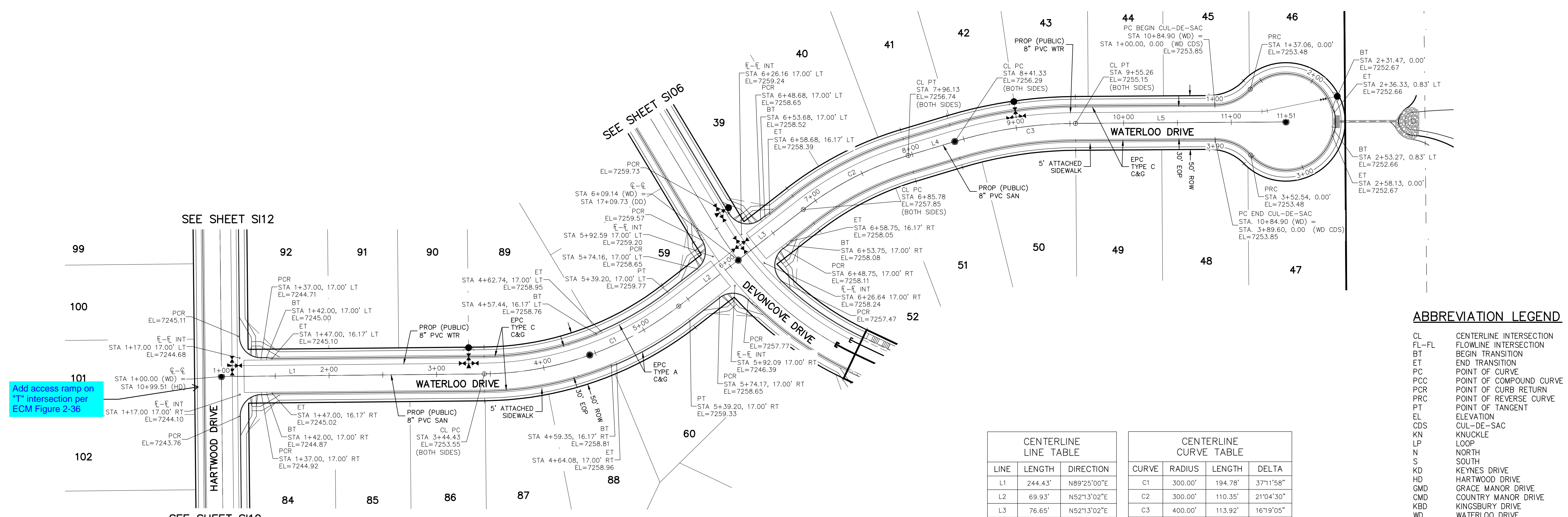
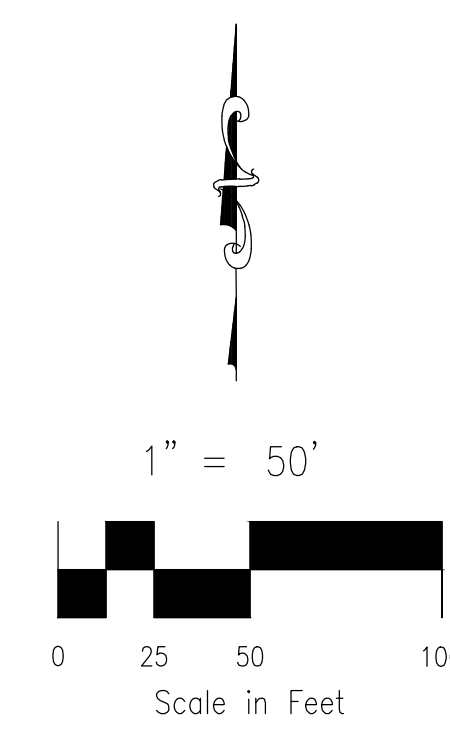
REVISIONS:

NO.	DATE	BY	DESCRIPTION

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

FOR THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

**CAUTION**



**WATERLOO DRIVE  
 STA 1+00.00 TO STA 11+50.92**

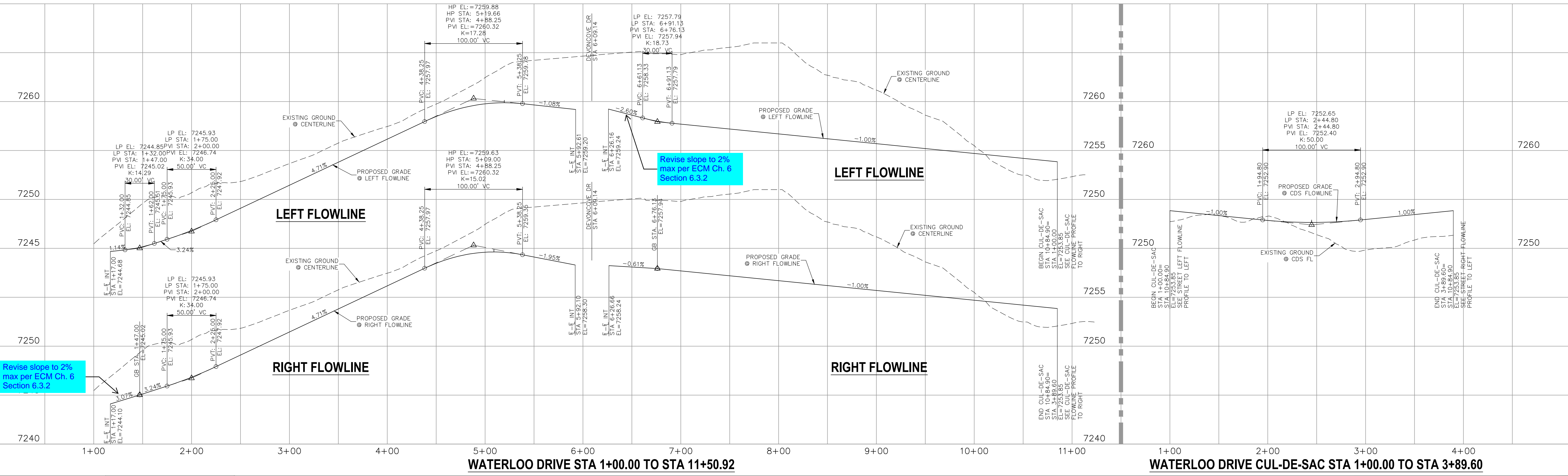
LINE	LENGTH	DIRECTION
L1	244.43'	N89°25'00"E
L2	69.93'	N52°13'02"E
L3	76.65'	N52°13'02"E
L4	45.21'	N73°17'32"E
L5	195.67'	N89°36'37"E

CURVE	RADIUS	LENGTH	DELTA
C1	300.00'	194.78'	37°11'58"
C2	300.00'	110.35'	21°04'30"
C3	400.00'	113.92'	16°19'05"

**ABBREVIATION LEGEND**

CL	CENTERLINE INTERSECTION	LT	LEFT
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XPAN	CROSSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD
PCR	POINT OF CURB RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	POINT OF TANGENT	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL-DE-SAC	E	EAST
KN	KNUCKLE	ROW	RIGHT OF WAY
LP	LOOP	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
KD	KEYNES DRIVE	PROP	PROPOSED
HD	HARTWOOD DRIVE	COLL	COLLECTOR
GMD	GRACE MANOR DRIVE	LPT	LOW POINT
CMD	COUNTRY MANOR DRIVE	RES	RESIDENTIAL
KBD	KINGSBURY DRIVE		
WD	WATERLOO DRIVE		
FC	FINSBURY COURT		
DD	DEVONCOVE DRIVE		
HP	HIGH POINT		



**WATERLOO DRIVE STA 1+00.00 TO STA 11+50.92**      **WATERLOO DRIVE CUL-DE-SAC STA 1+00.00 TO STA 3+89.60**

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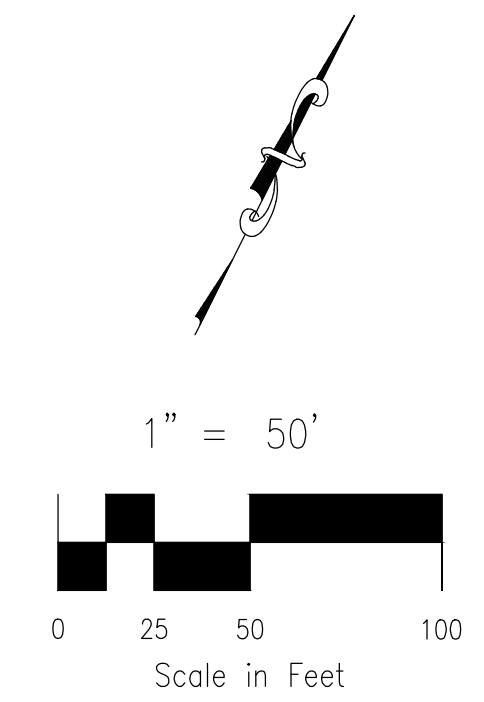
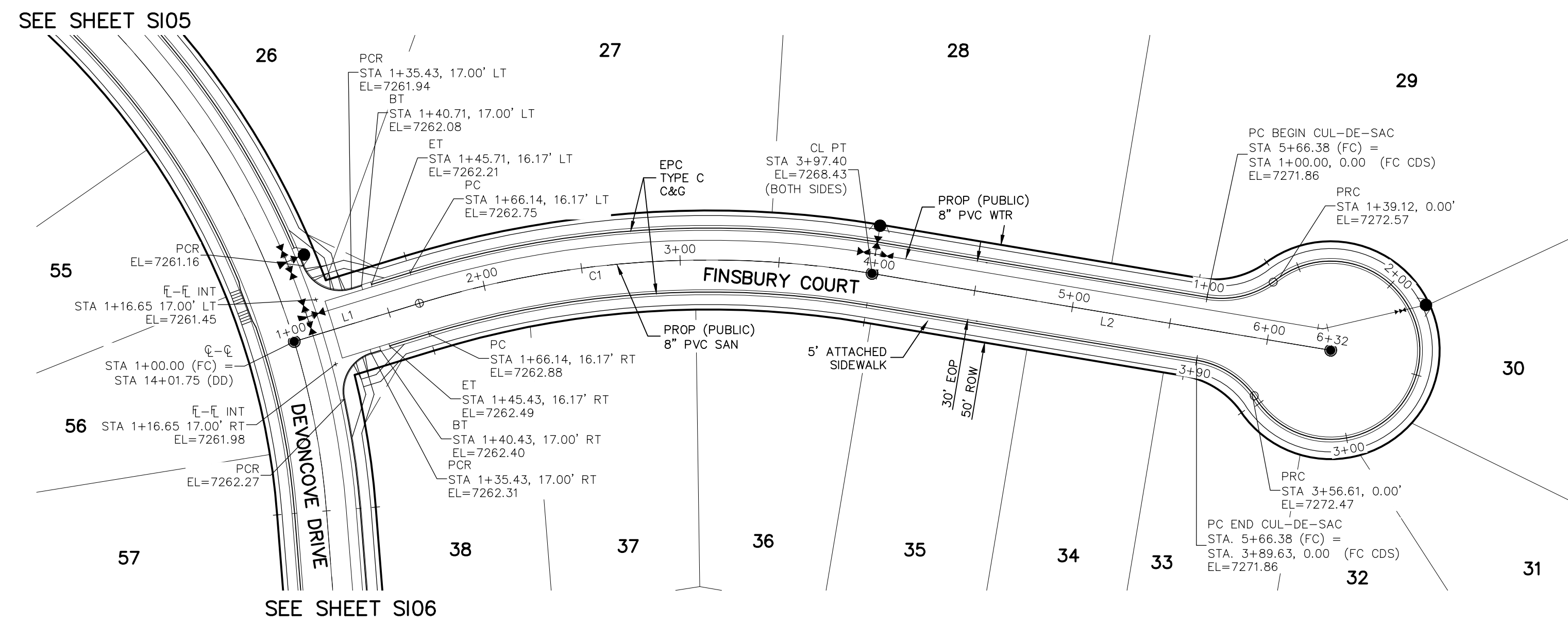
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**FOR BURIED UTILITY INFORMATION CALL 1-800-922-1987**

**STREET DESIGN:**  
 REVIEW:  
 TRAFFIC ENGINEERING: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CURB & GUTTER: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FINAL REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_

**DRAINAGE DESIGN:**  
 DRAINAGE REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.

**DESIGN DATA:**  
 SIDEWALKS: WIDTH 5' ASPHALT THICKNESS: \_\_\_\_\_  
 LOCATION: Attached 8' AC Surface \_\_\_\_\_  
 Detached 8' CENTERED IN 5' EASEMENT AB Base \_\_\_\_\_  
 CURB TYPE: A 8' AGG. BASE THICKNESS: \_\_\_\_\_  
 CURB TYPE: C 8' Class 6 \_\_\_\_\_  
 ROW WIDTH: 50' EOP-EOP 30' Class 5 \_\_\_\_\_  
 STREET TYPE: RESIDENTIAL HVEEM Class 2 \_\_\_\_\_  
 DESIGN SPEED: 25 MPH



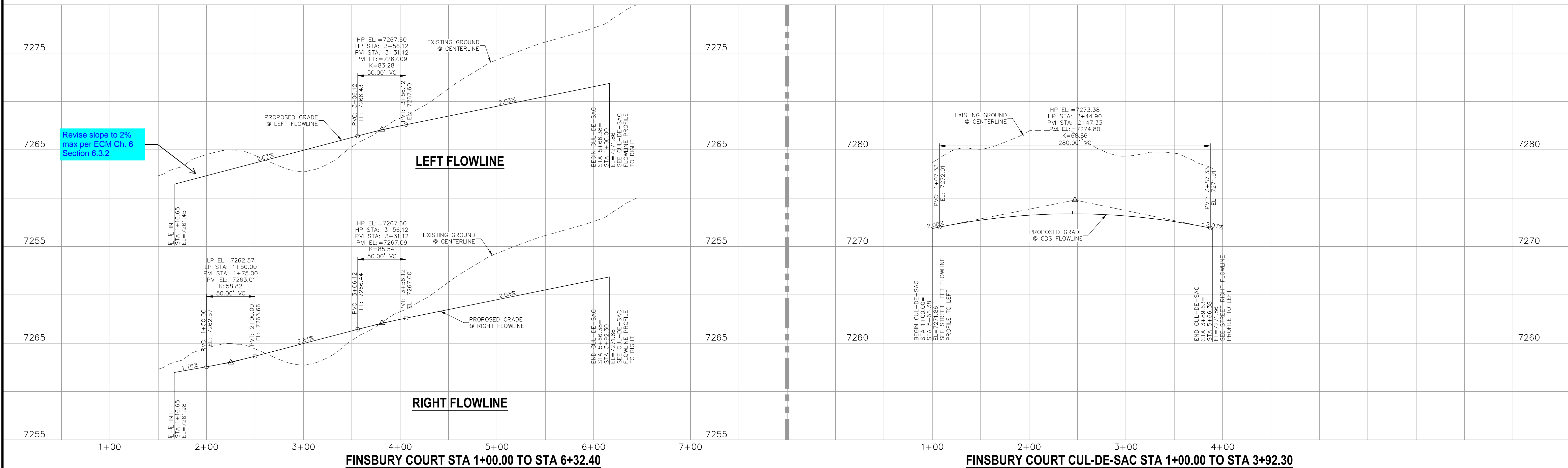
**FINSBURY COURT  
STA 1+00.00 TO STA 6+32.40**

CENTERLINE LINE TABLE		
LINE	LENGTH	DIRECTION
L1	66.14'	N46°30'00"E
L2	235.00'	N73°00'00"E

CENTERLINE CURVE TABLE			
CURVE	RADIUS	LENGTH	DELTA
C1	500.00'	231.26'	26°30'00"

**ABBREVIATION LEGEND**

CL	CENTERLINE INTERSECTION	LT	LEFT FLOWLINE
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT FLOWLINE
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XPAN	CROSSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD
PCR	POINT OF CURVE RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	POINT OF TANGENT	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL-DE-SAC	E	EAST
KN	KNUCKLE	ROP	RIGHT OF WAY
LP	LOOP	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
KD	KEYNES DRIVE	PROP	PROPOSED
HD	HARTWOOD DRIVE	COLL	COLLECTOR
GMD	GRACE MANOR DRIVE	LPT	LOW POINT
CMD	COUNTRY MANOR DRIVE	RES	RESIDENTIAL
KBD	KINGSBURY DRIVE		
WD	WATERLOO DRIVE		
FC	FINSBURY COURT		
DD	DEVONCOVE DRIVE		
HP	HIGH POINT		



**STATEMENT:**  
THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER APPROVAL DATE.



**STREET DESIGN:**  
TRAFFIC ENGINEERING: \_\_\_\_\_ DATE: \_\_\_\_\_  
CURB & GUTTER: \_\_\_\_\_ DATE: \_\_\_\_\_  
FINAL REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
**DRAINAGE DESIGN:**  
DRAINAGE REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.

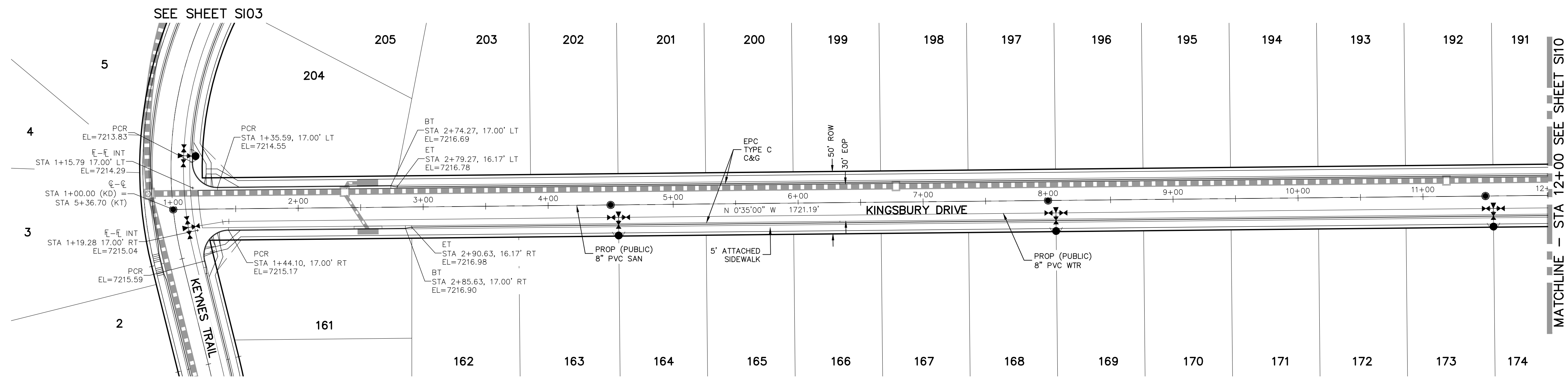
**DESIGN DATA:**  
SIDEWALKS: WIDTH 5' ASPHALT THICKNESS: \_\_\_\_\_  
LOCATION: Attached  Detached  CENTERED IN 5' EASEMENT  
CURB TYPE: A  B  C  E  
CURB TYPE: C  B  E  
ROW WIDTH: 50' EOP-EOP 30'  
STREET TYPE: RESIDENTIAL HVEEM Class 5  
DESIGN SPEED: 25 MPH Class 2

NO.	DATE	BY	DESCRIPTION

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.  
MARCIL A. SANCHEZ, COLORADO P.E. NO. 37160  
20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485  
CIVIL CONSULTANTS, INC.  
THE DESIGNER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.  
**CAUTION**

**PAINT BRUSH HILLS FILING NO. 14**  
**STREET IMPROVEMENT PLANS**  
PROJECT NO. 10-014  
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'  
DESIGNED BY: JWP  
DRAWN BY: JWP  
CHECKED BY: GW  
DATE: 06/25/2020  
SHEET 8 OF 25  
S108

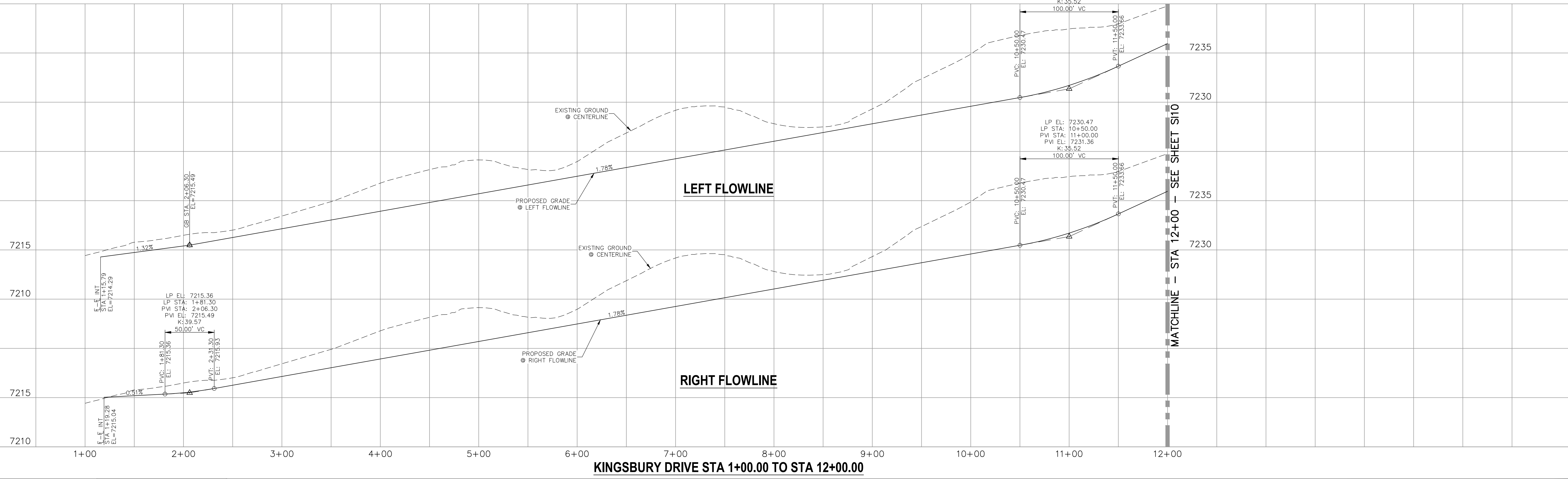




**KINGSBURY DRIVE  
STA 1+00.00 TO STA 12+00.00**

**ABBREVIATION LEGEND**

CL	CENTERLINE INTERSECTION	LT	LEFT
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XPAN	CROSSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD
PCR	POINT OF CURB RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	POINT OF TANGENT	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL-DE-SAC	E	EAST
KN	KNUCKLE	ROW	RIGHT OF WAY
LP	LOOP	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
KD	KEYNES DRIVE	PROP	PROPOSED
HD	HARTWOOD DRIVE	COLL	COLLECTOR
GMD	GRACE MANOR DRIVE	LPT	LOW POINT
CMD	COUNTRY MANOR DRIVE	RES	RESIDENTIAL
KBD	KINGSBURY DRIVE		
WD	WATERLOO DRIVE		
FC	FINSBURY COURT		
DD	DEVONCOVE DRIVE		
HP	HIGH POINT		



**KINGSBURY DRIVE STA 1+00.00 TO STA 12+00.00**

**STATEMENT:**  
THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER APPROVAL DATE.

**FOR LOCATING & MARKING**  
GAS,  
ELECTRIC,  
WATER &  
TELEPHONE  
LINES

**FOR BURIED UTILITY INFORMATION**  
**CALL 1-800-922-1987**

**STREET DESIGN:**  
TRAFFIC ENGINEERING: \_\_\_\_\_ DATE: \_\_\_\_\_  
CURB & GUTTER: \_\_\_\_\_ DATE: \_\_\_\_\_  
FINAL REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_

**DRAINAGE DESIGN:**  
DRAINAGE REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.

**DESIGN DATA:**  
SIDEWALKS: WIDTH 5' ASPHALT THICKNESS: \_\_\_\_\_  
LOCATION: Attached  AC Surface \_\_\_\_\_  
Detached  CENTERED IN 5' EASEMENT AB Base \_\_\_\_\_  
CURB TYPE A  AGG. BASE THICKNESS: \_\_\_\_\_  
CURB TYPE C  Class 6 \_\_\_\_\_  
ROW WIDTH 50' EOP-EOP 30' Class 5 \_\_\_\_\_  
STREET TYPE RESIDENTIAL HVEEM Class 2 \_\_\_\_\_  
DESIGN SPEED 25 MPH

**PAIN BRUSH HILLS FILING NO. 14**  
**STREET IMPROVEMENT PLANS**  
PROJECT NO. 10-014  
SCALE: \_\_\_\_\_  
DESIGNED BY: JWP  
DRAWN BY: JWP  
CHECKED BY: GW

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

**CIVIL CONSULTANTS, INC.**

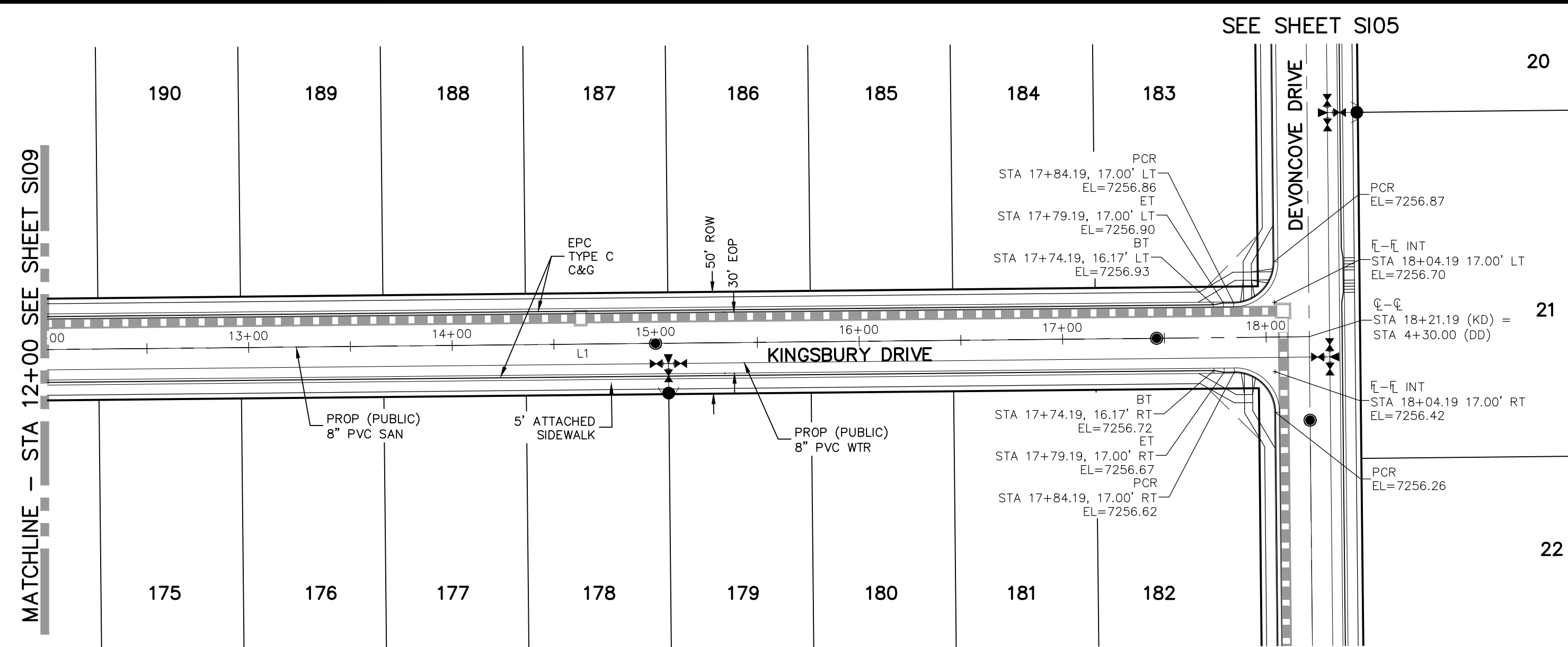
FOR AND ON BEHALF OF  
M&S CIVIL  
CONSULTANTS,  
INC.

NO.	DATE	BY	DESCRIPTION

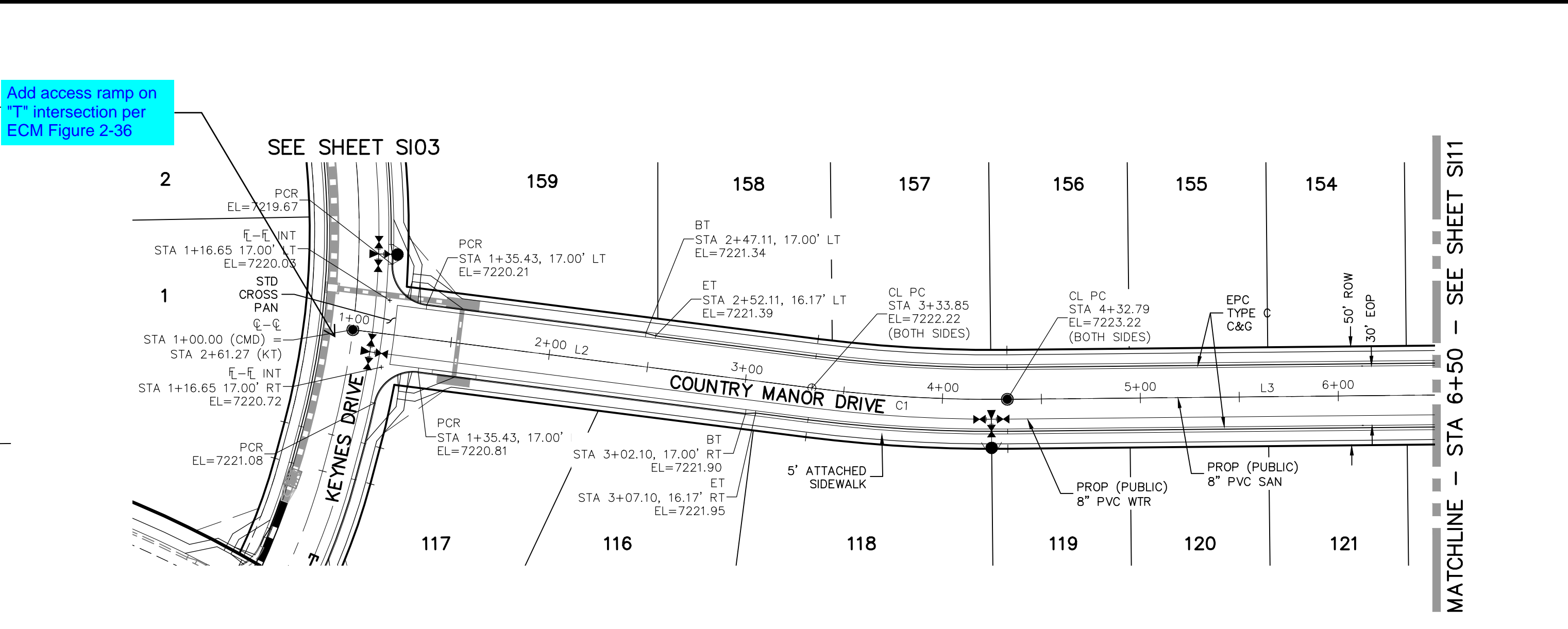
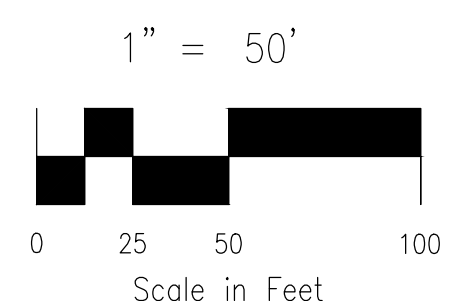
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

**CAUTION**

File: C:\Users\lprince\Documents\100144-PBH 14\Draw\Contal Draw\STREET\S109.dwg Plotstamp: 7/1/2020 9:57 AM



**KINGSBURY DRIVE  
STA 12+00.00 TO STA 18+21.19**



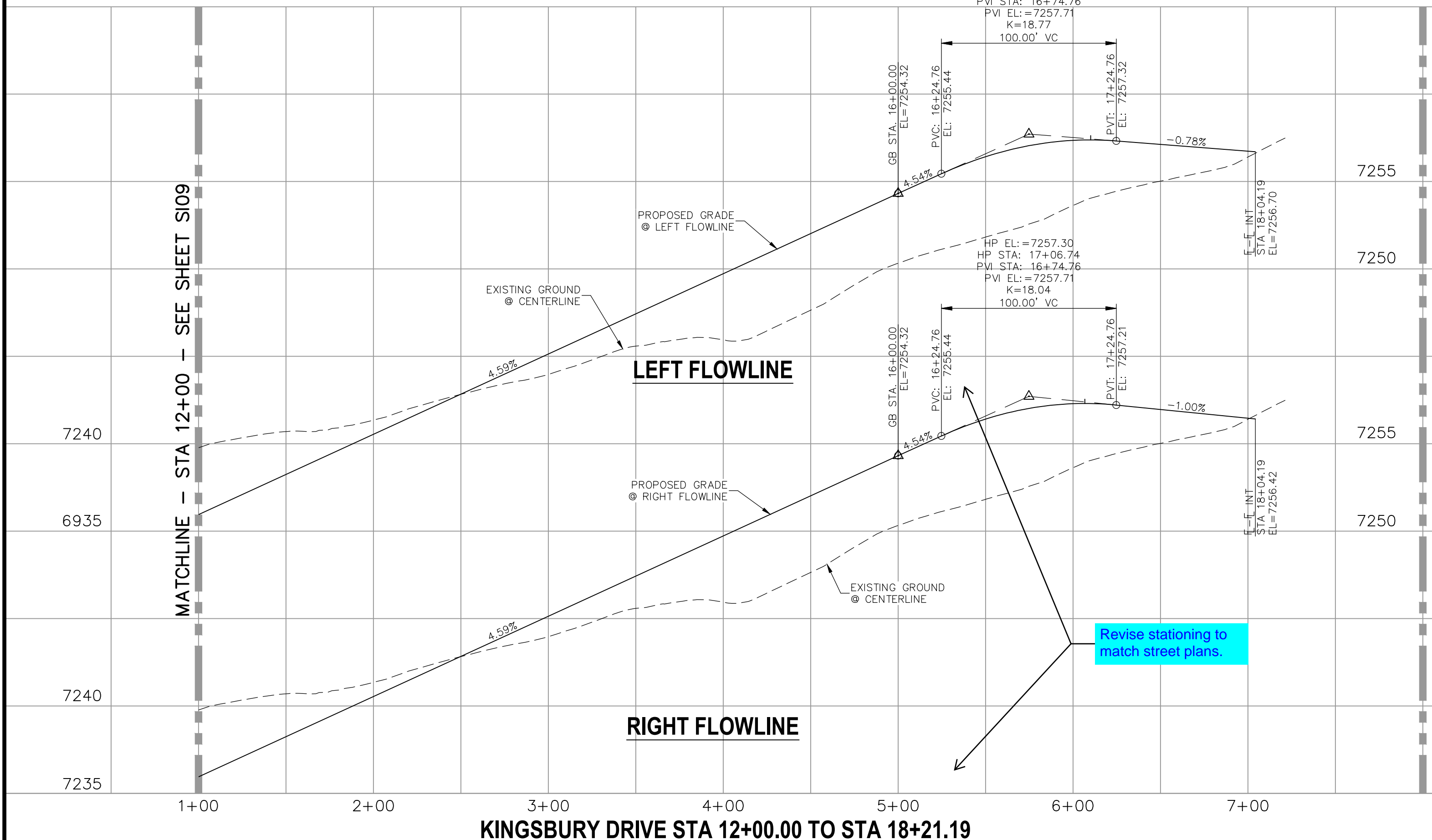
**COUNTRY MANOR DRIVE  
STA 1+00.00 TO STA 6+50.00**

CENTERLINE LINE TABLE		
LINE	LENGTH	DIRECTION
L1	1721.19'	N0°35'00\"W
L2	233.85'	N71°4'08\"E
L3	1356.82'	N0°35'00\"W

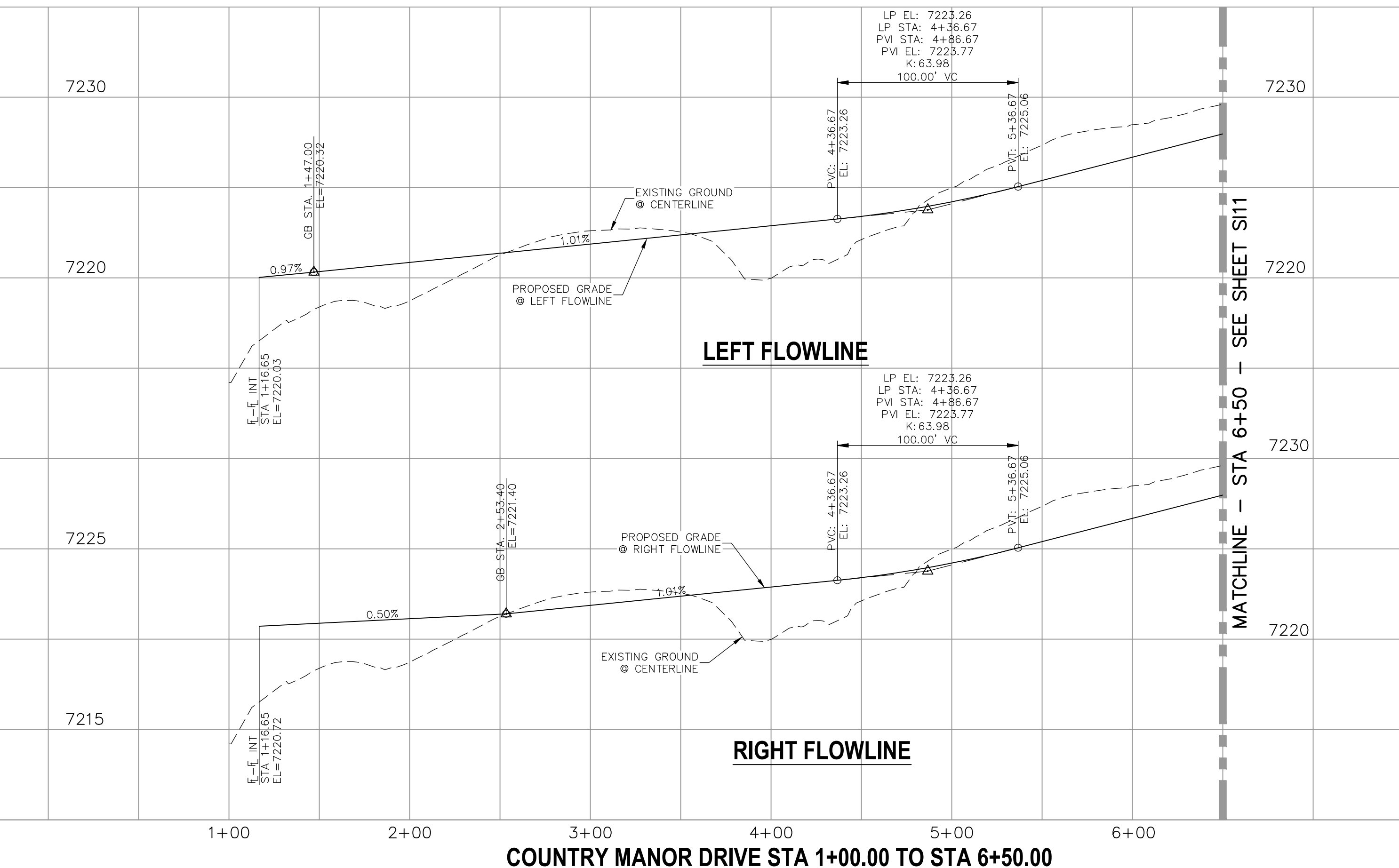
CENTERLINE CURVE TABLE			
CURVE	RADIUS	LENGTH	DELTA
C1	725.00'	98.94'	7°49'08\"

**ABBREVIATION LEGEND**

- |       |                         |      |                  |
|-------|-------------------------|------|------------------|
| CL    | CENTERLINE INTERSECTION | LT   | LEFT             |
| FL-FL | FLOWLINE INTERSECTION   | RT   | RIGHT            |
| BT    | BEGIN TRANSITION        | FL   | FLOWLINE         |
| ET    | END TRANSITION          | TBC  | TOP BACK OF CURB |
| PC    | POINT OF CURVE          | XPC  | CROSSSPAN        |
| PCC   | POINT OF COMPOUND CURVE | STD  | STANDARD         |
| PCR   | POINT OF CURB RETURN    | SHT  | SHEET            |
| PRC   | POINT OF REVERSE CURVE  | P&P  | PLAN AND PROFILE |
| PT    | POINT OF TANGENT        | C&G  | CURB AND GUTTER  |
| EL    | ELEVATION               | W    | WEST             |
| CDS   | CUL-DE-SAC              | E    | EAST             |
| KN    | KNUCKLE                 | ROW  | RIGHT OF WAY     |
| LP    | LOOP                    | EOP  | EDGE OF PAVEMENT |
| N     | NORTH                   | WTR  | WATER            |
| S     | SOUTH                   | SAN  | SANITARY SEWER   |
| KD    | KEYNES DRIVE            | PROP | PROPOSED         |
| HD    | HARTWOOD DRIVE          | COLL | COLLECTOR        |
| GMD   | GRACE MANOR DRIVE       | LPT  | LOW POINT        |
| CMD   | COUNTRY MANOR DRIVE     | RES  | RESIDENTIAL      |
| KBD   | KINGSBURY DRIVE         |      |                  |
| WD    | WATERLOO DRIVE          |      |                  |
| FC    | FINSBURY COURT          |      |                  |
| DD    | DEVONCOVE DRIVE         |      |                  |
| HP    | HIGH POINT              |      |                  |



**KINGSBURY DRIVE STA 12+00.00 TO STA 18+21.19**



**COUNTRY MANOR DRIVE STA 1+00.00 TO STA 6+50.00**

**STATEMENT:**  
THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER APPROVAL DATE.

**FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES**

**FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987**

**STREET DESIGN:**  
TRAFFIC ENGINEERING: \_\_\_\_\_ DATE: \_\_\_\_\_  
CURB & GUTTER: \_\_\_\_\_ DATE: \_\_\_\_\_  
FINAL REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_

**DRAINAGE DESIGN:**  
DRAINAGE REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.

**DESIGN DATA:**  
SIDEWALKS: WIDTH 5' ASPHALT THICKNESS: \_\_\_\_\_  
LOCATION: Attached  AC Surface \_\_\_\_\_  
Detached  CENTERED IN 5' EASEMENT AB Base \_\_\_\_\_  
CURB TYPE: A  AGG. BASE THICKNESS: \_\_\_\_\_  
CURB TYPE: C  Class 6 \_\_\_\_\_  
ROW WIDTH: 50' EOP-EOP 30' Class 5 \_\_\_\_\_  
STREET TYPE: RESIDENTIAL HVEEM Class 2 \_\_\_\_\_  
DESIGN SPEED: 25 MPH

**PAINT BRUSH HILLS FILING NO. 14**

**STREET IMPROVEMENT PLANS**

PROJECT NO. 10-014 DATE: 06/25/2020  
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'  
DESIGNED BY: JWP  
DRAWN BY: JWP  
CHECKED BY: GW

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

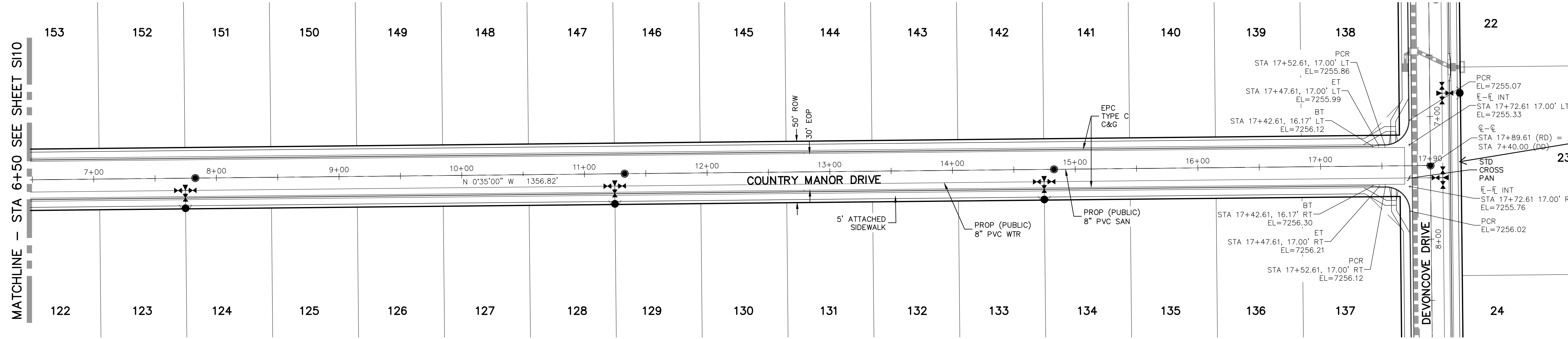
MARCIL A. SANCHEZ, COLORADO P.E. NO. 371760

NO.	DATE	BY	DESCRIPTION

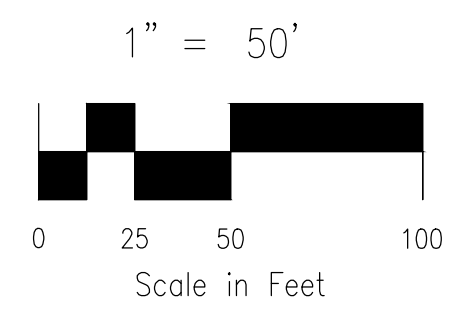
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**CAUTION**

File: C:\Users\jprince\Documents\100144-PBH 14\Draw\Contd Draw\STREET\S10.Dwg Plotstamp: 7/1/2020 9:58 AM



Add access ramp on 'T' intersection per ECM Figure 2-36



**COUNTRY MANOR DRIVE  
STA 6+50.00 TO STA 17+89.61**

**ABBREVIATION LEGEND**

CL	CENTERLINE INTERSECTION	LT	LEFT FLOWLINE
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT FLOWLINE
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XPAN	CROSSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD SHEET
PCR	POINT OF CURB RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	POINT OF TANGENT	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL-DE-SAC	E	EAST
KN	KNUCKLE	ROW	RIGHT OF WAY
LP	LOOP	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
KD	KEYNES DRIVE	PROP	PROPOSED
HD	HARTWOOD DRIVE	COLL	COLLECTOR
GMD	GRACE MANOR DRIVE	LPT	LOW POINT
CMD	COUNTRY MANOR DRIVE	RES	RESIDENTIAL
KBD	KINGSBURY DRIVE		
WD	WATERLOO DRIVE		
FC	FINSBURY COURT		
DD	DEVONCOVE DRIVE		
HP	HIGH POINT		

**PAINT BRUSH HILLS FILING NO. 14**

**STREET IMPROVEMENT PLANS**

PROJECT NO. 10-014  
DATE: 06/25/2020

DESIGNED BY: JWP  
DRAWN BY: JWP  
CHECKED BY: GW

SCALE: HORIZONTAL: 1"=50'  
VERTICAL: 1"=5'

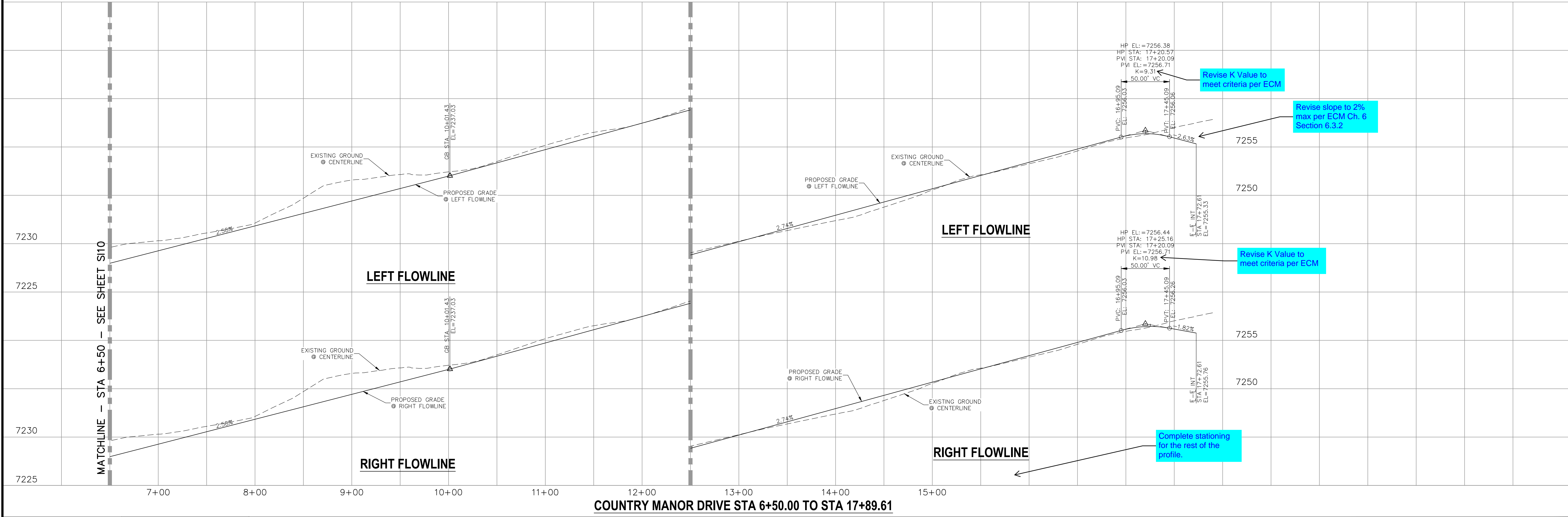
SHEET 11 OF 25  
S111

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

MARCIL A. SANCHEZ, COLORADO P.E. NO. 371760



**STATEMENT:**  
THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER APPROVAL DATE.

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

FOR BURIED UTILITY INFORMATION  
**CALL 1-800-922-1987**

<b>STREET DESIGN:</b>	TRAFFIC ENGINEERING: _____ DATE: _____
<b>REVIEW:</b>	CURB & GUTTER: _____ DATE: _____
<b>DRAINAGE DESIGN:</b>	FINAL REVIEW: _____ DATE: _____
	DRAINAGE REVIEW: _____ DATE: _____
	FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.

