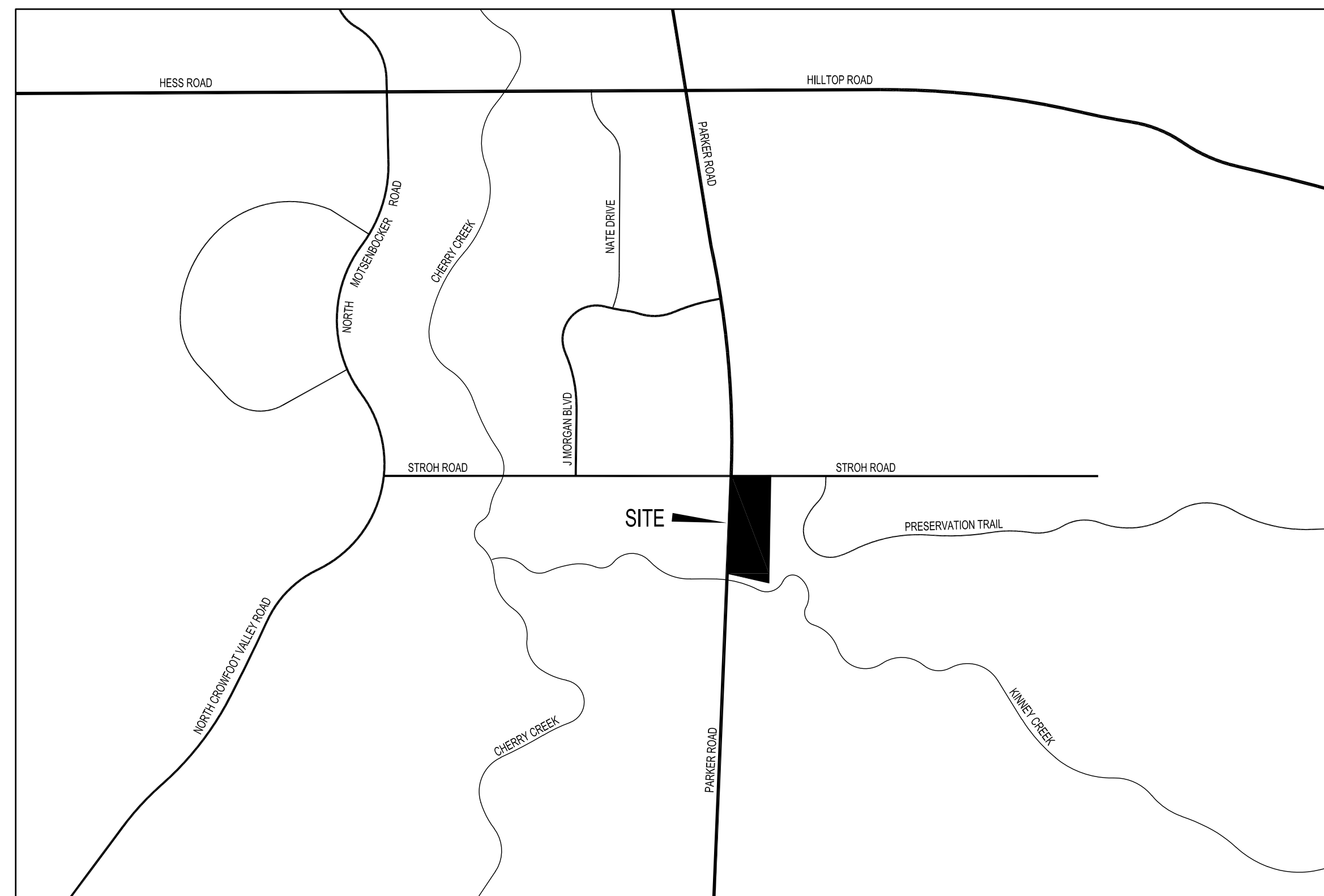


# WATER AND SANITARY SEWER CONSTRUCTION PLANS PARKER POINTE

LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINTE FILING NO. 1  
A PART OF SECTION 3, TOWNSHIP 7 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN  
TOWN OF PARKER, COUNTY OF DOUGLAS, STATE OF COLORADO

## GENERAL NOTES:

1. TOPOGRAPHIC MAPPING AS OF 03/05/14 PREPARED BY ENGINEERING SERVICE COMPANY, INC. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN HE SHALL, AT HIS EXPENSE, HAVE NEW MAPPING PREPARED BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR ACCEPTANCE AND APPROVAL.
2. CONTRACTOR SHALL REFER TO THE GRADING, EROSION AND SEDIMENT CONTROL (GESC) PLAN FOR ADDITIONAL REQUIREMENTS. NO WORK SHALL OCCUR UNTIL THE BMPs DEPICTED ON THE GESC HAVE BEEN INSTALLED AND ARE APPROVED BY THE CITY. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
3. EXISTING CONTOURS ARE SHOWN AT 1-FOOT INTERVALS; PROPOSED OVERLOT CONTOURS ARE SHOWN AT 1-FOOT INTERVALS.
4. ALL EARTHWORK, GRADING, OVERLOT GRADING, BACKFILLING, FILLING, EXCAVATION, COMPACTION, PAVEMENT, AND FLATWORK SHALL BE IN CONFORMANCE WITH THE GEOTECHNICAL REPORT PREPARED BY XXXXXXXX INC. TITLED XXXXX, DATED XXXX. THE CONTRACTOR IS REQUIRED TO HAVE A SIGNED AND SEALED COPY OF THE REPORT AT THE SITE AT ALL TIMES. DURING CONSTRUCTION, IF UNANTICIPATED CONDITIONS ARE ENCOUNTERED, THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED BY THE CONTRACTOR FOR RECOMMENDATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR:
  - a. VERIFYING ALL UTILITIES, WHETHER SHOWN OR NOT SHOWN, AND NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION. ALL UTILITIES TO REMAIN (MANHOLES, VALVE COVERS, CLEANOUTS, VAULTS, BOXES, ETC.) SHALL BE PROTECTED FROM DAMAGE AND ADJUSTED TO FINAL GRADE.
  - b. PREPARING ANY TRAFFIC CONTROL PLANS, AS MAY BE REQUIRED TO PERFORM THE WORK, AND PROVIDING ALL NECESSARY TRAFFIC CONTROL (SIGNS, BARRICADES, FLAGMEN, LIGHTS, ETC) IN ACCORDANCE WITH THE MUTCD, CURRENT EDITION, AS REQUIRED FOR THE WORK. THE PLAN FOR TRAFFIC CONTROL SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO COMMENCING ANY WORK IN THE RIGHTS-OF-WAY.
  - c. OBTAINING ALL NECESSARY PERMITS AND APPROVALS REQUIRED TO PERFORM THE WORK AND TO OBTAIN A COPY OF ALL APPLICABLE CODES, LICENSES, SPECIFICATIONS, AND STANDARDS NECESSARY TO PERFORM THE WORK, AND BE FAMILIAR WITH THEIR CONTENTS PRIOR TO COMMENCING ANY WORK.
  - d. KEEPING ONE COPY OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS ON THE JOB SITE AT ALL TIMES. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR TO VERIFY WITH PROJECT ENGINEER THE LATEST REVISION DATE OF THE APPROVED CONSTRUCTION PLANS.
  - e. COORDINATING PRIOR TO CONSTRUCTION WITH THE GEOTECHNICAL ENGINEER, THE CITY, AND UTILITY AND STORMWATER DISTRICT INSPECTORS TO IDENTIFY PROJECT INSPECTION AND TESTING REQUIREMENTS.
  - f. KEEPING TRACK OF ALL APPROVED DEVIATIONS FROM THE PLANS AND PROVIDING THE PROJECT ENGINEER WITH AS-BUILT DRAWINGS OF ALL IMPROVEMENTS REQUIRED FOR THE WORK.
  - g. COMPLYING WITH CITY GENERAL REQUIREMENTS, STANDARDS, AND SPECIFICATIONS.
  - h. PROVIDING AS-BUILT DRAWINGS OF CONSTRUCTED UTILITIES UPON COMPLETION OF THE WORK.



## VICINITY MAP

SCALE: 1" = 500'



## LEGAL DESCRIPTION

A TRACT OF LAND LOCATED IN SECTION 3, TOWNSHIP 7 SOUTH, RANGE 66 WEST OF THE 6TH P.M., DOUGLAS COUNTY, COLORADO, DESCRIBED AS FOLLOWS:  
BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 3; THENCE RUNNING WEST, 486 FEET; THENCE SOUTH 2°20' WEST, 1330 FEET; THENCE SOUTH 78°30' EAST, 535 FEET; THENCE NORTH, 1444 FEET TO THE POINT OF BEGINNING,  
EXCEPT THAT PORTION THEREOF LYING WITHIN EAST STROH ROAD AND EXCEPT THAT PORTION THEREOF TAKEN BY THE DEPARTMENT OF TRANSPORTATION, STATE OF COLORADO BY RULE AND ORDER, CASE NO. 90CV484 RECORDED MAY 11, 1993 IN BOOK 1124 AT

COUNTY OF DOUGLAS.

## BENCHMARK

BENCHMARK: DOUGLAS COUNTY SURVEY CONTROL MONUMENT TT15A - 3" DIAMETER DOUGLAS COUNTY GIS ALUMINUM CAP AT THE NE CORNER OF STROH ROAD AND SOUTH PARKER ROAD (US

ELEVATION: 5970.79 FEET (NAVD 1988 DATUM)

## BASIS OF BEARING

BEARINGS ARE BASED ON THE NORTH LINE OF THE NE 1/4 OF SECTION 3, TOWNSHIP 7 SOUTH, RANGE 66 WEST, OF THE 6TH PRINCIPAL MERIDIAN BEARING S89°59'29"W AND BOUNDED BY THE MONUMENTS SHOWN HEREON.

## PARKER WATER AND SANITATION PLAN SET

C7.00	WATER AND SEWER COVER SHEET
C7.01	WATER AND SEWER GENERAL NOTES
C7.09	OVERALL UTILITY PLAN
C7.10	WATER PLAN AND PROFILE
C7.11	WATER PLAN AND PROFILE
C7.12	WATER PLAN AND PROFILE
C7.13	WATER PLAN AND PROFILE
C7.14	SANITARY SEWER PLAN AND PROFILE
C7.15	SANITARY SEWER PLAN AND PROFILE
C7.90-C7.91	SANITARY SEWER DETAILS
C7.92-C7.94	WATER DETAILS
L100	TREE PRESERVATION PLAN
L101-L106	LANDSCAPE PLAN - COMMON AREAS / ROW
L107	LANDSCAPE DETAILS - COMMON AREAS / ROW LEGEND
L108	LANDSCAPE NOTES
IR101-IR106	IRRIGATION PLAN - COMMON AREAS / ROW
IR107	IRRIGATION LEGEND AND NOTES
IR108 - IR109	IRRIGATION DETAILS

## ENGINEER

HEREBY AFFIRM THAT THESE CONSTRUCTION PLANS FOR PARKER POINTE CONSTRUCTION PLANS WERE PREPARED BY ME (OR UNDER MY DIRECT SUPERVISION) IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AGENCY STANDARDS AND SPECIFICATIONS, FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP.

JERRY W. DAVIDSON, P.E.  
PROFESSIONAL ENGINEER REGISTRATION NO. 30226  
PERCEPTION DESIGN GROUP, INC.

## PARKER WATER AND SANITATION DISTRICT

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 SCHEDULING 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: \_\_\_\_\_

APPROVED FOR CONSTRUCTION:  
PARKER WATER AND SANITATION DISTRICT  
BY: \_\_\_\_\_  
(DISTRICT ENGINEER)

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

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATION 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 NFPA 24 WHEN SUBMITTING FOR REVIEW.)

## UTILITY NOTES

1. ROADWAY DIMENSIONS ARE FROM FL-FL. 1-FOOT PAN IS PROPOSED ONSITE.
2. ALL UTILITY CONSTRUCTION SHALL CONFORM TO PARKER WATER AND SANITATION DISTRICT AND CRITERIA REFERENCE. LOCAL AGENCY INFRASTRUCTURE DESIGN AND CONSTRUCTION STANDARDS.
3. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE PARKER WATER AND SANITATION DISTRICT THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
4. THE CONTRACTOR SHALL NOTIFY THE TOWN OF PARKER PUBLIC WORKS AND PARKER WATER AND SANITATION DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO STARTING CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES. EXISTING UTILITIES SHOWN ON THIS PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN AND DO NOT REFLECT A COMPLETE SURVEY OF EXISTING UTILITIES. CONTACT THE ENGINEER WITH DISCREPANCIES.
6. CONTRACTOR SHALL VERIFY THE STUB TIE IN ELEVATION PRIOR TO START OF CONSTRUCTION. THE ELEVATION OF THE STUB SHALL BE COORDINATED WITH THE ENGINEER PRIOR TO SANITARY SEWER CONSTRUCTION.
7. SAWCUT OF EXISTING STREETS SHALL BE IN CONFORMANCE WITH TOWN STANDARDS. CUTS SHALL STRAIGHT WITH CLEAN EDGES. REMOVE EXISTING CURB AND GUTTER TO NEAREST JOINT RETURN ALONG EXISTING LINE AND GRADE.
8. THE OWNER AND OR THEIR REPRESENTATIVE SHALL BE RESPONSIBLE FOR COORDINATION WITH EXISTING FRANCHISE UTILITIES TO INCLUDE COMCAST, XCEL, CENTURY LINK OR OWNERS OF EXISTING DRY UTILITY LINES.
9. EXISTING UTILITY SURFACE APPURTENANCES SHALL BE RAISED TO FINISHED GRADE, THIS INCLUDES BUT IS NOT LIMITED TO MANHOLE LIDS, VALVE COVERS.
10. SITE SURVEY IS PROVIDED BY ESC DATED 2-8-2016.
11. THE CONTRACTOR SHALL HAVE AN APPROVED SET OF CONSTRUCTION PLANS ON SITE AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR THE CONSTRUCTION, NOTIFYING AND SCHEDULING LOCAL AGENCIES INSPECTIONS.
12. ALL PIPE LENGTHS ARE MEASURED FROM CENTER OF FITTING TO CENTER OF FITTING STATIONING IS ALIGN DRIVE CENTERLINE AND CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
13. ELEVATIONS ARE FINISHED GRADE ELEVATION UNLESS OTHER WISE NOTED.

