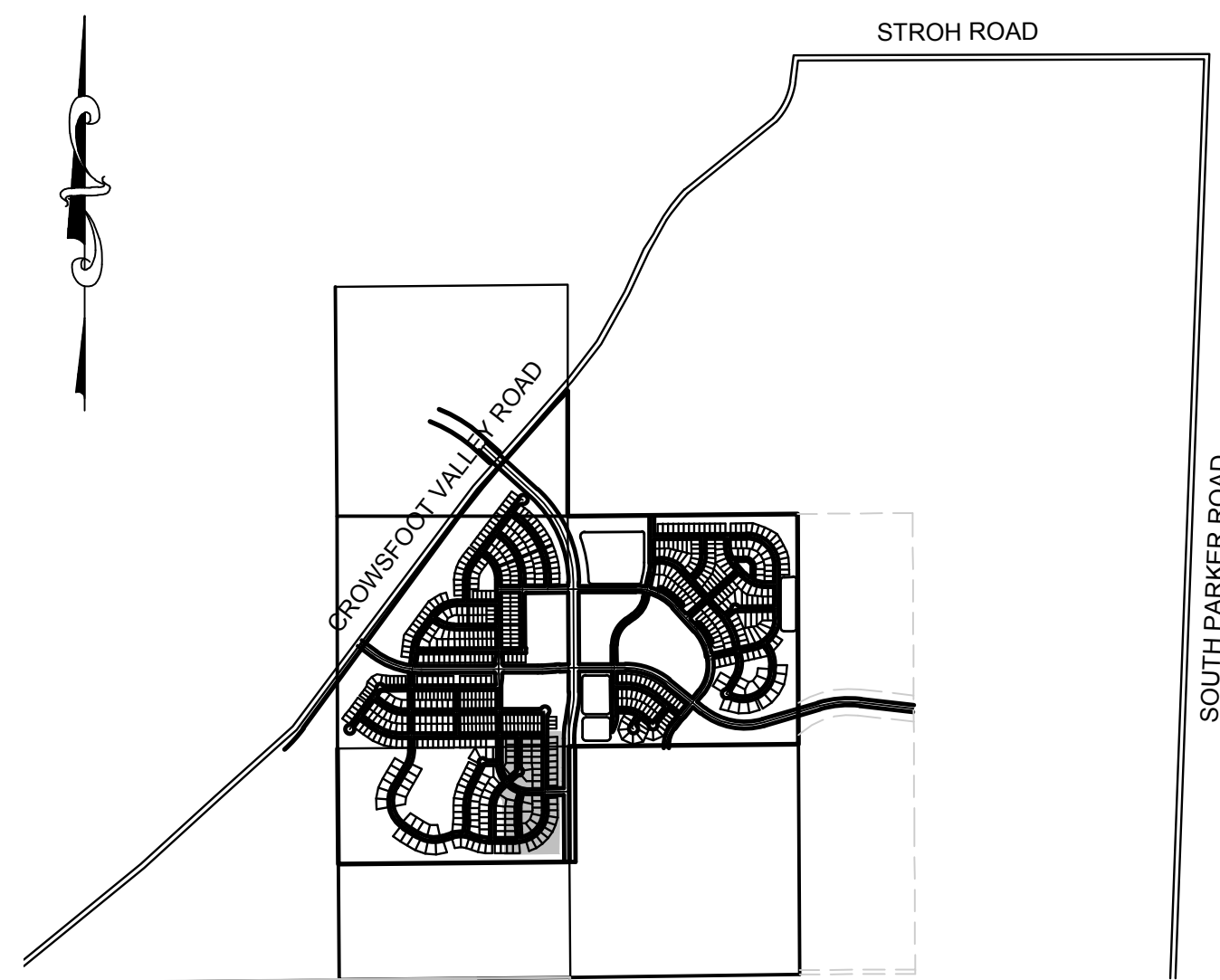


# TRAILS AT CROWFOOT FILING 6

## PARKER WATER AND SANITATION CONSTRUCTION PLANS

SECTIONS 4, 8, AND 9 TOWNSHIP 7 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN COUNTY OF DOUGLAS, STATE OF COLORADO

Sheet List Table	
Sheet Number	Sheet Title
1	COVER SHEET
2	PARKER WATER AND SANITATION NOTES
3	AREA UTILITY PLAN
4	SANITARY P&P HOP CLOVER TRAIL
5	SANITARY P&P HOP CLOVER STREET
6	SANITARY P&P SHASTA DAISY LANE
7	WATER P&P HOP CLOVER TRAIL
8	WATER P&P HOP CLOVER STREET
9	WATER P&P SHASTA DAISY LANE
10	SANITARY SEWER DETAILS
11	SANITARY SEWER DETAILS
12	SANITARY SEWER DETAILS
13	WATER DETAILS
14	WATER DETAILS
15	WATER DETAILS
16	WATER DETAILS
17	WATER DETAILS
18	WATER DETAILS



VICINITY MAP  
SCALE: 1" = 2000'

MATERIALS LIST		
DESCRIPTION	QUANTITY	UNIT
8" WATERPIPE (C900)	1,527	L.F.
8" BEND	3	EA.
WATER SERVICE LATERAL W/ WATER METER AND PIT	51	EA.
8" SEWER (SDR-35 PVC)	1,367	L.F.
4' DIA. MANHOLE	6	EA.
SEWER SERVICE LATERAL W/ WYE TAP	51	EA.

### FIRE DEPARTMENT APPROVAL

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

(FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE) \_\_\_\_\_ DATE \_\_\_\_\_

(NOTE- UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENTS OF NFPA24 WHEN SUBMITTING FOR REVIEW.)

THE DISTRICT INSPECTOR MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. CALL PARKER WATER AND SANITATION DISTRICT AT 303-841-4627. THE DISTRICT WILL PROVIDE PERIODIC INSPECTIONS OF THE WORK. 24 HOUR NOTICE TO THE INSPECTOR IS REQUIRED FOR SCHEDULE INSPECTIONS. ANY WORK ACCOMPLISHED WITHOUT THE APPROVAL OF THE INSPECTOR WILL BE SUBJECT TO REJECTION.

REVIEWED FOR CONFORMANCE TO PARKER WATER AND SANITATION DISTRICT STANDARDS.

BY: \_\_\_\_\_  
(DISTRICT REPRESENTATIVE)

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

APPROVED FOR CONSTRUCTION:  
PARKER WATER AND SANITATION DISTRICT

BY: \_\_\_\_\_  
(DISTRICT ENGINEER)

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

PREPARED UNDER THE SUPERVISION OF

BRIAN P. WILSON  
COLORADO P.E. 0050067

### DEVELOPER

HR 935 LLC  
7353 SOUTH ALTON WAY  
CENTENNIAL, CO 80112  
TEL: (303) 770-9111  
CONTACT: MATT JANKE

### PLANNER/ LANDSCAPE DESIGNER:

PCS GROUP, INC.  
200 KALAMATH STREET  
DENVER, CO 80233  
TEL: (303) 531-4905  
CONTACT: JOHN PRESTWICH

### SURVEYOR/ ENGINEER:

CVL CONSULTANTS  
OF COLORADO, INC.  
10333 E. DRY CREEK RD. STE 240  
ENGLEWOOD, CO 80112  
TEL: (720) 482-9526  
CONTACT: JIM JANNICKE

### UTILITY DISTRICT

PARKER WATER AND  
SANITATION DISTRICT  
18100 E. WOODMAN DRIVE  
PARKER, CO 80134  
TEL: (303) 841-4627

**BENCHMARK**  
DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.069032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.



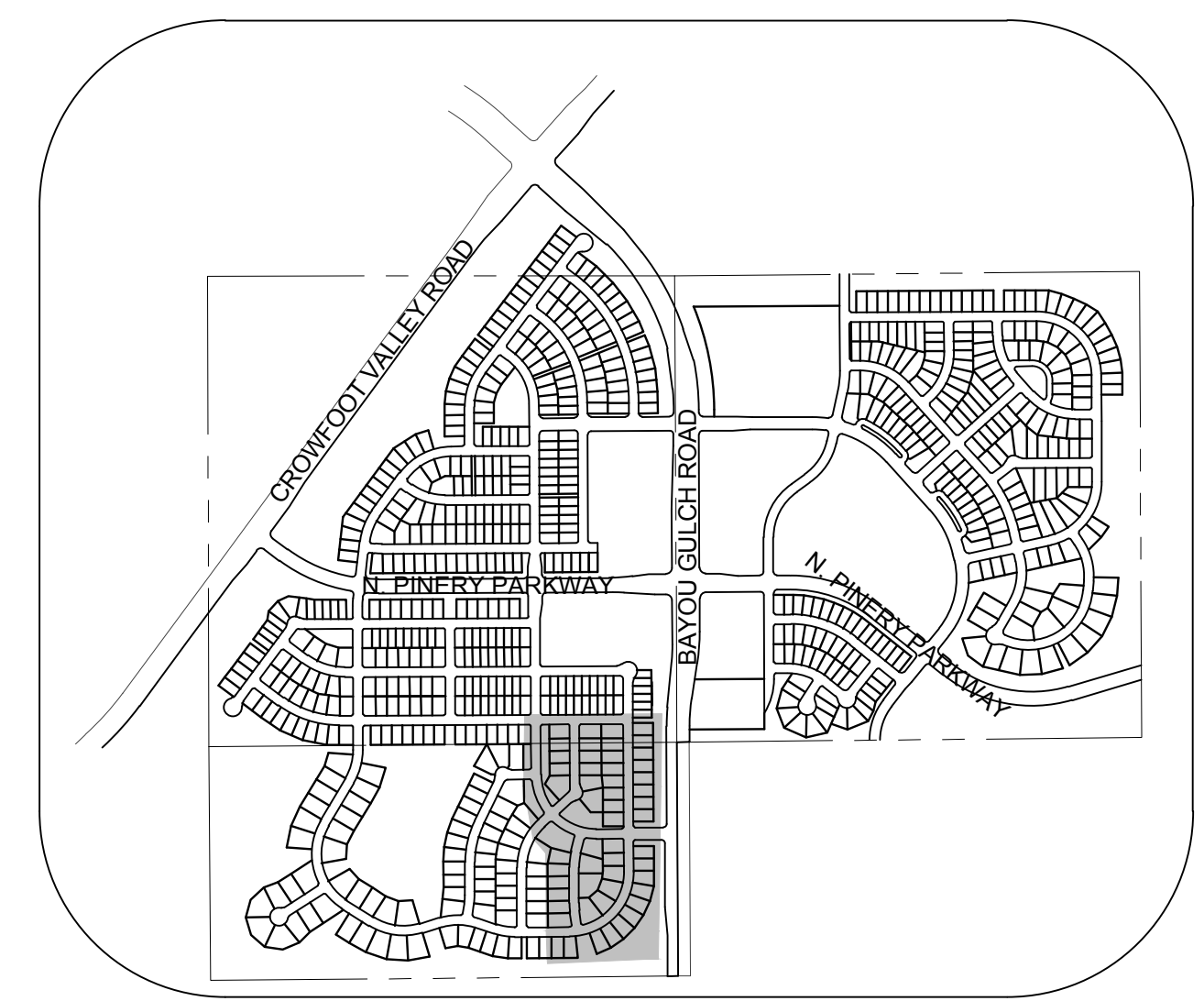
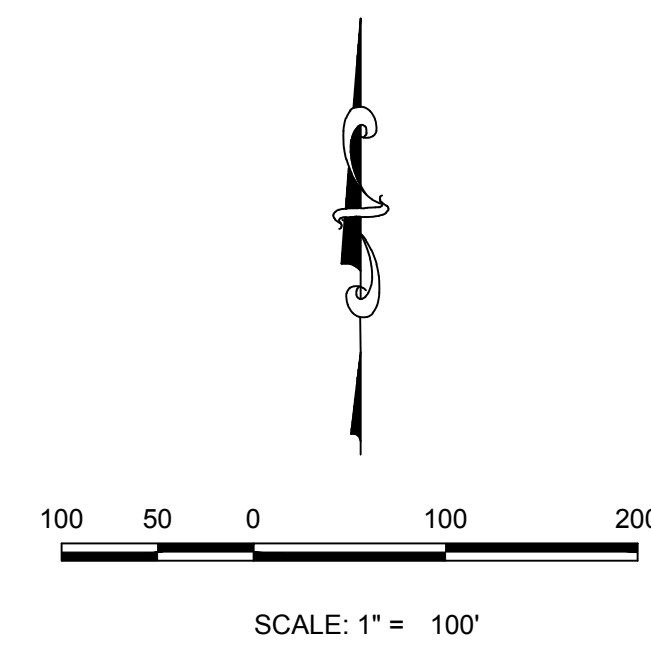
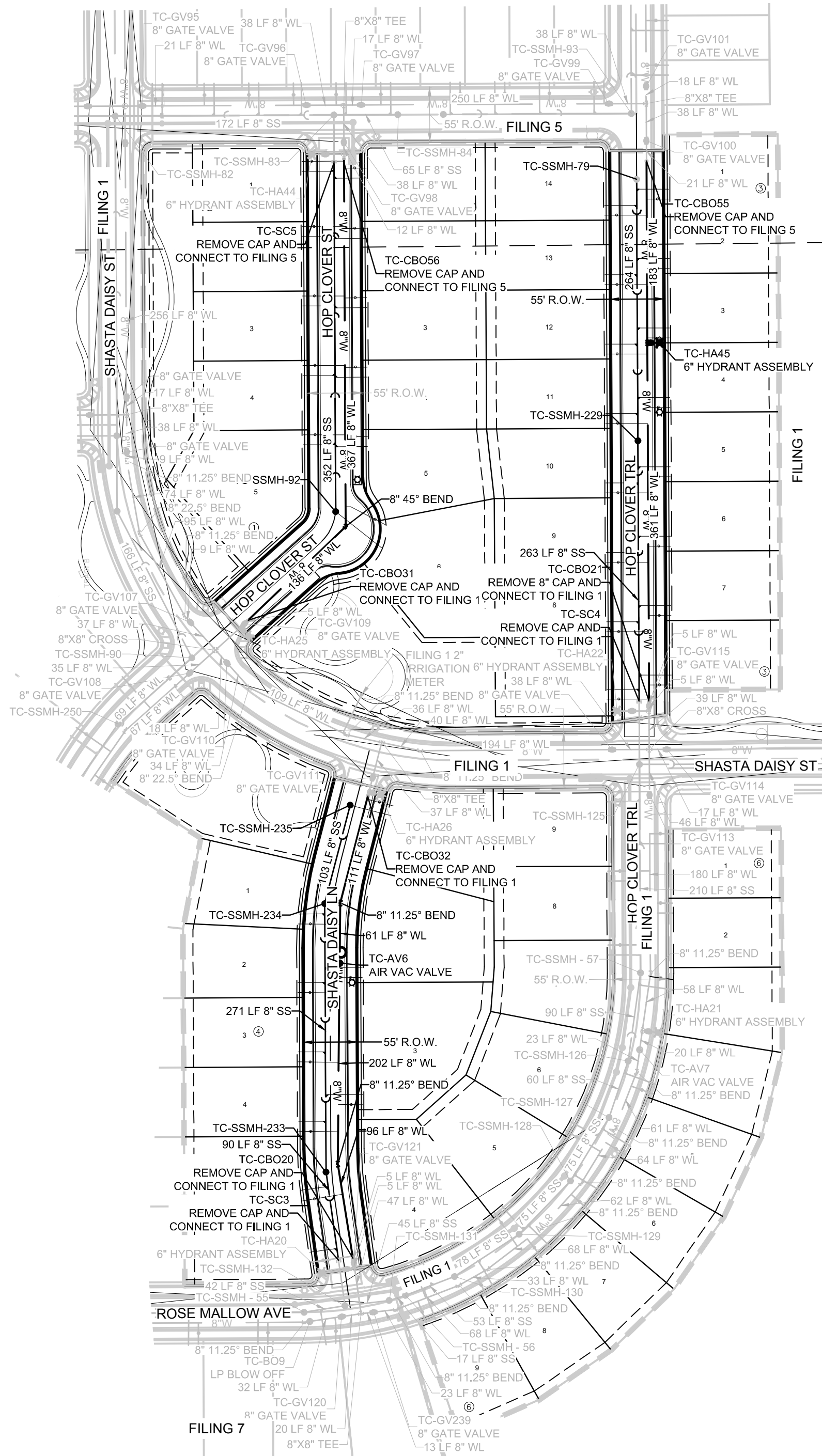
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SHEET NUMBER	DRAWN BY: KJD	CHECKED BY: JJ	DATE: AUGUST 2017	SCALE:	AS SHOWN	FILE NO:	8130283701
				TRAILS AT CROWFOOT FILING 6 CONSTRUCTION DRAWINGS COVER SHEET			
HR 935 LLC 7353 South Alton Way CENTENNIAL, CO 80112				CVL CONSULTANTS 10333 E. Dry Creek Rd. Englewood, Colorado 80110 Tel: (720) 482-9526 Fax: (720) 482-9546			
1				No.	Revisions	Date	Appr.



SERVICE TABLE			
FILING, BLOCK, LOT	STREET	SANITARY STATIONING	WATER STATIONING
F6,B1,L1	HOP CLOVER ST	22+66.74	22+76.74
F6,B1,L2	HOP CLOVER ST	22+00.94	22+10.94
F6,B1,L3	HOP CLOVER ST	21+30.94	21+40.94
F6,B1,L4	HOP CLOVER ST	20+60.94	20+70.94
F6,B1,L5	HOP CLOVER ST	19+90.91	20+00.94
F6,B2,L1	HOP CLOVER ST	22+59.74	22+69.74
F6,B2,L2	HOP CLOVER ST	21+98.94	22+08.94
F6,B2,L3	HOP CLOVER ST	21+28.94	21+38.94
F6,B2,L4	HOP CLOVER ST	20+58.94	20+68.94
F6,B2,L5	HOP CLOVER ST	19+88.94	19+98.94
F6,B2,L6	HOP CLOVER ST	19+23.48	19+28.29
F6,B2,L7	HOP CLOVER TR	21+57.33	21+67.33
F6,B2,L8	HOP CLOVER TR	20+89.33	20+99.33
F6,B2,L9	HOP CLOVER TR	20+19.33	20+29.33
F6,B2,L10	HOP CLOVER TR	19+49.33	19+59.33
F6,B2,L11	HOP CLOVER TR	18+79.33	18+89.33
F6,B2,L12	HOP CLOVER TR	18+09.33	18+19.33
F6,B2,L13	HOP CLOVER TR	17+39.33	17+49.33
F6,B2,L14	HOP CLOVER TR	16+69.33	16+79.33
F6,B3,L1	HOP CLOVER TR	16+53.21	16+63.21
F6,B3,L2	HOP CLOVER TR	17+23.21	17+33.21
F6,B3,L3	HOP CLOVER TR	17+93.21	18+03.21
F6,B3,L4	HOP CLOVER TR	18+63.21	18+73.21
F6,B3,L5	HOP CLOVER TR	19+33.21	19+43.21
F6,B3,L6	HOP CLOVER TR	20+03.21	20+13.21
F6,B3,L7	HOP CLOVER TR	20+73.21	20+83.21
F6,B3,L8	HOP CLOVER TR	21+43.21	21+53.21
F6,B4,L1	SHASTA DAISY LN	13+99.19	13+89.90
F6,B4,L2	SHASTA DAISY LN	13+30.67	13+20.06
F6,B4,L3	SHASTA DAISY LN	12+60.67	12+50.08
F6,B4,L4	SHASTA DAISY LN	11+90.67	11+80.09
F6,B4,L5	SHASTA DAISY LN	11+25.30	11+15.72
F6,B4,L6	SHASTA DAISY LN	10+62.40	10+52.40
F6,B5,L1	SHASTA DAISY LN	15+10.94	15+20.94
F6,B5,L2	SHASTA DAISY LN	13+45.69	13+35.69
F6,B5,L3	SHASTA DAISY LN	12+17.48	12+07.48
* F6,B5,L4	HOP CLOVER TR	28+46.39	28+56.49
* F6,B5,L5	HOP CLOVER TR	27+37.13	27+52.65
* F6,B5,L6	HOP CLOVER TR	26+15.89	26+27.96
* F6,B5,L7	HOP CLOVER TR	24+25.25	24+15.25
* F6,B5,L8	HOP CLOVER TR	23+50.71	23+40.71
* F6,B5,L9	HOP CLOVER TR	22+70.68	22+60.68
* F6,B6,L1	HOP CLOVER TR	23+13.23	23+03.23
* F6,B6,L2	HOP CLOVER TR	23+83.21	23+73.21
* F6,B6,L3	HOP CLOVER TR	24+55.57	24+46.98
* F6,B6,L4	HOP CLOVER TR	25+46.30	25+56.64
* F6,B6,L5	HOP CLOVER TR	26+07.19	26+17.68
* F6,B6,L6	HOP CLOVER TR	26+61.83	26+78.76
* F6,B6,L7	HOP CLOVER TR	27+30.78	27+40.41
* F6,B6,L8	HOP CLOVER TR	27+93.05	28+02.66
* F6,B6,L9	HOP CLOVER TR	28+55.00	28+64.75

\* INSTALLED WITH FILING 1 IMPROVEMENTS



**KEYMAP**  
N.T.S.  
**LEGEND**

②	BLOCK NUMBER	△	PROPOSED RANGE POINT
Ⓐ	LOT TYPE	---	CENTERLINE
6	LOT NUMBER	---	RIGHT-OF-WAY
⊕	PROPOSED BUTTERFLY VALVE	---	PROPERTY LINE
⊞	PROPOSED CAP WITH END OF LINE BLOWOFF	---	EDGE OF PAVEMENT
⊞	PROPOSED REDUCER	→	PROPOSED DIRECTION OF FLOW
⊞	PROPOSED VALVE	1.0%	PROPOSED SLOPE & DIRECTION
⊞	PROPOSED FIRE HYDRANT	5615	EXISTING 5' CONTOUR
⊞	PROPOSED WL FITTING WITH THRUST BLOCK	5616	EXISTING 1' CONTOUR
⊞	PROPOSED FLARED END SECTION	5620	PROPOSED 5' CONTOUR
⊞	PROPOSED LOW POINT BLOW-OFF	5607	PROPOSED 1' CONTOUR
⊞	PROPOSED AIR VALVE	---	PROPOSED STORM DRAIN
⊞	FUTURE PHASE VALVE	---	PROPOSED SEWER LINE WITH MANHOLE
⊞	FUTURE FIRE HYDRANT	---	PROPOSED SEWER LATERAL WITH MANHOLE
⊞	PROPOSED LIGHT POLE	---	PROPOSED WATER LATERAL W/ METER
⊞	PROPOSED SIDEWALK	---	SECTION LINE
⊞	PROPOSED SIDEWALK RAMP	---	PROPOSED WATER LATERAL W/ METER
10.00	EXISTING ELEVATION	---	SECTION LINE
10.00	PROPOSED DESIGN ELEVATION	---	FILING BOUNDARY
⊞	PROPOSED STORM DRAIN INLET	---	FO
⊞	PROPOSED STORM DRAIN MANHOLE	---	OH
		---	TEL

**ABBREVIATIONS**

AD	ANGLE DIFFERENCE	MH	MANHOLE
AV	AIR VAC RELEASE VALVE	N.T.S.	NOT TO SCALE
BVC	BEGIN VERTICAL CURVE	PVC	POLYVINYL CHLORIDE
BVP	BEGIN VERTICAL PROFILE	PVI	PT. OF VERTICAL INTERSECTION
CBO	CAP WITH BLOW OFF	PVT	POINT OF VERTICAL TANGENT
CRR	CURB RETURN RADIUS	RCBC	REINFORCED CONCRETE BOX CULVERT
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HCR	HANDICAP CURB RAMP	UE	UTILITY EASEMENT
HP	HIGH POINT	VC	VERTICAL CURVE
INV	INVERT	WL	WATER LINE
K	CURVATURE COEFFICIENT	WLC	WATER LINE CONNECTION
LF	LINEAR FEET	WSE	WATER SURFACE ELEVATION

THE TOWN OF PARKER REVIEW CONSTITUTES GENERAL COMPLIANCE WITH THE TOWN'S STANDARDS AND APPROVED VARIANCES, SUBJECT TO THESE PLANS BEING STAMPED, SIGN, AND DATED BY THE PROFESSIONAL ENGINEER OF RECORD. REVIEW BY THE TOWN DOES NOT CONSTITUTE APPROVAL OF THE PLAN DESIGN OR ACCURACY AND CORRECTNESS OF ENGINEERING CALCULATIONS. ERRORS IN THE DESIGN OR CALCULATIONS REMAIN THE RESPONSIBILITY OF THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT.