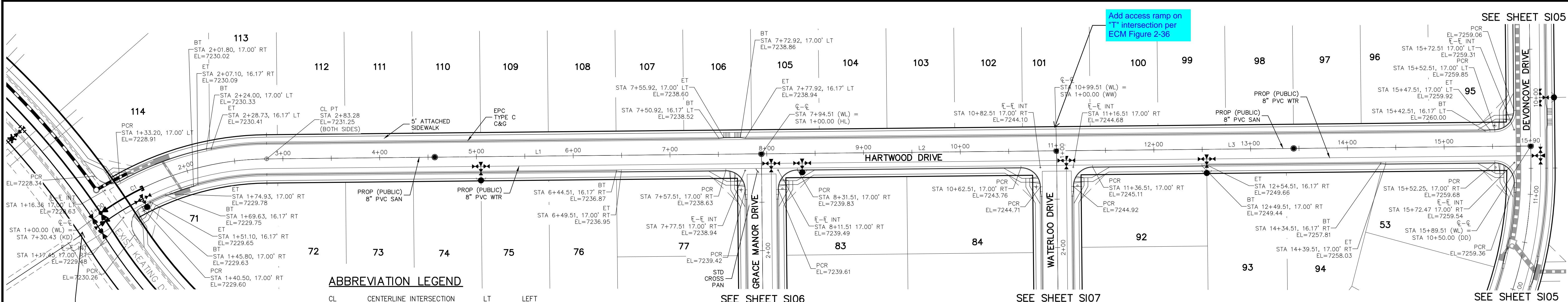
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	LOCATION: Attached <input checked="" type="checkbox"/>	AC Surface _____
	Detached <input type="checkbox"/> CENTERED IN 5' EASEMENT	AB Base _____
	CURB TYPE A <input checked="" type="checkbox"/>	AGG. BASE THICKNESS: _____
	CURB TYPE C <input type="checkbox"/>	Class 6 _____
	ROW WIDTH 50' EOP-EOP 30'	Class 5 _____
	STREET TYPE RESIDENTIAL HVEEM _____	Class 2 _____
	DESIGN SPEED 25 MPH	

REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

**CAUTION**



**ABBREVIATION LEGEND**

CL	CENTERLINE INTERSECTION	LT	LEFT FLOWLINE
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT FLOWLINE
BT	BEGIN TRANSITION	TBC	TOP BACK OF CURB
ET	END TRANSITION	XPCN	CROSSSPAN
PC	POINT OF CURVE	STD	STANDARD SHEET
PCC	POINT OF COMPOUND CURVE	SHT	SHEET
PCR	POINT OF CURB RETURN	P&P	PLAN AND PROFILE
PRC	POINT OF REVERSE CURVE	C&G	CURB AND GUTTER
PT	POINT OF TANGENT	W	WEST
EL	ELEVATION	E	EAST
CDS	CUL-DE-SAC	R	RIGHT OF WAY
KN	KNUCKLE	EOP	EDGE OF PAVEMENT
LP	LOOP	WTR	WATER
N	NORTH	SAN	SANITARY SEWER
S	SOUTH	PROP	PROPOSED
KD	KEYNES DRIVE	COLL	COLLECTOR
HD	HARTWOOD DRIVE	LPT	LOW POINT
GMD	GRACE MANOR DRIVE	RES	RESIDENTIAL
CMD	COUNTRY MANOR DRIVE		
KBD	KINGSBURY DRIVE		
WD	WATERLOO DRIVE		
FC	FINSBURY COURT		
DD	DEVONCOVE DRIVE		
HP	HIGH POINT		

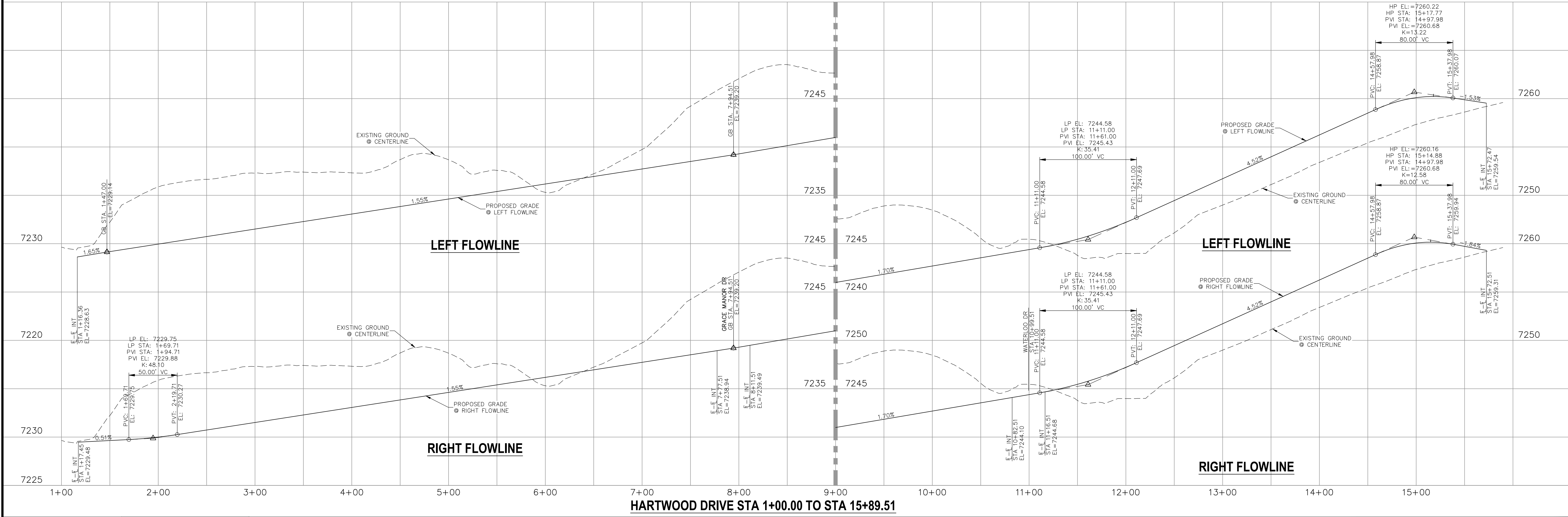
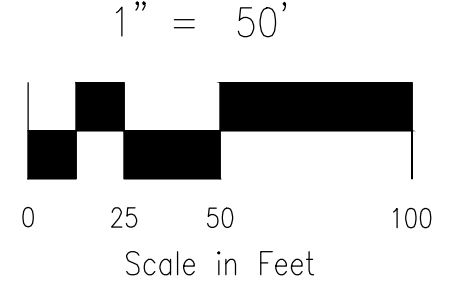
**HARTWOOD DRIVE  
STA 1+00.00 TO STA 15+89.51**

**CENTERLINE LINE TABLE**

LINE	LENGTH	DIRECTION
L1	511.23'	N0°35'00"W
L2	305.00'	N0°35'00"W
L3	490.00'	N0°35'00"W

**CENTERLINE CURVE TABLE**

CURVE	RADIUS	LENGTH	DELTA
C1	300.00'	183.28'	35°00'16"



**HARTWOOD DRIVE STA 1+00.00 TO STA 15+89.51**

**STATEMENT:**  
THE CITY OF COLORADO SPRINGS RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN; THE CITY HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. RESUBMITTAL REQUIRED IF CONSTRUCTION HAS NOT COMMENCED WITHIN 180 DAYS AFTER APPROVAL DATE.

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
**FOR BURIED UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987**

**STREET DESIGN:**  
TRAFFIC ENGINEERING: \_\_\_\_\_ DATE: \_\_\_\_\_  
CURB & GUTTER: \_\_\_\_\_ DATE: \_\_\_\_\_  
FINAL REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
**DRAINAGE DESIGN:**  
DRAINAGE REVIEW: \_\_\_\_\_ DATE: \_\_\_\_\_  
FILED IN ACCORDANCE WITH SECTION 7-7-906 OF COLORADO SPRINGS CODE 2001, AS AMENDED.

**DESIGN DATA:**  
SIDEWALKS: WIDTH 5' ASPHALT THICKNESS: \_\_\_\_\_  
LOCATION: Attached  AC Surface \_\_\_\_\_  
Detached  CENTERED IN 5' EASEMENT AB Base \_\_\_\_\_  
CURB TYPE A  AGG. BASE THICKNESS: \_\_\_\_\_  
CURB TYPE C  Class 6 \_\_\_\_\_  
ROW WIDTH 50' EOP-EOP 30' Class 5 \_\_\_\_\_  
STREET TYPE RESIDENTIAL HVEEM Class 2 \_\_\_\_\_  
DESIGN SPEED 25 MPH

**PAINT BRUSH HILLS FILING NO. 14**  
**STREET IMPROVEMENT PLANS**  
PROJECT NO. 10-014 DATE: 06/25/2020  
DESIGNED BY: JWP SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'  
DRAWN BY: JWP SHEET 12 OF 25  
CHECKED BY: GW S112

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160

NO.	DATE	DESCRIPTION

THE DESIGNER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

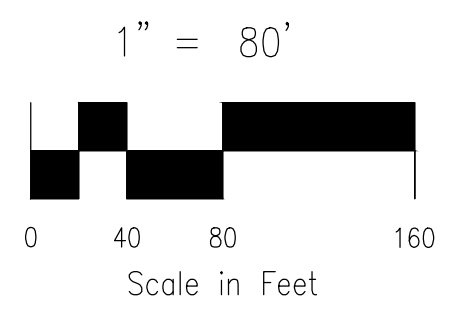
**CAUTION**

File: C:\Users\joprice\Documents\10014-PBH 14\Draw\Corra Draw\STREET\S12.dwg Plotstamp: 7/1/2020 10:00 AM

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
 FOR BURIED UTILITY INFORMATION  
 48 HRS BEFORE YOU DIG  
 CALL 1-800-922-1987



SEE SHEET S114



**PAINT BRUSH HILLS FILING NO. 14**  
**SIGNAGE AND STRIPING PLAN**

PROJECT NO. 10-014 FILE: \eng\Const\Draw\Street & Storm Plans\S13-14.dwg DATE: 2/26/2018  
 DESIGNED BY: JWP SCALE: N/A  
 DRAWN BY: JWP HORIZ: 1"=50'  
 CHECKED BY: GW VERT: N/A

20 BOULDER CRESCENT SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.555.5485

M&S CIVIL CONSULTANTS, INC.

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

MARGIL A. SANCHEZ, COLORADO P.E. NO. 37160

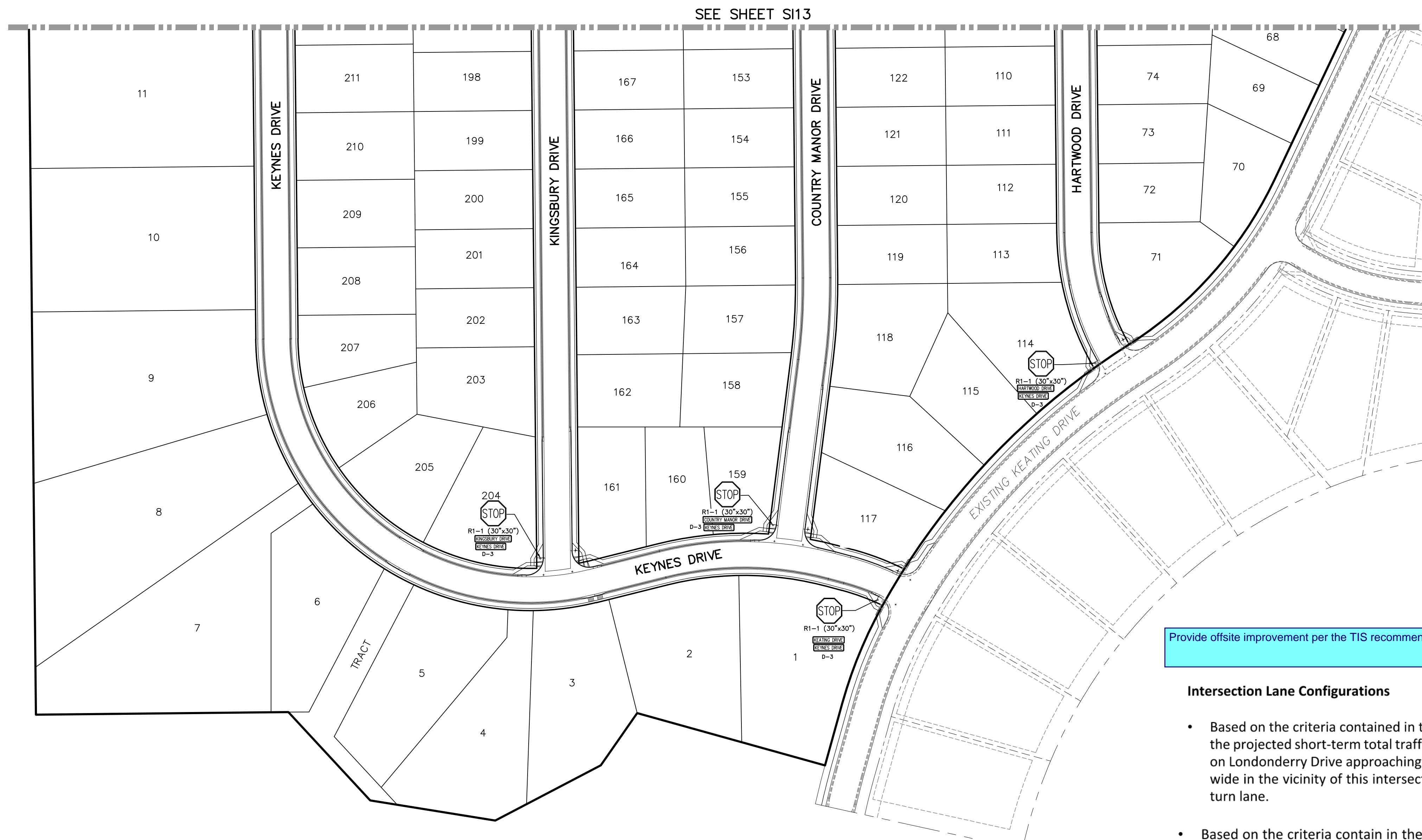
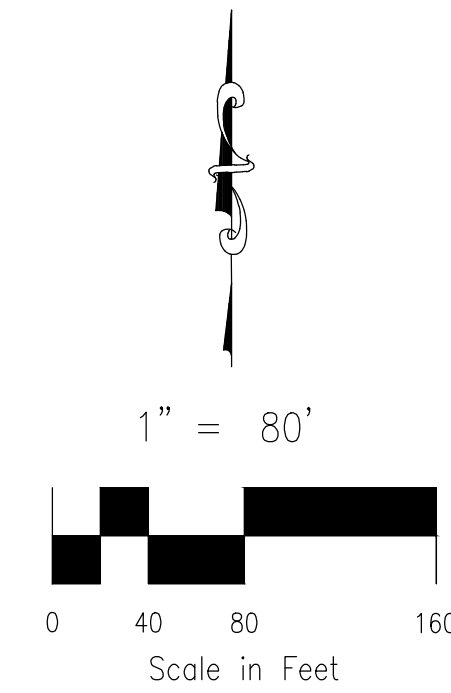
NO.	DATE	BY	DESCRIPTION	APPROV. BY	DATE

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CAUTION

SHEET 13 OF 25  
 S113

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
 FOR BURIED UTILITY INFORMATION  
**48 HRS BEFORE YOU DIG**  
 CALL 1-800-922-1987



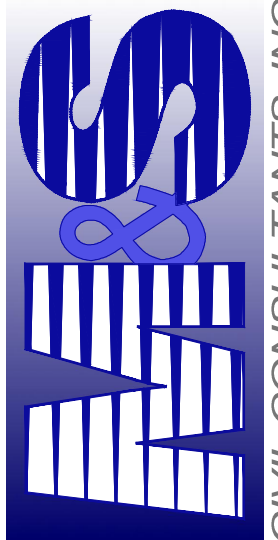
SEE SHEET S13

Provide offsite improvement per the TIS recommendation. See below

**Intersection Lane Configurations**

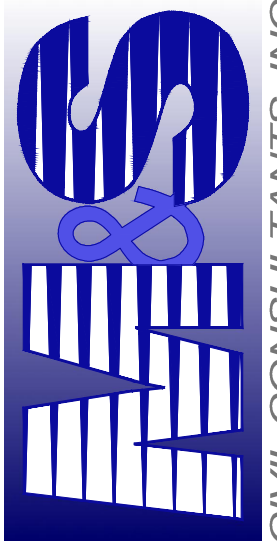
- Based on the criteria contained in the *El Paso County Engineering Criteria Manual (ECM)* and the projected short-term total traffic volumes, a northbound left-turn lane would be required on Londonderry Drive approaching Rockingham Drive. Londonderry Drive is currently 40 feet wide in the vicinity of this intersection and could be restriped to provide a northbound left-turn lane.
- Based on the criteria contain in the ECM and the projected short-term total traffic volumes, a southbound right-turn deceleration lane would be required on Londonderry Drive approaching Rockingham Drive based on the projected right-turn volume. However, at this particular location, the westbound through volume is low and is projected to remain low at buildout. Although the ECM does not have a provision for waiving the need for a right-turn deceleration lane when the through traffic is below a certain level, the State of Colorado Highway Access code provides a waiver to right-turn lane requirements when the 20<sup>th</sup> year predicted volume in the travel lane is below 150 vehicles per hour. As the southbound traffic volume is projected to be only 87 vehicles per hour, LSC recommends that the requirement for a right-turn deceleration lane be waived. The County may require the submittal of a deviation request form.

Coordinate with the traffic engineer as they will be submitting a deviation request.  
 The southbound right turn will be pending ECM Administrator's determination

20 BOULDER CRESCENT, SUITE 110 COLORADO SPRINGS, CO 80903 PHONE: 719.555.5485		 <p><b>M&amp;S</b> CIVIL CONSULTANTS, INC.</p>
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.		MARGIL A. SANCHEZ, COLORADO P.E. NO. 37160
PROJECT NO.: 10-014 FILE: \\wg\Const Draw\Street & Storm Plans\S13-14.dwg	DATE: 2/26/2018	PAINT BRUSH HILLS FILING NO. 14 SIGNAGE AND STRIPING PLAN SHEET 14 OF 25 S114
DESIGNED BY: JWP DRAWN BY: JWP CHECKED BY: GW	SCALE: 1"=50' HORIZ: N/A VERT: N/A	CAUTION
REVISIONS: NO. DATE BY: DESCRIPTION APPROVD. BY: DATE:		
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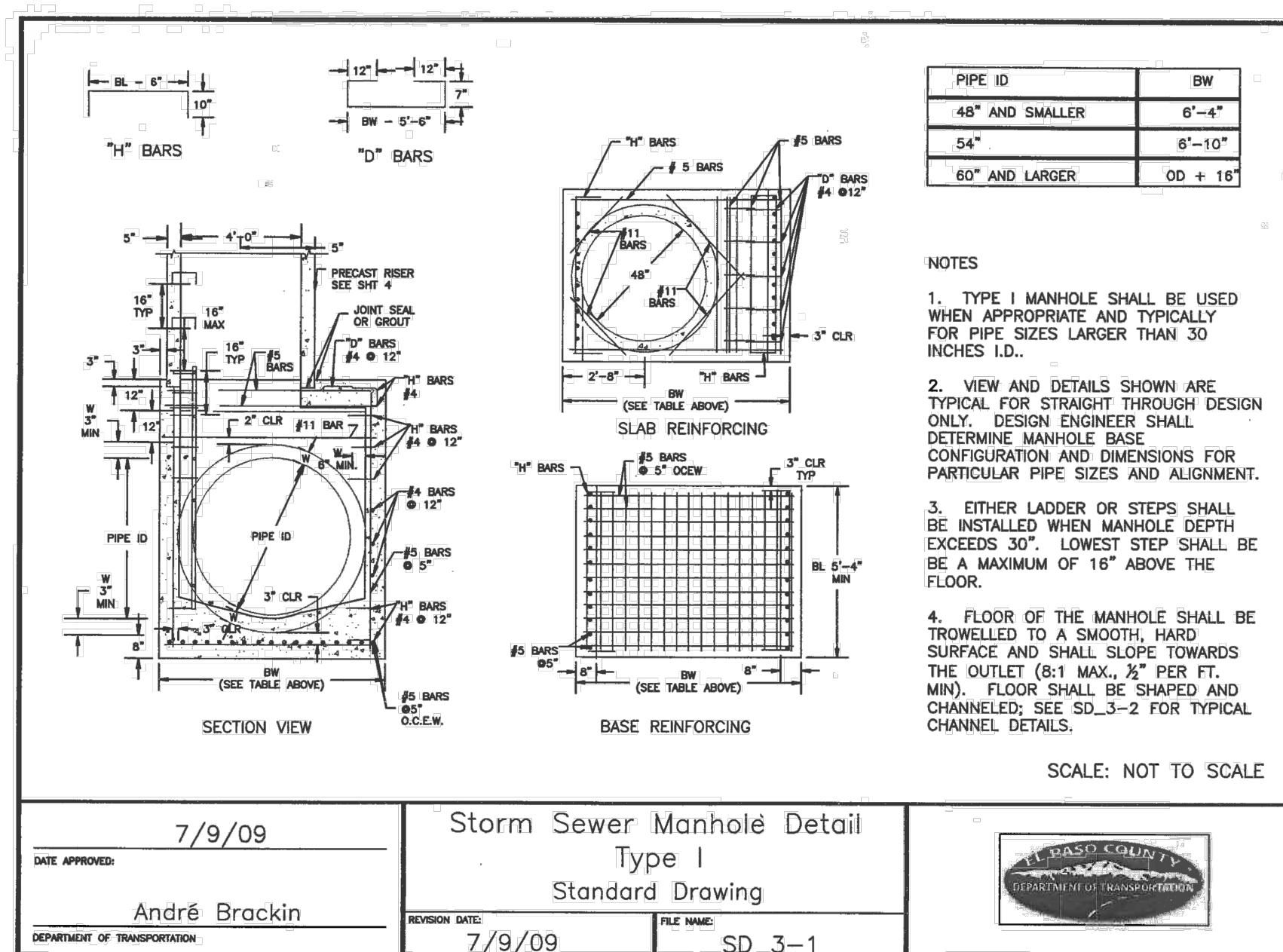
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PAINT BRUSH HILLS FILING NO. 14  
 GENERAL NOTES AND DETAILS  
 PROJECT NO. 10-014 FILE: \lang\Const\Draw\Storm - District\ST02.dwg DATE: 06/25/20  
 DESIGNED BY: GT SCALE: N/A  
 DRAWN BY: CMN HORIZ: N/A  
 CHECKED BY: WAS VERT: N/A

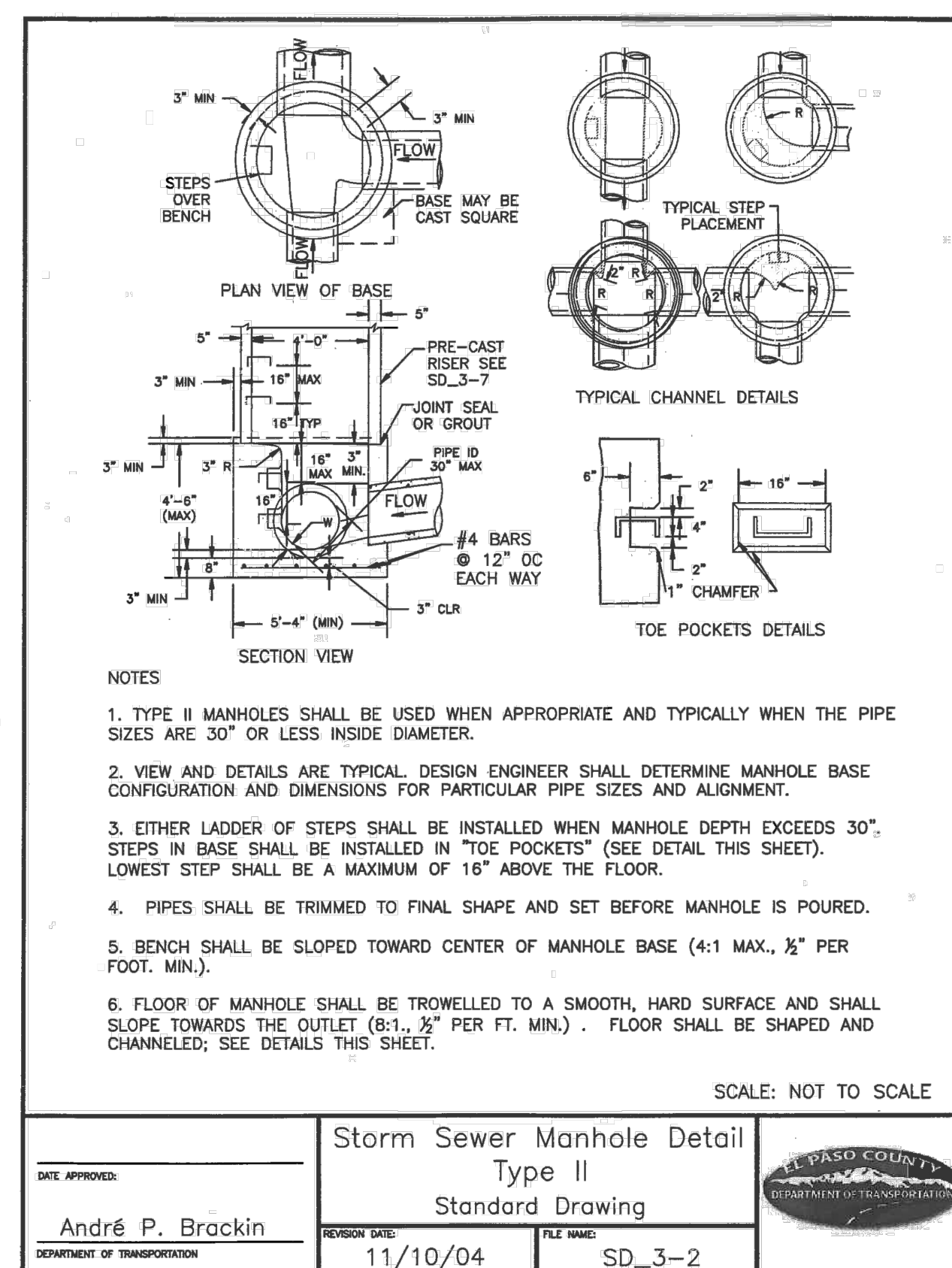
20 BOULDER CRESCENT, SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.555.5485  
  
 CIVIL CONSULTANTS, INC.

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.  
 VIRGIL A. SANCHEZ, COLORADO P.E. NO. 7160

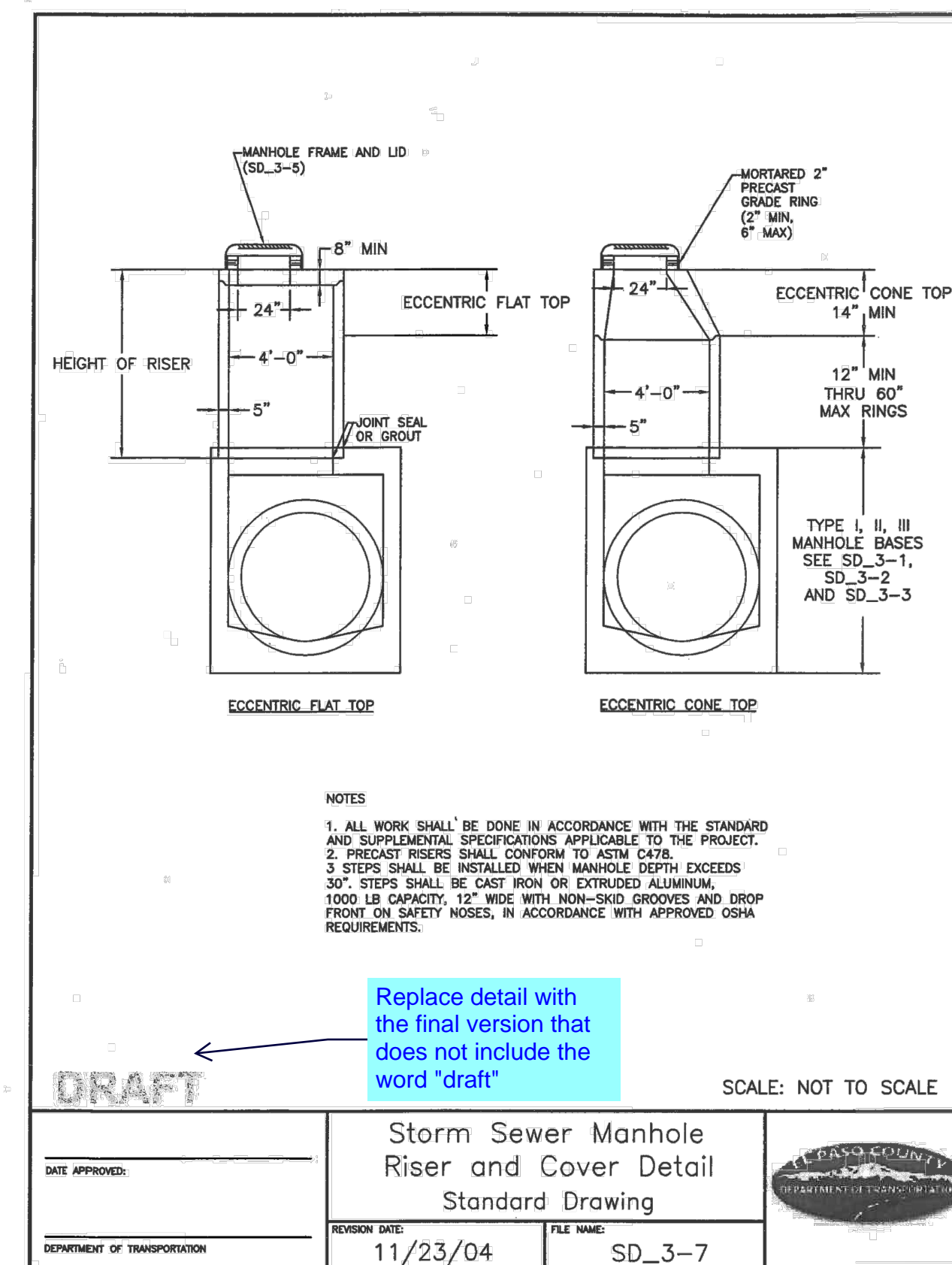
Replace detail with the latest version.  
 Revision Date (9/16/10)



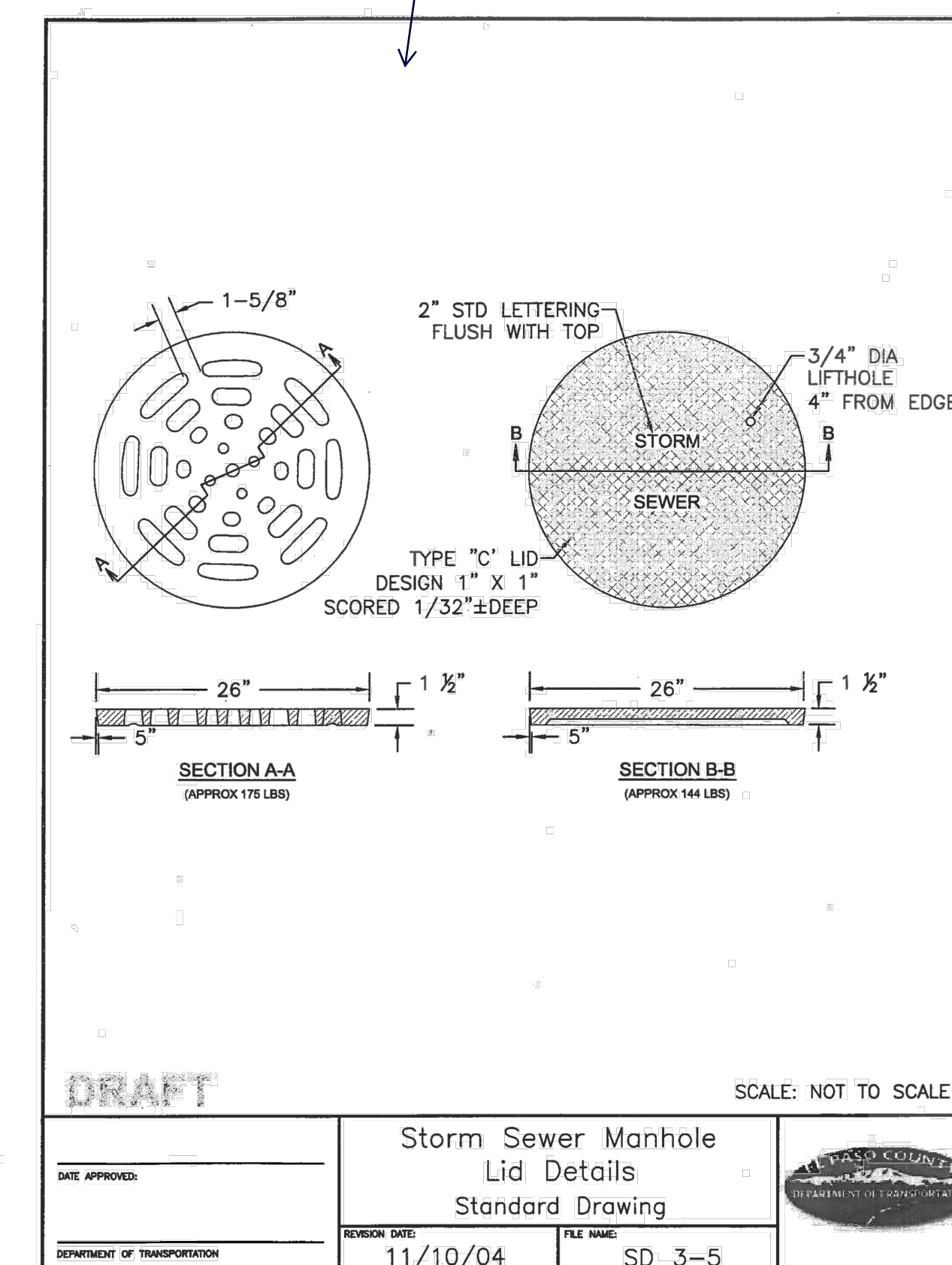
STORM SEWER MANHOLE DETAIL  
 TYPE I SD 3-1



STORM SEWER MANHOLE DETAIL  
 TYPE II SD 3-2



STORM SEWER MANHOLE  
 RISER AND COVER DETAIL  
 TYPE SD 3-7



STORM SEWER MANHOLE  
 LID DETAILS SD 3-5

NO.	DATE	BY	DESCRIPTION

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CAUTION

**GENERAL NOTES:**  
SEE SHEET 2.

FOR LENGTH (L) 10 FT. OR MORE, PROVIDE MAINTENANCE ACCESS AT BOTH ENDS WITH AN ADDITIONAL MANHOLE RING AND COVER. CUT REINFORCEMENT BAR ACCORDINGLY.

STATION POINT AT MIDPOINT OF INLET ALONG FLOWLINE.

MEET SHAPE OF NORMAL BARRIER CURB AND GUTTER HERE.

SEE CHANNEL LAYOUT ON SHEET 2.

WHEN A TYPE R INLET IS USED WITH MOUNTABLE CURB AND GUTTER, 2 FT. TRANSITION SHALL BE CONSTRUCTED. TRANSITION SHALL BE PAID FOR AS CURB AND GUTTER.

FOR A 1'-0" PAN SLOPE 2" PER FT.

A 2 IN. DIAMETER TEMPORARY HOLE FOR DRAINAGE SHALL BE PLACED AT SUBGRADE ELEVATION OR A MINIMUM THREE INCHES BELOW ROAD BASE. THE HOLE SHALL BE PLUGGED WITH CONCRETE BEFORE ACCEPTANCE OF THE INLET.

NOTE: MANHOLE RING AND COVER, STATION POINT AND OUTFLOW PIPE SHALL BE LOCATED AT THE SAME END OF THE INLET.

**TRANSITION CURB**

**PLAN VIEW**

**SECTION A-A REGULAR INLET**

**SECTION A-A INLET WITH DROP BOX ~ H ≥ 5 FT.**

**CURB FACE ASSEMBLY**

**SECTION B-B END VIEW**

**SECTIONS C-C & D-D** (DOTTED BARS ARE IN SECTION D-D)

**Computer File Information**  
Creation Date: 07/04/12 Initials: DD  
Last Modification Date: 07/04/12 Initials: LTA  
Full Path: www.colorado DOT.info/business/designsupport  
Drawing File Name: 60401202.dgn  
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

**Sheet Revisions**

**Colorado Department of Transportation**  
4201 East Arkansas Avenue  
Denver, Colorado 80222  
Phone: (303) 757-9083  
Fax: (303) 757-9820  
Project Development Branch DD/LTA

**CURB INLET TYPE R**

**STANDARD PLAN NO. M-604-12**

Issued By: Project Development Branch July 4, 2012  
Sheet No. 1 of 2

**GENERAL NOTES**

- INLET TYPE D IS NOT HS-20 RATED AND SHALL NOT BE PLACED IN PAVED ROADWAYS. THIS INLET SHALL BE USED ONLY OUTSIDE PAVED ROADWAYS.
- CONCRETE SHALL BE CLASS B INLET MAY BE CAST-IN-PLACE OR PRECAST.
- SEE PLANS FOR SIZE AND LOCATION OF PIPE.
- STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
- STANDARD INLET GRATES SHALL BE USED ON ALL TYPE D INLETS UNLESS CLOSE MESH GRATES ARE SPECIFIED ON THE PLANS.
- CLOSE MESH GRATES ARE RECOMMENDED WHERE FOOT TRAFFIC OR BICYCLE ROUTES ARE IN CLOSE PROXIMITY TO GRATE. THIS GRATE IS NOT A COMPLIANT OR BICYCLE FRIENDLY AND SHALL NOT BE PLACED DIRECTLY IN SIDEWALKS, CROSSWALKS OR BIKE PATHS.
- STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FT.-6 IN. AND SHALL CONFORM WITH AASHTO M 199.
- REINFORCING BARS SHALL BE EPOXY COATED AND DEFORMED #4, AND SHALL HAVE A 2 IN. MINIMUM CLEARANCE CUT OR BEND BARS AROUND PIPE AS REQUIRED.
- ALL INLETS SHALL HAVE A 4 IN. DIA. METAL MEDALLION WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE ON IT. THE MEDALLION SHALL HAVE A FISH SYMBOL WITH A BLUE BACKGROUND. IT SHALL BE FIRMLY ATTACHED TO THE INLET'S SURFACE WITH A PERMANENT FASTENER.

**TRANSVERSE CROSS SECTION LEVEL GRATE INSTALLATION**

**LONGITUDINAL CROSS SECTION**

**TRANSVERSE CROSS SECTION SLOPING GRATE INSTALLATION**

**LONGITUDINAL CROSS SECTION**

**PLAN VIEW (SHOWING ANCHOR BOLT LAYOUT)**

**QUANTITIES FOR ONE INLET**

"H" FT.	CONCRETE CU. YDS.	STEEL LBS.	CIRCULAR PIPE RANGE INSIDE DIA. IN. - "D"
3.0	1.5	127	18
3.5	1.7	149	18-24
4.0	1.9	157	18-30
4.5	2.0	179	18-36
5.0	2.2	187	18-42
5.5	2.4	208	18-42
6.0	2.6	215	18-42
6.5	2.8	236	18-42
7.0	2.9	243	18-42
7.5	3.1	264	18-42
8.0	3.3	271	18-42
8.5	3.5	292	18-42
9.0	3.6	299	18-42
9.5	3.8	320	18-42
10.0	4.0	327	18-42

CONCRETE AND STEEL QUANTITIES ARE FOR ONE ENTIRE INLET BEFORE DEDUCTION FOR VOLUME OCCUPIED BY PIPE. WEIGHT OF STEEL INCLUDES A RING FOR THE MAXIMUM PIPE DIAMETER.

**Computer File Information**  
Creation Date: 07/04/12 Initials: DD  
Last Modification Date: 07/04/12 Initials: LTA  
Full Path: www.colorado DOT.info/business/designsupport  
Drawing File Name: 60401101.dgn  
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

**Sheet Revisions**

**Colorado Department of Transportation**  
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Phone: (303) 757-9083  
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Project Development Branch DD/LTA

**INLET, TYPE D**

**STANDARD PLAN NO. M-604-11**

Issued By: Project Development Branch July 4, 2012  
Sheet No. 1 of 1

**GENERAL NOTES**

- CONCRETE SHALL BE CLASS B INLET MAY BE CAST-IN-PLACE OR PRECAST.
- CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8 IN. THICK.
- INLET STEPS SHALL BE IN CONFORMANCE WITH AASHTO M 199.
- CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
- EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4 IN. CURB AND GUTTER CORNERS SHALL BE FINISHED TO MATCH THE EXISTING CURB AND GUTTER BEYOND THE TRANSITION GUTTER.
- REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A 2 IN. MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE EPOXY COATED.
- DIMENSIONS AND WEIGHTS OF TYPICAL MANHOLE RING AND COVER ARE NOMINAL.
- MATERIAL FOR MANHOLE RINGS AND COVERS SHALL BE GRAY DUCTILE CAST IRON IN ACCORDANCE WITH SUBSECTION 712.06.
- SINCE PIPE ENTRIES INTO THE INLET ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK. QUANTITIES INCLUDE VOLUMES OCCUPIED BY PIPES.
- STRUCTURAL STEEL SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
- ALL MANHOLE COVERS SHALL BE CAST WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE AND A FISH SYMBOL. THE SURFACE OF THE MANHOLE COVER SHALL HAVE A NON-SLIP PATTERN.

**NO DUMPING DRAINS TO STREAM**

**PLAN VIEW**

**ELEVATION VIEW MANHOLE COVER (TYP.)**

**PLAN VIEW**

**ELEVATION VIEW MANHOLE RING (TYP.)**

**CHANNEL LAYOUT DETAILS**  
SEE CURB FACE ASSEMBLY ON SHEET 1.

**BAR BENDING DIAGRAMS ~ (DIMENSIONS ARE OUT-TO-OUT OF BAR)**

**TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"**

MARK	BAR OR SIZE	D.C. SPACING	ALL INLETS		INLETS: H ≤ 5 FT.		INLETS: H > 5 FT.		
			NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	NO. REQ'D.	LENGTH	
401	4	11"	15	21	26	7	11	7	
402	4	11"	7	18	7	7	7	7	
403	4	9"	4	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	
405	4	6"	11	6'-10"	31	6'-10"	11	6'-10"	
406	4	6"	7	8'-10"	7	8'-10"	7	8'-10"	
407	4	9"	5	5'-10"	5	5'-10"	5	5'-10"	
408	4	12"	3	6'-0"	3	6'-0"	3	6'-0"	
409	4	8"	11	6'-10"	6	10'-10"	6	10'-10"	
410	4	11"	6	5'-10"	3	3	3	3	
411	4	11"	11	11	3	5'-2"	3	10'-2"	
412	4	11"	11	11	3	2'-9"	3	2'-9"	
413	4	9"	11	11	7	10'-10"	7	10'-10"	
501	5	5/8"	11	3'-4"	22	3'-4"	33	3'-4"	
502	5	5/8"	11	11	11	11	11	11	
503	5	5/8"	11	5	3'-6"	16	3'-6"	6	3'-6"
504	5	5/8"	11	11	11	11	11	11	
601	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
602	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
603	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
604	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
605	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
606	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
607	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
608	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
609	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
610	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
611	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
612	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
613	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
614	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
615	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
616	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
617	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
618	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
619	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	
620	6	2 1/2"	2	8'-10"	2	8'-10"	2	8'-10"	

REGULAR INLETS

DROP BOX INLETS

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"

"H"	LENGTH	NO. REQ'D.		CONC. CU. YDS.	STEEL LBS.	CONC. CU. YDS.	STEEL LBS.	
		REGULAR	DROP BOX					
3'-0"	2'-8"	1	8	3.2	285	5.3	497	
3'-6"	3'-2"	1	7	3.4	305	5.7	528	
4'-0"	3'-8"	1	9	3.7	326	6.0	559	
4'-6"	4'-2"	1	12	3.9	334	6.4	571	
5'-0"	4'-8"	1	11	4.1	354	6.7	602	
5'-6"	5'-2"	1	15	4.4	375	6.9	627	
6'-0"	5'-8"	1	16	4.6	382	6.2	616	
6'-6"	6'-2"	1	18	4.8	402	6.4	637	
7'-0"	6'-8"	1	19	5.0	423	6.6	654	
7'-6"	7'-2"	1	20	5.3	430	6.9	664	
8'-0"	7'-8"	1	22	5.5	451	7.1	684	
8'-6"	8'-2"	1	23	5.7	471	7.3	702	
9'-0"	8'-8"	1	24	24	6.0	479	7.6	711
9'-6"	9'-2"	1	26	23	6.2	499	7.8	732
10'-0"	9'-8"	1	28	25	6.4	520	8.0	749
10'-6"	10'-2"	1	28	25	6.7	527	8.3	759
11'-0"	10'-8"	1	30	27	6.9	547	8.5	779

REGULAR INLETS: TOTAL QUANTITIES NEEDED ARE OUTSIDE THE HEAVY BLACK LINE.  
DROP BOX INLETS: TOTAL QUANTITIES NEEDED ARE INSIDE THE HEAVY BLACK LINE.  
STEEL WEIGHTS DO NOT INCLUDE STRUCTURAL STEEL CHANNEL.