## WATER QUANTITIES

6" G.V.	12	EA
6" HYDRANT ASSY.	10	EA
8" G.V.	15	EA
8"X6" TEE	13	EA
8"X8" TEE	5	EA
8" 45° BEND	4	EA
8" PVC	2693	LF
6" DIP	237	LF
TIE TO EXISTING	3	EA
AIR VAC / RELEASE VALVE	3	EA
6" PLUG	2	EA
6" CAP	2	EA
LOWERING INCLUDING FITTINGS	6	EA
LOW POINT BLOWOFF	6	EA

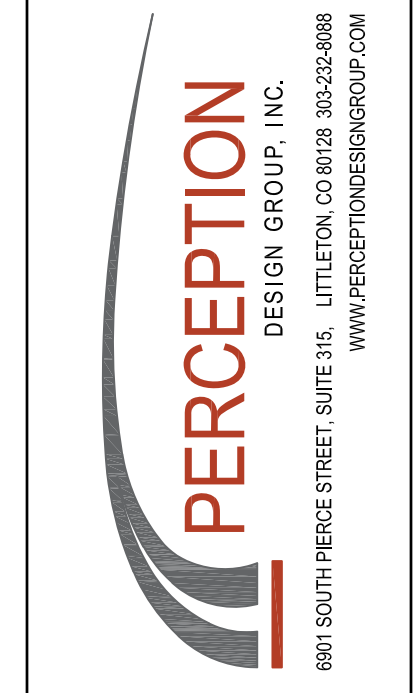
## SANITARY SEWER QUANTITIES

DESCRIPTION	QUANTITY	UNIT
<b>SANITARY SEWER</b>		
4" DIAMETER SAN. MANHOLE	10	EA
8" PVC	1949	LF
6" PVC	337	LF
SERVICE CAP	15	EA
18" BORING AND CASING	180	LF

<b>TOWN OF PARKER</b>	<b>CIVIL ENGINEER</b>
PUBLIC WORKS 20120 E. MAIN STREET PARKER, CO 80138 (303) 840-9546	PERCEPTION DESIGN GROUP, INC. 6901 S. PIERCE ST., SUITE #315 LITTLETON, CO 80128 (303) 232-8088 CONTACT: JERRY DAVIDSON
<b>GAS PROVIDER</b>	<b>DEVELOPER</b>
XCEL ENERGY 550 15TH STREET, SUITE 700 DENVER, CO 80202 1-800-628-2121	PARKER & STROH, LLC 975 LINCOLN STREET, SUITE 204 DENVER, CO 80203 (303) 699-3368 CONTACT: DAN YACOVETTA
<b>WATER/SEWER PROVIDER</b>	<b>ARCHITECT</b>
PARKER WATER AND SANITATION DISTRICT 18100 WOODMAN DR, PARKER, CO 80134 PARKER, CO 80134 (303) 841-4627 DRAYTON SANDERSON	IRELAND DEAN 425 WILCOX ST, STE 120 CASTLE ROCK, CO 80104 (720) 878-6534 CONTACT: SHANNIN ALBERS
<b>ELECTRIC PROVIDER</b>	<b>SURVEYOR</b>
INTERMOUNTAIN RURAL ELECTRIC ASSOCIATION 5496 NORTH U.S. HIGHWAY 85 SEDALIA, CO 80135 (303) 888-3100	ENGINEERING SERVICE COMPANY 1300 SOUTH POTOMAC STREET, SUITE 126 AURORA, CO 80012 (303) 337-1393 CONTACT: CHIP BECKSTROM
<b>FIRE PROTECTION</b>	
SOUTH METRO FIRE AND RESCUE 9195 EAST MINERAL AVENUE CENTENNIAL, CO 80112 (720) 989-2244 CONTACT: RANDY CAPRA	

**CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987**  
CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES.

CAUTION: NOTICE TO CONTRACTOR THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



PREPARED UNDER THE DIRECT SUPERVISION OF JERRY W. DAVIDSON, P.E. COLORADO REG # 30226 FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP, INC.

NO.	DATE	DESCRIPTION
11/01/18	SIXTH SUBMITTAL	
08/31/18	FOURTH SUBMITTAL	
05/25/18	THIRD SUBMITTAL	
03/19/18	PWSO SUBMITTAL	
02/28/18	SECOND SUBMITTAL	
10/24/17	INITIAL SUBMITTAL	

**WATER AND SANITARY COVER**

PARKER POINTE  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINTE FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
PARKER, COLORADO

design by: JWD  
approved by: JWD  
project no.: 2015-015  
date: 10/01/17  
SHEET  
**C7.00**

I:\PDG-MAST\PROJECTS\2015-015 PARKER AND STROH.DWG WATER AND SANITARY PLANS\2015-015 CDS - CVR & NOTES.DWG 11/28/2018 10:01 AM

I:\PDG-MAS\PUBLIC\PROJECTS\2015-015 PARKER AND STROH.DWG WATER AND SANITARY PLANS\2015-015 CDS - CVR & NOTES.DWG 11/5/2018 2:23 PM

**PARKER WATER AND SANITATION DISTRICT  
GENERAL NOTES**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PWSD ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST VERSION.
- THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY COMPANIES AND THE TOWN OF PARKER, DOUGLAS COUNTY AND OTHER NEIGHBORING CITIES AND TOWNS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ANY EXISTING UTILITY (INCLUDING DEPTHS) WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- ALL ITEMS SHOWN ON THE PLANS AS EXISTING ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE ACTUAL LOCATIONS MAY VARY FROM THE PLANS, ESPECIALLY IN THE CASE OF UNDERGROUND UTILITIES. WHENEVER THE CONTRACTOR DISCOVERS A DISCREPANCY IN LOCATIONS CONTACT THE PWSD IMMEDIATELY.
- PWSD ENGINEER AND OTHER APPROVING AGENCIES ARE TO BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ALL PERMITS NECESSARY TO PERFORM THE PROPOSED WORK.
- ALL CONCRETE SHALL BE A MINIMUM OF CLASS A, 6 SACK, TYPE II, 3000-POUND COMPRESSION STRENGTH.
- THE DESIGN ENGINEER SHALL SUBMIT ONE (1) SET OF "AS-BUILT" DRAWINGS AND ELECTRONIC FILES TO THE DISTRICT ENGINEER FOR APPROVAL BY DISTRICT. AFTER APPROVAL HAS BEEN GRANTED BY THE DISTRICT ENGINEER, FULL SIZE PRINTS SHALL BE TRANSMITTED TO THE PWSD OFFICE.
- NO WORK SHALL BE BACKFILLED UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE DISTRICT ENGINEER OR REPRESENTATIVE OF THE DISTRICT ENGINEER. ALL BACKFILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY. COMPACTION TESTS MUST BE SUBMITTED TO DISTRICT ENGINEER PRIOR TO PROBATIONARY ACCEPTANCE.
- TRENCHES SHALL BE EXCAVATED AND THE PIPE EXPOSED FOR THE INSPECTION AT ANY LOCATION ON THE PROJECT IF SO ORDERED BY THE INSPECTOR.
- THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROPER FUNCTIONING OF LINES (WATER AND SEWER) FOR UP TO TWO (2) YEARS FROM THE DATE OF PROBATIONARY ACCEPTANCE OF THE LINES BY THE DISTRICT. ANY MALFUNCTION DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY THE CONTRACTOR TO THE SATISFACTION OF THE DISTRICT ENGINEER AT NO EXPENSE TO THE DISTRICT.
- SURFACE GRADES ARE TO BE WITHIN PLUS OR MINUS ONE FOOT OF FINISHED GRADE AND VERIFICATION OF COMPACTION RESULTS OBTAINED PRIOR TO THE INSTALLATION OF WATER AND SEWER LINES. RESULTS MUST BE SUBMITTED TO THE DISTRICT ENGINEER.
- ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:  
"X" FOR SANITARY SERVICE SEWERS  
"V" FOR WATER SERVICES
- NO TREES ALLOWED IN EASEMENTS OR WITHIN 8' OF WATER OR SANITARY SEWER MAINS IN RIGHT OF WAY.
- THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE PWSD AND THE DISTRICT ENGINEER AND ONE (1) COPY OF THE LATEST PWSD SPECIFICATION MANUAL.

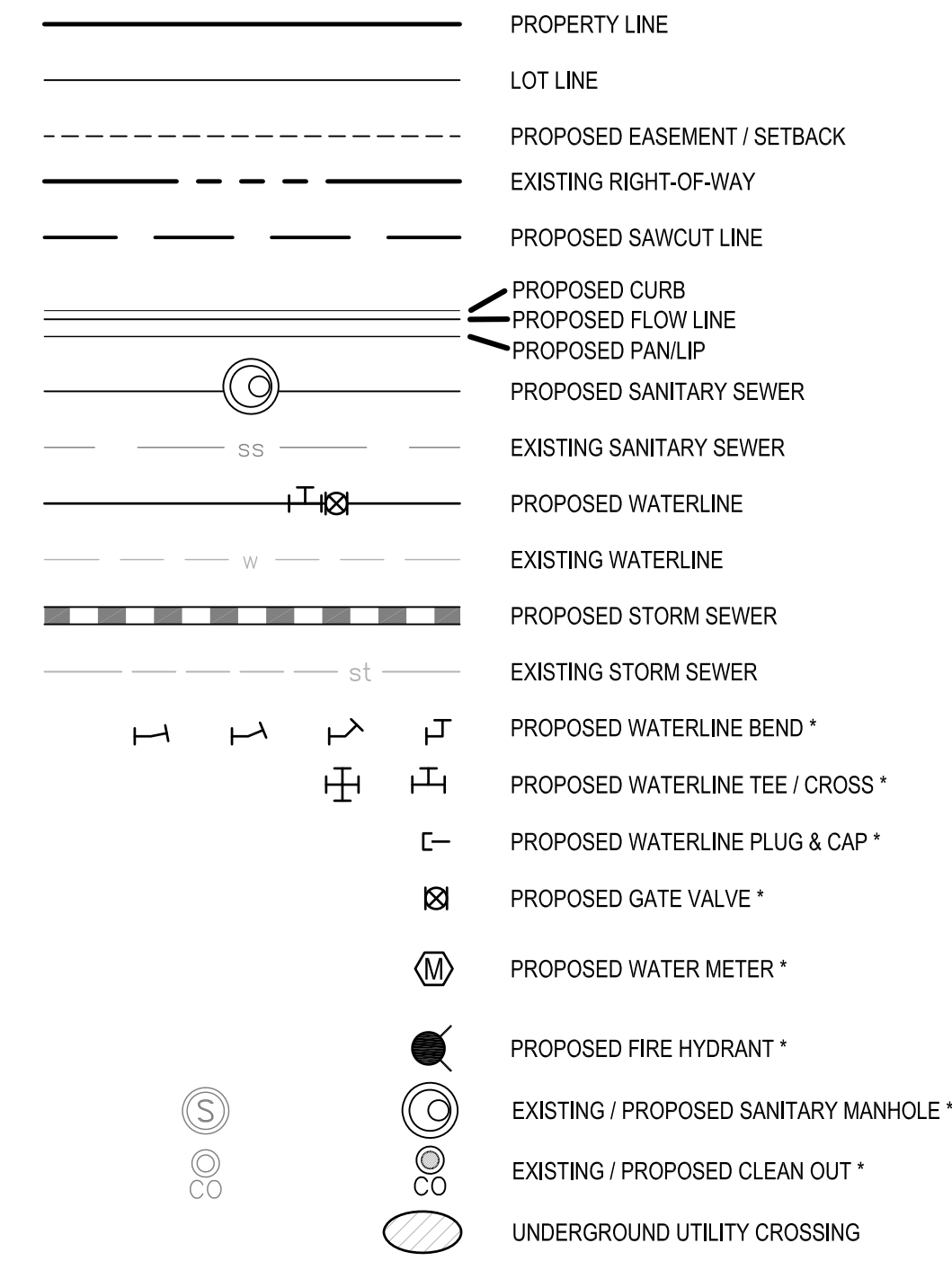
**PARKER WATER AND SANITATION DISTRICT  
WATER SYSTEM NOTES**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PWSD ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST REVISION.
- ALL WATER MAINS SHALL BE PER PWSD MATERIALS SPECIFICATIONS. ALL MATERIALS IN CONTACT WITH POTABLE WATER SHALL BE SUITABLE FOR CHLORINATED AND CHLORAMINATED WATER.
- ALL BENDS, PLUGS, REDUCERS, AND FIRE HYDRANTS TO BE RODDED OR MEGA-LUGGED. ALL FITTINGS SHALL BE WRAPPED PER PWSD MATERIALS SPECIFICATIONS.
- THERE SHALL BE A MINIMUM COVER OF 4.5 FEET OVER ALL WATER MAINS.
- FIRE HYDRANTS SHALL CONFORM TO AWWA C-502 "DRY BARREL FIRE HYDRANTS" PIPE HYDRANT ASSEMBLIES PER PWSD SPECIFICATIONS.
- ALL BENDS, TEES, FIRE HYDRANTS, BLOW-OFFS, AND PLUGS AT DEAD-END MAINS SHALL BE PROTECTED FROM THRUST WITH CONCRETE THRUST BLOCKS.
- PRECAUTIONS SHALL BE TAKEN TO PROTECT THE INTERIOR OF PIPES, FITTINGS, AND VALVES AGAINST CONTAMINATION. ALL OPENINGS IN THE PIPELINE SHALL BE CLOSED WITH WATERTIGHT PLUGS WHEN PIPE LAYING IS STOPPED AT THE CLOSE OF THE DAY'S WORK OR FOR OTHER REASONS, SUCH AS REST BREAKS OR MEAL PERIODS.
- VALVES IN STREETS ARE TO BE LOCATED AT PROPERTY LINE EXTENSIONS EXCEPT FOR TAPPING TEES; WHERE AN ADDITIONAL VALVE SHALL BE PLACED ON THE TAPPING TEE. OTHER LOCATIONS SHOWN ON THE PLANS.
- WHEN NECESSARY TO LOWER OR RAISE WATER LINES AT STORM DRAINS AND OTHER UTILITY CROSSING, A MINIMUM CLEARANCE OF 1.5 FEET SHALL BE MAINTAINED BETWEEN OUTSIDE OF PIPES.
- THE CONTRACTOR SHALL NOTIFY THE PWSD AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION, IF WORK IS SUSPENDED FOR ANY PERIOD OF TIME AFTER INITIAL START-UP, THE CONTRACTOR MUST NOTIFY THE DISTRICT ENGINEER 48 HOURS PRIOR TO RE-START.
- PIPE BEDDING SHALL BE A CLEAN, WELL-GRADED SAND OR SQUEEGEE SAND IN ACCORDANCE WITH PWSD STANDARDS AND SPECIFICATIONS, LATEST REVISION.
- THE CONTRACTOR SHALL NOTIFY THE PUBLIC UTILITY COMPANIES AND DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO PROCEEDING WITH THE EXCAVATION. ALL WORK PERFORMED IN THE AREA OF THE PUBLIC UTILITIES SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS OF THESE AGENCIES.
- COMPACTION OF ALL TRENCHES MUST BE ATTAINED IN ACCORDANCE WITH THE SOILS REPORTS AND COMPACTION TEST RESULTS SUBMITTED TO THE DISTRICT ENGINEER PRIOR TO PROBATIONARY ACCEPTANCE.
- AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE OFFICE OF THE DISTRICT ENGINEER AND ATTENDED BY THE CONTRACTOR, DESIGN ENGINEER, AND REPRESENTATIVE OF OTHER APPROVING AGENCIES.
- CHLORINATION AND FLUSHING: ALL WATER MAINS SHALL BE INSTALLED AND CHLORINATED PER PWSD SPECIFICATIONS. CHLORINATION OF FINISHED PIPELINE COMPLETED BEFORE HYDROSTATIC TESTING.
- HYDROSTATIC TESTING: ALL WATER MAINS SHALL BE TESTED PER THE REQUIREMENTS OF THE PWSD SPECIFICATIONS UP TO MINIMUM OF 150 PSI IN THE PRESENCE OF A PWSD INSPECTOR/ENGINEER.

