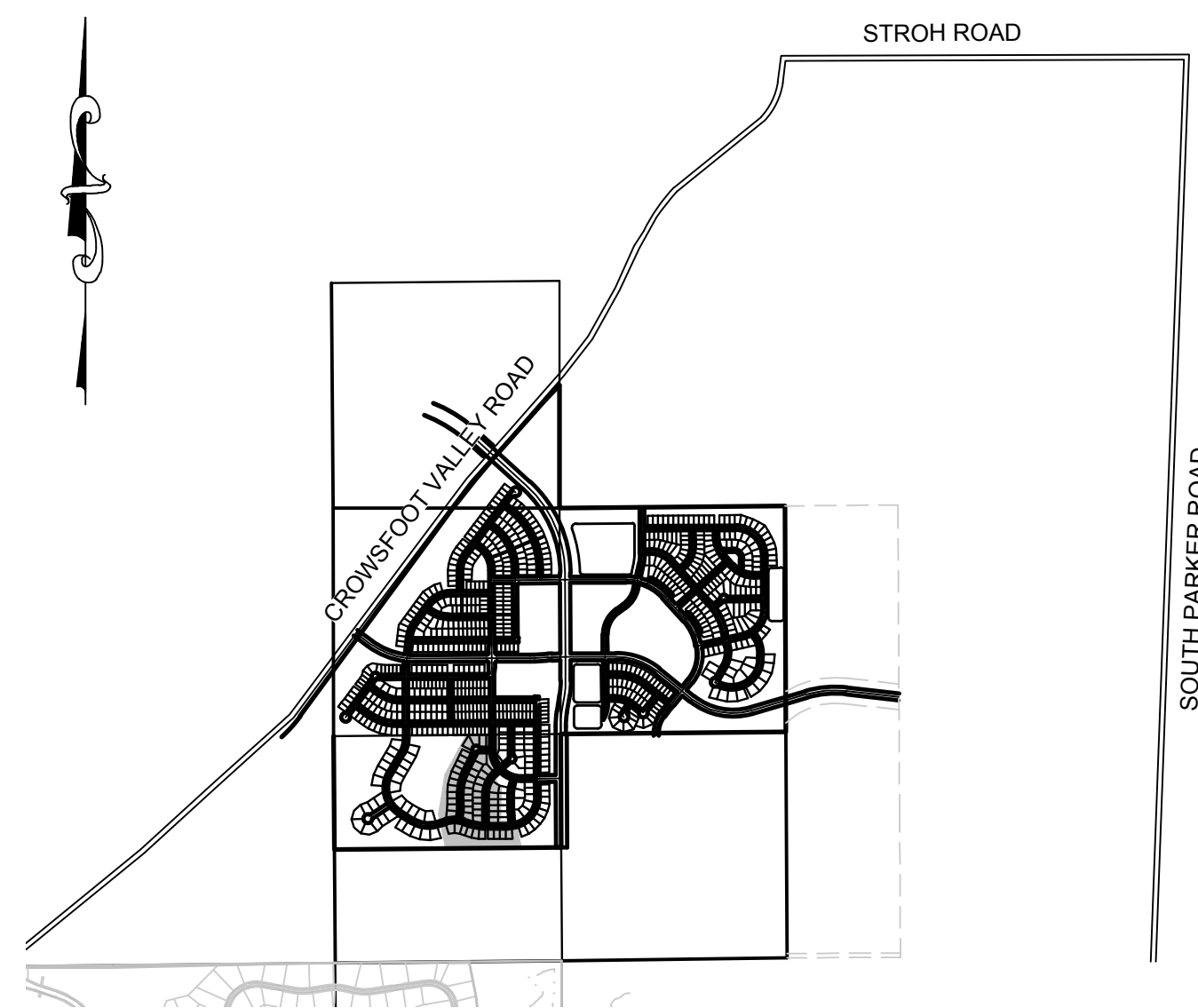


TRAILS AT CROWFOOT FILING 8

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 ROSE MALLOW WAY
5	WATER P&P ROSE MALLOW WAY
6	SANITARY SEWER DETAILS
7	SANITARY SEWER DETAILS
8	SANITARY SEWER DETAILS
9	WATER DETAILS
10	WATER DETAILS
11	WATER DETAILS
12	WATER DETAILS
13	WATER DETAILS
14	WATER DETAILS
15	WATER DETAILS



VICINITY MAP
SCALE: 1" = 2000'

MATERIALS LIST		
DESCRIPTION	QUANTITY	UNIT
8" WATERPIPE (C900)	310	L.F.
6" WATERPIPE (DIP-FIRE HYDRANT LINE)	16	L.F.
8" GATE VALVE W/ BOX	0	EA.
6" GATE VALVE W/ BOX	1	EA.
FIRE HYDRANT WITH 6" LEAD	1	EA.
8" MISC. FITTINGS	2	EA.
AIR / VAC VALVE	1	EA.
DOMESTIC WATER SERVICE W/ METER	9	EA.
CONNECTION TO EXISTING MAIN	1	EA.
8" SEWER (SDR-35 PVC)	340	L.F.
4' DIA. MANHOLE	2	EA.
SEWER SERVICE LATERAL W/ WYE TAP	9	EA.
CONNECTION TO EXISTING MAIN	1	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.



N:\PROJECTS\HR 935\ENGINEERING\DRG\SET\CD\SP\PARKER WATER AND SANITATION\DRG COVERING.COPYA.3/7/2018 4:40 PM

SHEET NUMBER	DRAWN BY:	KJD	CHECKED BY:	JJ	DATE:	AUGUST 2017	SCALE:	AS SHOWN	FILE NO:	8130283701	Revisions		
											No.	Date	Appr.
1													

10333 E. Dry Creek Rd.
Suite 240
Englewood, Colorado 80112
Tel: (720) 482-9526
Fax: (720) 482-9546

HR 935 LLC
7353 South Alton Way
CENTENNIAL, CO 80112

TRAILS AT CROWFOOT
FILING 8 CONSTRUCTION DRAWINGS
COVER SHEET

N:\PROJECTS\BENCHMARC\ENGINEERING\DRG\AREA UTILITY PLAN\DWG_CODEVA_382018_113.PLA

FILING, LOT, BLOCK	STREET	STATIONING
F8.B1.L1	ROSE MALLOW AVE	19+88.81
F8.B1.L2	ROSE MALLOW AVE	21+35.68
F8.B1.L3	ROSE MALLOW AVE	22+25.68
F8.B1.L4	ROSE MALLOW AVE	23+15.68
F8.B1.L5	ROSE MALLOW AVE	24+05.62
F8.B1.L6	ROSE MALLOW AVE	24+92.62
F8.B1.L7	ROSE MALLOW WAY	12+83.43
F8.B1.L8	ROSE MALLOW WAY	11+90.65
F8.B1.L9	ROSE MALLOW WAY	11+00.65
F8.B1.L10	ROSE MALLOW WAY	10+07.00
F8.B1.L11	ROSE MALLOW WAY	9+89.14
F8.B1.L12	ROSE MALLOW WAY	9+65.00
F8.B1.L13	ROSE MALLOW WAY	10+96.65
F8.B1.L14	ROSE MALLOW WAY	11+88.65
F8.B1.L15	ROSE MALLOW WAY	12+81.43
F8.B1.L16	ROSE MALLOW AVE	29+93.58
F8.B1.L17	ROSE MALLOW AVE	30+83.58
F8.B1.L18	ROSE MALLOW AVE	31+71.90
F8.B1.L19	ROSE MALLOW AVE	33+06.43
F8.B1.L20	ROSE MALLOW AVE	33+90.10
F8.B2.L1	ROSE MALLOW AVE	20+22.09
F8.B2.L2	ROSE MALLOW AVE	21+03.57
F8.B2.L3	ROSE MALLOW AVE	21+85.16
F8.B2.L4	ROSE MALLOW AVE	22+76.16
F8.B2.L5	ROSE MALLOW AVE	23+66.87
F8.B2.L6	ROSE MALLOW AVE	24+94.56
F8.B2.L7	ROSE MALLOW AVE	27+74.71
F8.B2.L8	ROSE MALLOW AVE	29+34.24
F8.B2.L9	ROSE MALLOW AVE	30+27.18
F8.B2.L10	ROSE MALLOW AVE	31+17.11
F8.B2.L11	ROSE MALLOW AVE	33+62.25

FILING, LOT, BLOCK	STREET	STATIONING
* F8, B1, L1	ROSE MALLOW AVE	19+72.71
* F8, B1, L2	ROSE MALLOW AVE	21+25.68
* F8, B1, L3	ROSE MALLOW AVE	22+15.68
* F8, B1, L4	ROSE MALLOW AVE	23+05.68
* F8, B1, L5	ROSE MALLOW AVE	23+95.68
* F8, B1, L6	ROSE MALLOW AVE	24+79.97
* F8, B1, L16	ROSE MALLOW AVE	29+83.58
* F8, B1, L17	ROSE MALLOW AVE	30+73.58
* F8, B1, L18	ROSE MALLOW AVE	31+64.55
* F8, B1, L19	ROSE MALLOW AVE	33+15.73
* F8, B1, L20	ROSE MALLOW AVE	33+99.31
* F8, B2, L1	ROSE MALLOW AVE	20+12.19
* F8, B2, L2	ROSE MALLOW AVE	20+91.06
* F8, B2, L3	ROSE MALLOW AVE	21+75.16
* F8, B2, L4	ROSE MALLOW AVE	22+66.16
* F8, B2, L5	ROSE MALLOW AVE	23+56.87
* F8, B2, L6	ROSE MALLOW AVE	24+82.03
* F8, B2, L7	ROSE MALLOW AVE	27+67.44
* F8, B2, L8	ROSE MALLOW AVE	29+24.15
* F8, B2, L9	ROSE MALLOW AVE	30+17.18
* F8, B2, L10	ROSE MALLOW AVE	31+07.18
* F8, B2, L11	ROSE MALLOW AVE	33+95.13
F8.B1.L7	ROSE MALLOW WAY	12+93.43
F8.B1.L8	ROSE MALLOW WAY	12+00.65
F8.B1.L9	ROSE MALLOW WAY	11+10.65
F8.B1.L10	ROSE MALLOW WAY	10+20.73
F8.B1.L11	ROSE MALLOW WAY	9+79.14
F8.B1.L12	ROSE MALLOW WAY	9+70.00
F8.B1.L13	ROSE MALLOW WAY	11+08.65
F8.B1.L14	ROSE MALLOW WAY	11+98.65
F8.B1.L15	ROSE MALLOW WAY	12+91.43

* INSTALLED WITH FILING 1 IMPROVEMENTS

FIRE DEPARTMENT APPROVAL

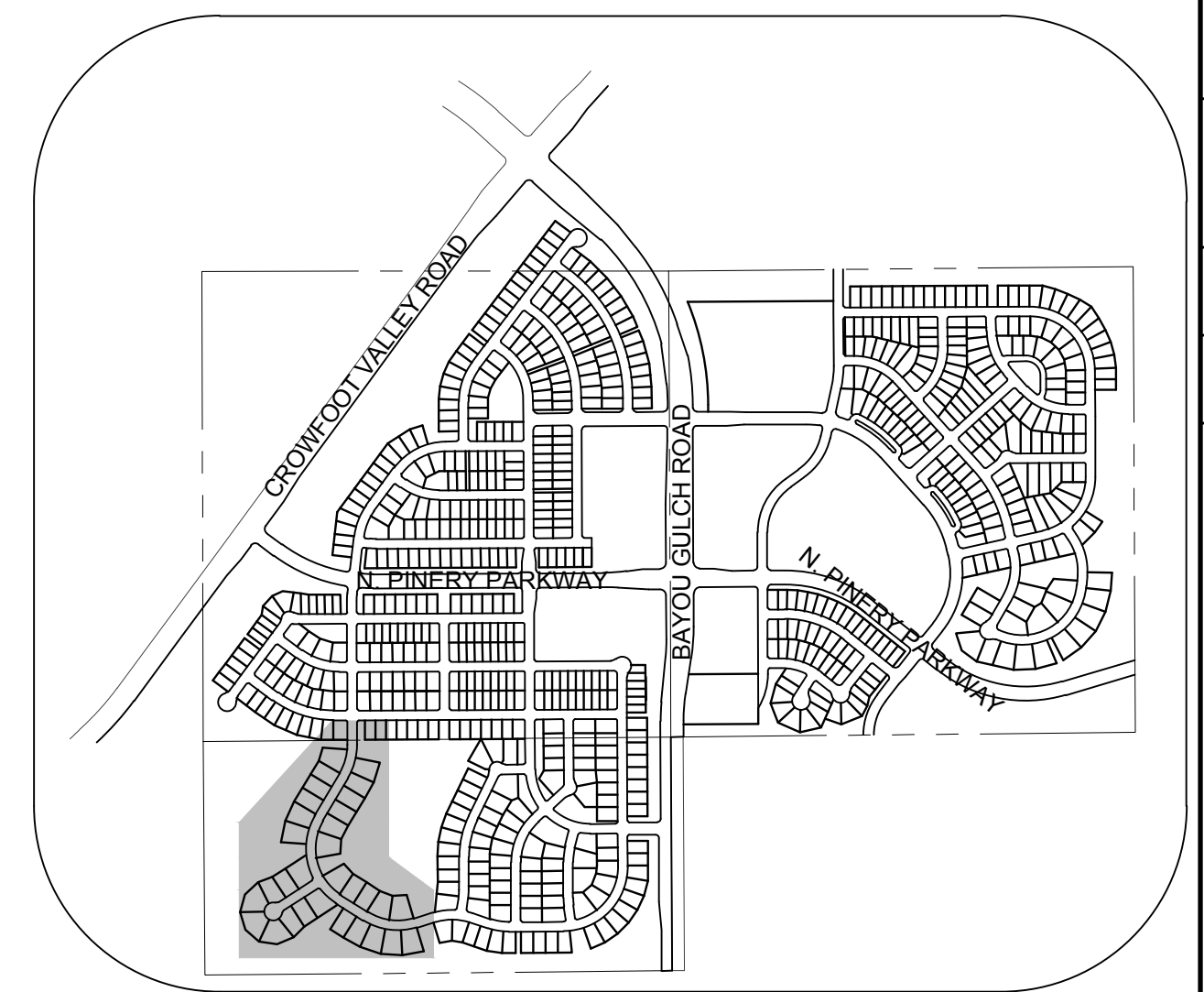
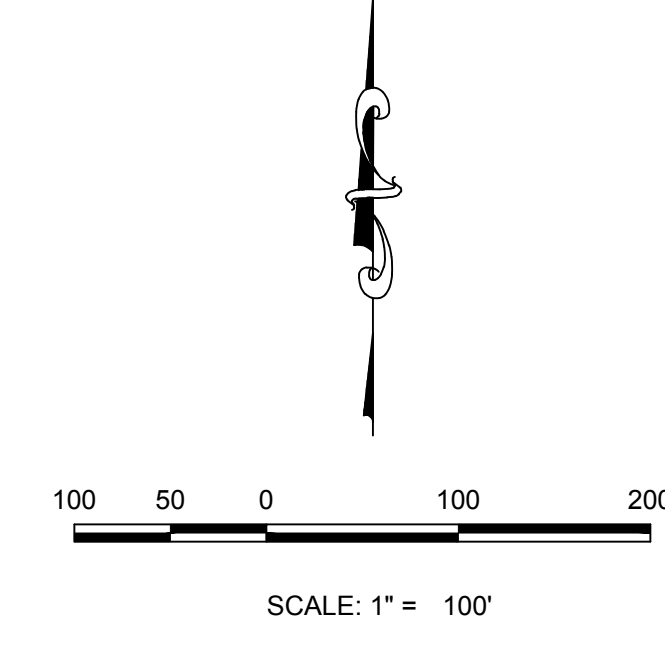
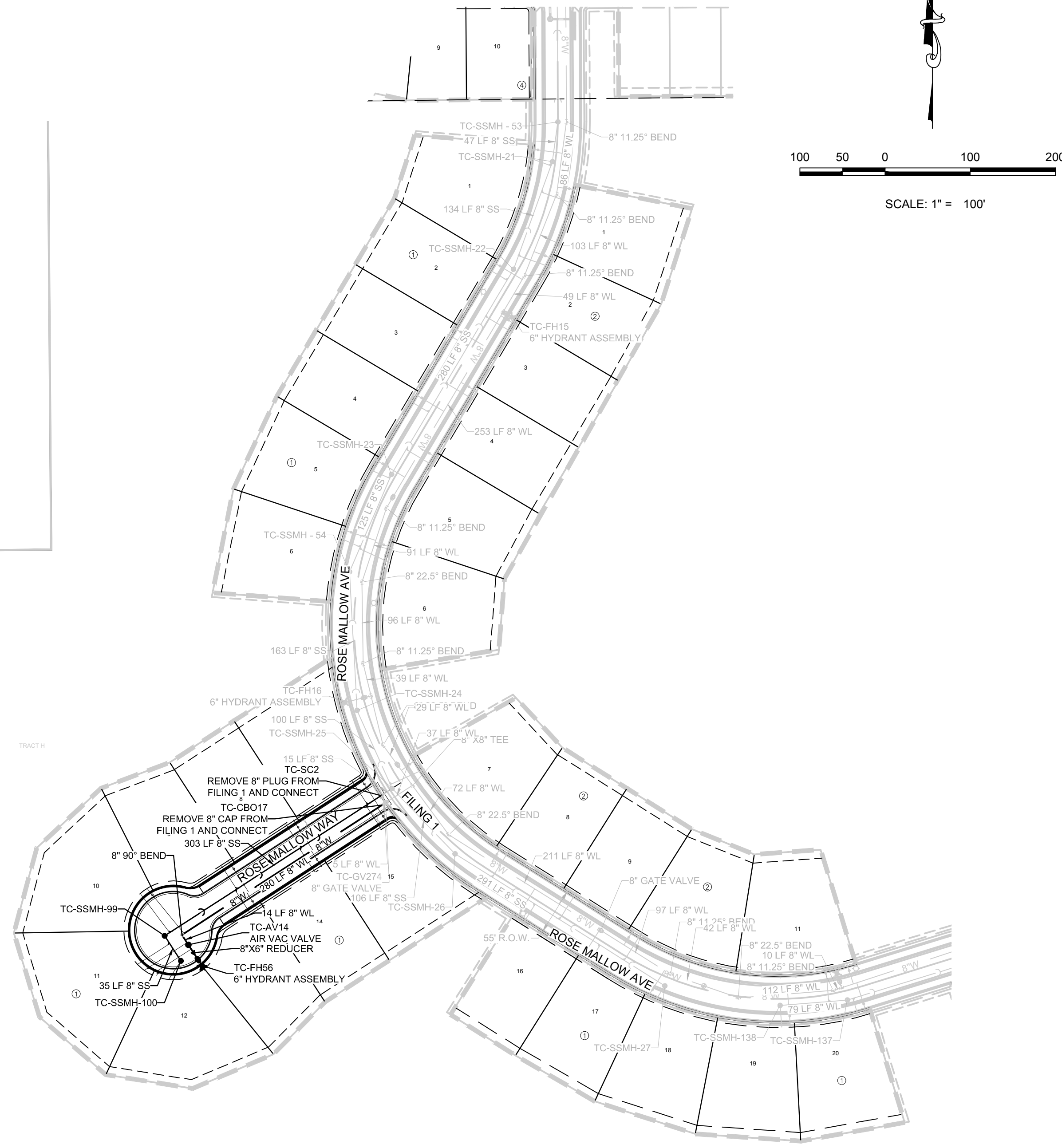
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(FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE) _____ DATE _____

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

CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
UNCC 1-800-922-1987
UTILITY NOTIFICATION
CENTER OF COLORADO

FUTURE
PWSD
WELL SITE



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 WATER LINE WITH MANHOLE
⊕	PROPOSED SIDEWALK	8"	PROPOSED WATER LINE LATERAL W/ METER
⊕	PROPOSED SIDEWALK RAMP	---	SECTION LINE
10.00	EXISTING ELEVATION	---	FILING BOUNDARY
10.00	PROPOSED DESIGN ELEVATION	FO	EXISTING FIBER OPTIC LINE
⊕	PROPOSED STORM DRAIN INLET	OH	EXISTING OVERHEAD POWER
⊕	PROPOSED STORM DRAIN MANHOLE	TEL	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
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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, SIGNED 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 REVIEWS(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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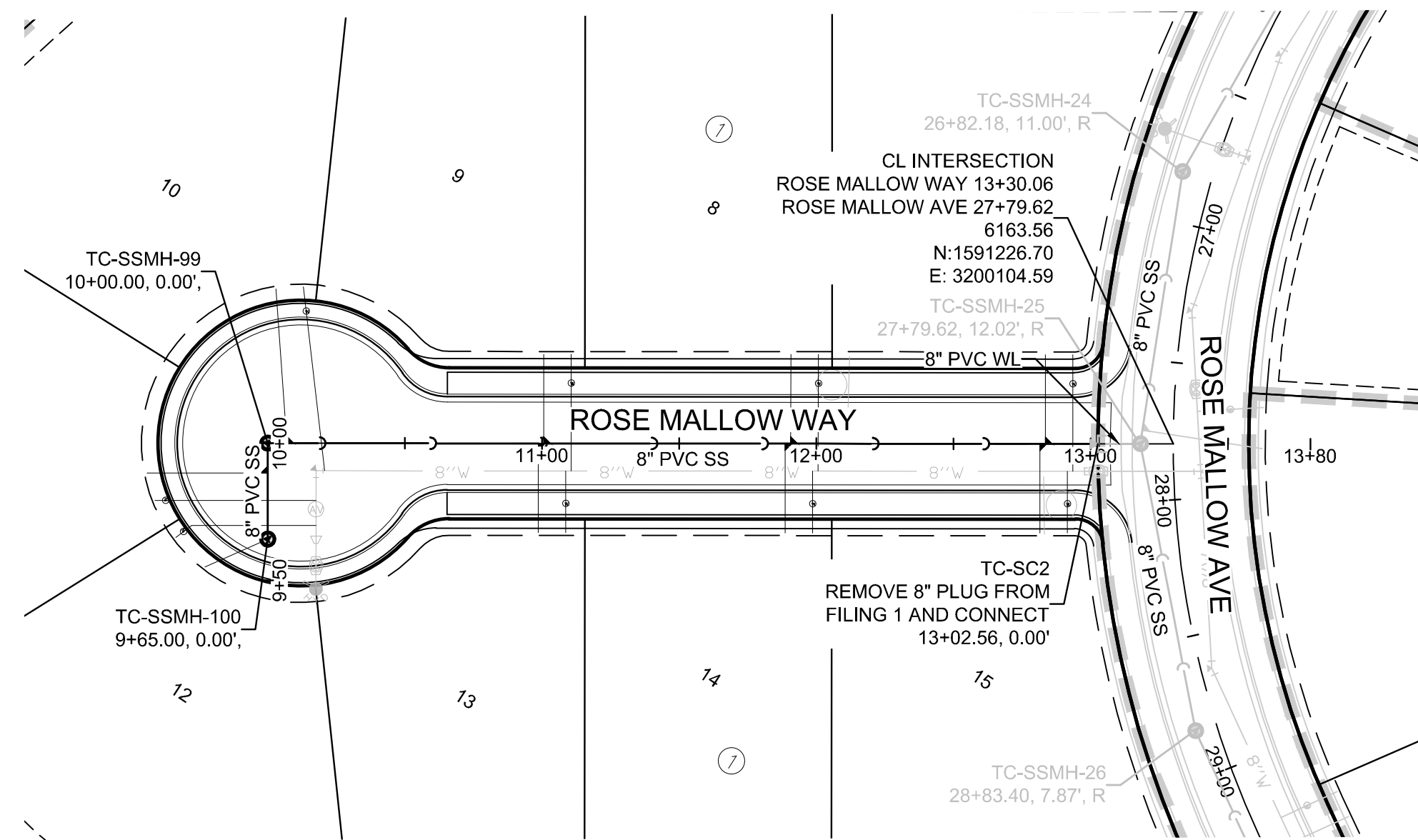
REVIEWED FOR CONFORMANCE TO PARKER WATER AND SANITATION DISTRICT STANDARDS.
BY: _____ DATE _____
(DISTRICT REPRESENTATIVE)

APPROVED FOR CONSTRUCTION:
PARKER WATER AND SANITATION DISTRICT
BY: _____ DATE _____
(DISTRICT ENGINEER)

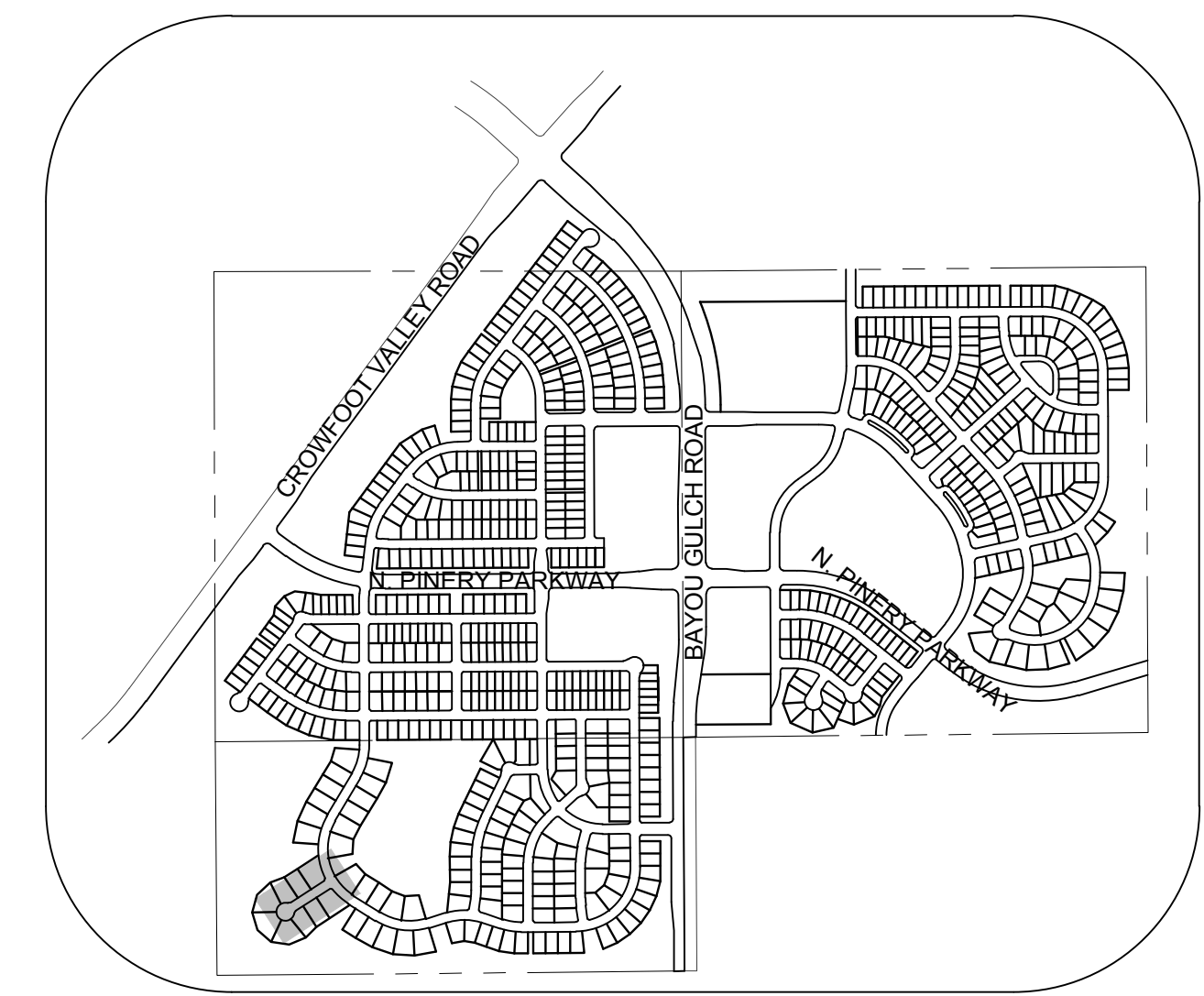
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SCALE:	AS SHOWN	FILE NO.:	8130283701
DRAWN BY:	JLR	CHECKED BY:	JLU
DATE:	AUGUST 2017		
SHEET NUMBER	3		
TRAILS AT CROWFOOT FILING 8 CONSTRUCTION DRAWINGS AREA UTILITY PLAN			
 10333 E. Dry Creek Rd. Suite 410 Englewood, Colorado 80150 Tel: (720) 482-9526 Fax: (720) 482-9546 HR 935 LLC 7353 South Alton Way CENTENNIAL, CO 80112			
No.	Revisions	Date	Appr.