THIS REVIEW DOES NOT CONSTITUTE APPROVAL OF ANY PRIVATE ON-SITE IMPROVEMENTS WHICH MAY BE SHOWN. CONSTRUCTION CANNOT COMMENCE UNTIL ALL REQUIRED DRAINAGE/TRAFFIC REPORT(S), FINAL DEVELOPMENT PLAN(S), SPECIAL REVIEW(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED AND ON FILE WITH THE TOWN OF PARKER.

TOWN OF PARKER, DIRECTOR OF ENGINEERING DATE

PREPARED UNDER THE SUPERVISION OF

BRIAN P. WILSON  
COLORADO P.E. 0050067

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REVIEWED FOR CONFORMANCE TO PARKER WATER AND SANITATION DISTRICT STANDARDS.

BY: (DISTRICT REPRESENTATIVE) DATE

APPROVED FOR CONSTRUCTION:  
PARKER WATER AND SANITATION DISTRICT

BY: (DISTRICT ENGINEER) DATE

**FIRE DEPARTMENT APPROVAL**

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

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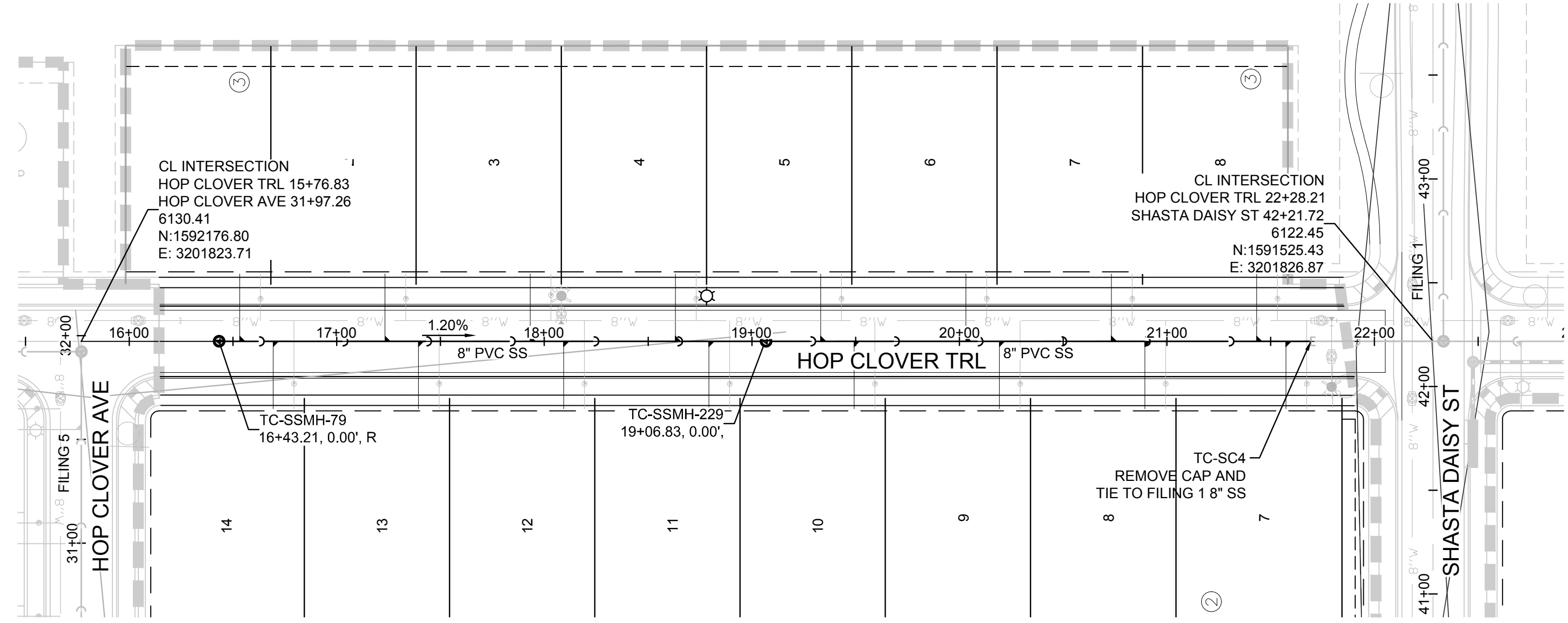
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**BENCHMARK**

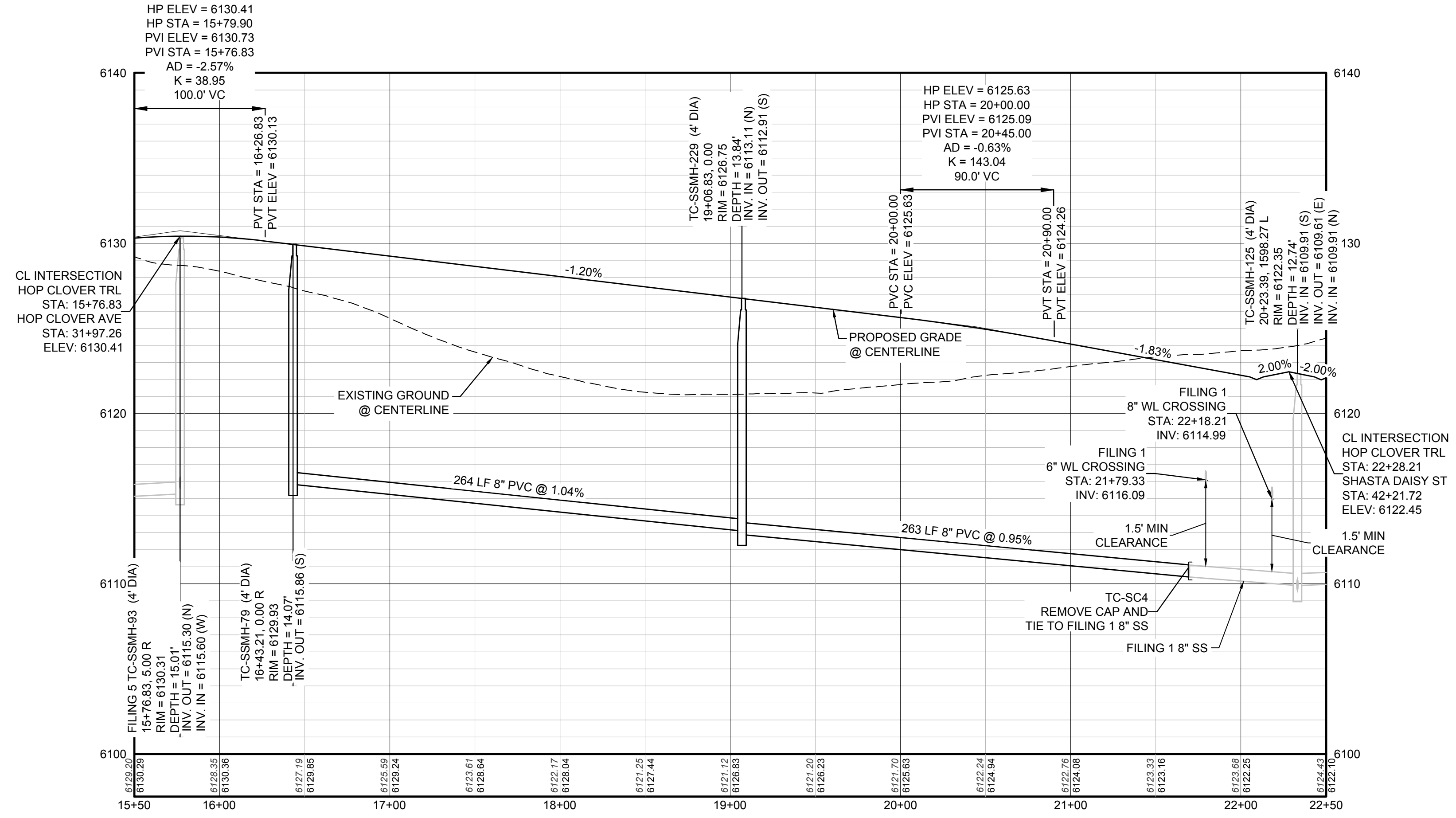
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**BASIS OF BEARINGS:**

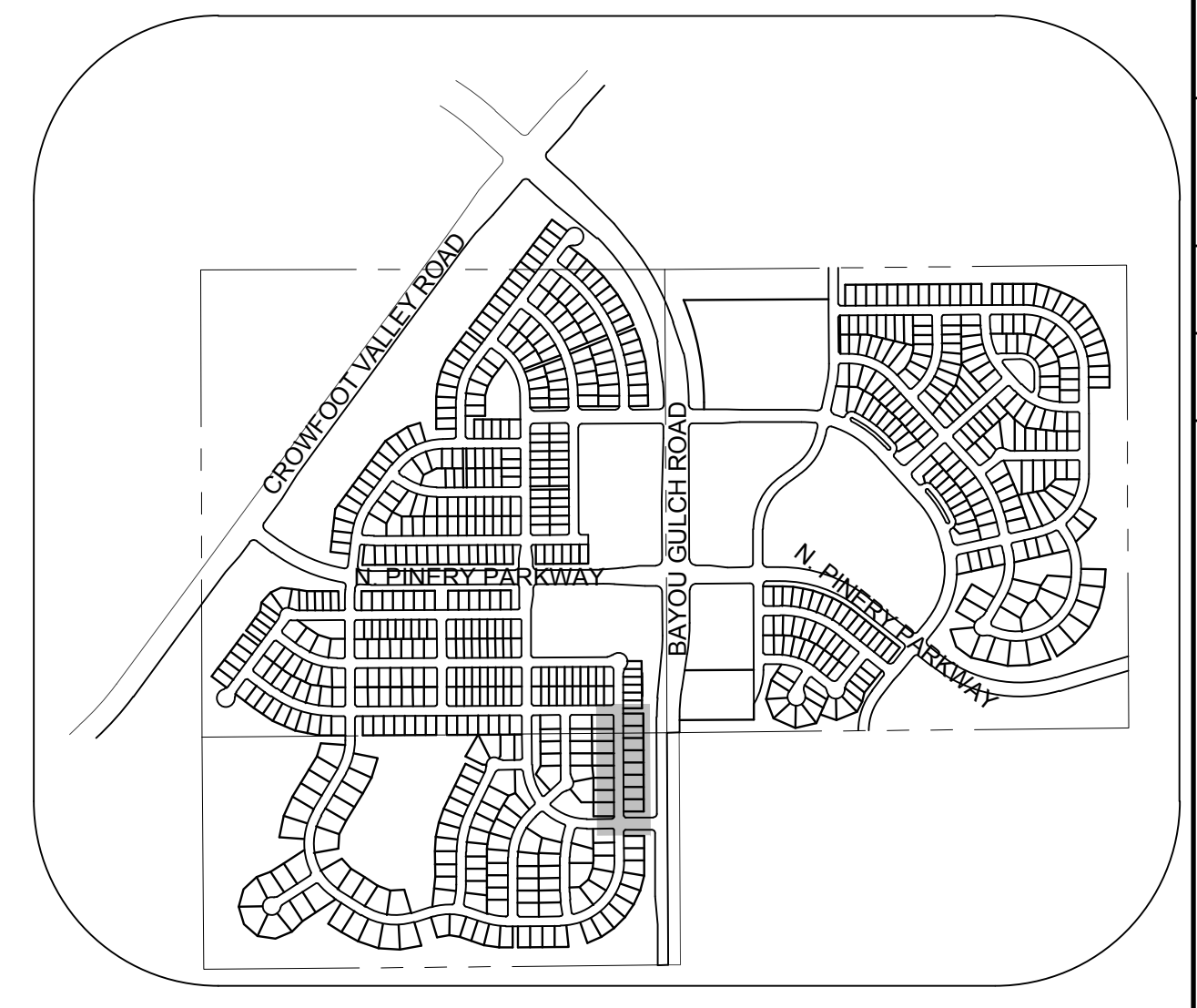
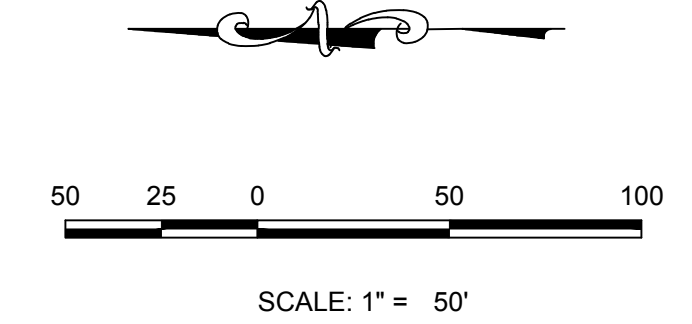
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PLAN: HOP CLOVER TRL STA: 15+50.00 TO 22+50.00  
HORIZONTAL SCALE: 1" = 50'



PROFILE: HOP CLOVER TRL STA: 15+50.00 TO 22+50.00  
HORIZONTAL: 1" = 50'  
VERTICAL: 1" = 5'



KEYMAP  
N.T.S.  
LEGEND

⊙	BLOCK NUMBER	△	PROPOSED RANGE POINT	
⊙	LOT TYPE	---	CENTERLINE	
6	LOT NUMBER	---	RIGHT-OF-WAY	
⊕	PROPOSED BUTTERFLY VALVE	---	PROPERTY LINE	
⌋	PROPOSED CAP WITH END OF LINE BLOWOFF	---	EDGE OF PAVEMENT	
⌋	PROPOSED REDUCER	→	PROPOSED DIRECTION OF FLOW	
⊕	PROPOSED VALVE	1.0%	PROPOSED SLOPE & DIRECTION	
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10.00	PROPOSED DESIGN ELEVATION	---	FILING BOUNDARY	
⊕	PROPOSED STORM DRAIN INLET	---	FO	EXISTING FIBER OPTIC LINE
⊕	PROPOSED STORM DRAIN MANHOLE	---	OH	EXISTING OVERHEAD POWER
		---	TEL	EXISTING TELEPHONE LINE

ABBREVIATIONS

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LF	LINEAR FEET	WSE	WATER SURFACE ELEVATION

SEE SHEET 3 - AREA UTILITY PLAN FOR SANITARY SERVICE STATION TABLE.

N:\PROJECTS\SS\BENCH\ENGINEERING\SS\BENCH\WATER AND SANITATION\SANITARY PLAN AND PROFILE\6 ROSE MALLOW TRL SANITARY DWG. BRIAN.W. 12/22/2017 11:28 AM

CALL 811  
TWO WORKING DAYS  
BEFORE YOU DIG  
UNCC 1-800-922-1987

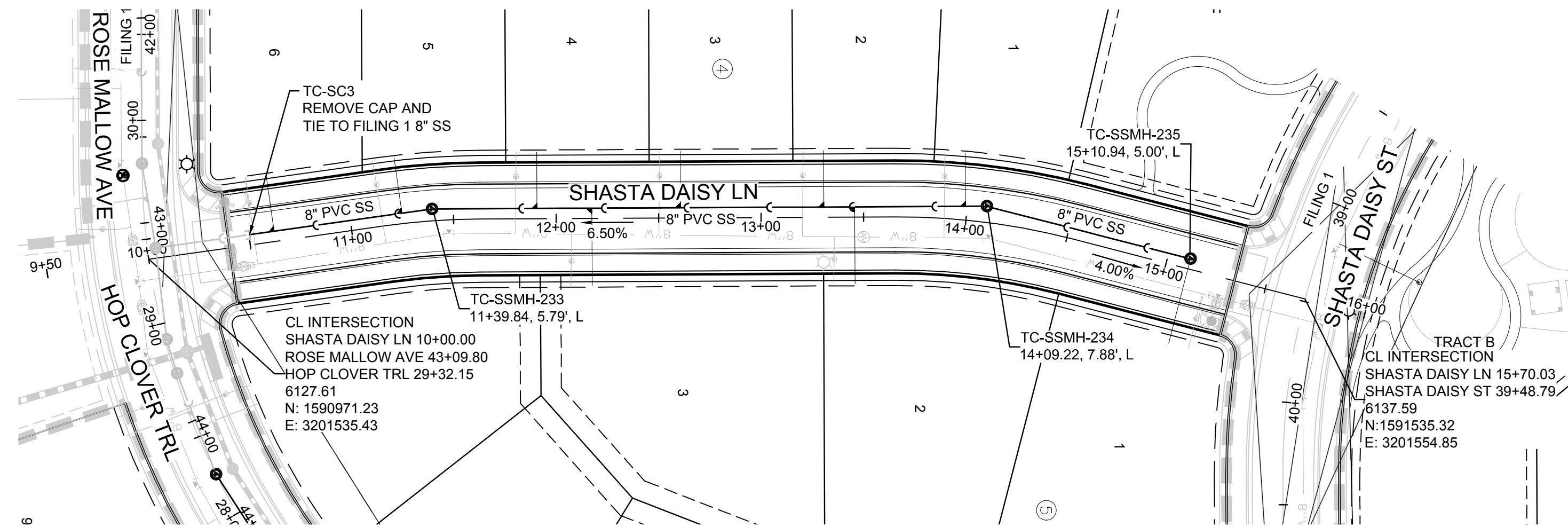
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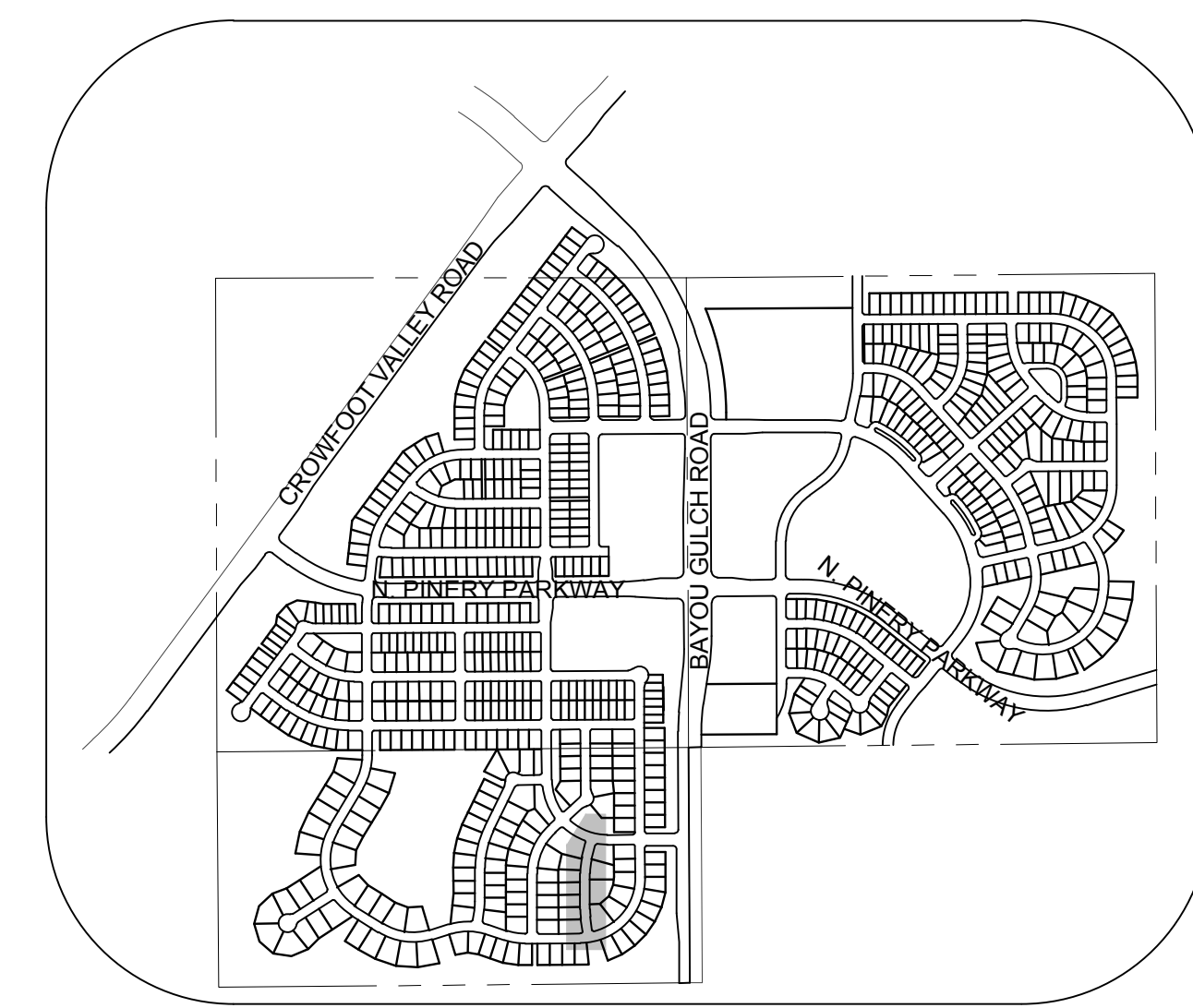
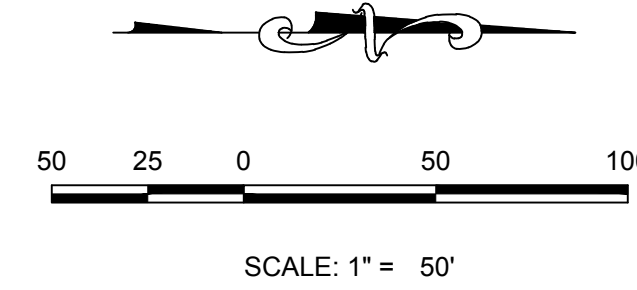
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COLORADO P.E. 0050067