**Computer File Information**  
Creation Date: 07/04/12 Initials: DD  
Last Modification Date: 07/04/12 Initials: LTA  
Full Path: www.colorado DOT.info/business/designsupport  
Drawing File Name: 60401202.dgn  
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

**Sheet Revisions**

**Colorado Department of Transportation**  
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Denver, Colorado 80222  
Phone: (303) 757-9083  
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Project Development Branch DD/LTA

**CURB INLET TYPE R**

**STANDARD PLAN NO. M-604-12**

Issued By: Project Development Branch July 4, 2012  
Sheet No. 2 of 2

**PAINT BRUSH HILLS FILING NO. 14**

**GENERAL NOTES AND DETAILS**

PROJECT NO. 10-014 FILE: Yang\Const\Eng\Storm - District\ST03.dwg  
DATE: 06/25/20  
SCALE: N/A  
DESIGNED BY: CT  
DRAWN BY: CWN  
CHECKED BY: VAS

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.4485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

REVISIONS:  
NO. DATE BY: DESCRIPTION

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CAUTION

7/1/2020 10:05 AM  
C:\Users\lpcresce\Documents\100144--P&H-14\F&H-14\Yang\Const\Eng\Storm\ST03.dwg ProStamp

MR. J. A. SANCHEZ, COLORADO P.E. NO. 37160

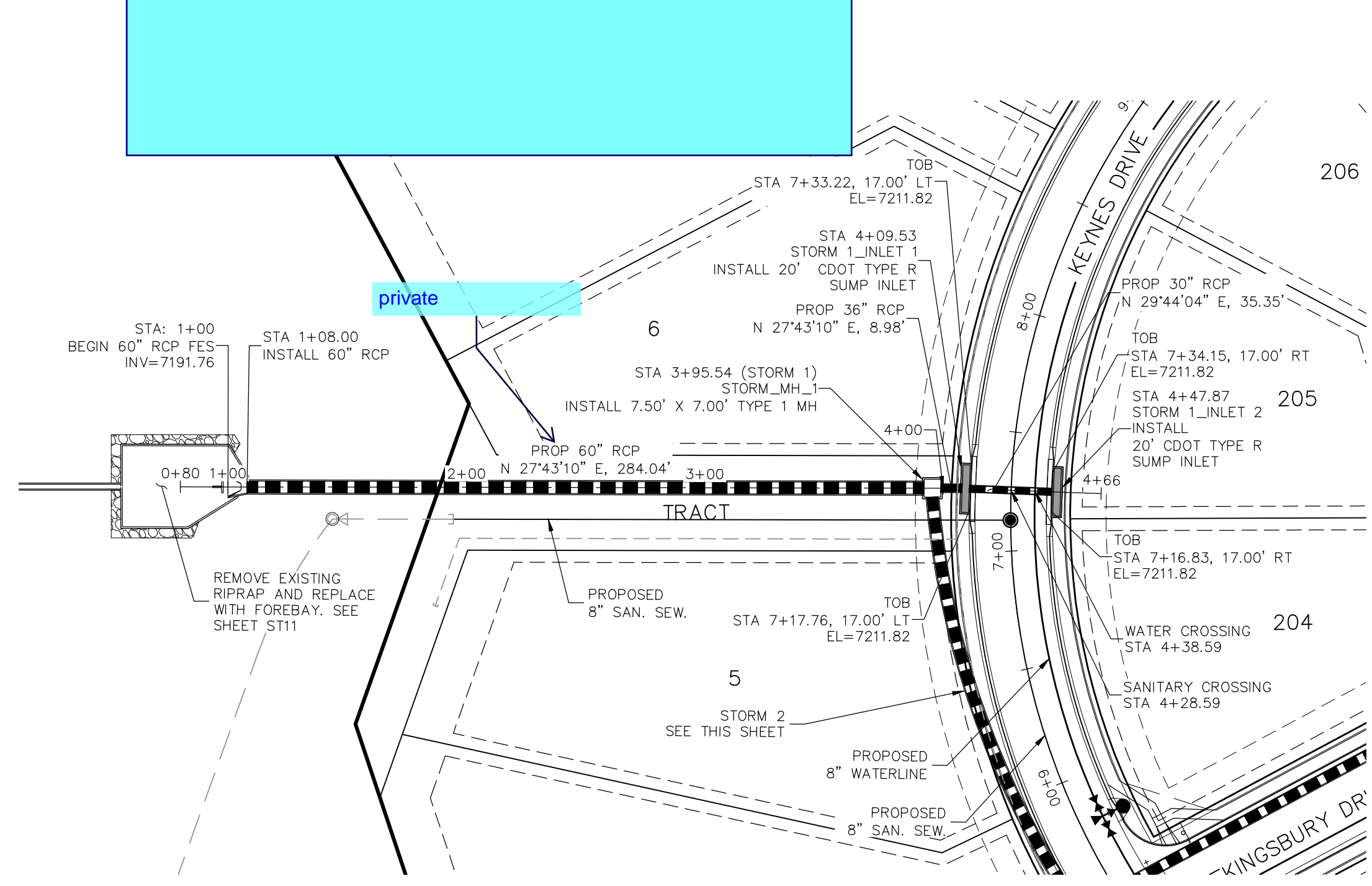
APPROVED BY: DATE:

ST03  
SHEET 16 OF 25

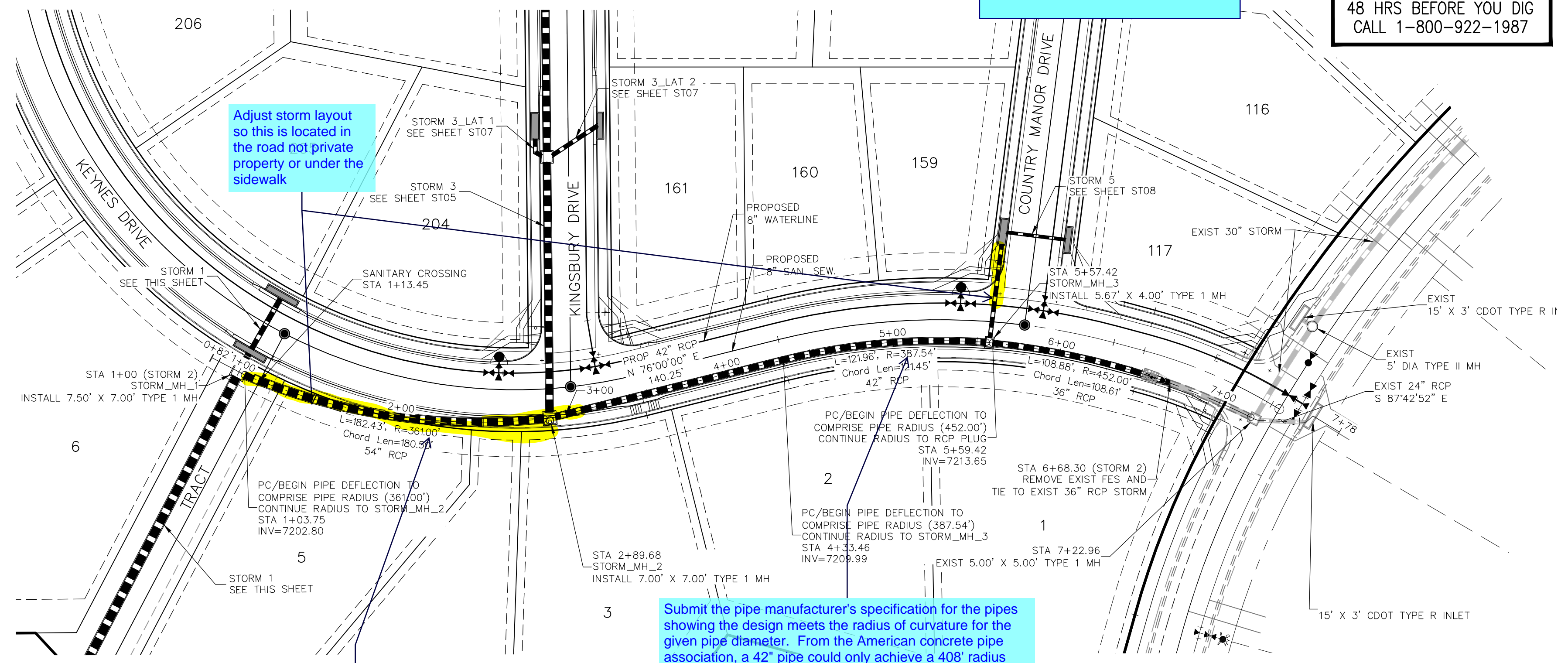
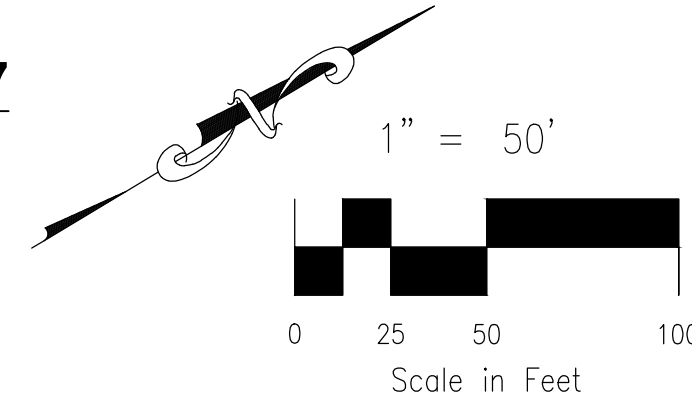


For all storm drain pipes, identify as either public or private. Typically, storm drain pipes in the ROW is public and private outside the ROW maintained by the district or HOA.

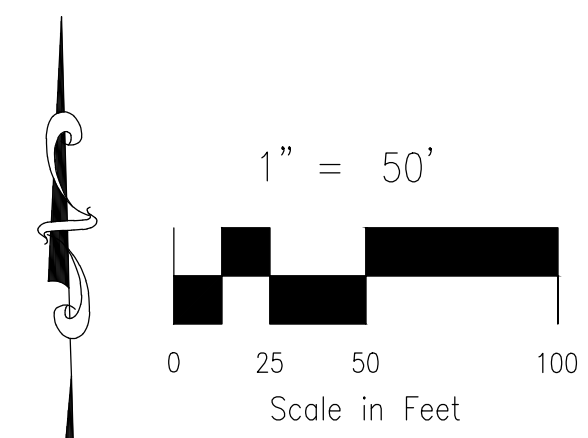
Provide a key map in the storm drain P&P sheets



**STORM 1**  
STA 1+00.00 TO STA 4+47.87

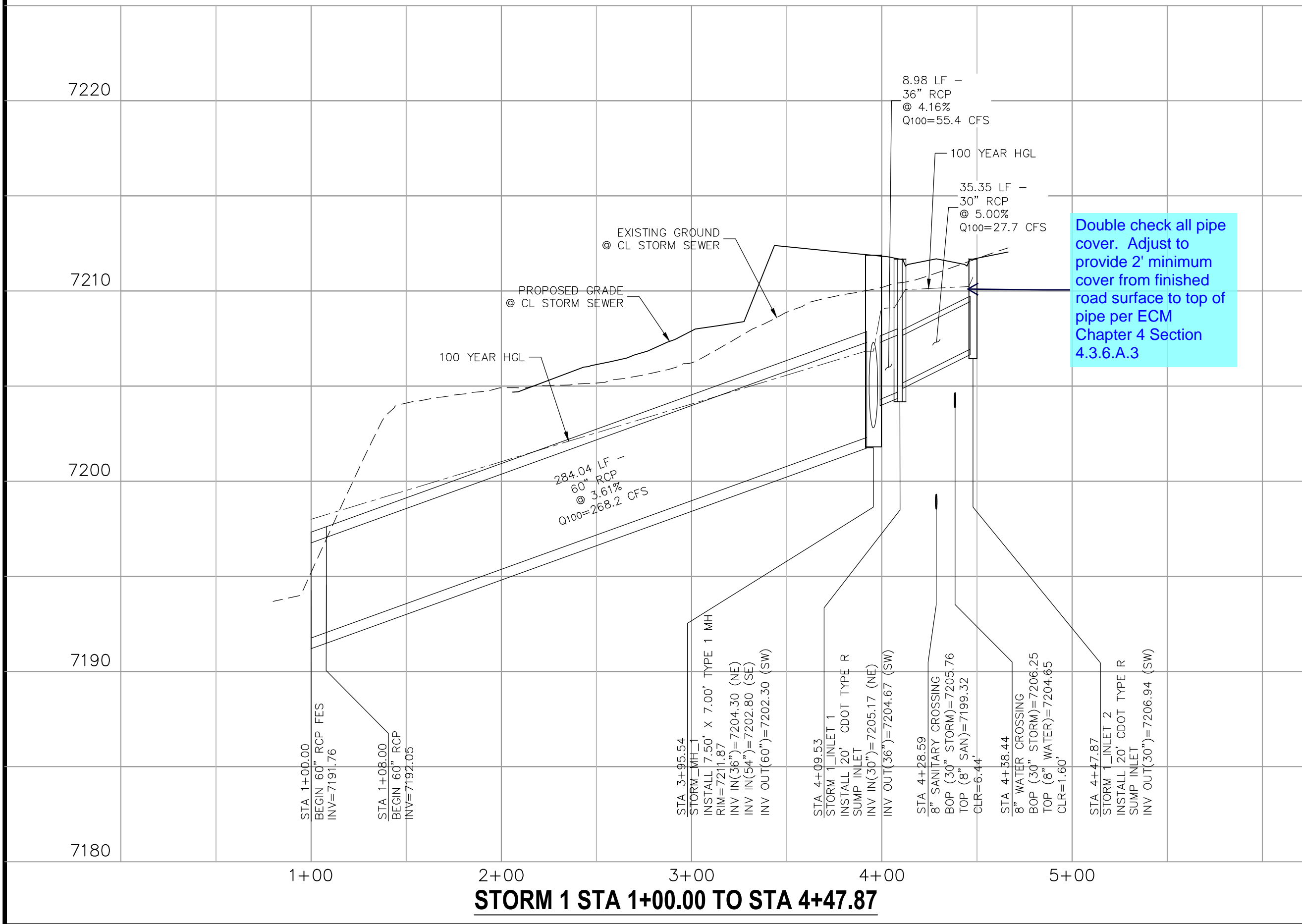


**STORM 2**  
STA 1+00.00 TO STA 7+96.22

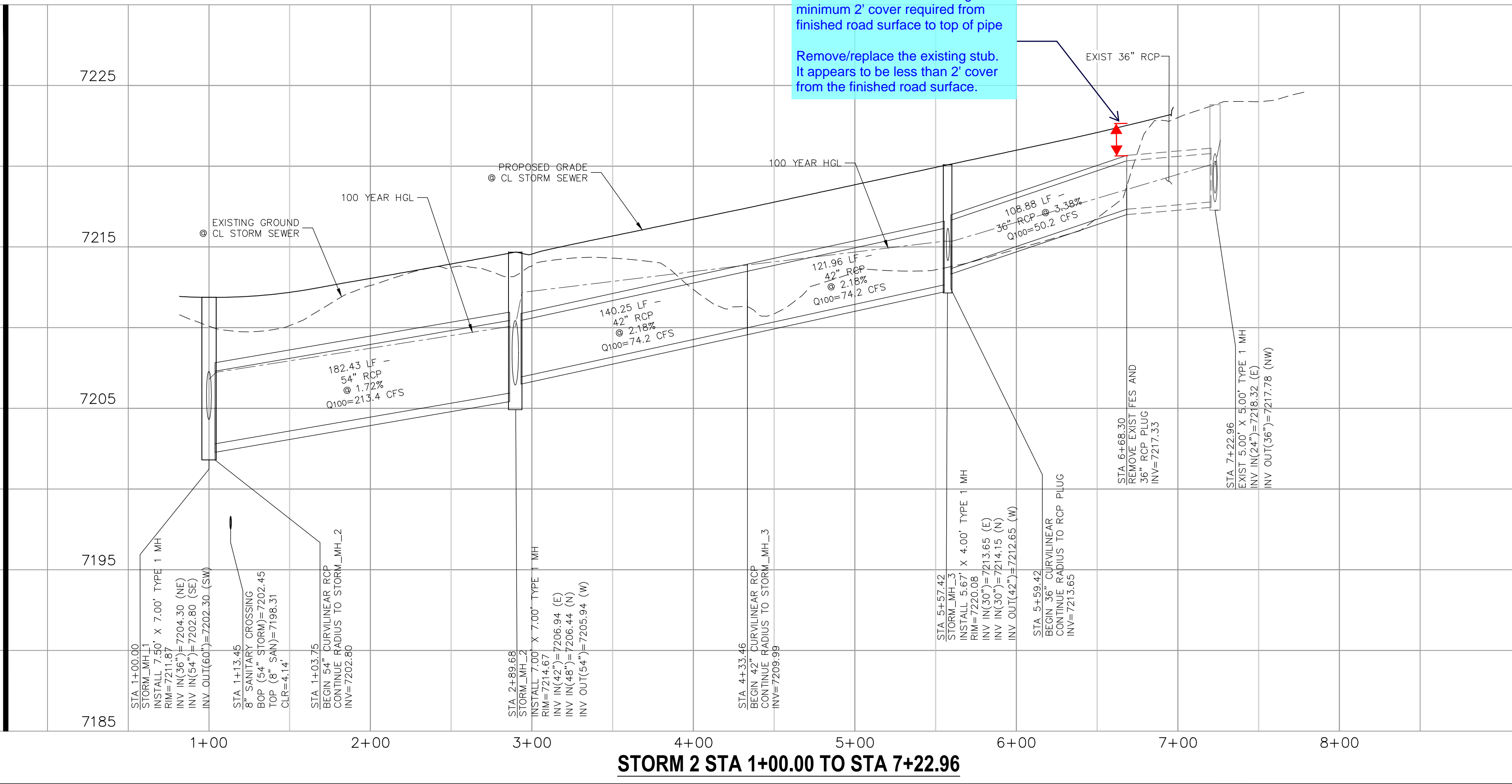


Per ECM 3.3.1.F curvilinear alignment is only allowed for pipe diameters of 48 inch or less. Revise to horizontal alignment.

Submit the pipe manufacturer's specification for the pipes showing the design meets the radius of curvature for the given pipe diameter. From the American concrete pipe association, a 42" pipe could only achieve a 408' radius



**STORM 1 STA 1+00.00 TO STA 4+47.87**



**STORM 2 STA 1+00.00 TO STA 7+22.96**

**PAINT BRUSH HILLS FILING NO. 14**

**STORM PLAN & PROFILE**

PROJECT NO. 10-014      DATE: 06/25/20

DESIGNED BY: GT      SCALE: HORIZONTAL: 1"=50'      VERTICAL: 1"=5'

DRAWN BY: CMN      SHEET 17 OF 25

CHECKED BY: VAS      ST04

---

20 BOULDER CRESCENT SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

**M&S CIVIL CONSULTANTS, INC.**

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FOR AND ON BEHALF OF  
M&S CIVIL CONSULTANTS, INC.

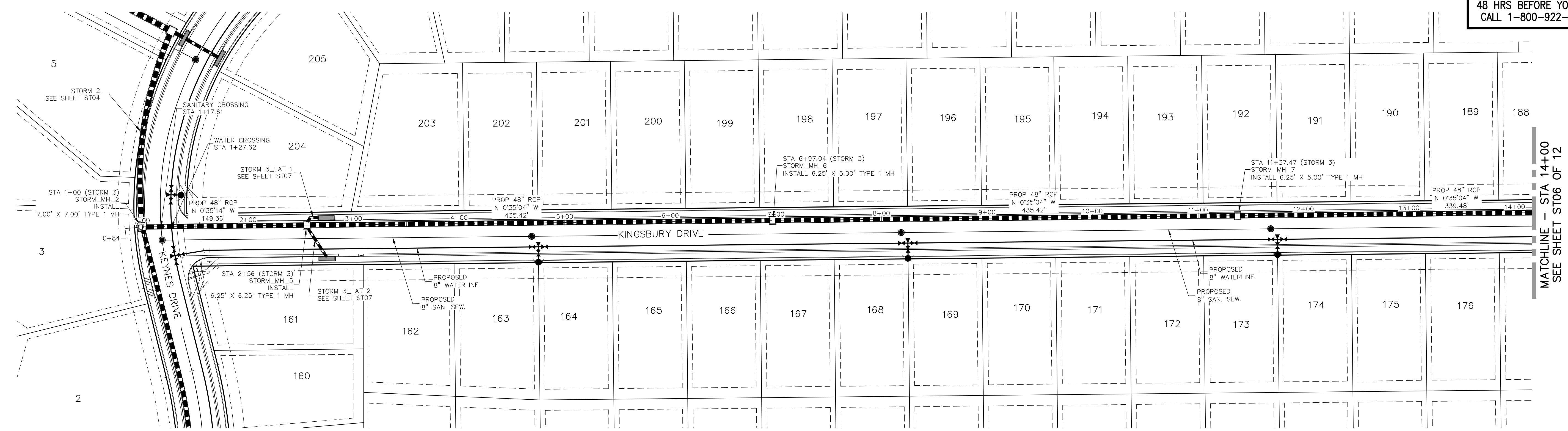
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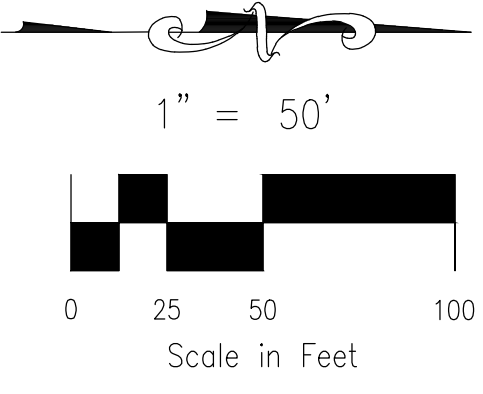
NO.	DATE:	BY:	DESCRIPTION:	APPROV. BY:	DATE:

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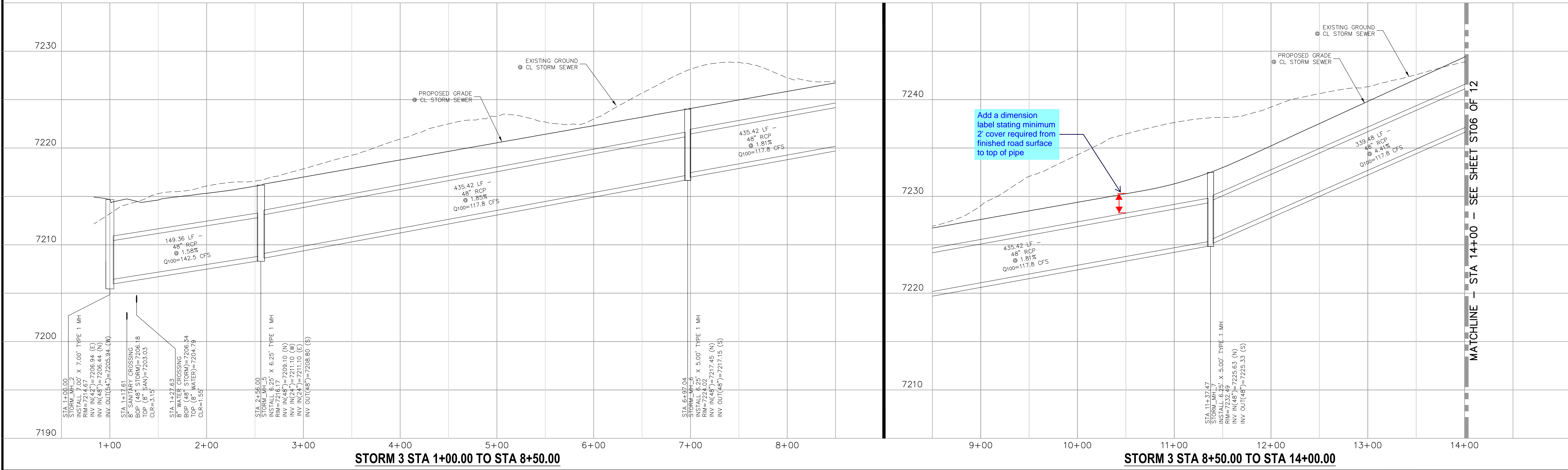
**CAUTION**



**STORM 3  
STA 1+00.00 TO STA 14+00.00**



Show the HGL on all storm sewer profiles



Add a dimension label stating minimum 2' cover required from finished road surface to top of pipe

**PAINT BRUSH HILLS FILING NO. 14**

**STORM PLAN & PROFILE**

PROJECT NO. 10-014 DATE: 06/25/20

DESIGNED BY: GT SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

DRAWN BY: CMN SHEET 18 OF 25

CHECKED BY: VAS ST05

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

**M&S CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF  
M&S CIVIL CONSULTANTS, INC.

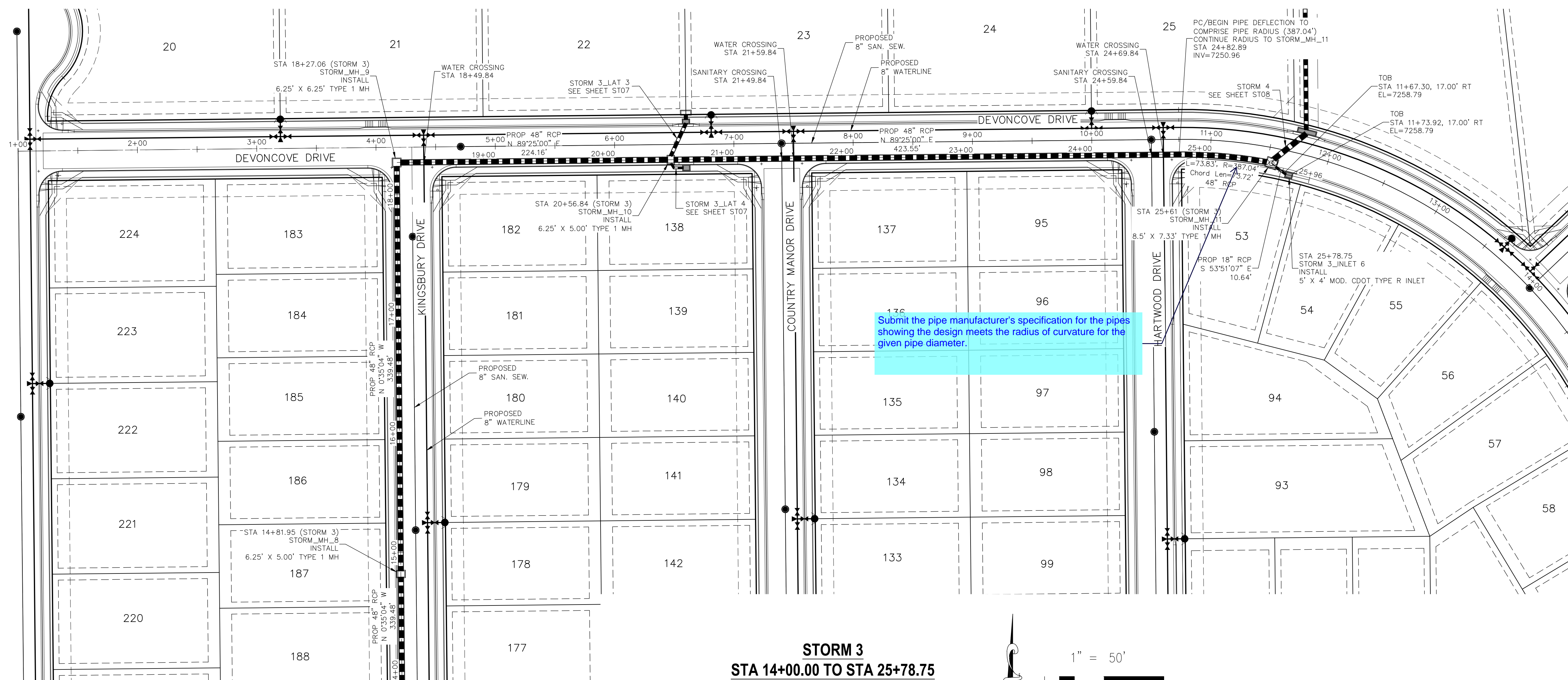
MARCIL A. SANCHEZ, COLORADO P.E. NO. 37760

NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

**CAUTION**

File: C:\Users\jprince\Documents\100144-PBH 14\Draw\Contd Draw\Storm\ST05.dwg PlotStamp: 7/1/2020 10:07 AM



**PAINT BRUSH HILLS FILING NO. 14**

**STORM PLAN & PROFILE**

PROJECT NO. 10-014 DATE: 06/25/20

DESIGNED BY: GT SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

DRAWN BY: CMN SHEET 19 OF 25

CHECKED BY: VAS **ST06**

20 BOULDER CRESCENT, SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.555.5485

**M&S CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160

NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

**CAUTION**

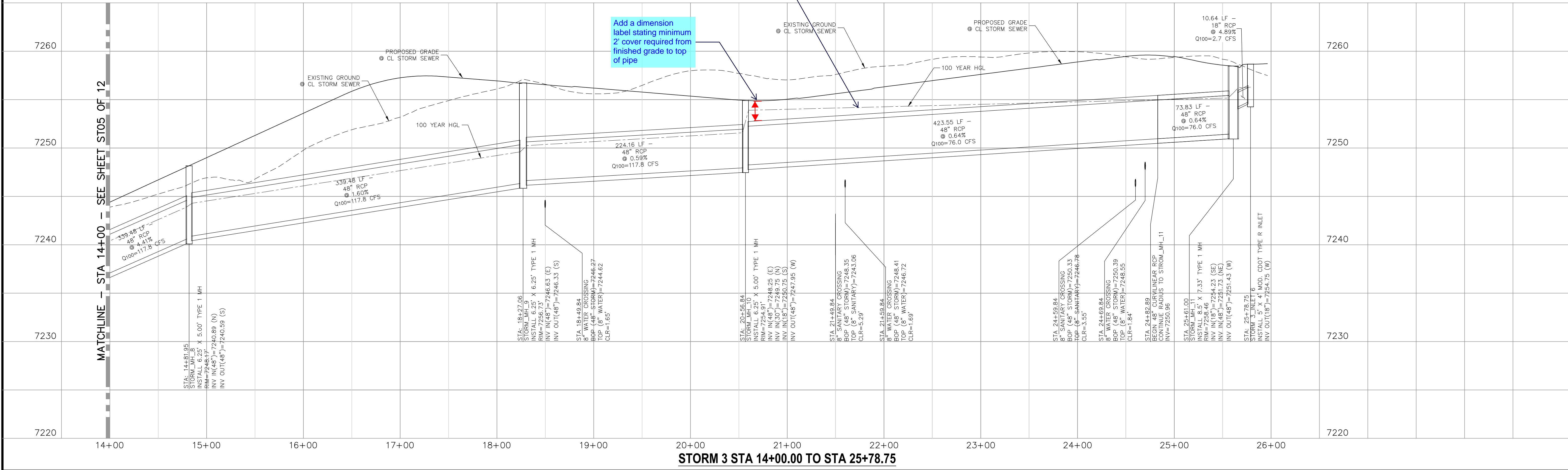
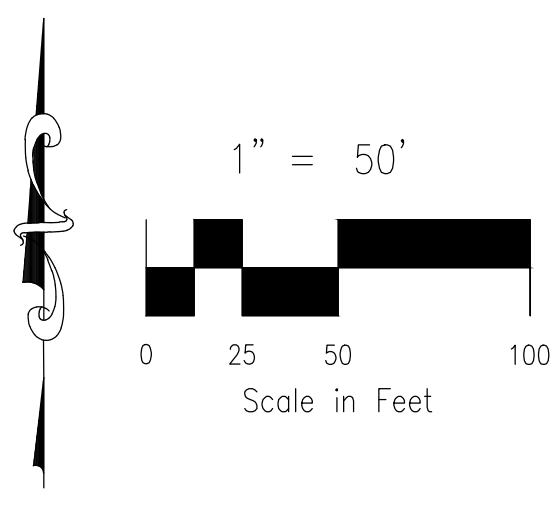
MATCHLINE - STA 14+00  
 SEE SHEET ST05 OF 12

Per ECM 3.3.1.D where it is necessary to design for a pressure head watertight joints with a 100-year service life is required. Update plans to identify the sections pipe requiring the watertight joints with 100-yr service life.

Submit the pipe manufacturer's specification for the pipes showing the design meets the radius of curvature for the given pipe diameter.

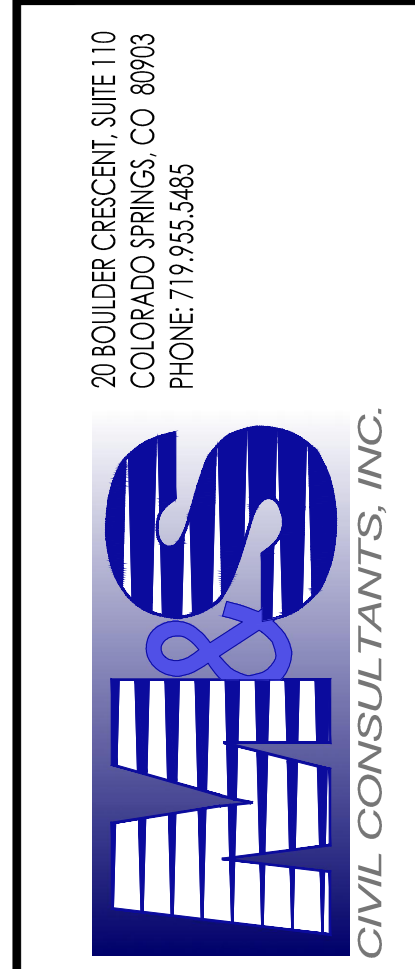
Add a dimension label stating minimum 2' cover required from finished grade to top of pipe

**STORM 3  
 STA 14+00.00 TO STA 25+78.75**





**PAINT BRUSH HILLS FILING NO. 14**  
**STORM PLAN & PROFILE**  
 PROJECT NO. 10-014  
 DATE: 06/25/20  
 SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'  
 DESIGNED BY: GT  
 DRAWN BY: CMN  
 CHECKED BY: VAS

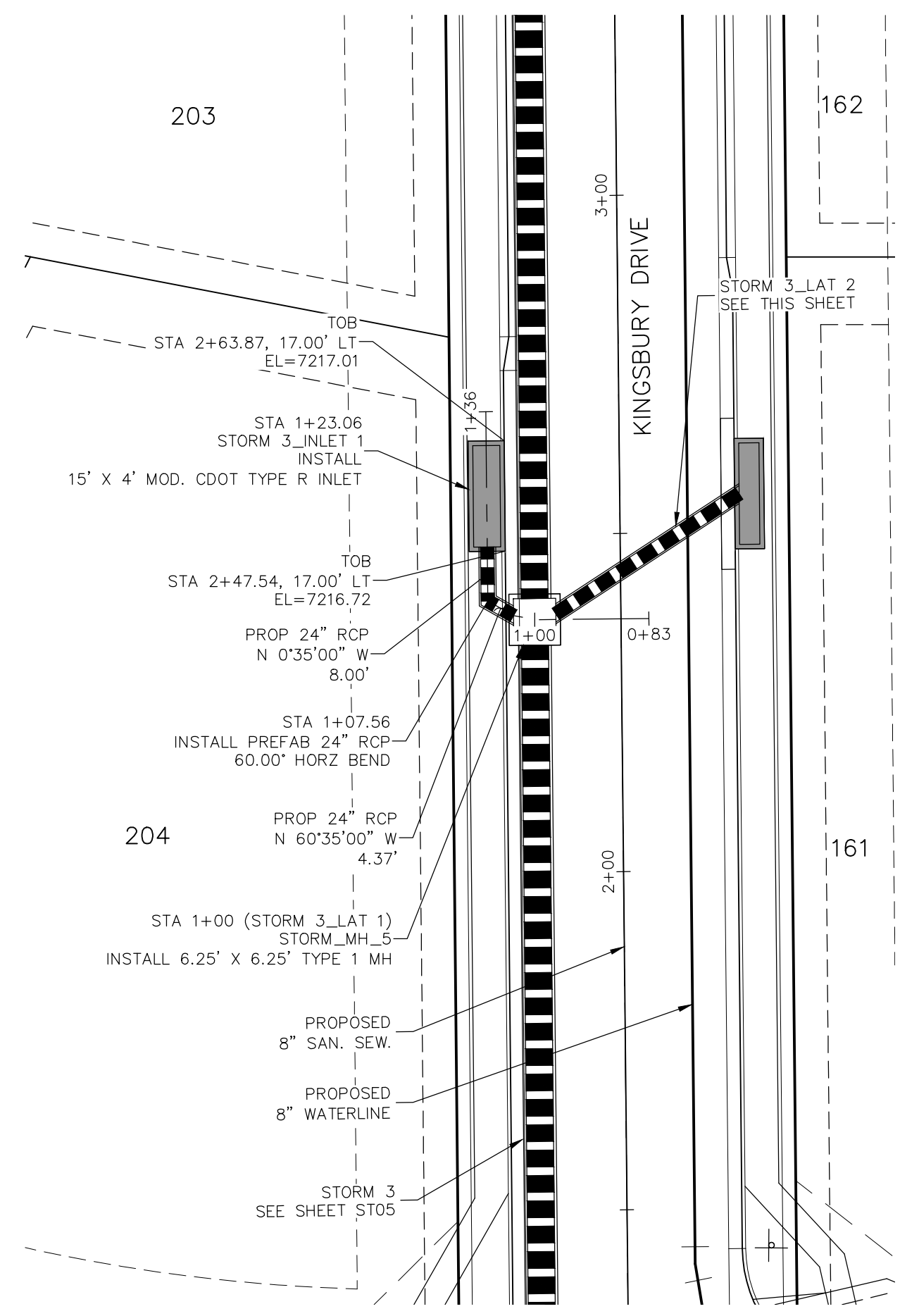


FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

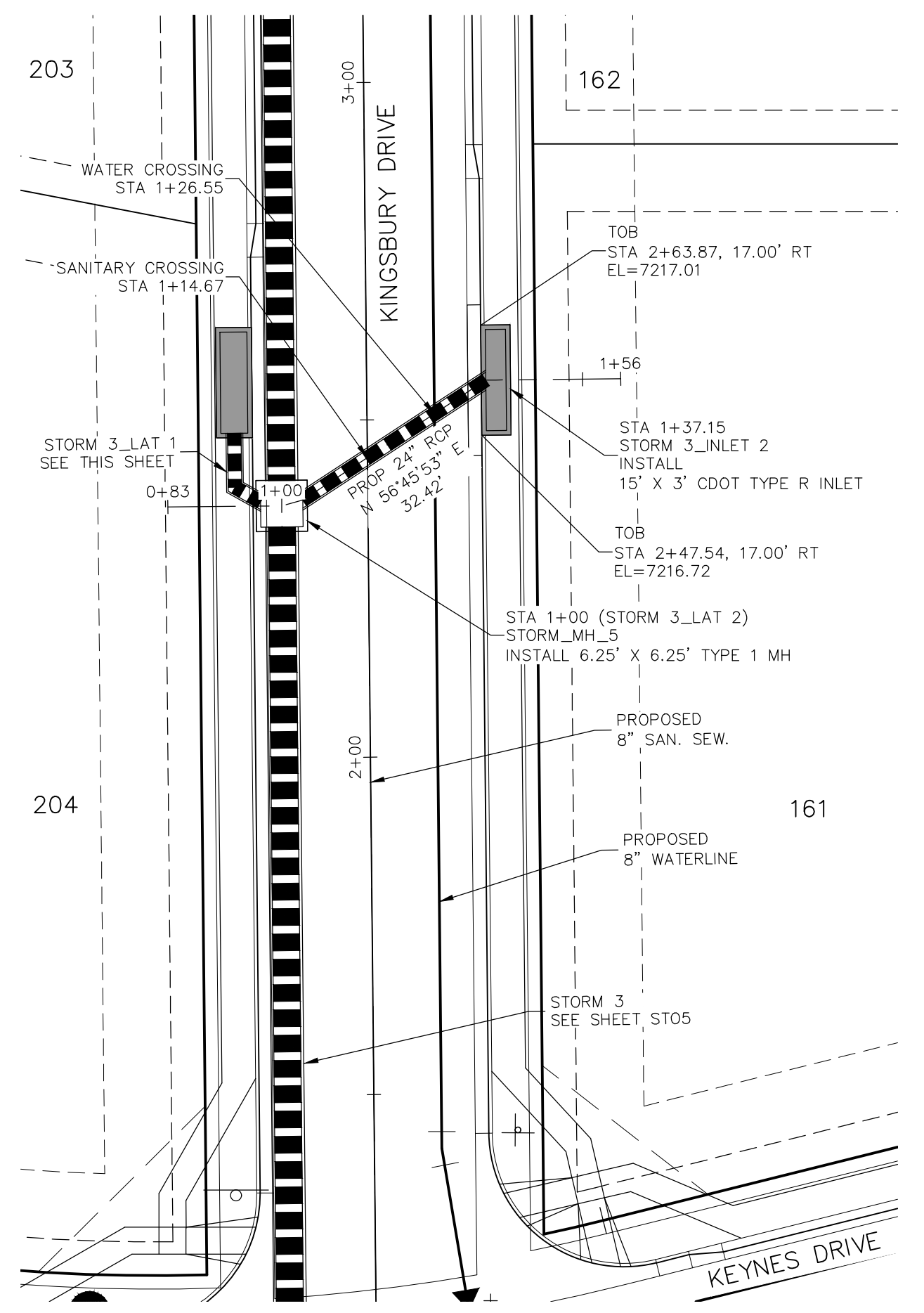
NO.	DATE:	BY:	DESCRIPTION:	APPROV'D. BY:	DATE:

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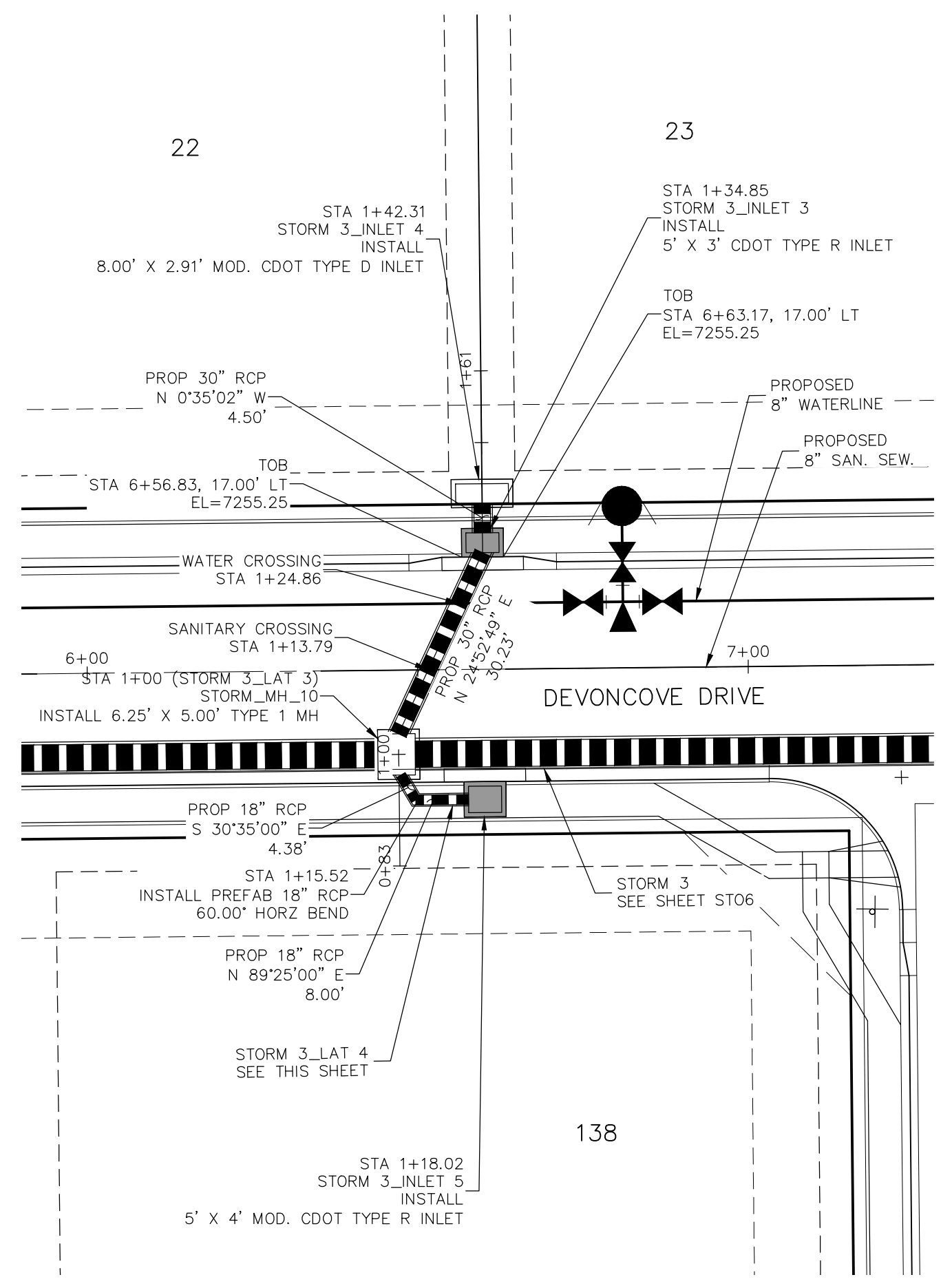
**CAUTION**



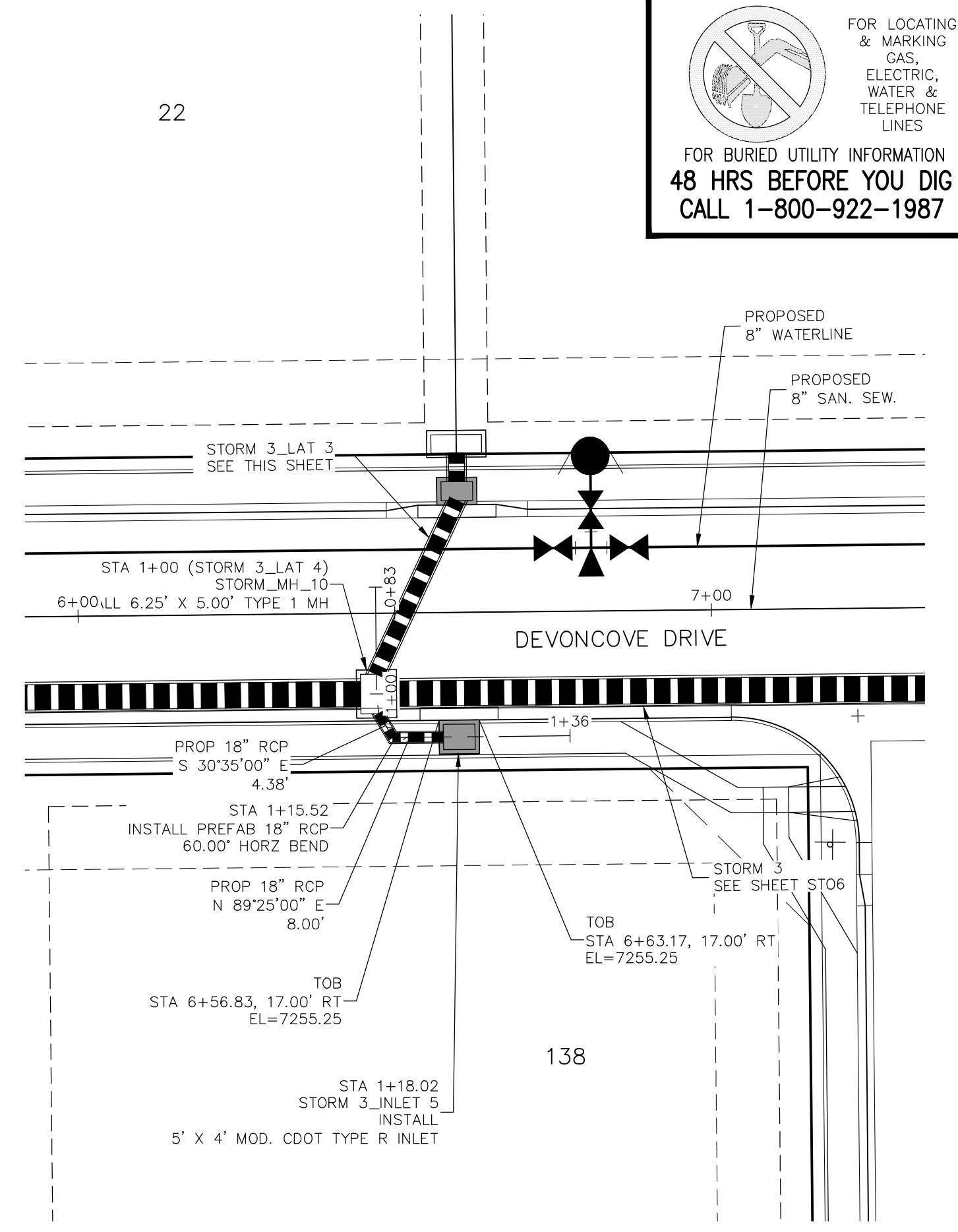
**STORM 3 LAT 1**  
**STA 1+00.00 TO STA 1+23.06**