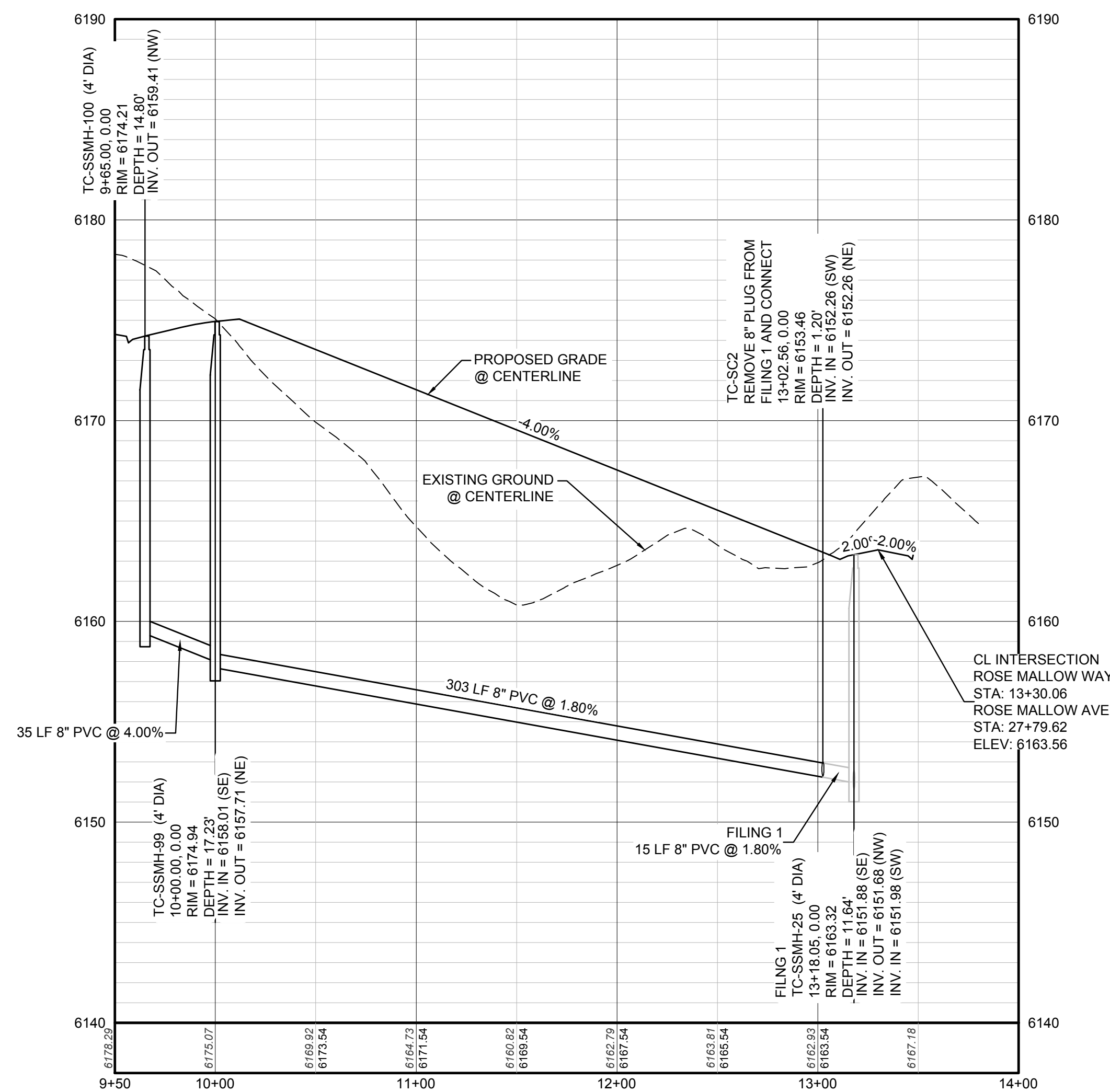


PLAN: ROSE MALLOW WAY STA: 9+50.00 TO 14+00.00
HORIZONTAL SCALE: 1" = 50'



KEYMAP
N.T.S.
LEGEND

②	BLOCK NUMBER	△	PROPOSED RANGE POINT
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6	LOT NUMBER	---	RIGHT-OF-WAY
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⌋	PROPOSED CAP WITH END OF LINE BLOWOFF	---	EDGE OF PAVEMENT
⊗	PROPOSED REDUCER	→	PROPOSED DIRECTION OF FLOW
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⊗	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
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⊗	PROPOSED STORM DRAIN INLET	---	EXISTING OVERHEAD POWER
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PROFILE: ROSE MALLOW WAY STA: 9+50.00 TO 14+00.00
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LF	LINEAR FEET	WSE	WATER SURFACE ELEVATION

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PREPARED UNDER THE SUPERVISION OF

BRIAN P. WILSON
COLORADO P.E. 0050067

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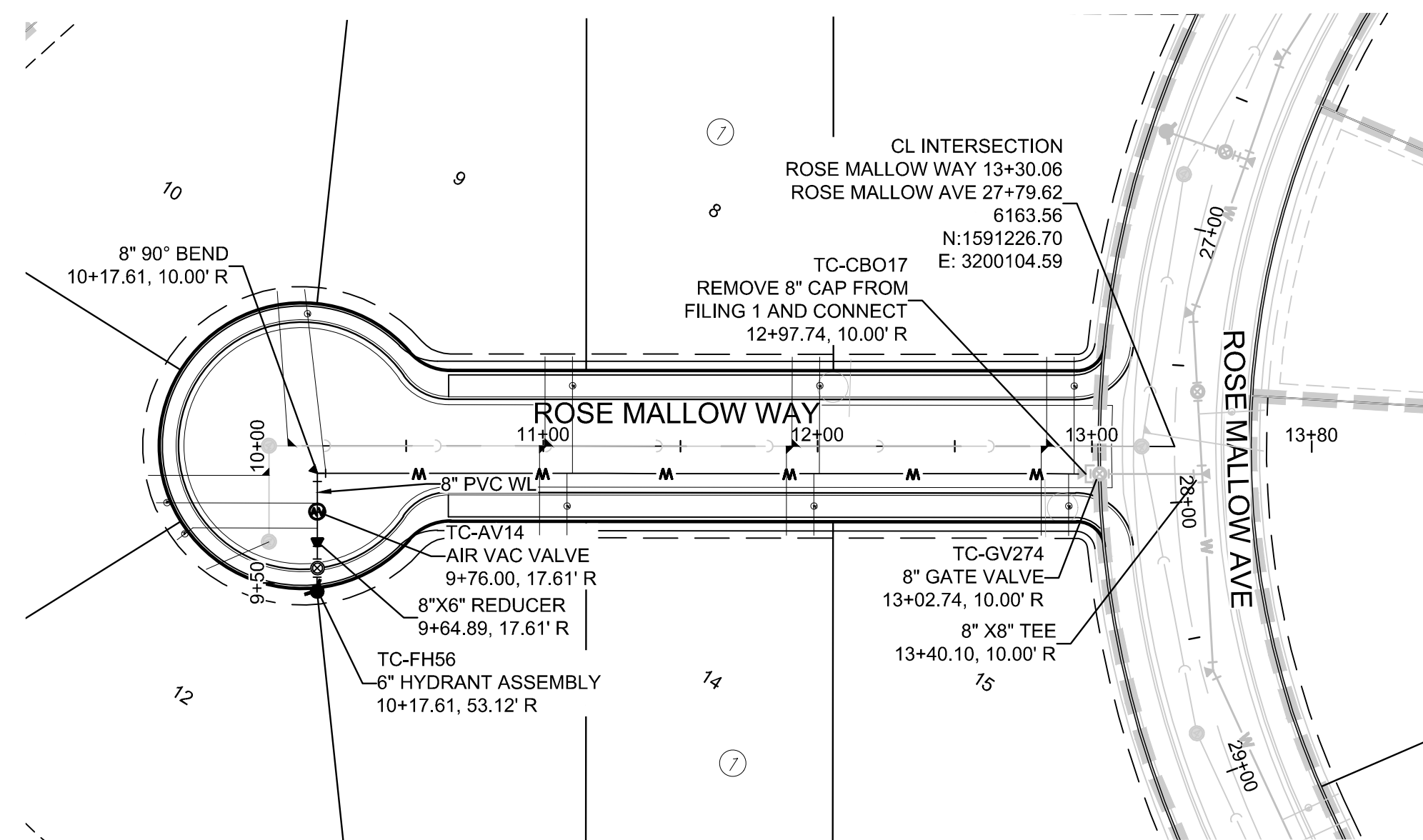
CALL 811
TWO WORKING DAYS
BEFORE YOU DIG
UNCC 1-800-922-1987
UTILITY NOTIFICATION CENTER OF COLORADO

SHEET NUMBER	DRAWN BY: KJD	CHECKED BY: JJ	DATE: AUGUST 2017	SCALE:	AS SHOWN	FILE NO:	8130283701
				TRAILS AT CROWFOOT FILING 8 CONSTRUCTION DRAWINGS SANITARY SEWER PLAN AND PROFILE ROSE MALLOW WAY			
4	DATE: AUGUST 2017	CHECKED BY: JJ	DATE: AUGUST 2017	Revisions	No.	Init.	Appr.
				Date	Date	Date	Date

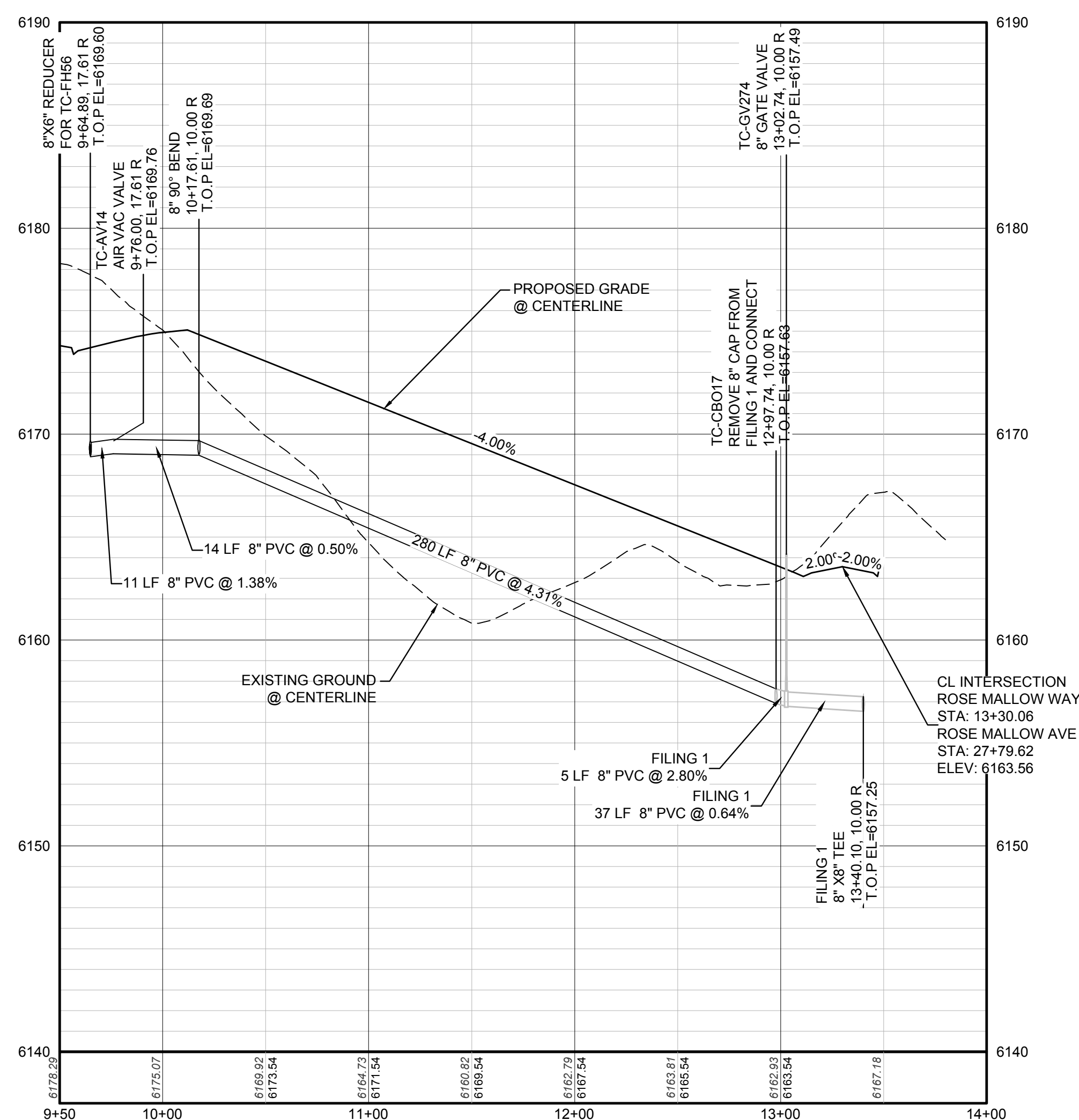
10333 E. Dry Creek Rd.
Suite 410
Englewood, CO 80150
Tel: (720) 482-9526
Fax: (720) 482-9546

CVL
CONSULTANTS

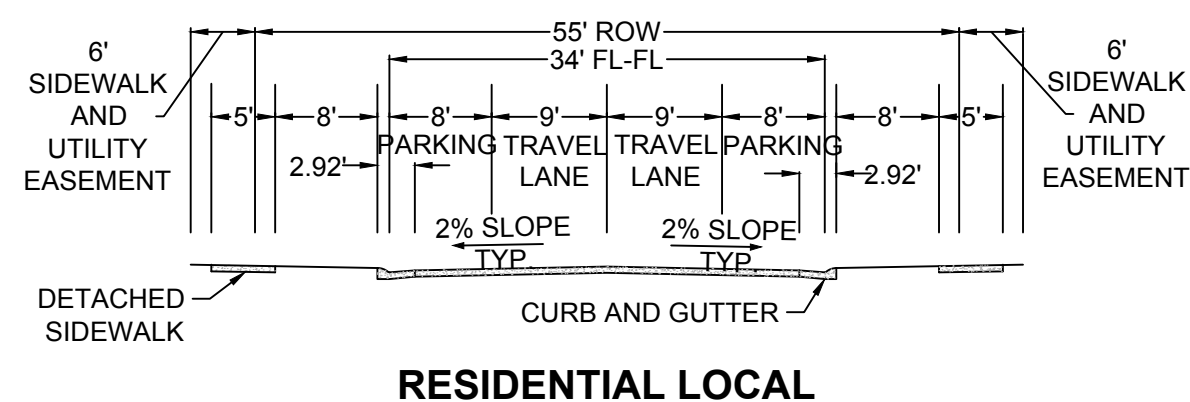
HR 935 LLC
7353 South Alton Way
CENTENNIAL, CO 80112



PLAN: ROSE MALLOW WAY STA: 9+50.00 TO 14+00.00
HORIZONTAL SCALE: 1" = 50'



PROFILE: ROSE MALLOW WAY STA: 9+50.00 TO 14+00.00
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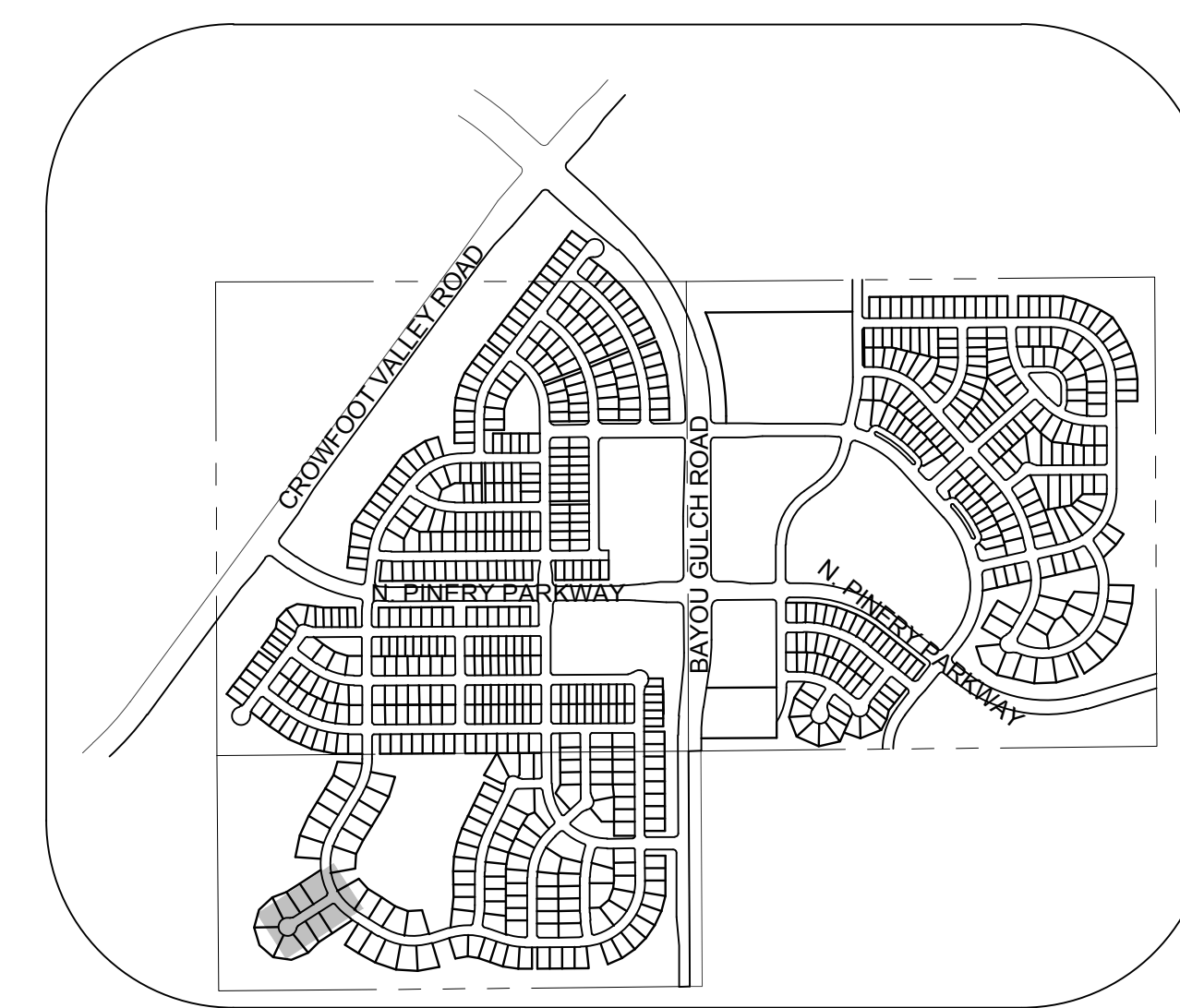
RESIDENTIAL LOCAL