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				TRAILS AT CROWFOOT	FILING 6 CONSTRUCTION DRAWINGS	SANITARY SEWER PLAN AND PROFILE	HOP CLOVER TRAIL													
4	10333 E. Dry Creek Rd., Suite 6410, Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9546																			
	HR 935 LLC 7353 South Alton Way CENTENNIAL, CO 80112			<table border="1"> <tr><td>Date</td><td></td></tr> <tr><td>Appr.</td><td></td></tr> <tr><td>Date</td><td></td></tr> <tr><td>Init.</td><td></td></tr> <tr><td>Date</td><td></td></tr> <tr><td>Revisions</td><td></td></tr> <tr><td>No.</td><td></td></tr> </table>				Date		Appr.		Date		Init.		Date		Revisions		No.
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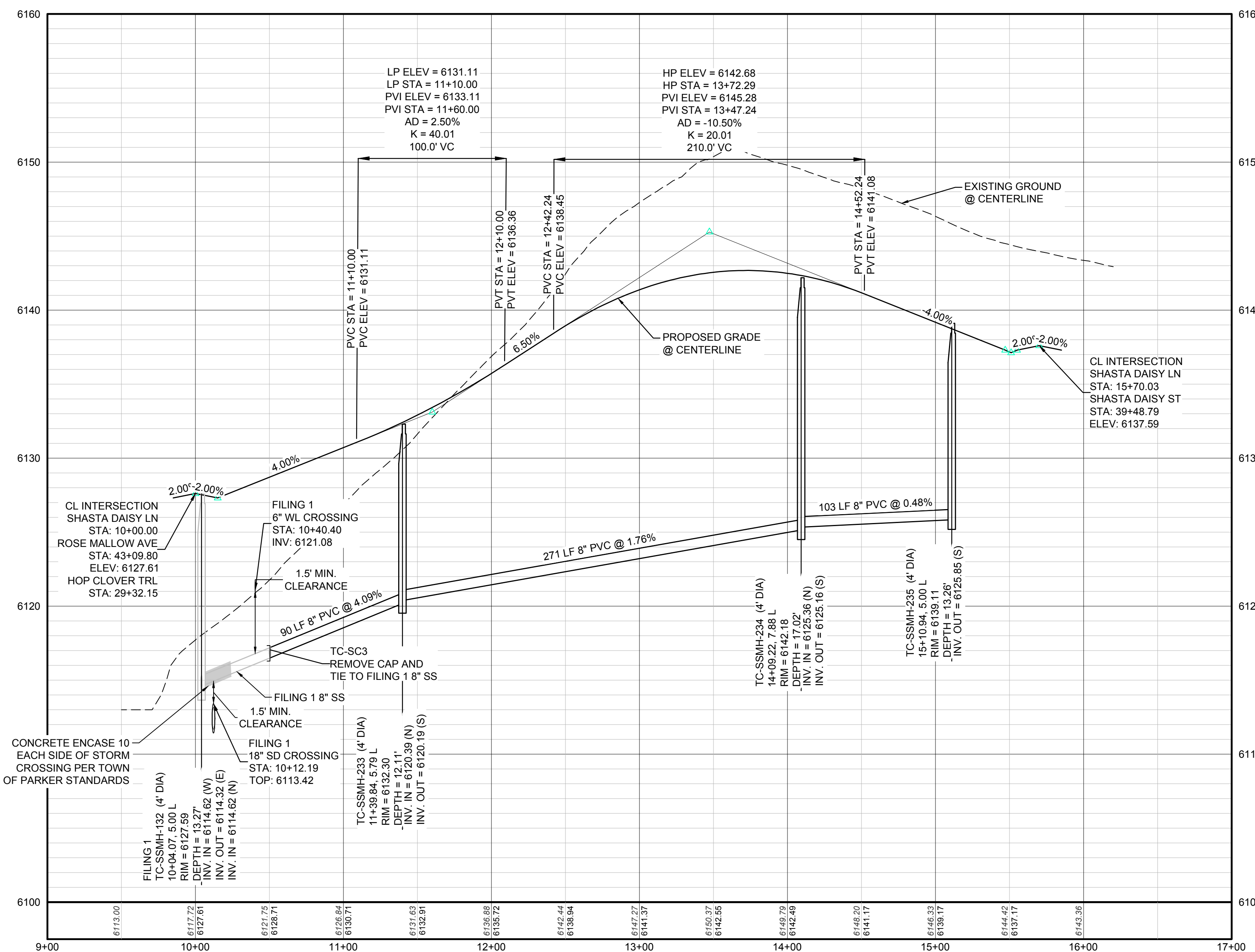




PLAN: SHASTA DAISY LN STA: 9+00.00 TO 17+00.00  
HORIZONTAL SCALE: 1" = 50'



KEYMAP  
N.T.S.



PROFILE: SHASTA DAISY LN STA: 9+00.00 TO 17+00.00  
HORIZONTAL: 1" = 50'  
VERTICAL: 1" = 5'

LEGEND			
②	BLOCK NUMBER	△	PROPOSED RANGE POINT
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⊗	PROPOSED BUTTERFLY VALVE	---	PROPERTY LINE
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⊗	PROPOSED FIRE HYDRANT	---	EXISTING 5' CONTOUR
⊗	PROPOSED WL FITTING WITH THRUST BLOCK	---	EXISTING 1' CONTOUR
⊗	PROPOSED FLARED END SECTION	---	PROPOSED 5' CONTOUR
⊗	PROPOSED LOW POINT BLOW-OFF	---	PROPOSED 1' CONTOUR
⊗	PROPOSED AIR VALVE	---	PROPOSED STORM DRAIN
⊗	FUTURE PHASE VALVE	---	PROPOSED SEWER LINE WITH MANHOLE
⊗	FUTURE FIRE HYDRANT	---	PROPOSED SEWER LATERAL
⊗	PROPOSED LIGHT POLE	---	PROPOSED WATER LINE
⊗	PROPOSED SIDEWALK	---	PROPOSED WATER LATERAL W/ METER
⊗	PROPOSED SIDEWALK RAMP	---	SECTION LINE
10.00	EXISTING ELEVATION	---	FILING BOUNDARY
10.00	PROPOSED DESIGN ELEVATION	---	EXISTING FIBER OPTIC LINE
⊗	PROPOSED STORM DRAIN INLET	---	EXISTING OVERHEAD POWER
⊗	PROPOSED STORM DRAIN MANHOLE	---	EXISTING TELEPHONE LINE

ABBREVIATIONS			
AD	ANGLE DIFFERENCE	MH	MANHOLE
AV	AIR VAC RELEASE VALVE	N.T.S.	NOT TO SCALE
BVC	BEGIN VERTICAL CURVE	PVC	POLYVINYL CHLORIDE
BVP	BEGIN VERTICAL PROFILE	PVI	PT. OF VERTICAL INTERSECTION
CBO	CAP WITH BLOW OFF	PVT	POINT OF VERTICAL TANGENT
CRR	CURB RETURN RADIUS	ROBC	REINFORCED CONCRETE BOX CULVERT
ELEVATION	ELEVATION	RCP	REINFORCED CONCRETE PIPE
EP	EDGE OF PAVEMENT	ROW	RIGHT OF WAY
EVC	END VERTICAL CURVE	SC	SANITARY CAP
EVP	END VERTICAL PROFILE	SD	STORM DRAIN
FG	FINISHED GROUND	SL	SECTION LINE
FL	FLOW LINE	SS	SANITARY SEWER
GV	GATE VALVE	STA	STATION
HA	HYDRANT ASSEMBLY	T.O.P.	TOP OF PIPE
HCR	HANDICAP CURB RAMP	UE	UTILITY EASEMENT
HP	HIGH POINT	VC	VERTICAL CURVE
INV	INVERT	WL	WATER LINE
K	CURVATURE COEFFICIENT	WLC	WATER LINE CONNECTION
LF	LINEAR FEET	WSE	WATER SURFACE ELEVATION

SEE SHEET 3 - AREA UTILITY PLAN FOR SANITARY SERVICE STATION TABLE.

PREPARED UNDER THE SUPERVISION OF  
  
BRIAN P. WILSON  
COLORADO P.E. 0050067

SCALE:	AS SHOWN	FILE NO.:	8130283701
DRAWN BY:	DEK	CHECKED BY:	JU
SHEET NUMBER:	6	DATE:	AUGUST 2017
TRAILS AT CROWFOOT FILING 6 CONSTRUCTION DRAWINGS SANITARY SEWER PLAN AND PROFILE SHASTA DAISY LANE			
HR 935 LLC 7353 South Alton Way CENTENNIAL, CO 80112			
10339 E. Dry Creek Rd. Suite 410 Englewood, CO 80110 Tel: (720) 482-9526 Fax: (720) 482-9548			
CVL CONSULTANTS			
No.	Revisions	Date	Appr.

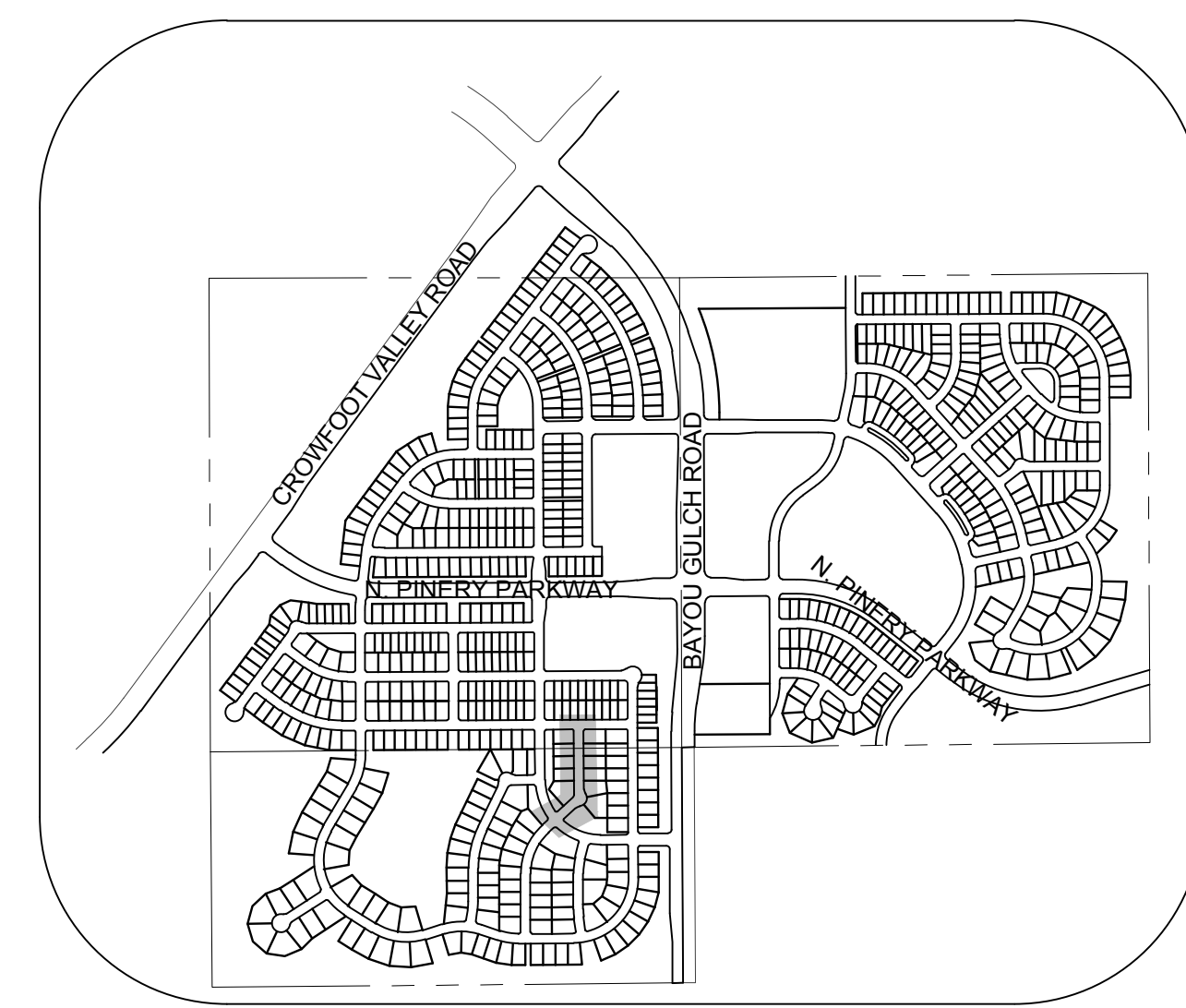
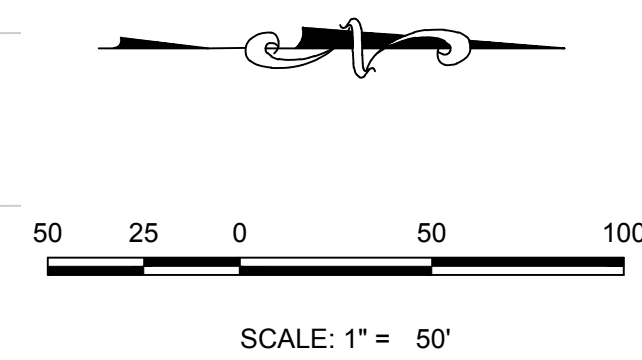
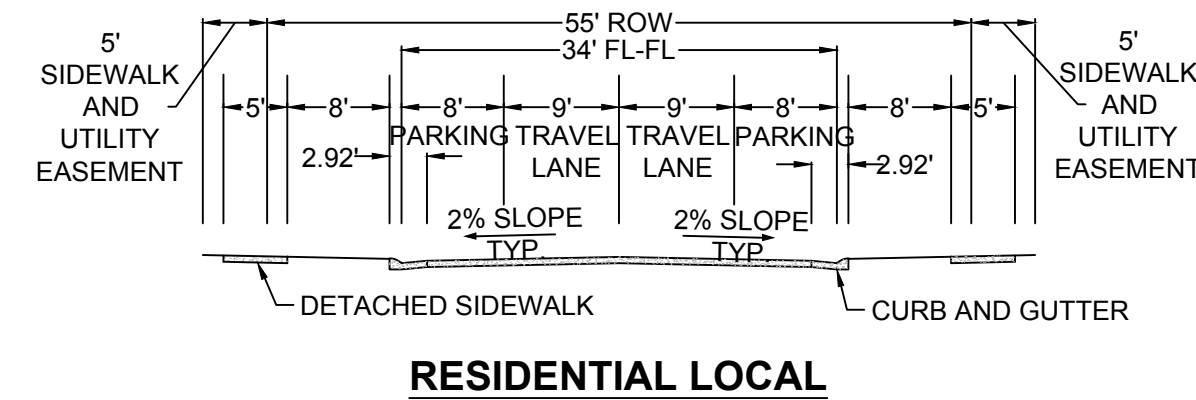
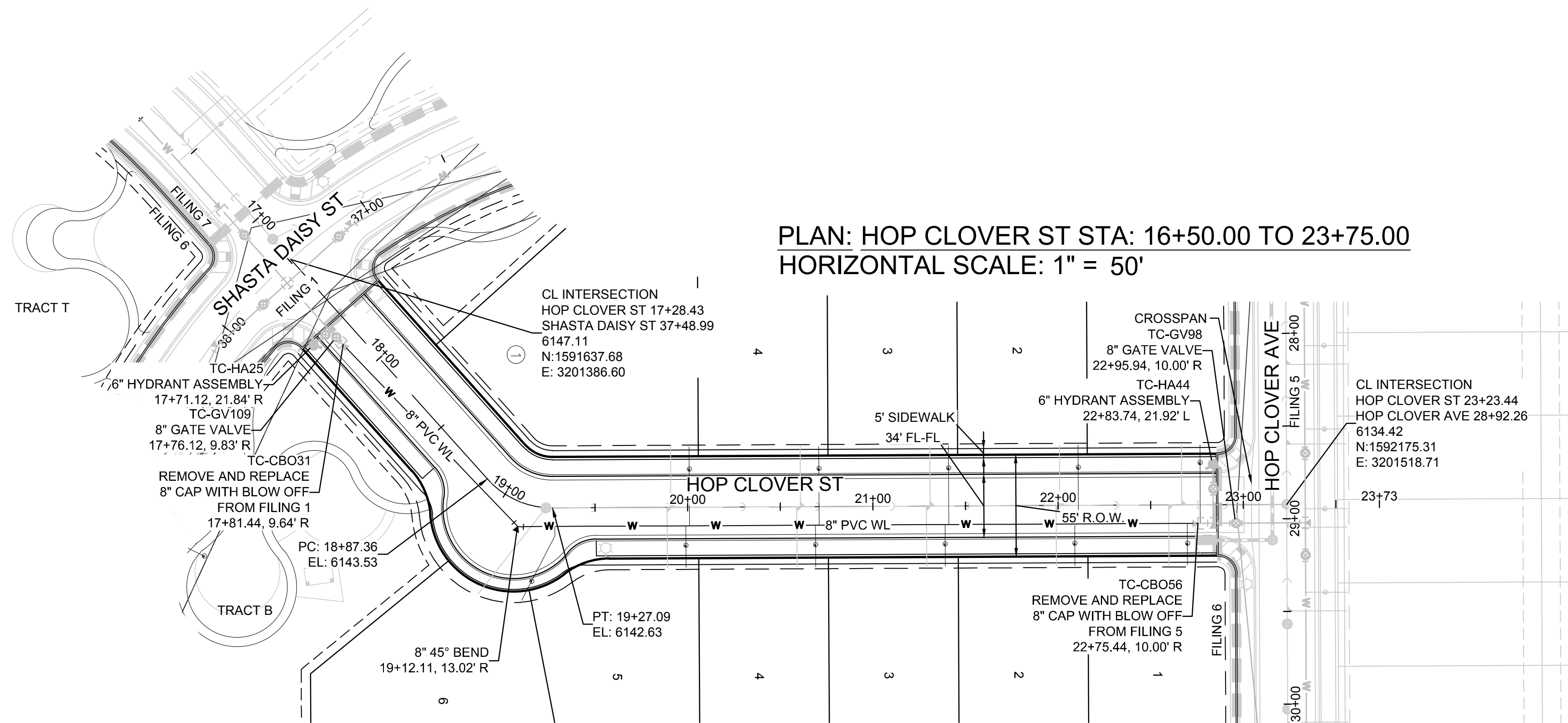
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UTILITY NOTIFICATION  
CENTER OF COLORADO

**BENCHMARK**  
THE DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.069032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

**BASIS OF BEARINGS:**  
THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 9 BEING MONUMENTED AT THE NORTHEAST CORNER OF SAID SECTION 9 BY A 3-1/4" ALUMINUM CAP STAMPED LS 23053 AND AT THE EAST QUARTER CORNER OF SAID SECTION 9 BY A 2-1/2" ALUMINUM CAP STAMPED LS 6935 BEING CONSIDERED TO BEAR SOUTH 00°15'06" EAST, 2648.70 FEET.