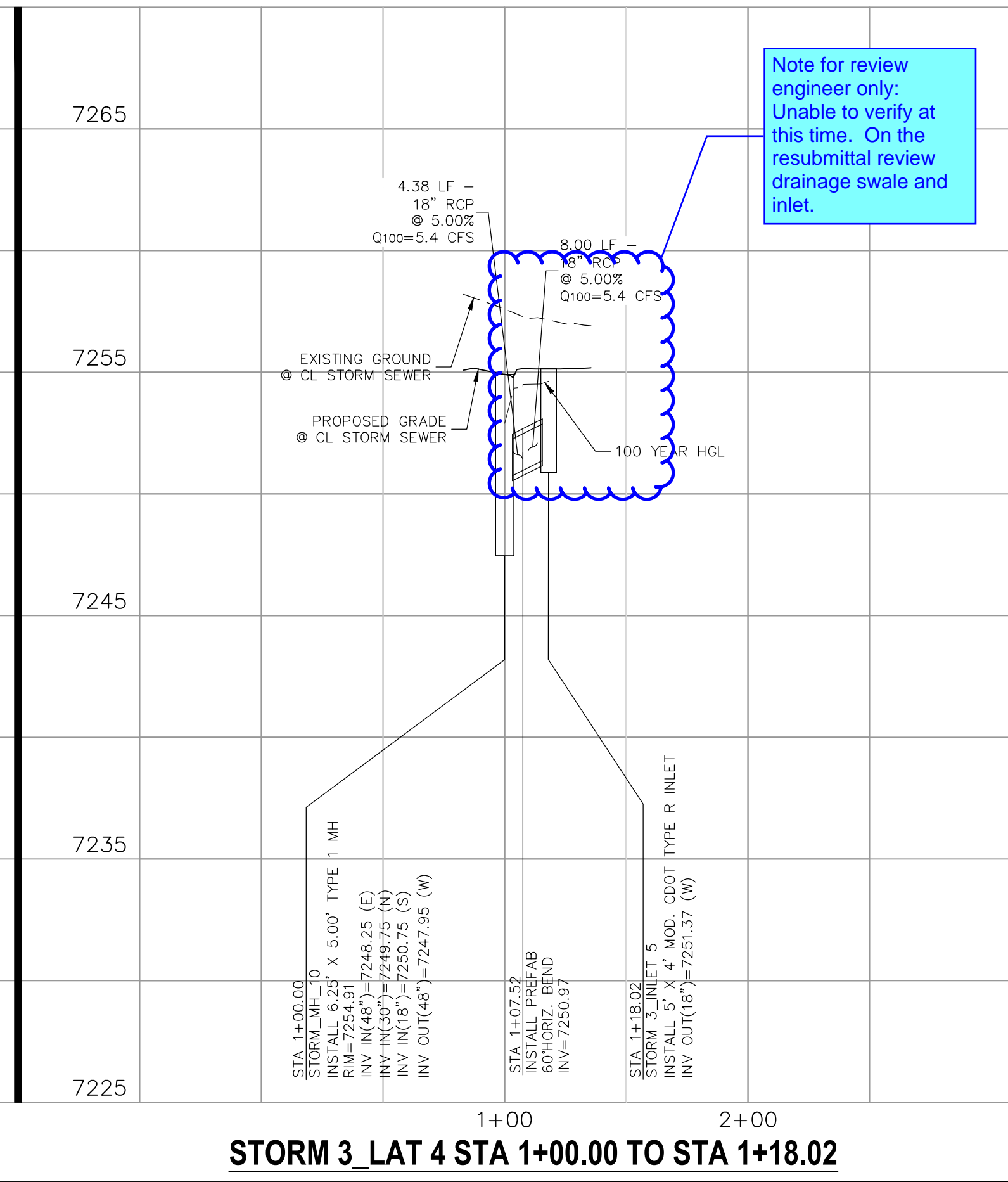
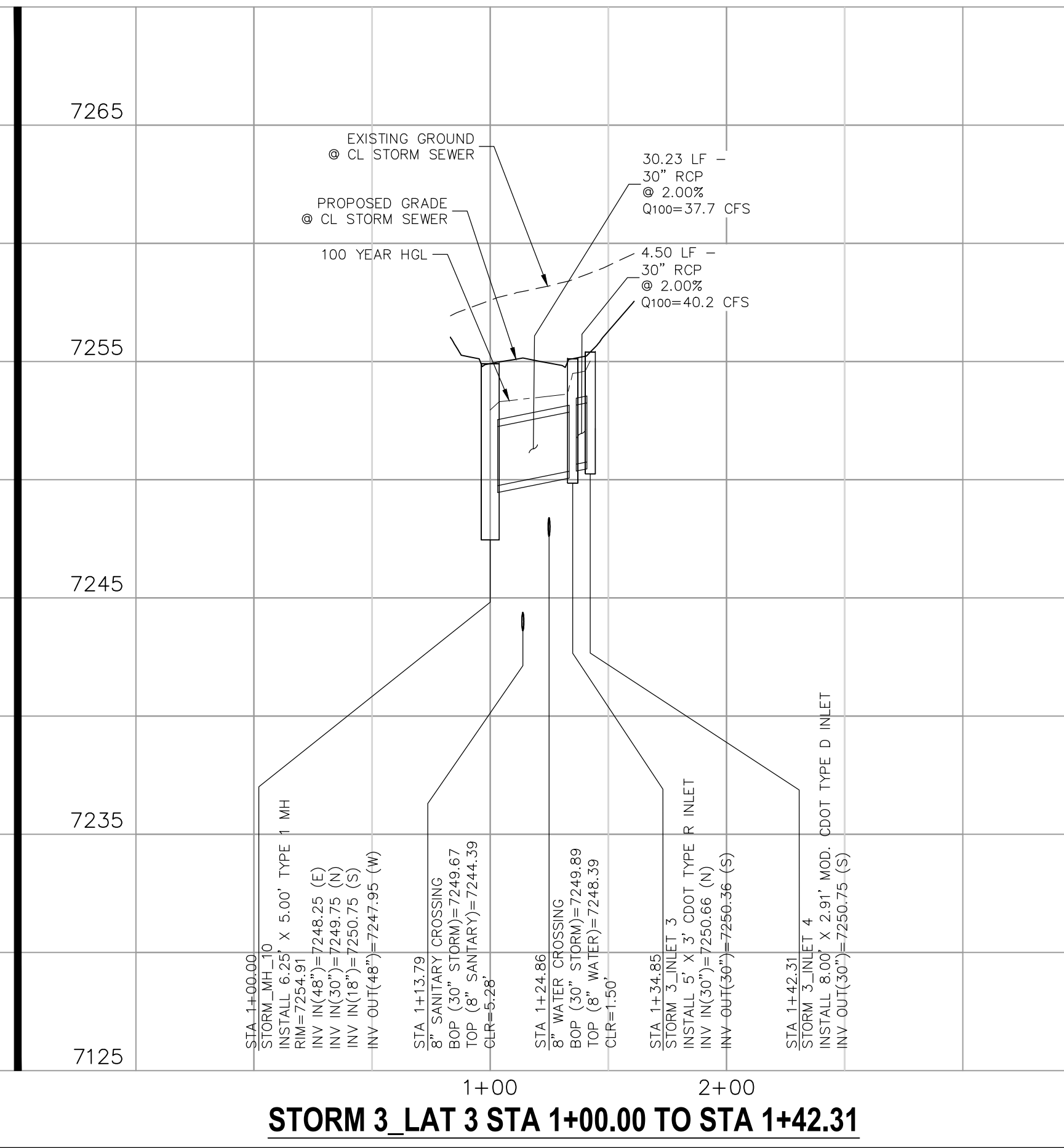
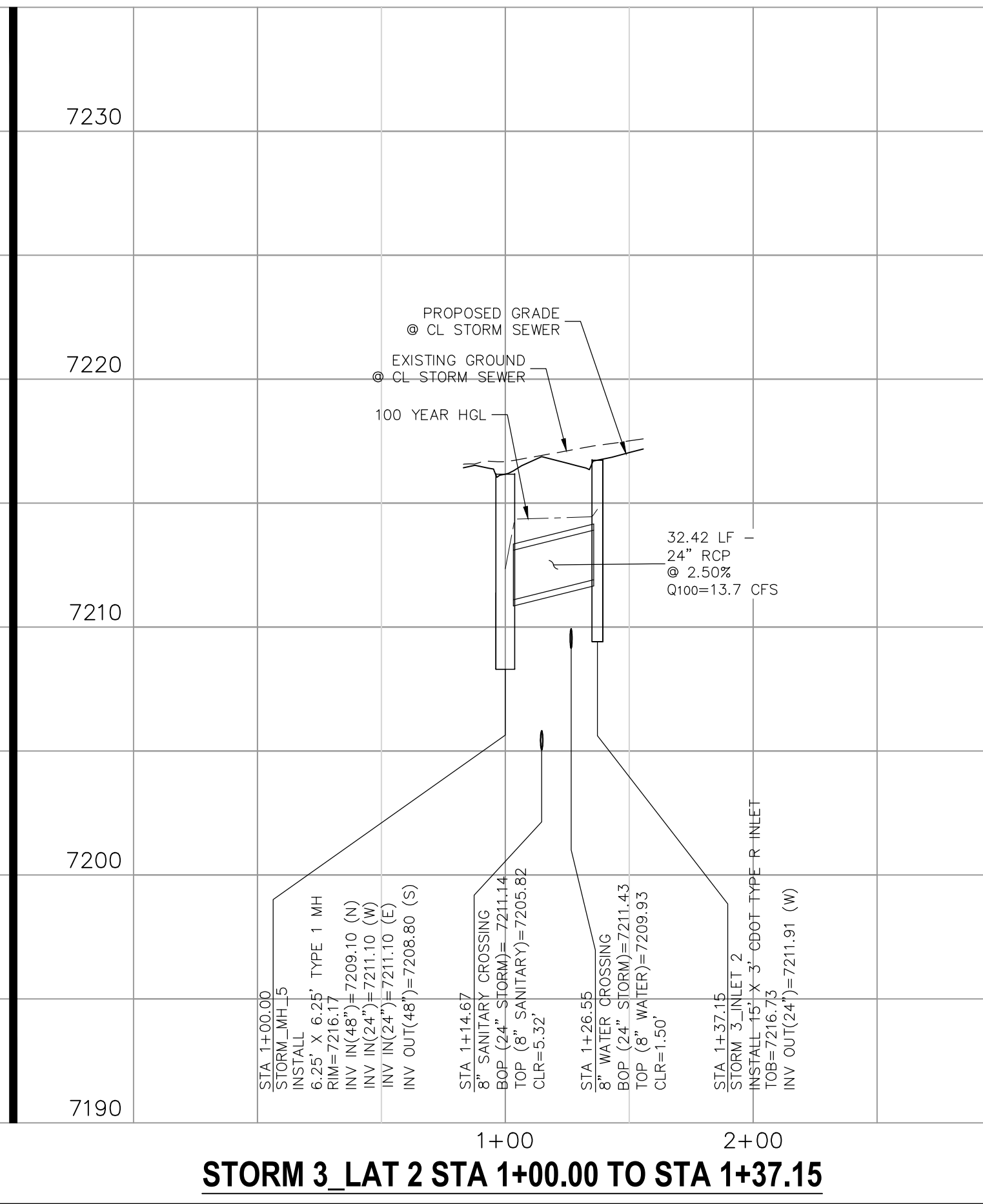
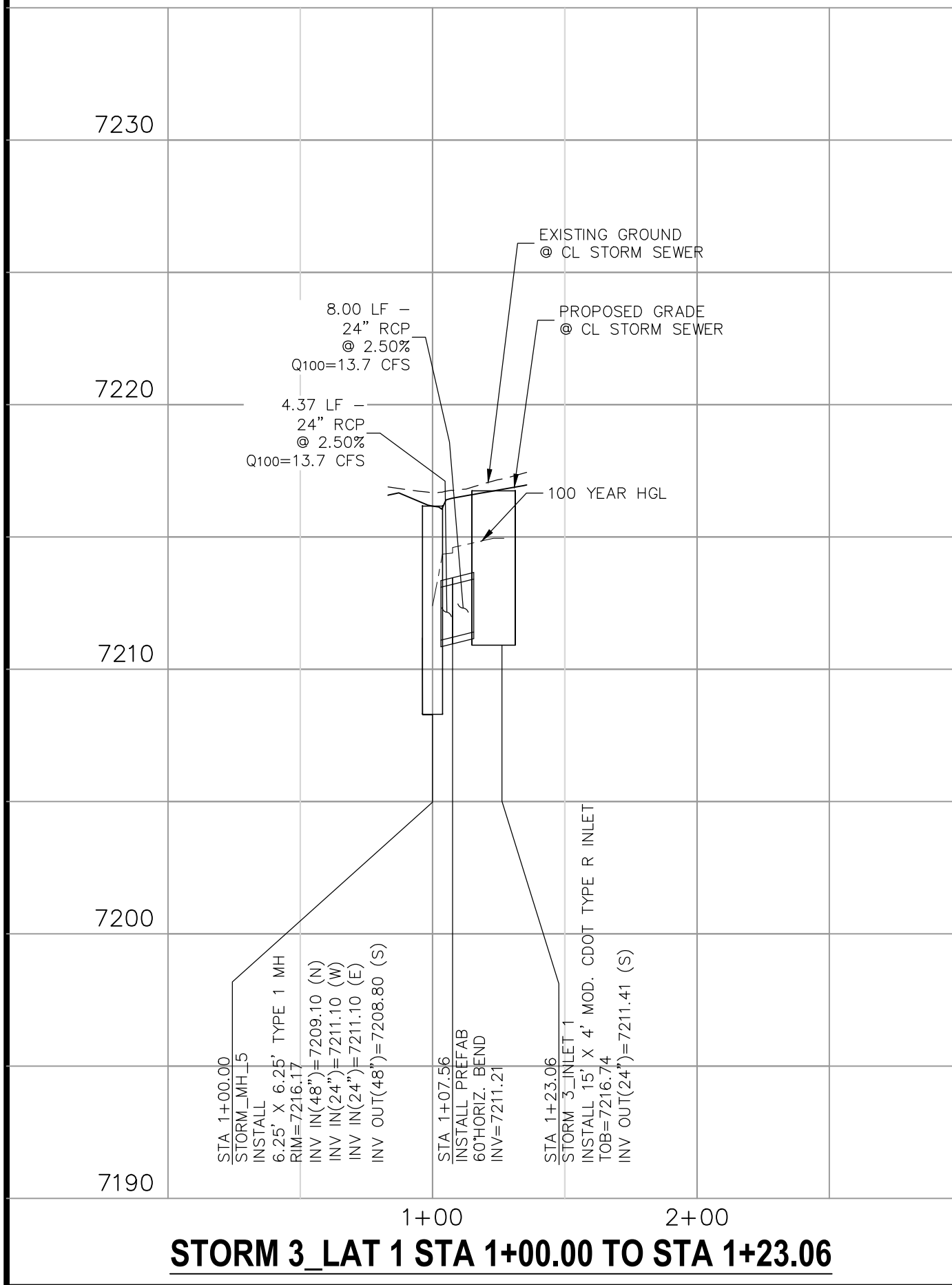
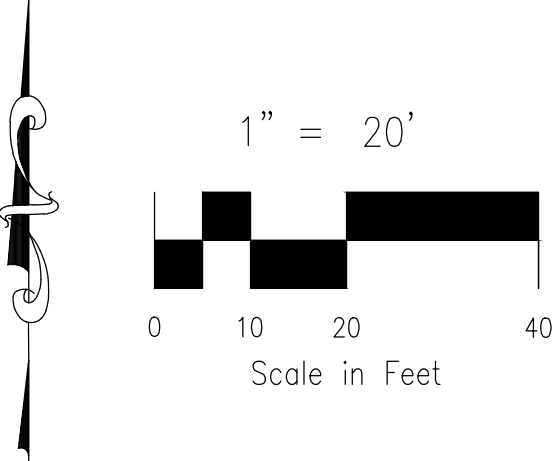
**STORM 3 LAT 2**  
**STA 1+00.00 TO STA 1+37.15**



**STORM 3 LAT 3**  
**STA 1+00.00 TO STA 1+42.31**

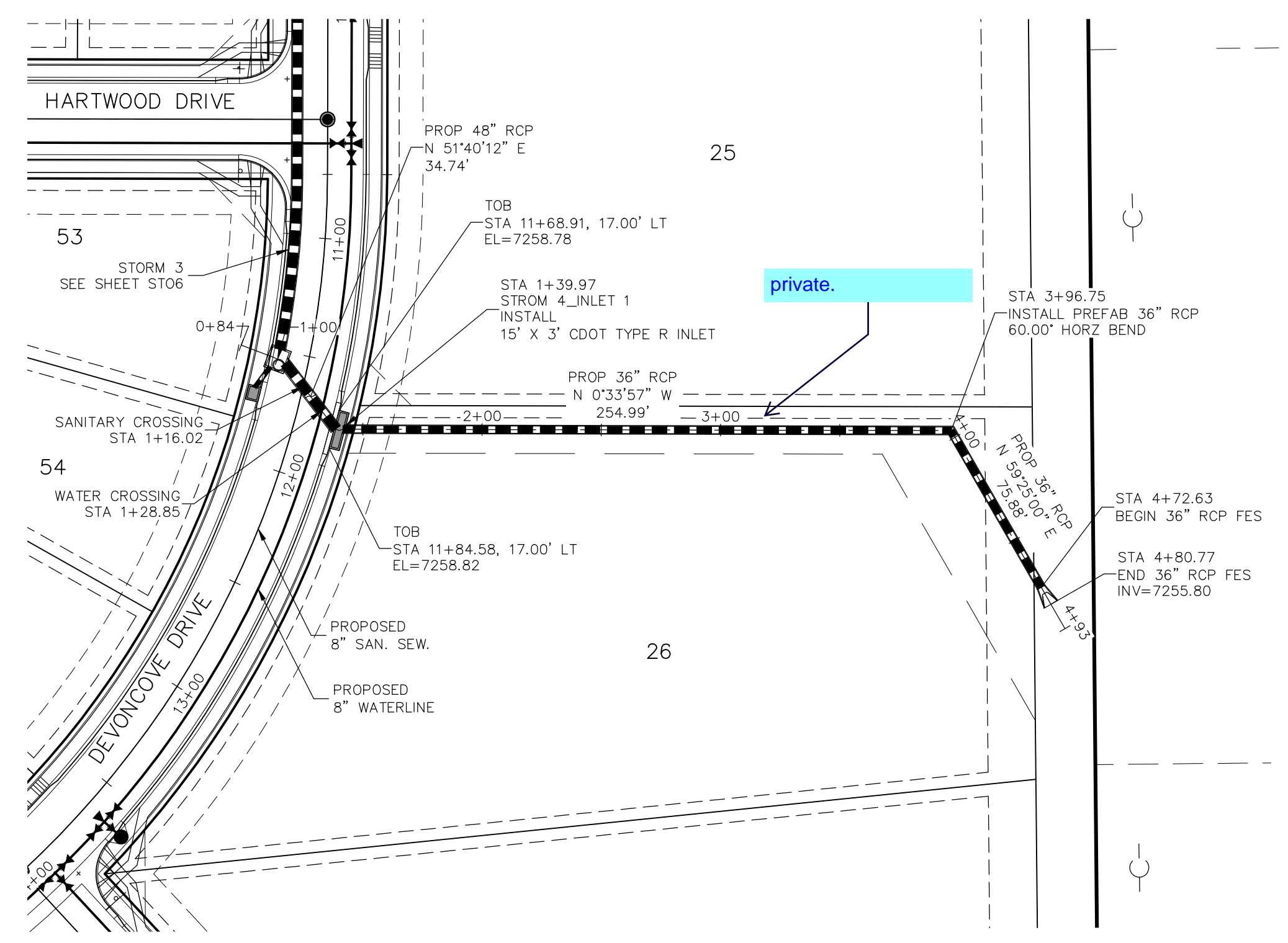
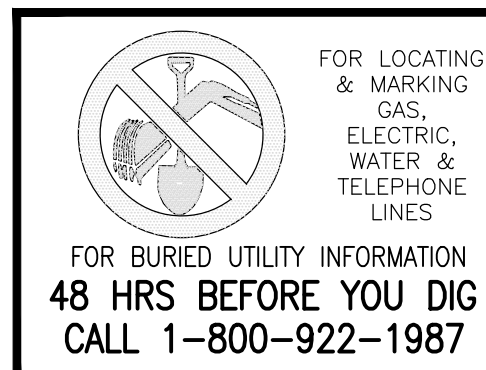


**STORM 3 LAT 4**  
**STA 1+00.00 TO STA 1+18.02**

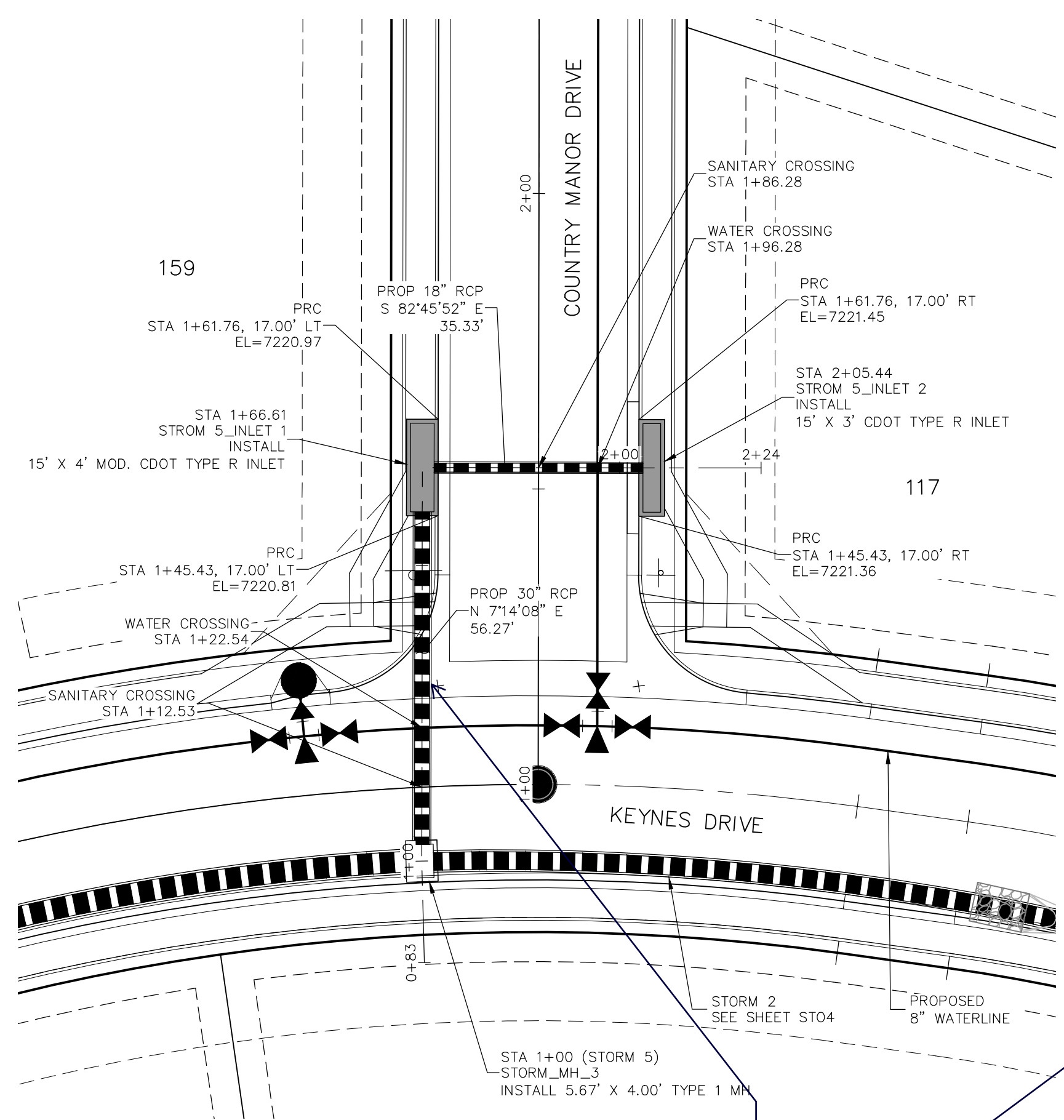
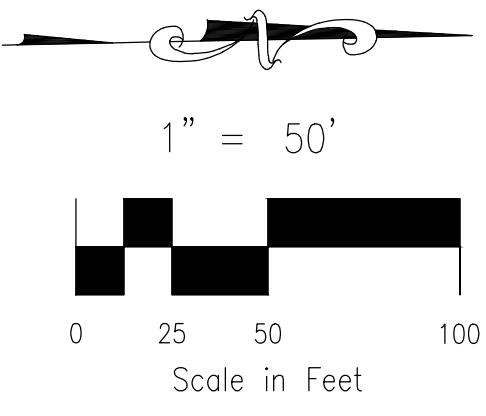


Note for review engineer only: Unable to verify at this time. On the resubmittal review drainage swale and inlet.

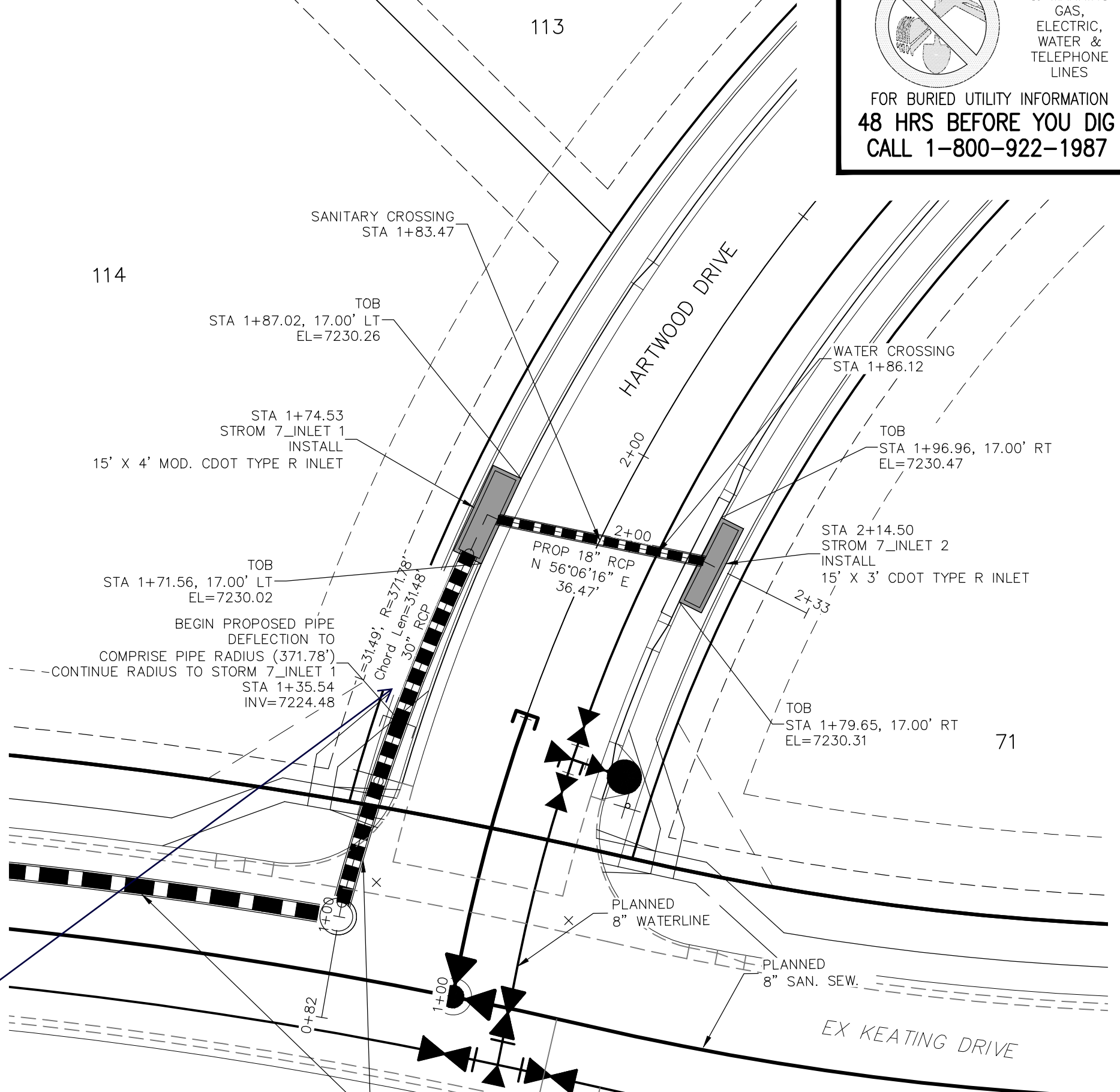
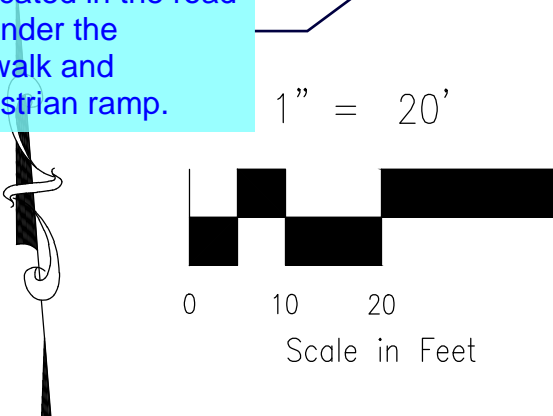
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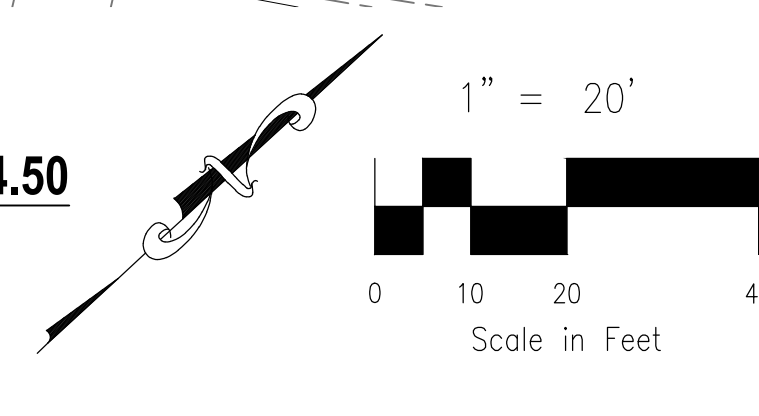
**STORM 4**  
STA 1+00.00 TO STA 4+80.77



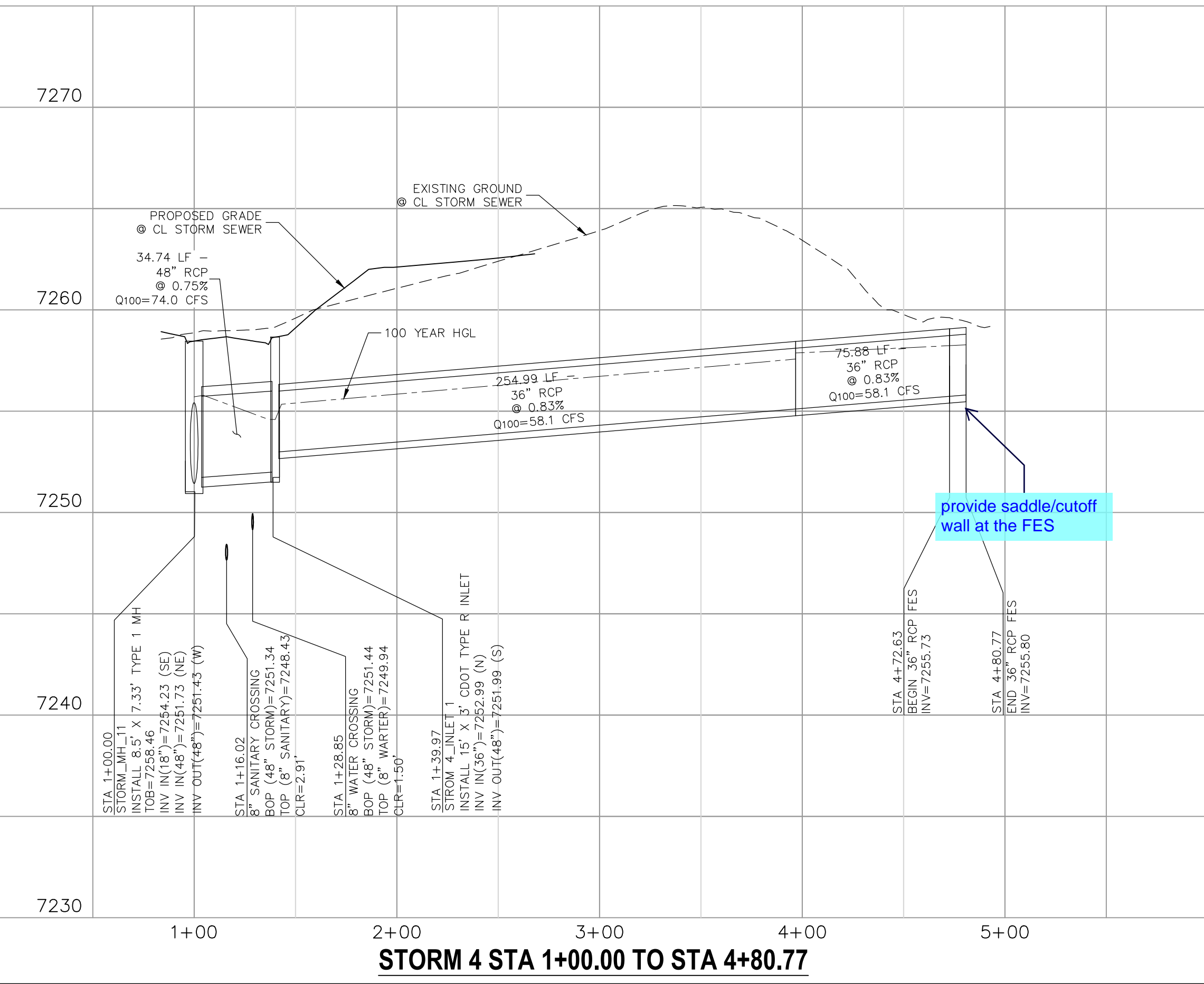
**STORM 5**  
STA 1+00.00 TO STA 2+05.44



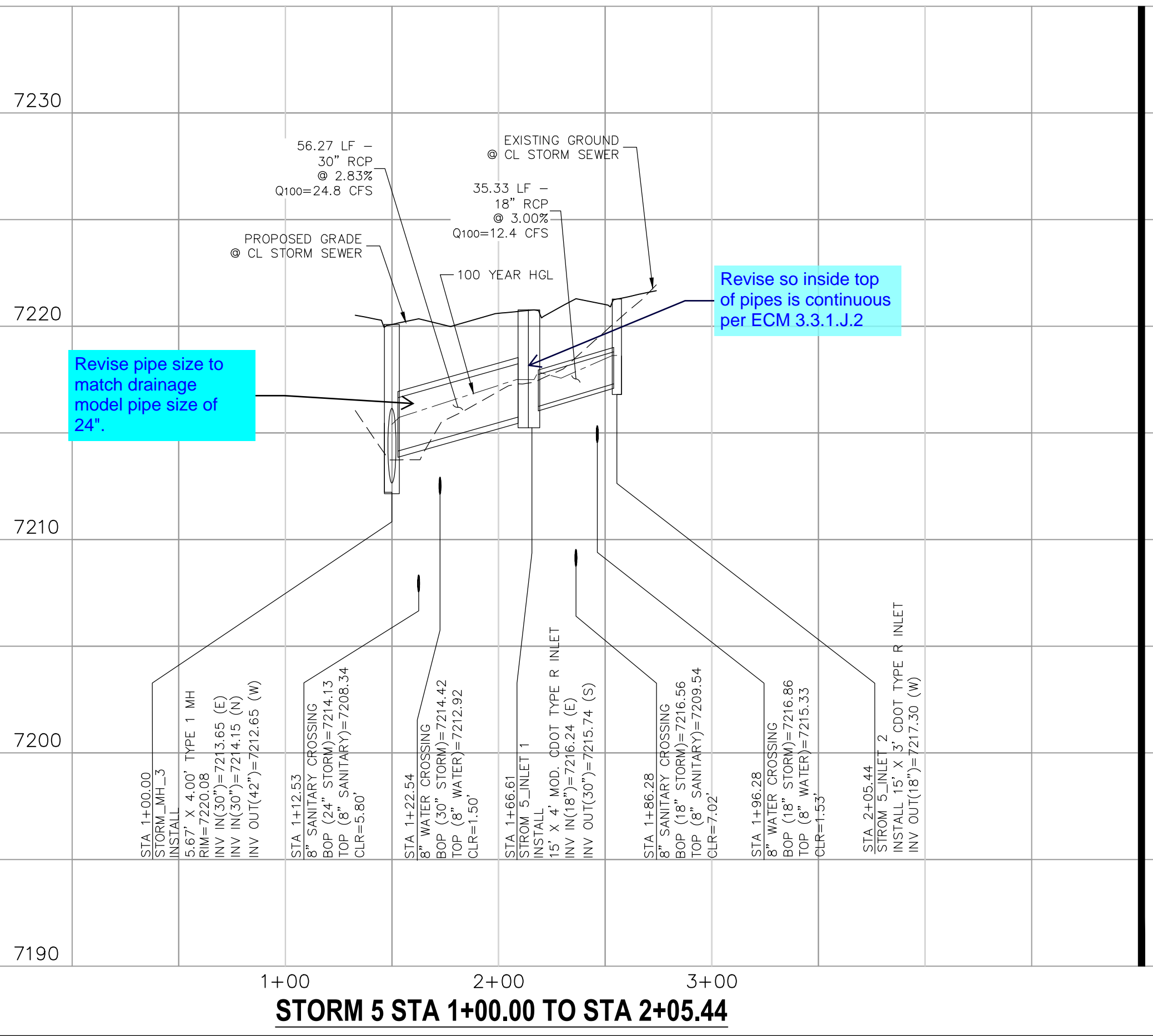
**STORM 7**  
STA 1+00.00 TO STA 2+14.50



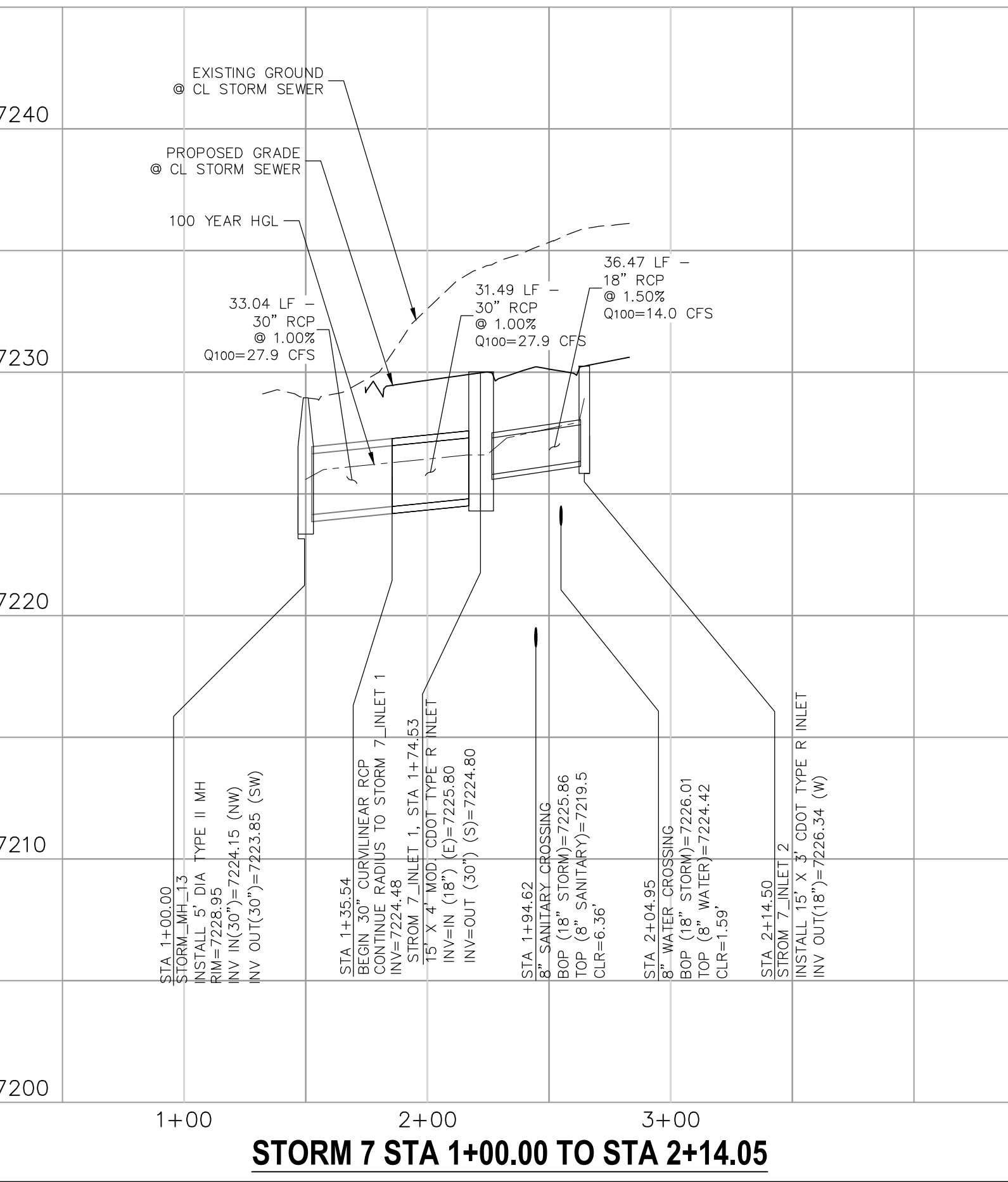
Shift storm pipes to be located in the road not under the sidewalk and pedestrian ramp.



**STORM 4 STA 1+00.00 TO STA 4+80.77**



**STORM 5 STA 1+00.00 TO STA 2+05.44**



**STORM 7 STA 1+00.00 TO STA 2+14.50**

NO.	DATE	BY	DESCRIPTION	APPROV. BY	DATE

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CAUTION

File: C:\Users\lptace\Documents\100144-PBH 14\Draw\Corral Draw\Storm\ST08.dwg PlotStamp: 7/7/2020 11:28 AM













File: C:\Users\lprince\Documents\100144-PBH 14\Proj\14\Draw\Corral Draw\Sanitary\SS02.dwg Plotstamp: 7/7/2020 11:20 AM

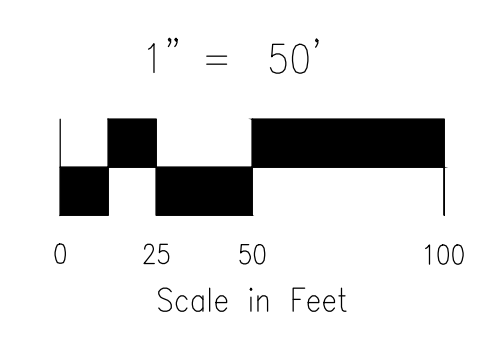
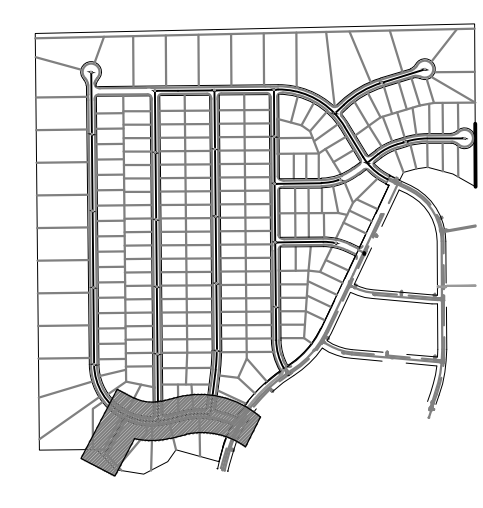
**SANITARY SEWER LINE TABLE**

Line #	Length	Direction
C2	40.20	300.00 7.68
C3	176.24	300.00 33.66

**SANITARY SEWER CURVE TABLE**

Curve #	Length	Radius	Delta
C2	40.20	300.00	7.68
C3	176.24	300.00	33.66

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**FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987**



**PAINT BRUSH HILLS FILING NO. 14**  
**SANITARY SEWER PLANS**  
 PROJECT NO. 10-014  
 DATE: 06/25/2020  
 SCALE: 1"=50'  
 HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'  
 DESIGNED BY: SM  
 DRAWN BY: SM  
 CHECKED BY: GW

20 BOULDER CRESCENT, SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.555.8485

**M&S CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

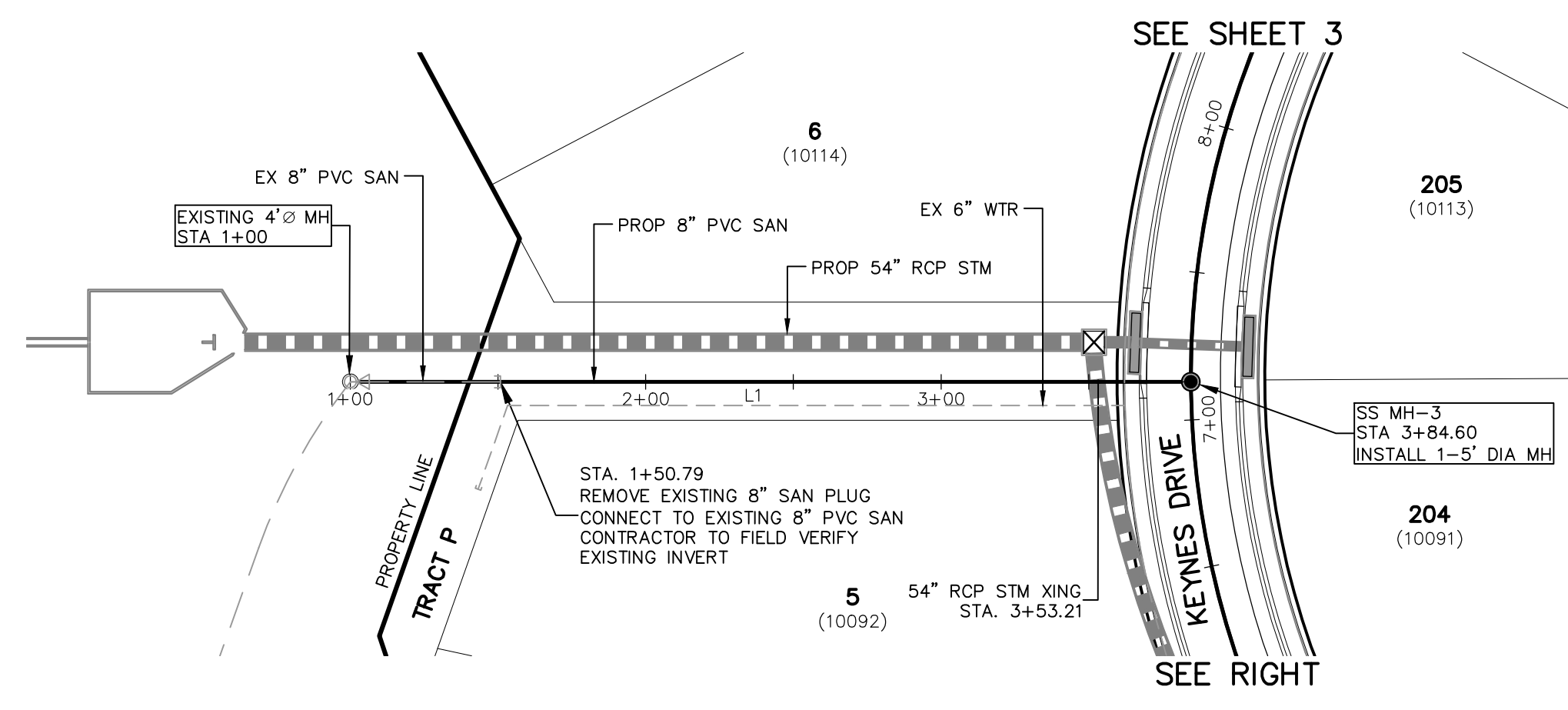
REVISIONS:

NO.	DATE	BY	DESCRIPTION

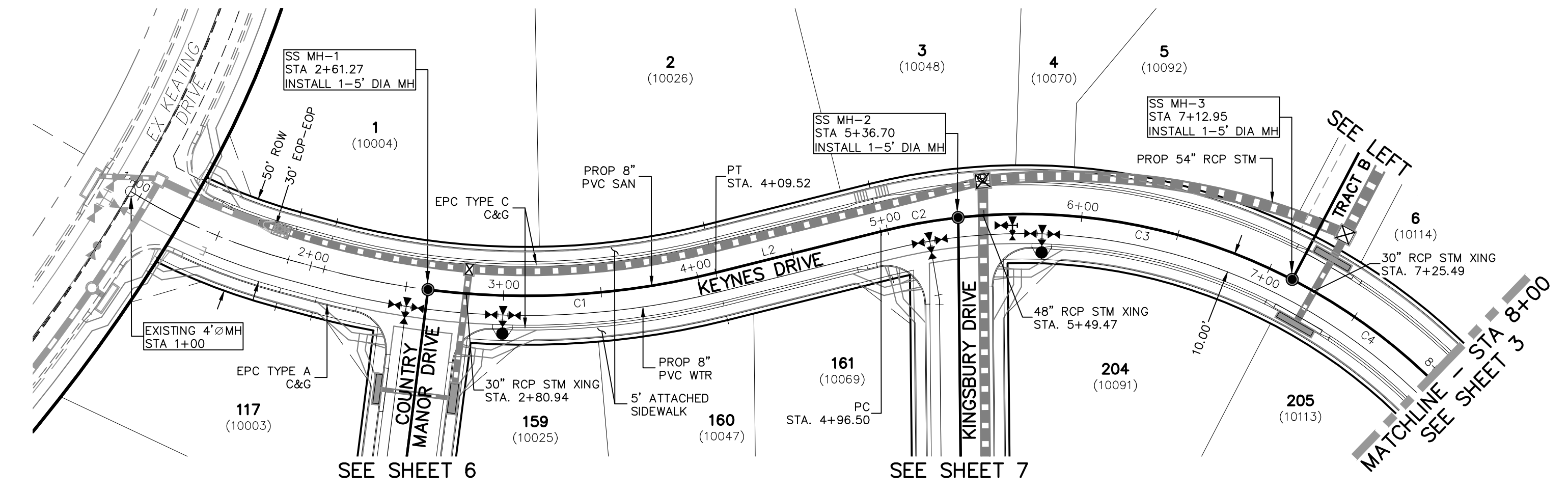
APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

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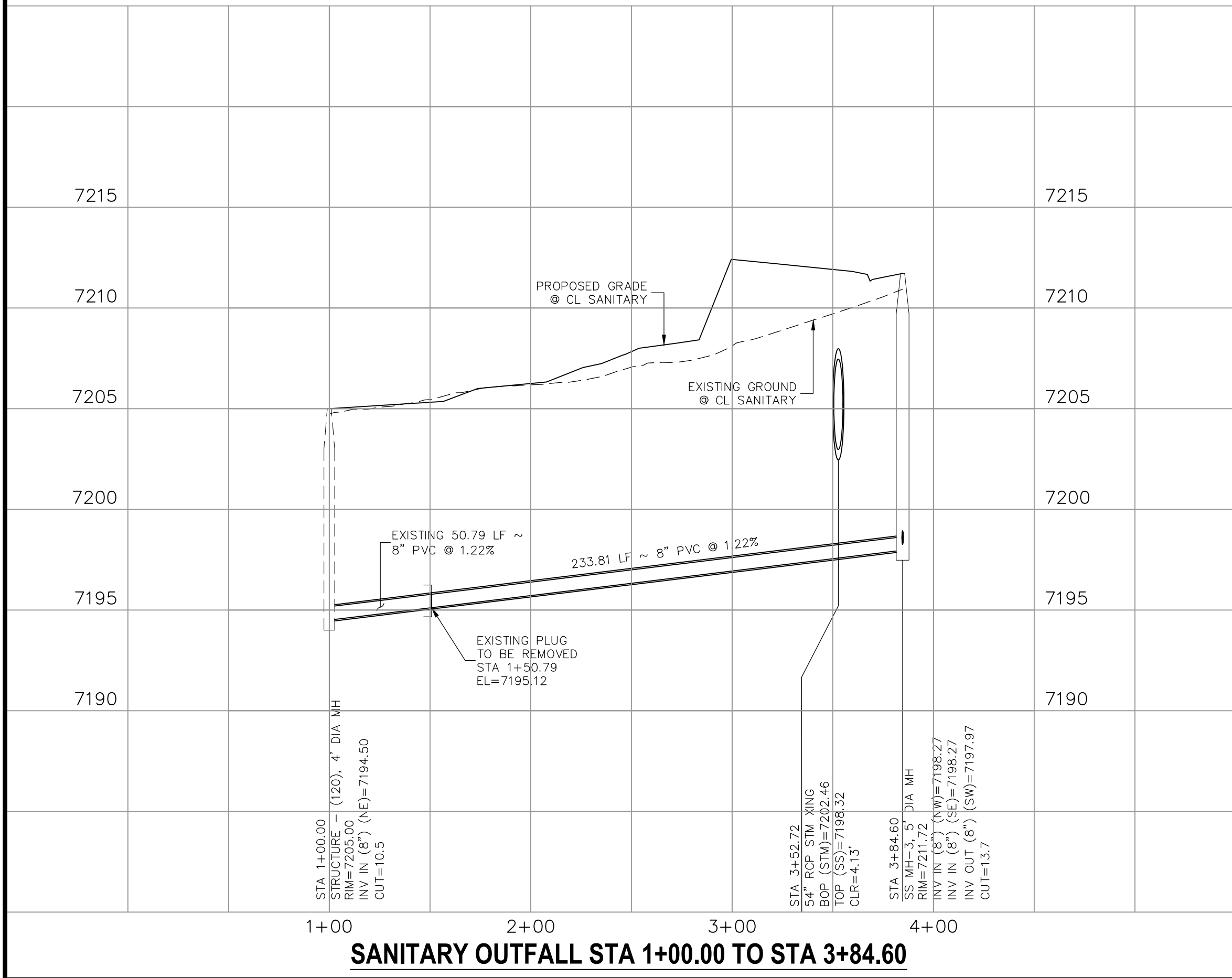
**CAUTION**