BENCHMARK
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PREPARED UNDER THE SUPERVISION OF

BRIAN P. WILSON
COLORADO P.E. 0050067



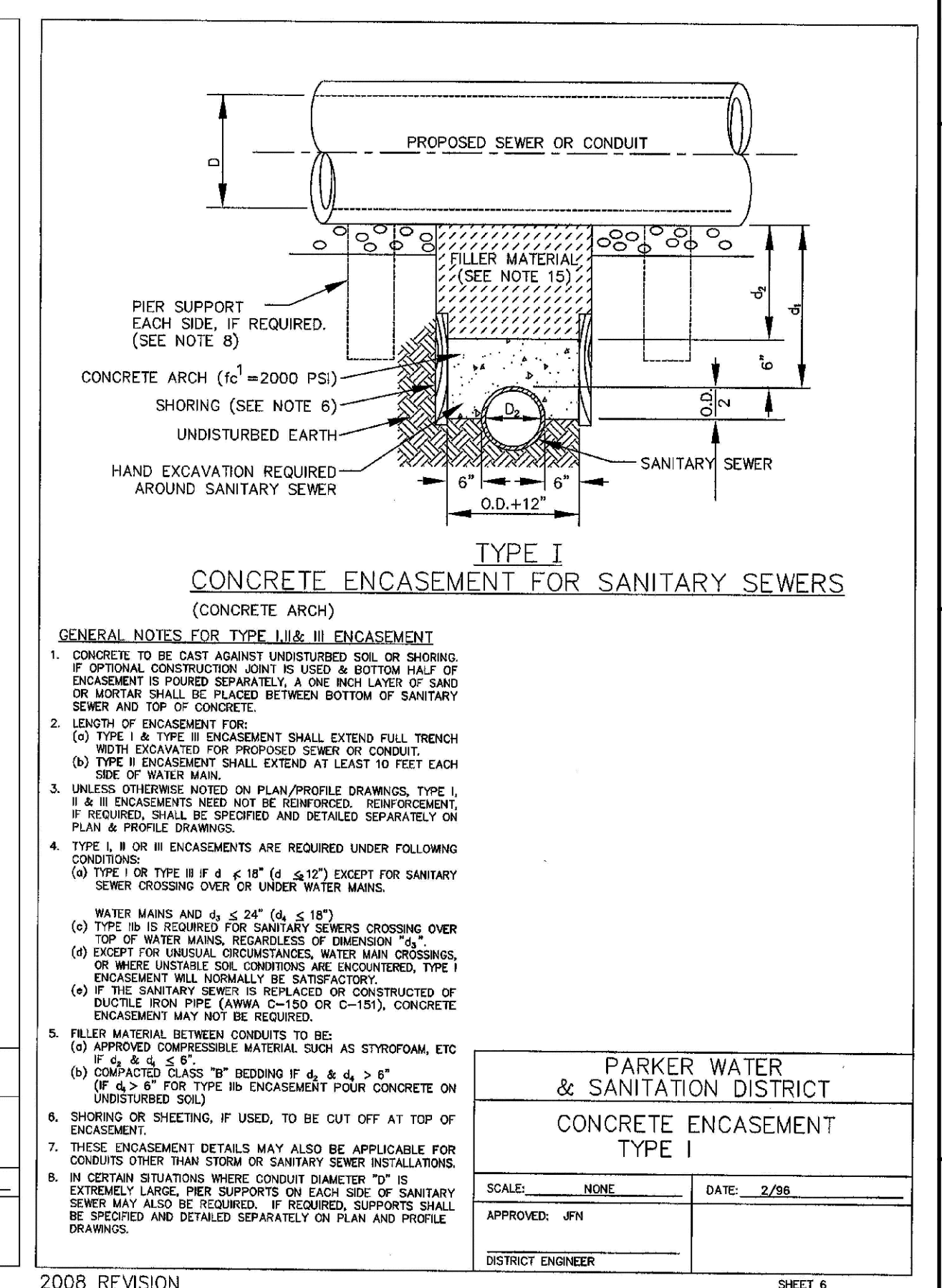
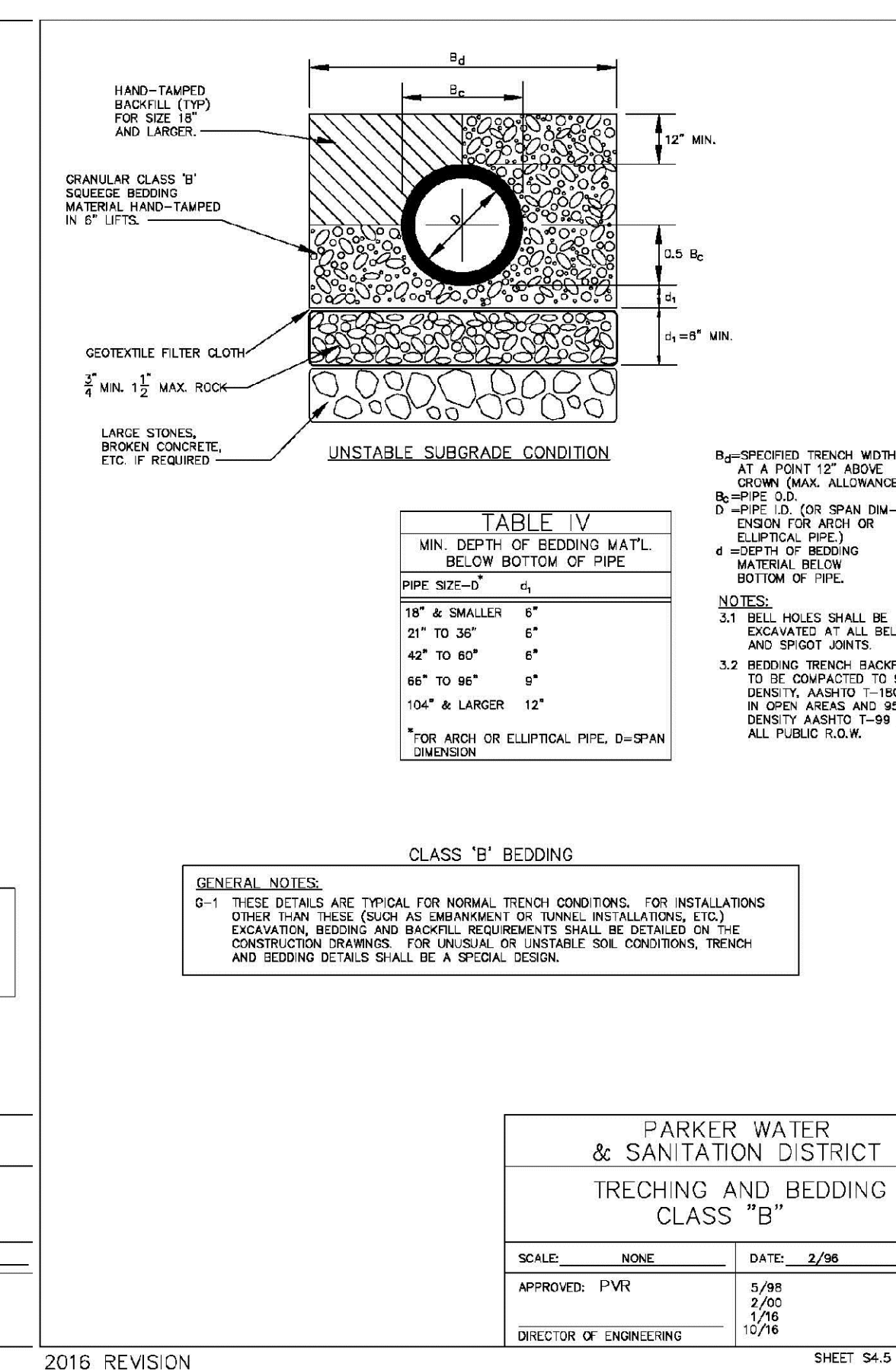
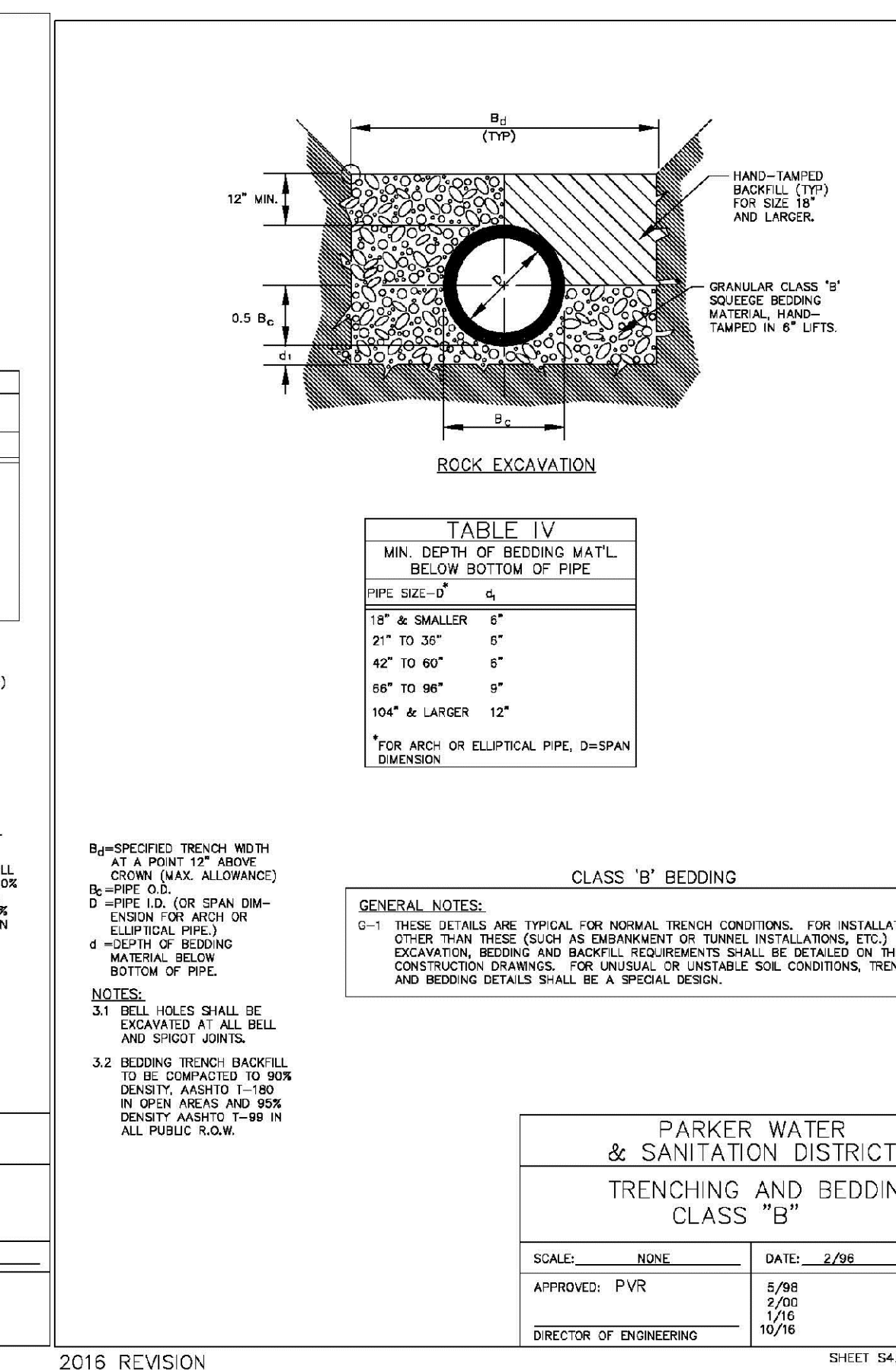
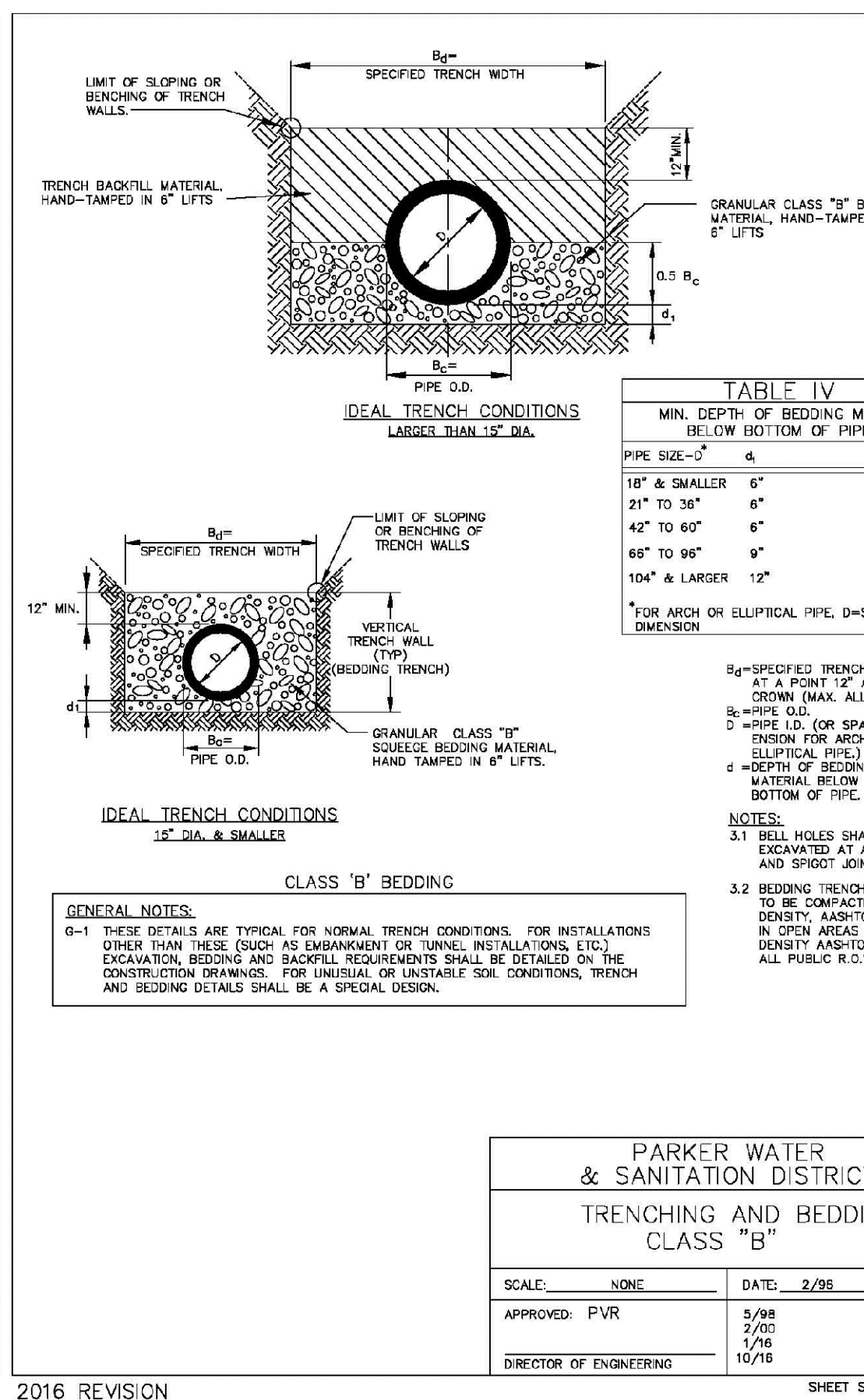
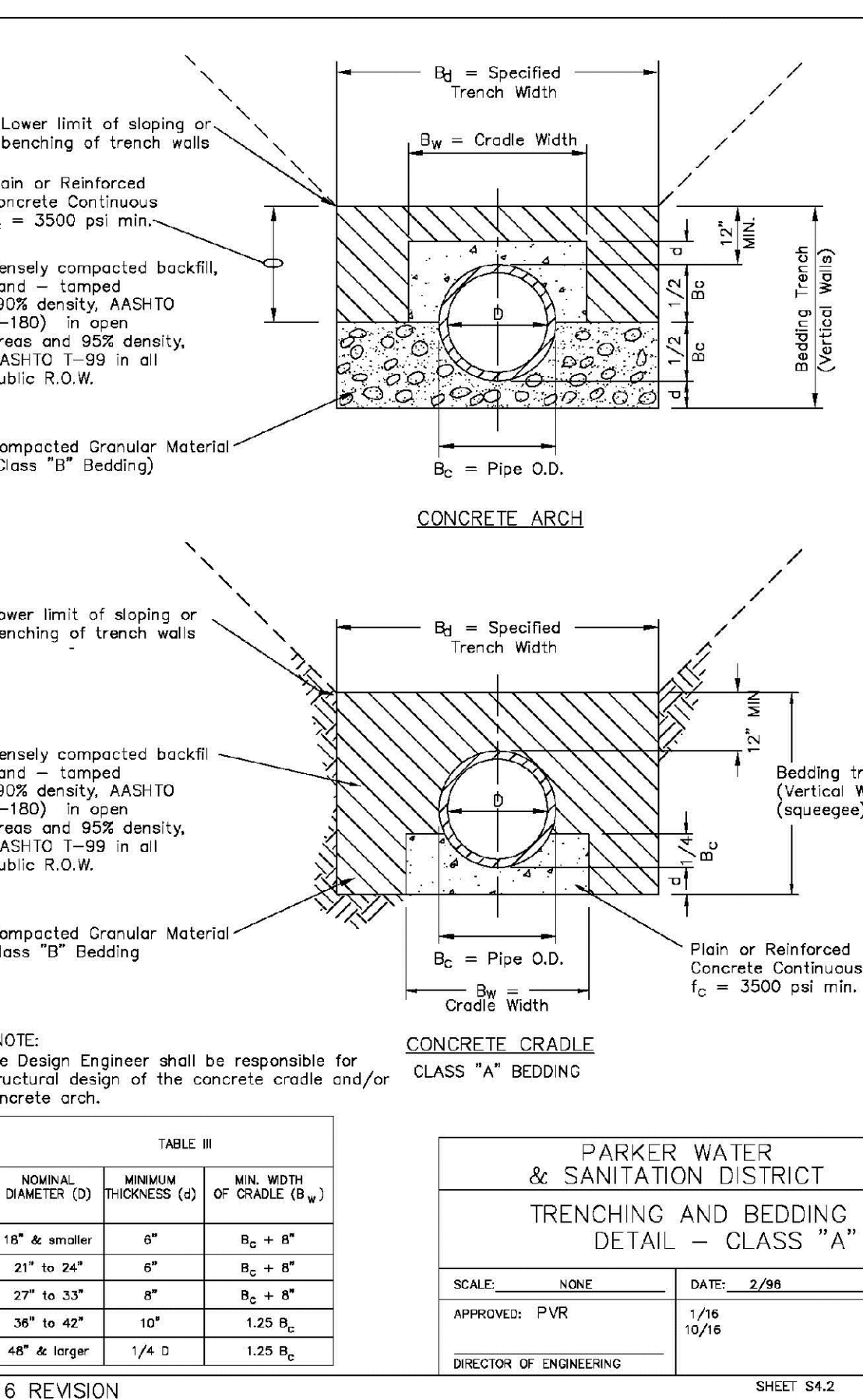
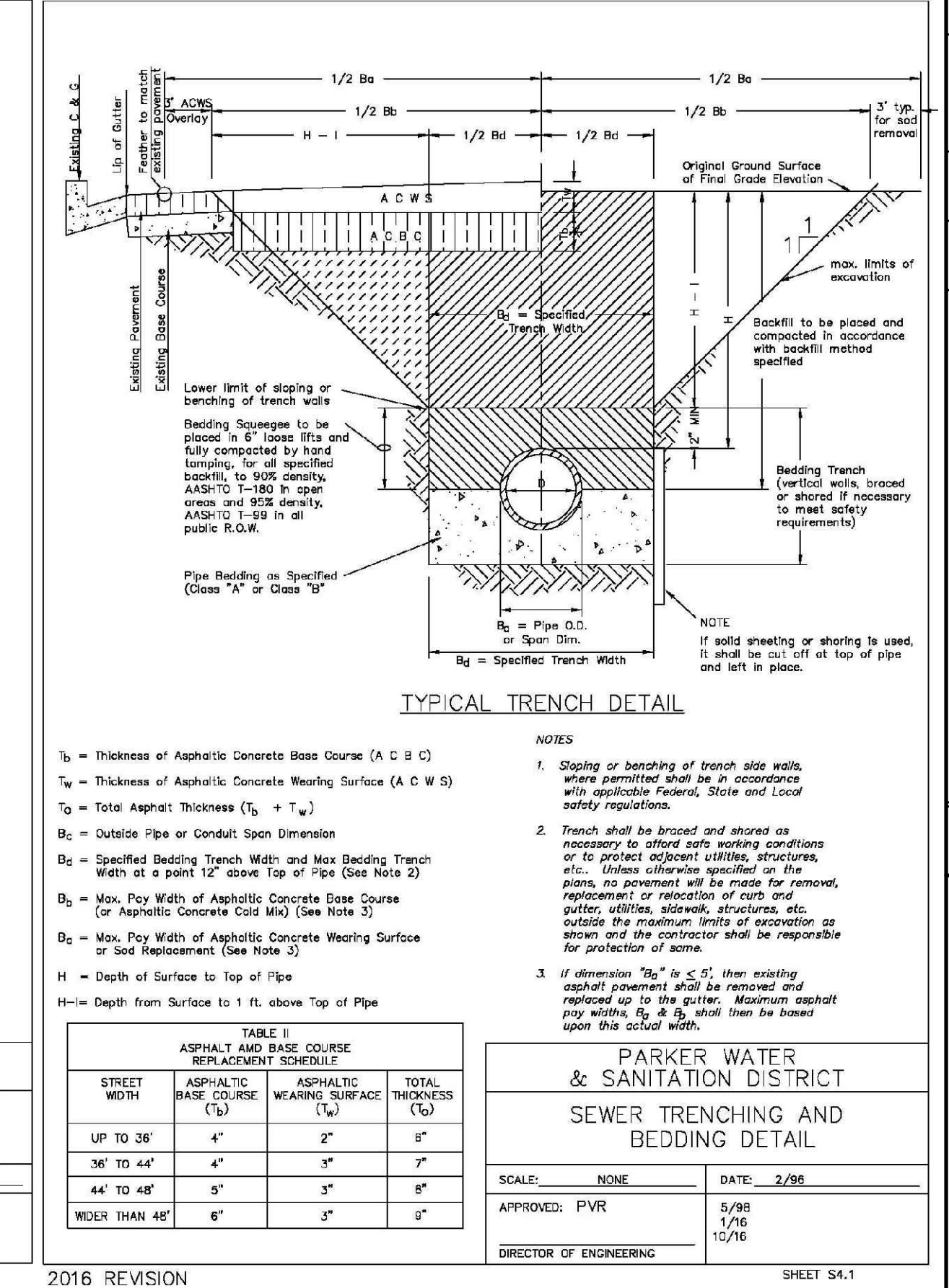
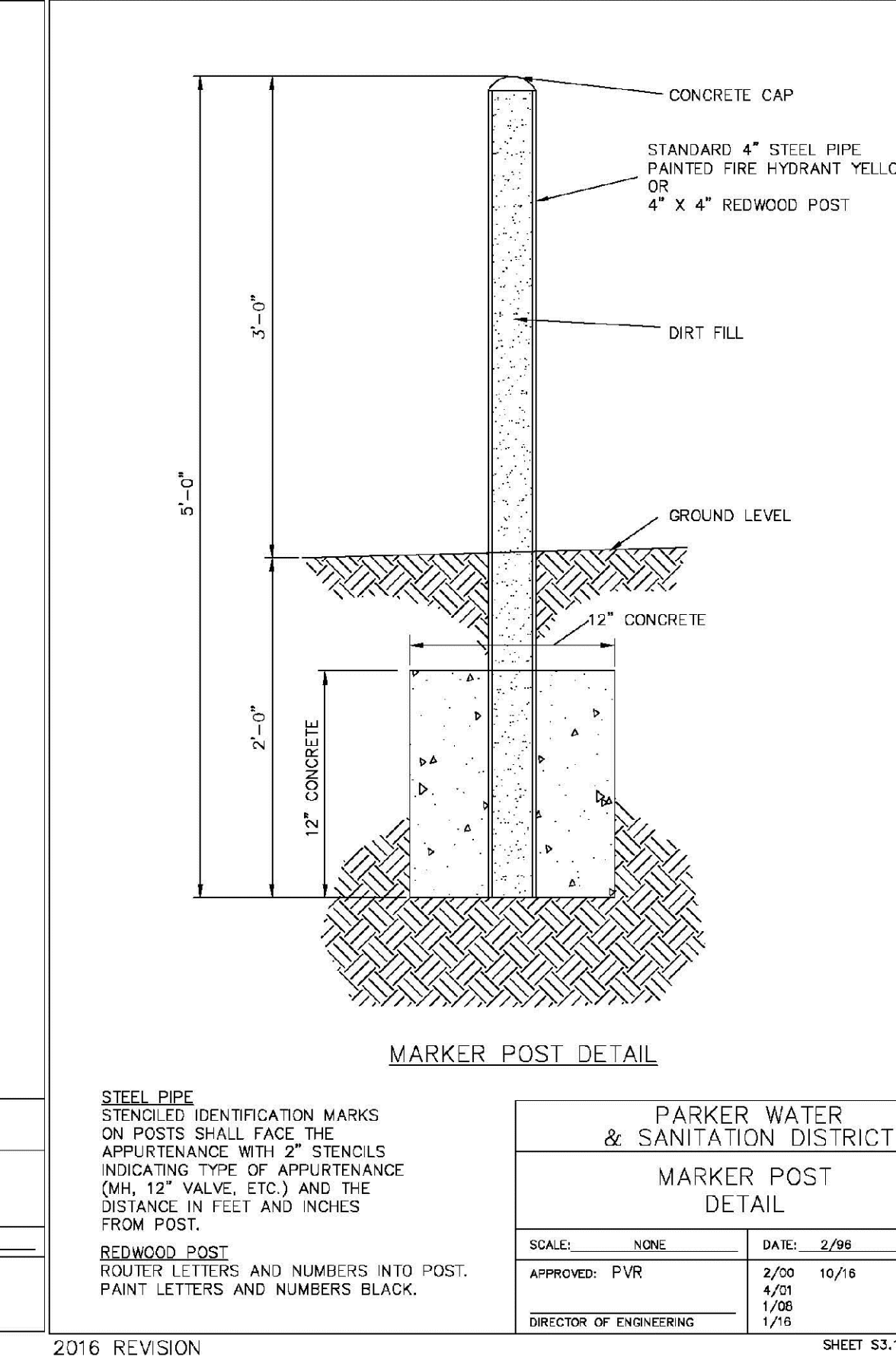
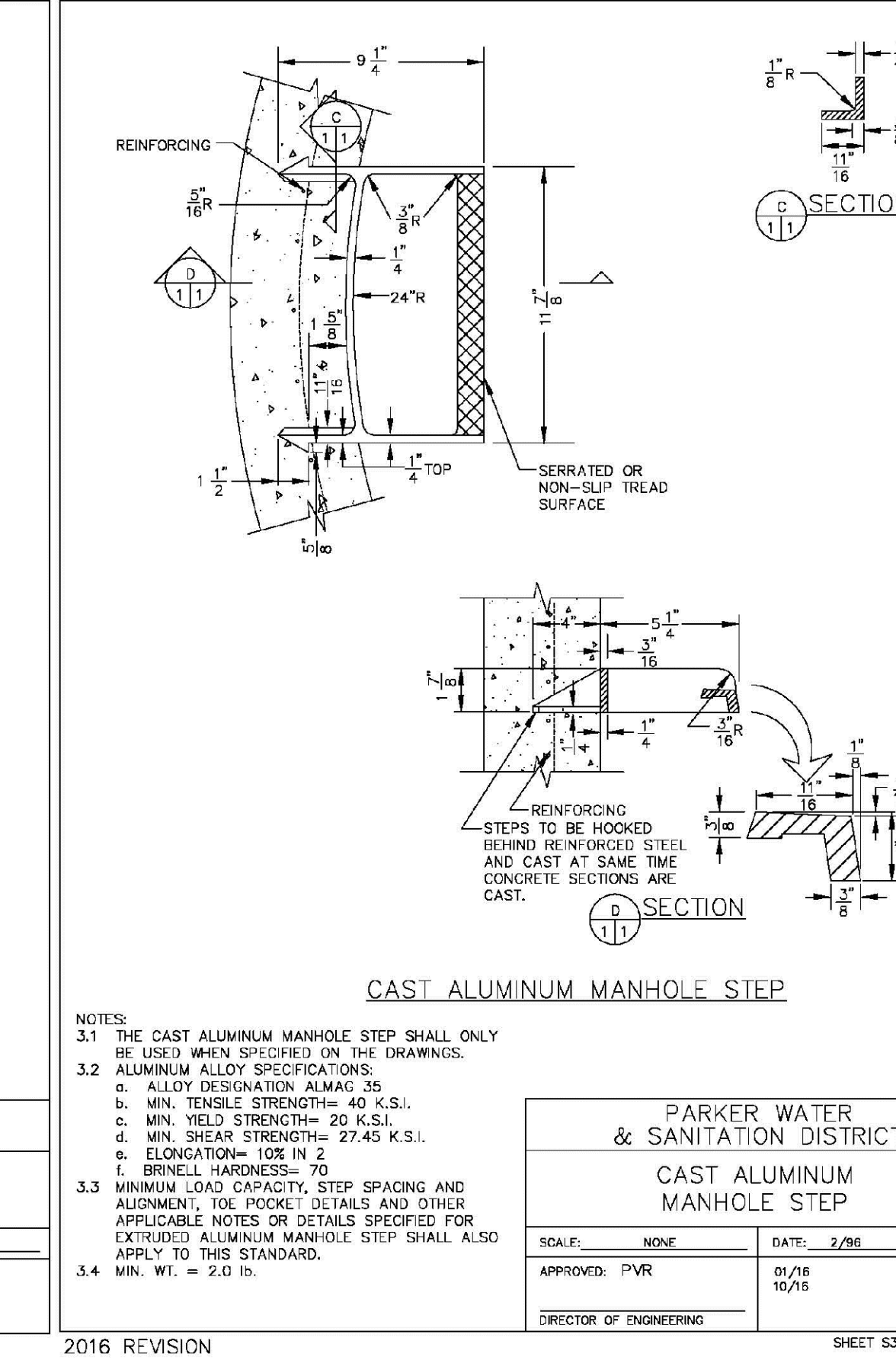
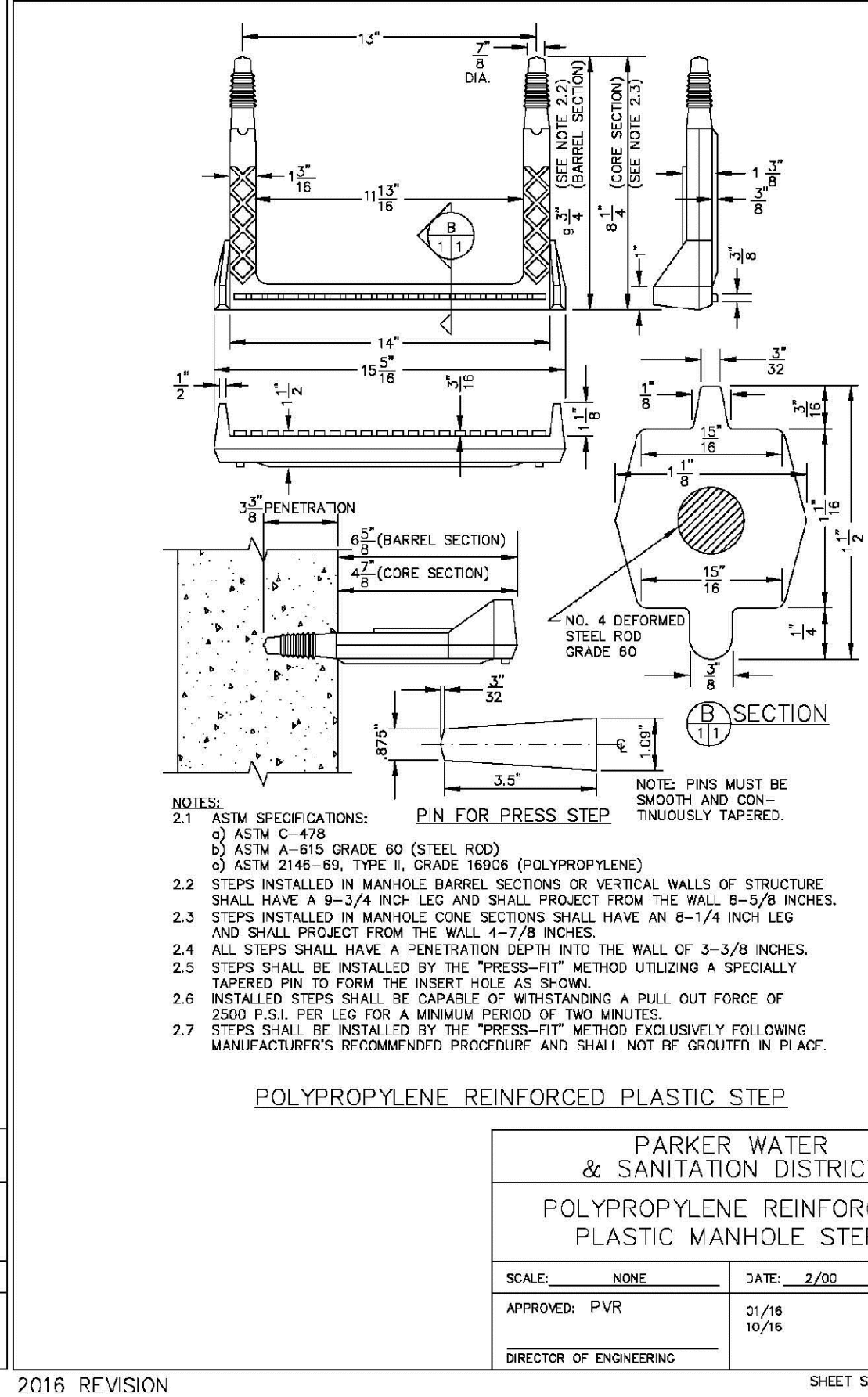
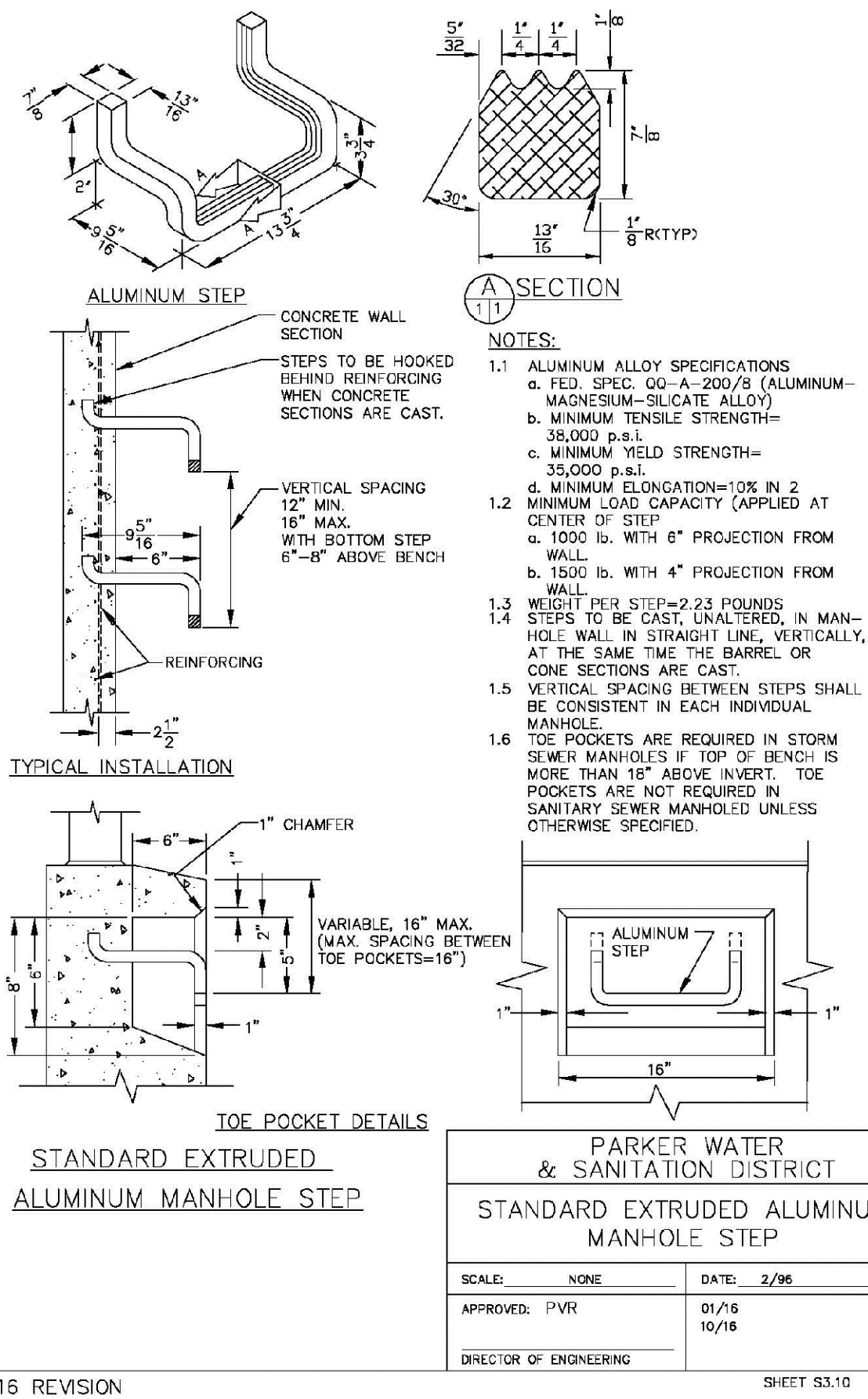
KEYMAP
N.T.S.
LEGEND