**PARKER WATER AND SANITATION DISTRICT  
SANITARY SEWER SYSTEM NOTES**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PWSD ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST VERSION.
- ALL SEWER MAINS SHALL BE PVC, ASTM D-3034, SDR 35 OR APPROVED EQUAL. ALL SEWER MAIN SIZE IS 8" IN DIAMETER UNLESS OTHERWISE NOTED.
- SEWER LINES SHALL BE INSTALLED 5.0 FEET SOUTH OR WEST OF STREET CENTERLINE, UNLESS OTHERWISE SHOWN ON PLANS. SEWER LINES SHALL BE 10.00 FEET FROM WATER LINES EXCEPT WHEN CROSSING EACH OTHER. SEWER LINES WHICH CROSS LESS THAN 1.50 FEET VERTICALLY FROM THE WATER MAIN SHALL BE ENCASED IN CONCRETE AS PER PWSD SPECIFICATIONS. USE RUBBER GASKETS FOR PVC ENCASEMENT.
- SEWER RIM ELEVATIONS SHOWN ARE APPROPRIATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. RING AND COVER SHALL BE SET IN CENTERED CONCRETE RINGS WITH RIM-NECK FOR ADJUSTMENT TO MATCH FINAL PAVEMENT ELEVATIONS.
- THE CONTRACTOR AND SURVEY CREW SHALL VERIFY ELEVATIONS OF EXISTING SEWER LINES AND MANHOLES TO BE TIED TO PRIOR TO CONSTRUCTION OR STAKING OF SANITARY SEWER.
- NO UNDERDRAIN SYSTEM WILL BE ALLOWED TO BE PLACED IN MAINLINE OR SEWER SERVICE TRENCHES.
- SEWER SERVICE TEES FOR EACH UNIT SHALL BE STAKED BY A SURVEY CREW AND FURNISHED AND INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER "AS CONSTRUCTED" LOCATION OF TEES. SEWER WYES SHALL BE USED RATHER THAN TEES.
- ALL MANHOLES SHALL BE 48-INCHES IN DIAMETER WITH 24-INCH RING AND COVER, ECCENTRIC CONE UNLESS OTHERWISE SPECIFIED. ALL MANHOLES SHALL HAVE SHAPED INVERTS.
- PIPE BEDDING SHALL BE CLASS "B" AND SHALL CONFORM TO ASTM C-33 OR D-448 GRADATION NO. 6 OR NO. 67.
- AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE OFFICE OF THE DISTRICT ENGINEER AND ATTENDED BY THE CONTRACTOR AND REPRESENTATIVES OF THE OTHER APPROVING AGENCIES. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE DISTRICT ENGINEER TO SCHEDULE THIS MEETING.
- THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE PWSD AND THE DISTRICT ENGINEER AND ONE (1) COPY OF THE LATEST PWSD SPECIFICATION MANUAL.
- ALL SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE PWSD STANDARDS AND SPECIFICATIONS PRIOR TO ACCEPTANCE OR ANY CONNECTION TO AN EXISTING SEWER LINE.
- PRIOR TO STARTING WORK WHERE SEWER MAIN IS TO BE CONNECTED TO EXISTING PWSD SEWER SYSTEMS, THE NEAREST MANHOLE TO THE POINT OF TIE-IN SHALL BE PLUGGED WITH A PLUMBER'S PLUG ON THE INLET SIDE BY THE CONTRACTOR. THIS PLUG SHALL REMAIN IN PLACE UNTIL FINAL PROBATIONARY ACCEPTANCE BY PWSD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PUMPING AND CLEANING THESE MANHOLES AND REMOVING THE PLUG WHEN INSTRUCTED BY THE DISTRICT.
- PRIOR TO PROBATIONARY ACCEPTANCE WALK-THROUGH, THE CONTRACTOR SHALL JET CLEAN THE ENTIRE SANITARY SEWER SYSTEM AND PUMP OUT AT THE PLUGGED MANHOLE.

**LEGEND**



**ABBREVIATIONS**

ASSY	ASSEMBLY
BP	BOTTOM OF PIPE
ESMT	EASEMENT
ELEV	ELEVATION
EX	EXISTING
DIP	DUCTILE IRON PIPE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FU	FUTURE
GV	GATE VALVE
INV	INVERT
KB	KICK BLOCK / THRUST BLOCK
PR	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE
TP	TOP OF PIPE
W/	WITH



PREPARED UNDER THE DIRECT SUPERVISION OF JERRY W. DAVIDSON, P.E. COLORADO REG # 30226 FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP, INC.

NO.	DATE	DESCRIPTION	REVISIONS
1	11/01/18	SIXTH SUBMITTAL	
2	08/31/18	FOURTH SUBMITTAL	
3	05/25/18	THIRD SUBMITTAL	
4	03/19/18	PWSD SUBMITTAL	
5	02/28/18	SECOND SUBMITTAL	
6	10/24/17	INITIAL SUBMITTAL	

**WATER AND SANITARY NOTES**

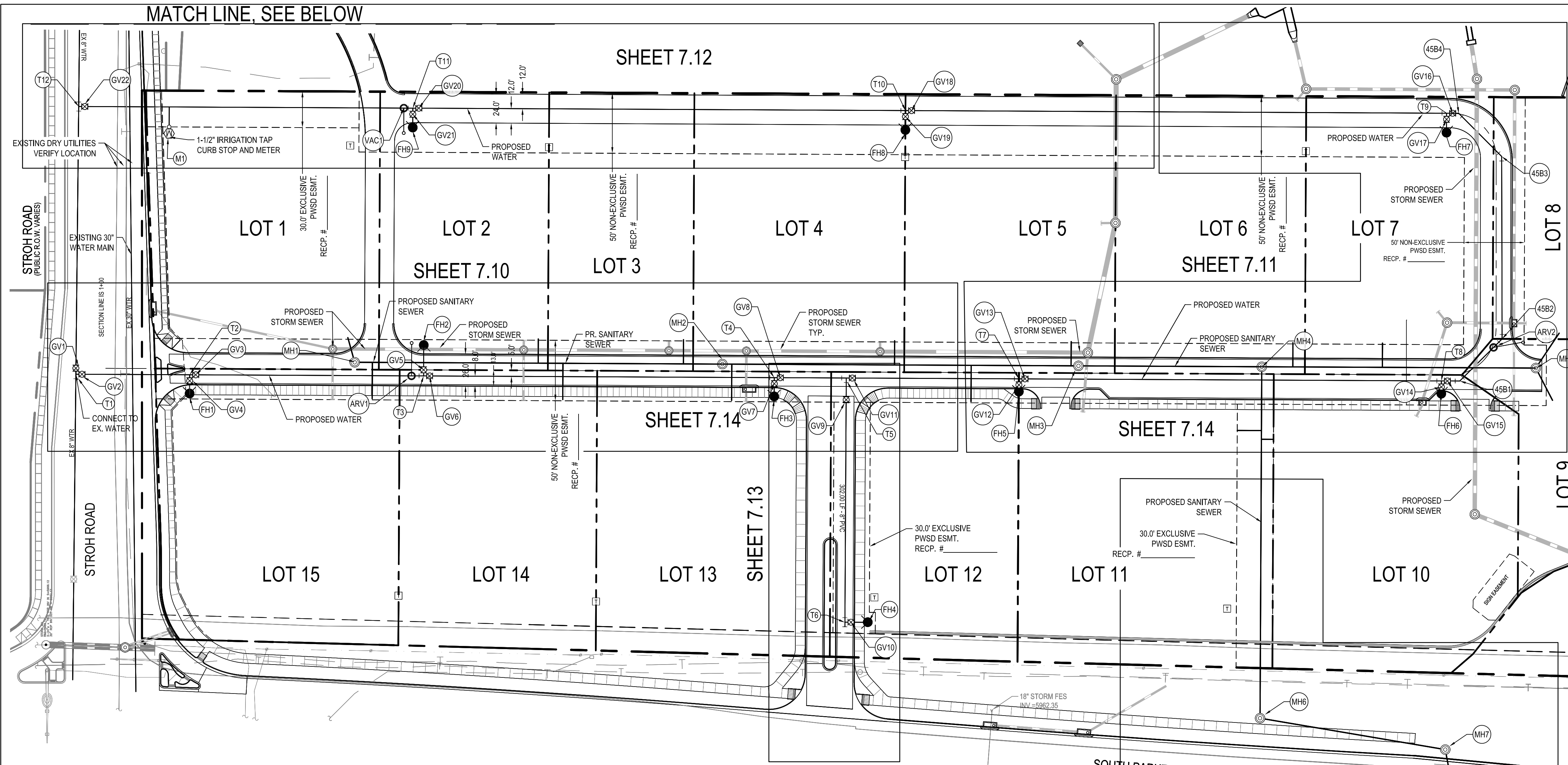
PARKER POINTE  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINTE FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
PARKER, COLORADO

design by: JWD  
approved by: JWD  
project no.: 2015-015

date: 10/01/17

SHEET  
**C7.01**

I:\PDG-MA\PROJECTS\2015-015 PARKER AND STROH.DWG\WATER AND SANITARY PLANS\2015-015 CDS - OVERALL UTIL PLANDWG 2/11/2019 8:19 PM



### LEGEND

- PROPERTY LINE
- LOT LINE
- PROPOSED EASEMENT / SETBACK
- EXISTING RIGHT-OF-WAY
- PROPOSED SAWCUT LINE
- PROPOSED CURB
- PROPOSED FLOW LINE
- PROPOSED PANLIP
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED WATERLINE
- EXISTING WATERLINE
- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- PROPOSED WATERLINE BEND \*
- PROPOSED WATERLINE TEE / CROSS \*
- PROPOSED WATERLINE PLUG & CAP \*
- PROPOSED GATE VALVE \*
- PROPOSED WATER METER \*
- PROPOSED FIRE HYDRANT \*
- EXISTING / PROPOSED SANITARY MANHOLE \*
- EXISTING / PROPOSED CLEAN OUT \*
- UNDERGROUND UTILITY CROSSING

### ABBREVIATIONS

ARV	AIR RELEASE VALVE
ASSY	ASSEMBLY
BP	BOTTOM OF PIPE
ESMT	EASEMENTPS
ELEV	ELEVATION
EX	EXISTING
DIP	DUCTILE IRON PIPE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FU	FUTURE
GV	GATE VALVE
INV	INVERT
KB	KICK BLOCK / THRUST BLOCK
M	METER
MH	MANHOLE
PR	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE
T	TEE
TP	TOP OF PIPE
VAC	AIRVAC VALVE
W	WITH
45B	45° BEND

- ### UTILITY NOTES
- ALL UTILITY CONSTRUCTION SHALL CONFORM TO PARKER WATER AND SANITATION DISTRICT AND CRITERIA REFERENCE. LOCAL AGENCY INFRASTRUCTURE DESIGN AND CONSTRUCTION STANDARDS.
  - NOMINAL DEPTH OF WATER MAIN SHALL BE 4.5' FROM FINISHED GRADE TO TOP OF PIPE.
  - ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE PARKER WATER AND SANITATION DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
  - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES. EXISTING UTILITIES SHOWN ON THIS PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN AND DO NOT REFLECT A COMPLETE SURVEY OF EXISTING UTILITIES. CONTACT THE ENGINEER WITH DISCREPANCIES.
  - SAWCUT OF EXISTING STREETS SHALL BE IN CONFORMANCE WITH TOWN STANDARDS. CUTS SHALL STRAIGHT WITH CLEAN EDGES. REMOVE EXISTING CURB AND GUTTER TO NEAREST JOINT RETURN ALONG EXISTING LINE AND GRADE.
  - THE OWNER AND OR THEIR REPRESENTATIVE SHALL BE RESPONSIBLE FOR COORDINATION WITH EXISTING FRANCHISE UTILITIES TO INCLUDE COMCAST, XCEL, CENTURY LINK OR OWNERS OF EXISTING DRY UTILITY LINES.
  - EXISTING UTILITY SURFACE APPURTENANCES SHALL BE RAISED TO FINISHED GRADE. THIS INCLUDES BUT IS NOT LIMITED TO MANHOLE LIDS, VALVE COVERS.

### TOWN NOTE

THE PROPOSED UTILITY CONNECTION WILL REQUIRE A TOWN RIGHT-OF-WAY PERMIT PRIOR TO COMMENCING WORK. THE TOWN PREFERENCES CONNECTIONS TO BE BORED TO THE EXTENT POSSIBLE, AND ANY STREET CUT ALLOWED BY THE TOWN WILL BE REQUIRED TO BE PATCHED ACCORDING TO THE TOWN'S CONSTRUCTION STANDARDS AND DETAILS. THE LIMITS OF PATCHING WILL BE DETERMINED BY THE TOWN AT THE TIME OF CONSTRUCTION. THE TOWN OF PARKER DOES NOT ALLOW ROADWAY CLOSURES FOR UTILITY WORK.