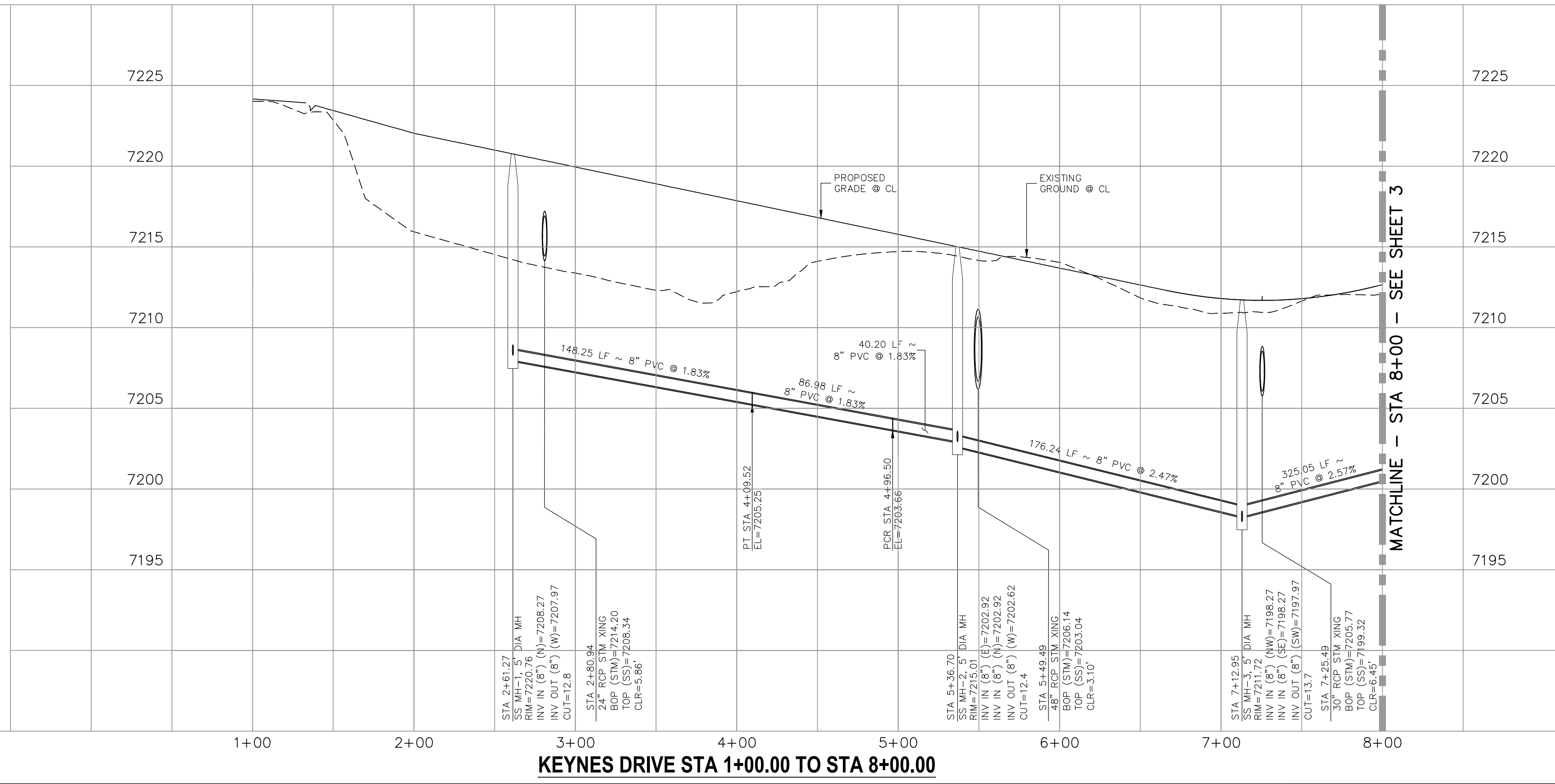
**SANITARY OUTFALL  
 STA 1+00.00 TO STA 3+84.60**



**KEYNES DRIVE  
 STA 1+00.00 TO STA 8+00.00**



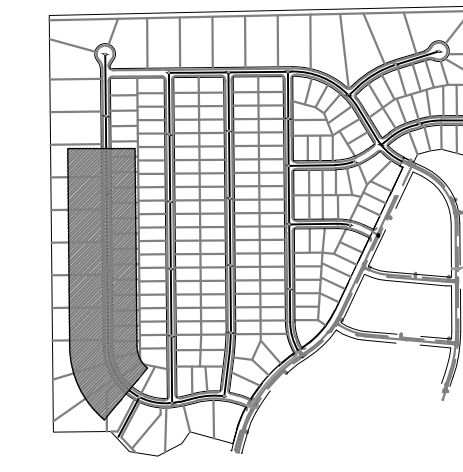
**SANITARY OUTFALL STA 1+00.00 TO STA 3+84.60**



**KEYNES DRIVE STA 1+00.00 TO STA 8+00.00**

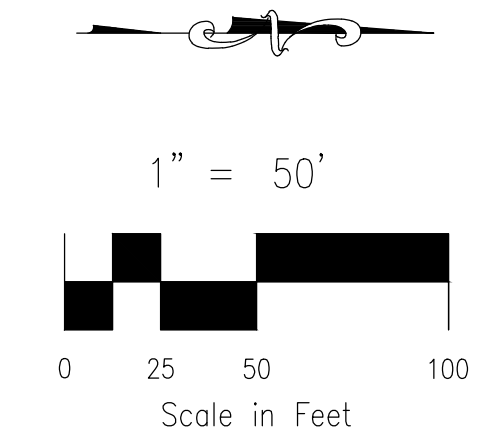
SANITARY SEWER LINE TABLE		
Line #	Length	Direction
L1	400.00	N0°35'00"W
L2	400.00	N0°35'00"W
L3	400.00	N0°35'00"W

SANITARY SEWER CURVE TABLE			
Curve #	Length	Radius	Delta
C1	325.05	300.00	62.08



KEY MAP  
SCALE: NTS

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PAINT BRUSH HILLS FILING NO. 14

SANITARY SEWER PLANS

PROJECT NO. 10-014 DATE: 06/25/2020

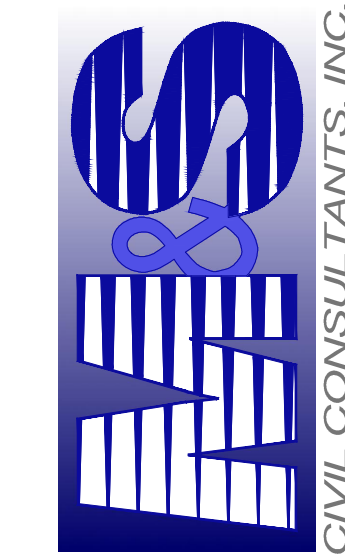
DESIGNED BY: SM SCALE: HORIZONTAL: 1"=50'

DRAWN BY: SM VERTICAL: 1"=5'

CHECKED BY: GW SHEET 3 OF 24

SS03

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485



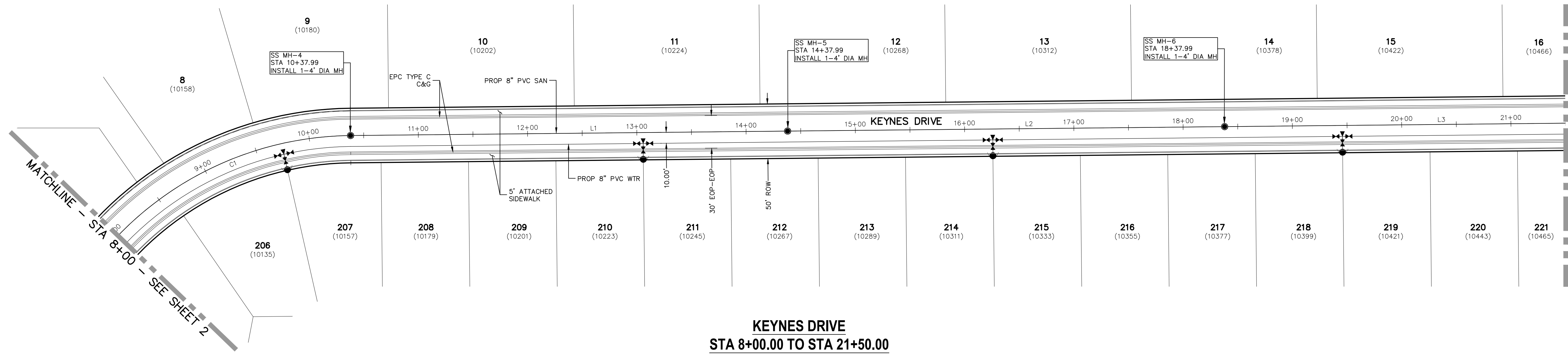
MARCIL A. SANCHEZ, COLORADO P.E. NO. 37760

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

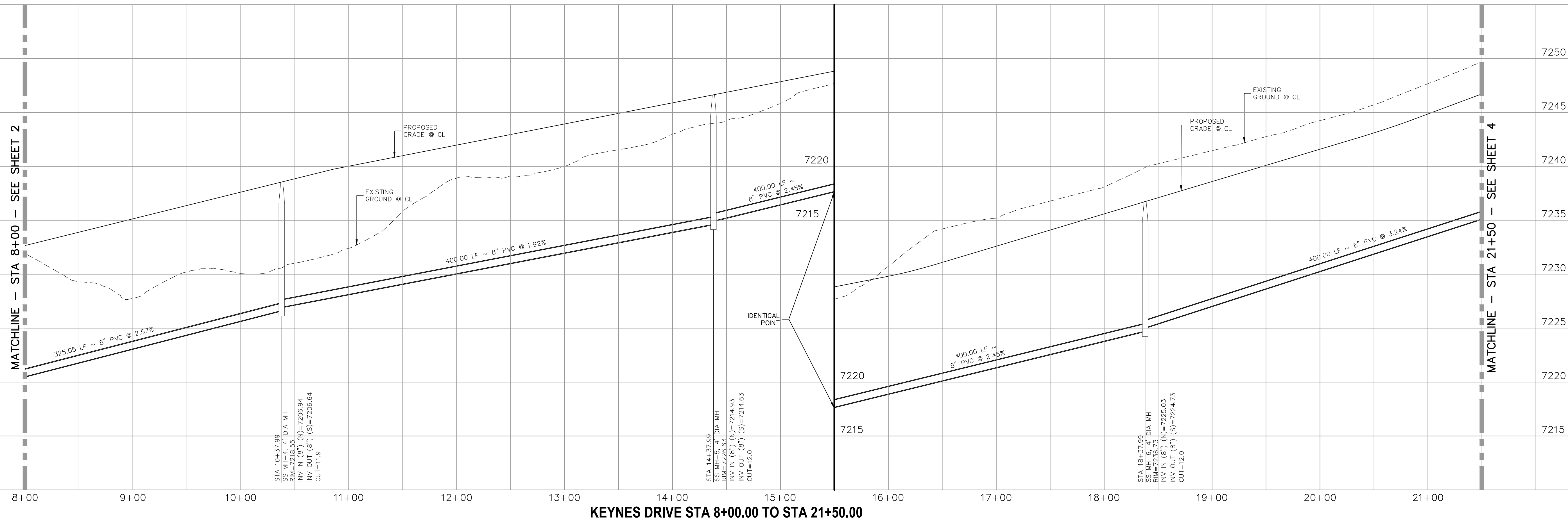
NO.	DATE	BY	DESCRIPTION	APPROV. BY	DATE

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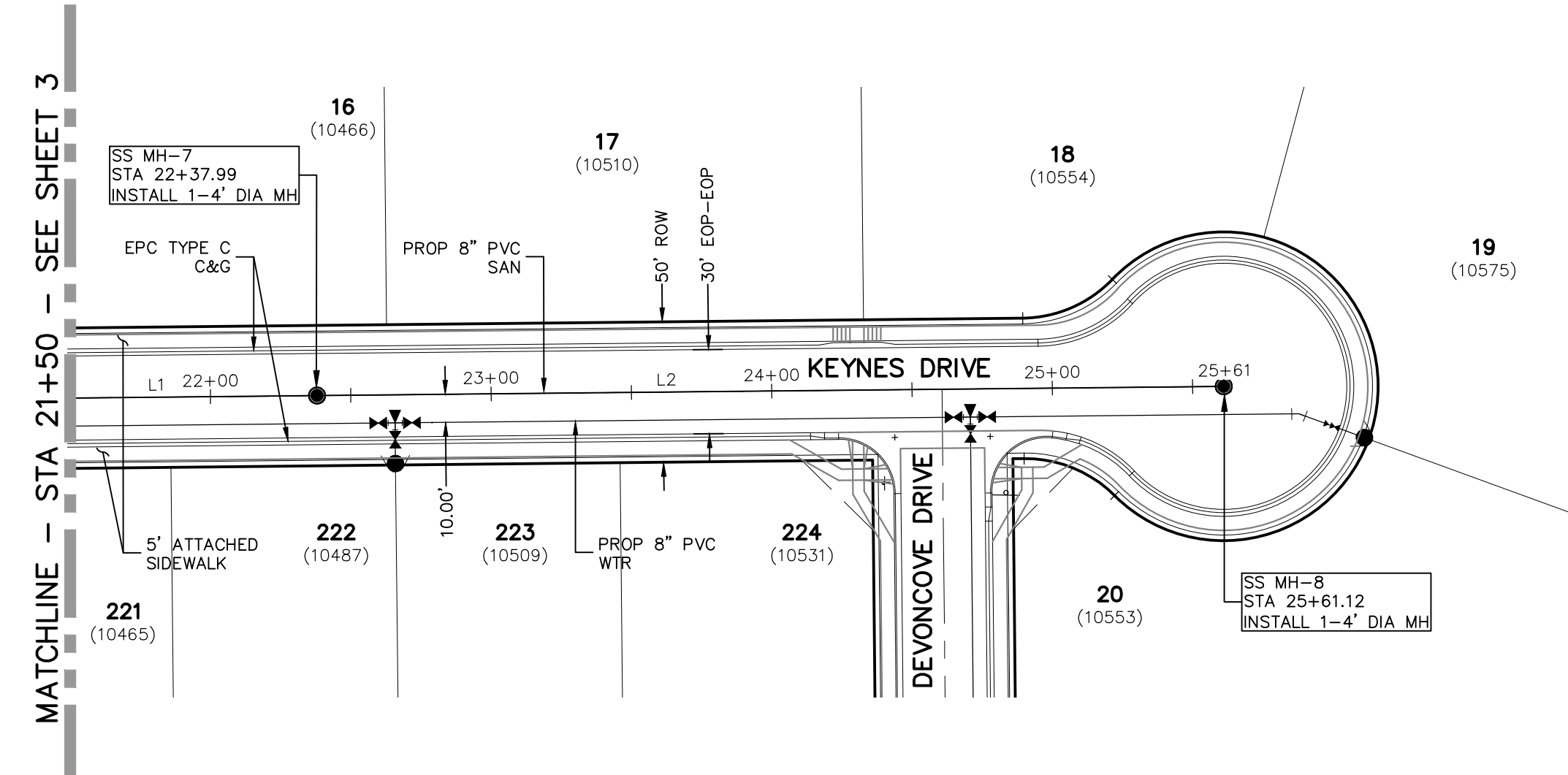
CAUTION



KEYNES DRIVE  
STA 8+00.00 TO STA 21+50.00

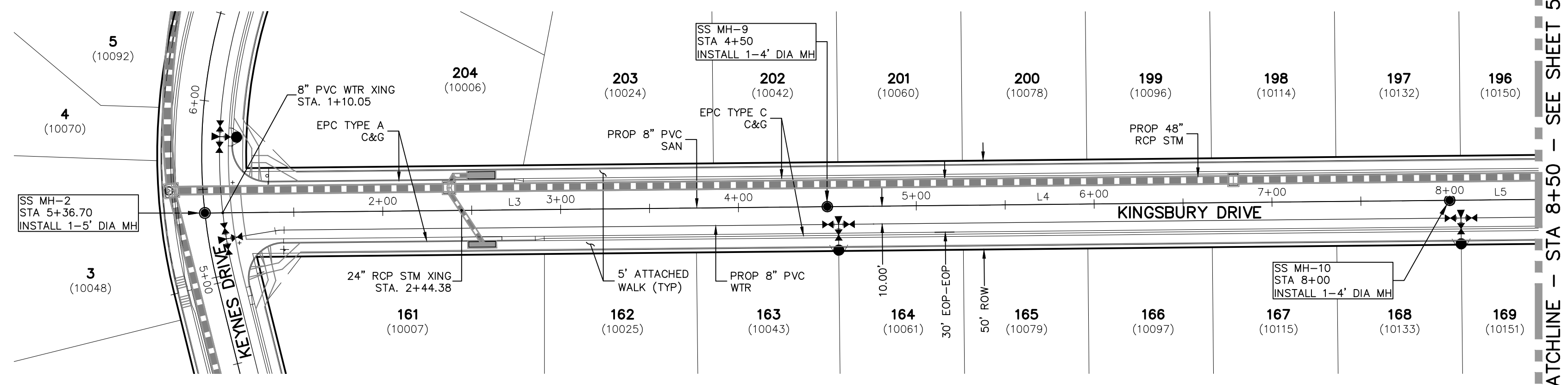


KEYNES DRIVE STA 8+00.00 TO STA 21+50.00

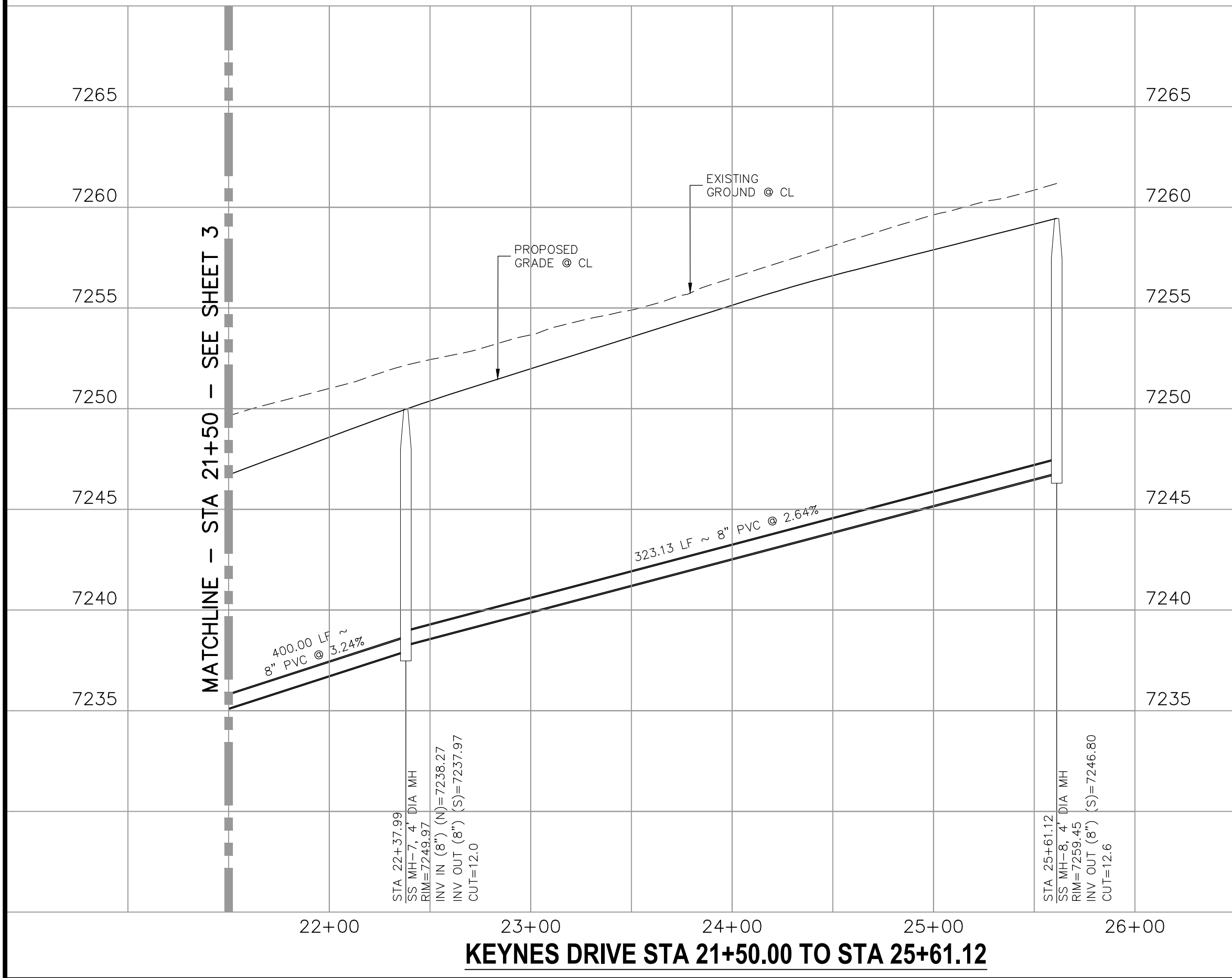


**KEYNES DRIVE  
STA 21+50.00 TO STA 25+61.12**

Line #	Length	Direction
L1	400.00	N0°35'00.00"W
L2	323.13	N0°35'00.00"W
L3	350.00	N0°35'00.00"W
L4	350.00	N0°35'00.00"W
L5	350.00	N0°35'00.00"W



**KINGSBURY DRIVE  
STA 1+00.00 TO STA 8+50.00**

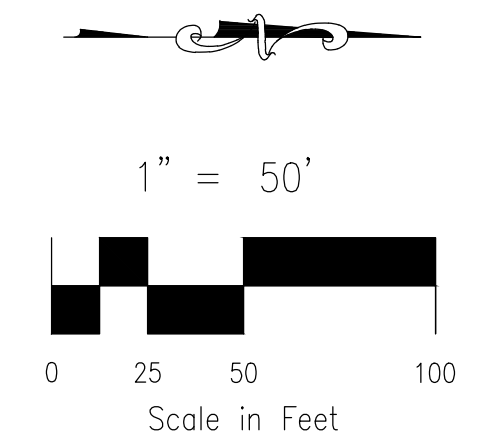
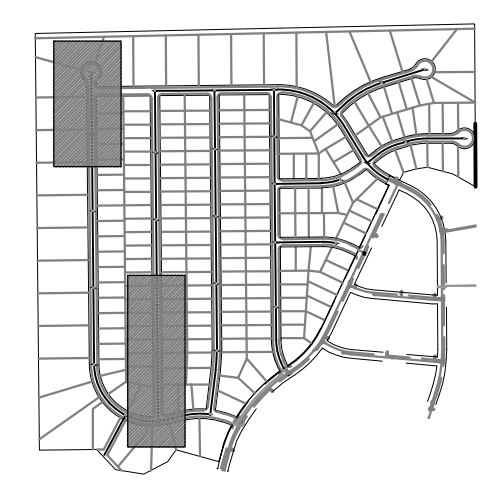


**KEYNES DRIVE STA 21+50.00 TO STA 25+61.12**



**KINGSBURY DRIVE STA 1+00.00 TO STA 8+50.00**

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**PAINT BRUSH HILLS FILING NO. 14**

**SANITARY SEWER PLANS**

PROJECT NO. 10-014 DATE: 06/25/2020

DESIGNED BY: SM SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

DRAWN BY: SM SHEET 4 OF 24

CHECKED BY: GW SS04

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

**M&S CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF  
M&S CIVIL CONSULTANTS, INC.

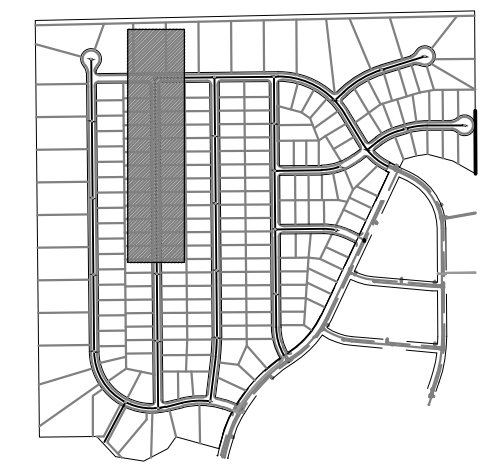
MARGIE A. SANCHEZ, COLORADO P.E. NO. 37760

NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

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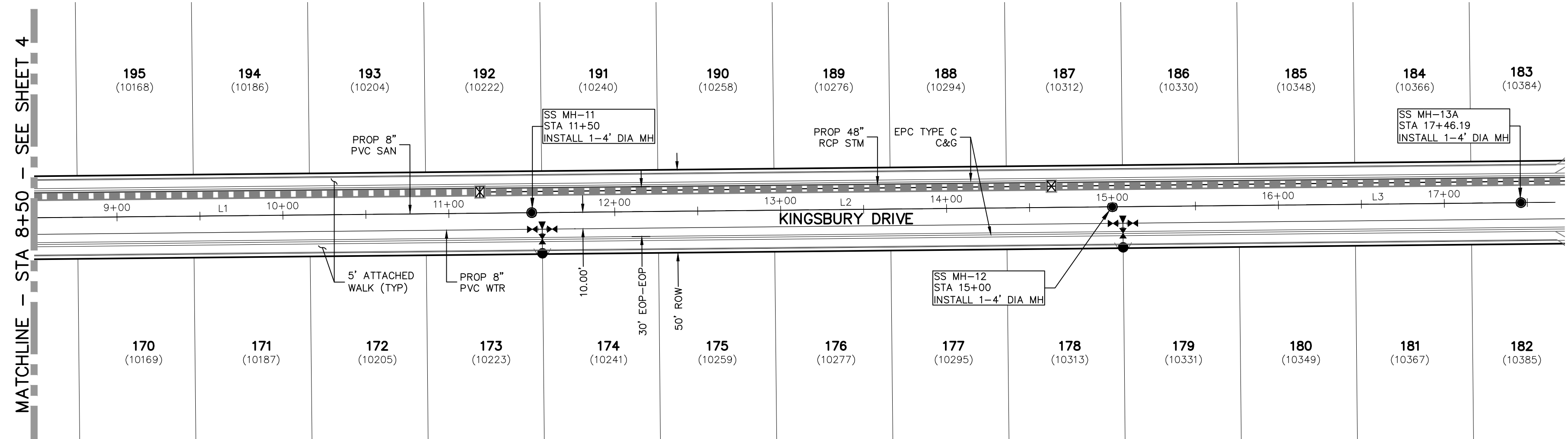
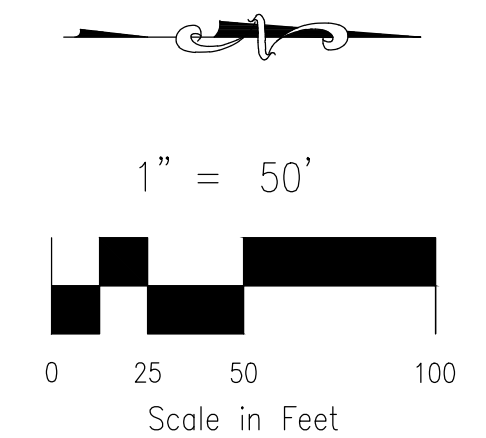
**CAUTION**

Line #	Length	Direction
L1	350.00	N0°35'00"W
L2	350.00	N0°35'00"W
L3	321.19	N0°35'00"W

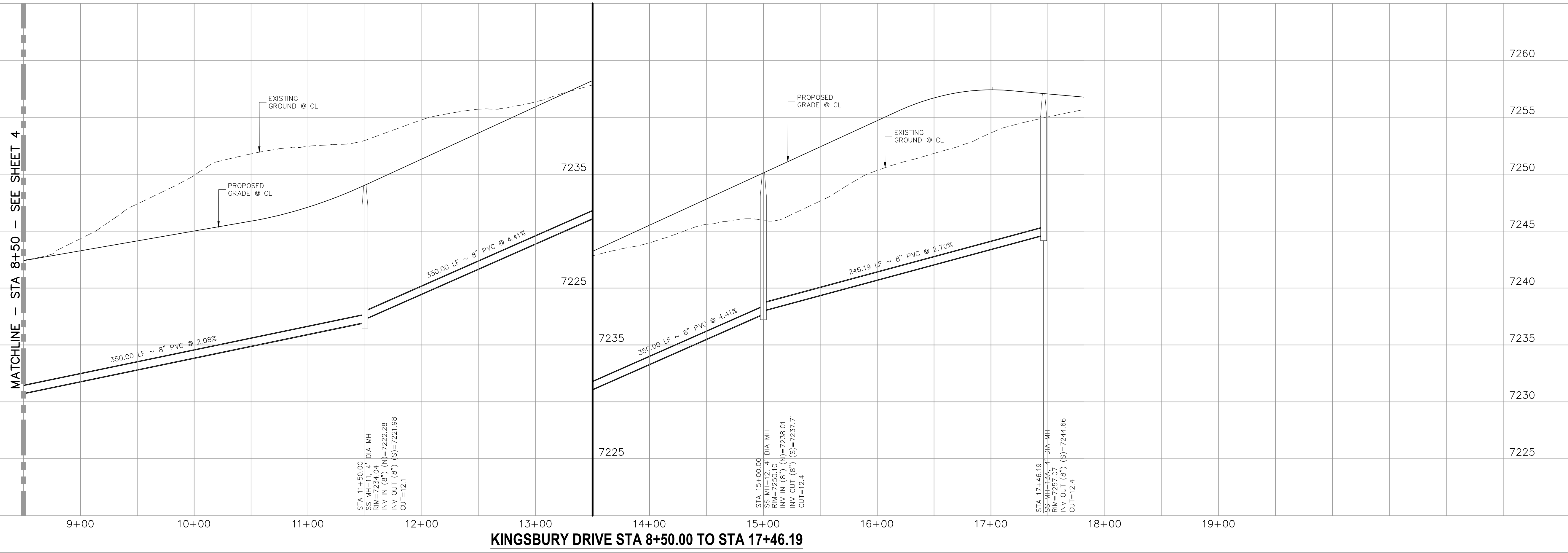


KEY MAP  
SCALE: NTS

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
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CALL 1-800-922-1987



**KINGSBURY DRIVE  
STA 8+50.00 TO STA 17+46.19**



**PAINT BRUSH HILLS FILING NO. 14**  
**SANITARY SEWER PLANS**  
PROJECT NO. 10-014 DATE: 06/25/2020  
DESIGNED BY: SM SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'  
DRAWN BY: SM  
CHECKED BY: GW

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

**M&S CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF  
M&S CIVIL CONSULTANTS, INC.

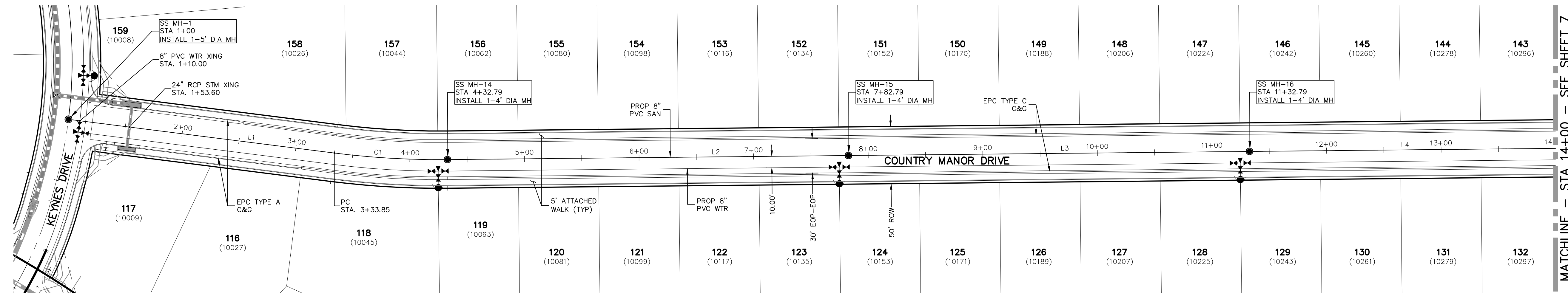
REVISIONS:

NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

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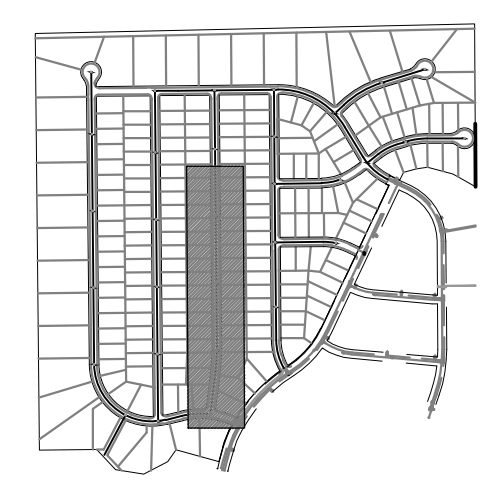
**CAUTION**

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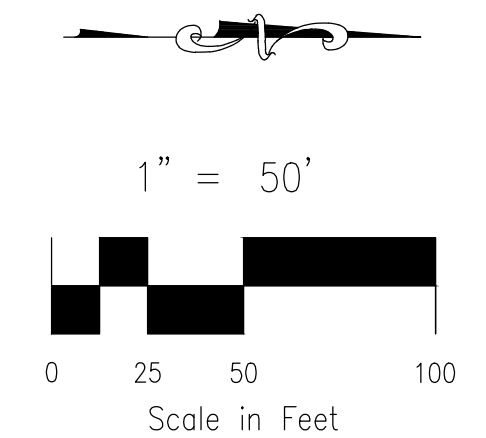


Line #	Length	Direction
L2	350.00	N0°35'00"W
L3	350.00	N0°35'00"W
L4	350.00	N0°35'00"W

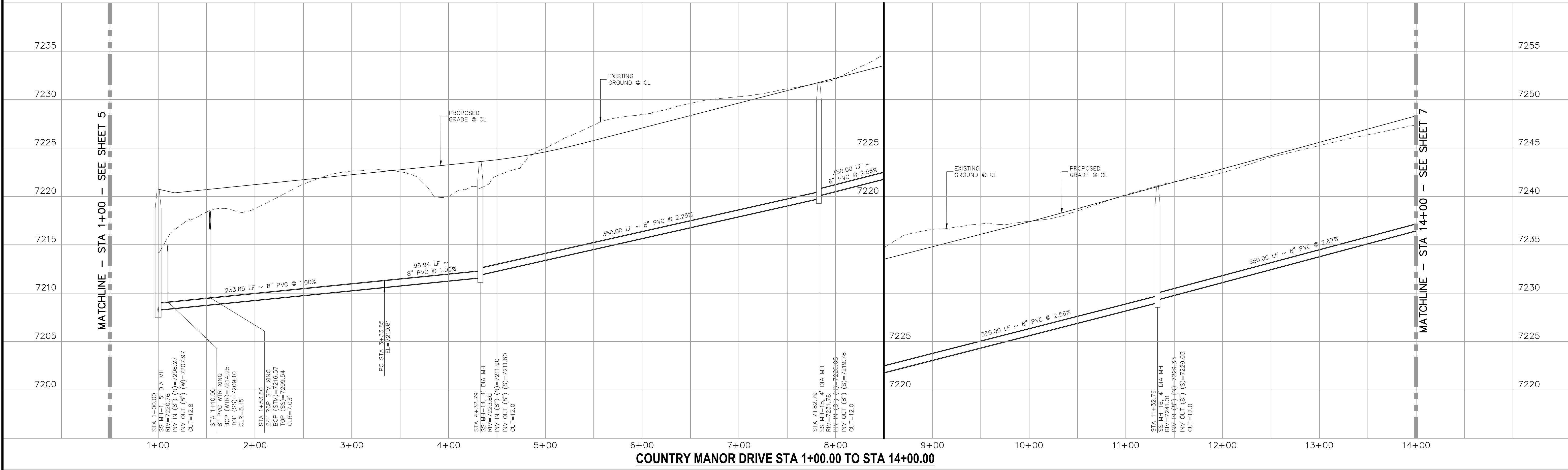
Curve #	Length	Radius	Delta
C1			



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 FOR BURIED UTILITY INFORMATION  
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 CALL 1-800-922-1987



**COUNTRY MANOR DRIVE  
 STA 1+00.00 TO STA 14+00.00**



**PAINT BRUSH HILLS FILING NO. 14**

**SANITARY SEWER PLANS**

DATE: 06/25/2020

PROJECT NO. 10-014

SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

DESIGNED BY: SM

DRAWN BY: SM

CHECKED BY: GW

SS06

SHEET 6 OF 21

20 BOULDER CRESCENT, SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.555.5485

M&S CIVIL CONSULTANTS, INC.

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37760

NO.	DATE	BY	DESCRIPTION	APPROV'D. BY	DATE

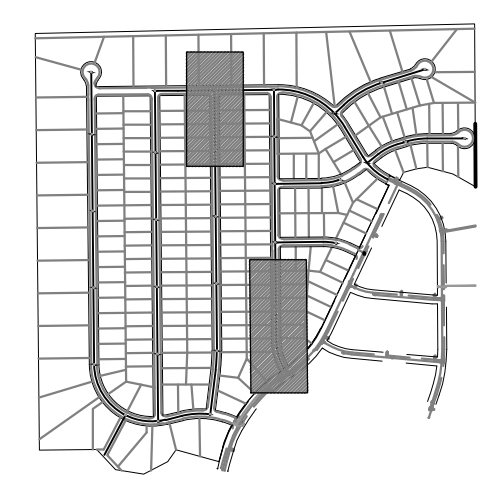
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**CAUTION**

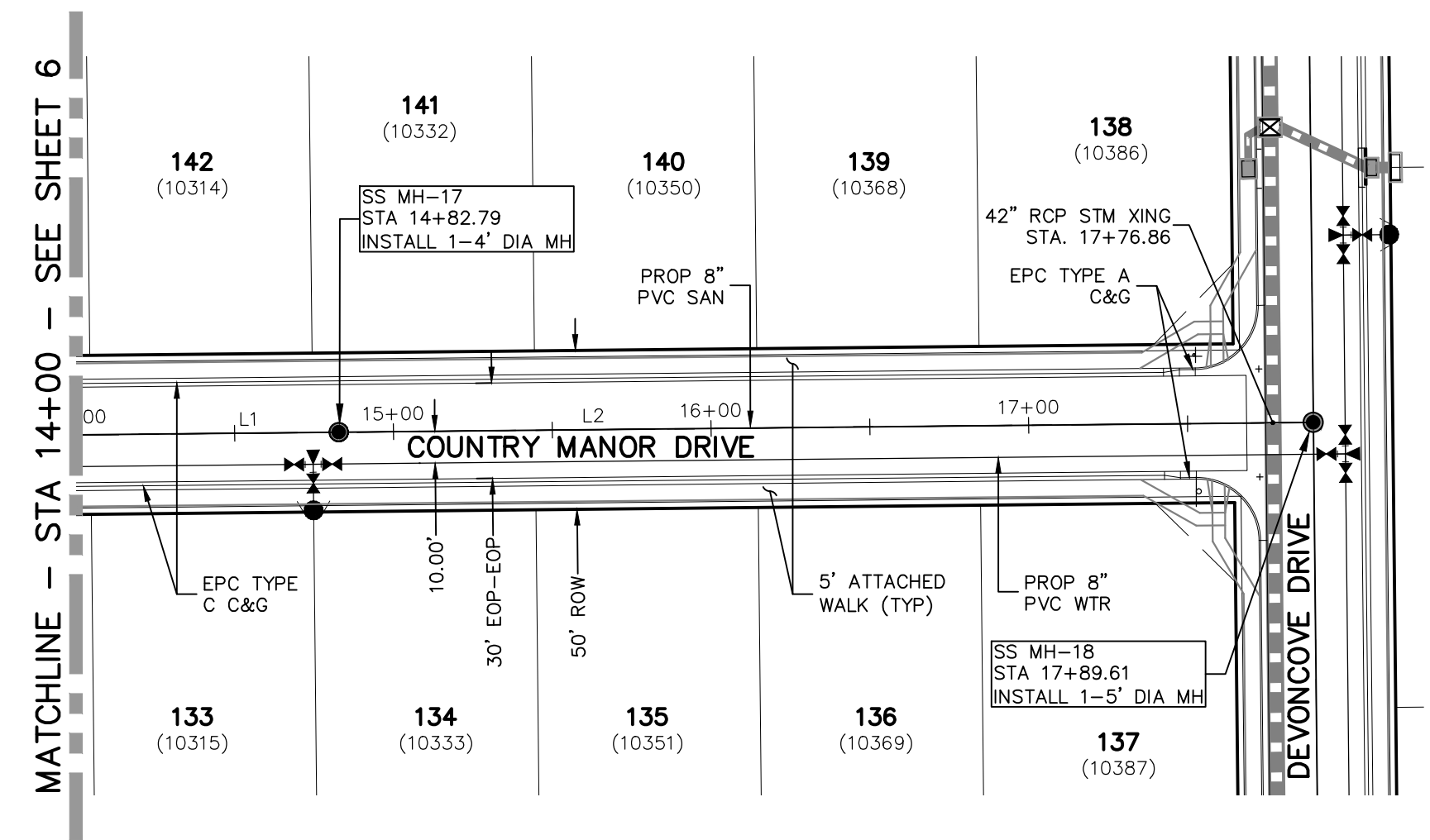
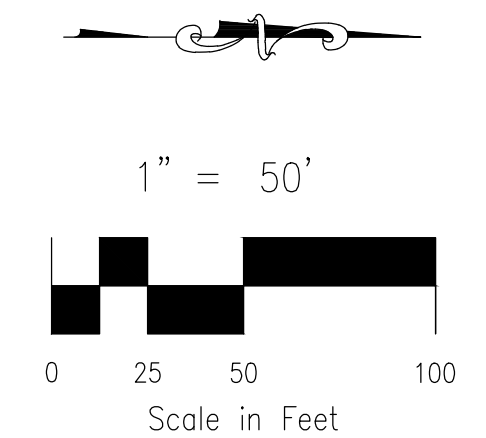
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Line #	Length	Direction
L3	173.68	N0°35'00"W
L4	337.56	N0°35'00"W
L1	350.00	N0°35'00"W
L2	306.82	N0°35'00"W

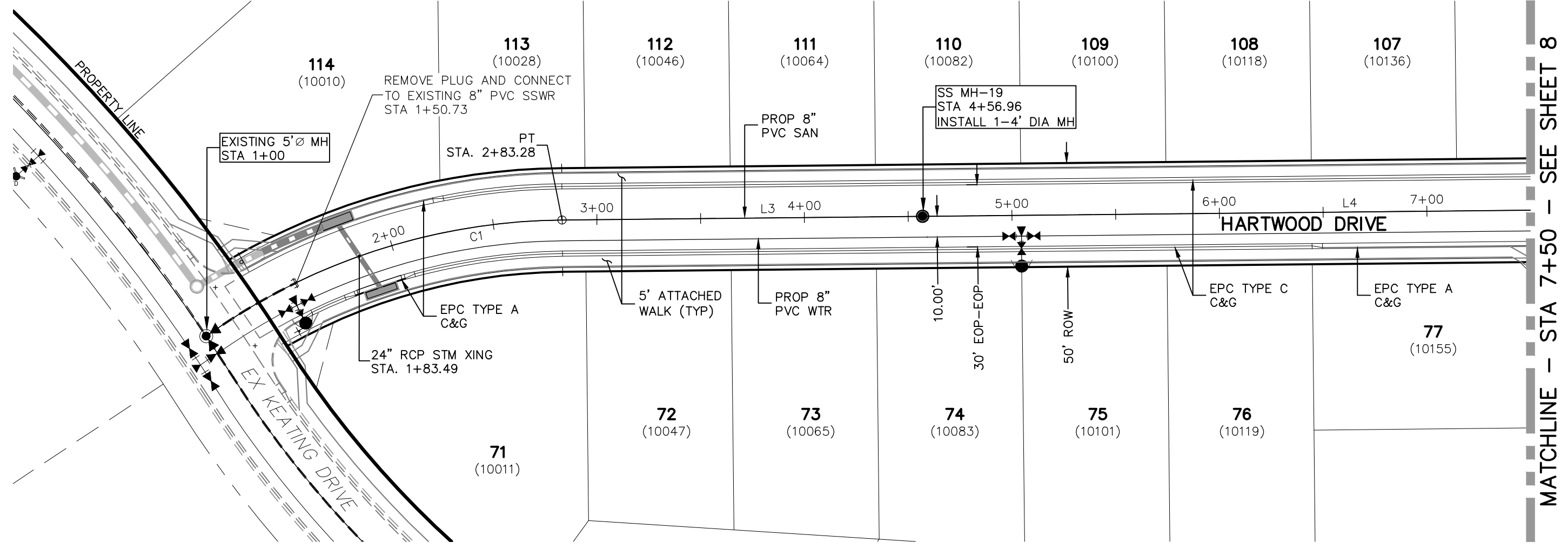
Curve #	Length	Radius	Delta
C1	132.55	300.00	25.32



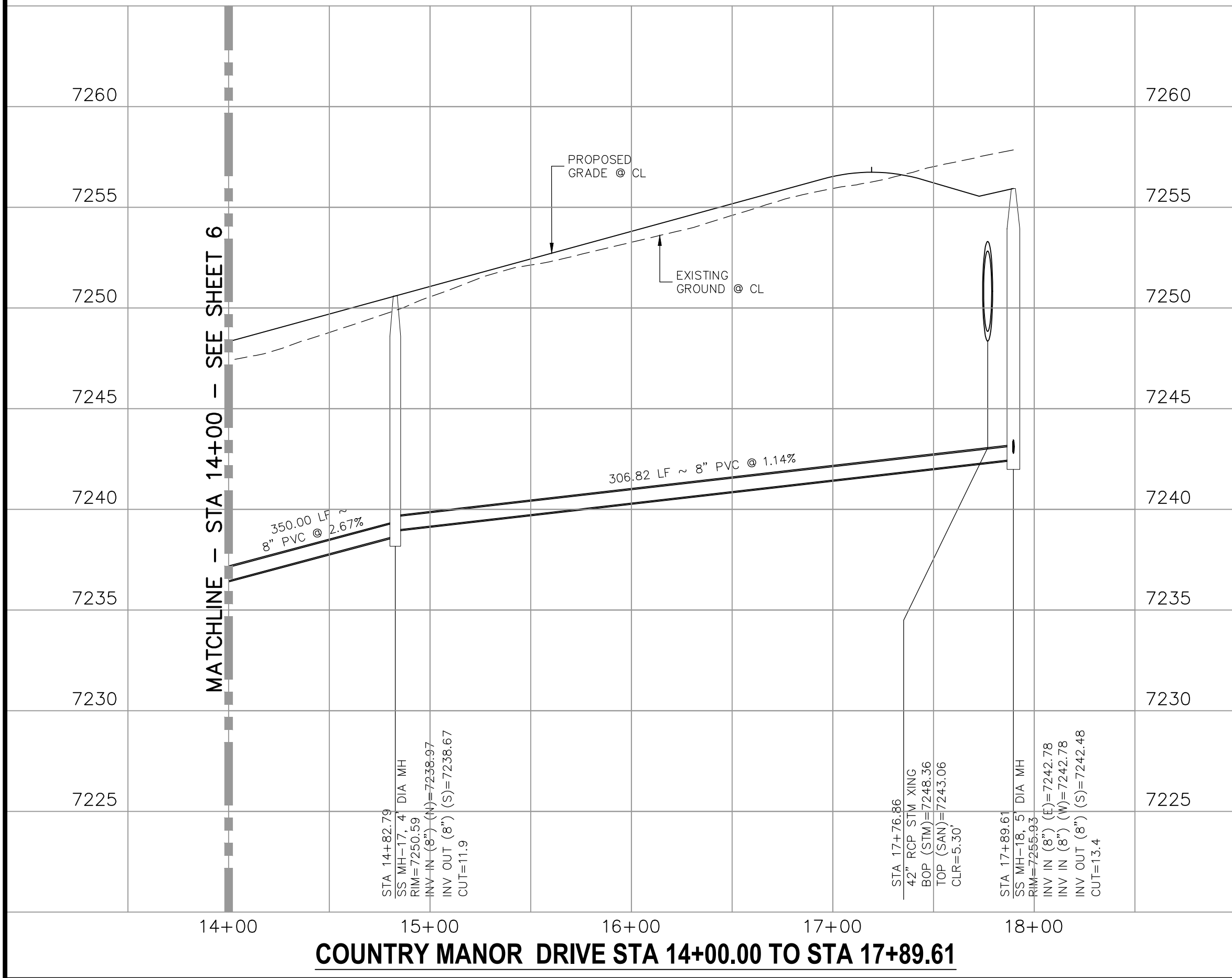
FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
 FOR BURIED UTILITY INFORMATION  
 48 HRS BEFORE YOU DIG  
 CALL 1-800-922-1987



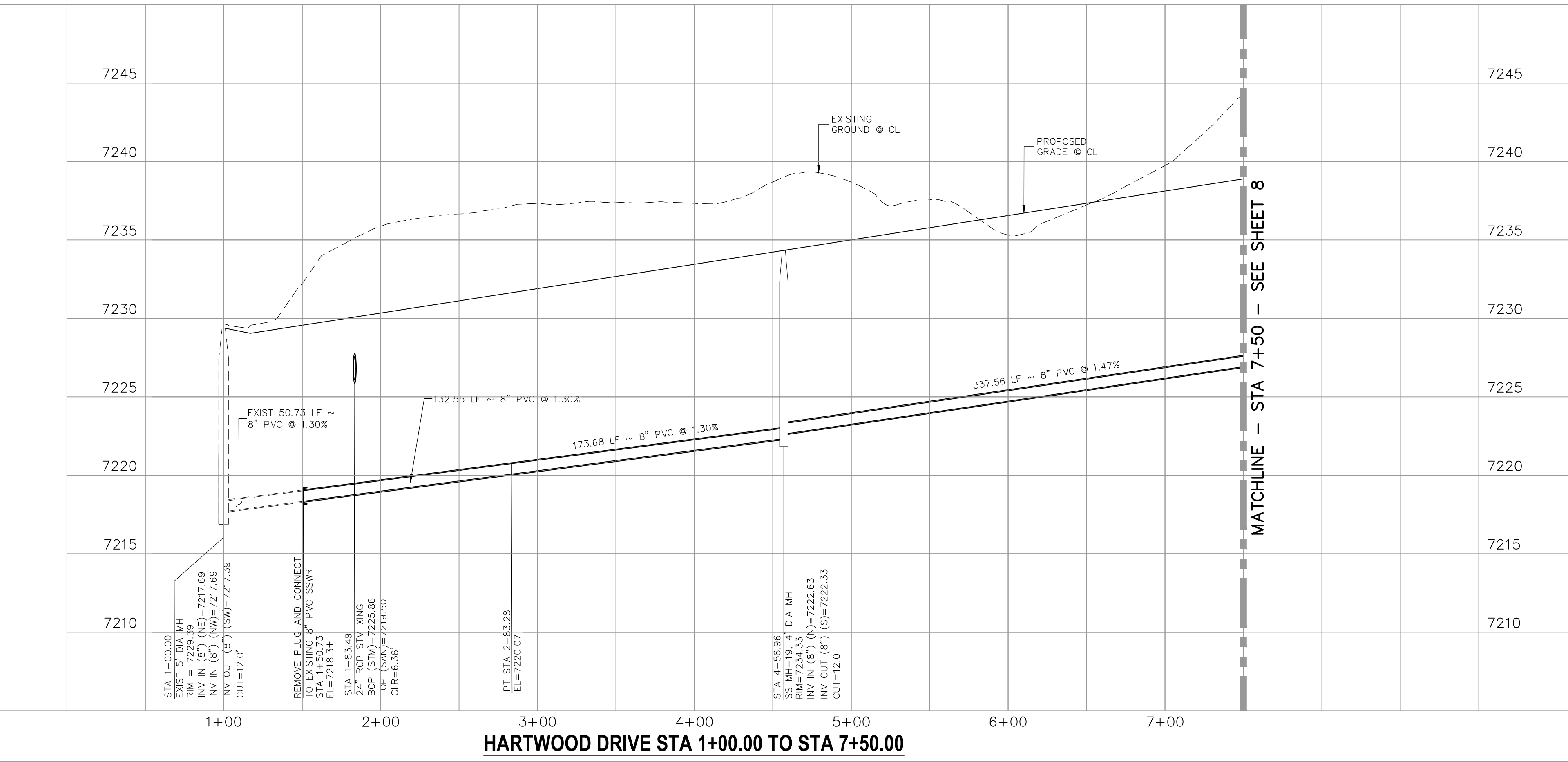
**COUNTRY MANOR DRIVE**  
 STA 14+00.00 TO STA 17+89.61