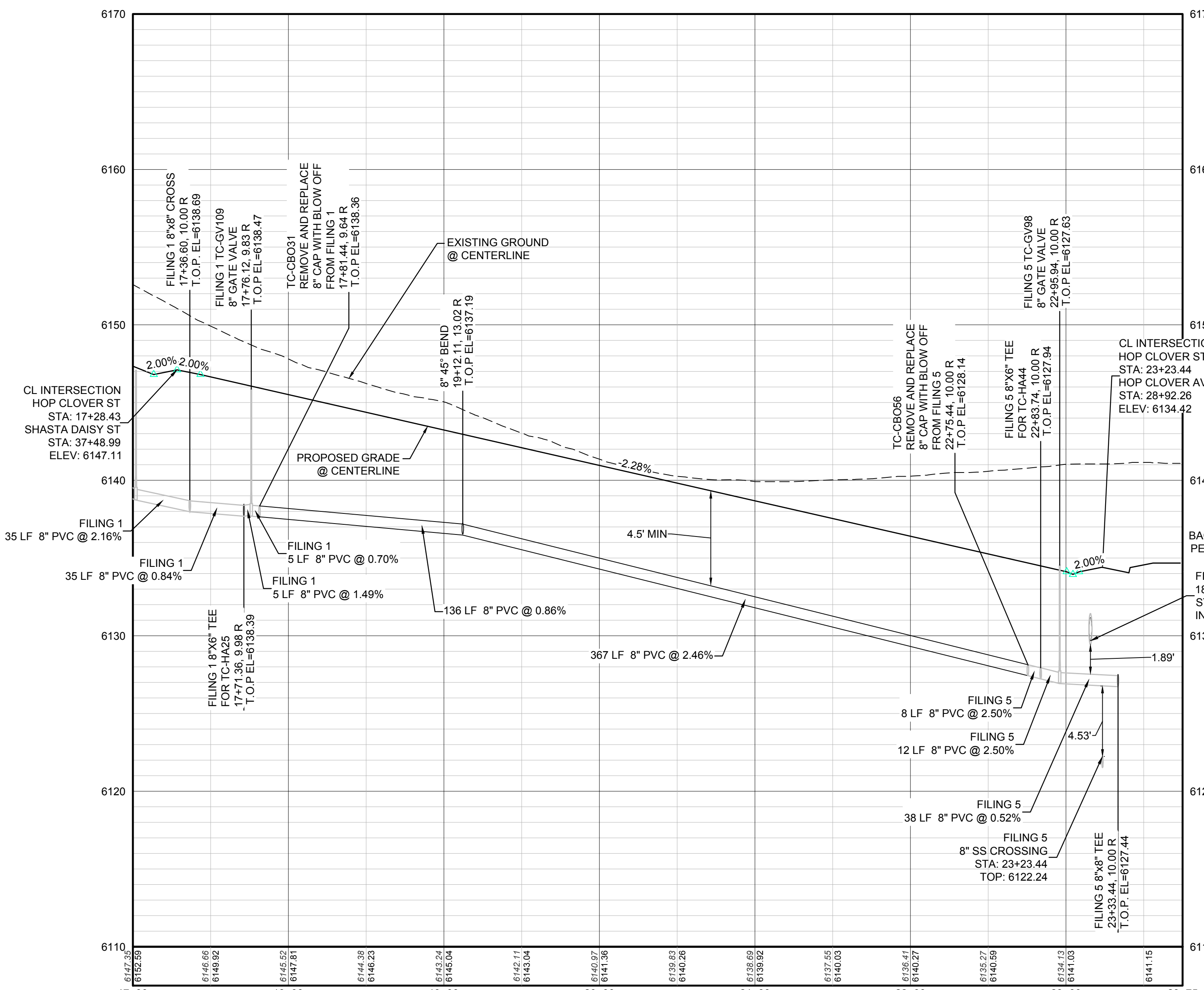
**KEYMAP**  
N.T.S.  
**LEGEND**

②	BLOCK NUMBER	△	PROPOSED RANGE POINT
Ⓐ	LOT TYPE	---	CENTERLINE
6	LOT NUMBER	---	RIGHT-OF-WAY
⊗	PROPOSED BUTTERFLY VALVE	---	PROPERTY LINE
⌈	PROPOSED CAP WITH END OF LINE BLOWOFF	---	EDGE OF PAVEMENT
⊗	PROPOSED REDUCER	→	PROPOSED DIRECTION OF FLOW
⊗	PROPOSED VALVE	1.0%	PROPOSED SLOPE & DIRECTION
⊗	PROPOSED FIRE HYDRANT	5615	EXISTING 5' CONTOUR
⊗	PROPOSED WL FITTING WITH THRUST BLOCK	5616	EXISTING 1' CONTOUR
⊗	PROPOSED FLARED END SECTION	5620	PROPOSED 5' CONTOUR
⊗	PROPOSED LOW POINT BLOW-OFF	5607	PROPOSED 1' CONTOUR
⊗	PROPOSED AIR VALVE	---	PROPOSED STORM DRAIN
⊗	FUTURE PHASE VALVE	---	PROPOSED SEWER LINE WITH MANHOLE
⊗	FUTURE FIRE HYDRANT	---	PROPOSED SEWER LATERAL
⊗	PROPOSED LIGHT POLE	---	PROPOSED WATER LINE
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10.00	EXISTING ELEVATION	---	SECTION LINE
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⊗	PROPOSED STORM DRAIN INLET	---	EXISTING FIBER OPTIC LINE
⊗	PROPOSED STORM DRAIN MANHOLE	---	EXISTING OVERHEAD POWER
		---	EXISTING TELEPHONE LINE

**ABBREVIATIONS**

AD	ANGLE DIFFERENCE	MH	MANHOLE
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BVC	BEGIN VERTICAL CURVE	PVC	POLYVINYL CHLORIDE
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K	CURVATURE COEFFICIENT	WLC	WATER LINE CONNECTION
LF	LINEAR FEET	WSE	WATER SURFACE ELEVATION

SEE SHEET 3 - AREA UTILITY PLAN FOR WATER SERVICE STATION TABLE.



**PROFILE: HOP CLOVER ST STA: 17+00.00 TO 23+75.00**  
HORIZONTAL: 1" = 50'  
VERTICAL: 1" = 5'

**BENCHMARK**  
THE DOUGLAS COUNTY CONTROL POINT KNOWN AS 1.069032, BEING A 3-1/4" ALUMINUM CAP, BEING LOCATED IN THE SOUTHWEST QUARTER OF SECTION 33, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, HAVING A PUBLISHED ELEVATION OF 1799.2870 METERS (5903.13 FEET) NAVD '88 DATUM.

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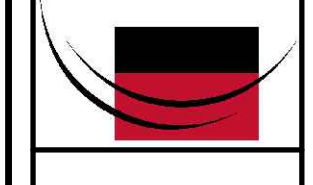
PREPARED UNDER THE SUPERVISION OF  
  
BRIAN P. WILSON  
COLORADO P.E. 0050067

N:\PROJECTS\SS\BENCHM\ENGINEERING\SS\BENCHM\WATER PLAN AND PROFILE\BENCHM\ROCKET STREET WATER DIVS. DRAWING - 12212017 2:56 PM

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SHEET NUMBER	DRAWN BY:	SCALE:	AS SHOWN	FILE NO:	DATE:	Revisions	Date	Appr.	Date
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8	RHR			JJ	AUGUST 2017				

10338 E. Dry Creek Rd.  
Suite 6410  
Englewood, CO 80150  
Tel: (720) 482-9526  
Fax: (720) 482-9546



HR 935 LLC  
7353 South Alton Way  
CENTENNIAL, CO 80112

**TRAILS AT CROWFOOT**  
**FILING 6 CONSTRUCTION DRAWINGS**  
WATER PLAN & PROFILE  
HOP CLOVER STREET









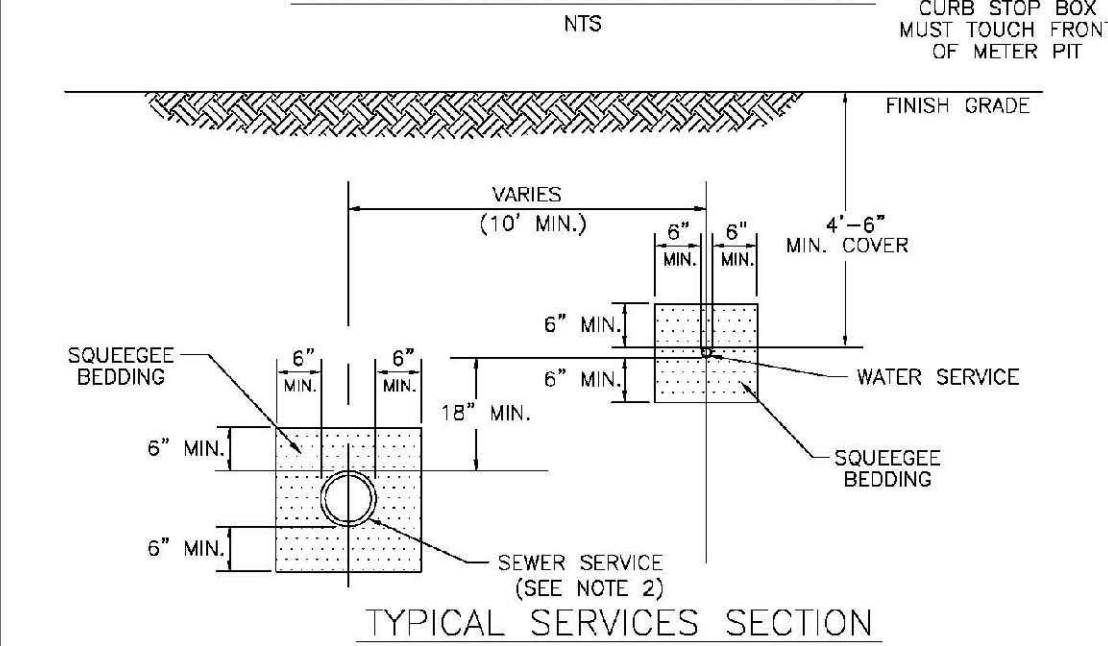
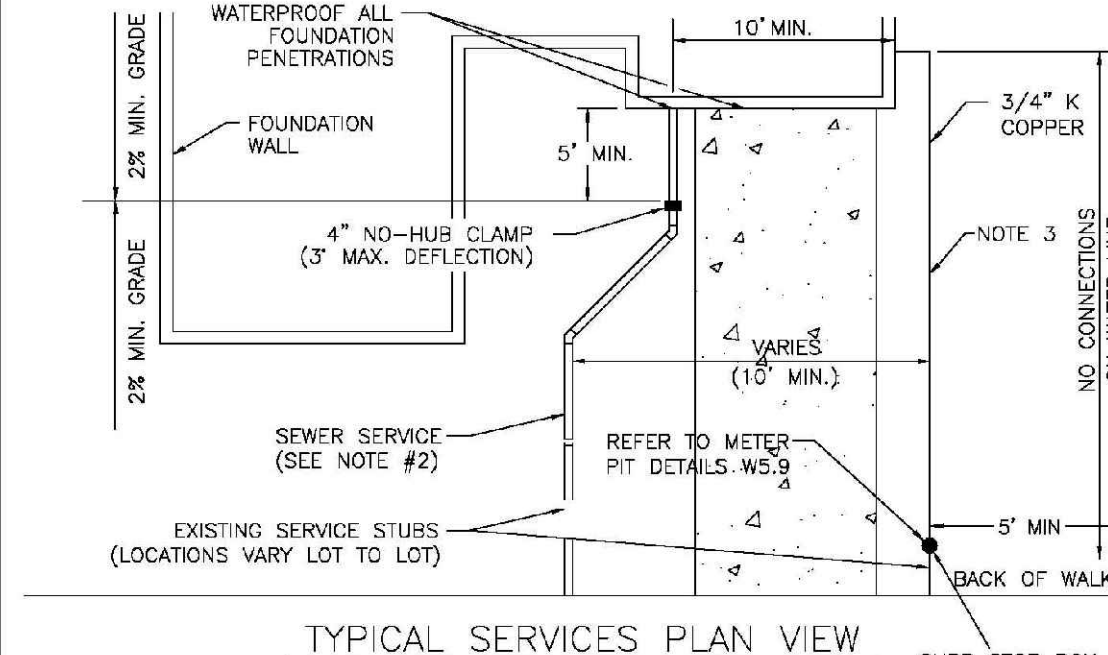
- INSPECTION POLICY:**
1. ALL SERVICE INSPECTIONS MUST BE SCHEDULED AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
  2. SERVICE INSPECTIONS WILL OCCUR BETWEEN 1:00 P.M. AND 3:00 P.M. SPECIFIC INSPECTION TIMES ARE NOT AVAILABLE.
  3. IF THE CONTRACTOR IS NOT READY FOR THE INSPECTOR ARRIVES AT THE SITE OR SERVICE FAILS, A RE-INSPECTION WILL HAVE TO BE SCHEDULED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE AND A RE-INSPECTION FEE CHARGED.
  4. SHOULD THE SERVICE LINES BE DAMAGED BY LATER CONSTRUCTION, AN INSPECTION OF THE REPAIR WILL BE REQUIRED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE.
  5. THE CONTRACTOR SHALL LEAVE ALL PIPE AND FITTINGS EXPOSED FOR THE INSPECTOR TO OBSERVE. INSPECTORS WILL NOT ENTER ANY EXCAVATIONS TO CHECK MATERIALS. THE TOP LAYER OF BEDDING CAN BE ADDED AFTER THE INSPECTION HAS BEEN COMPLETED.
  6. ALL EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.
  7. LOTS WITHOUT BUILDING ADDRESSES BEFORE DISTRICT INSPECTION OR METER SET WILL FAIL AUTOMATICALLY.
  8. CONTRACTOR MUST BE PRESENT AT TIME OF INSPECTION, UNLESS COORDINATED WITH DISTRICT INSPECTOR.

- INSTALLATION NOTES:**
- WATER**
1. ACCEPTABLE PIPE MATERIALS SHALL BE K-COPPER TUBING, (3/4" MIN.)
  2. APPROVED BEDDING TO BE SQUEEGEE.
  3. ONLY ONE COUPLING WILL BE ALLOWED BETWEEN THE SUB-IN AND BUILDING. COMPRESSION COUPLINGS WILL NOT BE ALLOWED ON NEW CONSTRUCTION. SILVER SOLDERED JOINTS MUST BE USED ON SERVICES LARGER THAN 3/4". SILVER SOLDERED JOINTS MUST BE INSPECTED BY PWS BEFORE BURIAL. FLARED COUPLINGS WILL BE ALLOWED ON ALL SERVICES 3/4" AND SMALLER.
  4. A WATER SERVICE WHICH CROSSES A SEWER SERVICE CAN DO SO ONLY AT A 45-90° ANGLE. WATER SERVICES SHALL BE LOCATED A MINIMUM OF 18" ABOVE SEWER SERVICE.
  5. WATER SERVICE FOUNDATION PENETRATIONS SHALL BE WATERPROOFED USING MASTIC OR OTHER APPROVED METHOD. CRAWL SPACE REQUIRES CONTINUOUS COPPER WITH A 1" BURY.
  6. CURB STOP MUST BE PLUMB AND CENTERED OVER THE NUT. IT SHOULD BE STRAPPED TO THE METER PIT (RESIDENTIAL INSTALLATIONS) OR CENTERED OVER THE EASEMENT LINE (COMMERCIAL INSTALLATIONS). THE ASSEMBLY MUST BE AT OR SLIGHTLY ABOVE FINISHED GRADE.
  7. MOVED CURB BOXES MUST BE INSPECTED BY PWS PRIOR TO BURIAL.
  8. WATERLINE MUST BE ATTACHED TO A SUPPORT BOARD THAT IS MOUNTED TO THE WALL.
  9. NO VOIDS ALLOWED UNDER WATERLINES FROM STOP BOX TO FOUNDATION.
  10. CURBSTOP BOXES AND METER PITS CANNOT BE IN DRIVEWAYS.
  11. ONLY 3/4" (JUMPER) PIPES (RESIDENCES) ARE ALLOWED. (JUMPER) PIPES WILL BE REMOVED PRIOR TO METER SET DATE.
  12. ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:  
"X" FOR SANITARY SEWER SERVICE  
"W" FOR WATER SERVICES
  13. NO SPLICES OR FLARED COUPLINGS ALLOWED ON SERVICES LARGER THAN 3/4". SILVER SOLDERED JOINTS MUST BE INSPECTED BY PWS PRIOR TO BURIAL. FLARED COUPLINGS WILL BE ALLOWED ON ALL SERVICES 3/4" AND SMALLER.

PARKER WATER & SANITATION DISTRICT	
DISTRICT POLICIES & INSTALLATION NOTES FOR WATER SERVICES	
SCALE: NONE	DATE: 2/96
APPROVED: 1/04	1/16
PVR	10/16
DIRECTOR OF ENGINEERING	

2016 REVISION

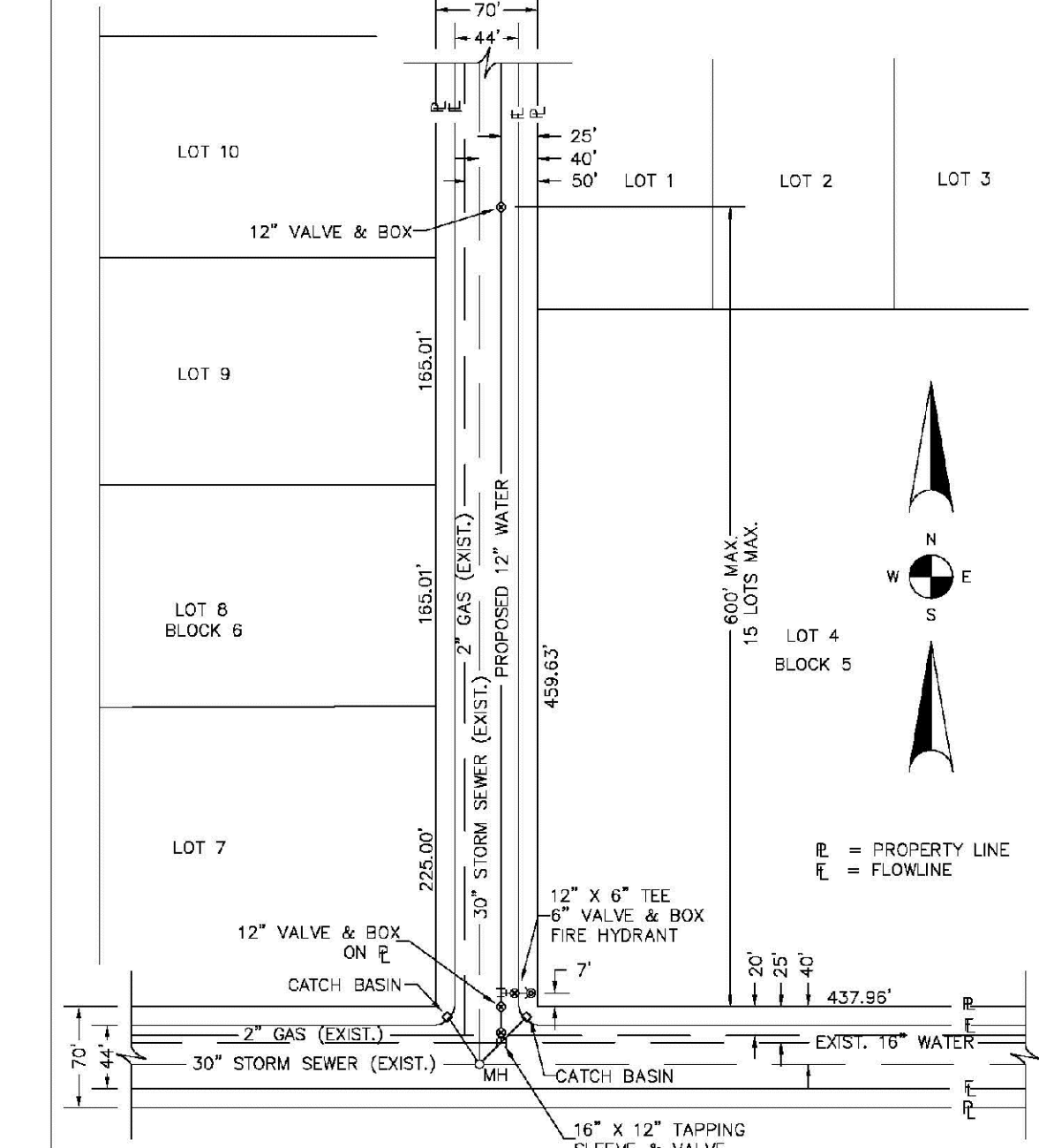
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PARKER WATER & SANITATION DISTRICT	
TYPICAL WATER SERVICES	
SCALE: NONE	DATE: 2/96
APPROVED: 1/04	10/16
PVR	12/07
DIRECTOR OF ENGINEERING	

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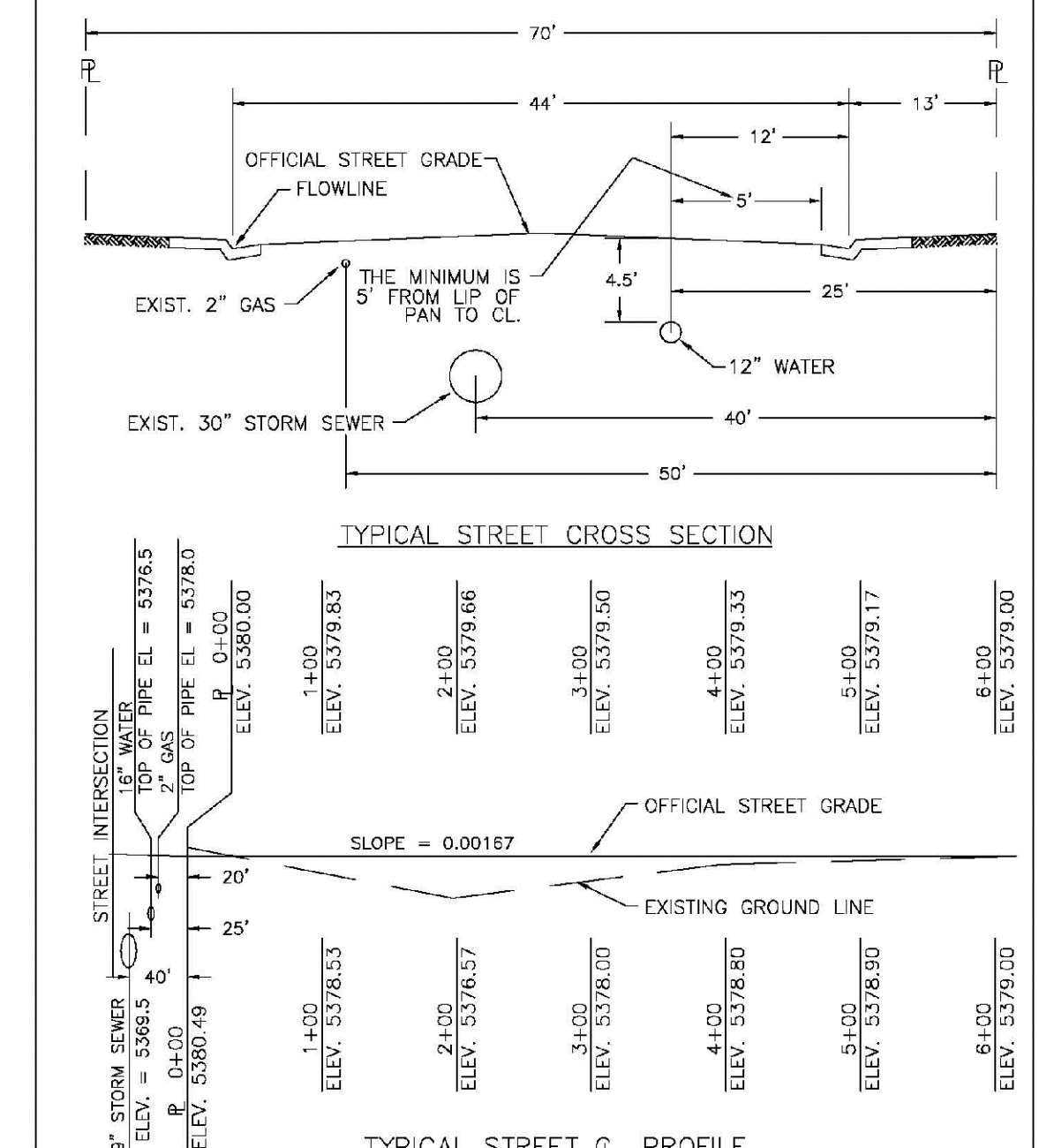
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PARKER WATER & SANITATION DISTRICT	
WATER DISTRIBUTION SYSTEM TYPICAL PLAN	
SCALE: NONE	DATE: 2/96
APPROVED: 1/16	10/16
PVR	DIRECTOR OF ENGINEERING