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	---	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
⊗	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
FH	FIRE HYDRANT	SS	SANITARY SEWER
FL	FLOW LINE	STA	STATION
GV	GATE VALVE	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

10333 E. Dry Creek Rd. Suite 6410 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9546	Revisions	Date	Appr.	Date
HR 935 LLC 7353 South Alton Way CENTENNIAL, CO 80112	No.	Date	Init.	Date
TRAILS AT CROWFOOT FILM 8 CONSTRUCTION DRAWINGS WATER PLAN & PROFILE ROSE MALLOW WAY	SHEET NUMBER	SCALE:	AS SHOWN	FILE NO:
5	RHR	AS SHOWN	8130283701	AUGUST 2017
UNCC UTILITY NOTIFICATION CENTER OF EXCELLENCE	DRAWN BY:	CHECKED BY:	DATE:	
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PREPARED UNDER THE SUPERVISION OF
BRIAN P. WILSON
COLORADO P.E. 0050067

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Denver, CO 80231
Tel: (720) 482-9296
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CVL CONSULTANTS

HR 935 LLC
7353 South Alton Way
CENTENNIAL, CO 80112

TRAILS AT CROWFOOT
FILM 8 CONSTRUCTION DRAWINGS
SANITARY SEWER DETAILS

SCALE: AS SHOWN
DRAWN BY: JF
CHECKED BY: JU
DATE: AUGUST 2017

FILE NO: 8130283701

SHEET NUMBER: 7

NO. REVISIONS

No.	Revisions	Date	Init.	Appr.	Date

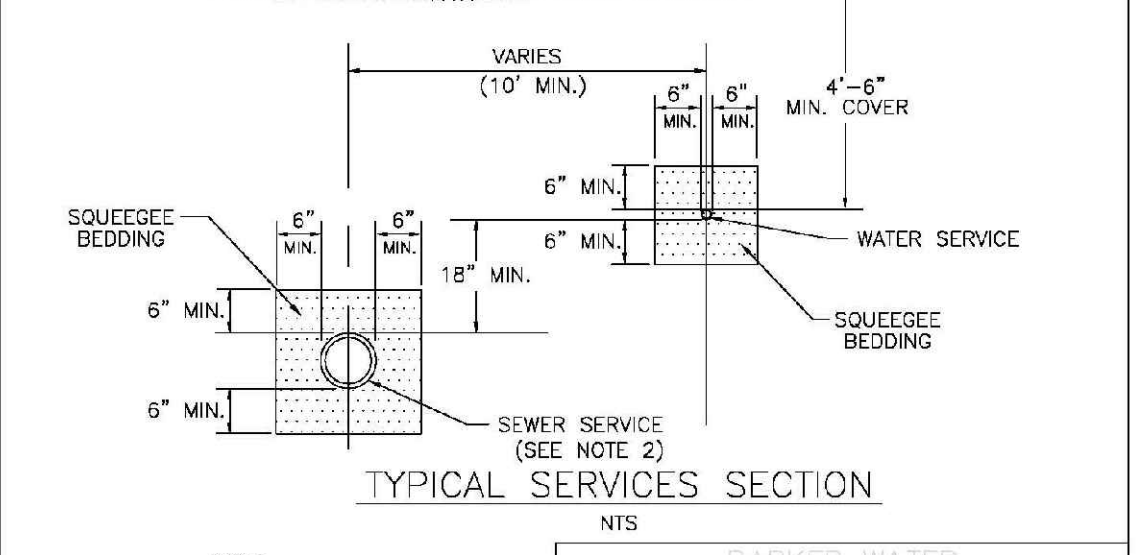
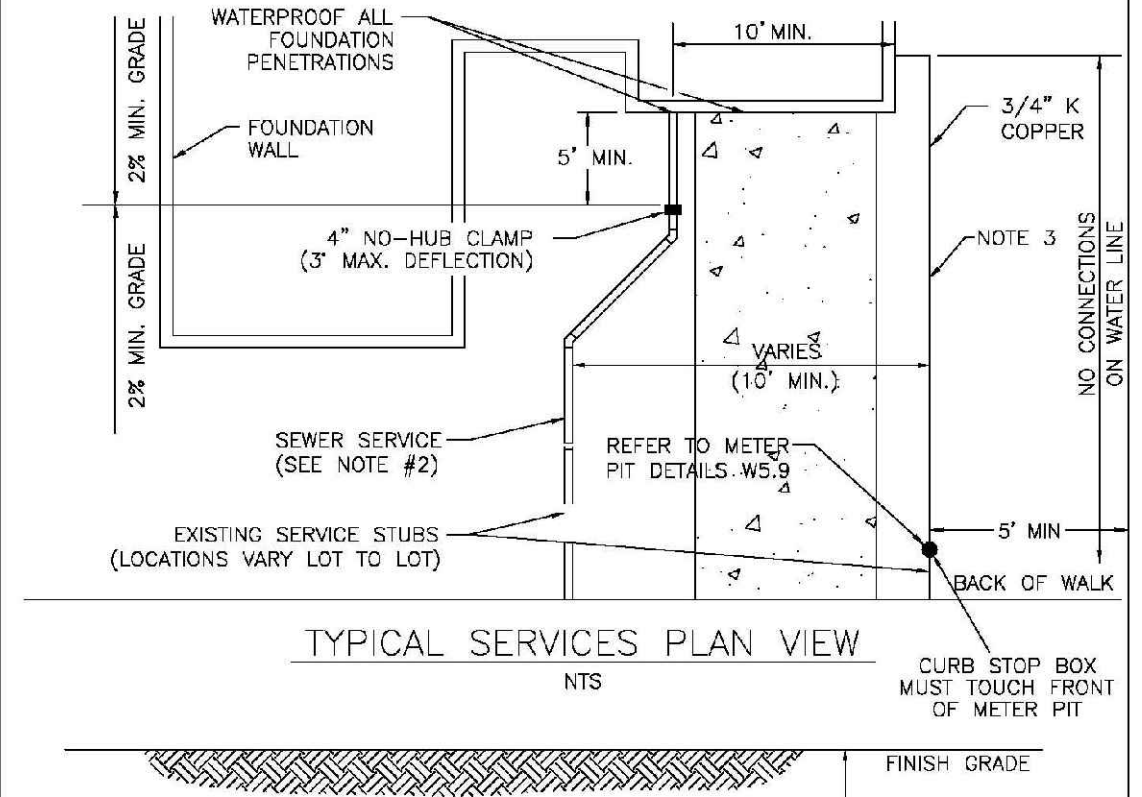
- INSPECTION POLICY:**
1. ALL SERVICE INSPECTIONS MUST BE SCHEDULED AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
 2. SERVICE INSPECTIONS WILL OCCUR BETWEEN 1:00 P.M. AND 3:00 P.M. SPECIFIC INSPECTION TIMES ARE NOT AVAILABLE.
 3. IF THE CONTRACTOR IS NOT READY FOR INSPECTION WHEN THE INSPECTOR 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

SHEET W1.1



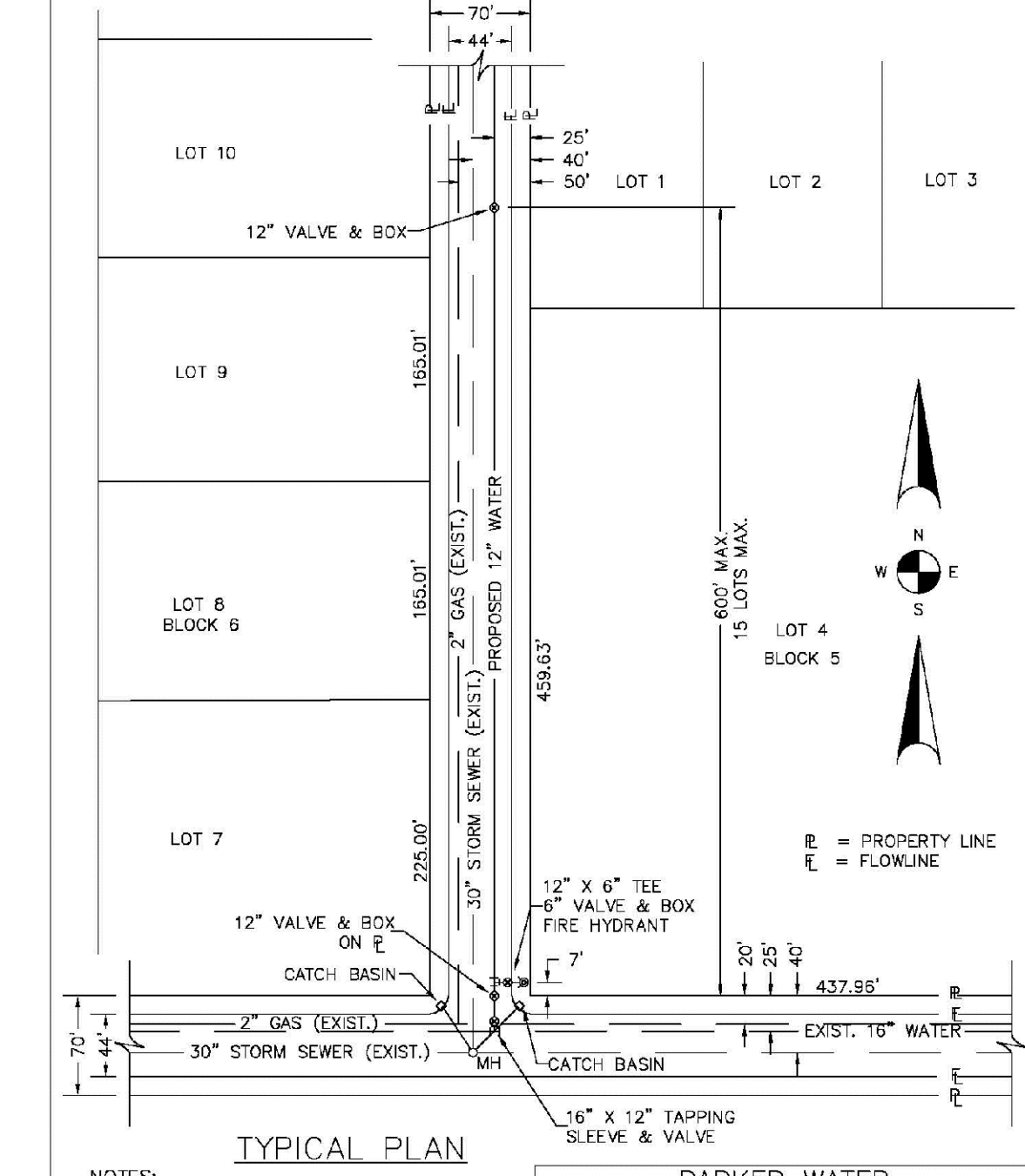
NOTE:

1. SEE SHEET W1.1 FOR DISTRICT POLICIES AND INSTALLATION NOTES.
2. REFER TO SEWER SERVICES DETAIL SHEET S1.2.
3. 4" PVC SLEEVES REQUIRED FOR SERVICE LINES UNDER CONCRETE SURFACE.

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

2016 REVISION

SHEET W1.2



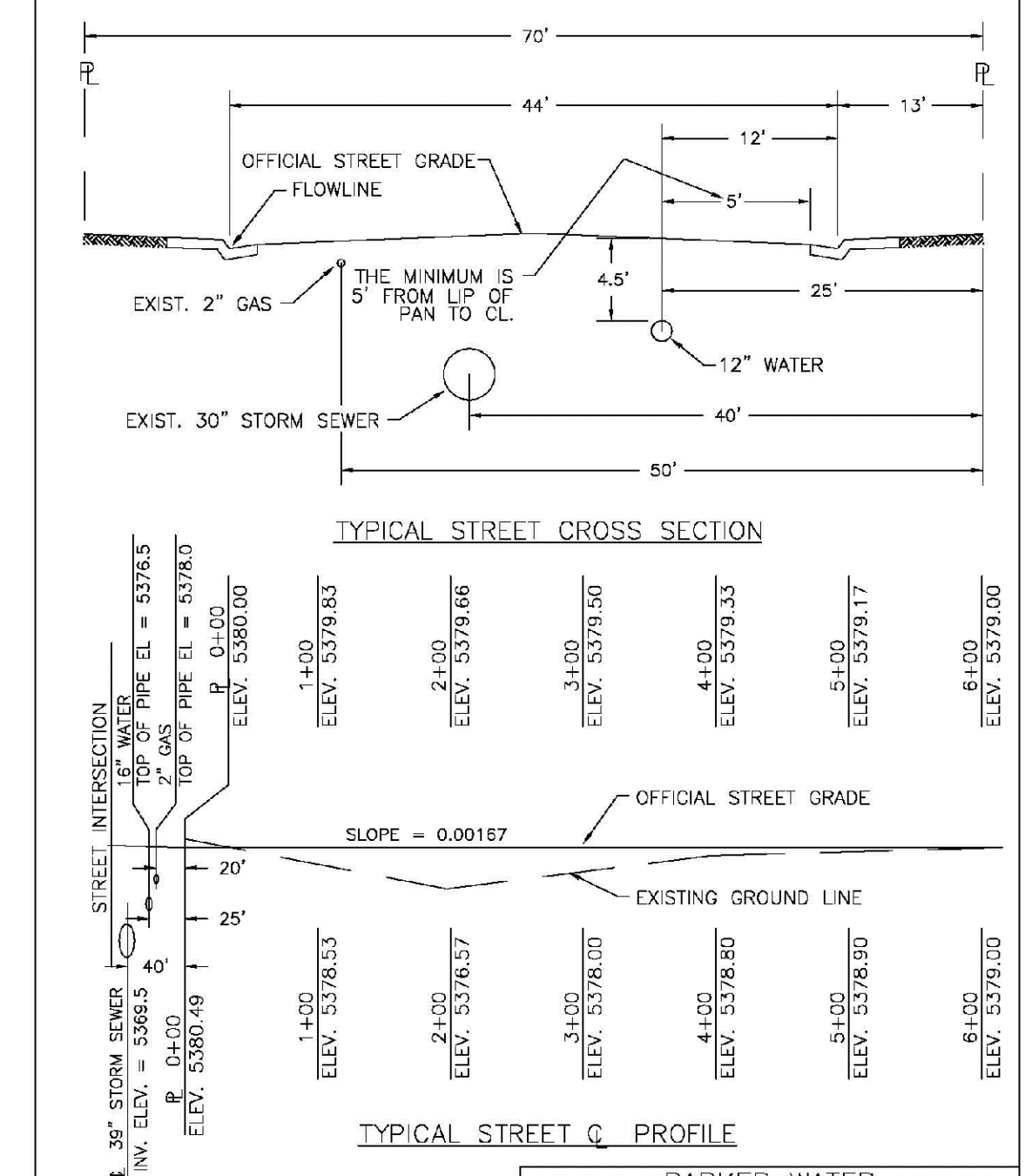
NOTES:

1. SEE "TYPICAL STREET CROSS SECTION - TYPICAL STREET CL PROFILE" DRAWING.
2. ALL FIRE HYDRANTS TO BE LOCATED AT POINTS OTHER THAN CORNER INTERSECTIONS SHALL BE INSTALLED AT A LOT LINE EXTENDED.