**HARTWOOD DRIVE**  
 STA 1+00.00 TO STA 7+50.00



**COUNTRY MANOR DRIVE STA 14+00.00 TO STA 17+89.61**



**HARTWOOD DRIVE STA 1+00.00 TO STA 7+50.00**

PROJECT NO. 10-014  
 DESIGNED BY: SM  
 DRAWN BY: SM  
 CHECKED BY: GW

DATE: 06/25/2020  
 SCALE: 1"=50'  
 HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'

SHEET 7 OF 24  
 SS07

PAINT BRUSH HILLS FILING NO. 14  
 SANITARY SEWER PLANS

20 BOULDER CRESCENT, SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.955.5485

M&S CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37760

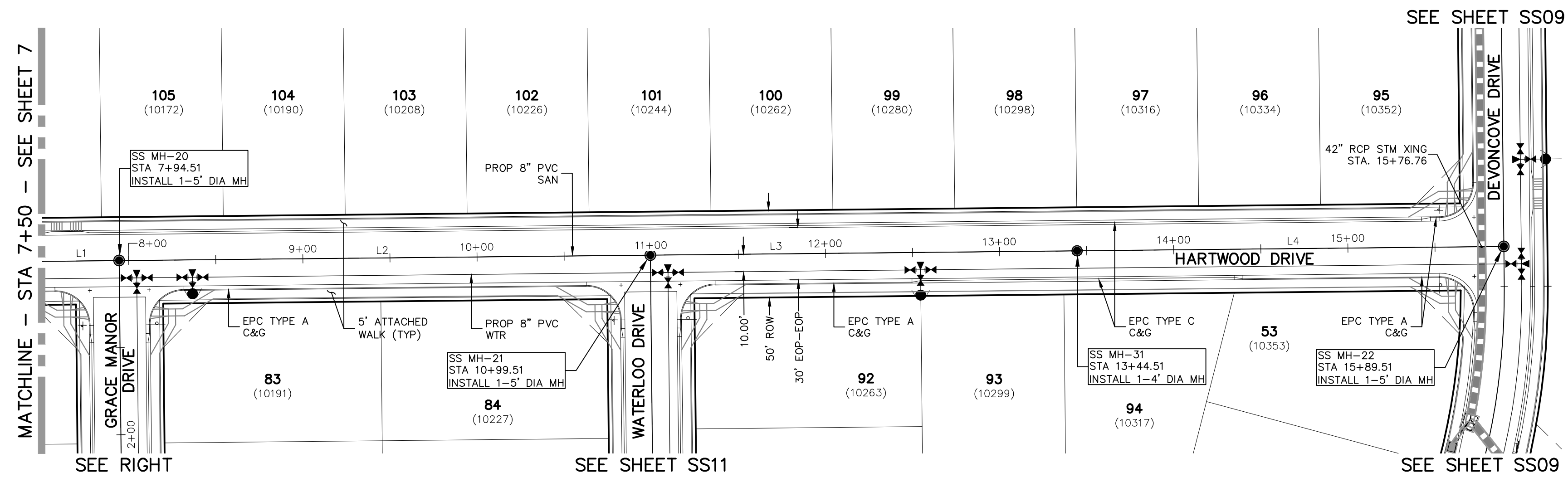
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

REVISIONS: NO. DATE BY: DESCRIPTION

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**CAUTION**

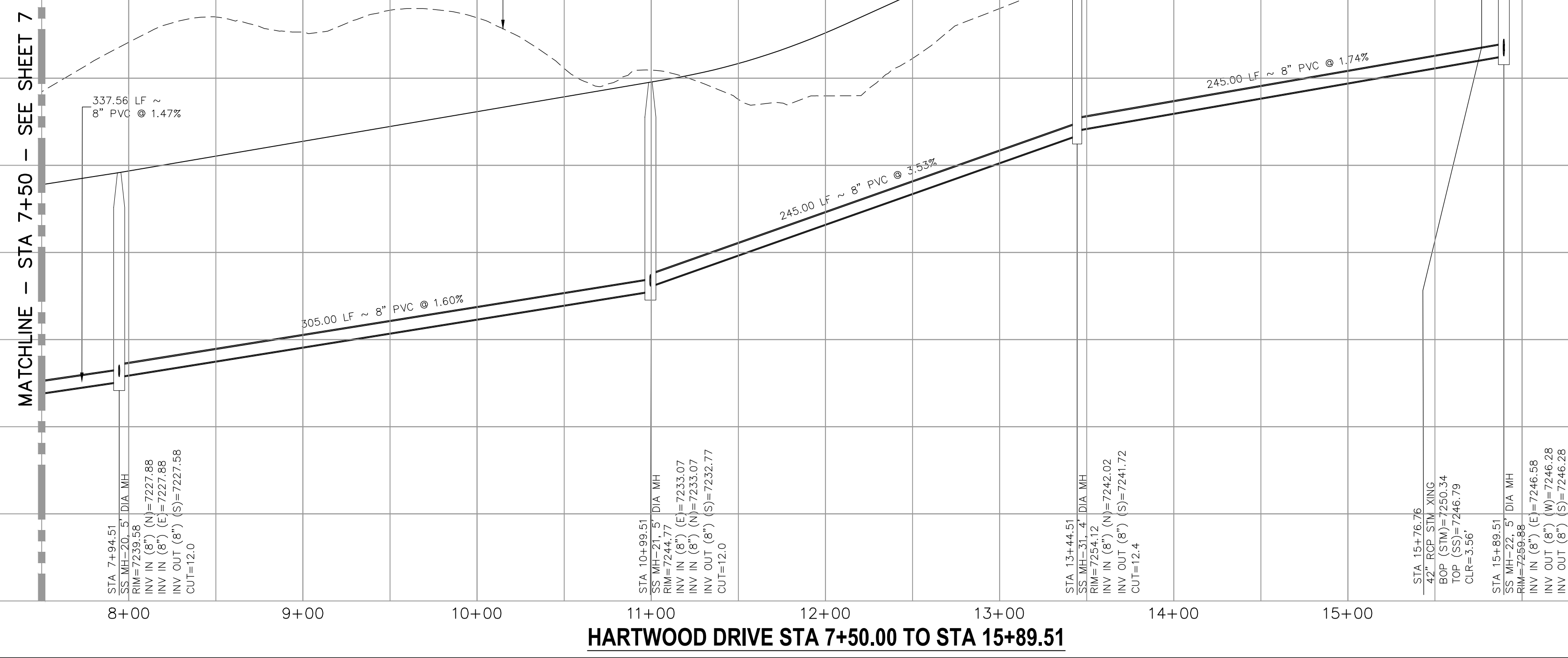




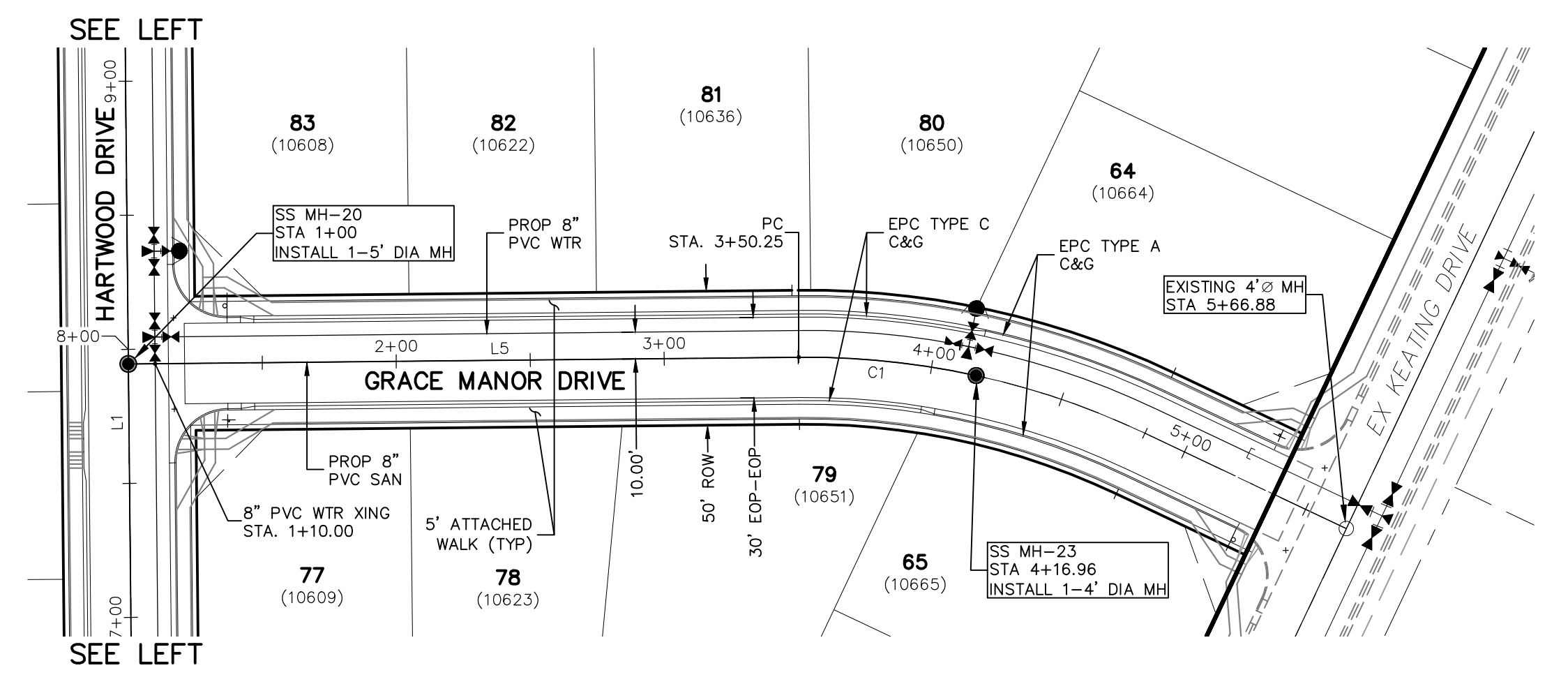
**HARTWOOD DRIVE  
STA 7+50.00 TO STA 15+89.51**

SANITARY SEWER LINE TABLE		
Line #	Length	Direction
L1	337.56	N0°35'00\"/>
L2	305.00	N0°35'00\"/>
L3	245.00	N0°35'00\"/>
L4	245.00	N0°35'00\"/>
L5	250.25	N89°25'00\"/>

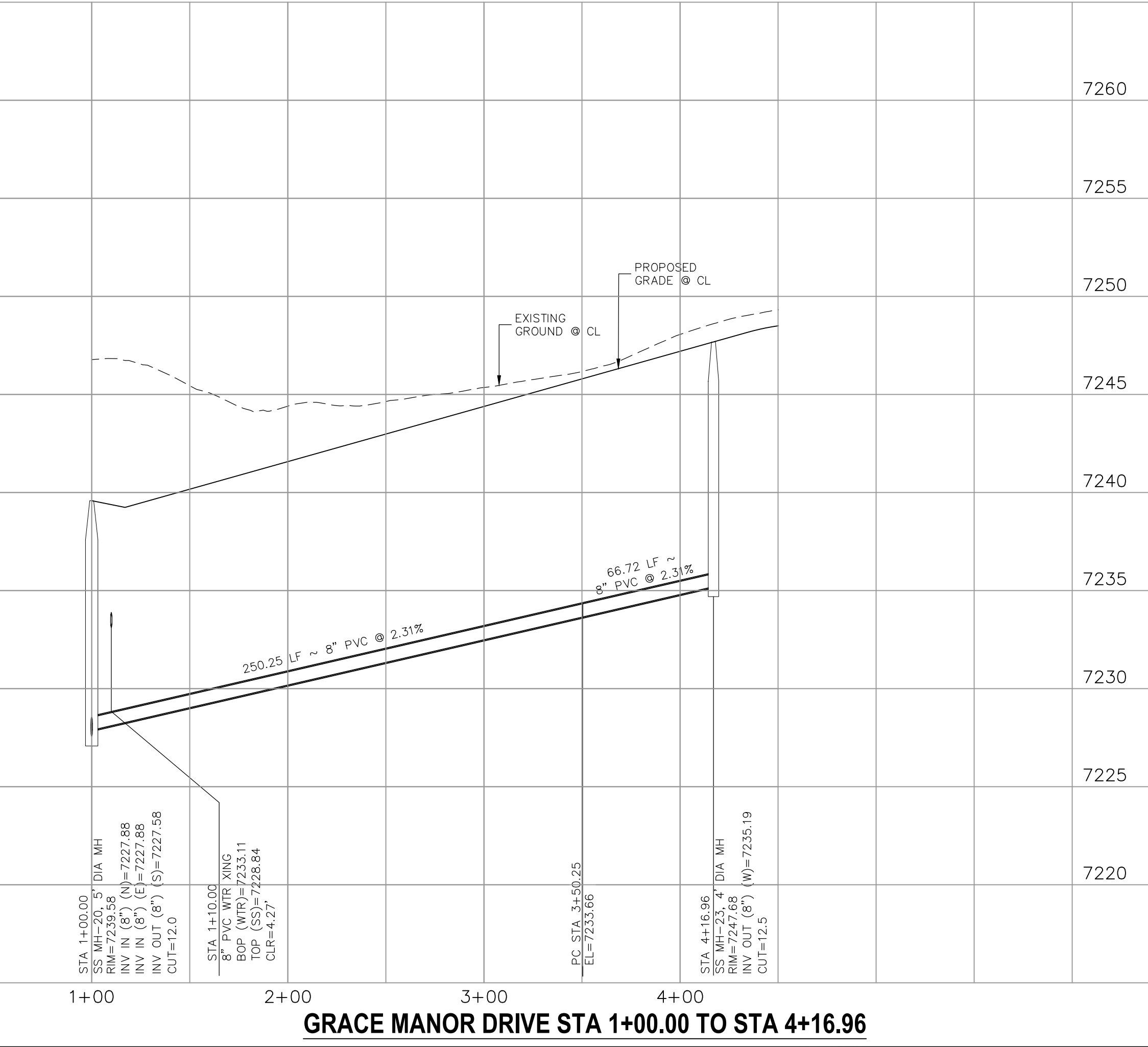
SANITARY SEWER CURVE TABLE			
Curve #	Length	Radius	Delta
C1	66.72	295.00	12.96



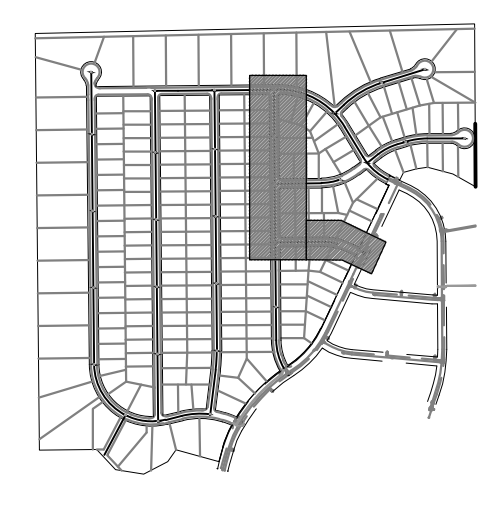
**HARTWOOD DRIVE STA 7+50.00 TO STA 15+89.51**



**GRACE MANOR DRIVE  
STA 1+00.00 TO STA 4+16.96**



**GRACE MANOR DRIVE STA 1+00.00 TO STA 4+16.96**



FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
FOR BURIED UTILITY INFORMATION  
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CALL 1-800-922-1987

1" = 50'

0 25 50 100  
Scale in Feet

**PAINT BRUSH HILLS FILING NO. 14**

**SANITARY SEWER PLANS**

PROJECT NO. 10-014 DATE: 06/25/2020

DESIGNED BY: SM SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

DRAWN BY: SM SHEET 8 OF 24

CHECKED BY: GW SS08

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

**CIVIL CONSULTANTS, INC.**

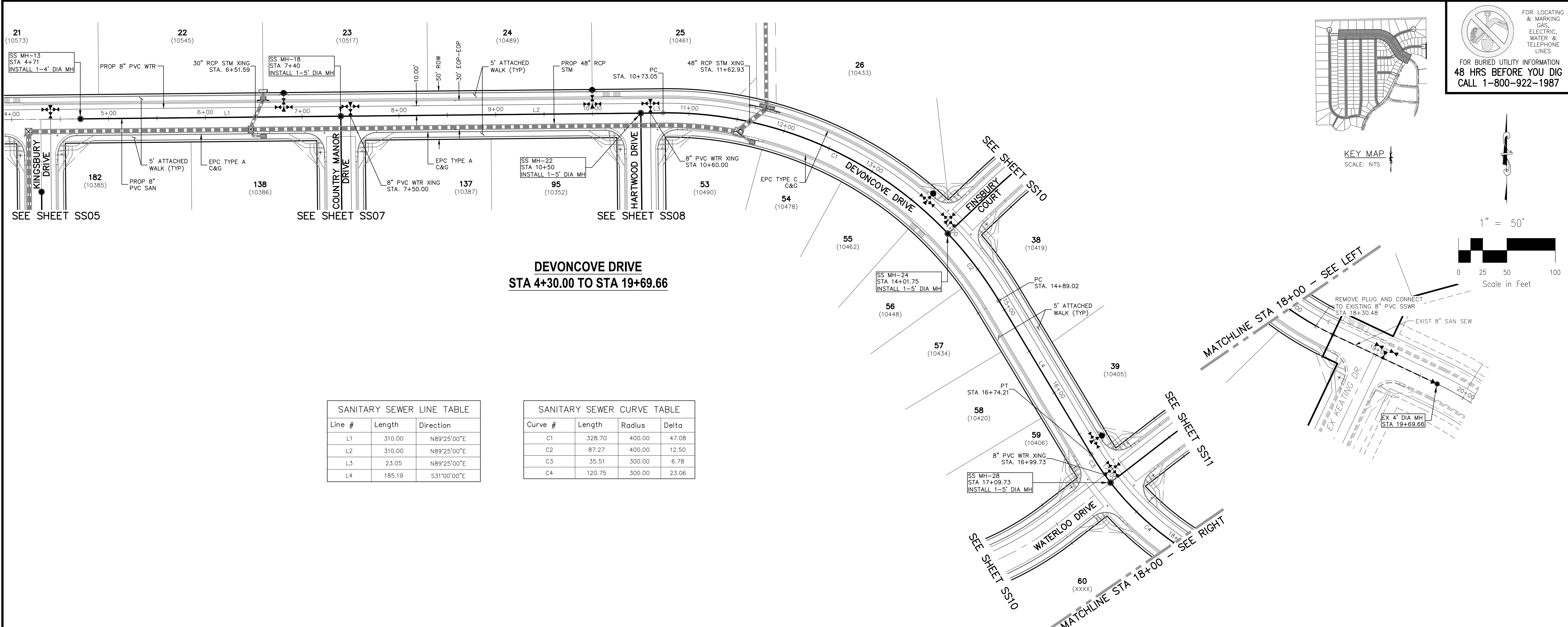
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

MARCIL A. SANCHEZ, COLORADO P.E. NO. 37160

NO.	DATE	BY	DESCRIPTION

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CAUTION

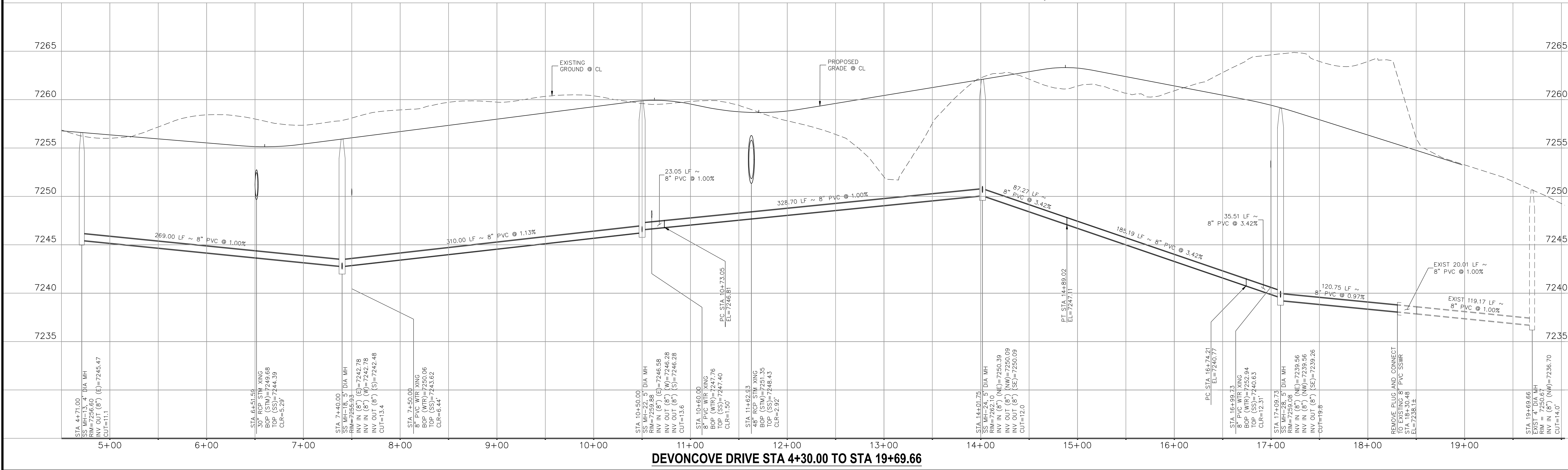


**SANITARY SEWER LINE TABLE**

Line #	Length	Direction
L1	310.00	N89°25'00"E
L2	310.00	N89°25'00"E
L3	23.05	N89°25'00"E
L4	185.19	S31°00'00"E

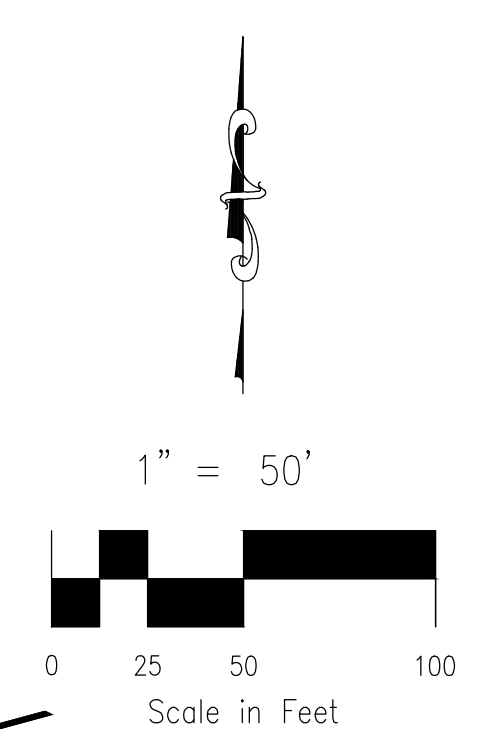
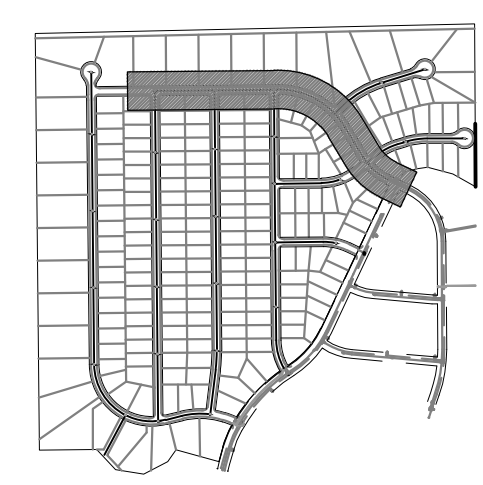
**SANITARY SEWER CURVE TABLE**

Curve #	Length	Radius	Delta
C1	328.70	400.00	47.08
C2	87.27	400.00	12.50
C3	35.51	300.00	6.78
C4	120.75	300.00	23.06



**DEVONCOVE DRIVE STA 4+30.00 TO STA 19+69.66**

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FOR BURIED UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987



**PAINT BRUSH HILLS FILING NO. 14**  
**SANITARY SEWER PLANS**  
PROJECT NO. 10-014  
DATE: 06/25/2020  
SCALE: HORIZONTAL: 1"=50'  
DESIGNED BY: SM  
DRAWN BY: GW  
CHECKED BY: SS09  
SHEET 9 OF 24

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

**M&S CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF  
M&S CIVIL CONSULTANTS, INC.

REVISIONS:

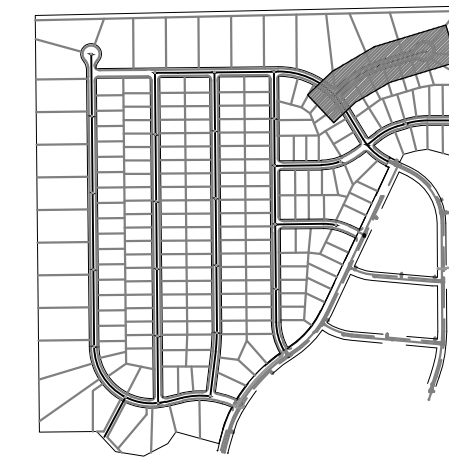
NO.	DATE:	BY:	DESCRIPTION:

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**CAUTION**

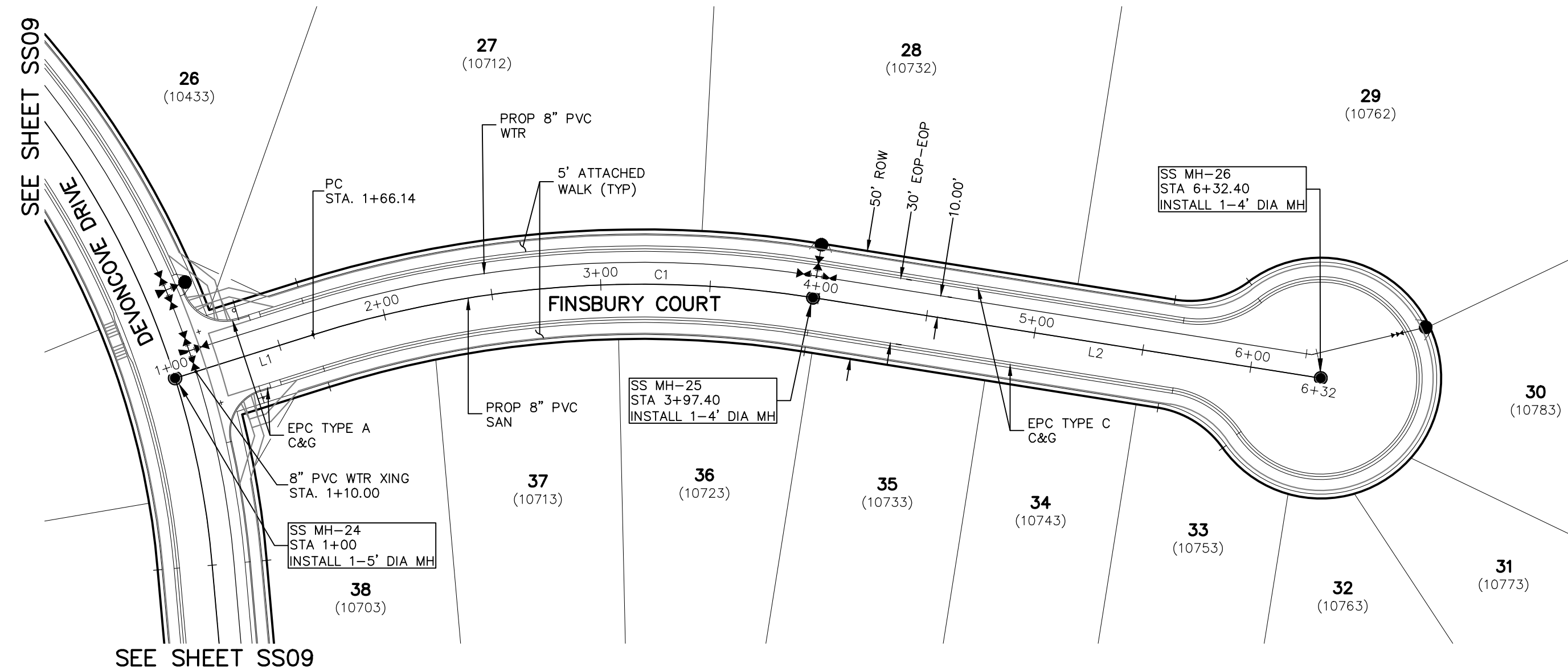
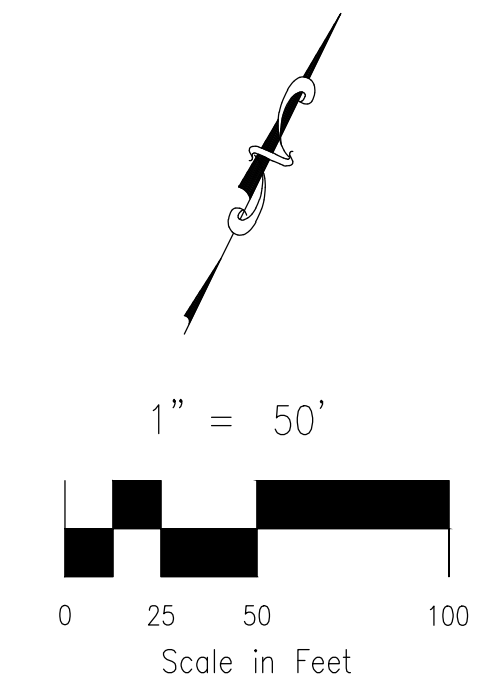
SANITARY SEWER LINE TABLE		
Line #	Length	Direction
L1	66.14	N46°30'00"E
L2	235.00	N73°00'00"E

SANITARY SEWER CURVE TABLE			
Curve #	Length	Radius	Delta
C1	231.26	500.00	26.50

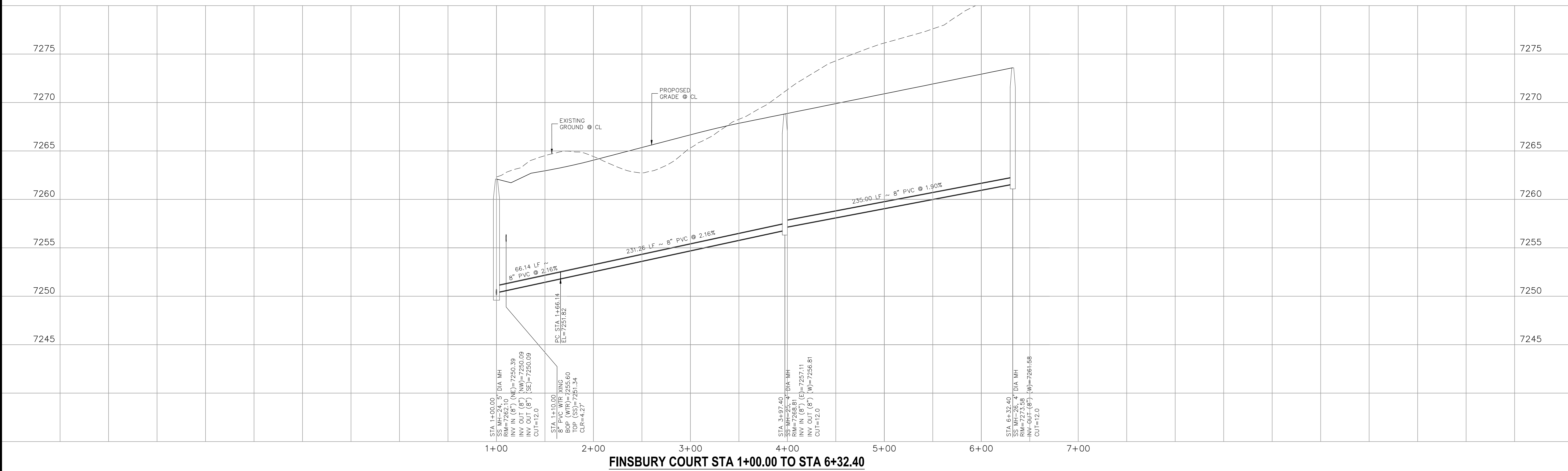


KEY MAP  
SCALE: NTS

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
FOR BURIED UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987



**FINSBURY COURT  
STA 1+00.00 TO STA 6+32.40**



**PAINT BRUSH HILLS FILING NO. 14**

**SANITARY SEWER PLANS**

PROJECT NO. 10-014 DATE: 06/25/2020

SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

DESIGNED BY: SM DRAWN BY: SM CHECKED BY: GW

SHEET 10 OF 24 **SS10**

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

**M&S CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF  
M&S CIVIL CONSULTANTS, INC.

MARCIL A. SANCHEZ, COLORADO P.E. NO. 37760

NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

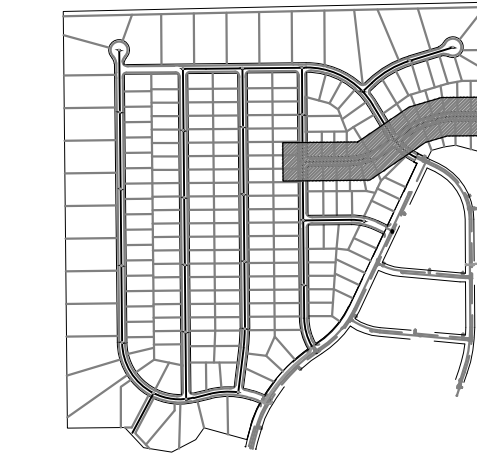
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**CAUTION**

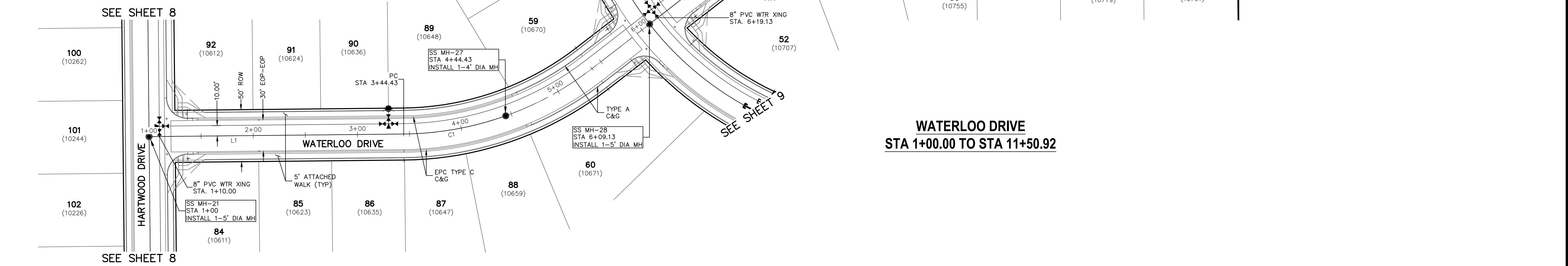
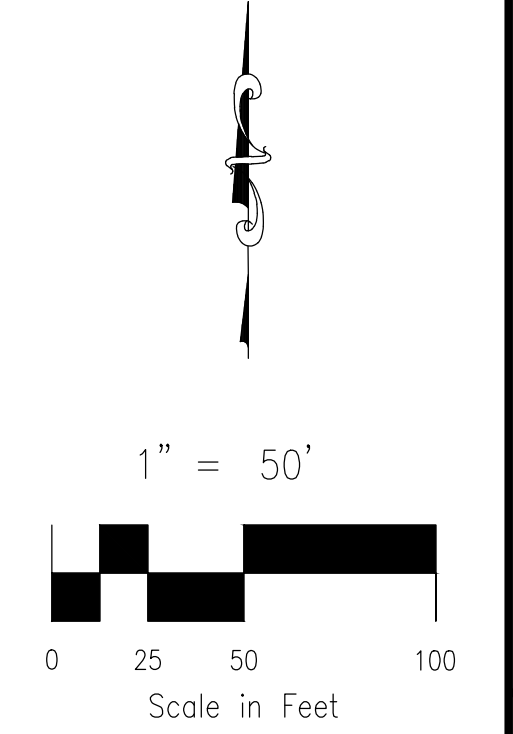
Line #	Length	Direction
L1	244.43	S89°25'00"W
L3	76.65	N52°13'02"E
L4	45.21	N73°17'32"E
L5	195.67	N89°36'37"E

Curve #	Length	Radius	Delta
C1	100.00	300.00	19.10
C3	110.35	300.00	21.08
C4	113.92	400.00	16.32

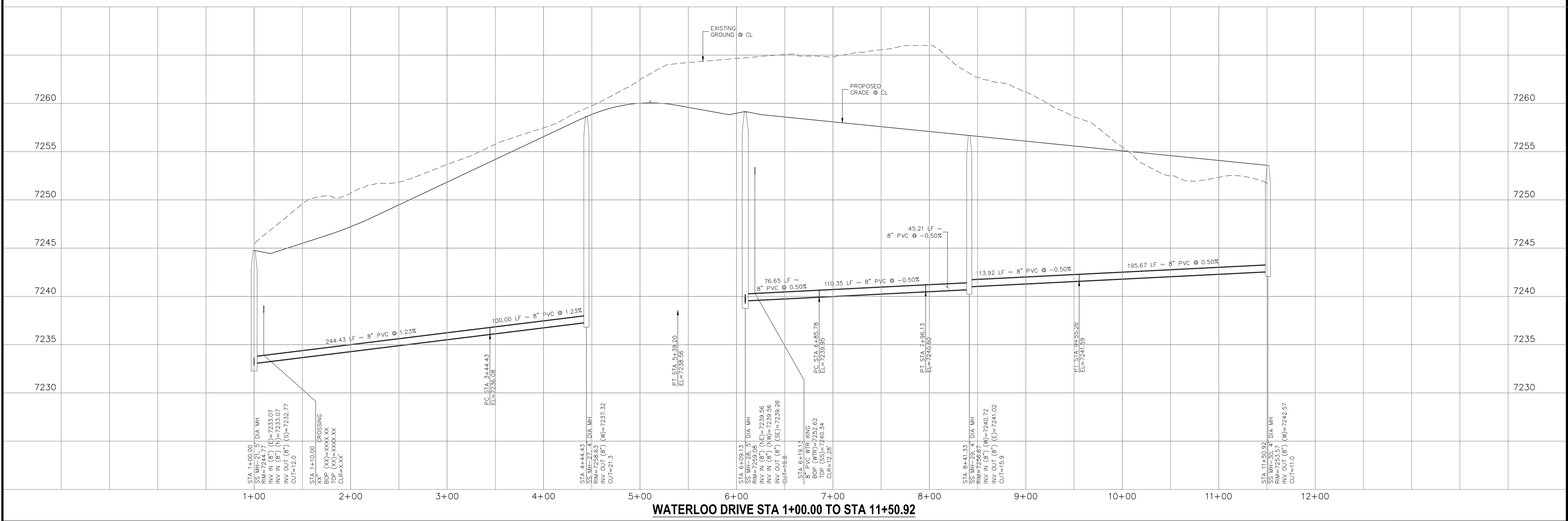
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FOR BURIED UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987



KEY MAP  
SCALE: NTS



**WATERLOO DRIVE  
STA 1+00.00 TO STA 11+50.92**



**WATERLOO DRIVE STA 1+00.00 TO STA 11+50.92**

**PAINT BRUSH HILLS FILING NO. 14**

**SANITARY SEWER PLANS**

PROJECT NO. 10-014 DATE: 06/25/2020

DESIGNED BY: SM SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

DRAWN BY: SM SHEET 11 OF 24

CHECKED BY: GW **SS11**

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

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FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

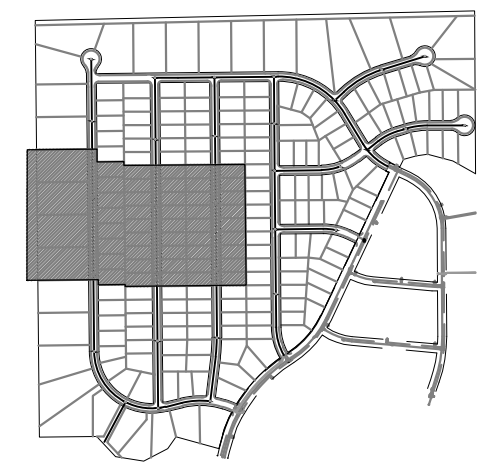
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160

NO.	DATE	BY	DESCRIPTION

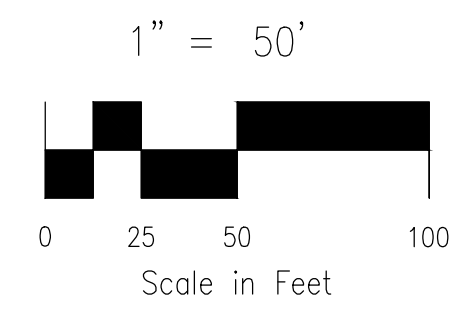
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**CAUTION**





SCALE: NTS



**NOTE:**

- 1. CURVILINEAR PIPE MUST UTILIZE HD COUPLERS.

**ABBREVIATIONS**

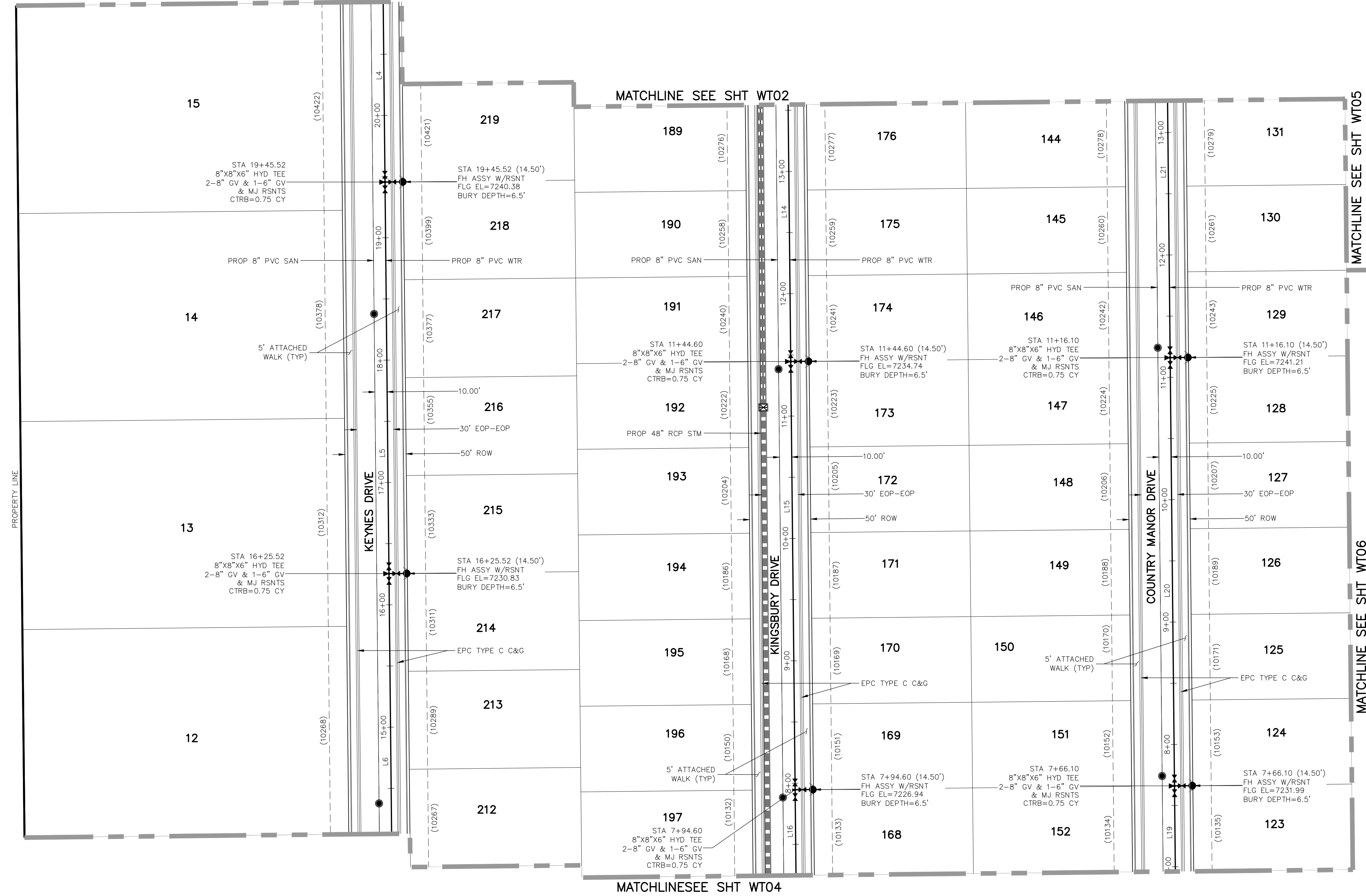
- FBC FINSBURY COURT
- KND KEYNES DRIVE
- DCD DEVONCOVE DRIVE
- KBD KINGSBURY DRIVE
- CMD COUNTRY MANOR DRIVE
- WLD WATERLOO DRIVE
- HWD HARTWOOD DRIVE
- GMD GRACE MANOR DRIVE
- EXIST'G EXISTING
- SAN SANITARY SEWER
- PROP PROPOSED
- SHT SHEET
- WTR WATER
- EPC EL PASO COUNTY CURB AND GUTTER
- ROW RIGHT OF WAY
- EOP EDGE OF PAVEMENT
- HYD HYDRANT
- TYP TYPICAL
- XING CROSSING
- STM STORM SEWER
- CLR CLEARANCE
- BOP BOTTOM OF PIPE
- TOP TOP OF PIPE
- CTRB CONCRETE TRUST BLOCK
- CY CUBIC YARD

**LEGEND**

- FUTURE WATER
- PROPOSED SANITARY SEWER
- PROPOSED WATER
- FIRE HYDRANT (PROPOSED)
- VALVE (PROPOSED)
- BLOWOFF ASSY. (PROPOSED)
- PLUG (PROPOSED)
- PROPOSED STORM DRAIN
- RIGHT-OF-WAY
- PROPERTY LINE
- CENTERLINE
- LOT ADDRESS
- LOT NUMBER
- MATCHLINE

**WATER LINE TABLE**

Line #	Length	Direction
L4	320.00	S0°35'00"E
L5	320.00	S0°35'00"E
L6	320.00	S0°35'00"E
L14	350.00	S0°35'00"E
L15	350.00	S0°35'00"E
L16	350.00	S0°35'00"E
L19	350.00	S0°34'30"E
L20	350.00	S0°35'00"E
L21	350.00	S0°35'00"E



20 BOULDER CRESCENT, SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.555.5485

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FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

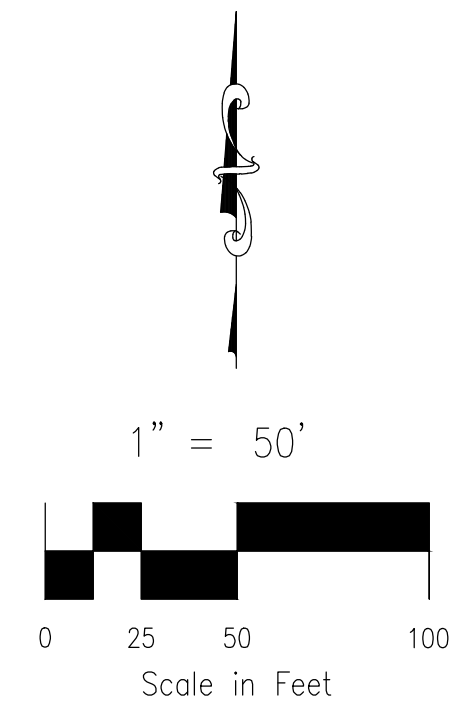
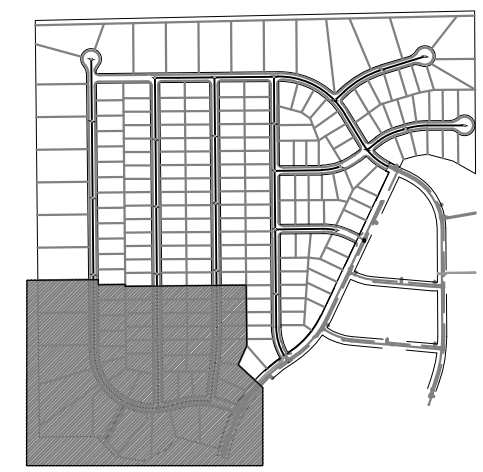
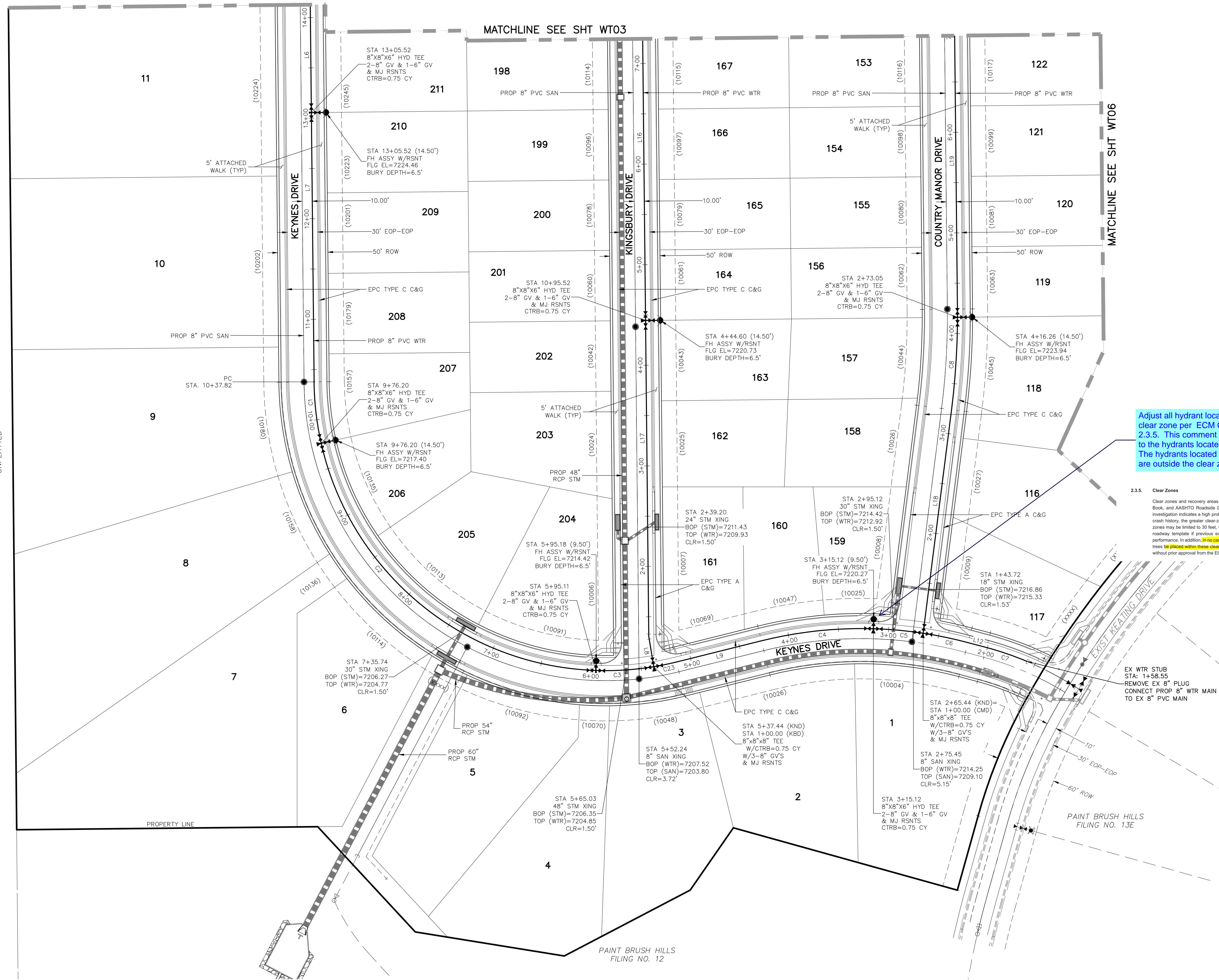
REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:

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**CAUTION**

File: C:\Users\oprice\Documents\100144-PBH 14\Map\Corral Day\water\WT02-WT06.dwg PlotStamp: 7/7/2020 11:33 AM



KEY MAP  
SCALE: NTS

**NOTE:**

- CURVILINEAR PIPE MUST UTILIZE HD COUPLERS.