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

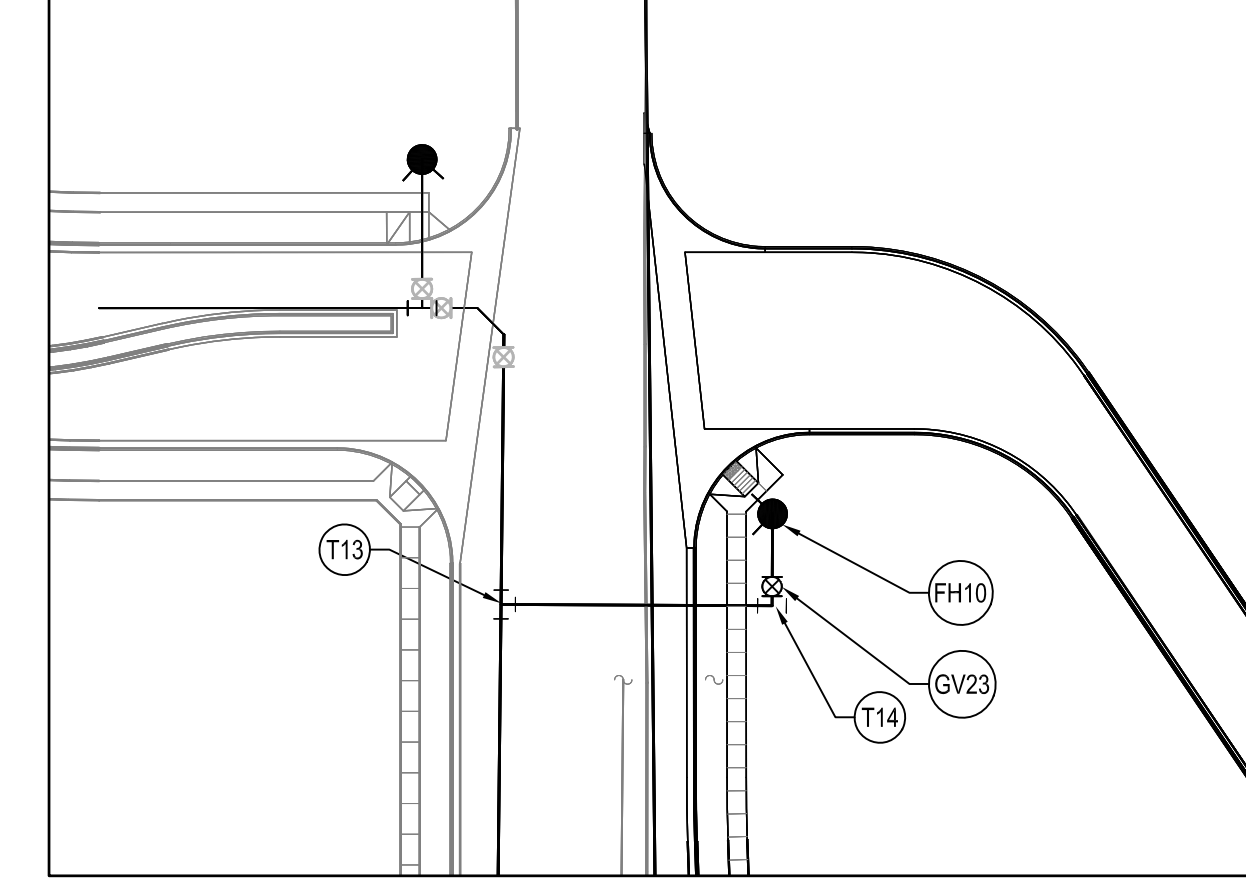
FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE \_\_\_\_\_ DATE \_\_\_\_\_

(NOTE - UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENTS OF NFPA 24 WHEN SUBMITTING FOR REVIEW.)

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 REVIEW(S), GRADING PERMIT, AND/OR OTHER PERMITS ARE COMPLETE, APPROVED AND ON FILE WITH THE TOWN OF PARKER.

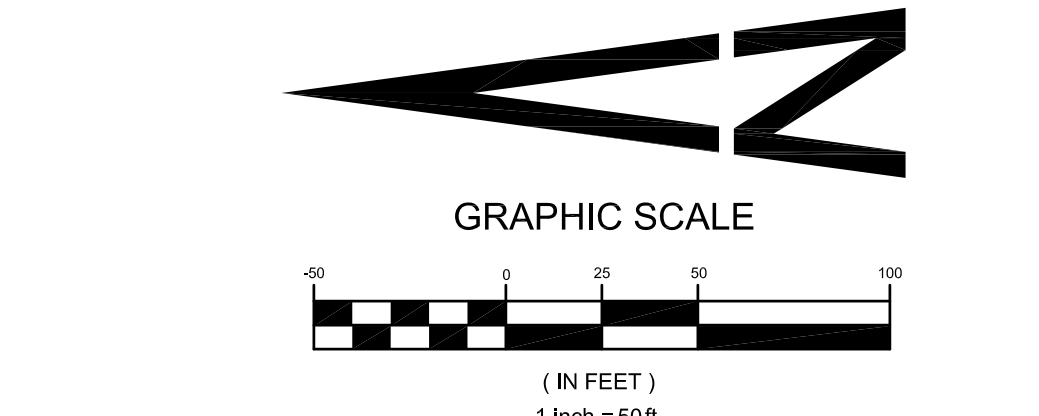
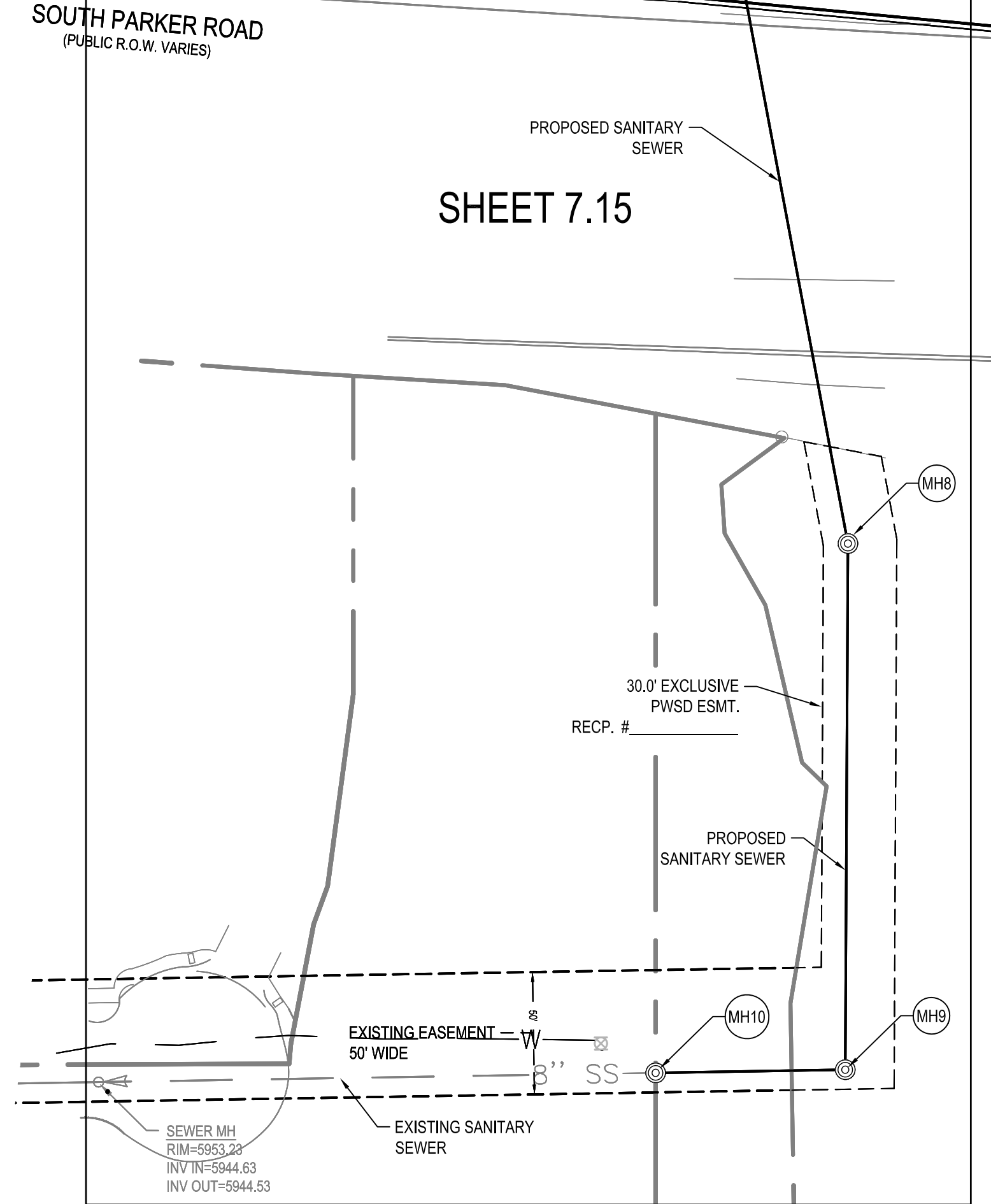
TOWN OF PARKER, DIRECTOR OF ENGINEERING \_\_\_\_\_ DATE \_\_\_\_\_



MATCH LINE, SEE ABOVE

**CALL UTILITY NOTIFICATION CENTER OF COLORADO**  
**1-800-922-1987**  
 CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

CAUTION: NOTICE TO CONTRACTOR THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



**BENCHMARK**  
 BENCHMARK: DOUGLAS COUNTY SURVEY CONTROL MONUMENT TT15A - 3" DIAMETER DOUGLAS COUNTY GIS ALUMINUM CAP AT THE NE CORNER OF STROH ROAD AND SOUTH PARKER ROAD (US HIGHWAY 83) ELEVATION: 5970.79 FEET (NAVD 1988 DATUM)

6901 SOUTH PIERCE STREET SUITE 315, LITTLETON, CO 80120 303.259.8688  
 WWW.PERCEPTIONDESIGNGROUP.COM

NO.	DATE	DESCRIPTION
11/01/18	SIXTH SUBMITTAL	
08/31/18	FOURTH SUBMITTAL	
05/25/18	THIRD SUBMITTAL	
03/19/18	PWS D SUBMITTAL	
02/28/18	SECOND SUBMITTAL	
10/24/17	INITIAL SUBMITTAL	

OVERALL UTILITY PLAN

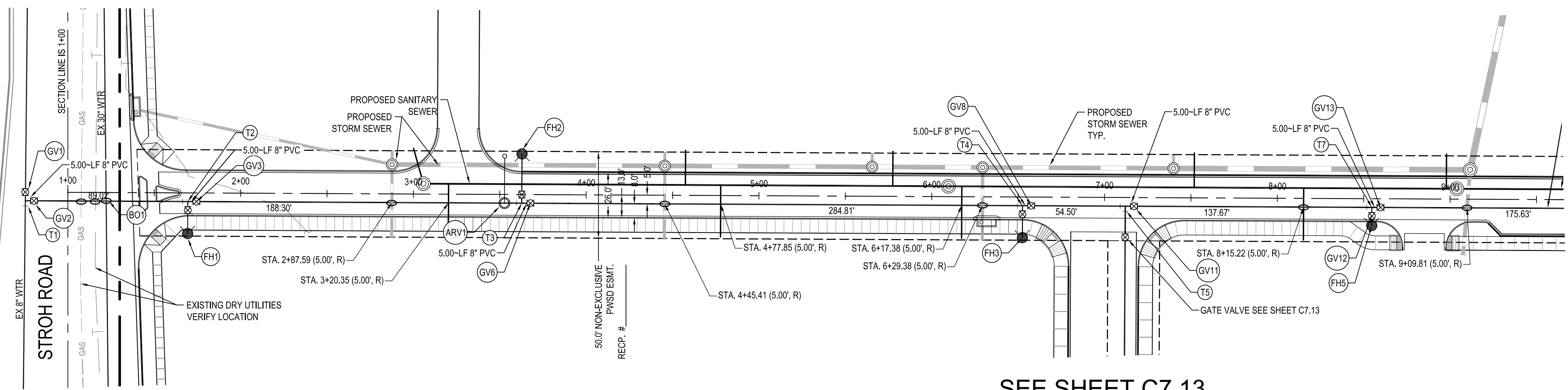
PARKER POINT  
 LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINT FILING NO. 1  
 SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
 PARKER, COLORADO

design by: JWD  
 approved by: JWD  
 project no.: 2015-015

date: 10/01/17

SHEET  
**C7.09**

**WATER MAINS MAY NOT BE TAPPED FOR A SERVICE LINE UNTIL TAP FEES ARE PAID**



SEE SHEET C7.11

SEE SHEET C7.13

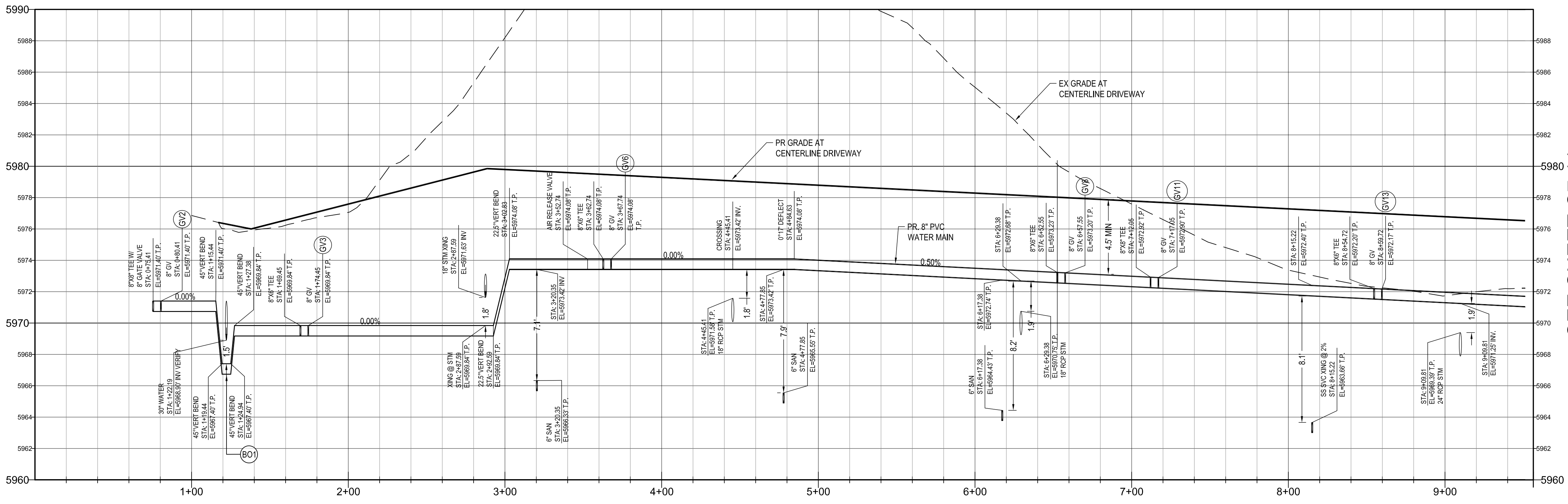
STATIONING IS BASED UPON CENTERLINE OF DRIVEWAY