2016 REVISION

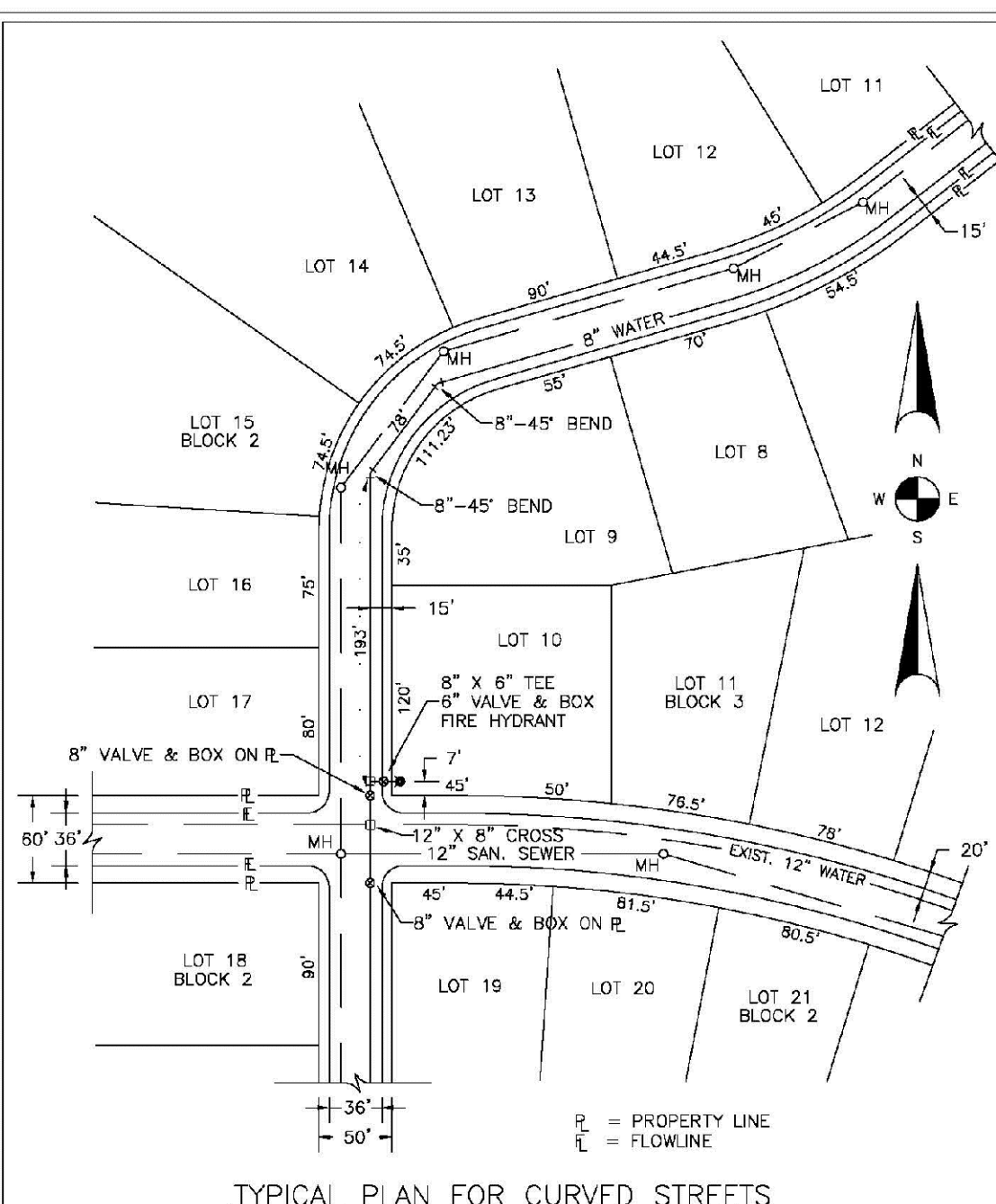
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PARKER WATER & SANITATION DISTRICT	
TYPICAL STREET CROSS SECTION	
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APPROVED: 1/16	10/16
PVR	DIRECTOR OF ENGINEERING

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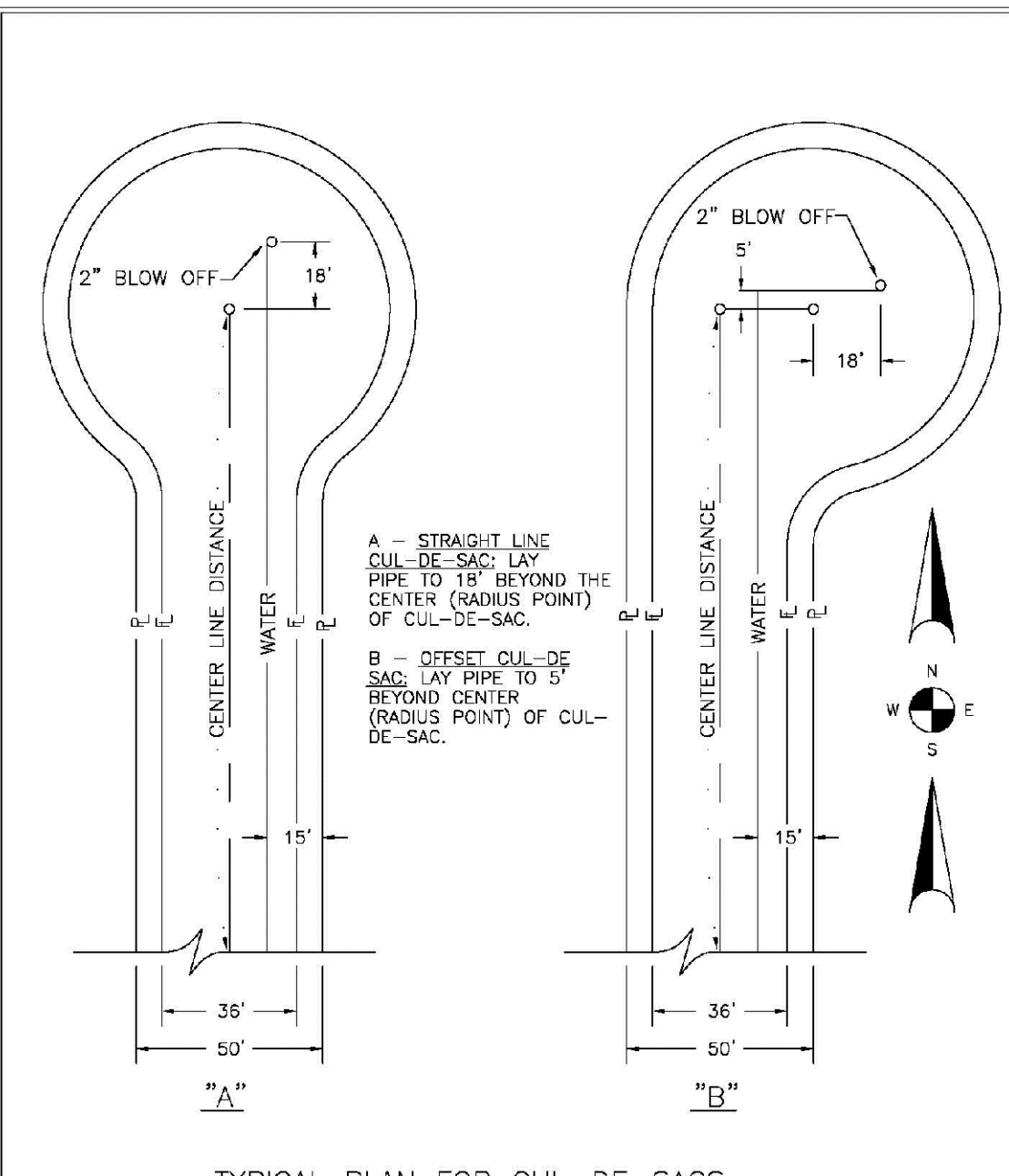
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PARKER WATER & SANITATION DISTRICT	
WATER DISTRIBUTION SYSTEM TYPICAL PLAN FOR CURVED STREETS	
SCALE: NONE	DATE: 2/96
APPROVED: 1/16	10/16
PVR	DIRECTOR OF ENGINEERING

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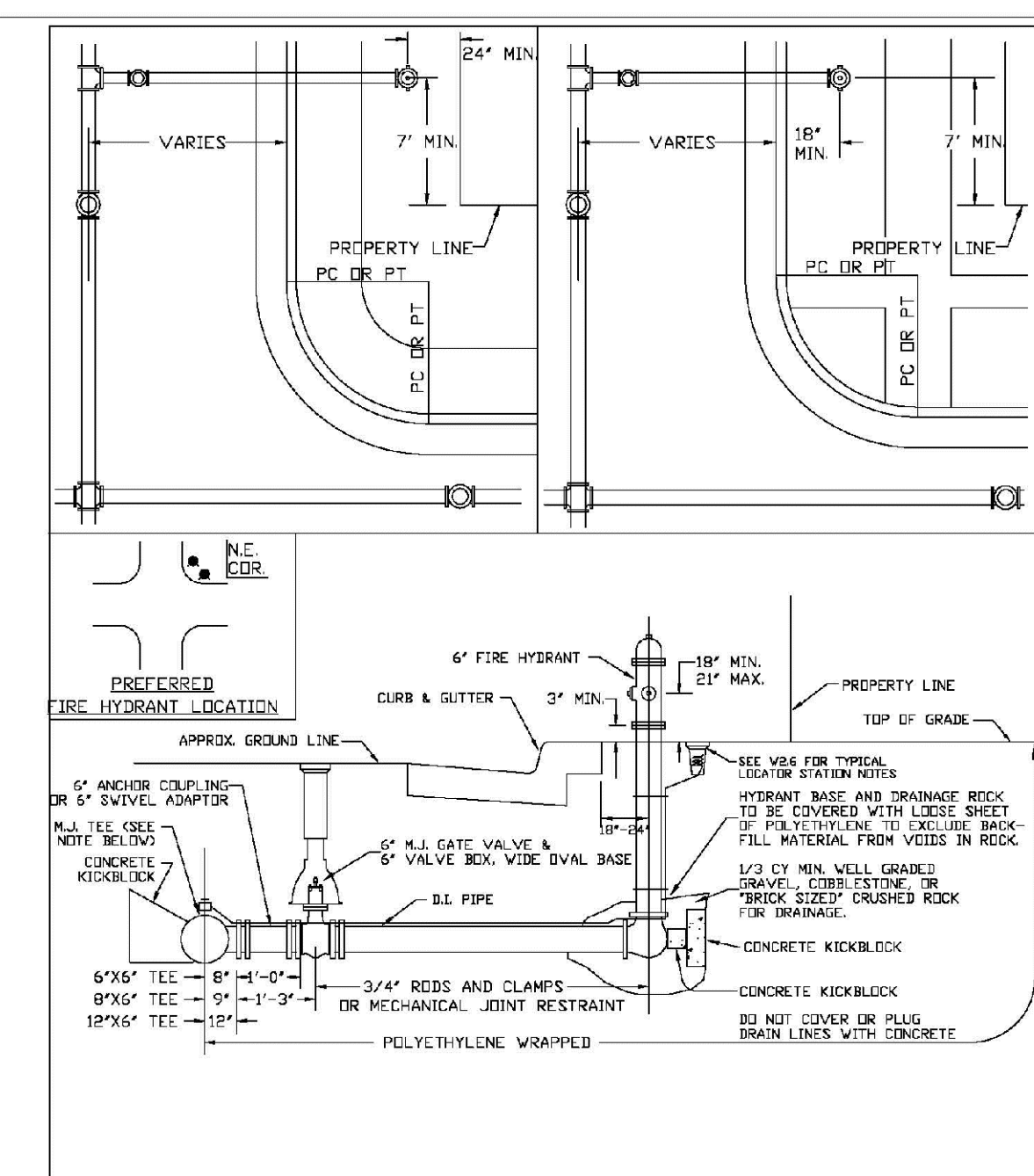
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PARKER WATER & SANITATION DISTRICT	
WATER DISTRIBUTION SYSTEM TYPICAL PLAN FOR CUL-DE-SACS	
SCALE: NONE	DATE: 2/96
APPROVED: 1/16	10/16
PVR	DIRECTOR OF ENGINEERING

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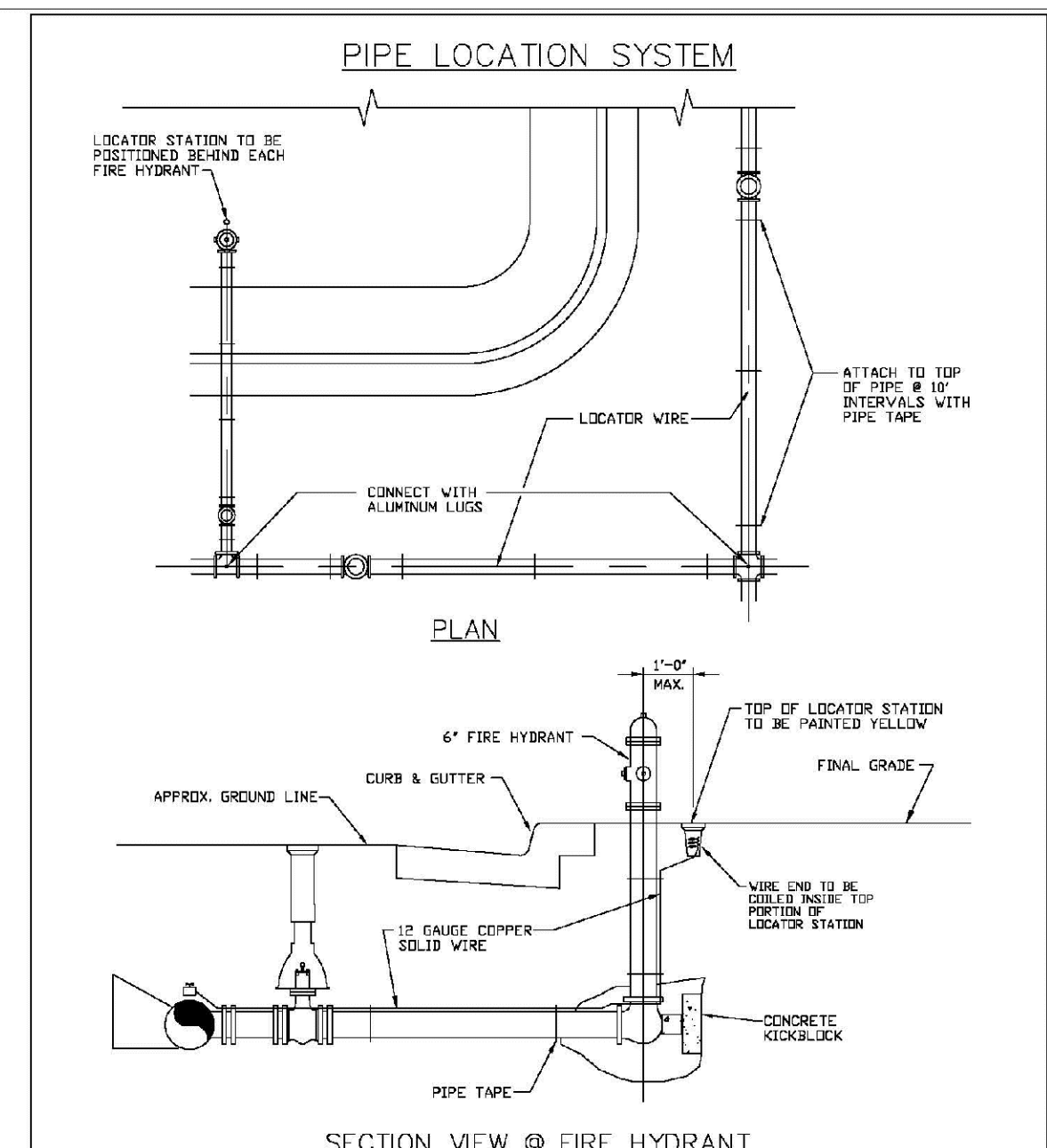
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PARKER WATER & SANITATION DISTRICT	
FIRE HYDRANTS LOCATION & INSTALLATION	
SCALE: NONE	DATE: 2/96
APPROVED: 4/01	10/16
PVR	10/20
DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET W3.5



PARKER WATER & SANITATION DISTRICT	
LOCATOR WIRE DETAILS	
SCALE: NONE	DATE: 2/96
APPROVED: 4/01	10/16
PVR	10/16
DIRECTOR OF ENGINEERING	