**ABBREVIATIONS**

- FBC FINSBURY COURT
- KND KEYNES DRIVE
- DCD DEVONCOVE DRIVE
- KBD KINGSBURY DRIVE
- CMD COUNTRY MANOR DRIVE
- WLD WATERLOO DRIVE
- HWD HARTWOOD DRIVE
- GMD GRACE MANOR DRIVE
- EX EXISTING
- SAN SANITARY SEWER
- PROP PROPOSED
- SHT SHEET
- WTR WATER
- EPC EL PASO COUNTY CURB AND GUTTER
- C&G CURB AND GUTTER
- ROW RIGHT OF WAY
- EOP EDGE OF PAVEMENT
- HYD HYDRANT
- TYP TYPICAL
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- CLR CLEARANCE
- BOP BOTTOM OF PIPE
- TOP TOP OF PIPE
- CTRB CONCRETE TRUST BLOCK
- CY CUBIC YARD

**LEGEND**

- FUTURE WATER
- PROPOSED SANITARY SEWER
- PROPOSED WATER
- FIRE HYDRANT (PROPOSED)
- VALVE (PROPOSED)
- BLOWOFF ASSY. (PROPOSED)
- PLUG (PROPOSED)
- PROPOSED STORM DRAIN
- RIGHT-OF-WAY
- PROPERTY LINE
- CENTERLINE
- LOT ADDRESS
- LOT NUMBER
- MATCHLINE

Adjust all hydrant locations outside of the clear zone per ECM Chapter 2 Section 2.3.5. This comment appear to mainly apply to the hydrants located at the back of sidewalk outside the clear zone.

**2.3.5. Clear Zones**

Clear zones and recovery areas shall conform to CDOT Highway Access Code, AASHTO Green Book, and AASHTO Roadside Design Guide, as modified by Table 2-16. Where a site-specific investigation indicates a high probability of continuing crashes, or such occurrence are indicated by crash history, the greater clear-zone distances may be required by the ECM Administrator. Clear zones may be limited to 30 feet, when approved by the ECM Administrator, to provide a consistent roadway template if previous experience with similar projects or designs indicates satisfactory performance. In addition, **driveway cases shall be permitted structures including light poles, fire hydrants or trees highlighted within these clear zones** or in any other location that would obstruct sight distances without prior approval from the ECM Administrator.

Line #	Length	Direction
L6	320.00	S0°35'00"E
L7	267.70	S0°35'00"E
L8	30.33	S9°26'40"E
L9	86.98	N76°00'00"E
L12	18.91	S75°00'00"E
L16	350.00	S0°35'00"E
L17	314.27	S0°35'00"E
L18	223.97	S71°4'10"W
L19	350.00	S0°34'30"E

Curve #	Length	Radius	Delta
C1	61.62	290.00	12.17
C2	381.07	290.00	75.29
C3	57.69	290.00	11.40
C4	112.29	410.00	15.69
C5	49.67	410.00	6.94
C6	45.56	410.00	6.37
C7	42.42	310.00	7.84
C8	92.13	734.84	7.18
C23	23.06	290.00	4.56

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
FOR BURIED UTILITY INFORMATION  
**48 HRS BEFORE YOU DIG**  
CALL 1-800-922-1987

**PAINT BRUSH HILLS FILING NO. 14**

**WATER PLANS**

PROJECT NO. 10-014  
SCALE: 1"=50'  
DATE: 06/25/2020

DESIGNED BY: JWP  
DRAWN BY: SM  
CHECKED BY: GW

SHEET 14 OF 21  
WT04

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

REVISIONS:

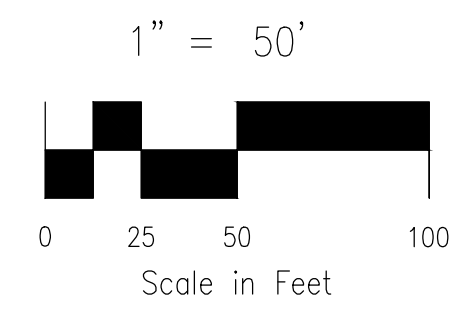
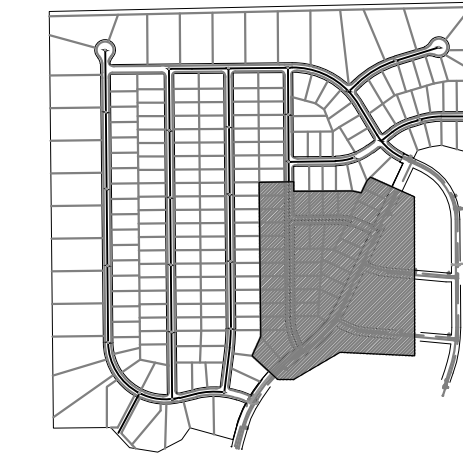
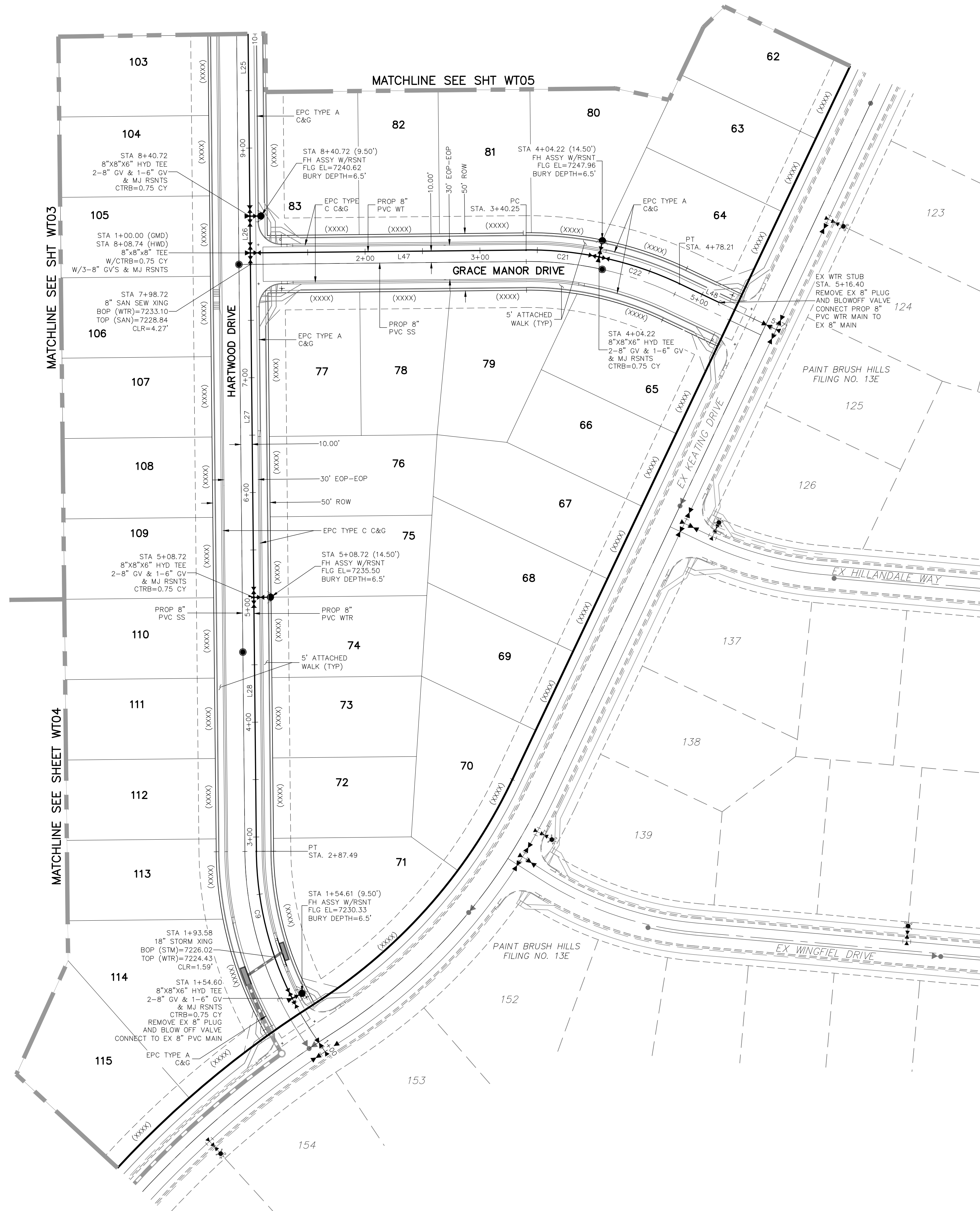
NO.	DATE	BY	DESCRIPTION

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**CAUTION**







**NOTE:**  
1. CURVILINEAR PIPE MUST UTILIZE HD COUPLERS.

- ABBREVIATIONS**
- FBC FINSBURY COURT
  - KND KEYNES DRIVE
  - DCD DEVONCOVE DRIVE
  - KBD KINGSBURY DRIVE
  - CMD COUNTRY MANOR DRIVE
  - WLD WATERLOO DRIVE
  - HWD HARTWOOD DRIVE
  - GMD GRACE MANOR DRIVE
  - EX EXISTING
  - SS SANITARY SEWER
  - PROP PROPOSED
  - SHT SHEET
  - WT WATER
  - EPC EL PASO COUNTY
  - C&G CURB AND GUTTER
  - ROW RIGHT OF WAY
  - EOP EDGE OF PAVEMENT
  - HYD HYDRANT
  - TYP TYPICAL
  - XING CROSSING
  - ST STORM SEWER
  - CLR CLEARANCE

- LEGEND**
- FUTURE WATER
  - PROPOSED SANITARY SEWER
  - PROPOSED WATER
  - FIRE HYDRANT (PROPOSED)
  - VALVE (PROPOSED)
  - BLOWOFF ASSY. (PROPOSED)
  - PLUG (PROPOSED)
  - PROPOSED STORM DRAIN
  - RIGHT-OF-WAY
  - PROPERTY LINE
  - CENTERLINE
  - LOT ADDRESS (XXXX)
  - LOT ADDRESS 136
  - MATCHLINE

**WATER LINE TABLE**

Line #	Length	Direction
L25	273.00	S0°35'00"E
L26	32.00	S0°35'00"E
L27	300.00	S0°35'00"E
L28	221.23	S0°35'00"E
L47	240.25	N89°25'00"E
L48	38.19	S64°40'00"E

**WATER CURVE TABLE**

Curve #	Length	Radius	Delta
C9	132.90	290.00	26.26
C21	63.97	305.00	12.02
C22	73.99	305.00	13.90

**PAINT BRUSH HILLS FILING NO. 14**

**WATER PLANS**

PROJECT NO. 10-014  
DATE: 06/25/2020  
SCALE: N/A  
DESIGNED BY: JWP  
DRAWN BY: SM  
CHECKED BY: GW

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

M&S CIVIL CONSULTANTS, INC.

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

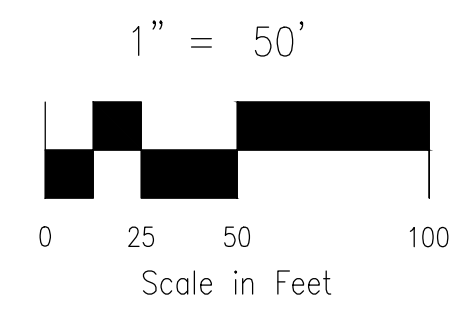
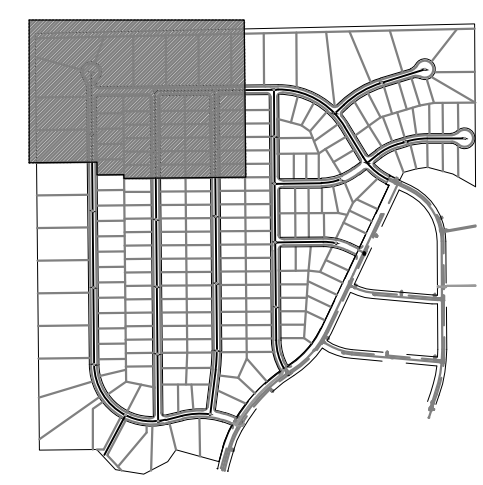
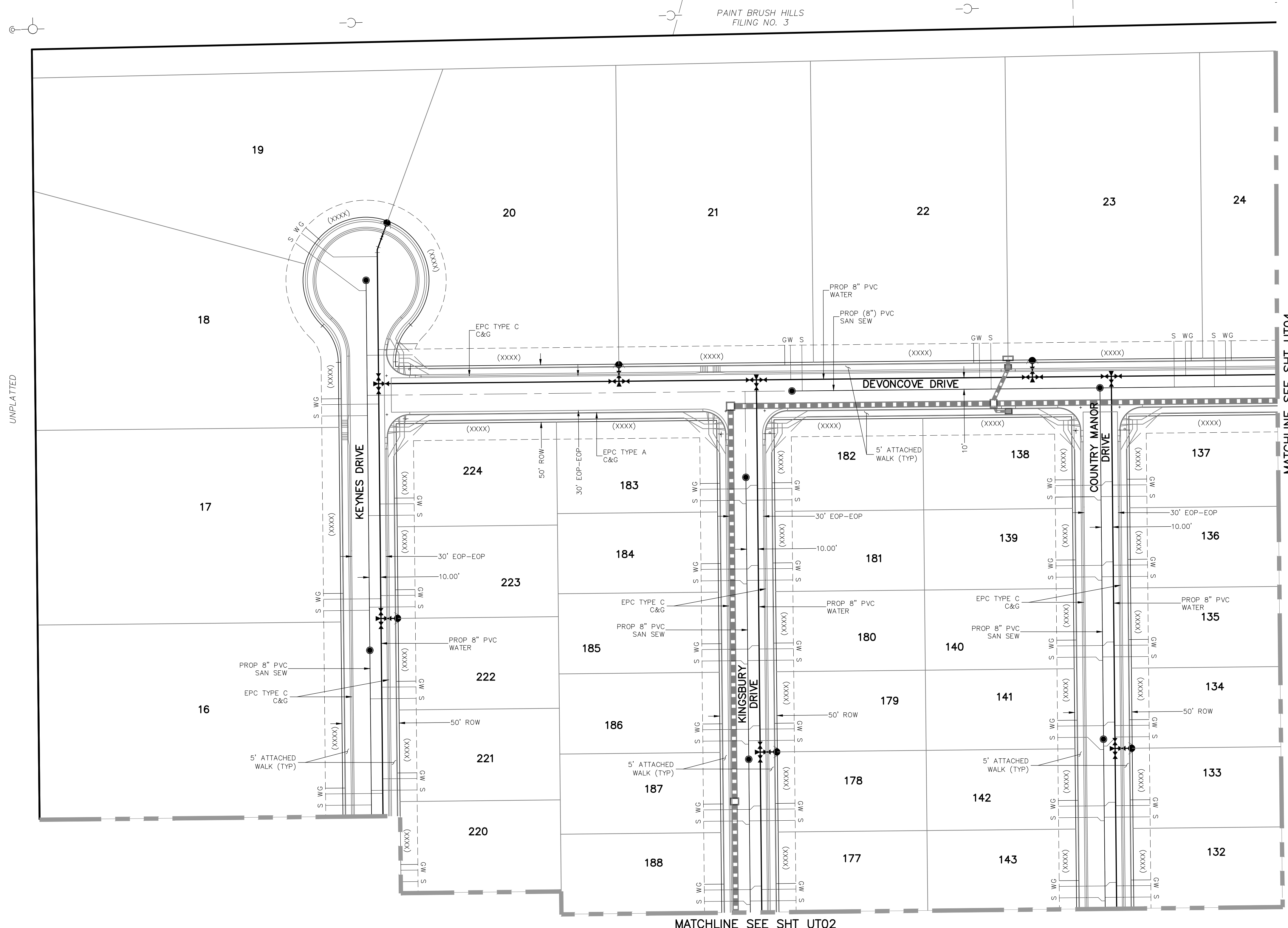
REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:

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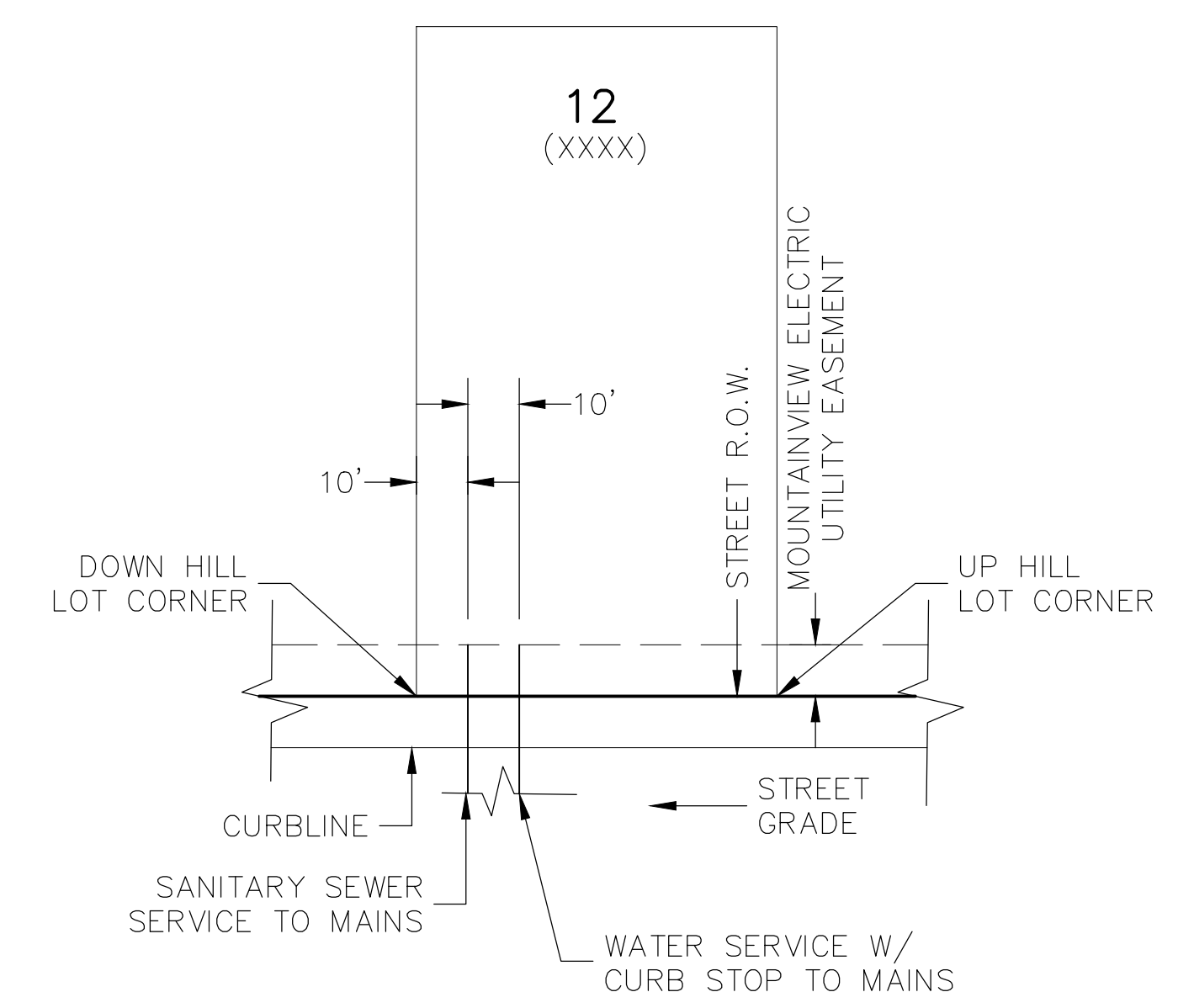
CAUTION

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**GENERAL NOTES:**

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**UTILITY SERVICE LOCATIONS DETAIL**  
N.T.S.

**NOTES:**

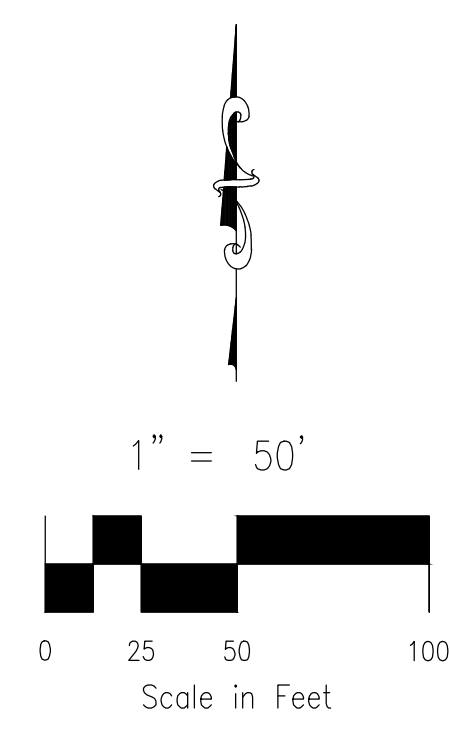
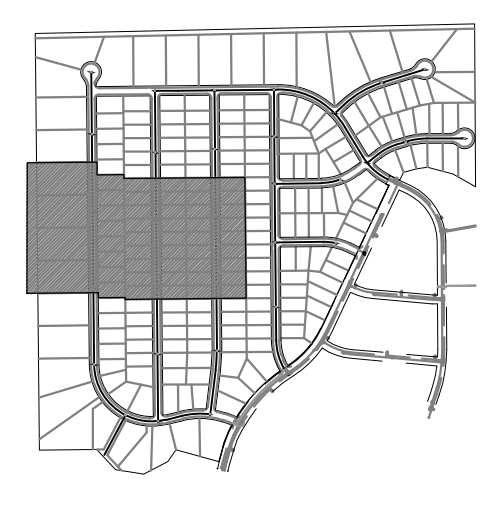
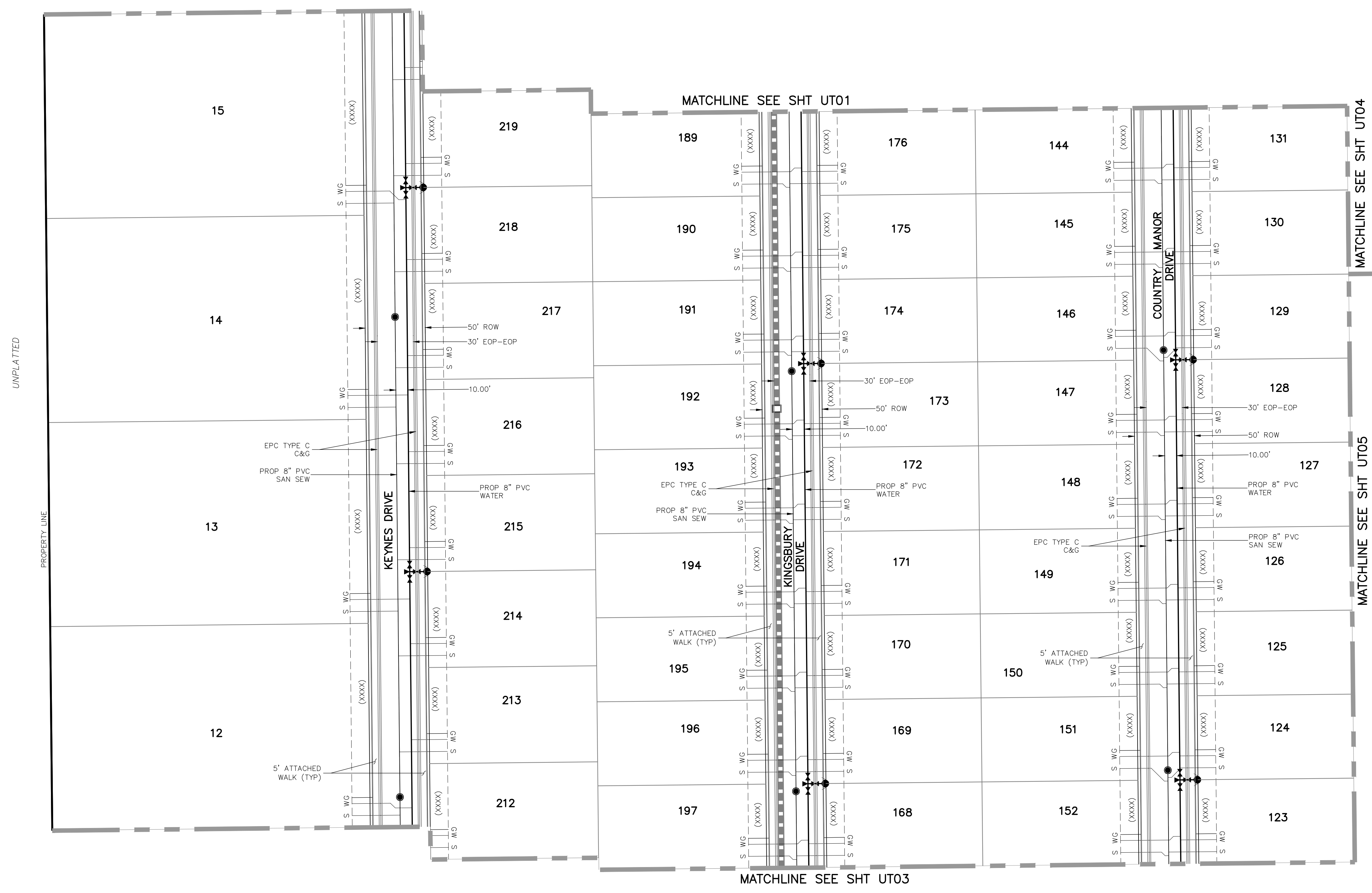
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FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
FOR BURIED UTILITY INFORMATION  
**48 HRS BEFORE YOU DIG**  
CALL 1-800-922-1987

<b>PAINT BRUSH HILLS FILING NO. 14</b> <b>UTILITY SERVICE PLANS</b>		PROJECT NO. 10-014 DATE: 06/25/2020	SCALE: HORIZONTAL: 1"=50' VERTICAL: N/A	SHEET 17 OF 24 UT01
20 BOULDER CRESCENT, SUITE 110 COLORADO SPRINGS, CO 80903 PHONE: 719.955.5485				
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.				
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 377160				
REVISIONS: NO. DATE BY: DESCRIPTION:	THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.			
<b>CAUTION</b>				

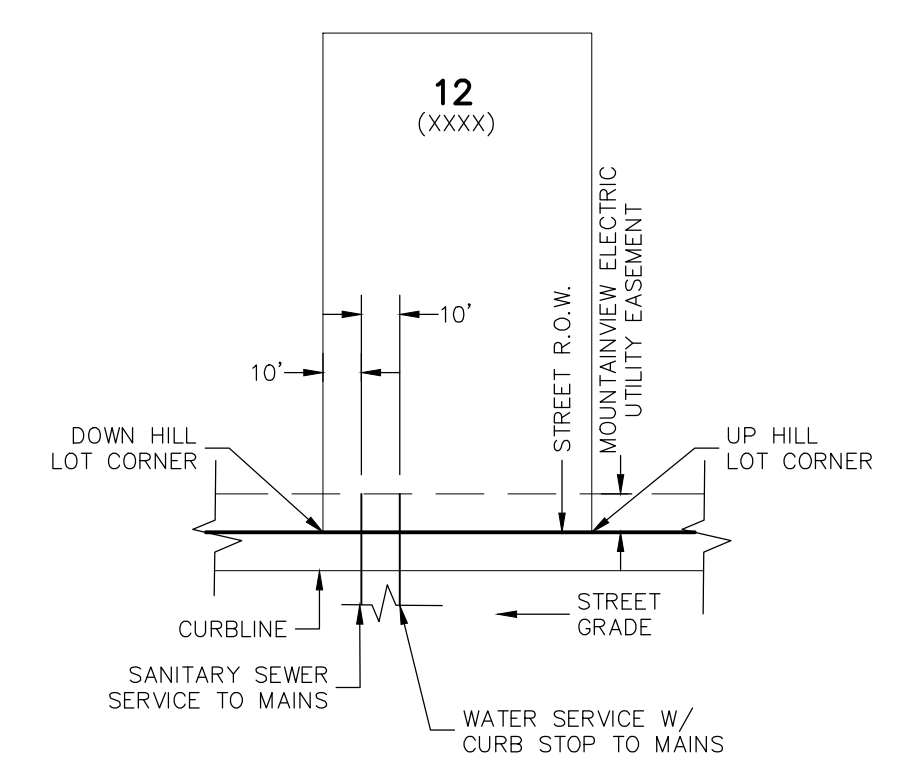
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**PAINT BRUSH HILLS FILING NO. 14**

**UTILITY SERVICE PLANS**

DATE: 06/25/2018

SCALE: PROJECT NO. 10-014

HORIZONTAL: DESIGNED BY: GW

VERTICAL: 1"=50' DRAWN BY: SM

N/A CHECKED BY: GW

SHEET 18 OF 24

UT02

20 BOULDER CRESCENT, SUITE 110  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.955.5485

**CIVIL CONSULTANTS, INC.**

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160

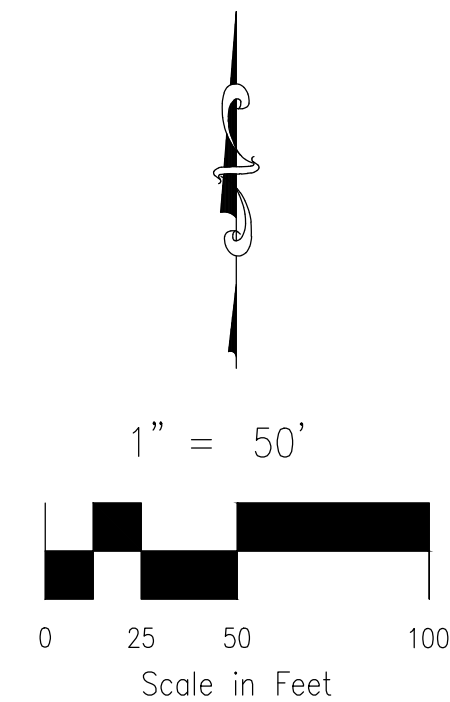
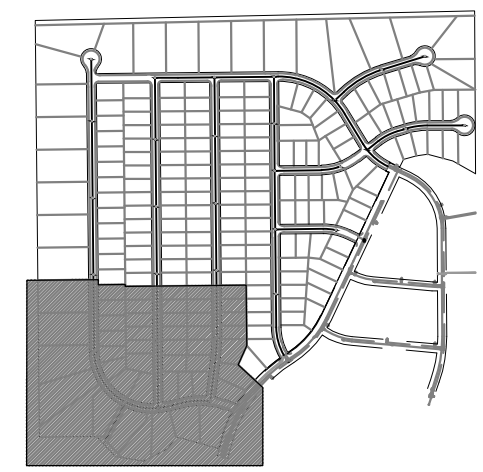
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

NO.	DATE	BY	DESCRIPTION

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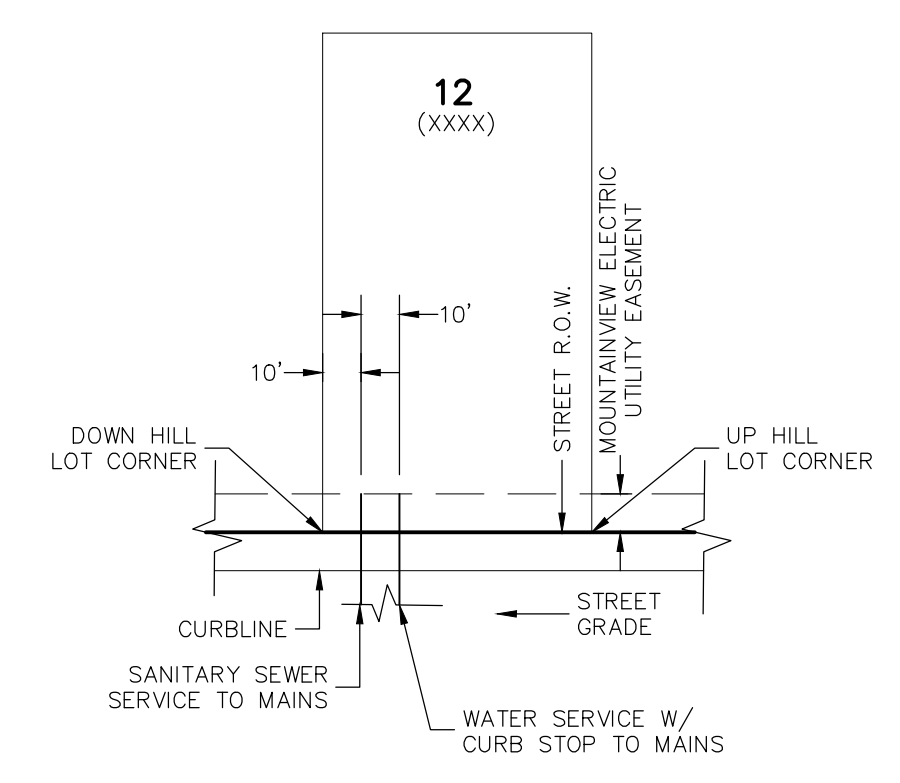
**CAUTION**

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**PAINT BRUSH HILLS FILING NO. 14**

**UTILITY SERVICE PLANS**

PROJECT NO. 10-014 DATE: 06/25/2020

DESIGNED BY: GW SCALE: 1"=50'

DRAWN BY: SM SHEET 19 OF 21

CHECKED BY: GW N/A UT03

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

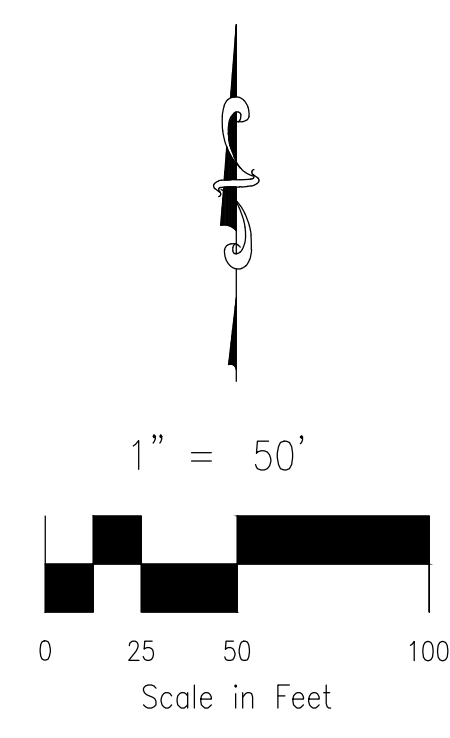
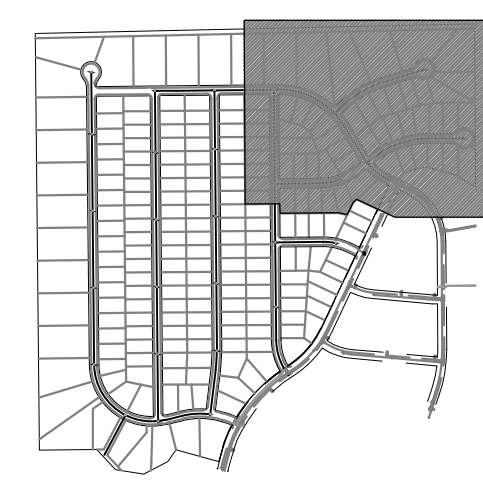
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160

NO.	DATE	BY	DESCRIPTION

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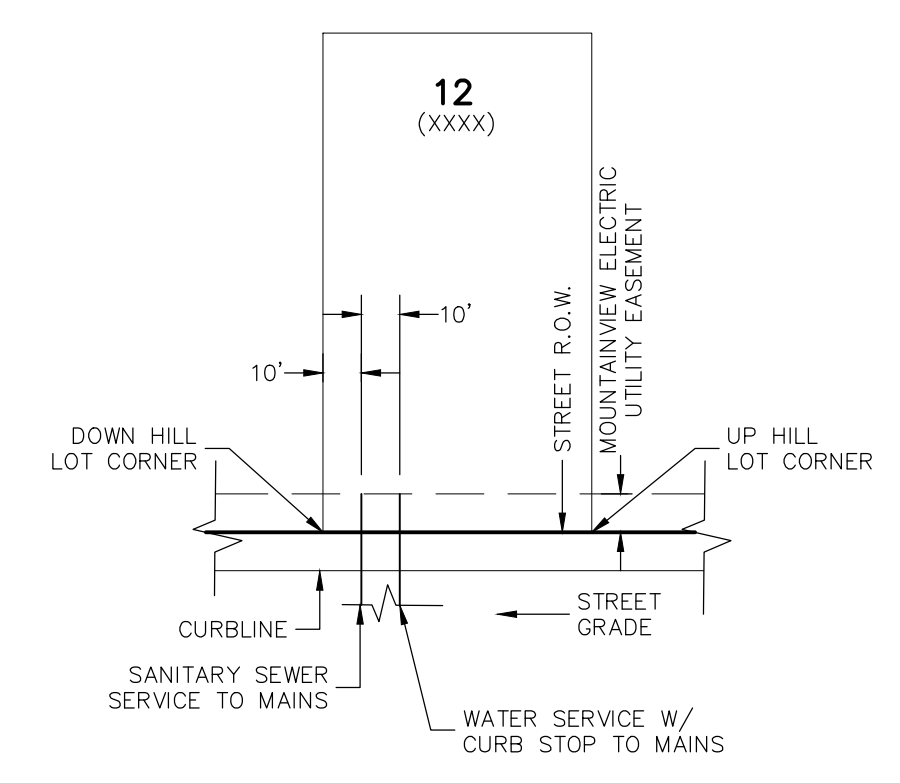
**CAUTION**

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**PAINT BRUSH HILLS FILING NO. 14**

**UTILITY SERVICE PLANS**

PROJECT NO. 10-014 DATE: 06/28/2018

DESIGNED BY: GW SCALE: 1"=50'

DRAWN BY: SM HORIZONTAL: 1"=50'

CHECKED BY: GW VERTICAL: N/A SHEET 20 OF 24

UT04

20 BOULDER CRESCENT, SUITE 110  
COLORADO SPRINGS, CO 80903  
PHONE: 719.555.5485

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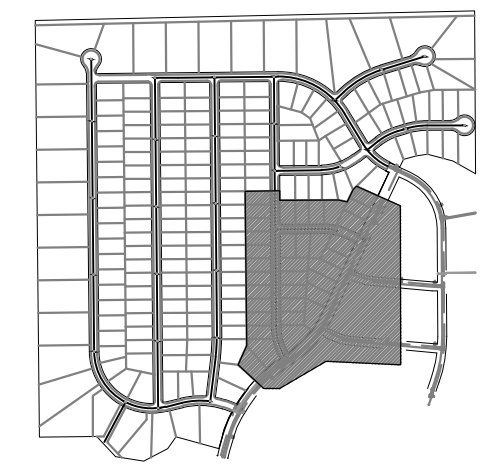
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FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

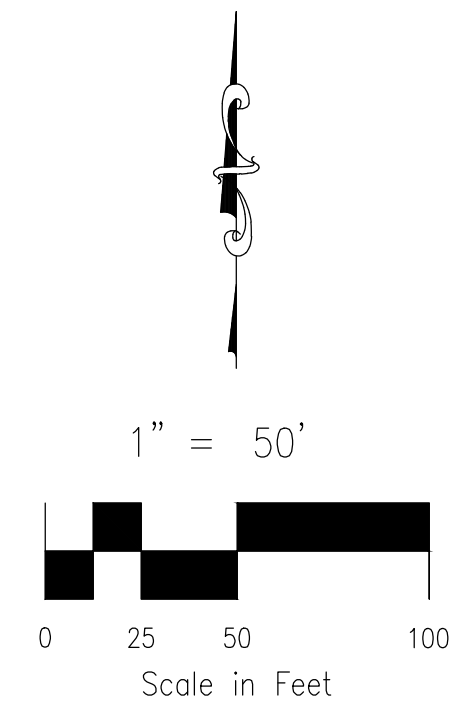
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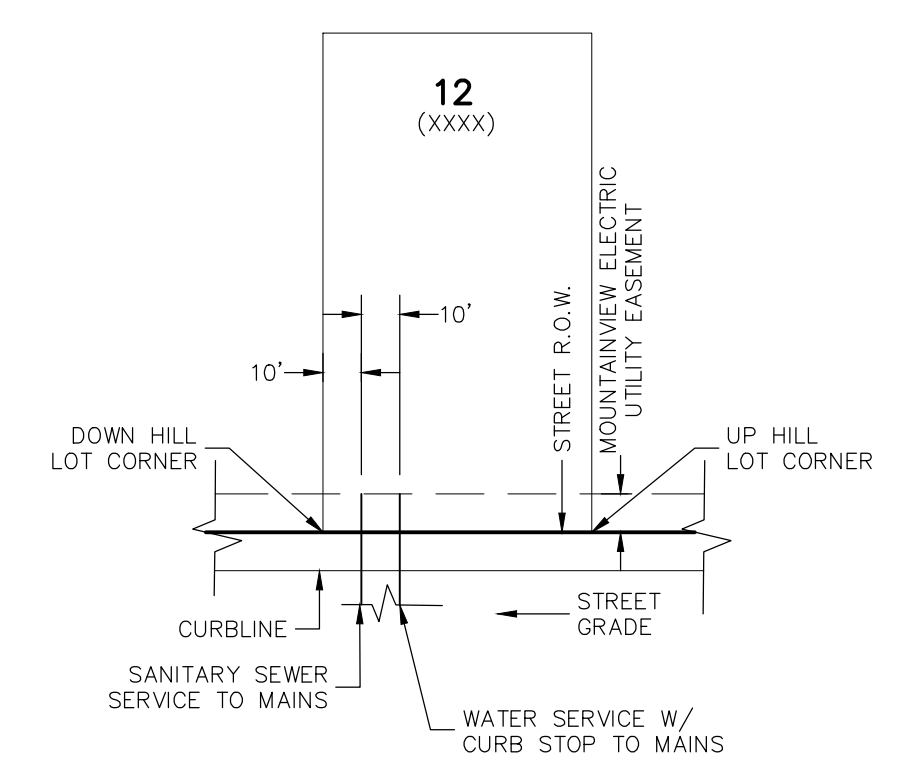


KEY MAP  
SCALE: NTS



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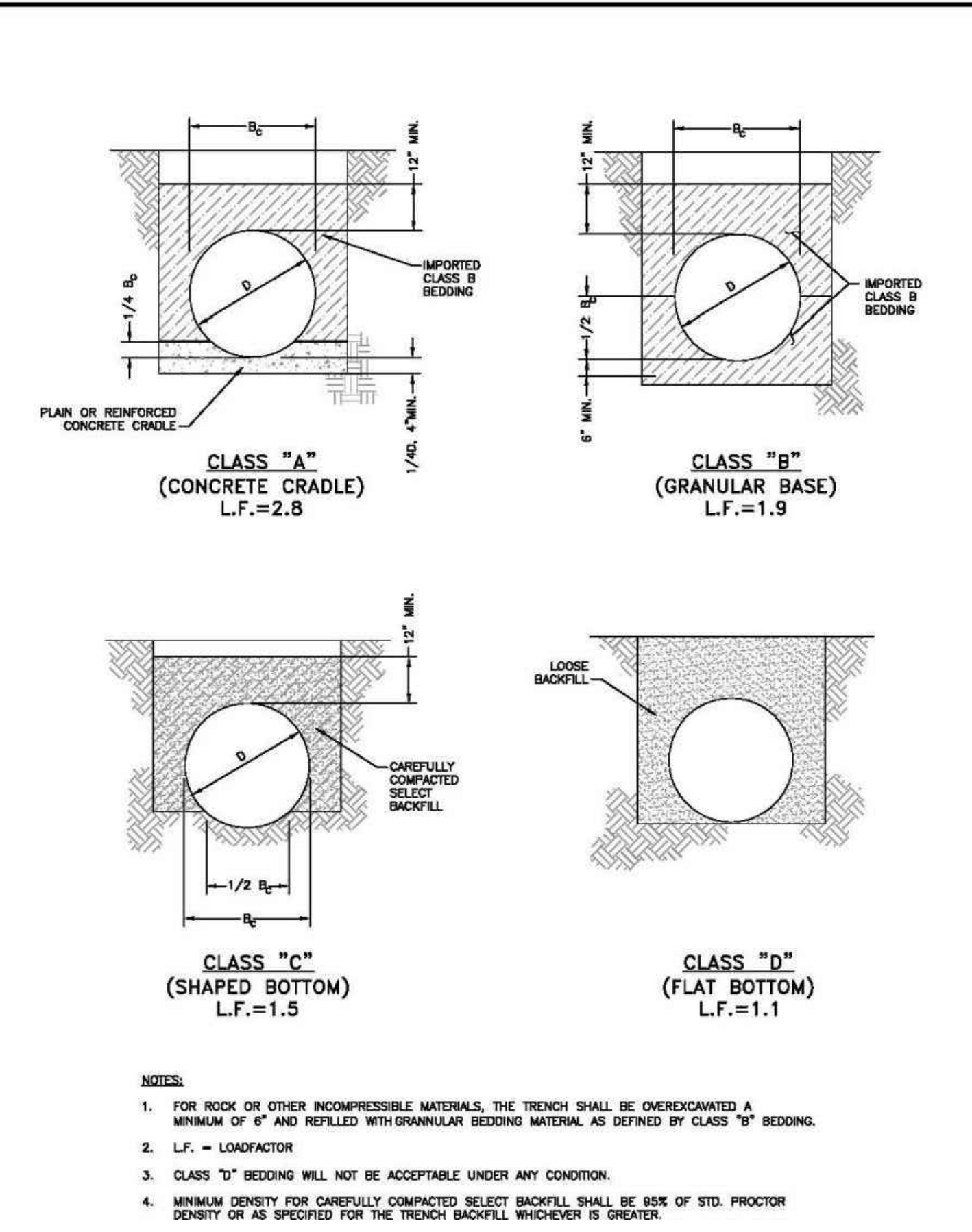
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PROJECT NO. 10-014 DESIGNED BY: GW DRAWN BY: SM CHECKED BY: GW		DATE: 06/28/2018 SHEET 21 OF 24 UT05
UTILITY SERVICE PLANS		
20 BOULDER CRESCENT, SUITE 110 COLORADO SPRINGS, CO 80903 PHONE: 719.955.5485		
CIVIL CONSULTANTS, INC.		
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.		
REVISIONS: NO. DATE BY DESCRIPTION	APPROVED BY: DATE:	THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
CAUTION		





**CLASS "A" (CONCRETE CRADLE)**  
L.F.=2.8

**CLASS "B" (GRANULAR BASE)**  
L.F.=1.9

**CLASS "C" (SHAPED BOTTOM)**  
L.F.=1.5

**CLASS "D" (FLAT BOTTOM)**  
L.F.=1.1

**NOTES:**

- FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVERDUGGED A MINIMUM OF 6" AND REFILLED WITH GRANULAR BEDDING MATERIAL AS DEFINED BY CLASS "B" BEDDING.
- L.F. = LOAD FACTOR
- CLASS "D" BEDDING WILL NOT BE ACCEPTABLE UNDER ANY CONDITION.
- MINIMUM DENSITY FOR CAREFULLY COMPACTED SELECT BACKFILL SHALL BE 95% OF STD. PROCTOR DENSITY OR AS SPECIFIED FOR THE TRENCH BACKFILL WHICHEVER IS GREATER.