ITEMS ALONG ALIGNMENT			
#	ITEM	STA.	OS (FT.)
GV2	PR. 8" G.V.	0+75.41	5.00 R
T1	PR. 8"X8" TEE	0+75.41	5.00 R
FH1	PR. 6" G.V. / 23.5 LF 6" DIP / 6" HYDRANT ASSY.	1+69.45	23.50 R
GV3	PR. 8" G.V.	1+74.45	5.00 R
T2	PR. 8"X6" TEE W/ KB	1+69.45	5.00 R
T3	PR. 8"X6" TEE W/ KB	3+62.74	5.00 R
GV6	PR. 8" G.V.	3+67.74	5.00 R
FH2	PR. 6" G.V. / 28.5 LF 6" DIP / 6" HYDRANT ASSY.	3+62.74	23.50 L
GV1	PR. 8" G.V.	0+75.41	0.000
T5	PR. 8"X8" TEE	7+12.05	5.00 R
GV11	PR. 8" G.V.	7+17.05	5.00 R
FH3	PR. 6" G.V. / 18.5 LF 6" DIP / 6" HYDRANT ASSY.	6+52.55	23.50 R
T4	PR. 8"X6" TEE W/ KB	6+52.55	5.00 R
GV8	PR. 8" G.V.	6+57.55	5.00 R
FH5	PR. 10.5 LF 6" DIP / 6" HYDRANT ASSY.	8+54.72	15.50 R
GV12	PR. 6" G.V.	8+54.72	10.00 R
T7	PR. 8"X6" TEE W/ KB	8+54.72	5.00 R
GV13	PR. 8" G.V.	8+59.72	5.00 R
BO1	PR. L.P. BLOW-OFF VALVE	1+23.94	0.00
ARV1	PR. AIR RELEASE VALVE	3+52.74	0.00

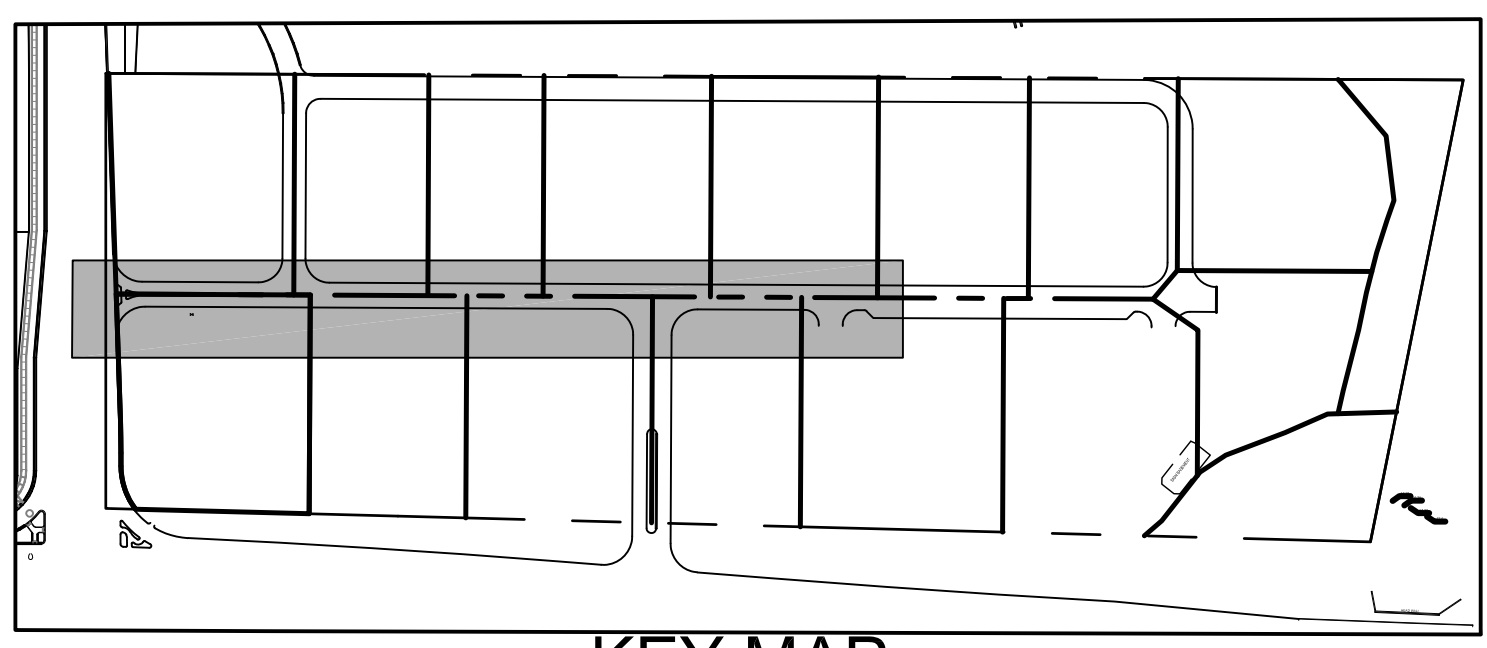


PREPARED UNDER THE DIRECT SUPERVISION OF JERRY W. DAVIDSON, P.E. COLORADO REG # 30226 FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP, INC.

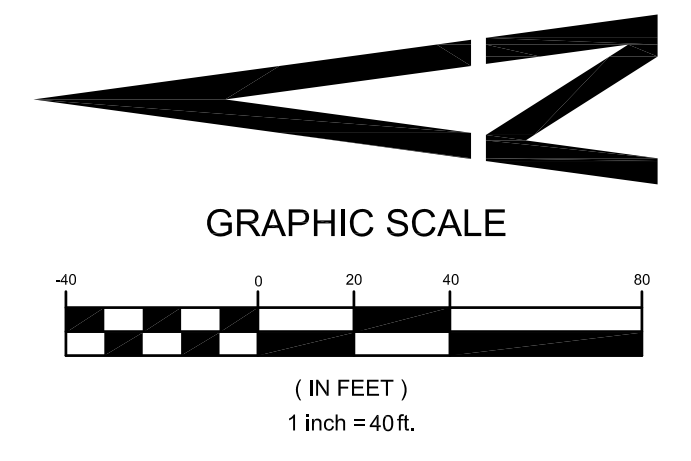
DATE	DESCRIPTION
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05/25/18	THIRD SUBMITTAL
03/19/18	PWSO SUBMITTAL
02/28/18	SECOND SUBMITTAL
10/24/17	INITIAL SUBMITTAL



SEE SHEET C7.11



KEY MAP



**BENCHMARK**  
BENCHMARK: DOUGLAS COUNTY SURVEY CONTROL MONUMENT T15A - 3" DIAMETER DOUGLAS COUNTY GIS ALUMINUM CAP AT THE NE CORNER OF STROTH ROAD AND SOUTH PARKER ROAD (US HIGHWAY 83) ELEVATION: 5970.79 FEET (NAVD 1988 DATUM)

**CALL UTILITY NOTIFICATION**  
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**WATER PLAN & PROFILE**

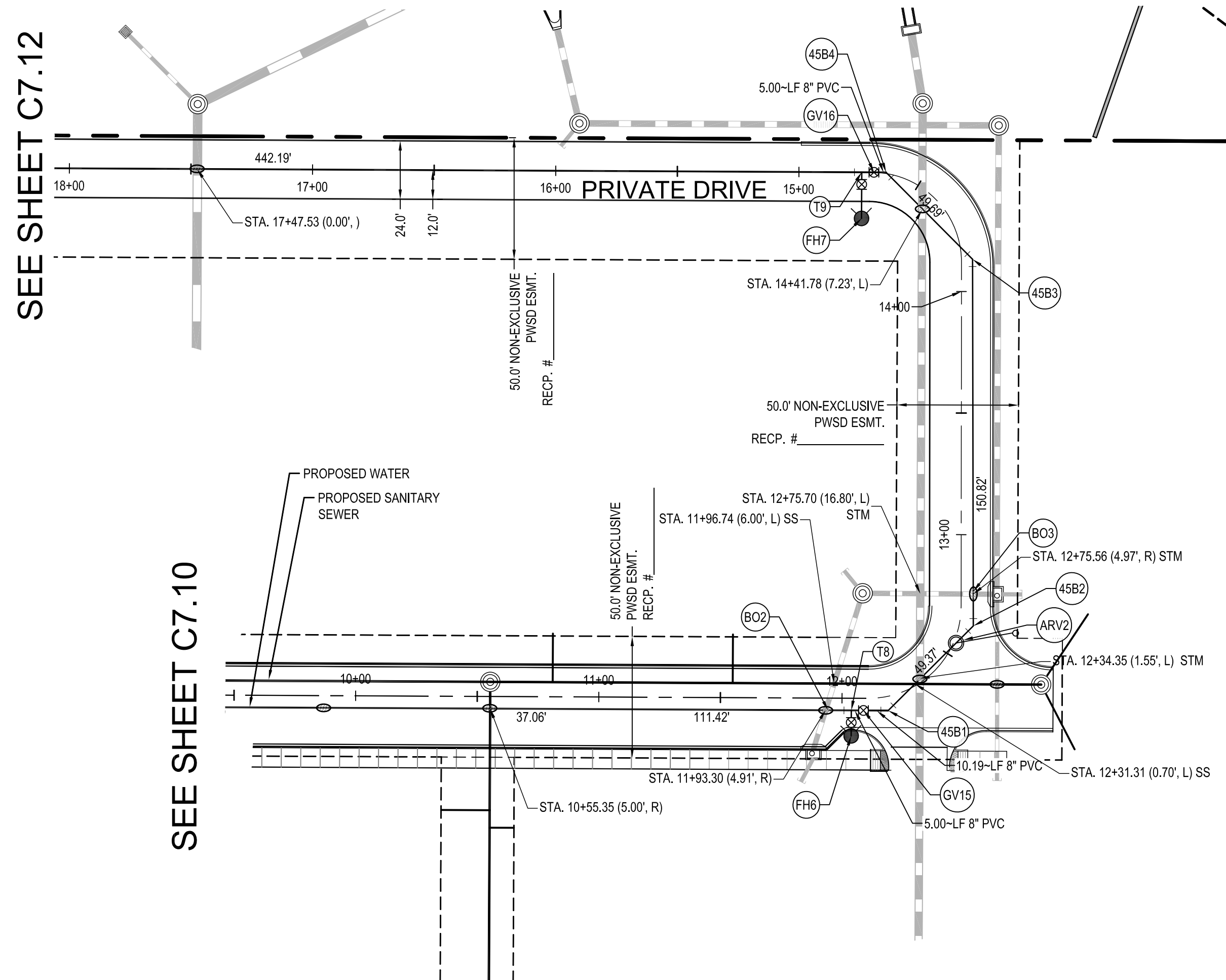
PARKER POINT  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINT FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROTH ROAD  
PARKER, COLORADO

design by: JWD  
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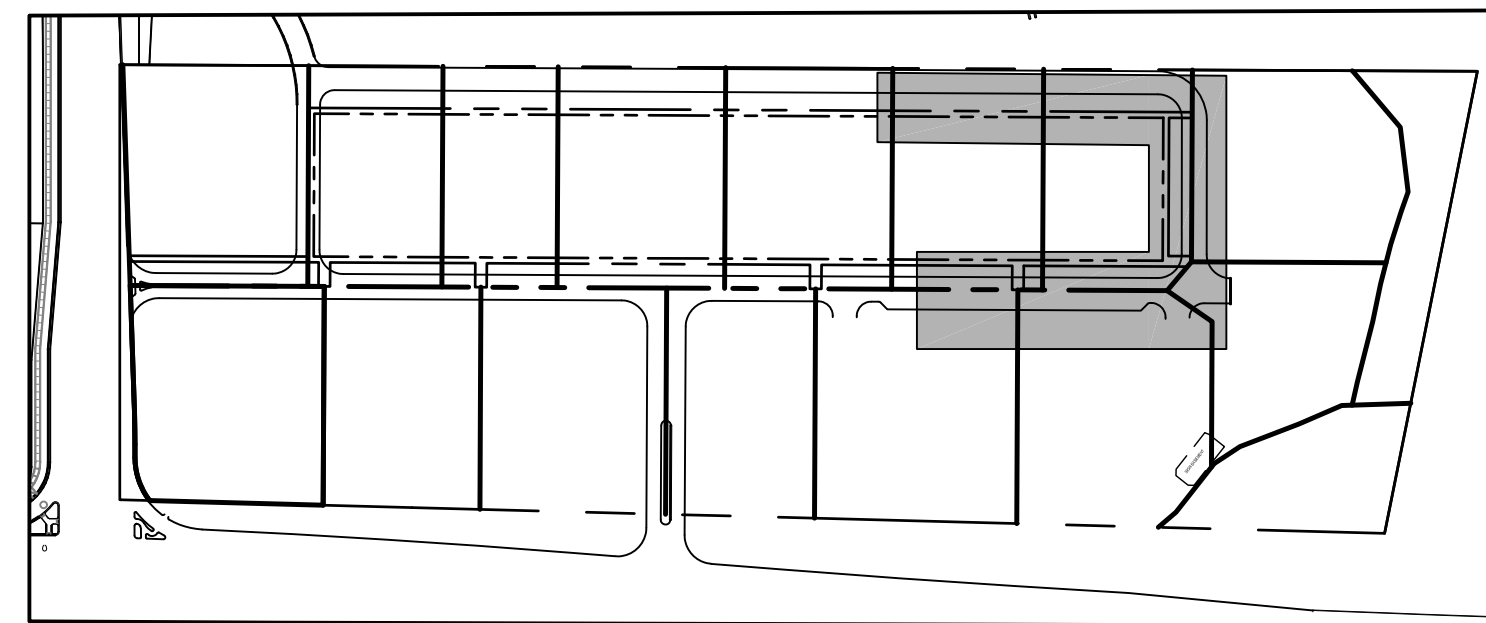
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\\PDG-MAS\PROJECTS\2015-015 PARKER AND STROTH.DWG WATER AND SANITARY PLANS\2015-015 CDS -WATER PLAN.DWG 2/11/2019 8:15 PM