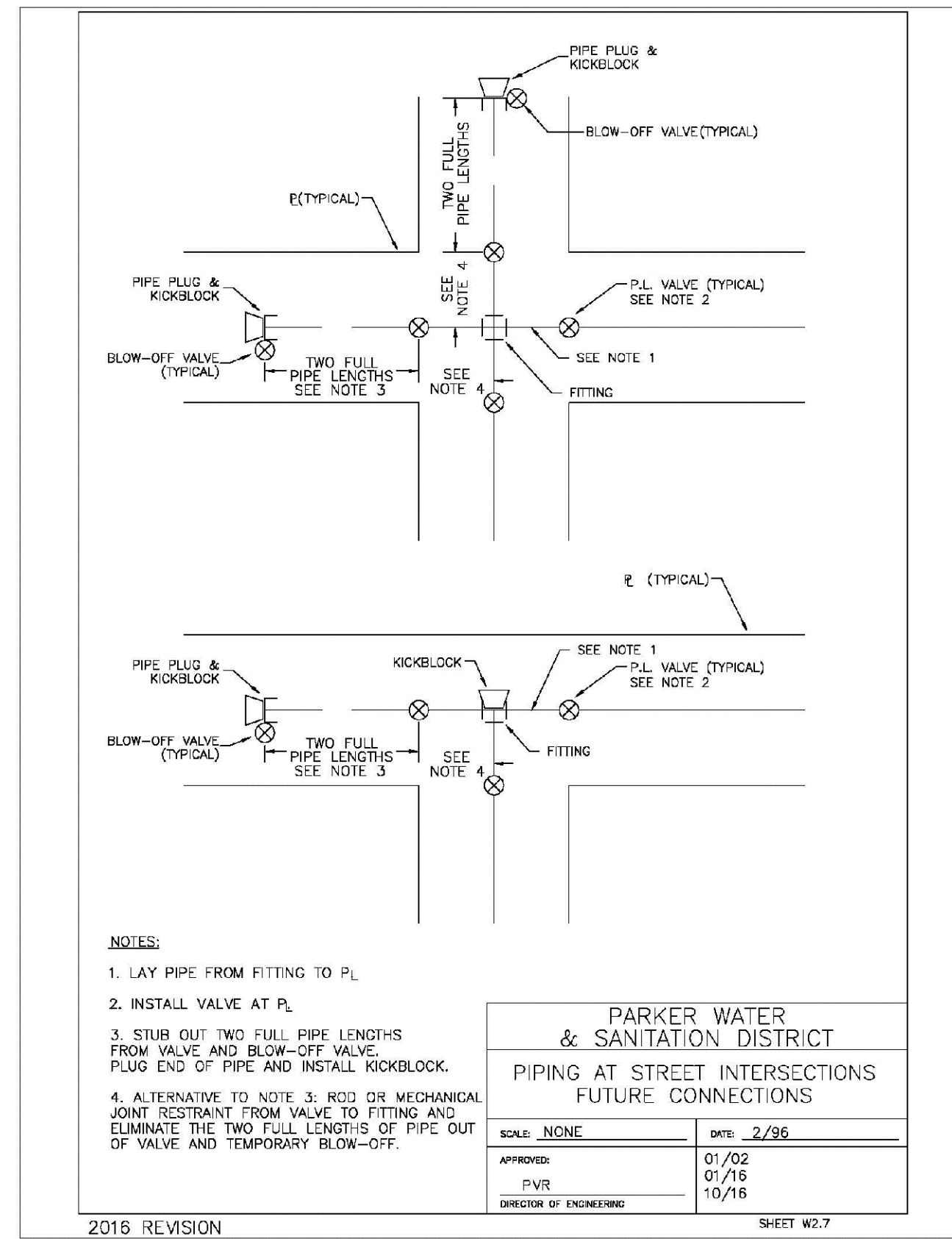
2016 REVISION

SHEET W3.6

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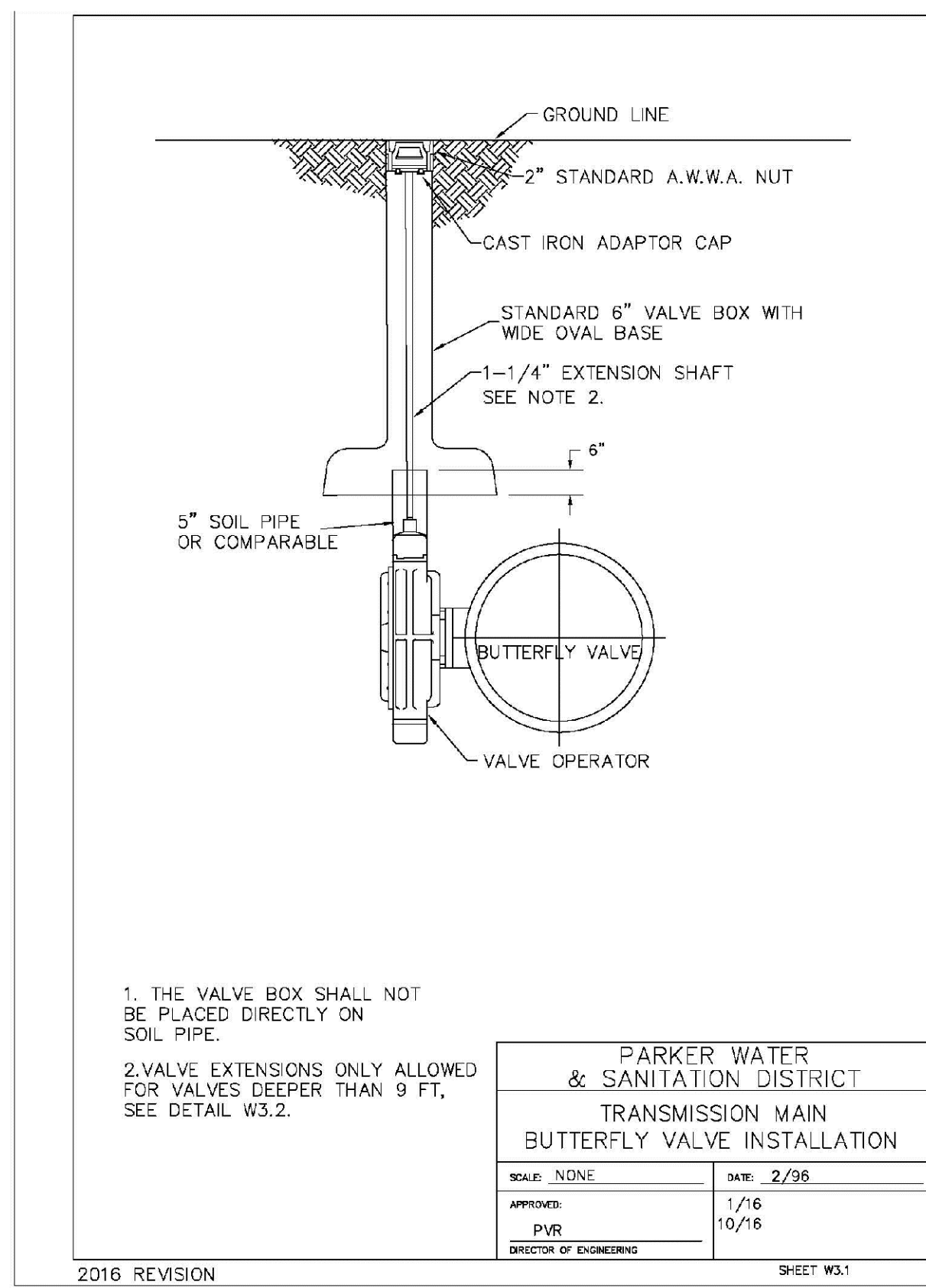
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SHEET NUMBER	DRAWN BY: JF	CHECKED BY: JJ	DATE: AUGUST 2017	SCALE:	AS SHOWN	FILE NO:	8130283701																													
				TRAILS AT CROWFOOT	FILING 6 CONSTRUCTION DRAWINGS	WATER DETAILS																														
13	10333 E. Dry Creek Rd., Suite 410, Englewood, CO 80110 Tel: (720) 482-9526 Fax: (720) 482-9546																																			
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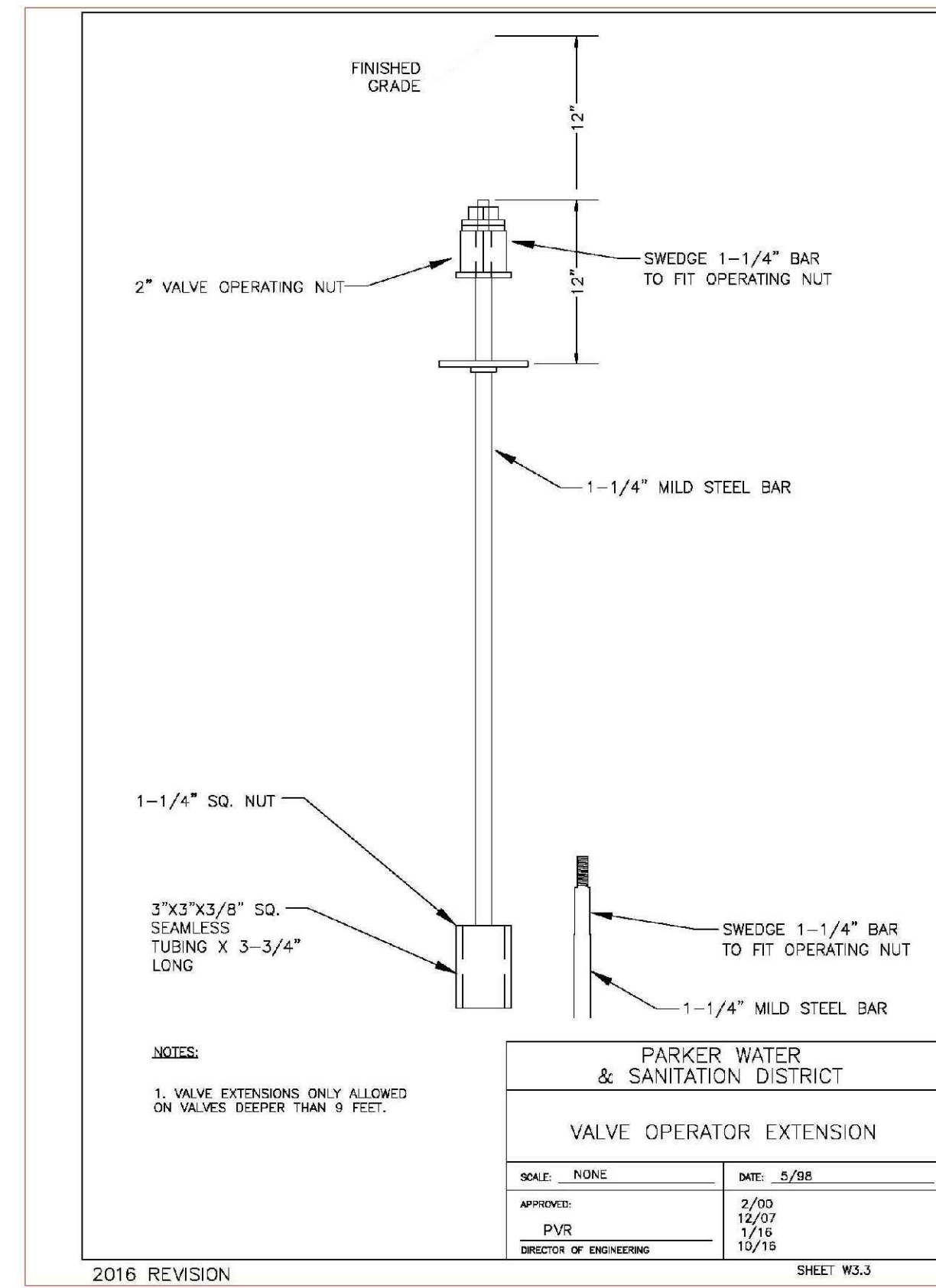
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PIPING AT STREET INTERSECTIONS FUTURE CONNECTIONS	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	DATE: 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.7



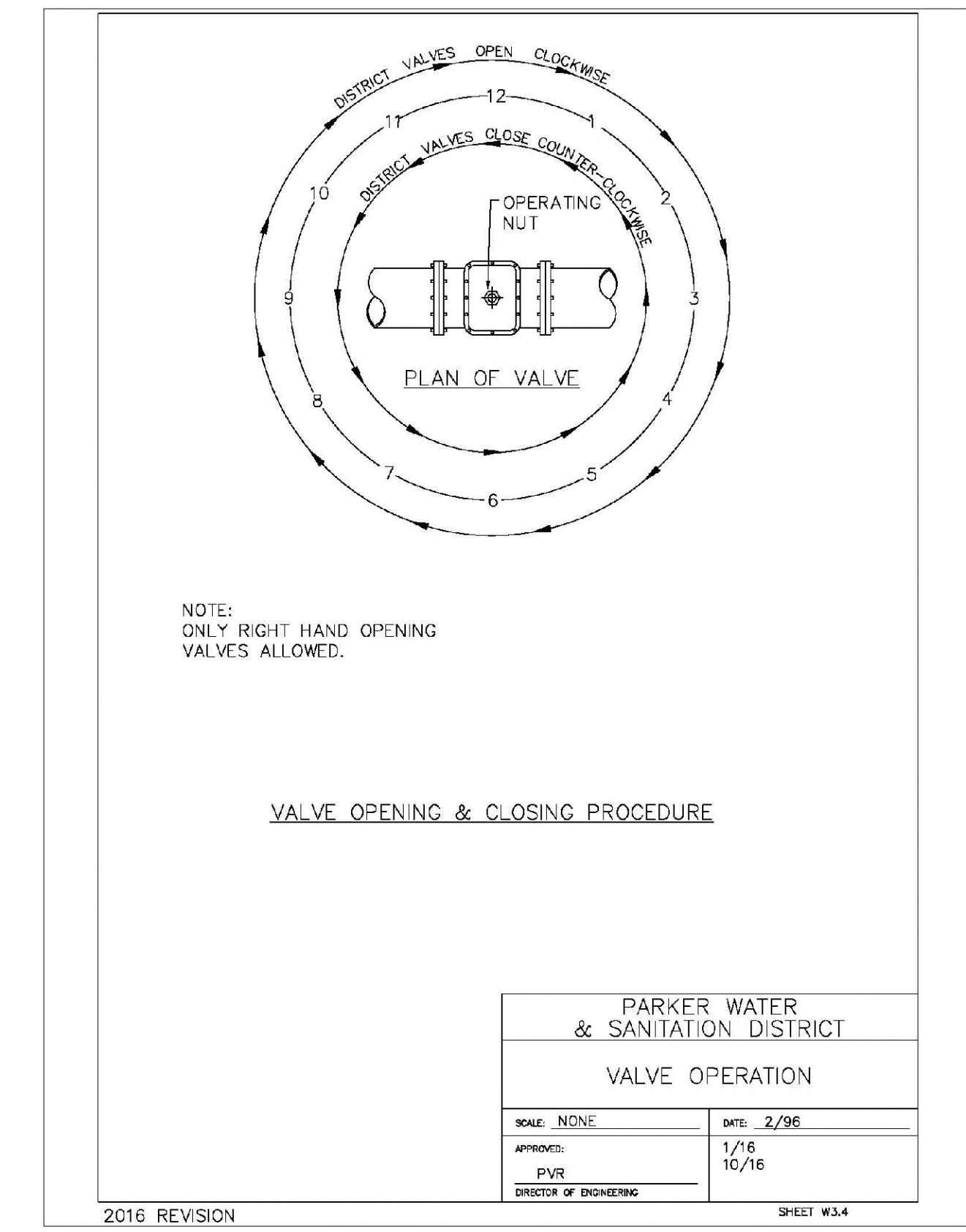
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TRANSMISSION MAIN BUTTERFLY VALVE INSTALLATION	
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APPROVED: PVR	DATE: 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.1



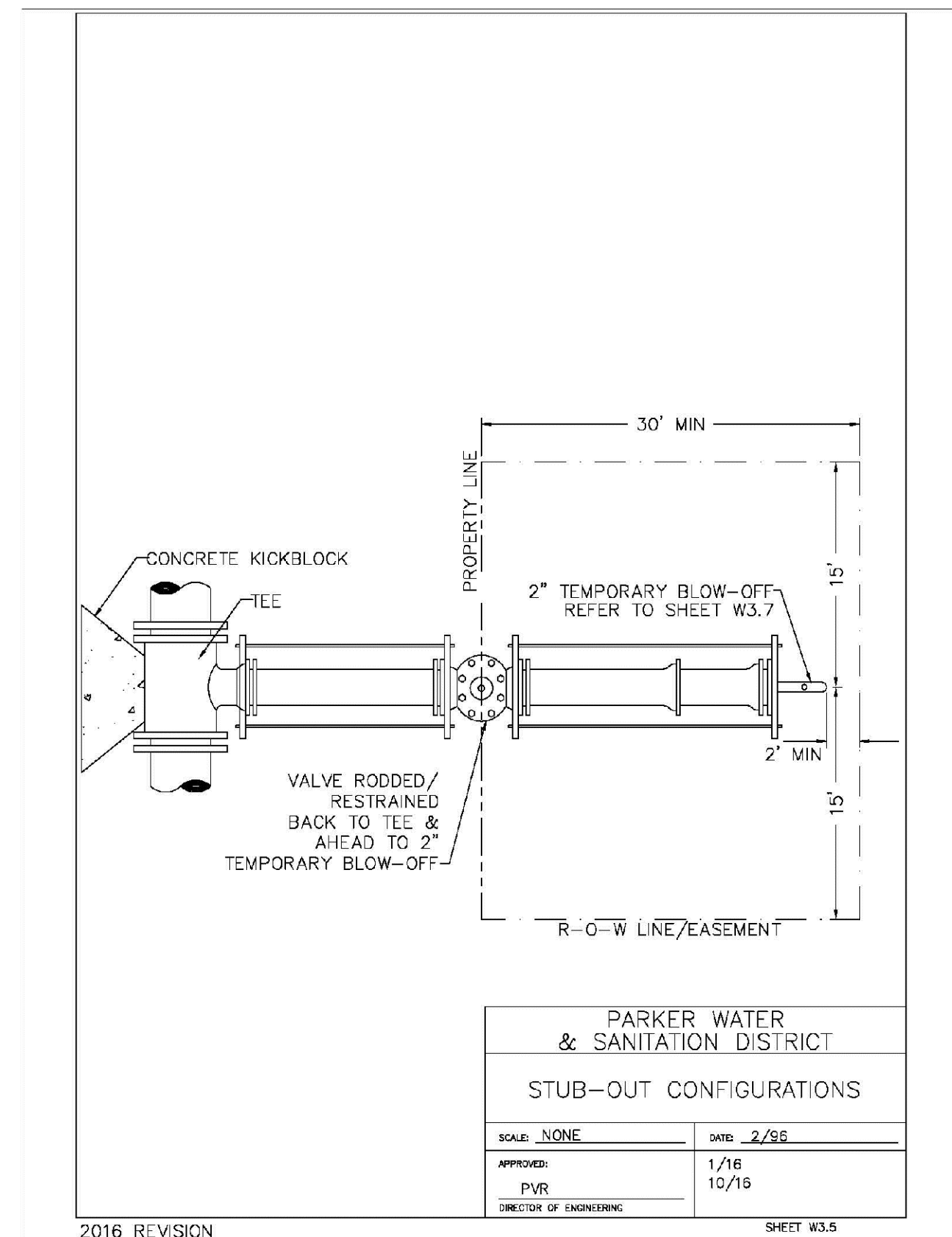
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DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.3



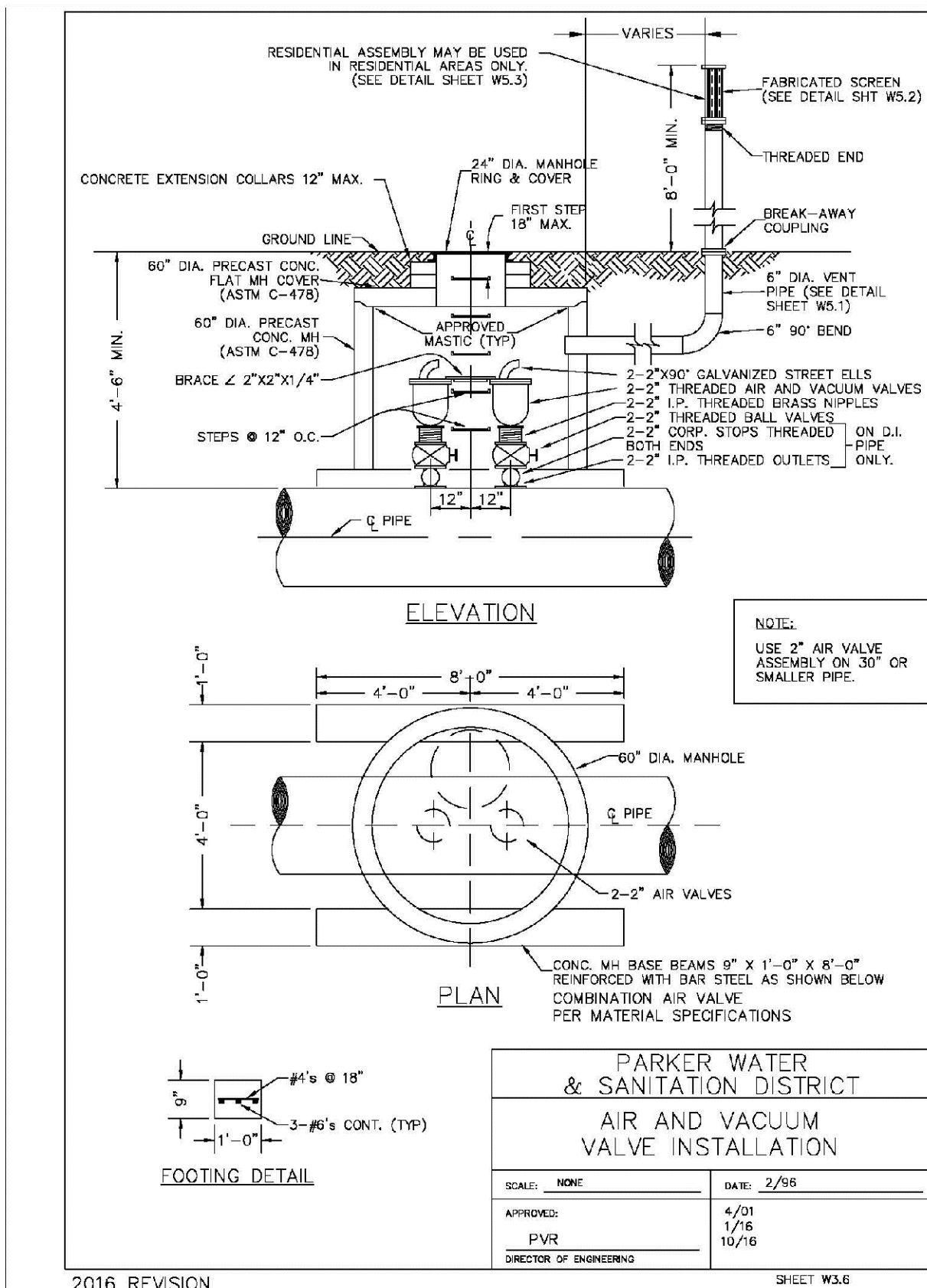
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VALVE OPERATION	
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APPROVED: PVR	DATE: 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.4



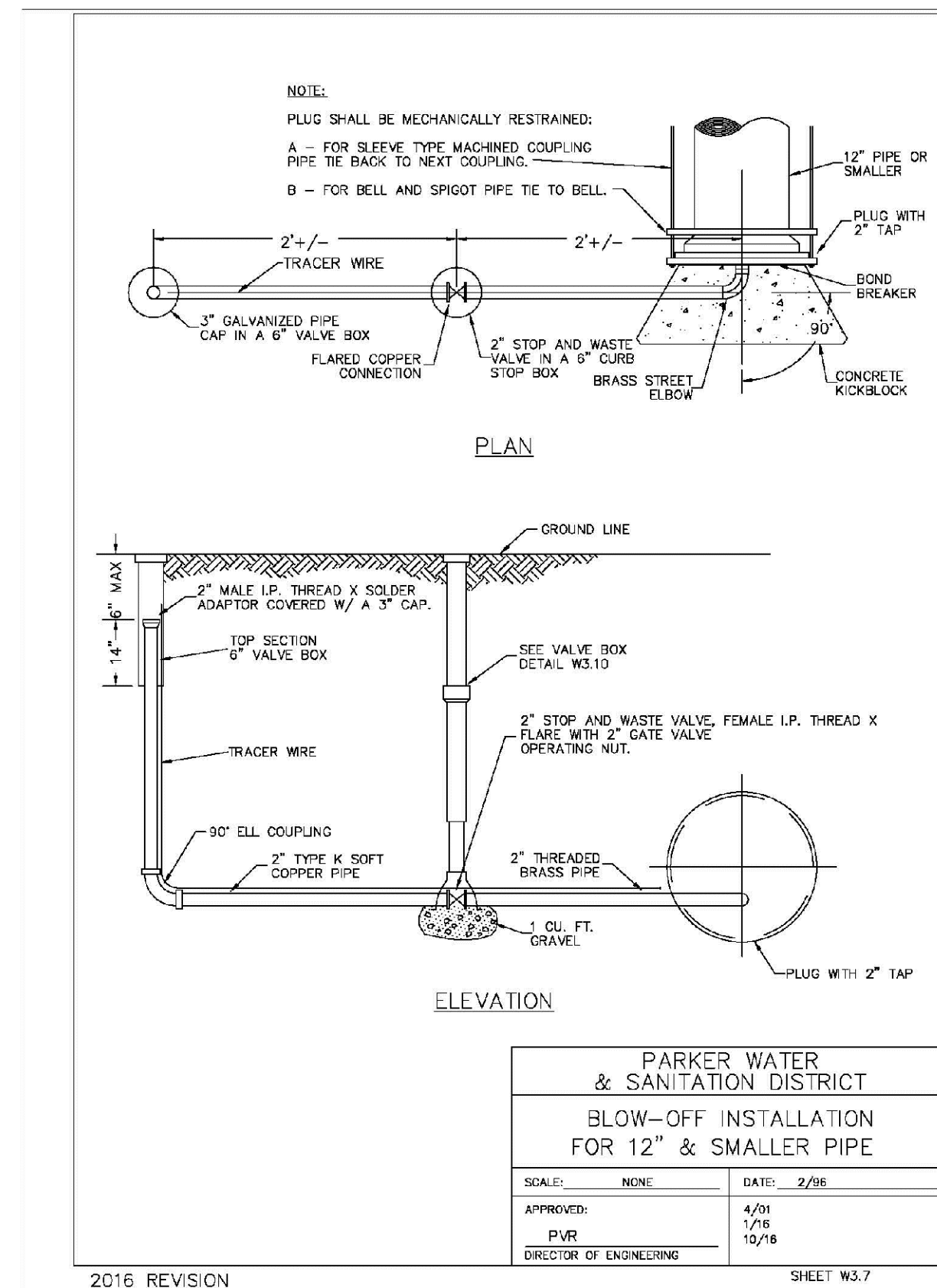
<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
STUB-OUT CONFIGURATIONS	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	DATE: 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.5