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

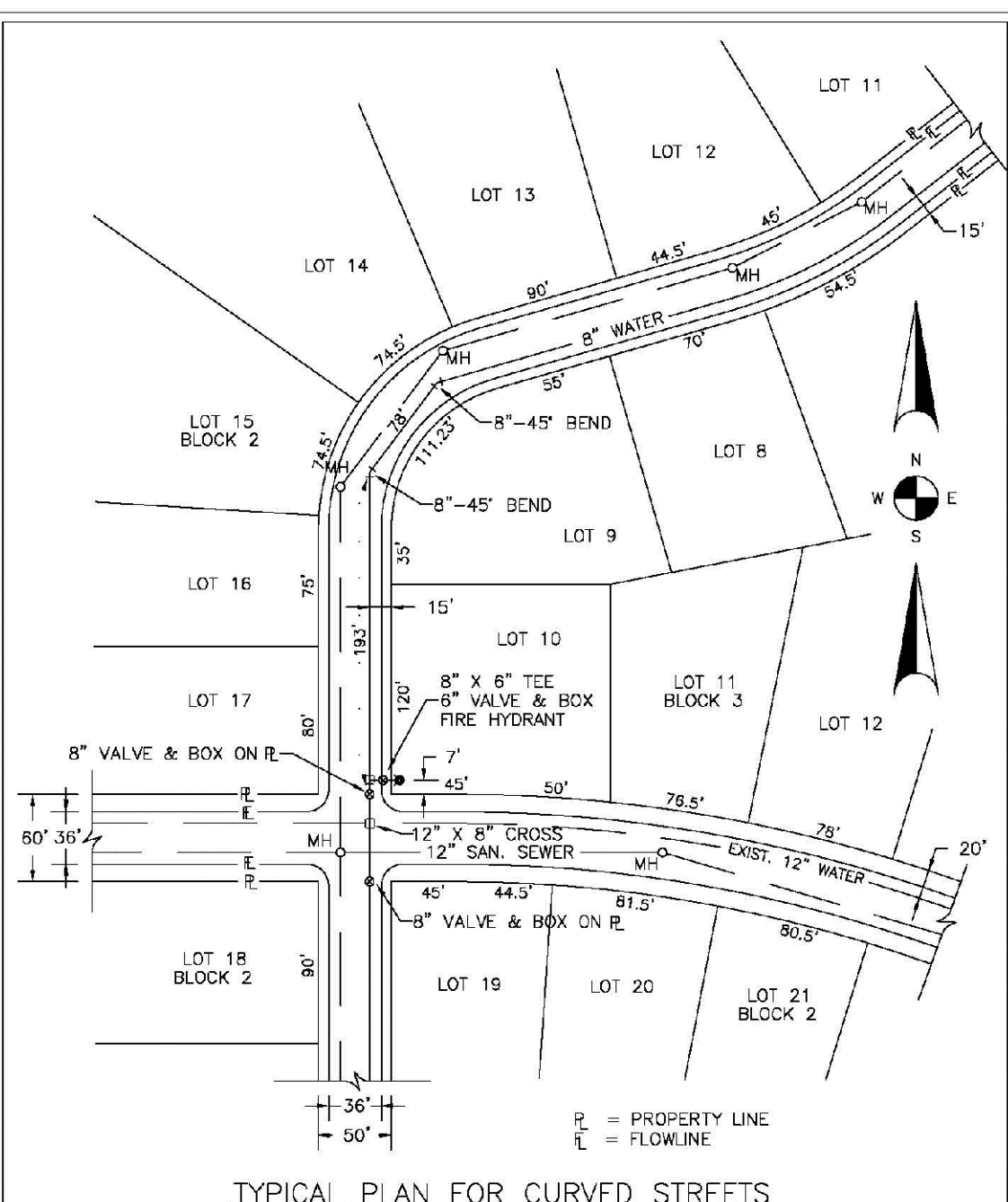
SHEET W2.1



PARKER WATER & SANITATION DISTRICT	
TYPICAL STREET CROSS SECTION	
SCALE: NONE	DATE: 2/96
APPROVED: 1/16	10/16
PVR	
DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET W2.2

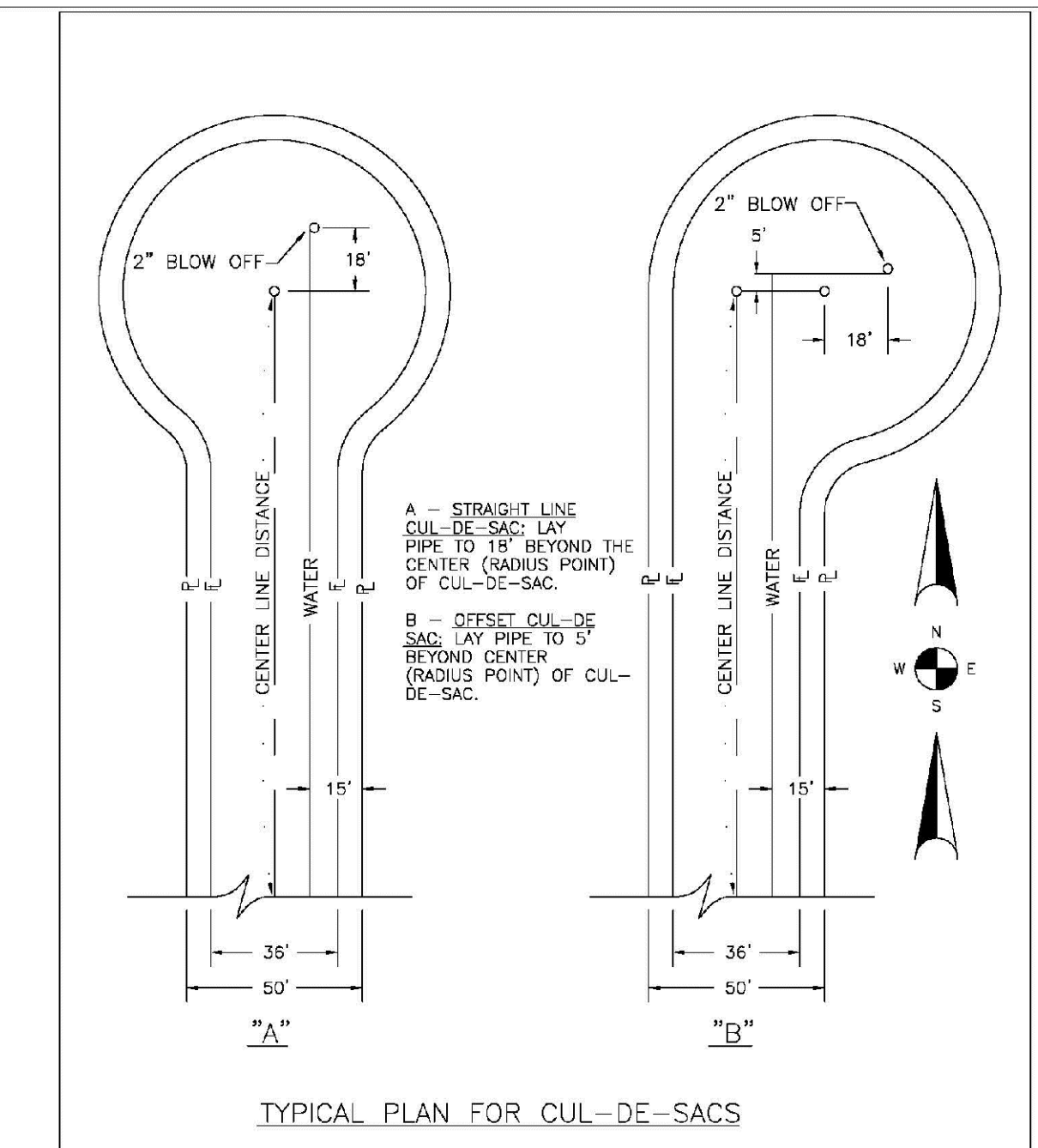


NOTE: WATER AND SEWER MAY NEVER BE CLOSER THAN 10' HORIZONTALLY AND MUST MAINTAIN A MINIMUM OF 5' FROM THE LIP OF PAN ON THE GUTTER.

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	

2016 REVISION

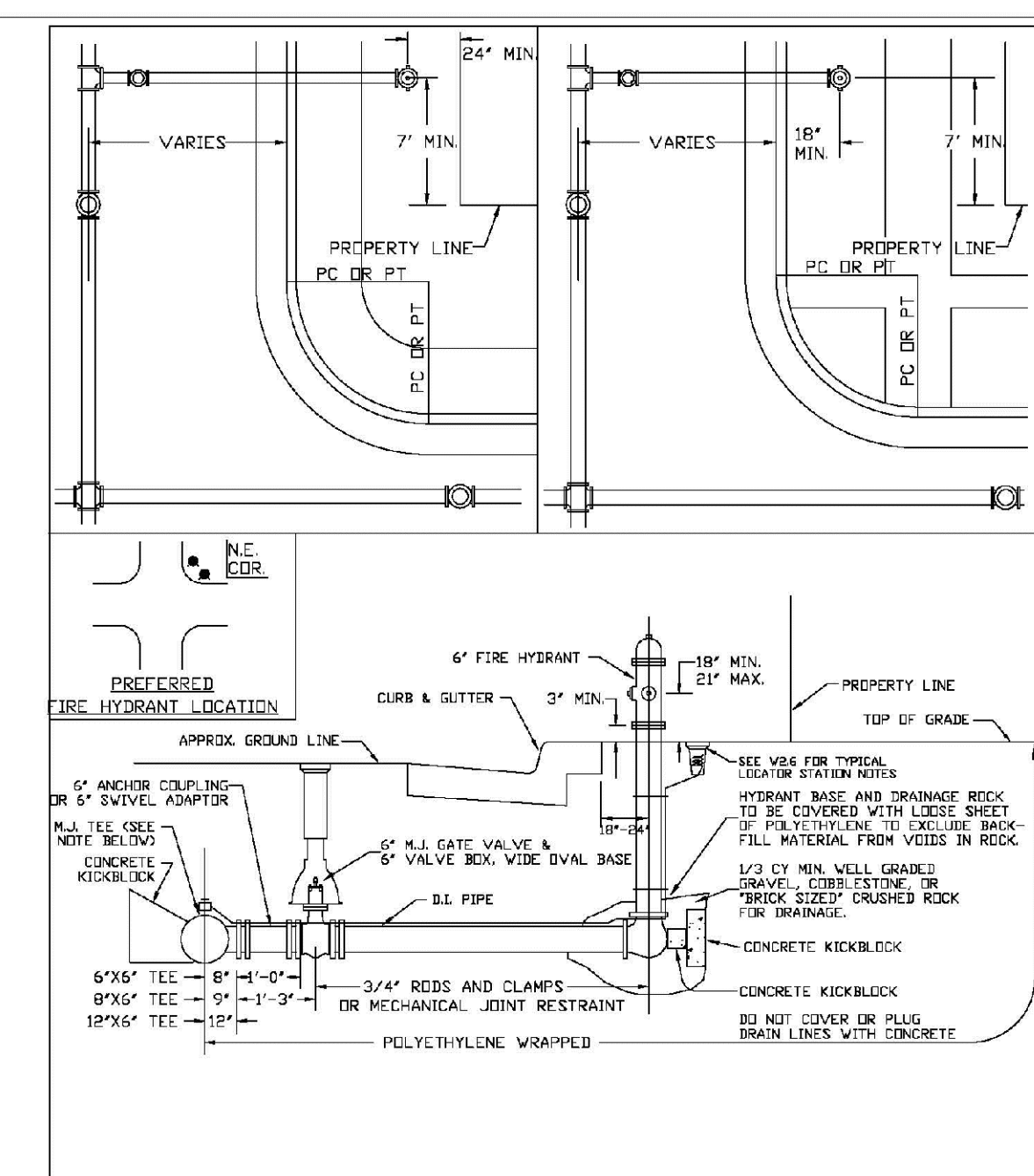
SHEET W3.3



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	

2016 REVISION

SHEET W2.4



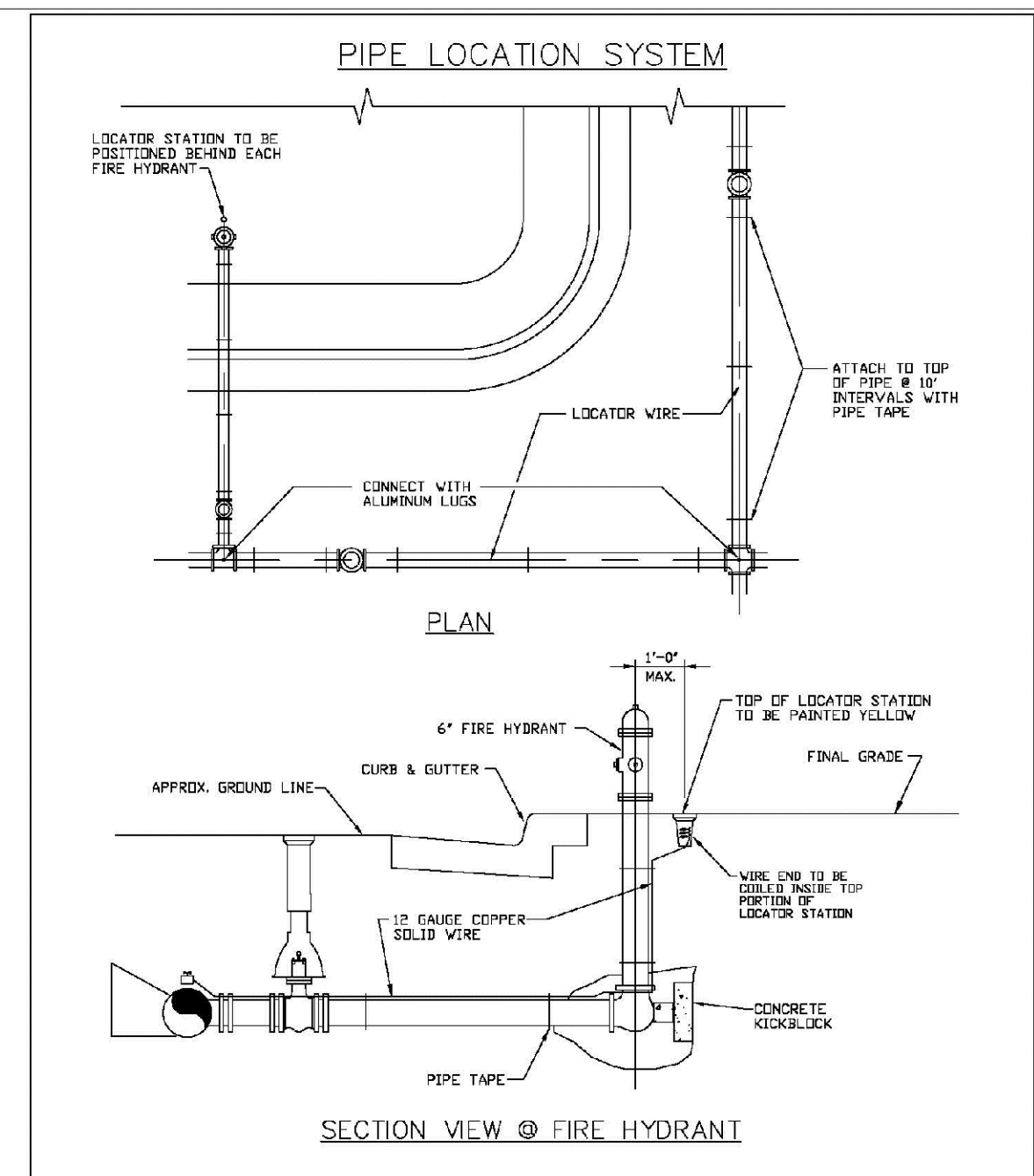
NOTES:

1. ALTERNATE TO FIG ABOVE: FASTEN ALL VALVE DIRECTLY TO A 4" HORIZONTAL TIE BARS CALLED TYPICAL 10.3.
2. NO HORIZONTAL OR VERTICAL BONDS ARE ALLOWED IN FIRE HYDRANT BRANCH.
3. NO PORTION OF FIRE HYDRANT MAY BE UNDER WALKWAY AREA.
4. FIRE HYDRANT EXTENSIONS MAY NOT BE UNDER WALKWAY AREA.

PARKER WATER & SANITATION DISTRICT	
FIRE HYDRANTS LOCATION & INSTALLATION	
SCALE: NONE	DATE: 2/96
APPROVED: 4/01	10/16
PVR	01/02
DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET W3.5



NOTES:

1. FOR USE BY ALL DISTRICT SONS AND PWS WATER MAINS.
2. LOCATOR STATION POSITION MAY BE REVERSED AT THE DIRECTION OF THE DISTRICT ENGINEER.
3. A CONTINUITY TEST WILL BE REQUIRED PRIOR TO COMMENCEMENT OF WORK.

PARKER WATER & SANITATION DISTRICT	
LOCATOR WIRE DETAILS	
SCALE: NONE	DATE: 2/96
APPROVED: 4/01	10/16
PVR	01/02
DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET W3.6