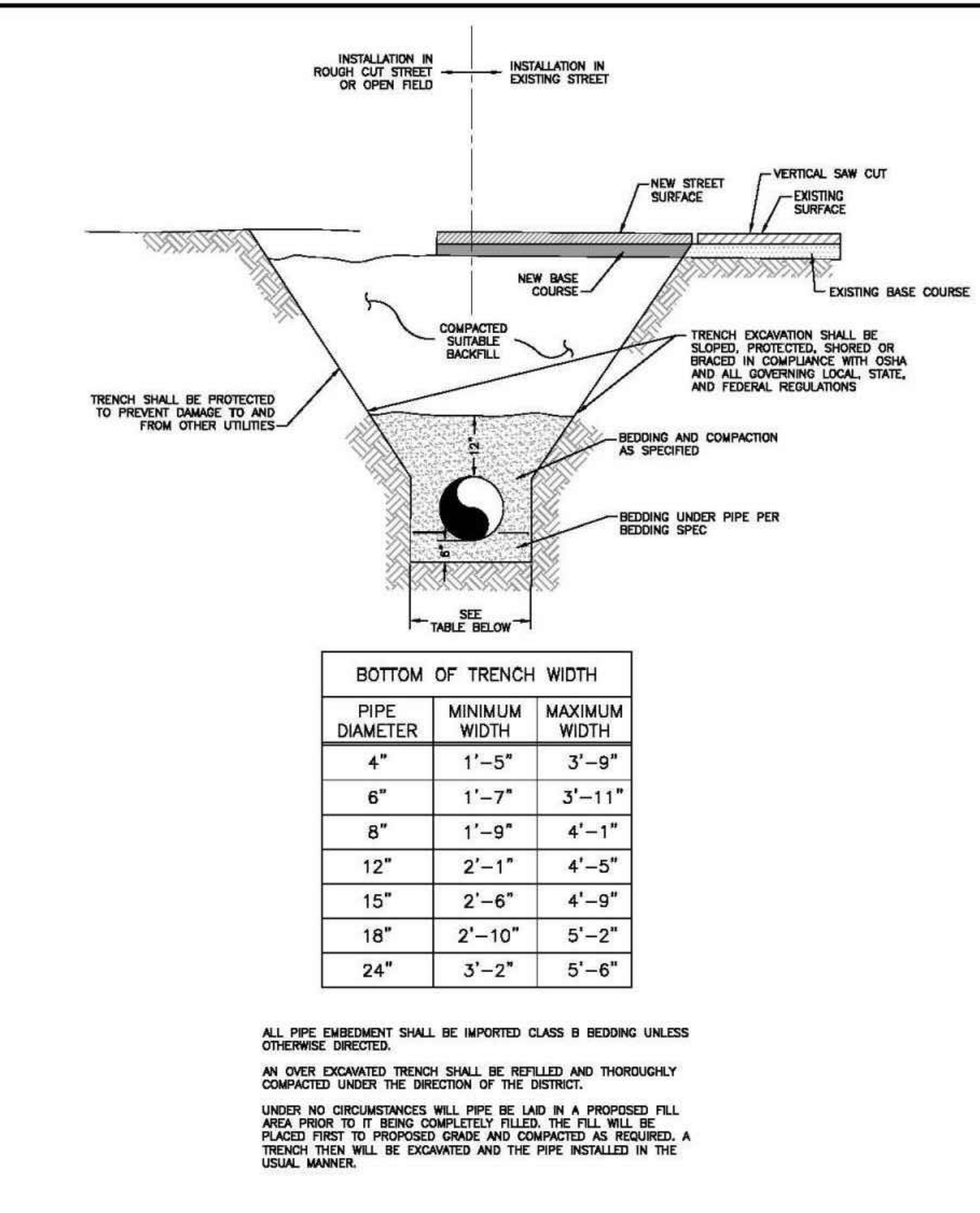
**PIPE BEDDING**

Drawn: GDM  
 Date: JAN 2011  
 Scale: N.T.S.

Reviewed: [Signature]  
 Date: [Blank]  
 Scale: [Blank]

WATER & WASTEWATER SYSTEM  
 STANDARD SPECIFICATIONS  
 painte brush hills  
 metropolitan district

WW-1



**TYPICAL TRENCH CROSS SECTION**

BOTTOM OF TRENCH WIDTH		
PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-5"	3'-9"
6"	1'-7"	3'-11"
8"	1'-9"	4'-1"
12"	2'-1"	4'-5"
15"	2'-6"	4'-9"
18"	2'-10"	5'-2"
24"	3'-2"	5'-6"

**NOTES:**

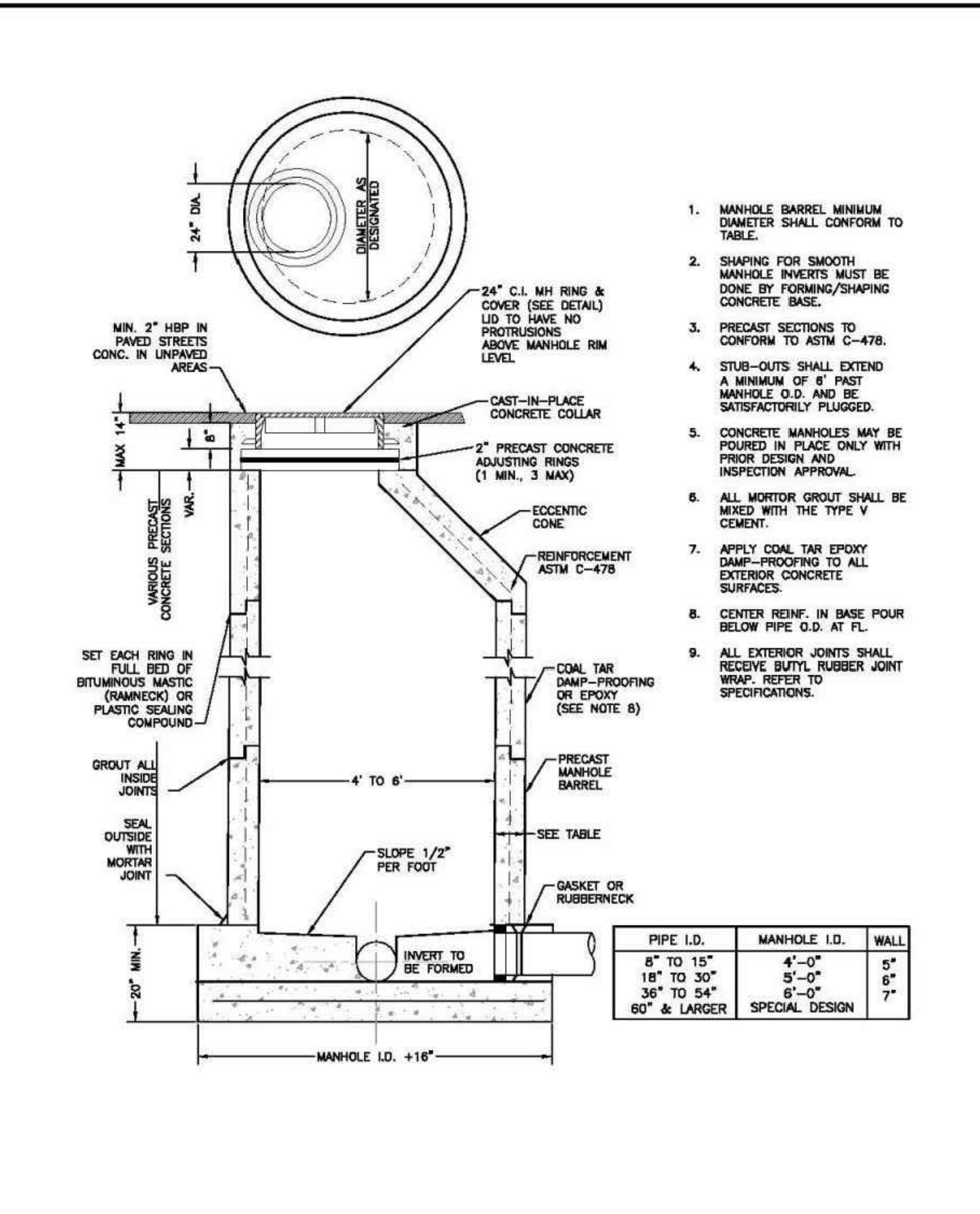
- ALL PIPE EMBEDEDMENT SHALL BE IMPORTED CLASS B BEDDING UNLESS OTHERWISE DIRECTED.
- AN OVER EXCAVATED TRENCH SHALL BE REFILLED AND THOROUGHLY COMPACTED UNDER THE DIRECTION OF THE DISTRICT.
- UNDER NO CIRCUMSTANCES WILL PIPE BE LAD IN A PROPOSED FILL AREA PRIOR TO IT BEING COMPLETELY FILLED. THE FILL WILL BE PLACED FIRST TO PROPOSED GRADE AND COMPACTED AS REQUIRED. A TRENCH THEN WILL BE EXCAVATED AND THE PIPE INSTALLED IN THE USUAL MANNER.

Drawn: GDM  
 Date: JAN 2011  
 Scale: N.T.S.

Reviewed: [Signature]  
 Date: [Blank]  
 Scale: [Blank]

WATER & WASTEWATER SYSTEM  
 STANDARD SPECIFICATIONS  
 painte brush hills  
 metropolitan district

WW-2



**PRECAST MANHOLE**

- MANHOLE BARREL MINIMUM DIAMETER SHALL CONFORM TO TABLE.
- SHAPING FOR SMOOTH MANHOLE INVERTS MUST BE DONE BY FORMING/SHAPING CONCRETE BASE.
- PRECAST SECTIONS TO CONFORM TO ASTM C-478.
- STUB-OUTS SHALL EXTEND A MINIMUM OF 8" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED.
- CONCRETE MANHOLES MAY BE POURED IN PLACE ONLY WITH PRIOR DESIGN AND INSPECTION APPROVAL.
- ALL MORTAR GROUT SHALL BE MIXED WITH THE TYPE V CEMENT.
- APPLY COAL TAR EPOXY DAMP-PROOFING TO ALL EXTERIOR CONCRETE SURFACES.
- CENTER REINF. IN BASE POUR BELOW PIPE O.D. AT FL.
- ALL EXTERIOR JOINTS SHALL RECEIVE BUTYL RUBBER JOINT WRAP. REFER TO SPECIFICATIONS.

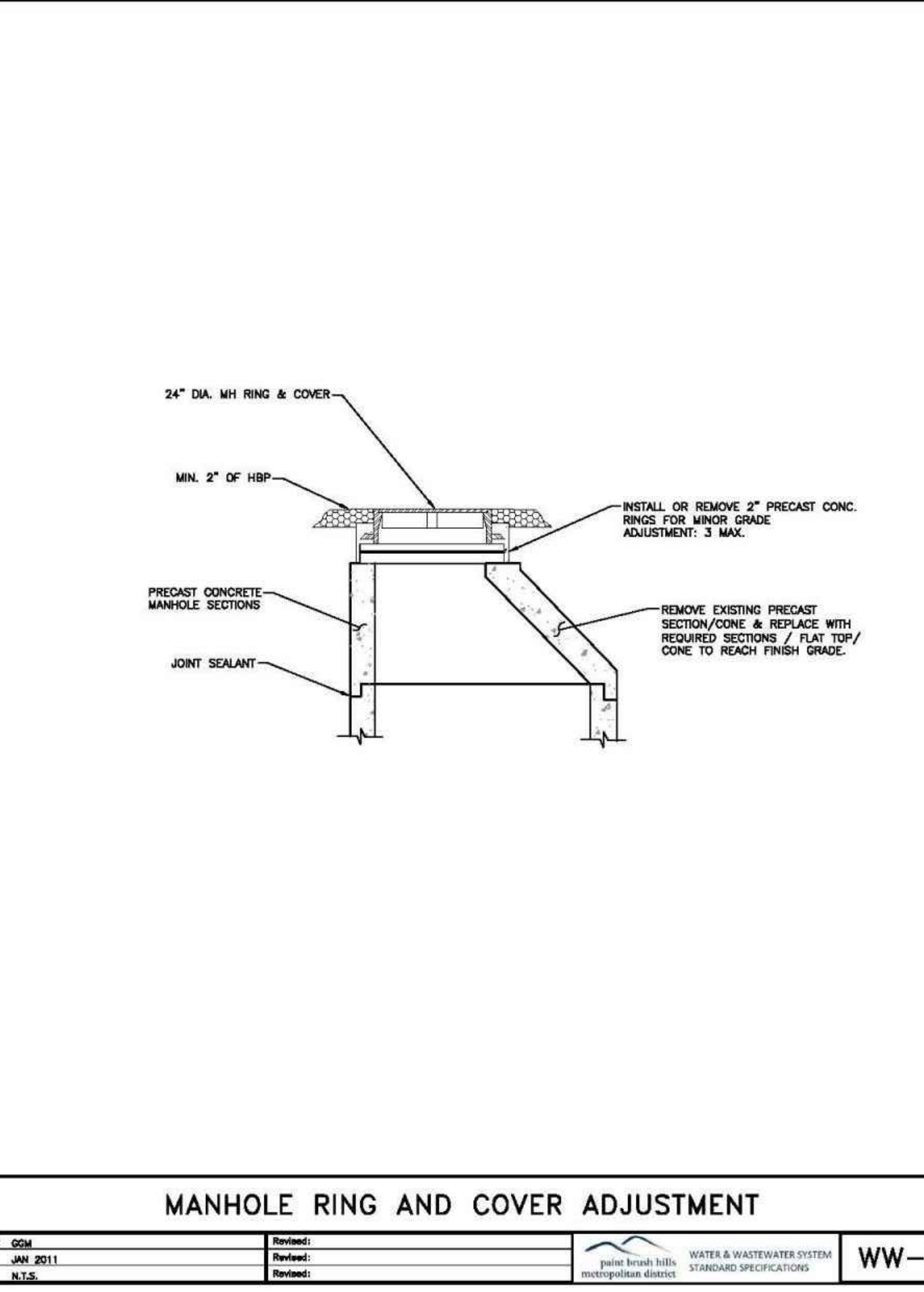
PIPE I.D.	MANHOLE I.D.	WALL
8" TO 15"	4'-0"	5"
18" TO 30"	5'-0"	6"
36" TO 54"	6'-0"	7"
60" & LARGER	SPECIAL DESIGN	

Drawn: GDM  
 Date: JAN 2011  
 Scale: N.T.S.

Reviewed: [Signature]  
 Date: [Blank]  
 Scale: [Blank]

WATER & WASTEWATER SYSTEM  
 STANDARD SPECIFICATIONS  
 painte brush hills  
 metropolitan district

WW-3



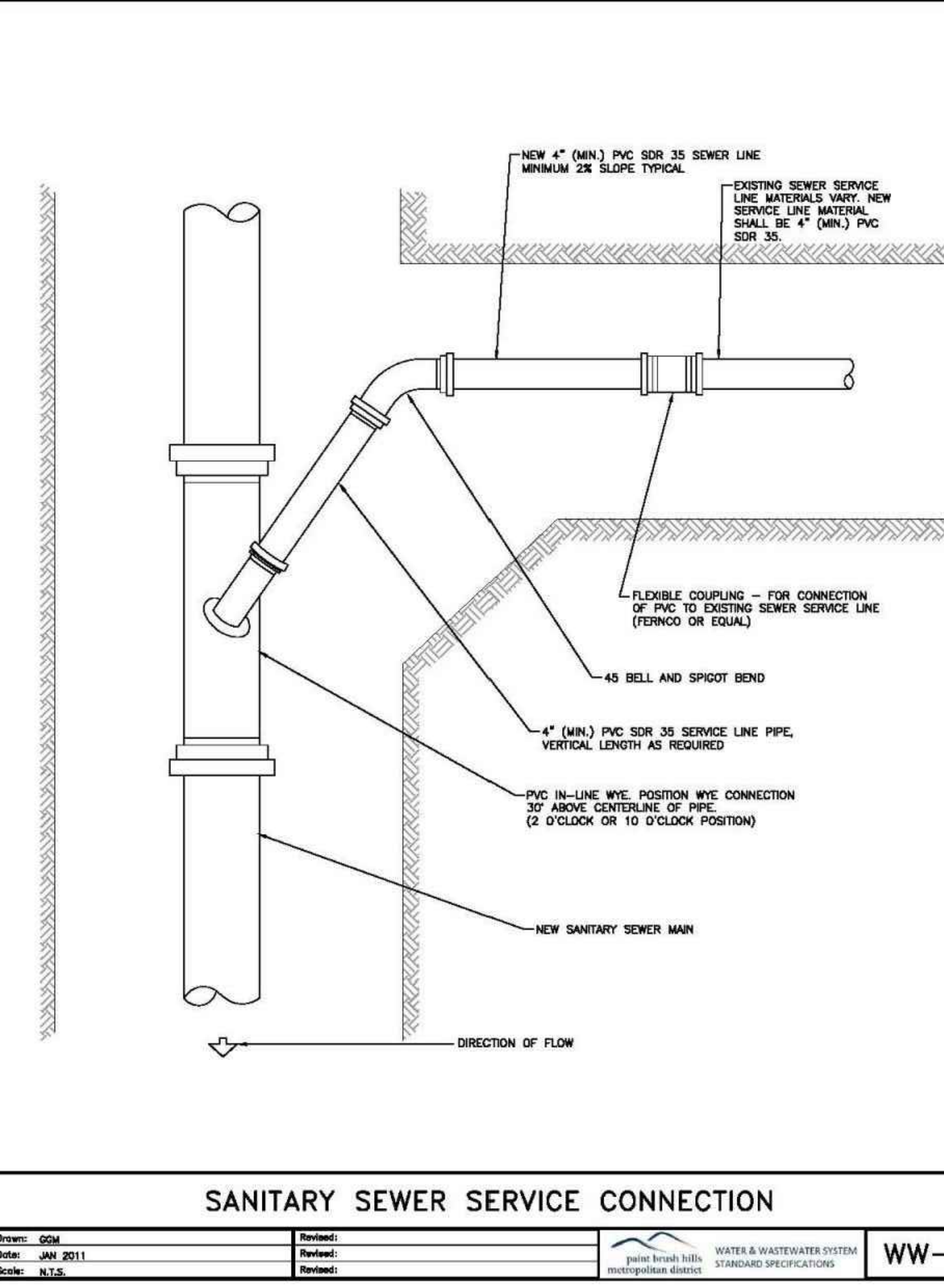
**MANHOLE RING AND COVER ADJUSTMENT**

Drawn: GDM  
 Date: JAN 2011  
 Scale: N.T.S.

Reviewed: [Signature]  
 Date: [Blank]  
 Scale: [Blank]

WATER & WASTEWATER SYSTEM  
 STANDARD SPECIFICATIONS  
 painte brush hills  
 metropolitan district

WW-5



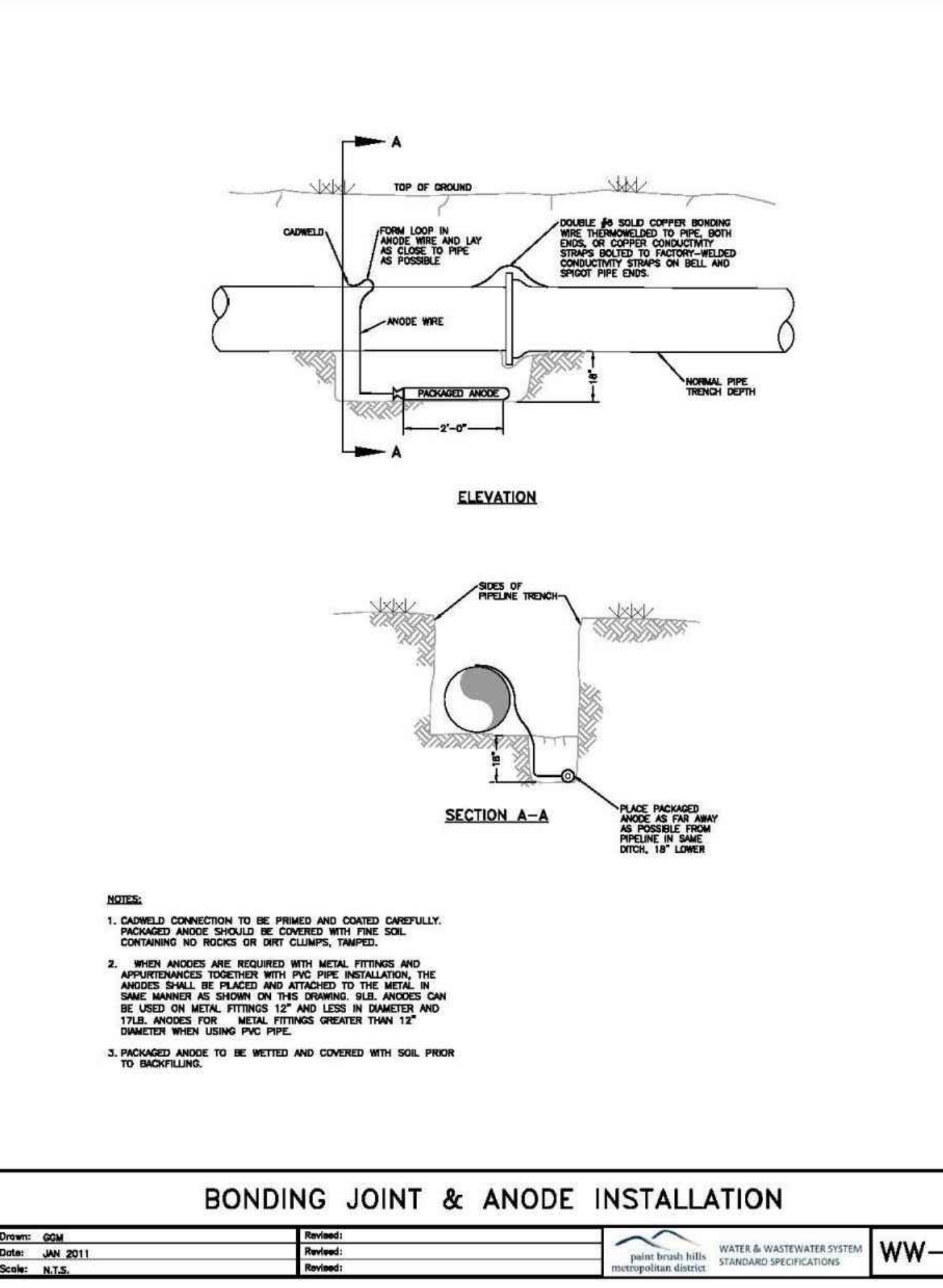
**SANITARY SEWER SERVICE CONNECTION**

Drawn: GDM  
 Date: JAN 2011  
 Scale: N.T.S.

Reviewed: [Signature]  
 Date: [Blank]  
 Scale: [Blank]

WATER & WASTEWATER SYSTEM  
 STANDARD SPECIFICATIONS  
 painte brush hills  
 metropolitan district

WW-7



**BONDING JOINT & ANODE INSTALLATION**

Drawn: GDM  
 Date: JAN 2011  
 Scale: N.T.S.

Reviewed: [Signature]  
 Date: [Blank]  
 Scale: [Blank]

WATER & WASTEWATER SYSTEM  
 STANDARD SPECIFICATIONS  
 painte brush hills  
 metropolitan district

WW-13

**MAXIMUM DEFLECTION PER SLIP JOINT OF D.I.P.**

PIPE DIAMETER I.D. (IN)	O.D. (IN)	O.D. (FT)	MFRS. DEF.	DESIGN DEFLECTION (80% MAX)		APPROX. RADIUS FOR DEFLECTING CURVES WITHOUT BENDS	
				MAX. DEF.	DIST.	MAX. DEF.	DIST.
4"	4.80"	.400'	3/000"	4/000"	10'	20'	15'
6"	6.80"	.575'	3/000"	4/000"	16"	286'	258'
8"	8.80"	.754'	3/000"	4/000"	18"	286'	258'
10"	11.10"	.925'	3/000"	4/000"	18"	286'	258'
12"	13.20"	1.100'	3/000"	4/000"	18"	286'	258'
14"	15.30"	1.275'	3/000"	2/240"	10"	477'	430'
16"	17.40"	1.450'	3/000"	2/240"	10"	477'	430'
18"	19.50"	1.625'	3/000"	2/240"	10"	477'	430'
20"	21.60"	1.800'	3/000"	2/240"	10"	477'	430'
24"	25.80"	2.150'	3/000"	2/240"	10"	477'	430'
30"	32.00"	2.666'	2/300"	2/000"	8"	573'	516'
36"	38.30"	3.192'	2/000"	1/380"	6"	716'	645'
42"	44.50"	3.708'	2/000"	1/380"	6"	716'	645'

(1) 20' L = NORMAL 20-FOOT JOINT LAYING LENGTH  
 (2) = NORMAL 18-FOOT JOINT LAYING LENGTH

**MAXIMUM PIPELINE DEFLECTION DATA**

Drawn: GDM  
 Date: [Blank]  
 Scale: [Blank]

Reviewed: [Signature]  
 Date: [Blank]  
 Scale: [Blank]

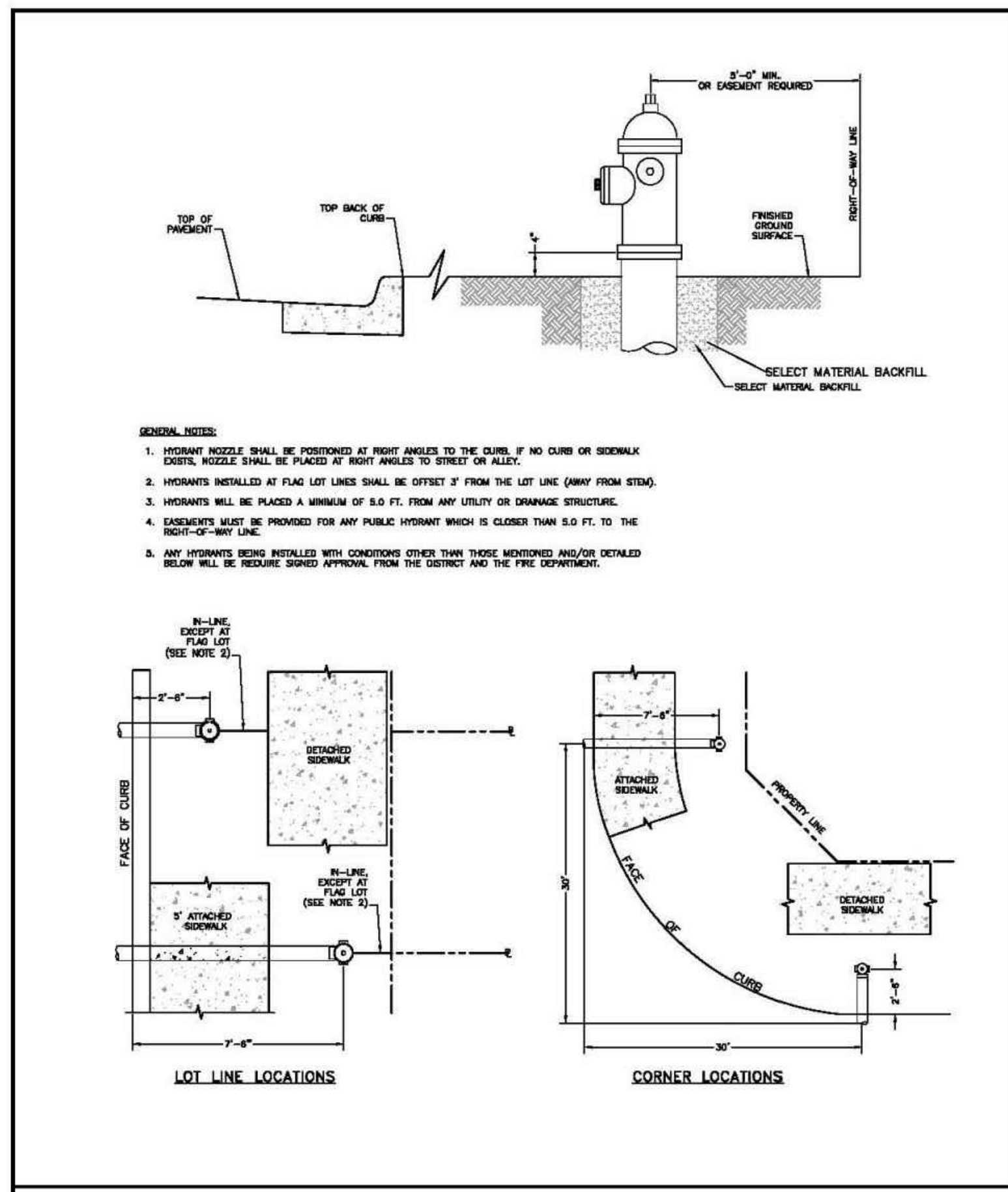
WATER & WASTEWATER SYSTEM  
 STANDARD SPECIFICATIONS  
 painte brush hills  
 metropolitan district

WW-14



FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
 FOR BURIED UTILITY INFORMATION  
 48 HRS BEFORE YOU DIG  
 CALL 1-800-922-1987





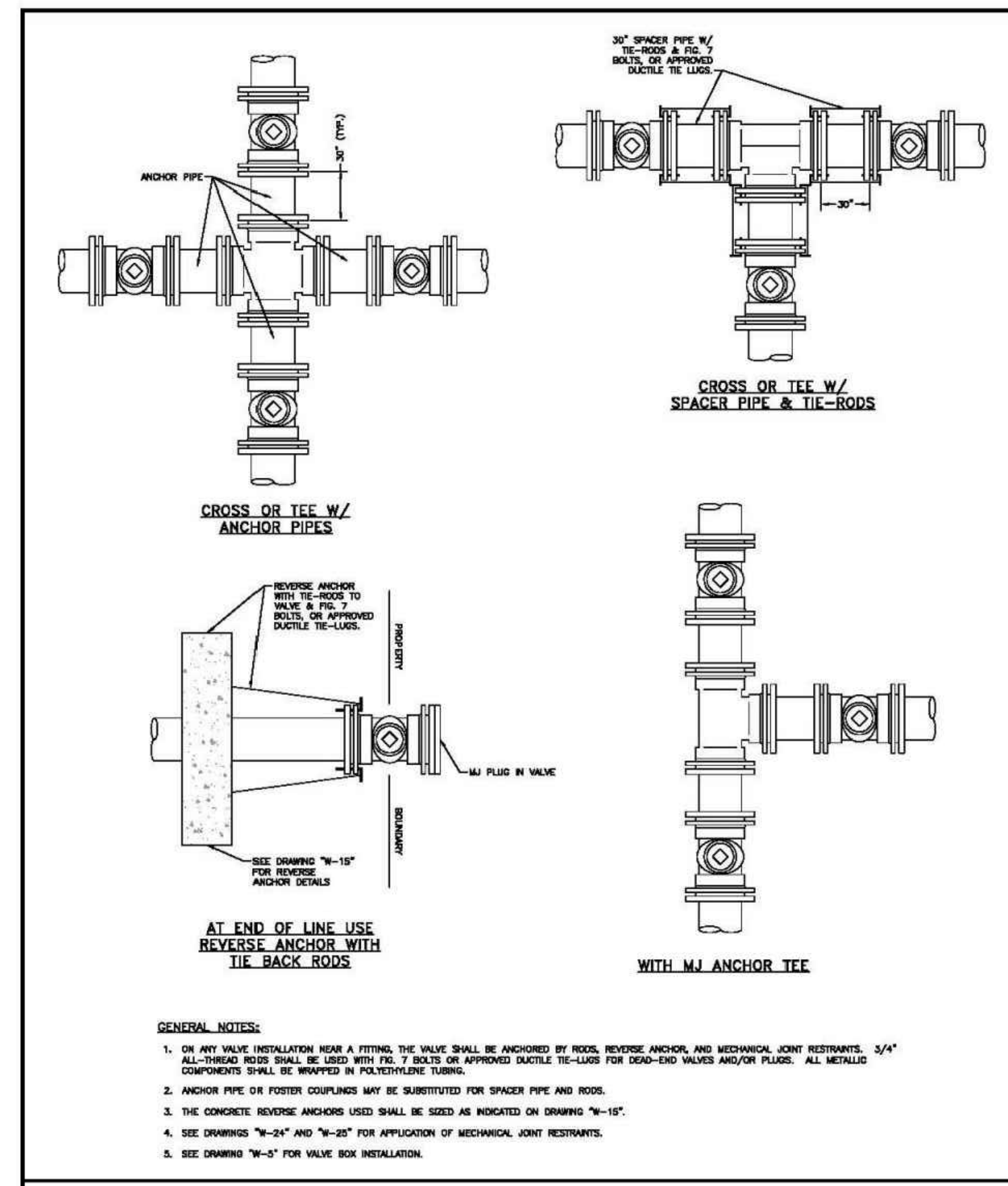
**FIRE HYDRANT LOCATIONS**

Drawn: GDM  
Date: JAN 2011  
Scale: N.T.S.

Reviewed: [Signature]  
Date: [Signature]  
Scale: [Signature]

WATER & WASTEWATER SYSTEM  
STANDARD SPECIFICATIONS  
metropolitan districts

**W-1**



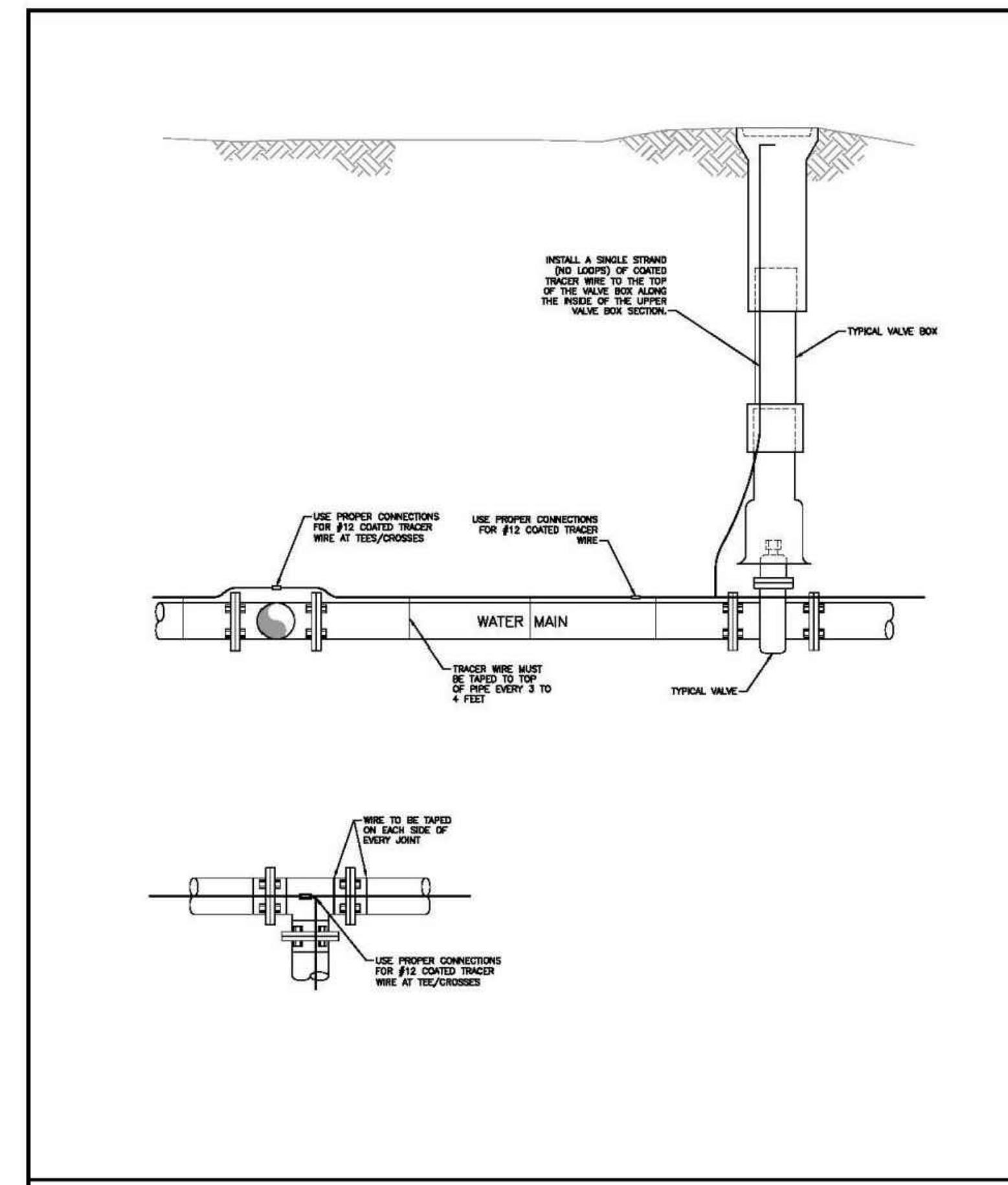
**VALVE INSTALLATION & LOCATION**

Drawn: GDM  
Date: JAN 2011  
Scale: N.T.S.

Reviewed: [Signature]  
Date: [Signature]  
Scale: [Signature]

WATER & WASTEWATER SYSTEM  
STANDARD SPECIFICATIONS  
metropolitan districts

**W-4**



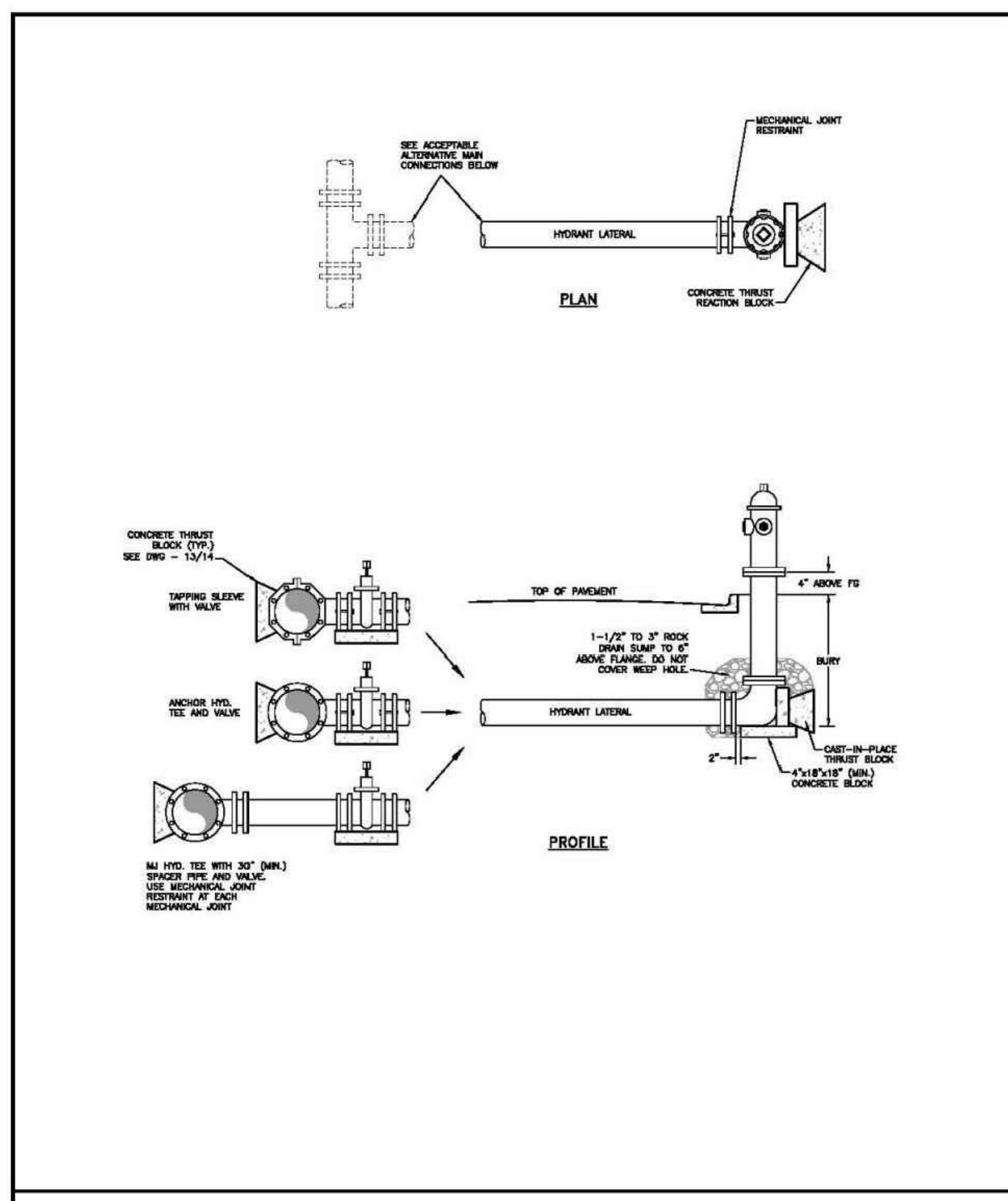
**TRACER WIRE INSTALLATION DETAILS**

Drawn: GDM  
Date: JAN 2011  
Scale: N.T.S.

Reviewed: [Signature]  
Date: [Signature]  
Scale: [Signature]

WATER & WASTEWATER SYSTEM  
STANDARD SPECIFICATIONS  
metropolitan districts

**W-9**



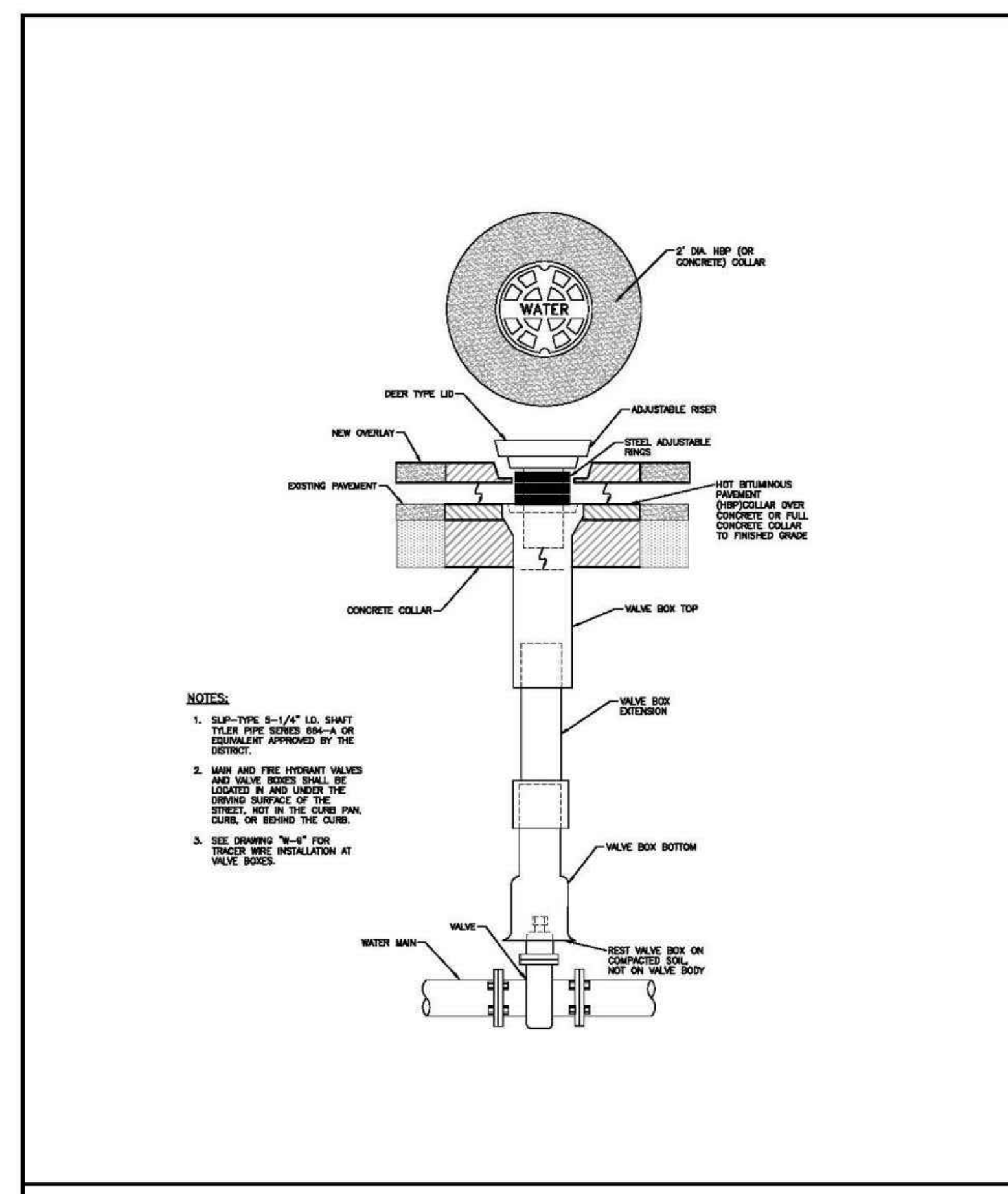
**FIRE HYDRANT INSTALLATION**

Drawn: GDM  
Date: JAN 2011  
Scale: N.T.S.

Reviewed: [Signature]  
Date: [Signature]  
Scale: [Signature]

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STANDARD SPECIFICATIONS  
metropolitan districts

**W-2**



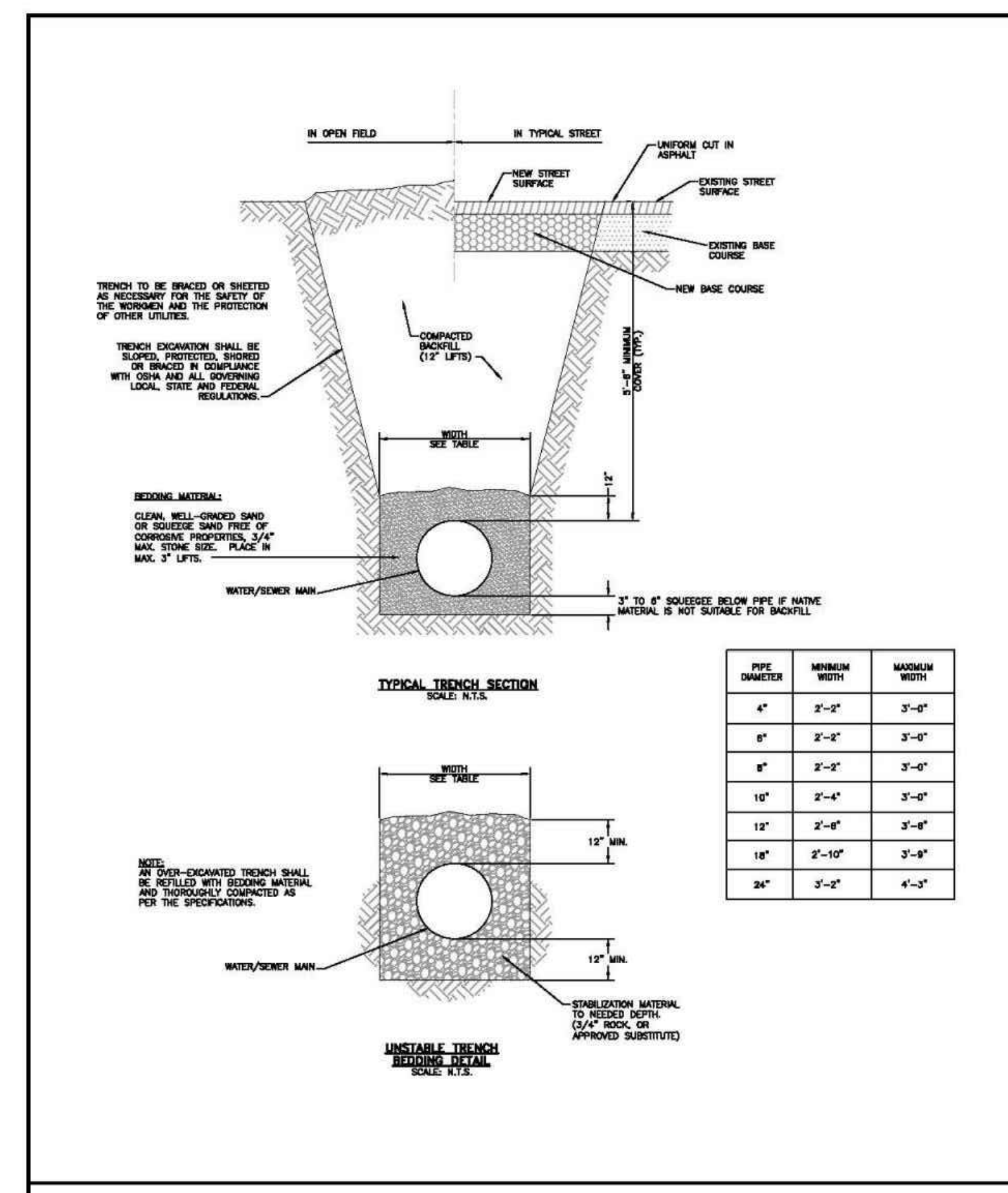
**VALVE BOX INSTALLATION**

Drawn: GDM  
Date: JAN 2011  
Scale: N.T.S.

Reviewed: [Signature]  
Date: [Signature]  
Scale: [Signature]

WATER & WASTEWATER SYSTEM  
STANDARD SPECIFICATIONS  
metropolitan districts

**W-5**



**TYPICAL TRENCH CROSS-SECTION**

Drawn: GDM  
Date: JAN 2011  
Scale: N.T.S.

Reviewed: [Signature]  
Date: [Signature]  
Scale: [Signature]

WATER & WASTEWATER SYSTEM  
STANDARD SPECIFICATIONS  
metropolitan districts

**W-12**