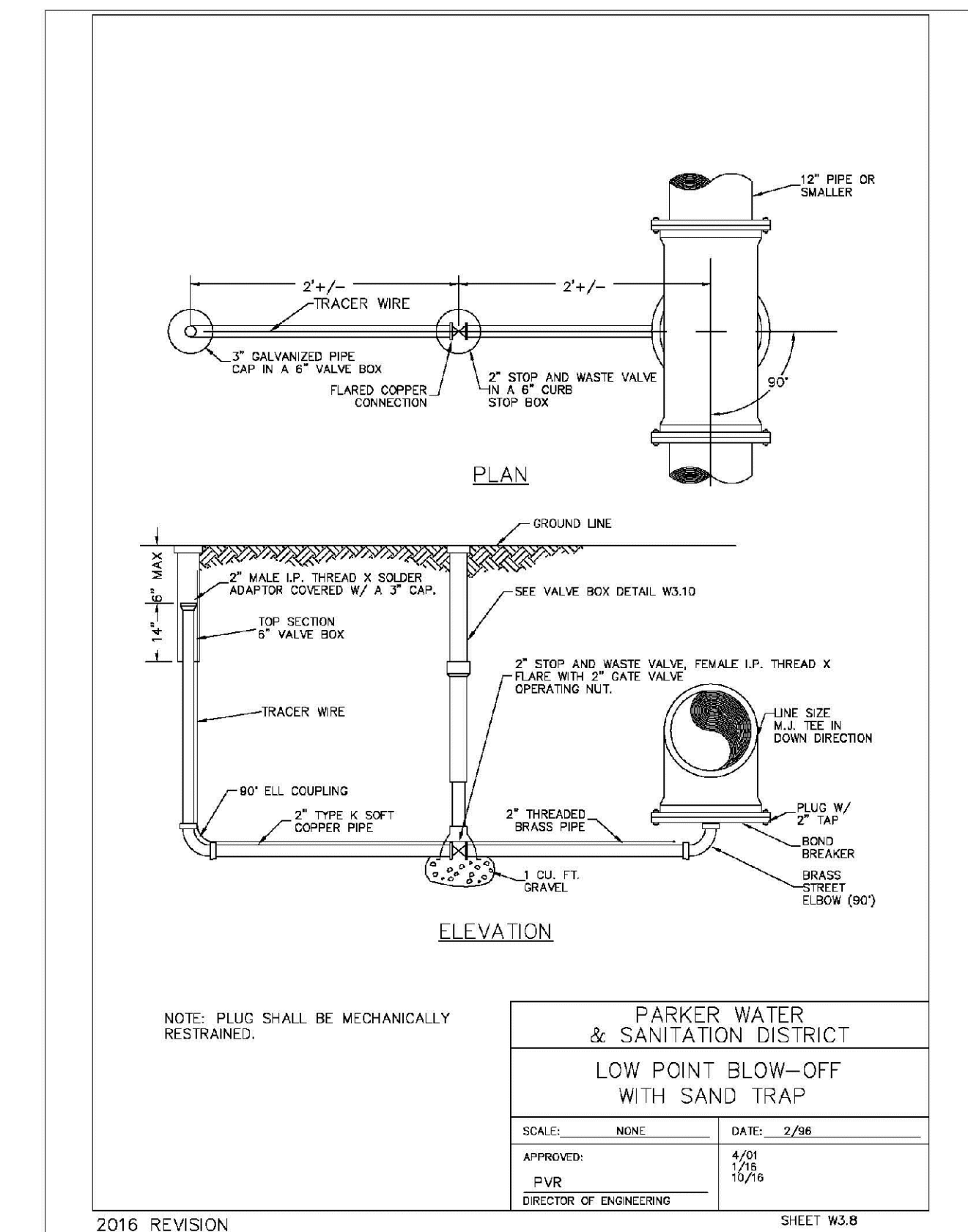
<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
AIR AND VACUUM VALVE INSTALLATION	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	DATE: 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.6



<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
BLOW-OFF INSTALLATION FOR 12" & SMALLER PIPE	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	DATE: 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.7



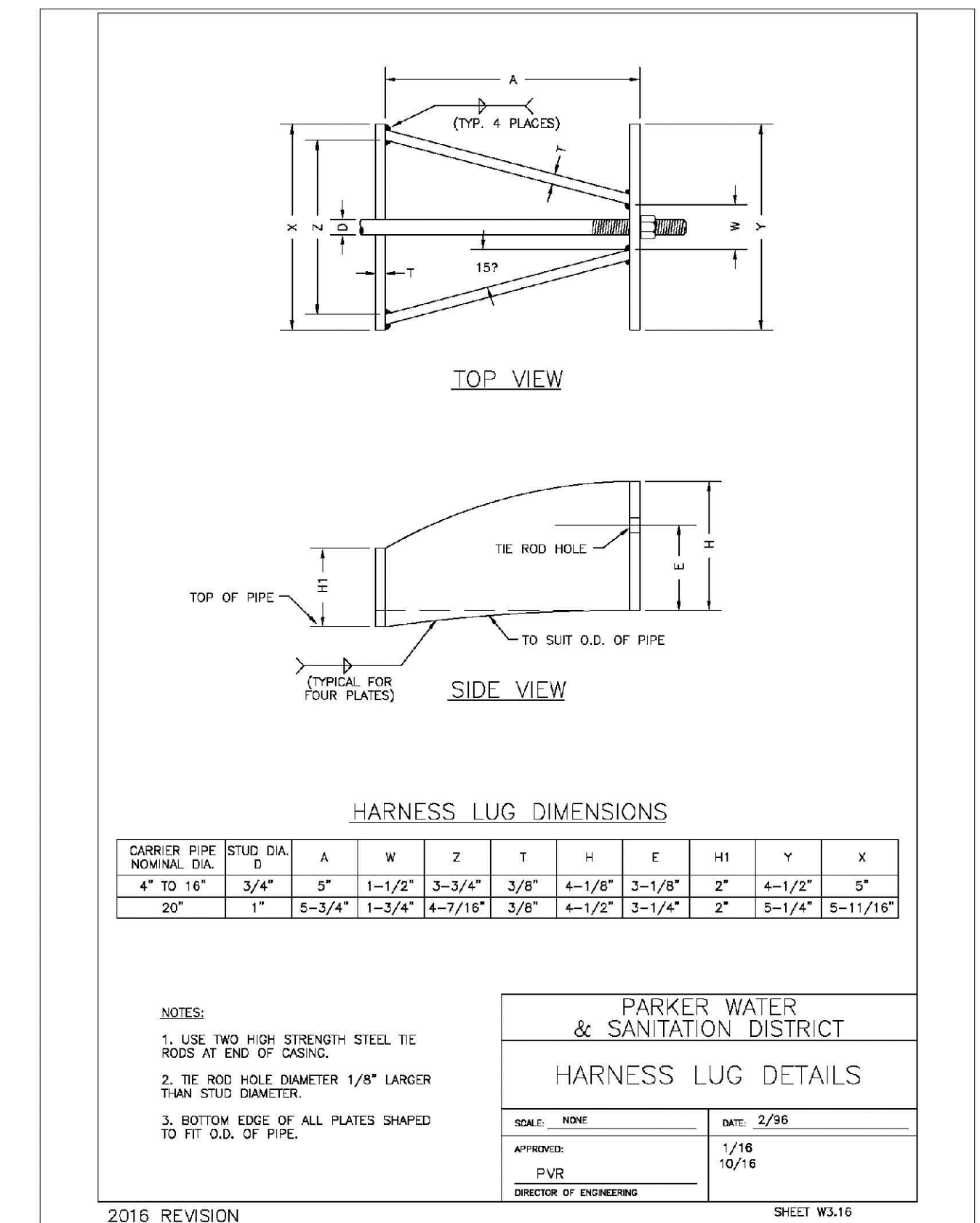
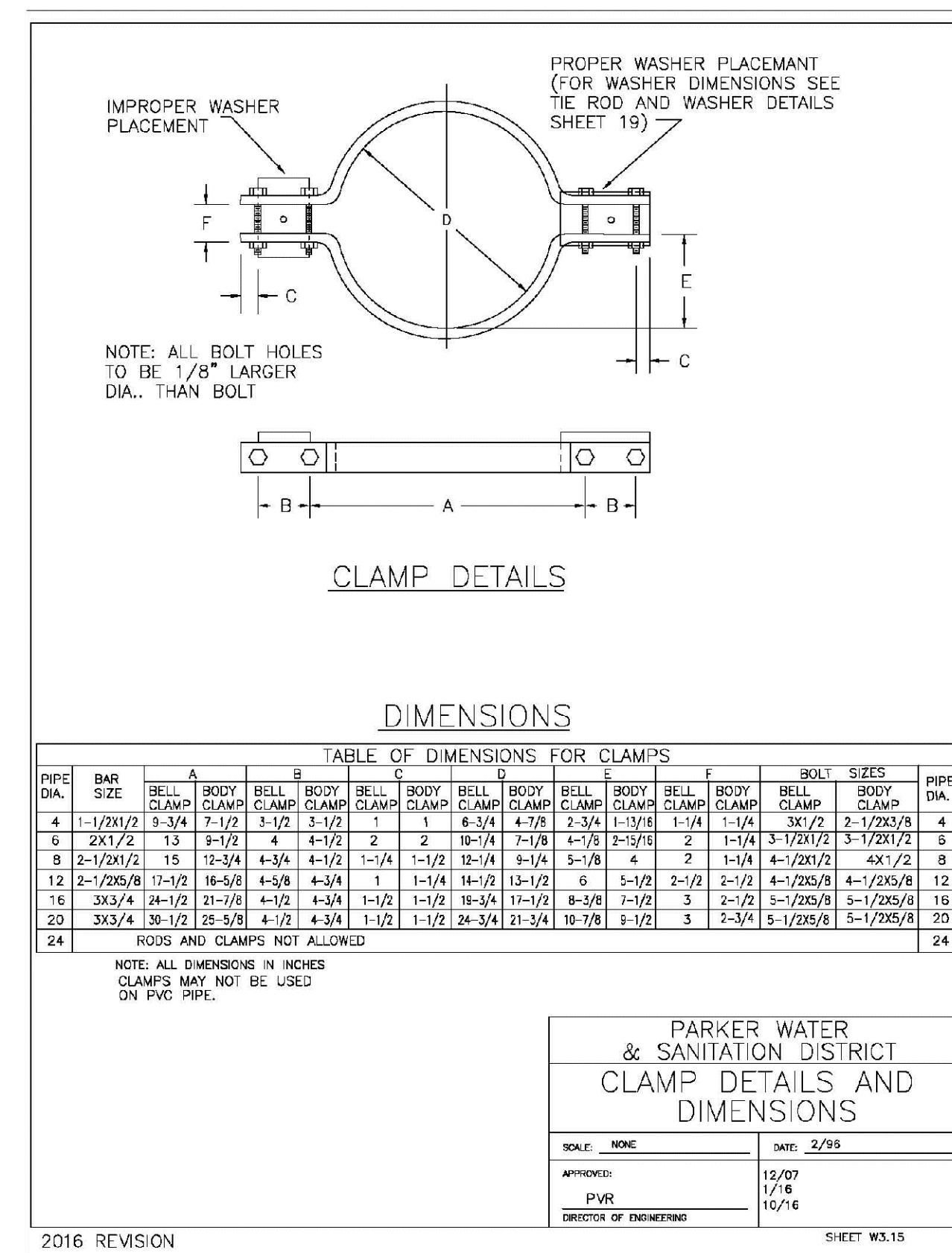
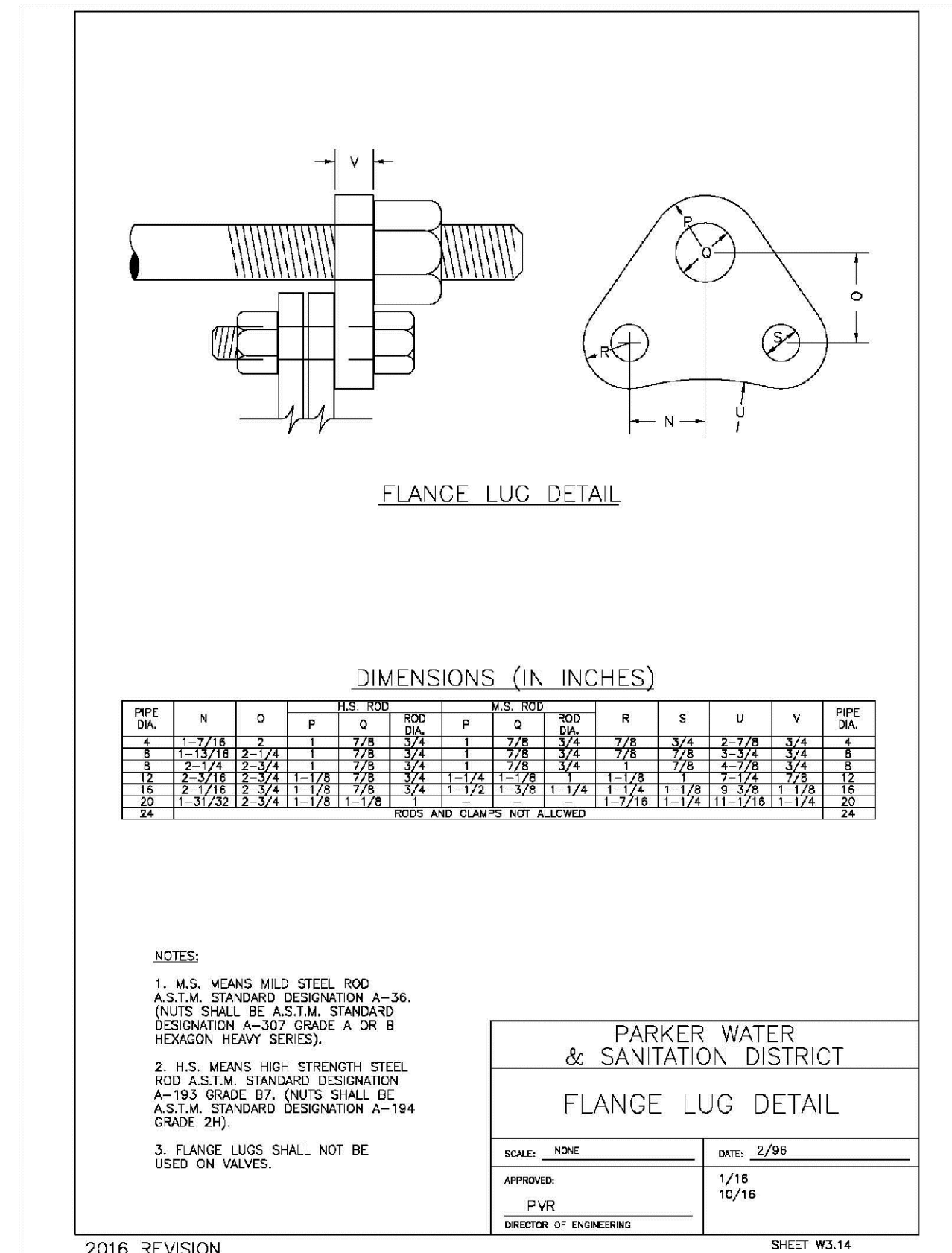
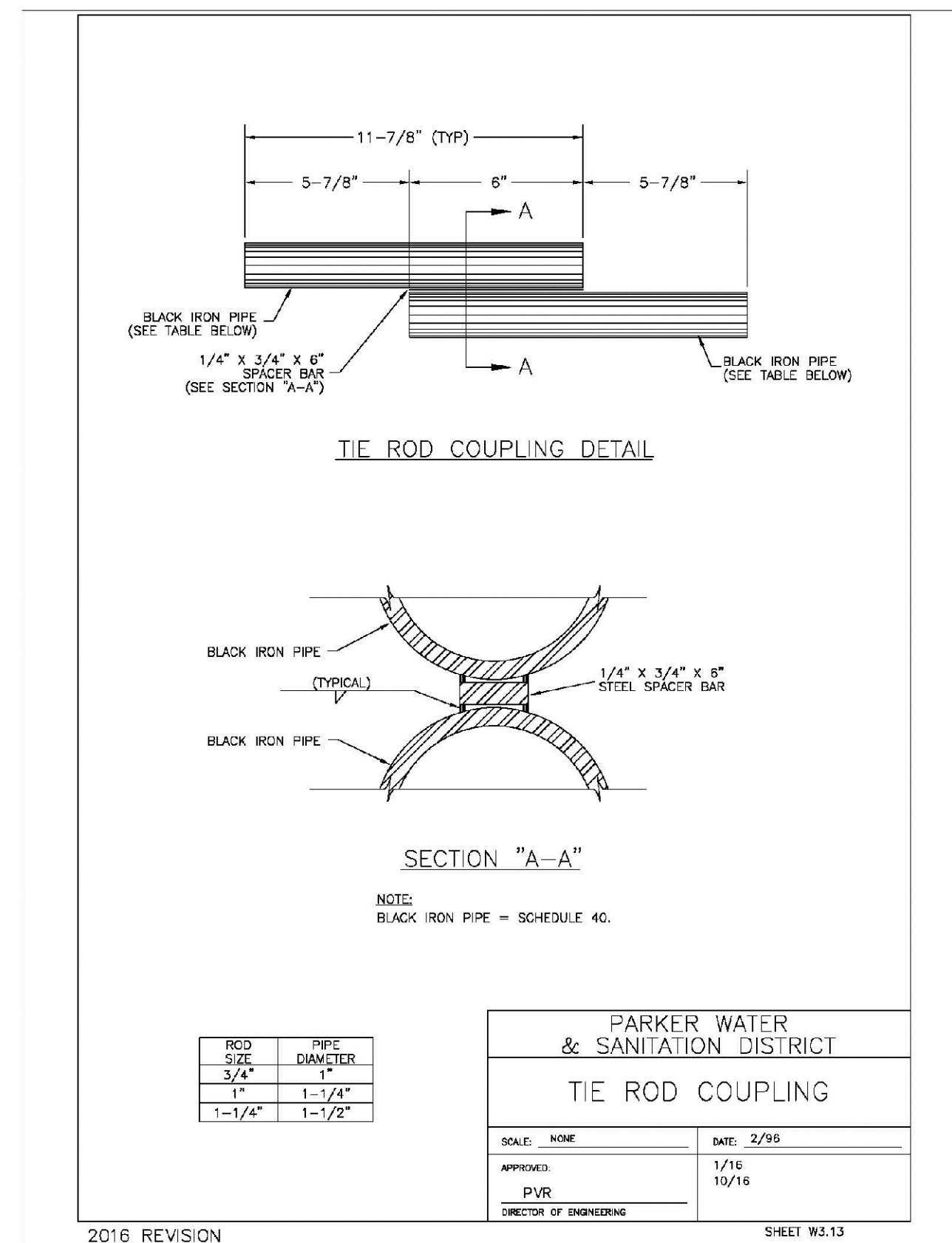
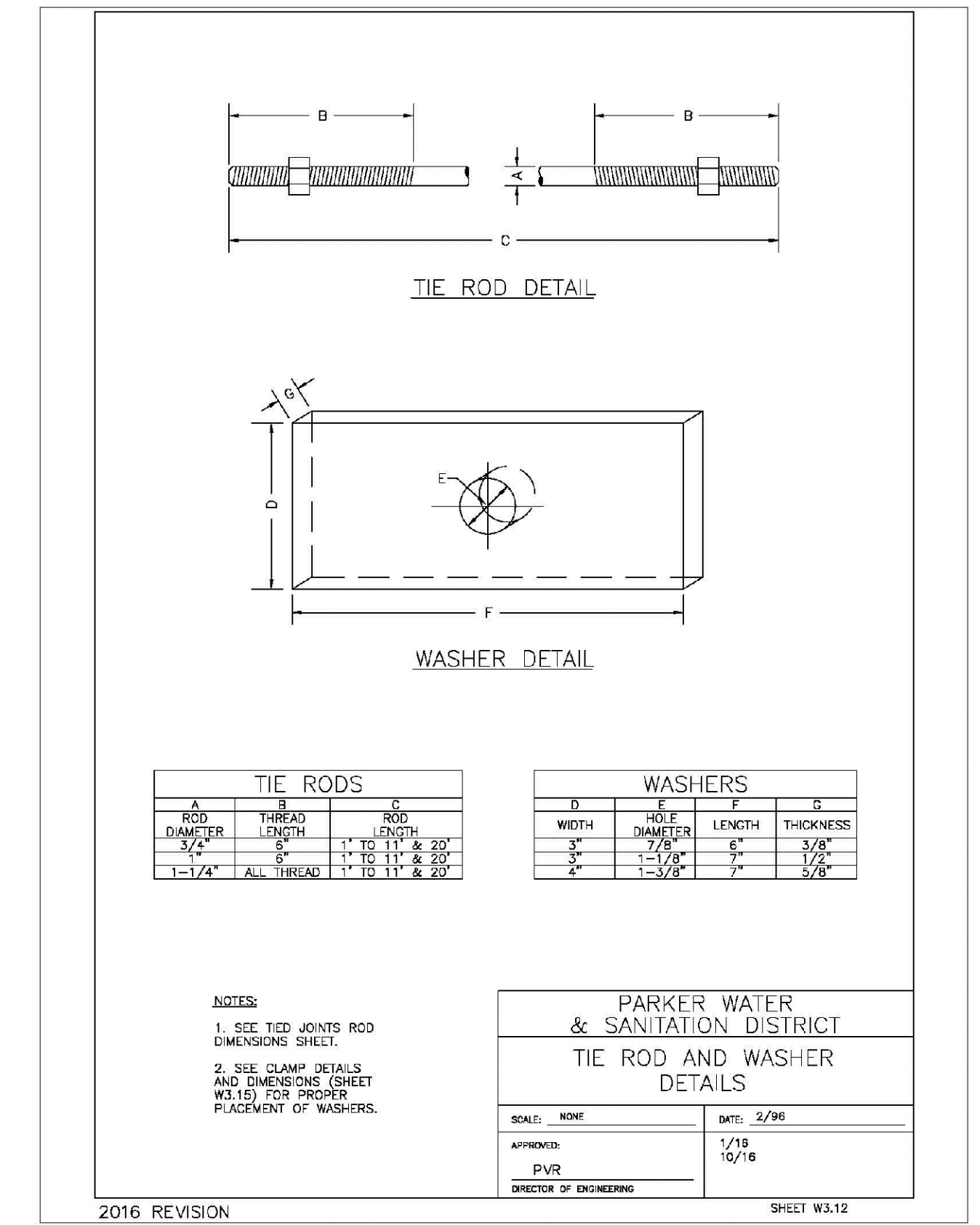
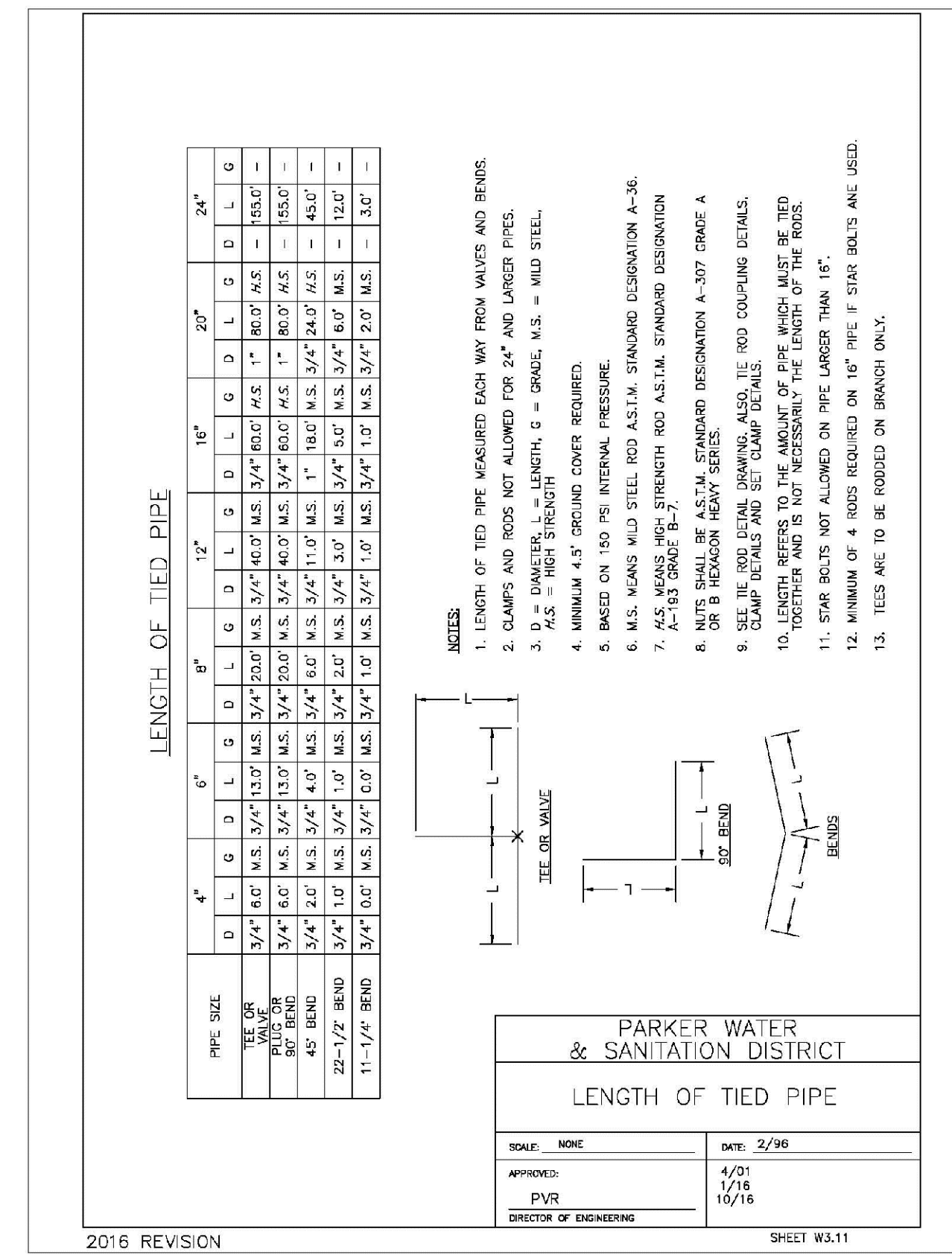
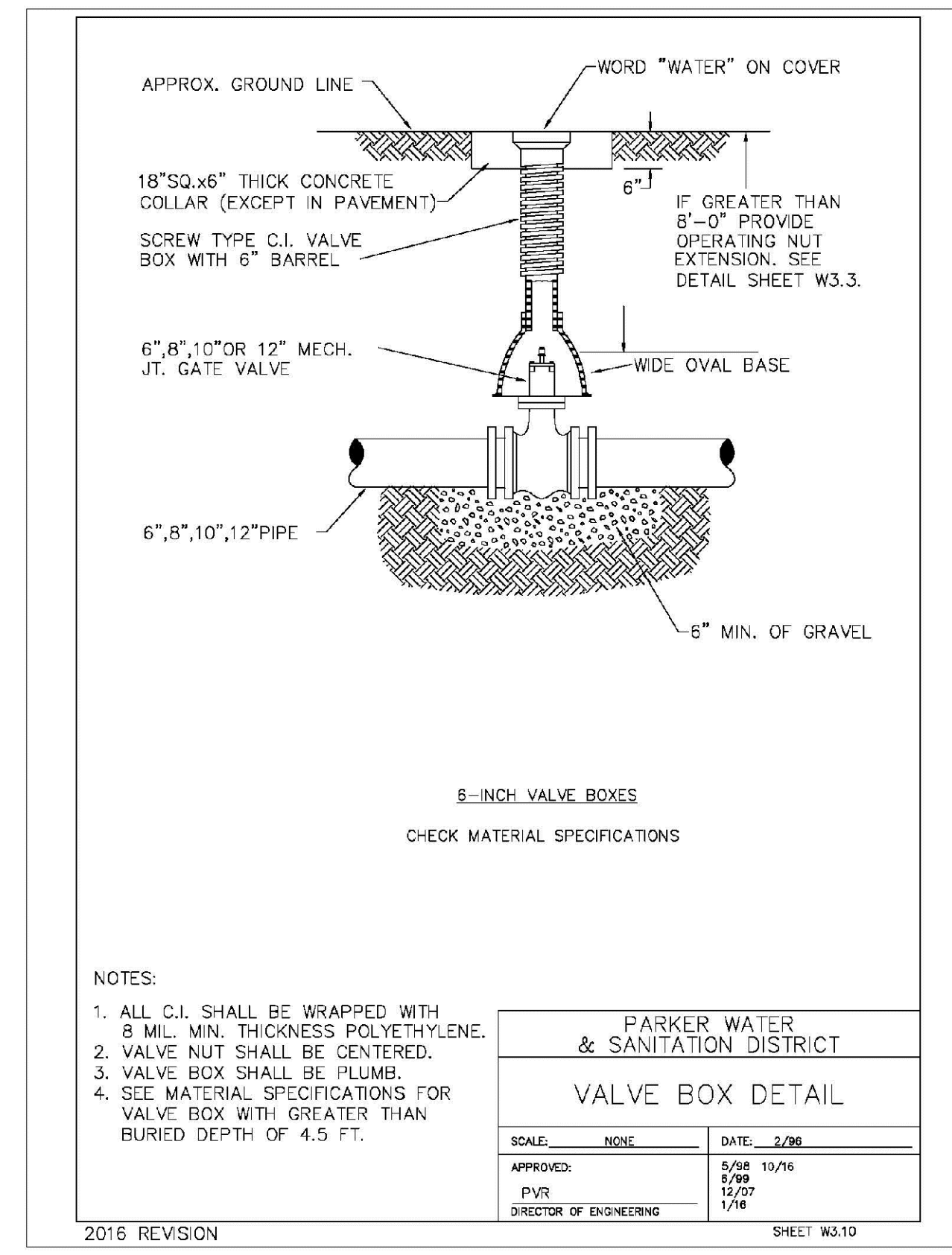
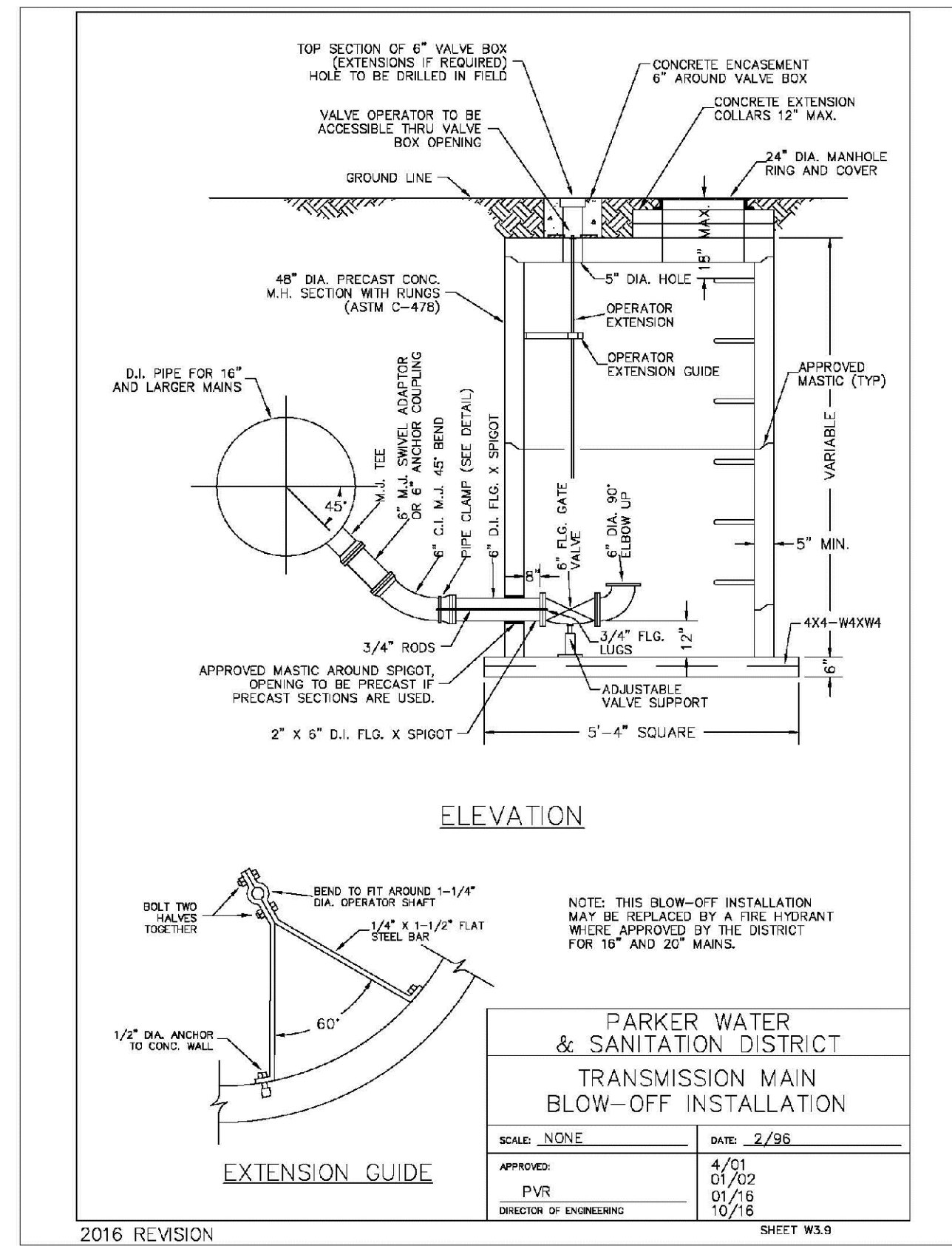
<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
LOW POINT BLOW-OFF WITH SAND TRAP	
SCALE: NONE	DATE: 2/96
APPROVED: PVR	DATE: 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.8