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CENTER OF EXCELLENCE

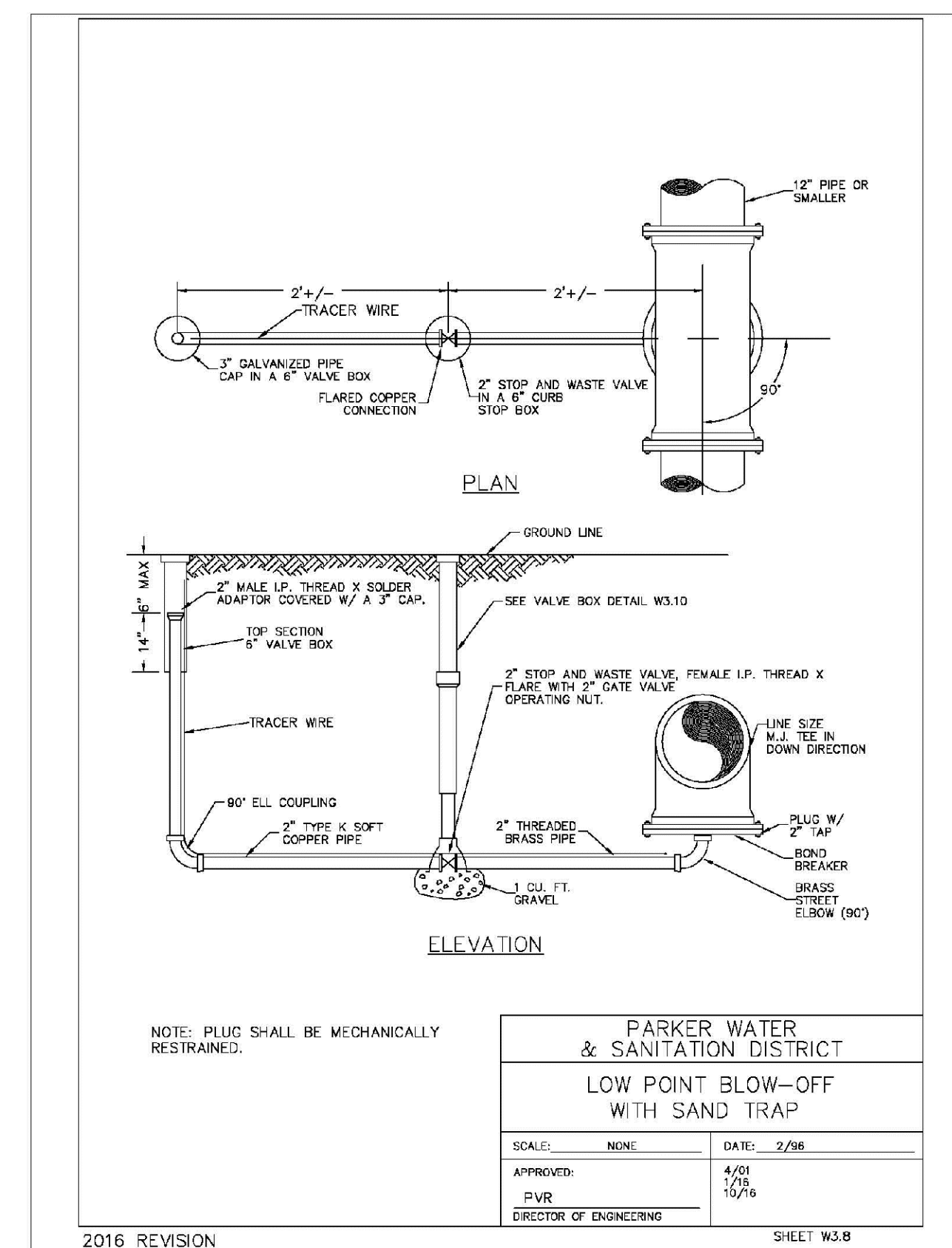
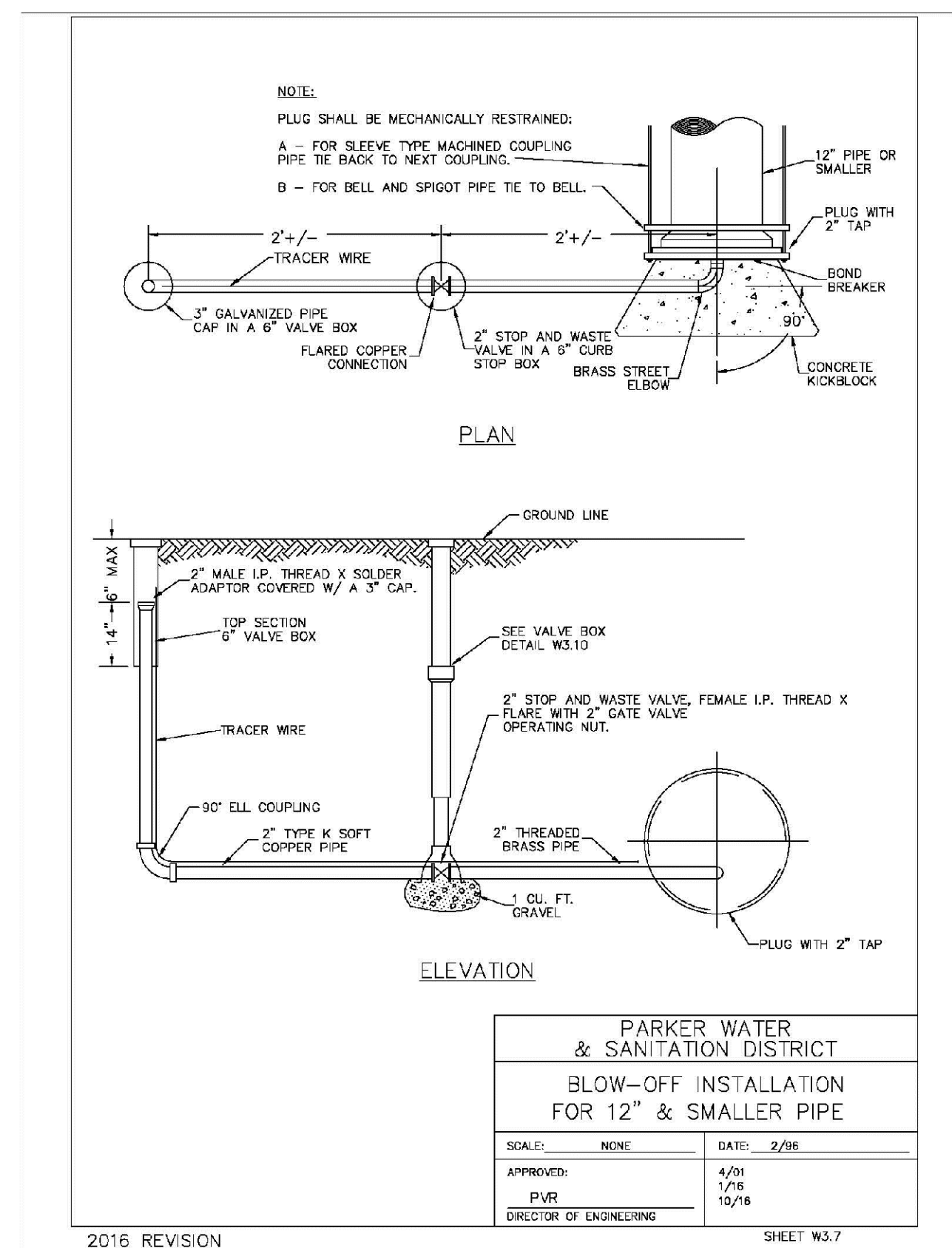
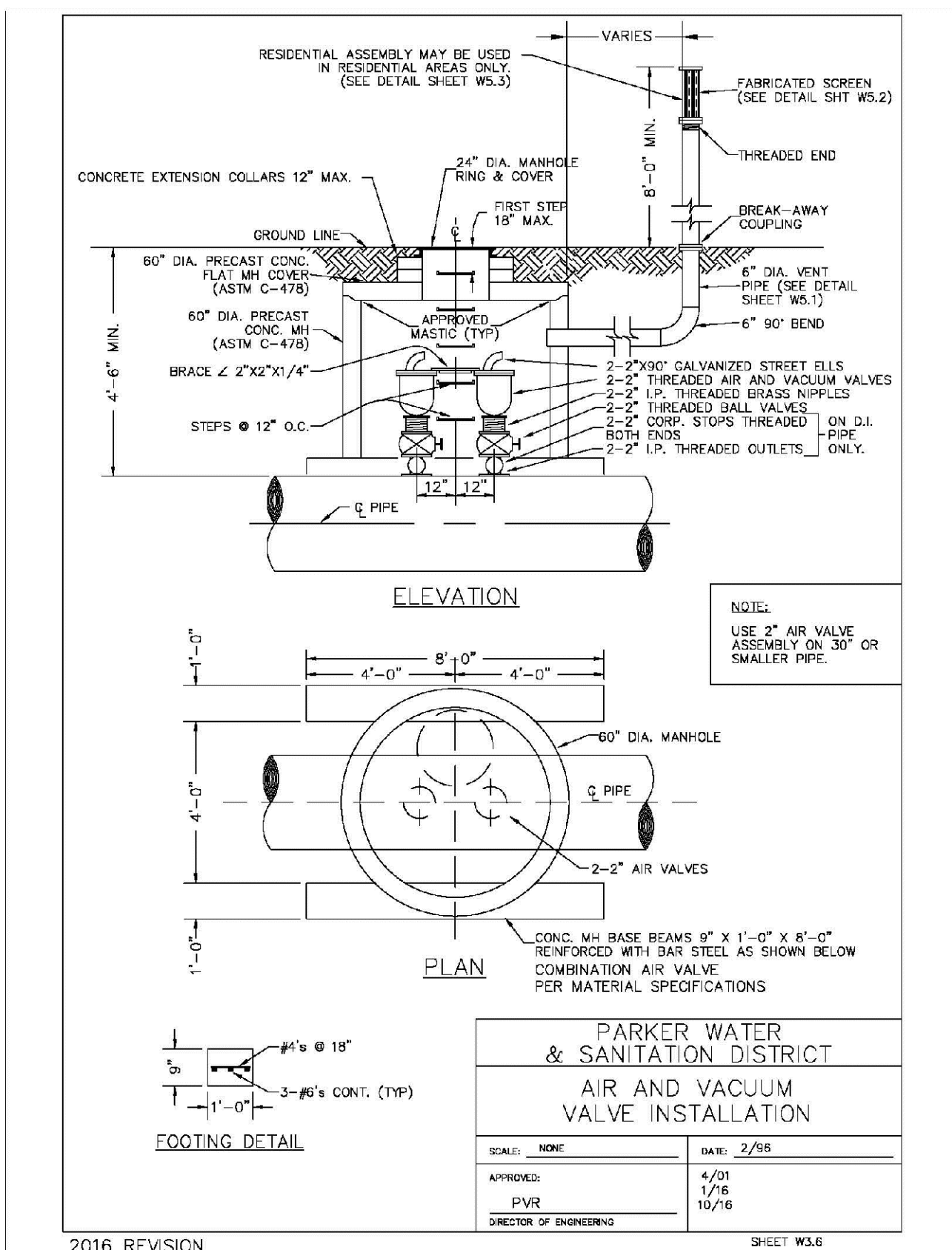
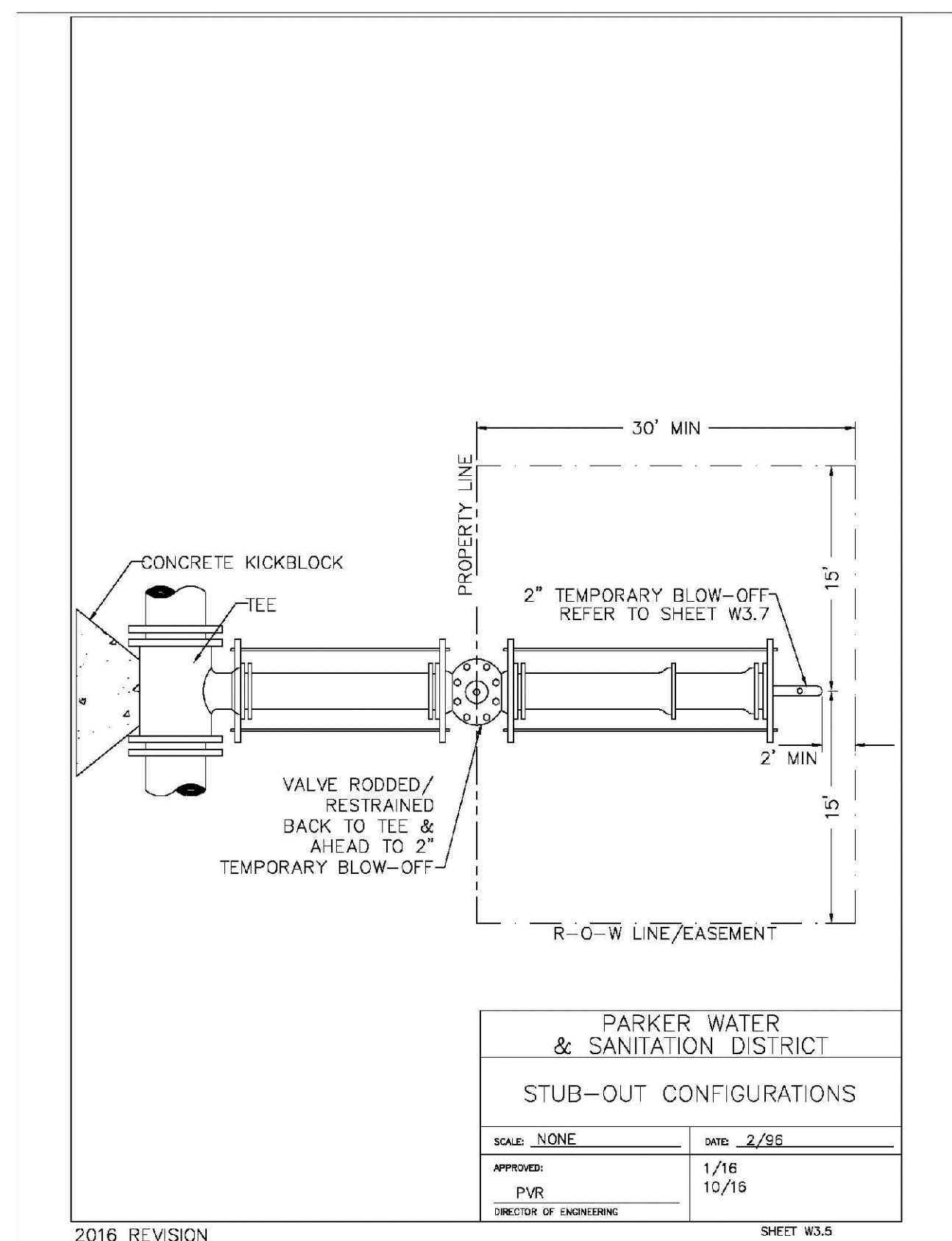
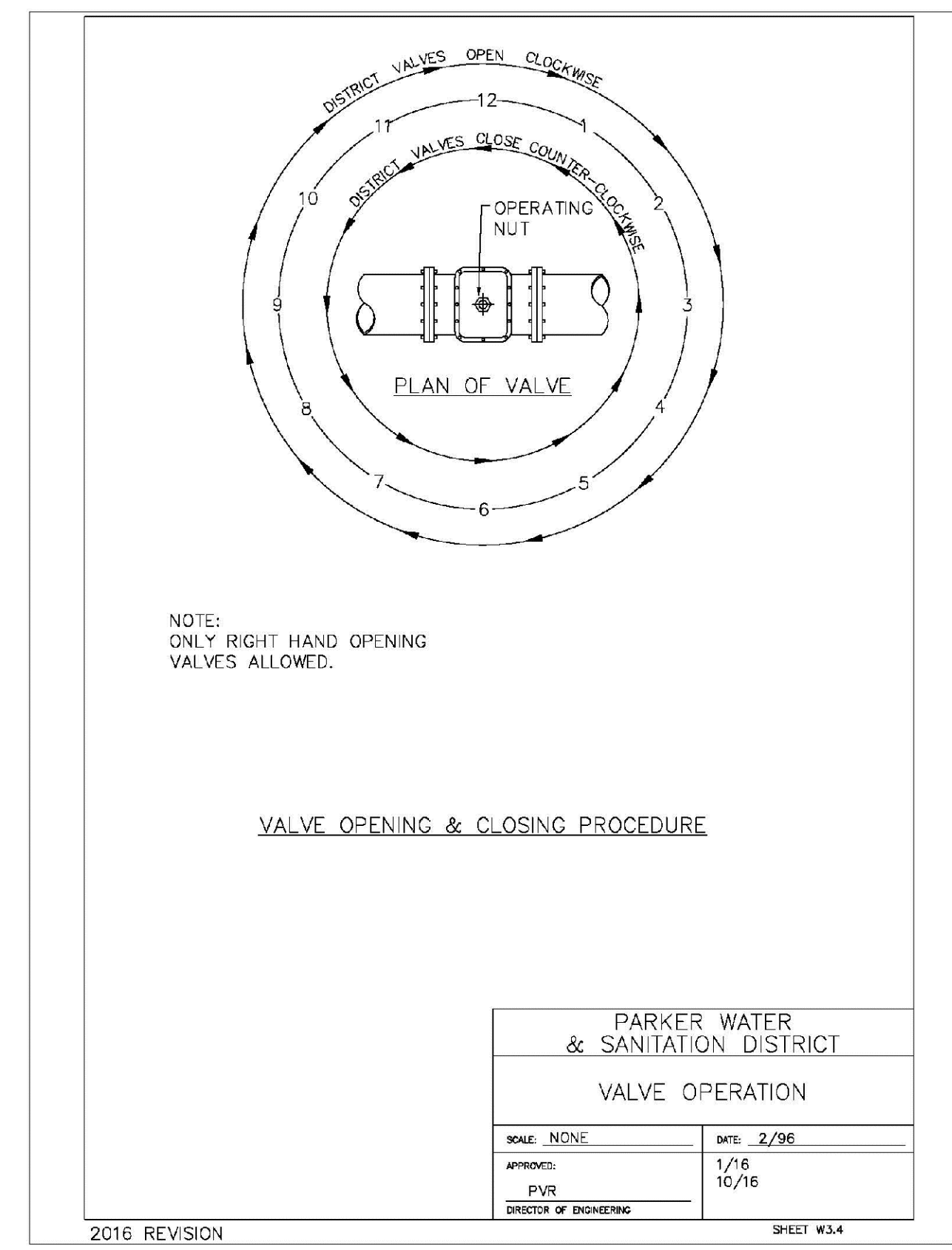
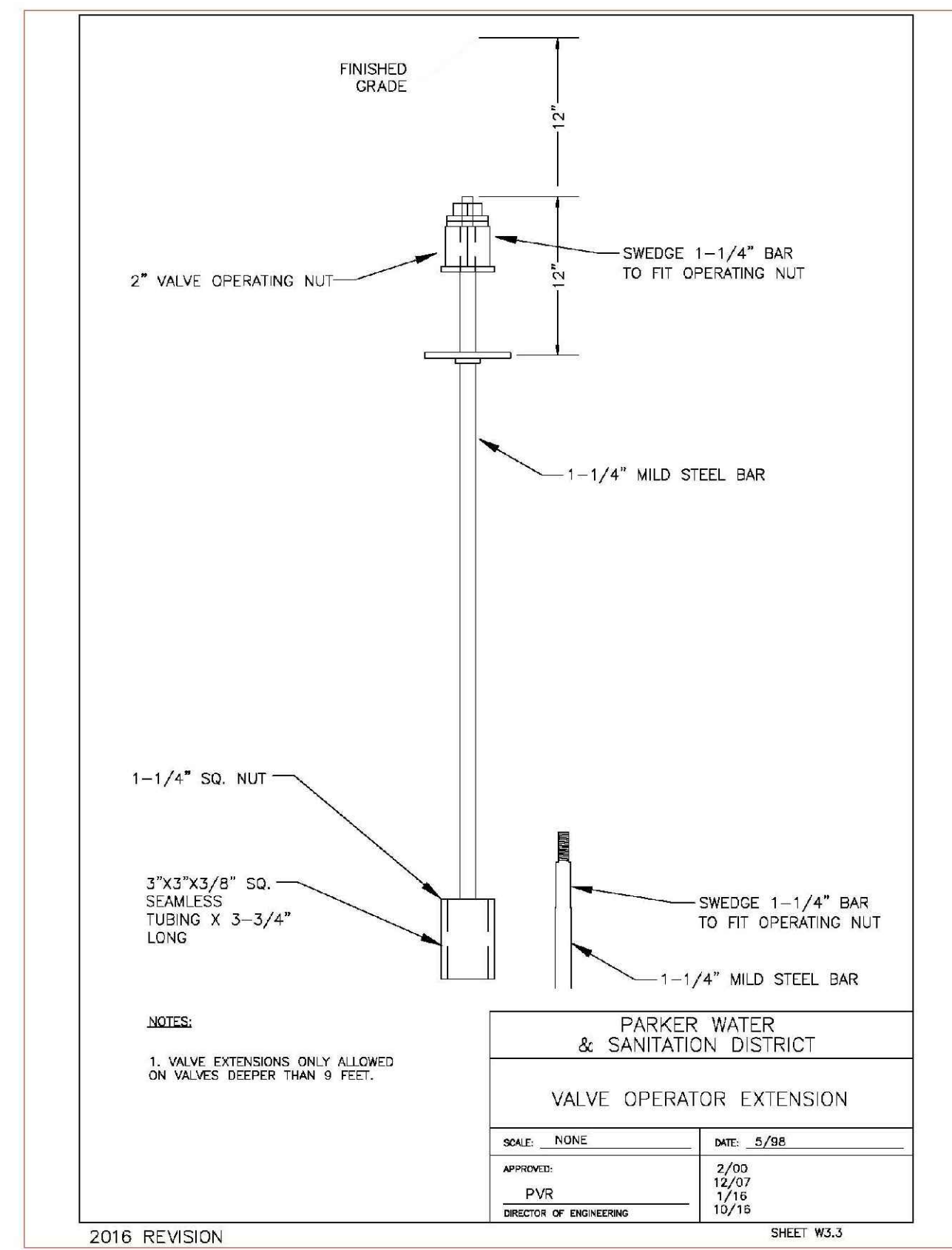
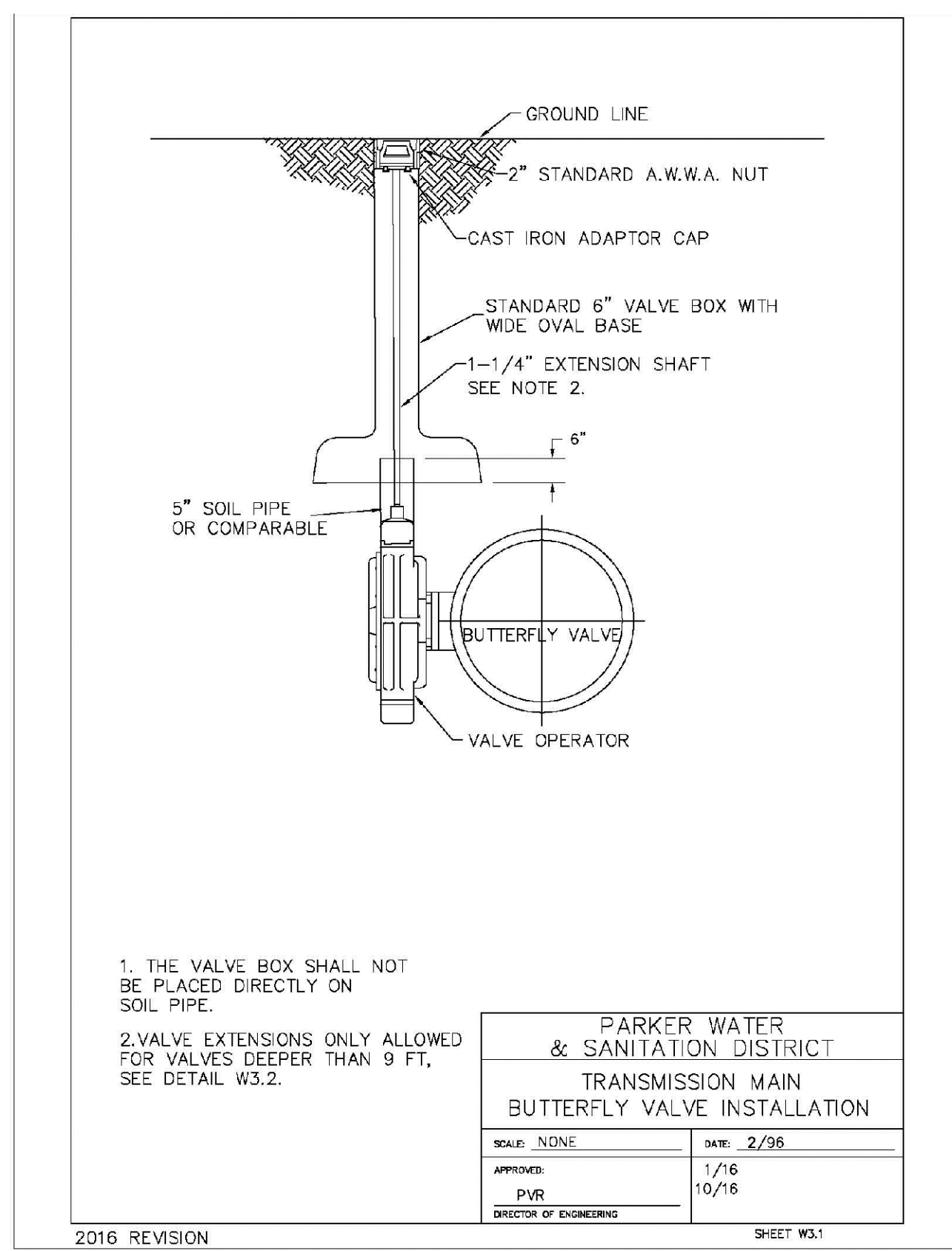
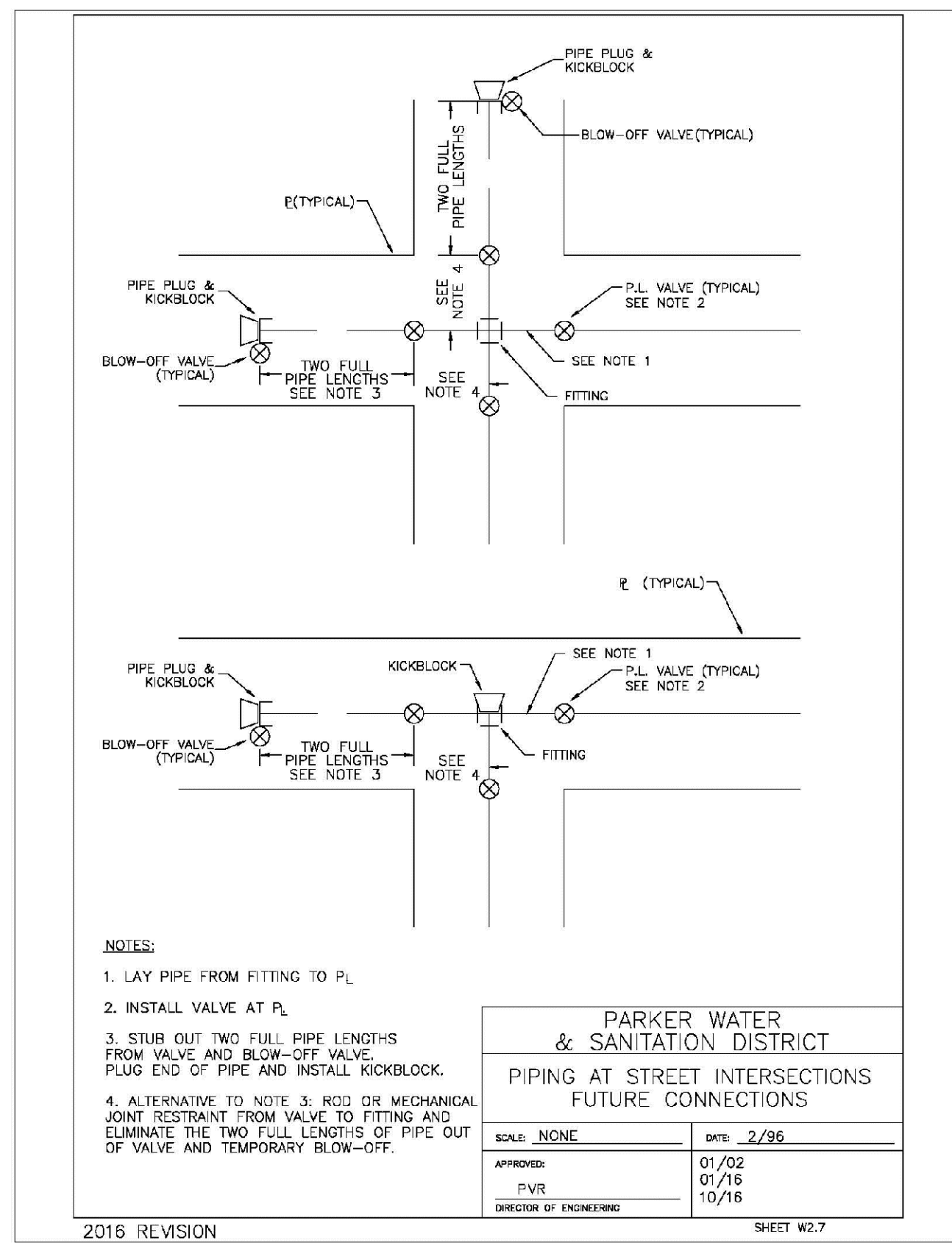
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	CHECKED BY: JJ	FILE NO: 8130283701							
SHEET NUMBER	9								