**WATER MAINS MAY NOT BE TAPPED FOR A SERVICE LINE UNTIL TAP FEES ARE PAID**

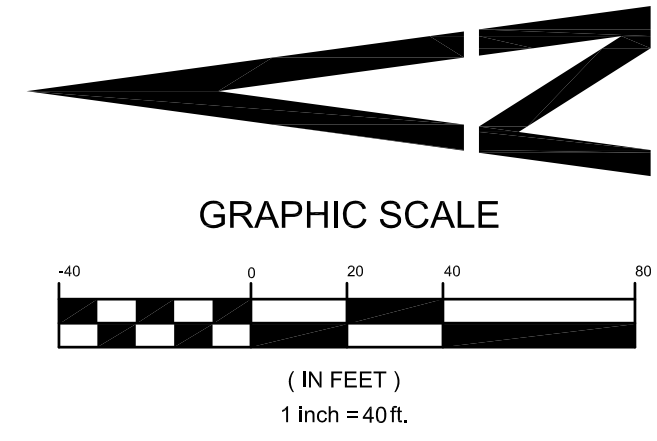
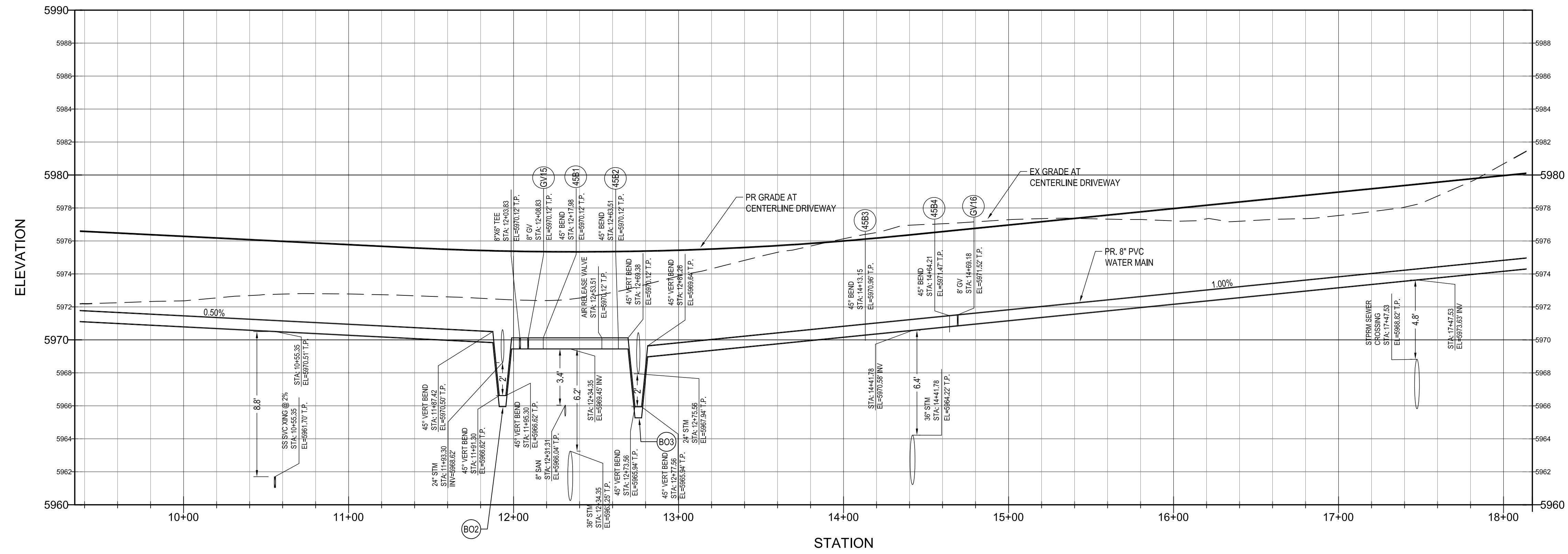


#	ITEM	STA.	OS (FT.)
BO2	PR. L.P. BLOW-OFF VALVE	11+94.30	0.000
BO3	PR. L.P. BLOW-OFF VALVE	12+76.56	0.000
T8	PR. 8"X6" TEE W/ KB	12+03.83	5.00 R
FH6	PR. 6" G.V. / 10.5 LF 6" DIP / 6" HYDRANT ASSY.	12+03.83	15.50 R
GV15	PR. 8" G.V.	12+08.83	5.00 R
45B1	PR. 8" 45° BEND W/ KB	12+17.98	5.78 R
45B2	PR. 8" 45° BEND W/ KB	12+63.51	5.78 R
45B3	PR. 8" 45° BEND W/ KB	14+13.15	4.57 R
45B4	PR. 8" 45° BEND W/ KB	14+64.21	0.45 R
GV16	PR. 8" G.V.	14+69.18	0.00
FH7	PR. 6" G.V. / 19.0 LF 6" DIP / 6" HYDRANT ASSY.	14+74.19	19.00 L
T9	PR. 8"X6" TEE W/ KB	14+74.19	0.00
ARV2	PR. AIR RELEASE VALVE	12+53.51	0.00



KEY MAP

STATIONING IS BASED UPON CENTERLINE OF DRIVEWAY



SEE SHEET C7.12

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08/31/18	FOURTH SUBMITTAL
05/25/18	THIRD SUBMITTAL
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WATER PLAN & PROFILE

PARKER POINTE  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINTE FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
PARKER, COLORADO

design by: JWD  
approved by: JWD  
project no.: 2015-015

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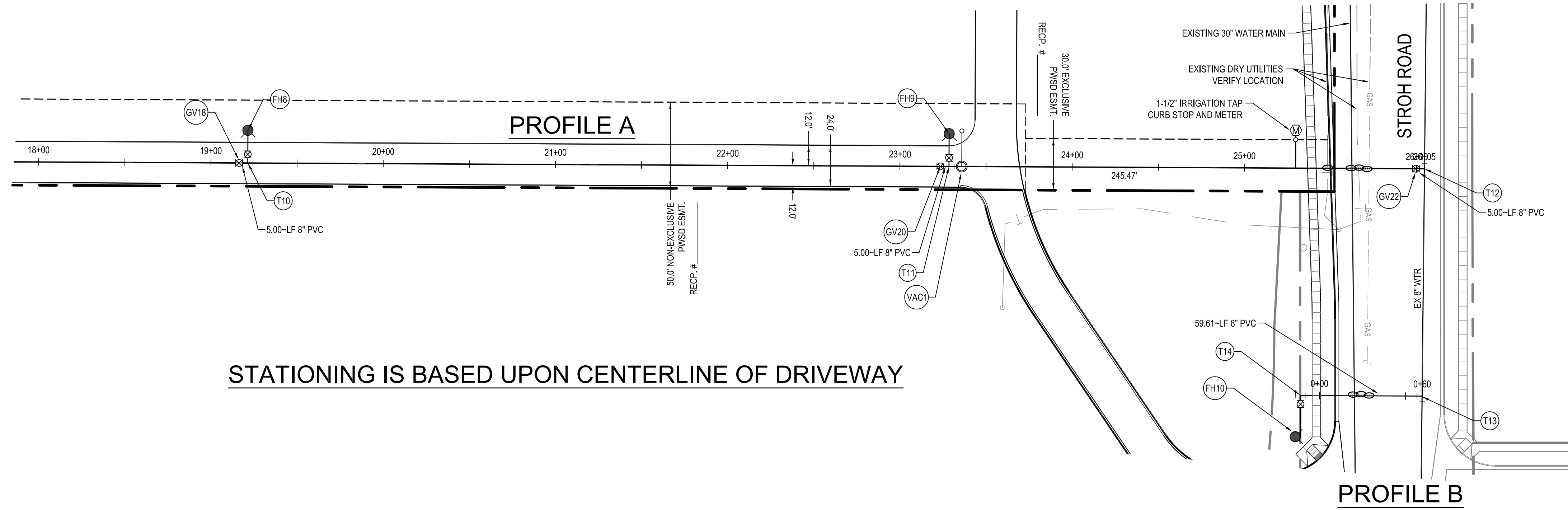
SHEET  
**C7.11**

**BENCHMARK**  
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I:\PDG-MAS\PROJECTS\2015-015 PARKER AND STROH.DWG\WATER AND SANITARY PLANS\2015-015-CDS-WATER PLAN.DWG 2/11/2019 8:15 PM

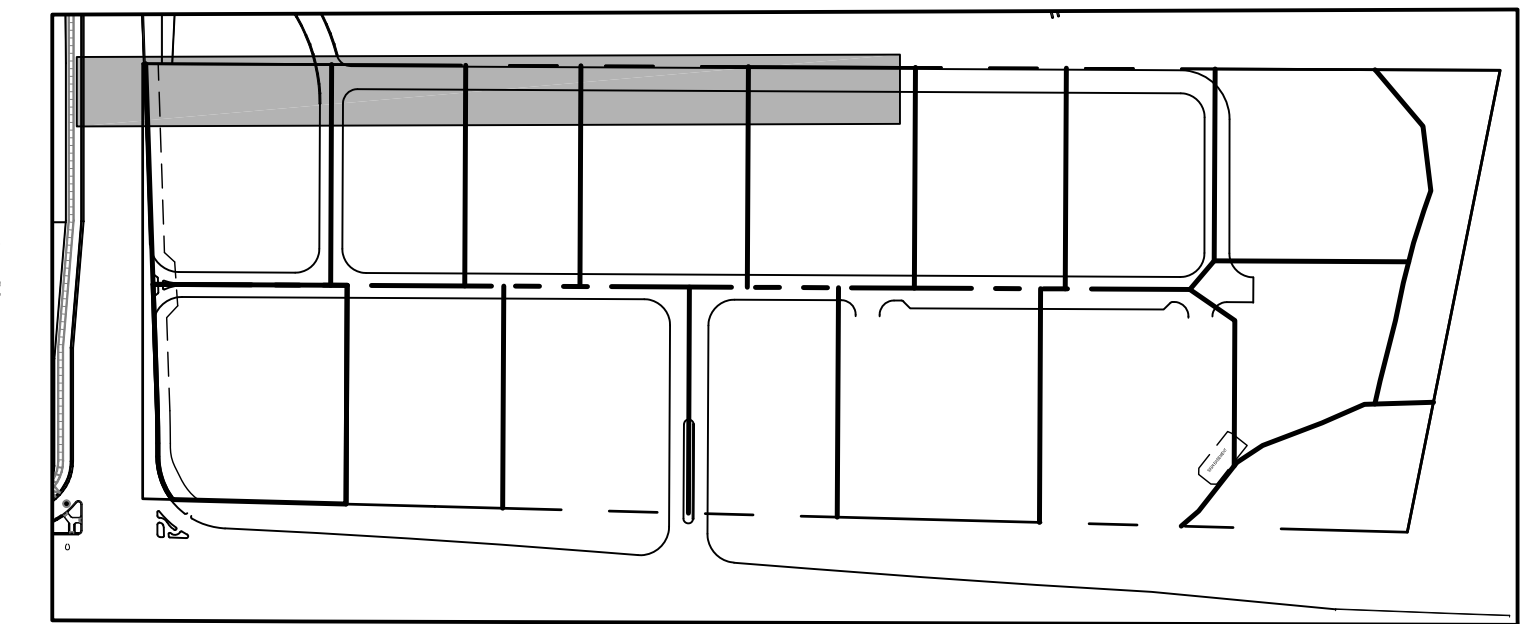
**WATER MAINS MAY NOT BE TAPPED FOR A SERVICE LINE UNTIL TAP FEES ARE PAID**

SEE SHEET C7.11



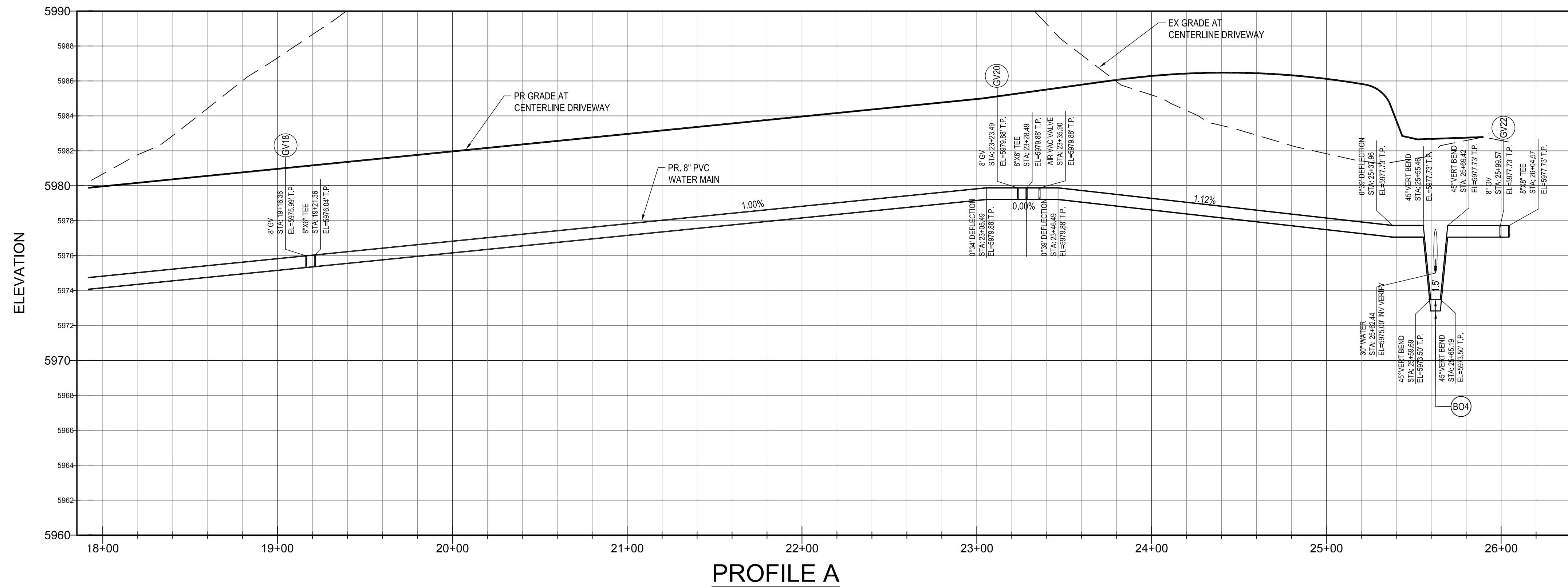
STATIONING IS BASED UPON CENTERLINE OF DRIVEWAY

#	ITEM	STA.	OS (FT.)
BO5	PR. L.P. BLOW OFF	0+22.02	0.00
T11	PR. 8"X6" TEE W/ KB	23+28.49	0.00
GV20	PR. 8" G.V.	23+23.49	0.00
FH9	PR. 6" G.V. / 19.0 LF 6" DIP / 6" HYDRANT ASSY	23+28.49	19.00 L
T12	PR. 8"X8" TEE W/ KB	26+04.57	0.00
T10	PR. 8"X6" TEE W/ KB	19+21.36	0.00
FH8	PR. 6" G.V. / 19.0 LF 6" DIP / 6" HYDRANT ASSY	19+21.36	19.00 L
BO4	PR. L.P. BLOW OFF	25+64.19	0.00
GV18	PR. 8" G.V.	19+16.36	0.00
VAC1	PR. 8" AIRVAC VALVE	23+35.90	0.00
GV22	PR. 8" G.V.	25+99.57	0.00
T13	PR. 8"X8" TEE W/ KB	0+59.61	0.00
T14	PR. 8"X6" TEE W/ KB	-0+10.56	0.00
FH10	PR. 6" G.V. / 23.94 LF 6" DIP / 6" HYDRANT ASSY.	-0+10.56	23.94 R