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UTILITY NOTIFICATION CENTER OF COLORADO

SHEET NUMBER	DRAWN BY: JF	CHECKED BY: JJ	DATE: AUGUST 2017	SCALE: AS SHOWN	FILE NO: 8130283701	Revisions	Date	Appr.	Date
				PROJECT: TRAILS AT CROWFOOT	CONSTRUCTION DRAWINGS				
				<b>HR 935 LLC</b> 7353 South Alton Way CENTENNIAL, CO 80112					
<b>CVL CONSULTANTS</b>									



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Tel: (720) 482-9526  
Fax: (720) 482-9546

**CVL CONSULTANTS**

HR 935 LLC  
7353 South Alton Way  
CENTENNIAL, CO 80112

TRAILS AT CROWFOOT  
FILM 6 CONSTRUCTION DRAWINGS  
WATER DETAILS

SCALE: AS SHOWN  
FILE NO: 8130283701

DRAWN BY: JF  
CHECKED BY: JJ  
DATE: AUGUST 2017

SHEET NUMBER: 15

No.	Revisions	Date	Init.	Appr.	Date

### MECHANICAL JOINT RESTRAINT

WEDGE DETAIL      BOLT HOLE DETAIL

NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	K1 INCHES	F INCHES	M INCHES
4"	2	2				
6"	3	3	11.12	9.5	7.00	0.88
8"	4	4	13.37	11.75	8.75	1.00
10"	5	5	15.62	14.00	11.20	1.00
12"	6	6	17.88	16.25	13.30	1.25

NOTES:  
1. DIMENSIONS FOR 16" AND 20" D.I. PIPE NOT SHOWN.

PARKER WATER & SANITATION DISTRICT  
MECHANICAL JOINT RESTRAINT DETAILS

SCALE: NONE      DATE: 2/96

APPROVED: 2/90  
PVR 12/07  
DIRECTOR OF ENGINEERING 10/16

2016 REVISION      SHEET W3.17

### 11-1/4", 22-1/2", 45" & 90" BENDS

DEAD END

TYPICAL CROSS SECTION

TEE

MINIMUM BEARING SURFACE AREA (IN SQUARE FEET)

SIZE OF PIPE	11-1/4" BENDS	22-1/2" BENDS	45" BENDS	90" BENDS	TEE OR DEAD END
4"	1.00	1.20	1.00	1.80	1.50
6"	1.00	1.45	1.25	4.00	3.00
8"	1.00	2.00	4.50	7.50	3.50
10"	3.20	10.00	15.50	33.00	11.00
12"	3.50	12.00	20.00	47.00	20.00
24"	5.50	32.00	28.00	47.00	33.00

NOTES:  
1. ALL VALVES, TEES, BENDS AND PLUGS SHALL BE RESTRAINED AND KICKBLOCKED.  
2. WATER HAMMER: 1" C 120 PSI, 16", 20" AND 24" WATER HAMMER = 70 PSI.  
3. SOIL BEARING CAPACITY = 3,000 LBS./SQ. FT.

PARKER WATER & SANITATION DISTRICT  
CONCRETE KICKBLOCKS BEARING SURFACES AND INSTALLATION

SCALE: NONE      DATE: 2/96

APPROVED: 4/01  
PVR 1/16  
DIRECTOR OF ENGINEERING 10/16

2016 REVISION      SHEET W3.18

### 24" DIAMETER RING AND COVER

HALF PLAN

STANDARD LIFTING SLOT DETAIL

MACHINED SEAT

NOTES:  
1. Coating Specifications: ASTM A-48 With A Minimum Tenacity Strength of 20 KSI (Class 20)  
2. All Castings to be Dipped in Asphalt Base Coat (Or Approved Lead)

PARKER WATER & SANITATION DISTRICT  
24" DIAMETER RING AND COVER

SCALE: NONE      DATE: 6/20

APPROVED: 12/07  
PVR 1/16  
DIRECTOR OF ENGINEERING 10/16

2016 REVISION      SHEET W3.19

### ACCESS MANHOLE ASSEMBLY

ACCESS MANHOLE

ACCESS MANHOLE AND AIR VALVE ASSEMBLY

NOTES:  
1. USE 2" AIR VALVE ASSEMBLY ON 30" OR SMALLER PIPES.  
2. RESIDENTIAL ASSEMBLY MAY BE USED IN RESIDENTIAL AREAS ONLY (SEE DETAIL SHEET W3.13).  
3. SEE SHEET W3.6 FOR CONCRETE MANHOLE BASE BEAMS AND AIR/VACUUM VALVE DETAILS.

PARKER WATER & SANITATION DISTRICT  
ACCESS MANHOLE ASSEMBLY

SCALE: NONE      DATE: 2/96

APPROVED: 4/01  
PVR 1/16  
DIRECTOR OF ENGINEERING 10/16

2016 REVISION      SHEET W3.20

### STANDARD TRENCH SECTION

STANDARD TRENCH SECTION

STREET CUT PATCH

PIPE DIAMETER	MINIMUM WIDTH	MAXIMUM WIDTH
4"	1'-4"	2'-4"
6"	1'-6"	2'-6"
8"	1'-8"	2'-8"
10"	2'-0"	3'-0"
12"	2'-2"	3'-2"
24"	3'-0"	4'-0"

PARKER WATER & SANITATION DISTRICT  
TYPICAL TRENCH SECTION PIPE PROTECTION

SCALE: NONE      DATE: 2/96

APPROVED: 5/08  
PVR 2/02  
DIRECTOR OF ENGINEERING 10/16

2016 REVISION      SHEET W4.1

### PIPE BEDDING

NOTE: (a) Installation of Bedding and Pipes After completion of the trench excavation and proper preparation of the foundation, six inches (6") of bedding material shall be placed on the trench bottom for support under the pipe. Bed holes shall be dug deep enough to provide a minimum of two inches (2") of clearance between the soil and bedding material. All pipe shall be installed in such a manner as to insure full support of the pipe barrel over its entire length. After the pipe is adjusted for line and grade, and the joint is made, the bedding material shall be carefully placed and tamped under the haunches of the pipe and in the previously dug bed holes.

NOTE: (b) Bedding Material: the bedding material shall be a clean well-graded sand or spongy sand and shall conform to the following limits when tested by means of laboratory sieves.

Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 4	70-100
No. 6	35-83
No. 16	20-80
No. 30	5-60
No. 50	2-30
No. 100	1-10
No. 200	0-3

PARKER WATER & SANITATION DISTRICT  
PIPE BEDDING

SCALE: NONE      DATE: 2/96

APPROVED: 5/08  
PVR 2/02  
DIRECTOR OF ENGINEERING 10/16

2016 REVISION      SHEET W4.2

### WATERLINE ENCASEMENT

PLAN VIEW

PROFILE

TYPICAL SECTION

NOTES:  
1. ALL CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3,000 PSI USING TYPE I PORTLAND CEMENT AND 3/4" AGGREGATE. ALL CONCRETE SHALL HAVE 5-7% ENTRAINED AIR CONTENT AND A MAXIMUM SLUMP OF 4".  
2. ALL REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.  
3. ALL REINFORCEMENT SHALL HAVE 2" MIN. CONCRETE COVER.  
4. THE SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY PRIOR TO FORMING THE STRUCTURE.  
5. PIPE SHALL BE WRAPPED WITH FELT LAYER BEFORE ENCASING.

PARKER WATER & SANITATION DISTRICT  
WATERLINE ENCASEMENT

SCALE: NONE      DATE: 5/20

APPROVED: 1/16  
PVR 10/16  
DIRECTOR OF ENGINEERING

2016 REVISION      SHEET W4.3

### BORED CROSSINGS BENEATH CONDUITS

PLAN FOR PERPENDICULAR CROSSING

PLAN FOR ANGLE CROSSING

PROFILE

FORMULA FOR FINDING C:

$$C = B + (2)(1.5) \left[ \frac{B}{2} + A + F \right]$$

FORMULA FOR FINDING L:

$$L = \frac{C}{\sin \phi}$$

PARKER WATER & SANITATION DISTRICT  
BORED CROSSINGS BENEATH CONDUITS

SCALE: NONE      DATE: 2/96

APPROVED: 2/00  
PVR 1/16  
DIRECTOR OF ENGINEERING 10/16

2016 REVISION      SHEET W4.4

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TRAILS AT CROWFOOT  
FILM 6 CONSTRUCTION DRAWINGS  
WATER DETAILS

SCALE: AS SHOWN  
FILE NO: 8130283701

DRAWN BY: JF  
CHECKED BY: JU  
DATE: AUGUST 2017

SHEET NUMBER: 16

DATE: 8/16/17  
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