**TRAILS AT CROWFOOT
FILM 8 CONSTRUCTION DRAWINGS
WATER DETAILS**

HR 935 LLC
7353 South Alton Way
CENTENNIAL, CO 80112

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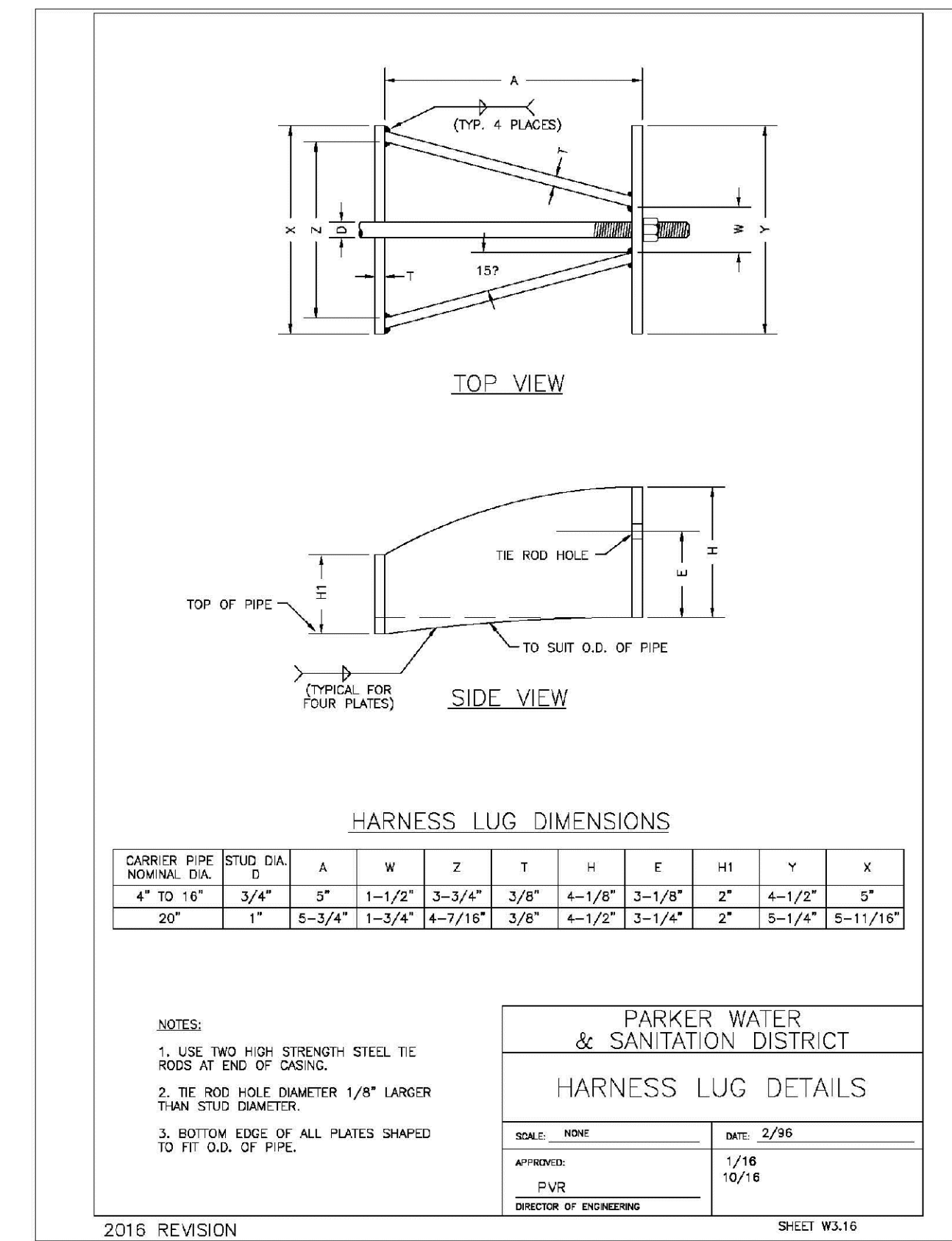
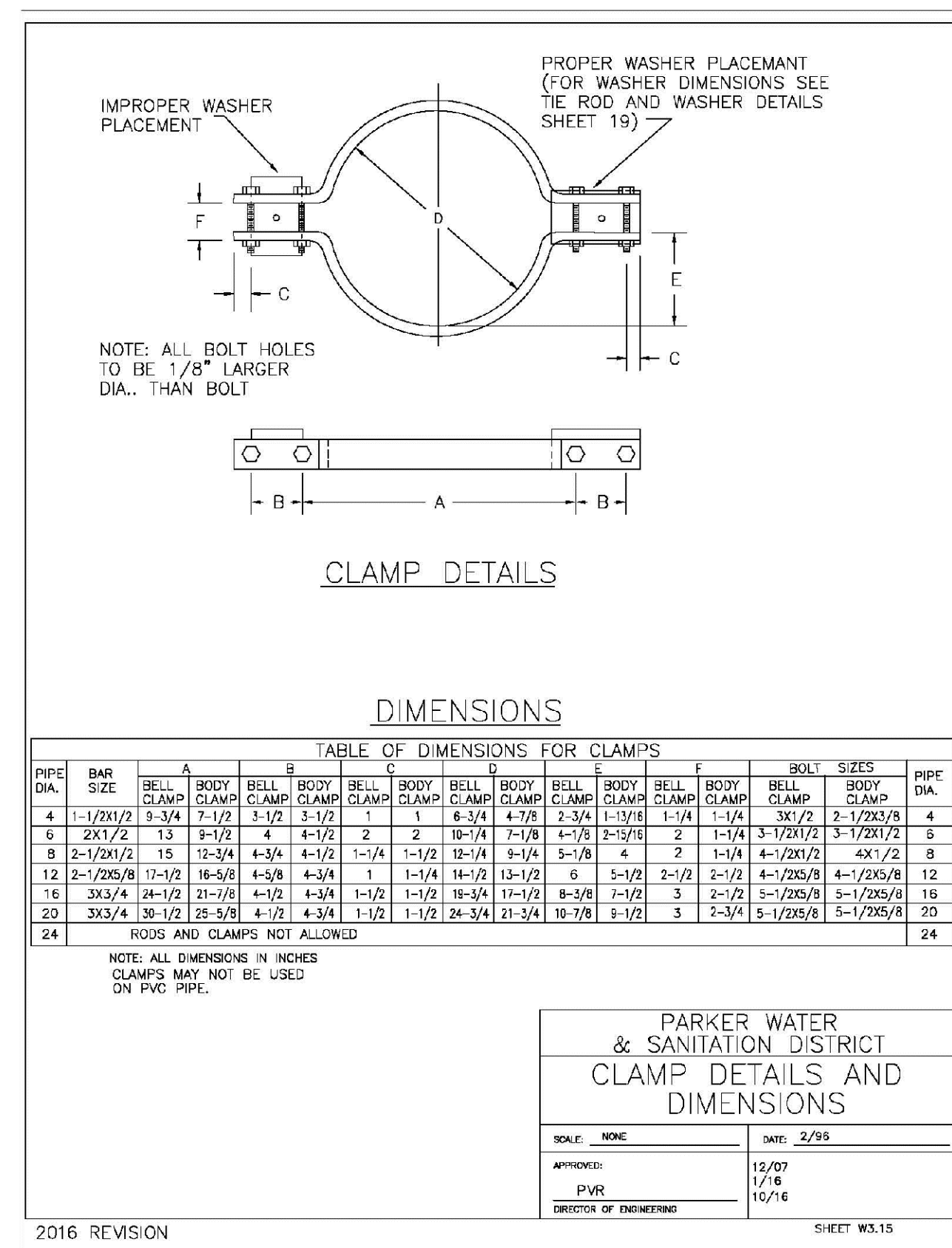
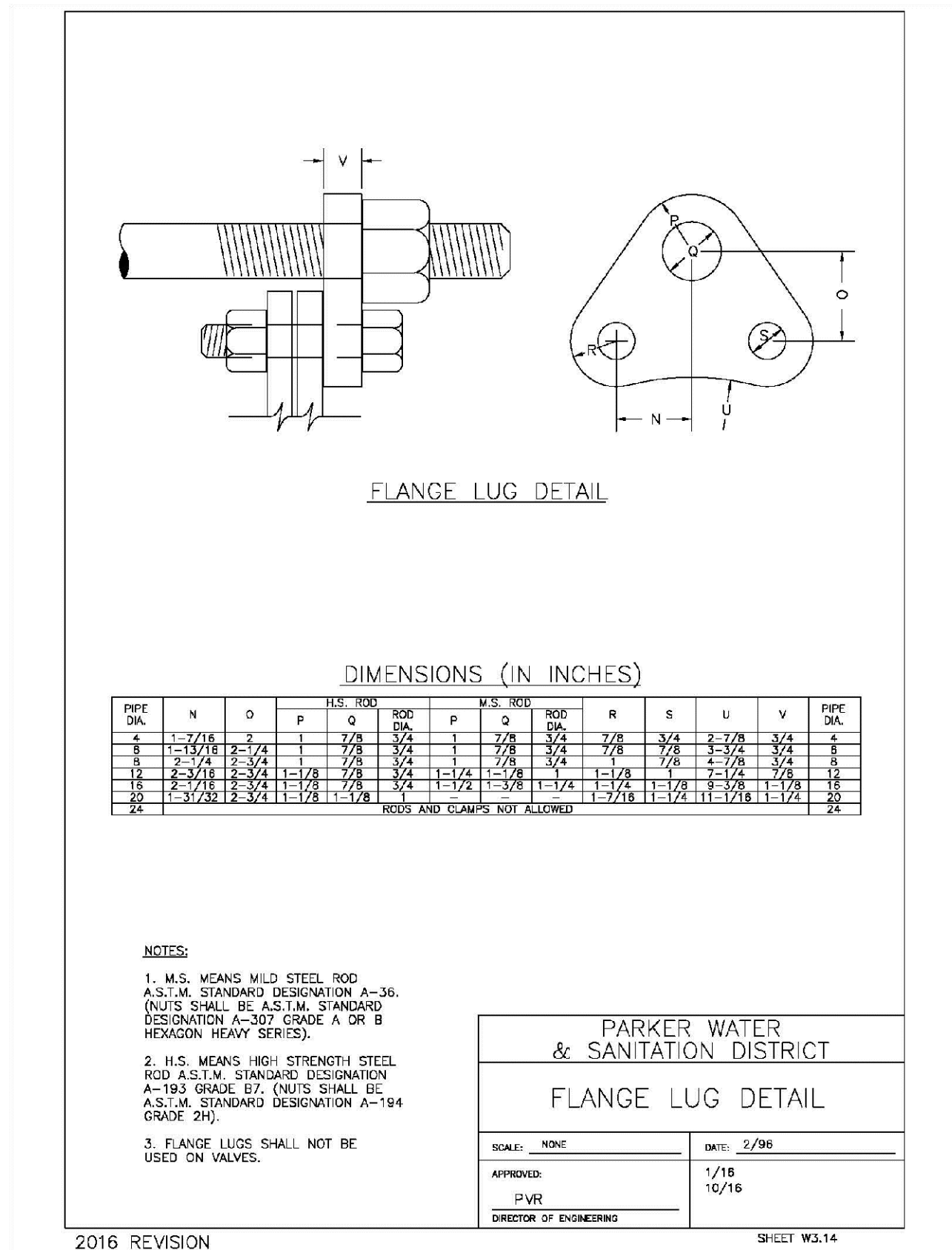
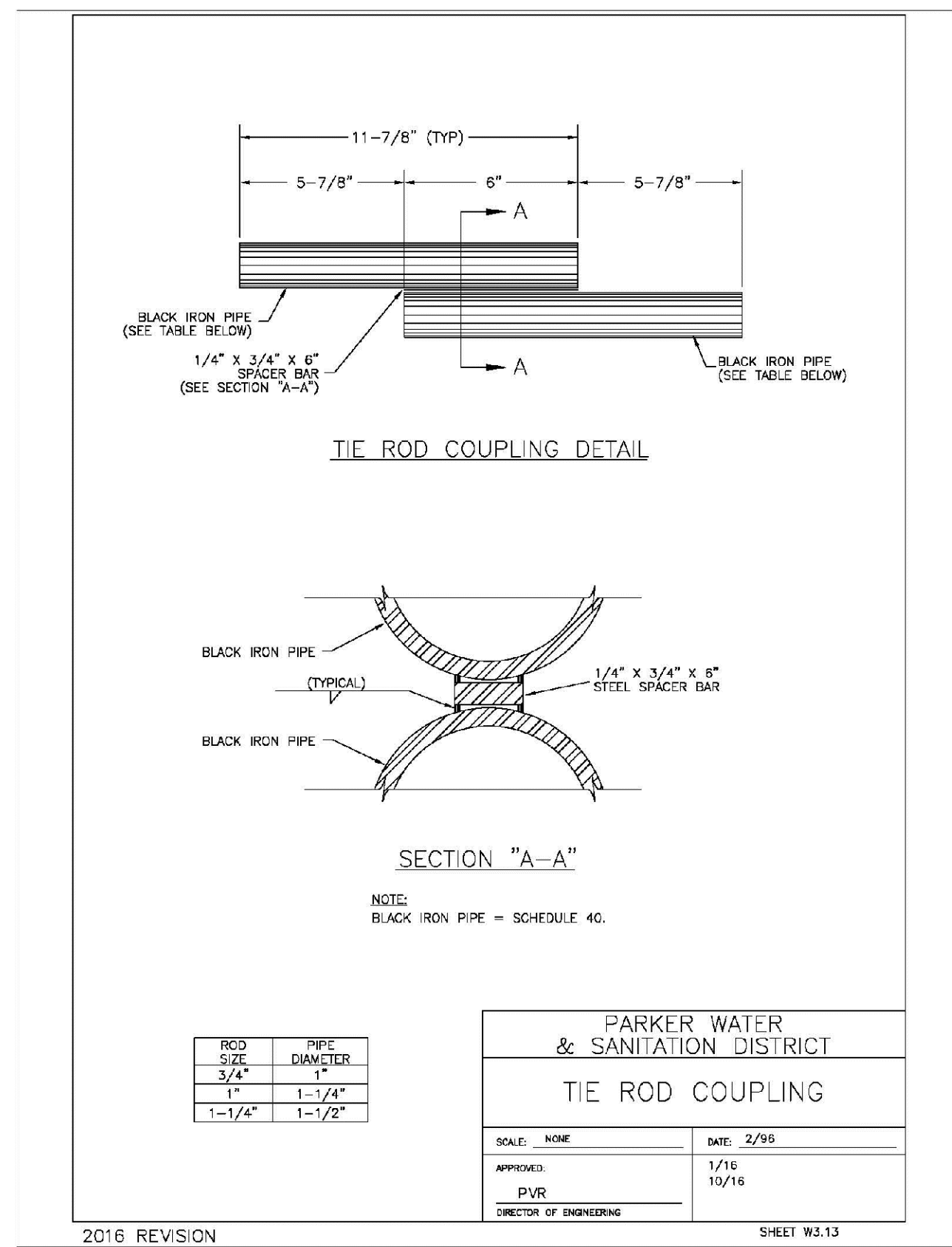
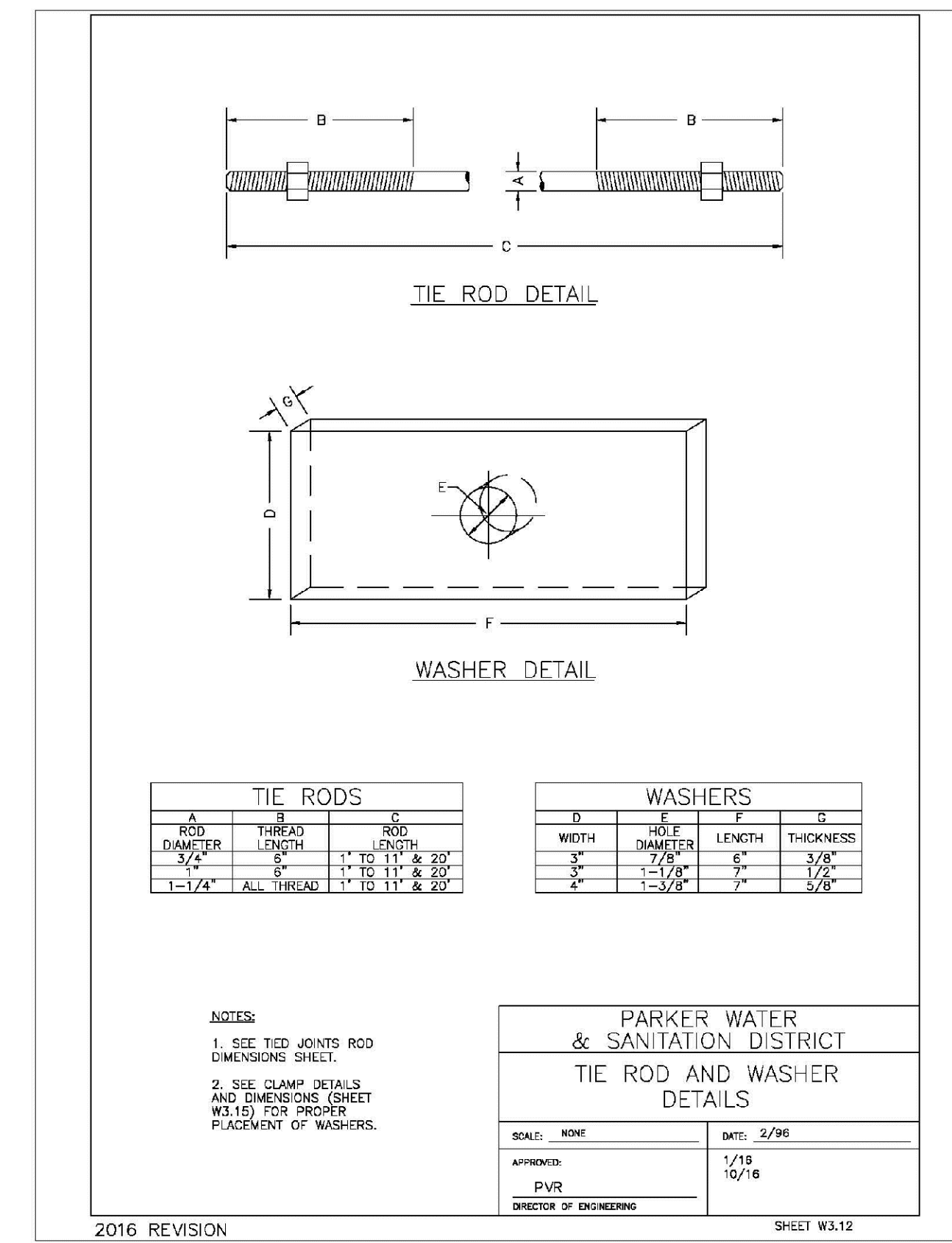
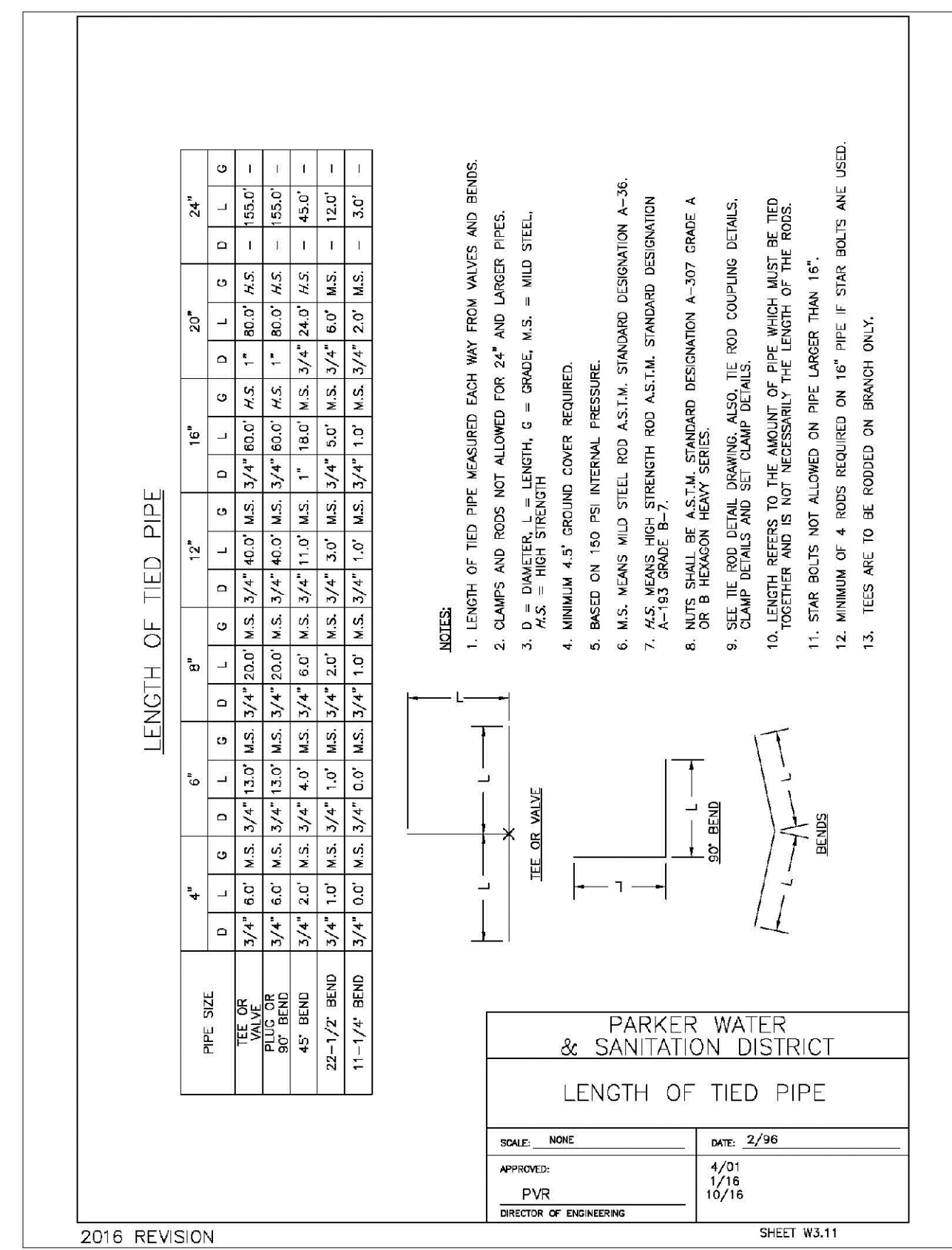
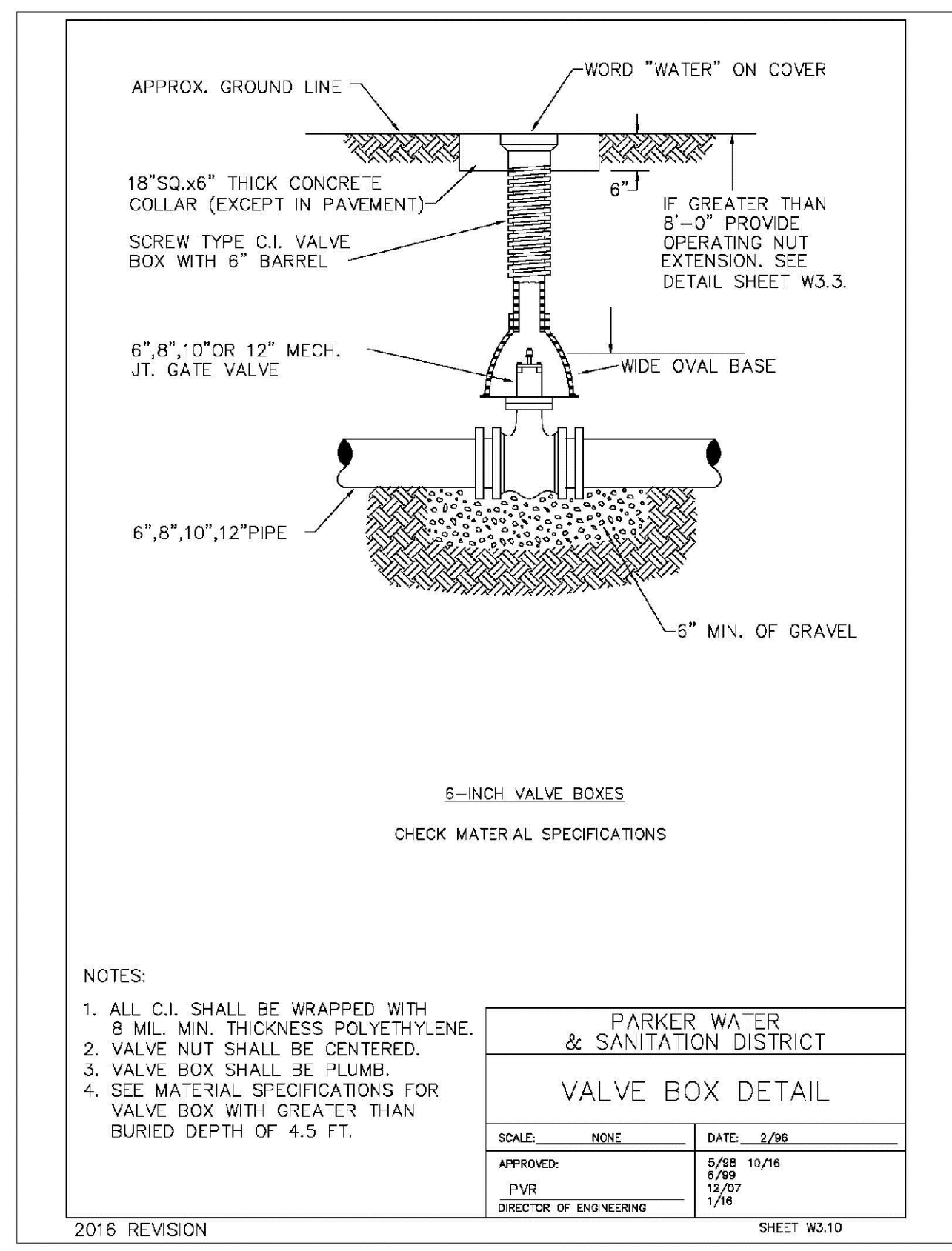
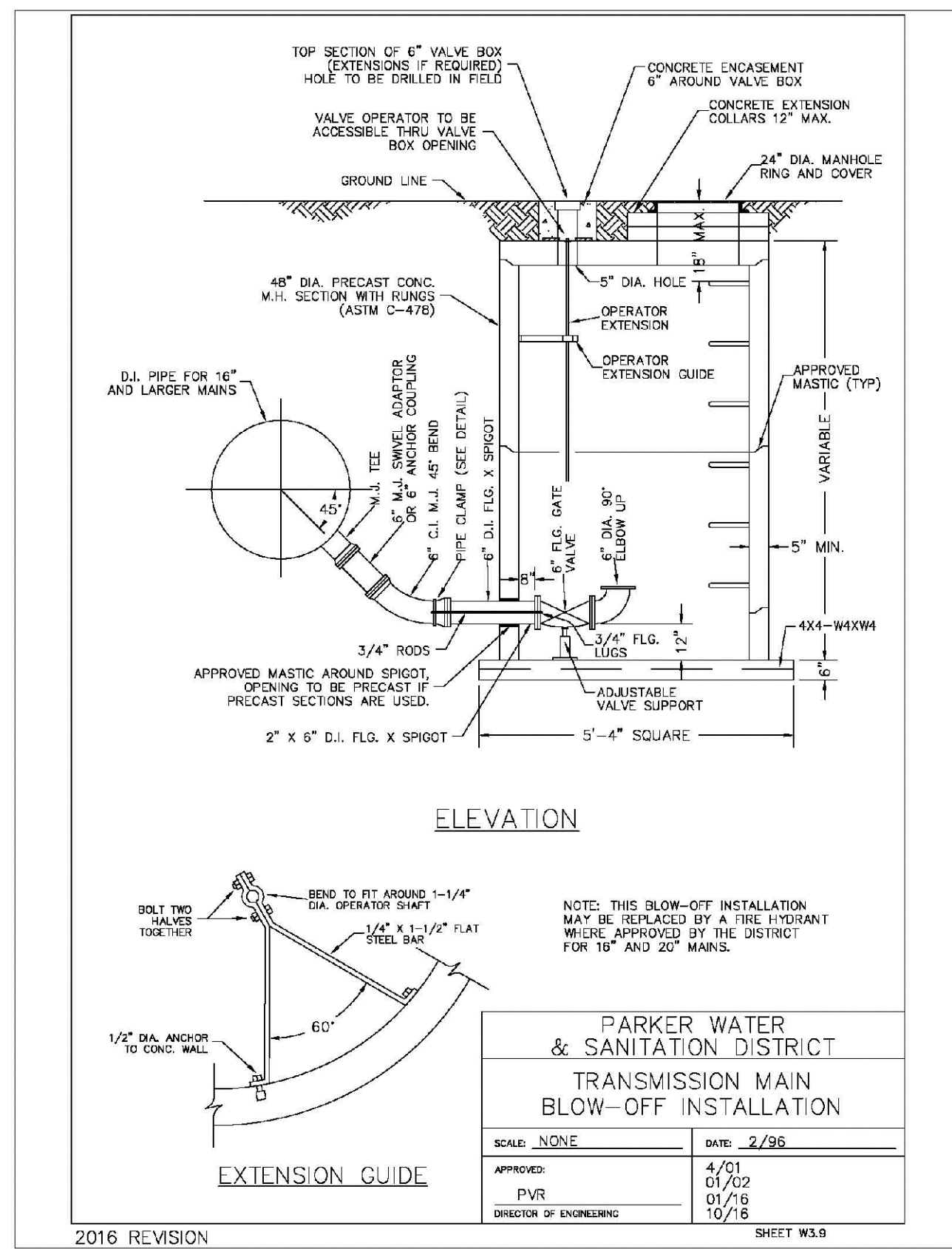
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Suite 410
Englewood, CO 80110
Tel: (720) 482-9526
Fax: (720) 482-9546



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10333 E. Dry Creek Rd. Suite 410 Englewood, CO 80150 Tel: (720) 482-9526 Fax: (720) 482-9546	Revisions	Date	Appr.	Date
CVL CONSULTANTS	No.	Date		
HR 935 LLC 7353 South Alton Way CENTENNIAL, CO 80112				
TRAILS AT CROWFOOT FILM 8 CONSTRUCTION DRAWINGS WATER DETAILS				
SCALE: AS SHOWN FILE NO: 8130283701				
DRAWN BY: JF CHECKED BY: JJ DATE: AUGUST 2017				
10				



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CVL CONSULTANTS

HR 935 LLC
7353 South Alton Way
CENTENNIAL, CO 80112

TRAILS AT CROWFOOT
FILM 8 CONSTRUCTION DRAWINGS
WATER DETAILS

SCALE: AS SHOWN
FILE NO: 8130283701

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

SHEET NUMBER: 11

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 1/16

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	2.00	2.00
8"	1.00	1.70	1.50	2.25	2.25
10"	1.00	1.95	1.75	2.50	2.50
12"	1.00	2.20	2.00	2.75	2.75
14"	1.00	2.45	2.25	3.00	3.00
16"	1.00	2.70	2.50	3.25	3.25
18"	1.00	2.95	2.75	3.50	3.50
20"	1.00	3.20	3.00	3.75	3.75
24"	1.00	3.70	3.50	4.25	4.25

NOTES:
1. ALL VALVES, TEES, BENDS AND PLUGS SHALL BE RESTRAINED AND KICKBLOCKED.
2. WATER HAMMER: 1" C.P. 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

TYPICAL CROSS SECTION

STANDARD LIFTING SLOT DETAIL

MACHINED SEAT

NOTES:
1. Coating Specifications: ASTM A-48 With A Minimum Tensile 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: 6/96

APPROVED: 12/97
PVR 1/16
DIRECTOR OF ENGINEERING 10/16

2016 REVISION SHEET W3.19

ACCESS MANHOLE AND AIR VALVE 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

STREET CUT PATCH

UNIFORM OUT LINE ASPHALT/CONCRETE

BACKFILL

NEW BASE COURSE

COMPACTED FILL ONLY IN OPEN FIELD. FLOWABLE FILL IN ROADWAY.