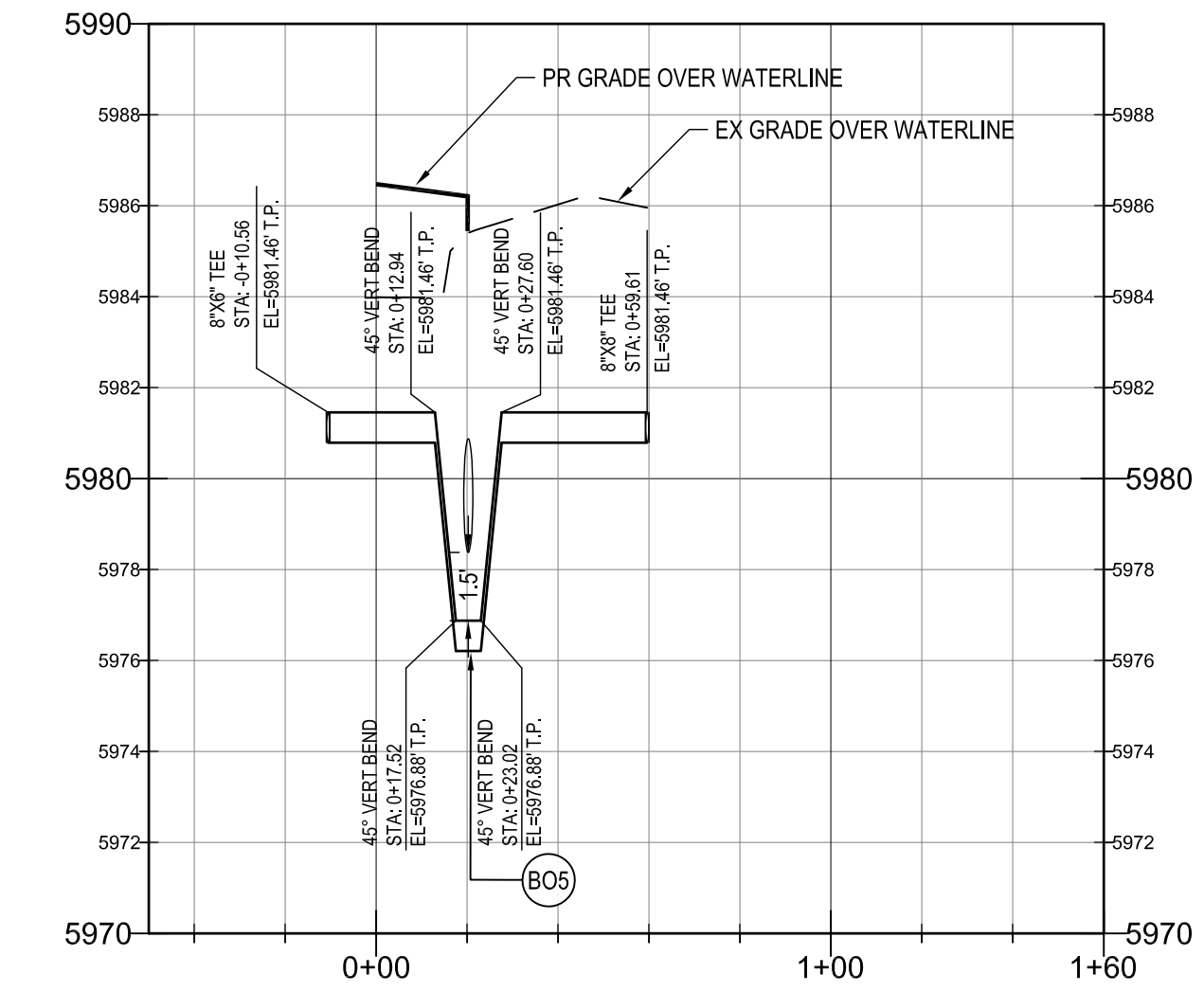


KEY MAP

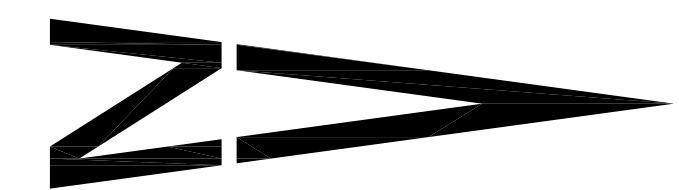
SEE SHEET C7.11



PROFILE A



PROFILE B



GRAPHIC SCALE

(IN FEET)  
1 Inch = 40ft.

**BENCHMARK**

BENCHMARK: DOUGLAS COUNTY SURVEY CONTROL MONUMENT T115A - 3" DIAMETER DOUGLAS COUNTY GIS ALUMINUM CAP AT THE NE CORNER OF STROH ROAD AND SOUTH PARKER ROAD (US HIGHWAY 83) ELEVATION: 5970.79 FEET (NAVD 1988 DATUM)

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**WATER PLAN & PROFILE**

PARKER POINTE  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINTE FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
PARKER, COLORADO

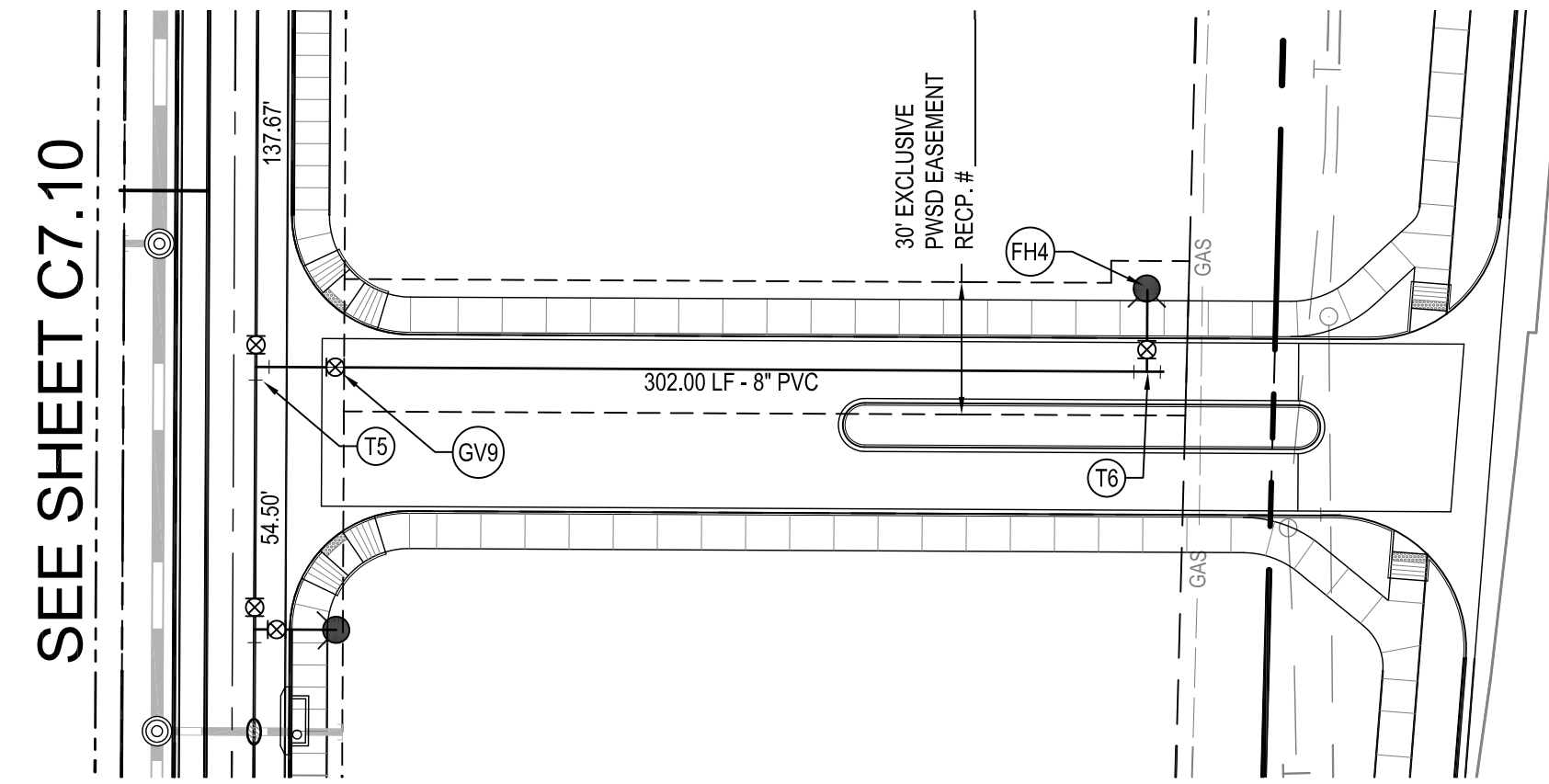
design by: JWD  
approved by: JWD  
project no.: 2015-015

date: 10/01/17

SHEET  
**C7.12**

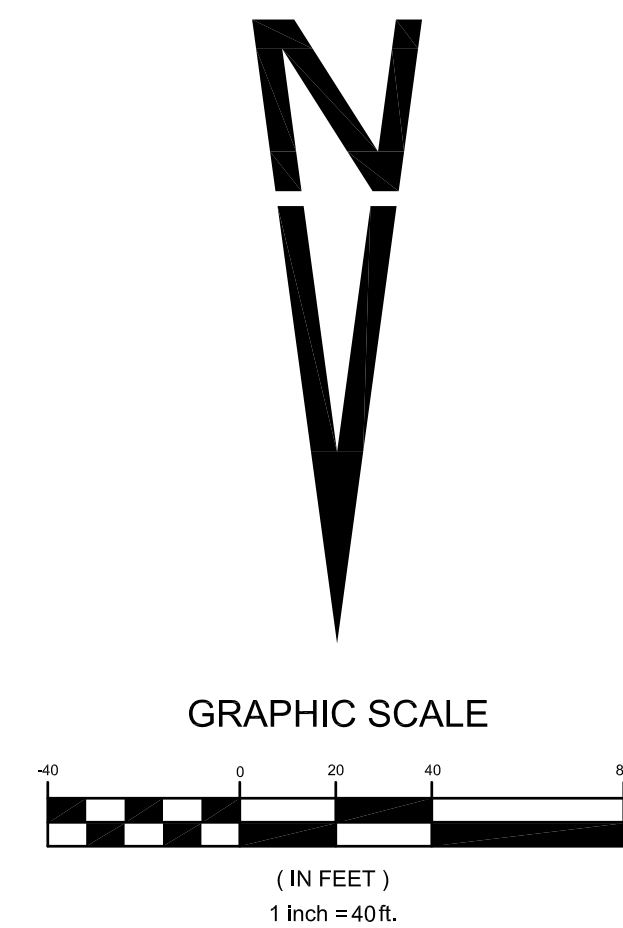
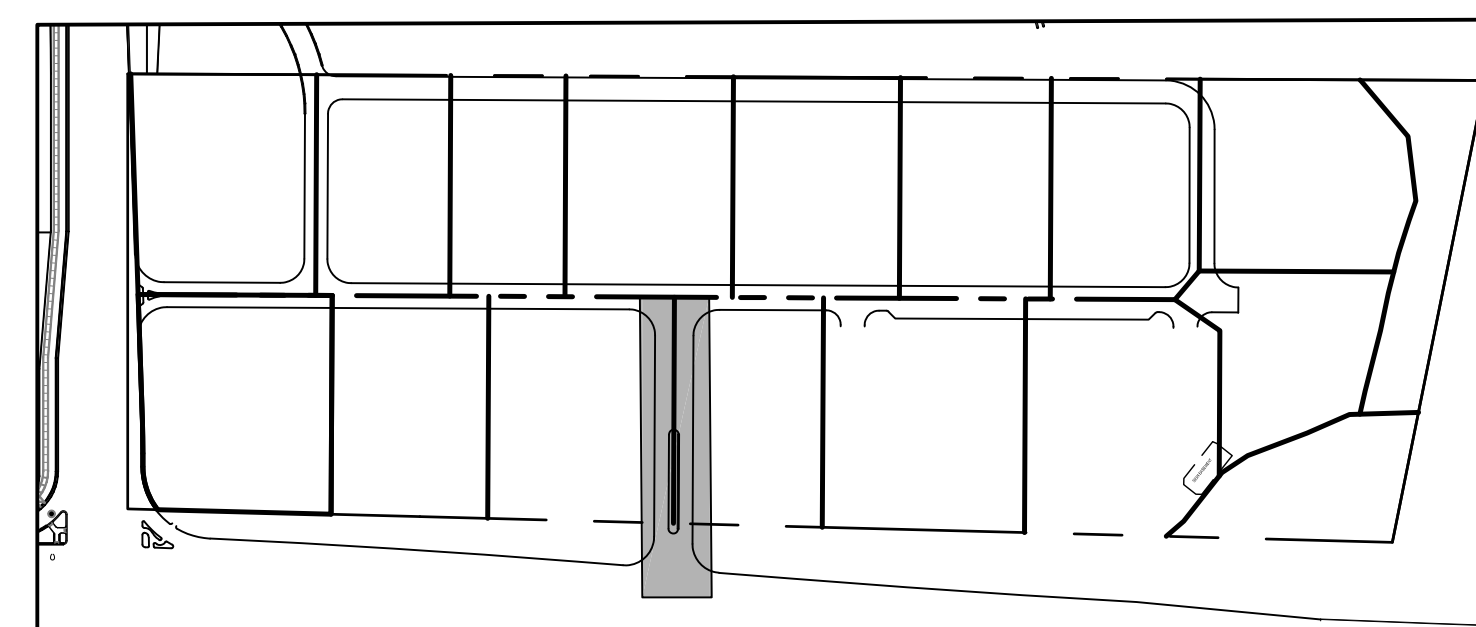
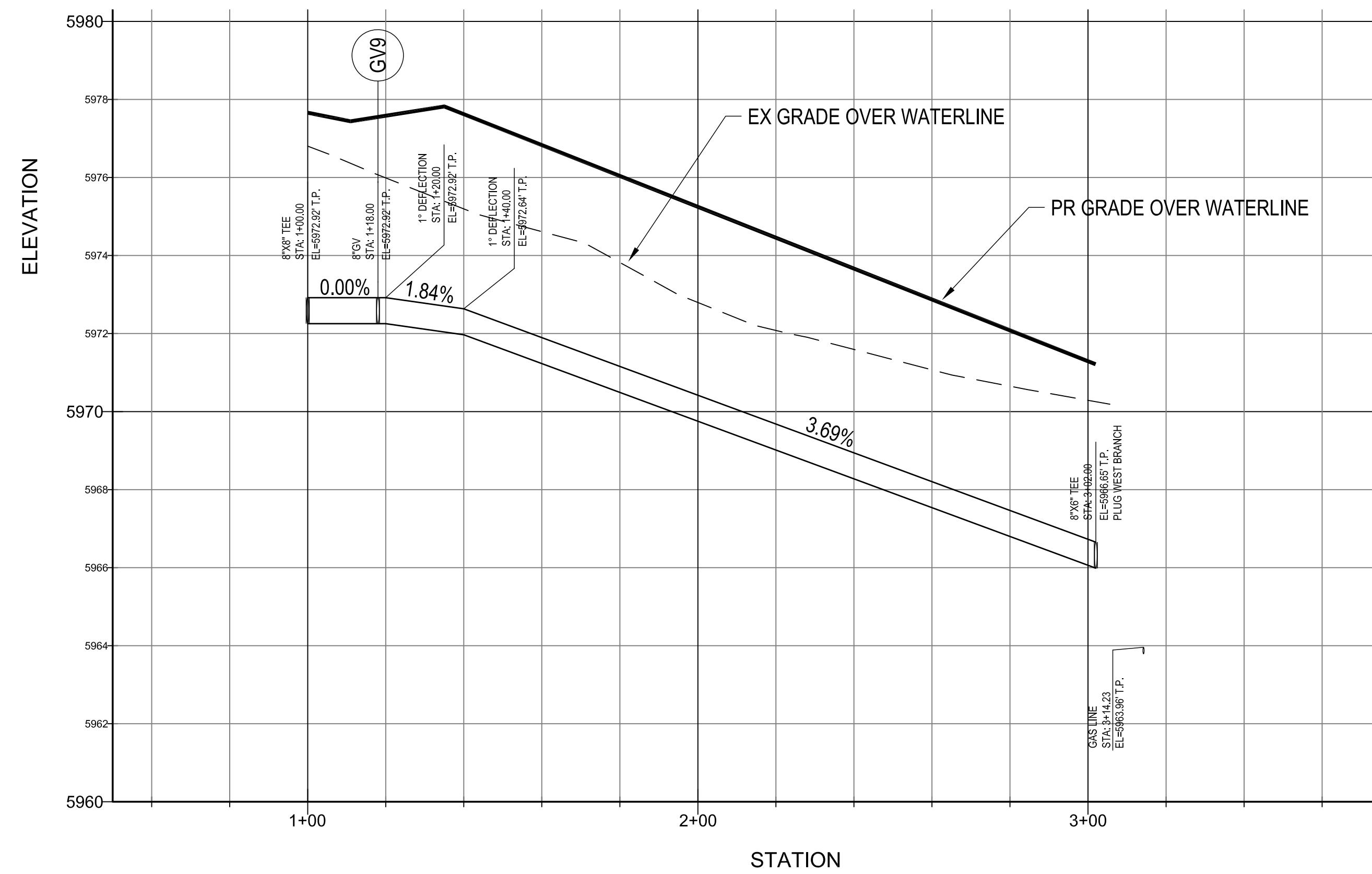
\\P:\PDG-MAS\PROJECTS\2015-015 PARKER AND STROH\DWG\WATER AND SANITARY PLANS\2015-015 CDS -WATER PLAN.DWG 2/11/2019 8:16 PM