NOTE: MINIMUM COVER TO BE BELOW OFFICIAL STREET GRADE.

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"
14"	2'-4"	3'-4"
16"	2'-6"	3'-6"
18"	2'-8"	3'-8"
20"	3'-0"	4'-0"
24"	3'-4"	4'-4"

**PARKER WATER & SANITATION DISTRICT
TYPICAL TRENCH SECTION PIPE PROTECTION**

SCALE: NONE DATE: 2/96

APPROVED: 5/98
PVR 2/02
DIRECTOR OF ENGINEERING 10/16

2016 REVISION SHEET W4.1

PIPE BEDDING:

(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 fullness of the pipe and in the previously dug bed holes.

Tamping is herein defined as the act of placing approved bedding material under the fullness of the pipe, paying particular attention to voids, bed holes, and sling holes. The purpose of tamping is to ensure uniform support for the pipe.

The limits of bedding shall be from six inches (6") below the bottom of the pipe to twelve inches (12") above the top of the pipe. Approved bedding may then be installed to the groundline. See Chapter 2 of these Standards for details and composition of bedding.

Composition of bedding is not required. The only requirement is sufficient tamping to achieve uniform support under the pipe. See Sheet W4.1 of the Standard Details for a typical trench cross section.

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

Well-Graded Sand for 24-inch or larger diameter

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

Sandstone Sand for use with 20-inch or smaller

Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 200	0-3

If approved by the District, fines from the trench walls and spoils pile may be used to provide uniform support for the pipe. No rock or stone larger than that allowed by the sieve analysis, or any other detrital materials, shall be placed under the pipe from six inches (6") approved bedding materials shall be stockpiled on the jobsite to be used in the event natural materials become unsatisfactory. The District reserves the right to require the use of the specified bedding material at any time.

**PARKER WATER & SANITATION DISTRICT
PIPE BEDDING**

SCALE: NONE DATE: 2/96

APPROVED: 5/98
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 1 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: 5/98

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

NOTES:
1. FINAL APPROVAL OF BORING AND CASING METHOD AND MATERIALS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CONSTRUCTION.

**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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UNCC 1-800-922-1987

10338 E. Dry Creek Rd.
Suite 410
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Fax: (720) 482-9548

CVL CONSULTANTS

HR 935 LLC
7253 South Alton Way
CENTENNIAL, CO 80112

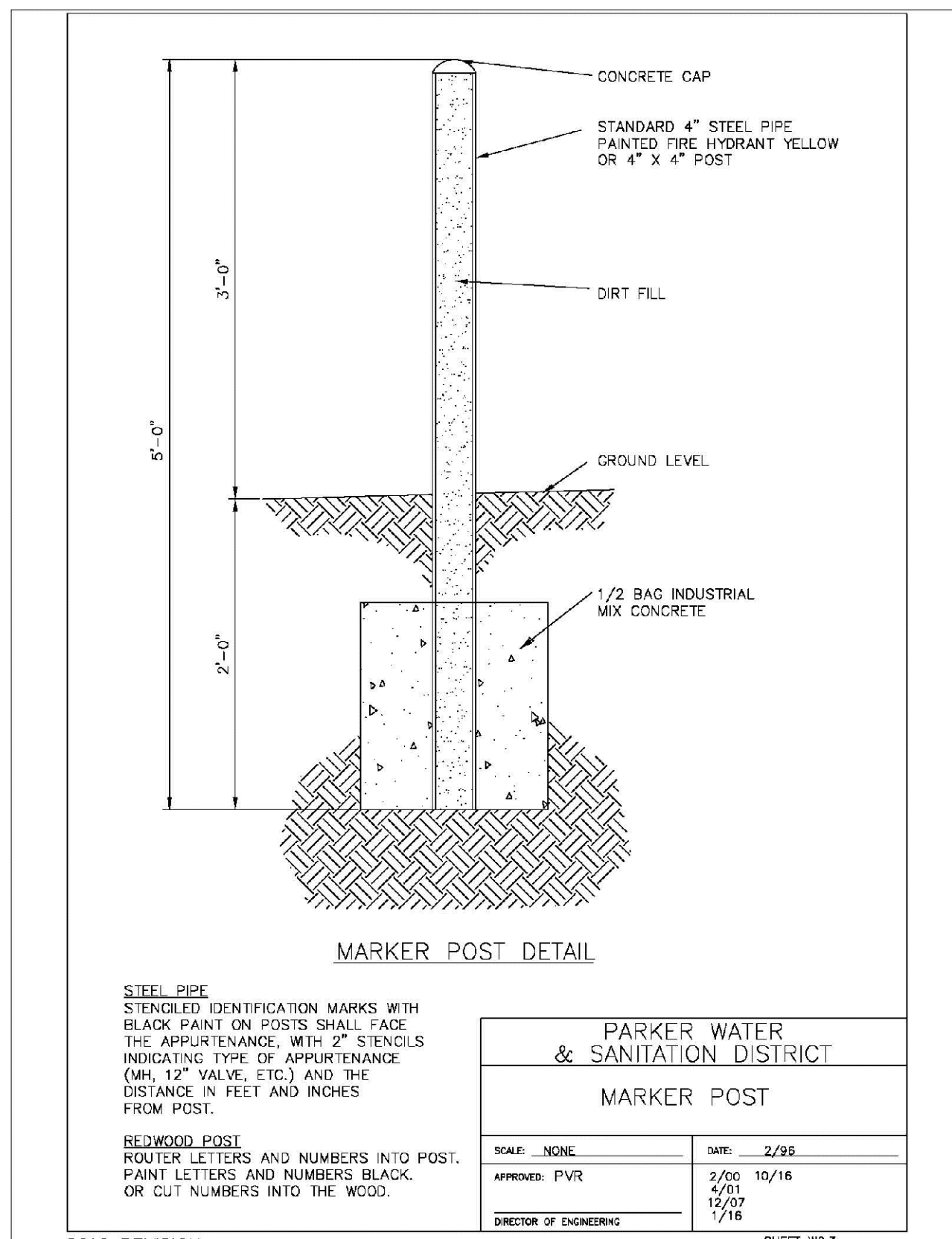
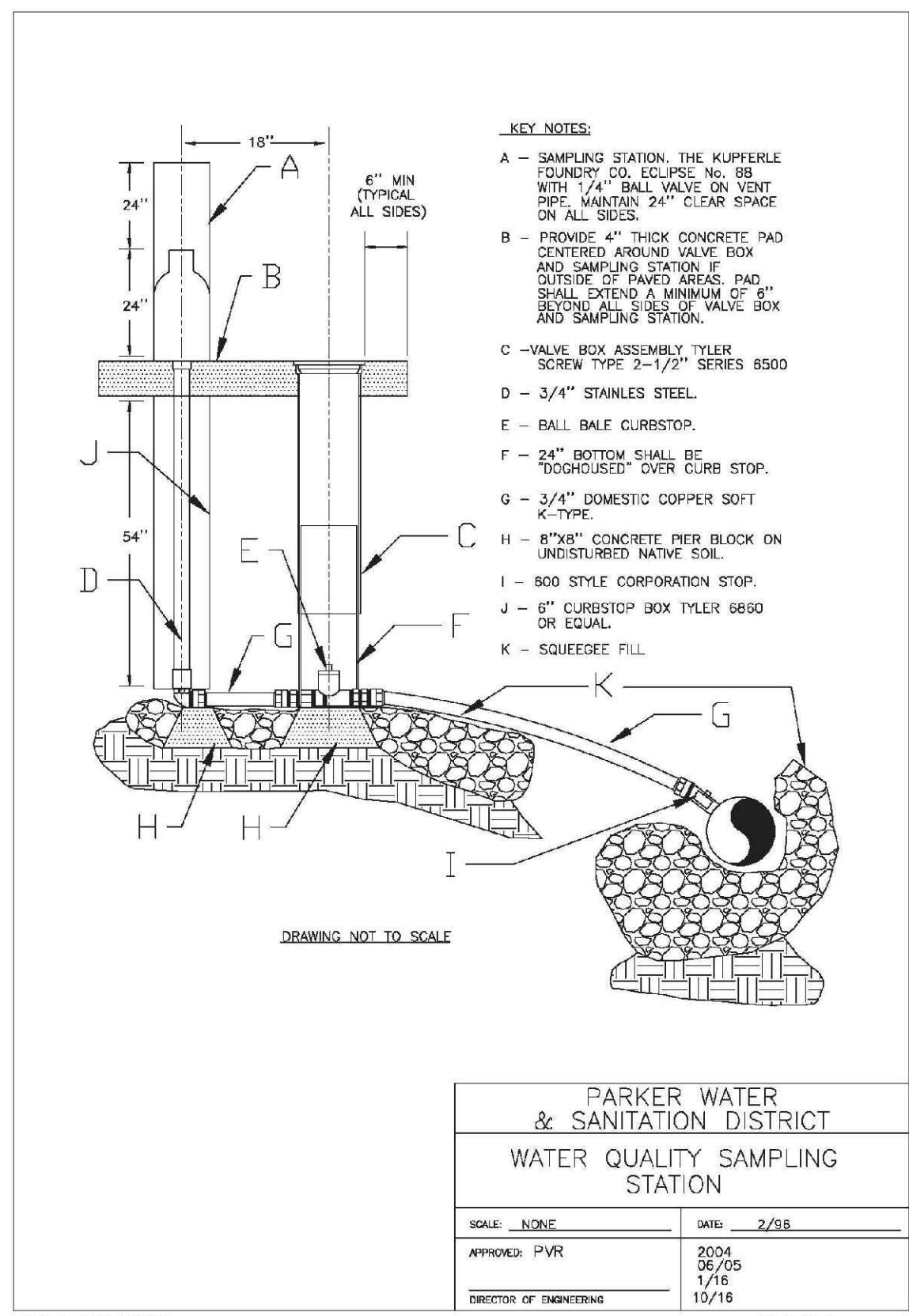
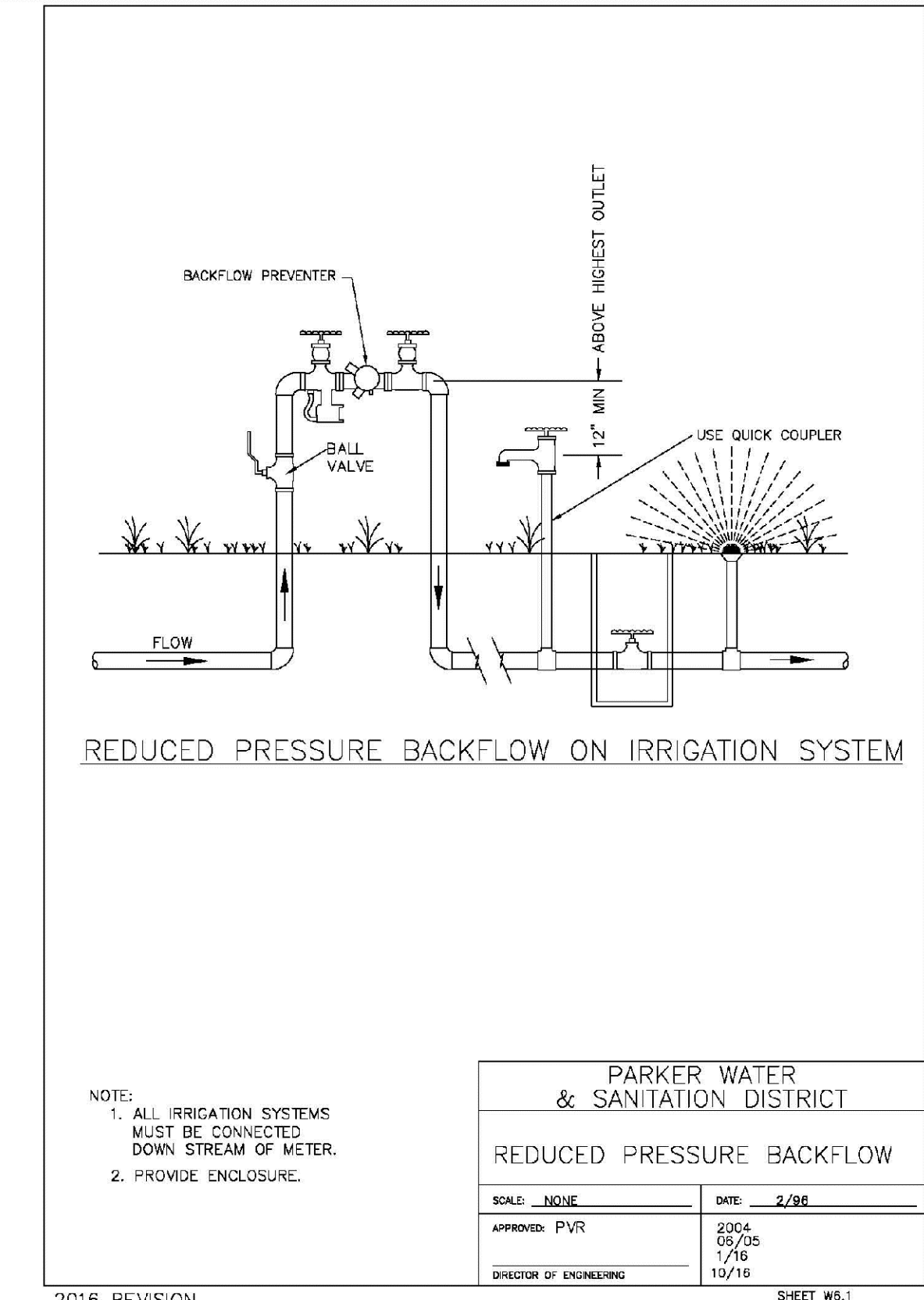
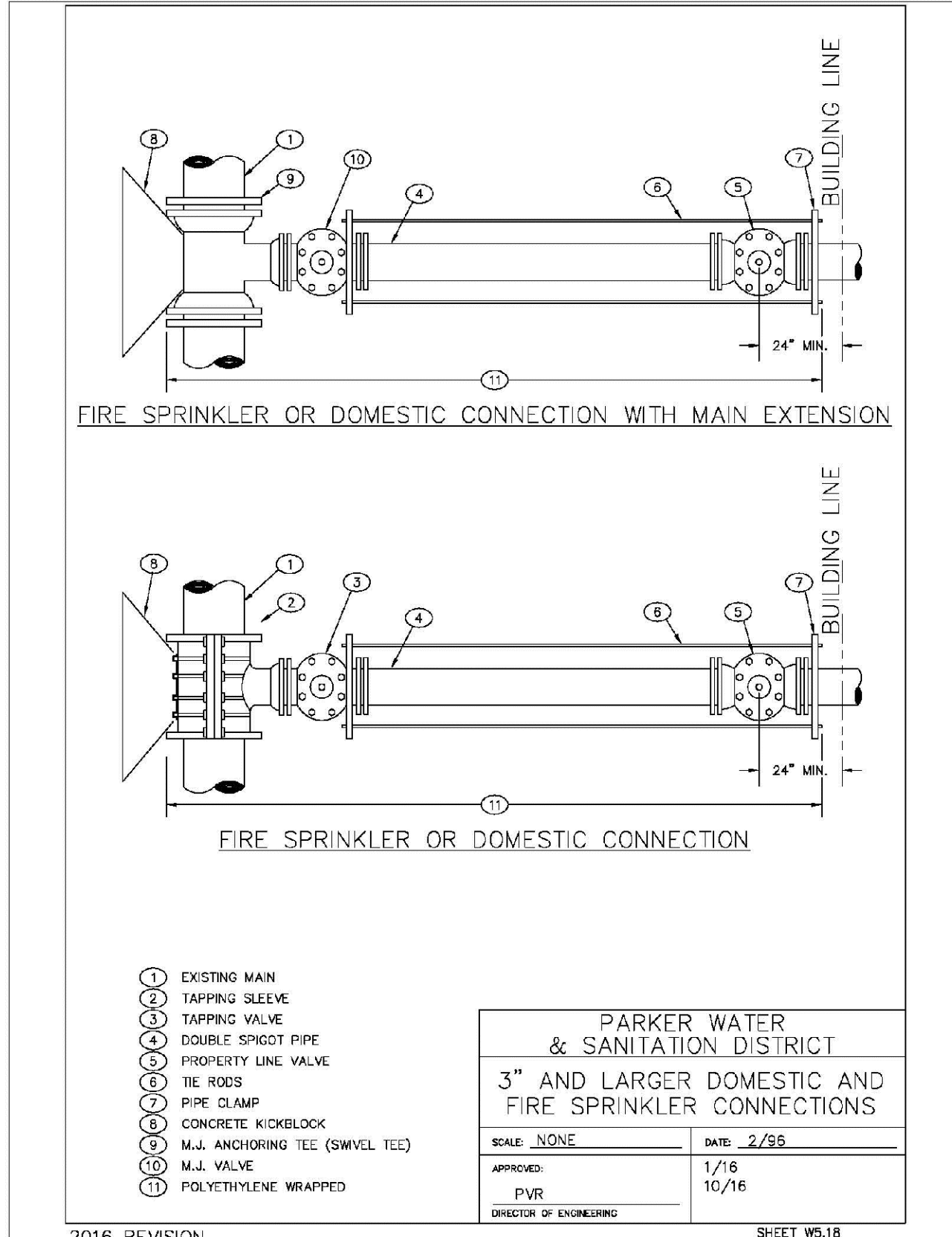
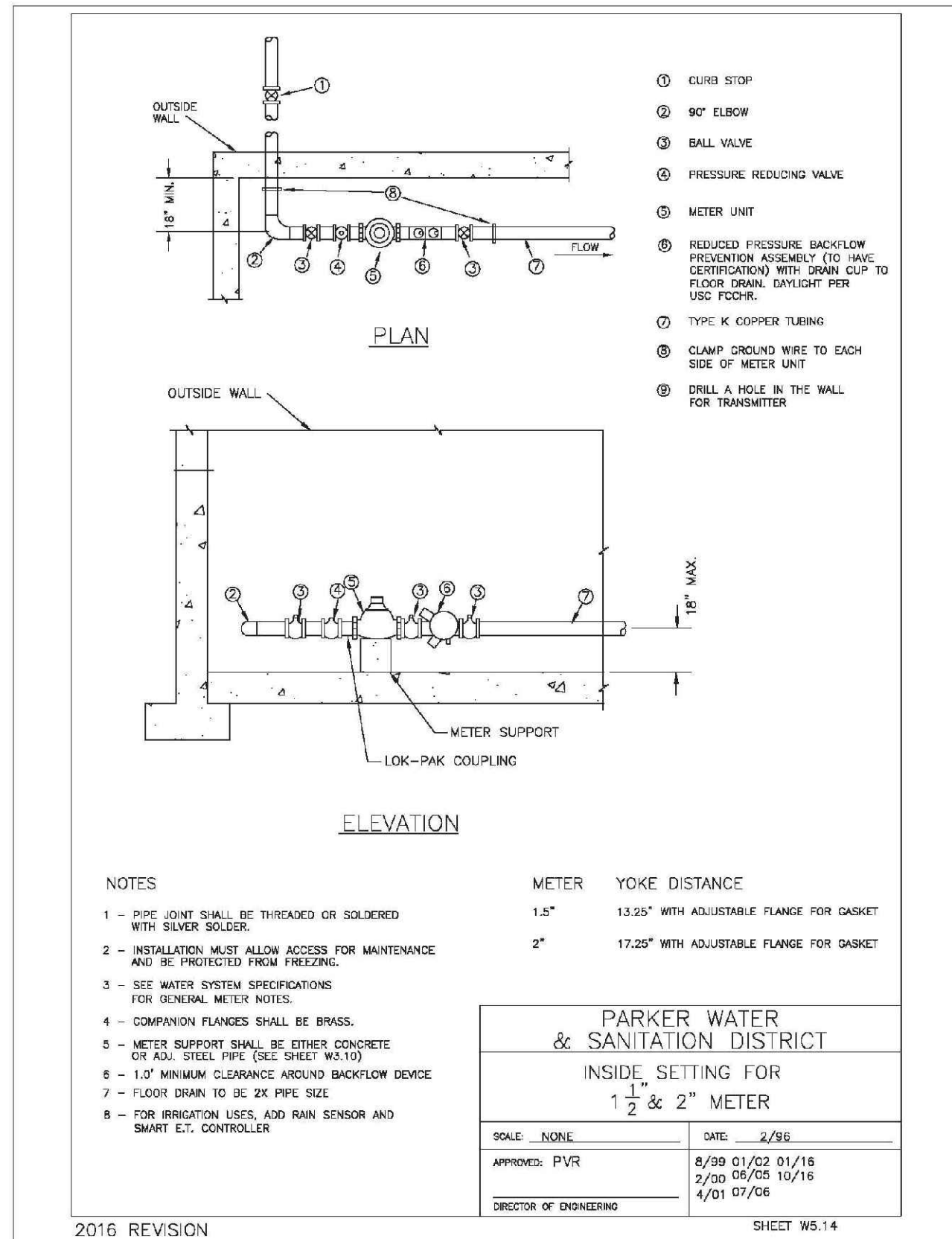
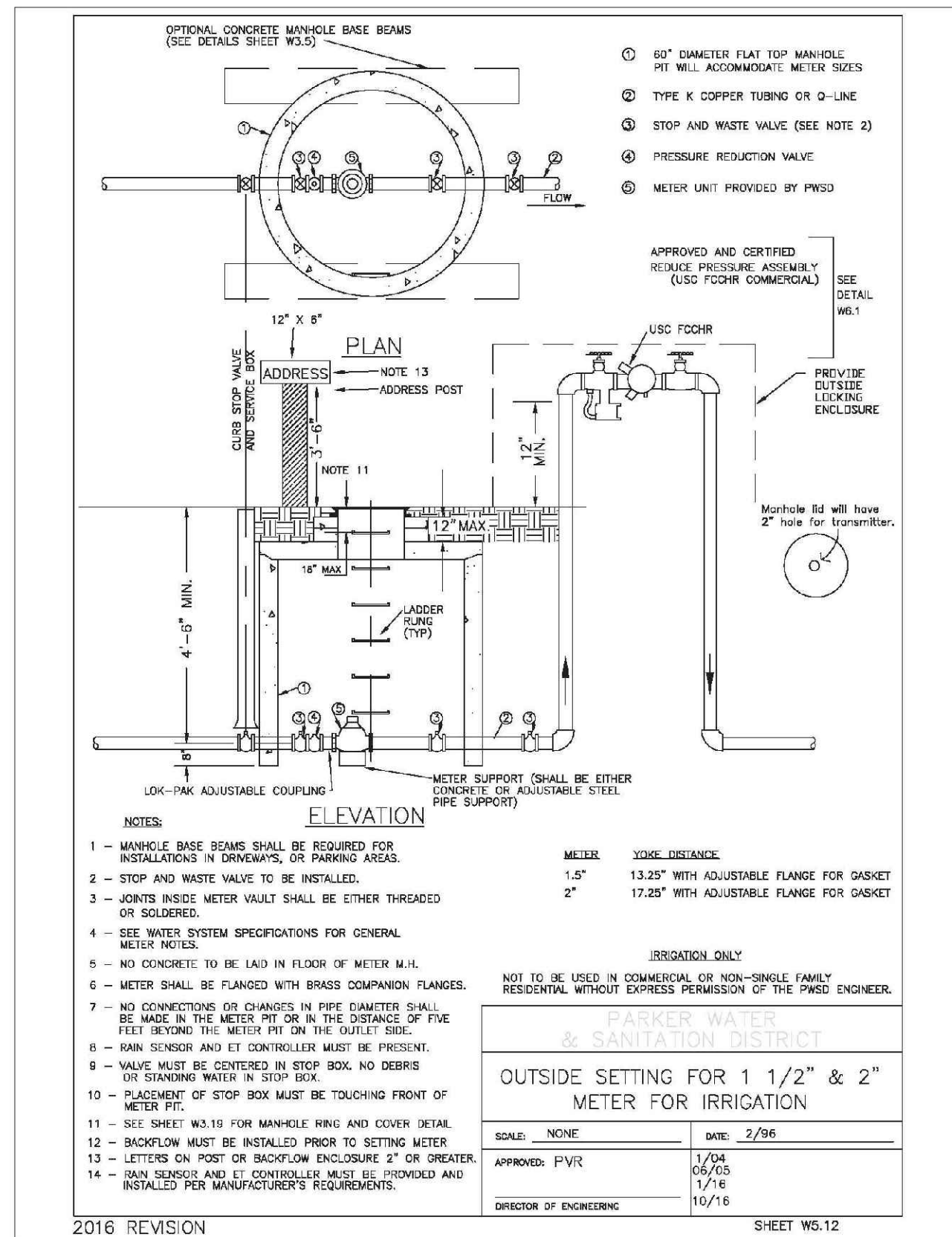
**TRAILS AT CROWFOOT
FILM 8 CONSTRUCTION DRAWINGS
WATER DETAILS**

SCALE: AS SHOWN
FILE NO: 8130283701

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

SHEET NUMBER: 12

Revisions: No. Date Init. Appr. Date



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SHEET NUMBER	DRAWN BY: JF	SCALE: AS SHOWN	CHECKED BY: JJ	DATE: AUGUST 2017	FILE NO: 8130283701	Revisions	Appr.	Date
							Init.	Date
TRAILS AT CROWFOOT FILING 8 CONSTRUCTION DRAWINGS WATER DETAILS								
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