**WATER MAINS MAY NOT BE TAPPED FOR A SERVICE LINE UNTIL TAP FEES ARE PAID**



#	ITEM	STA.	OS (FT.)
T5	8\"X8\" TEE W/ KB	1+00.00	0.00
T6	8\"X6\" TEE W/ KB	3+02.00	0.00
FH4	PR. 6\" HYDRANT ASSY. / 18.50LF 6\" DIP / 6\" G.V.	3+02.00	18.50 L
GV9	PR. 8\" G.V.	1+18.00	0.00

**WARNING**  
HIGH-PRESSURE PIPELINE(S)  
EXCAVATION AND / OR CONSTRUCTION PROHIBITED WITHOUT COMPLIANCE WITH STATE ONE-CALL, AND WITHOUT WRITTEN PERMISSION FROM MAGELLAN PIPELINE COMPANY.



**BENCHMARK**  
BENCHMARK: DOUGLAS COUNTY SURVEY CONTROL MONUMENT TT15A - 3\" DIAMETER DOUGLAS COUNTY GIS ALUMINUM CAP AT THE NE CORNER OF STROH ROAD AND SOUTH PARKER ROAD (US HIGHWAY 83) ELEVATION: 5970.79 FEET (NAVD 1988 DATUM)

**CALL UTILITY NOTIFICATION**  
**CENTER OF COLORADO**  
**1-800-922-1987**  
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

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PREPARED UNDER THE DIRECT SUPERVISION OF JERRY W. DAVIDSON, P.E. COLORADO REG # 30226 FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP, INC.

NO.	DATE	DESCRIPTION
11/01/18		SIXTH SUBMITTAL
08/31/18		FOURTH SUBMITTAL
05/25/18		THIRD SUBMITTAL
03/19/18		PWSD SUBMITTAL
02/28/18		SECOND SUBMITTAL
10/24/17		INITIAL SUBMITTAL
1		REVISIONS

**WATER PLAN & PROFILE**

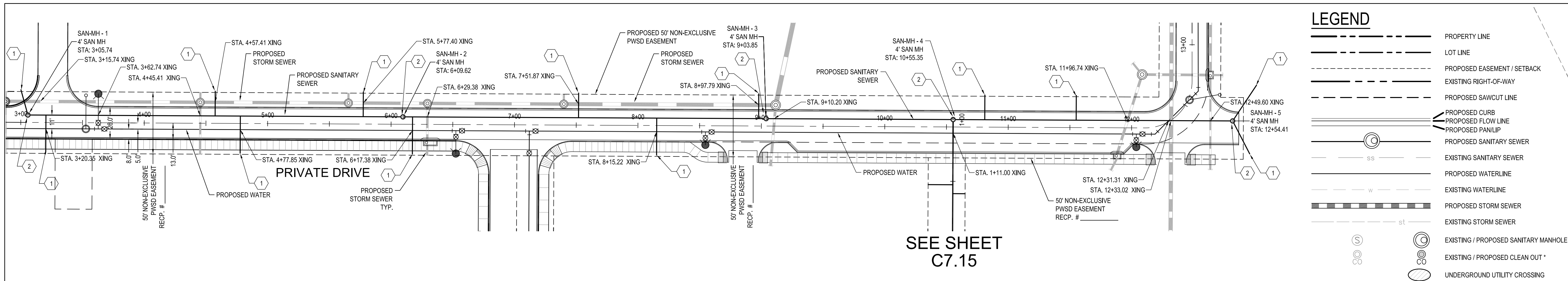
PARKER POINTE  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINTE FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
PARKER, COLORADO

design by: JWD  
approved by: JWD  
project no.: 2015-015

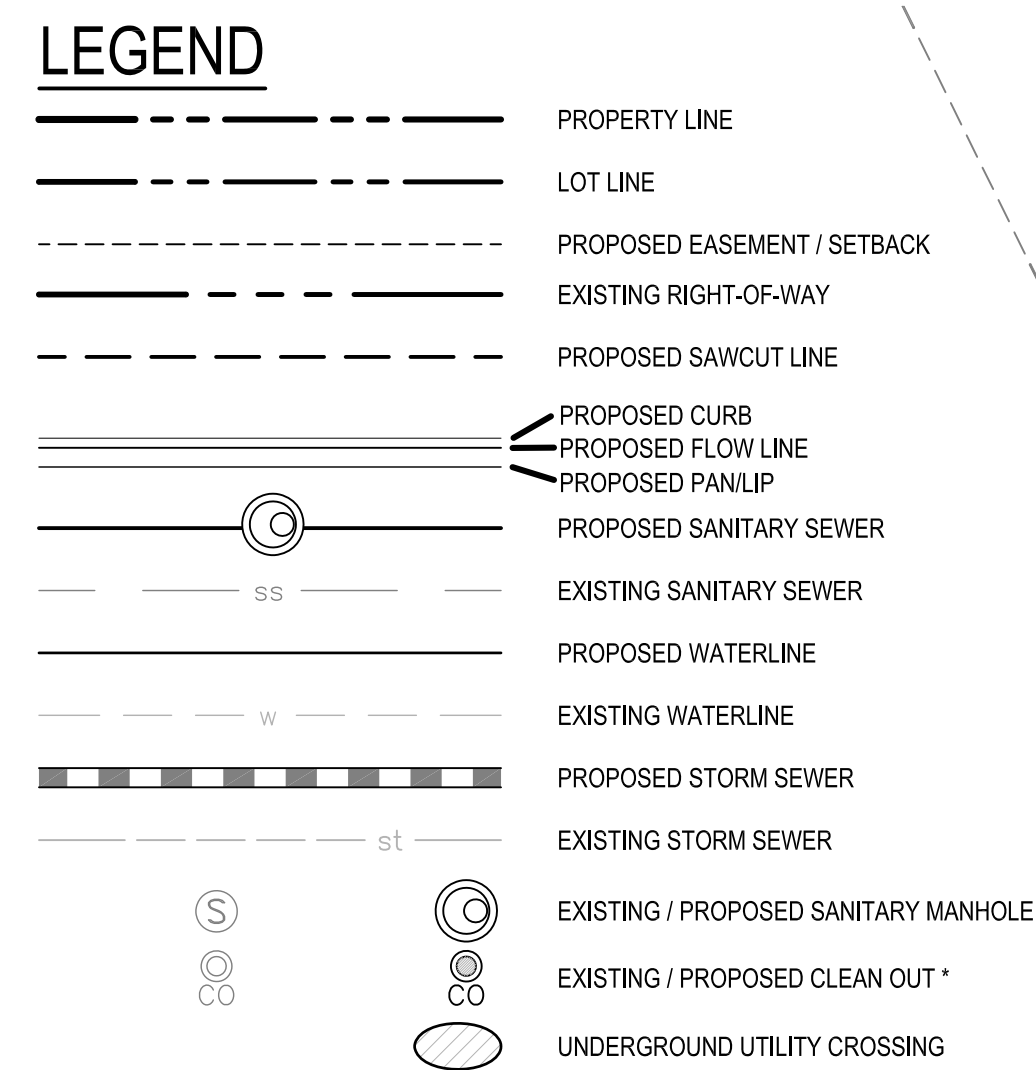
date: 10/01/17

SHEET  
**C7.13**



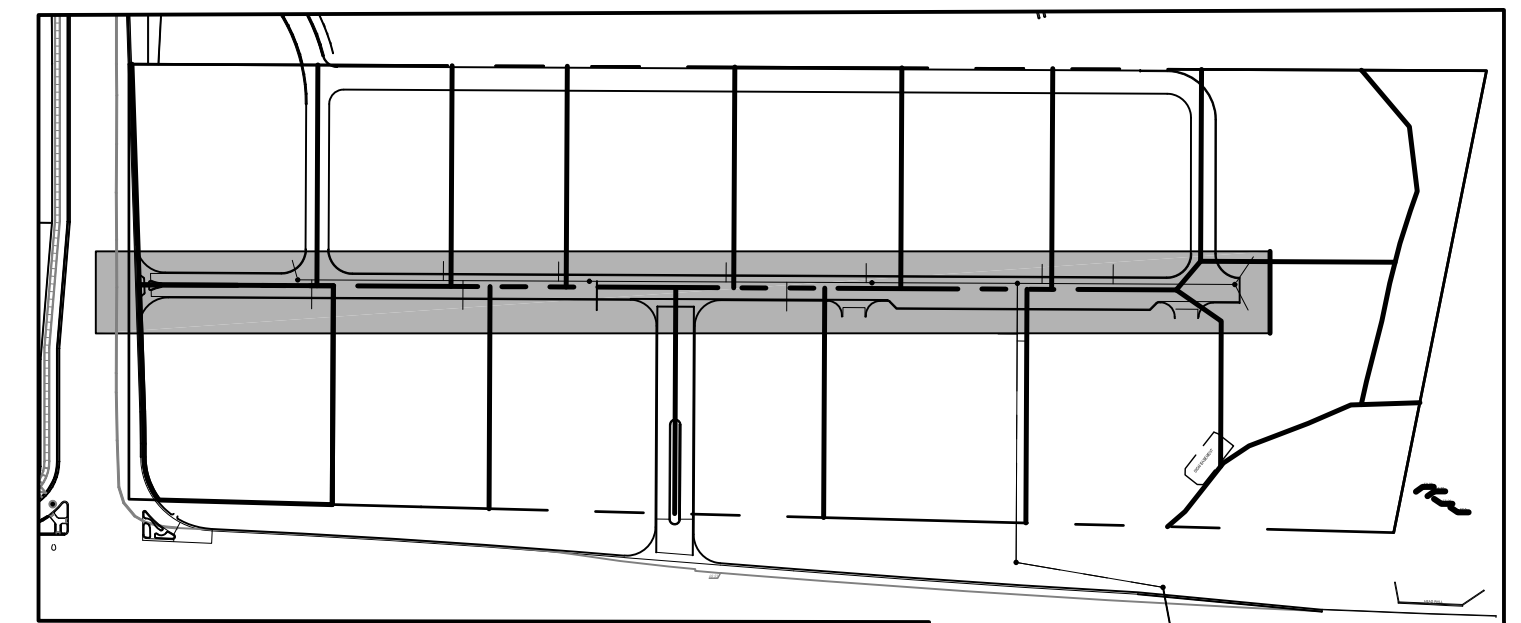


SEE SHEET  
C7.15

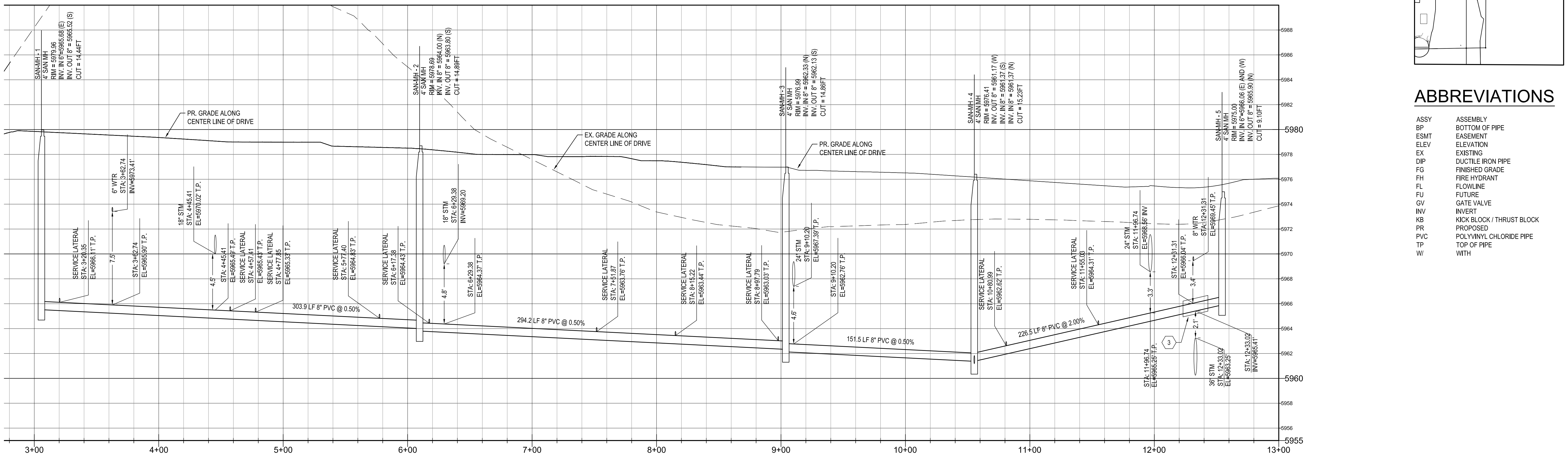


### CONSTRUCTION NOTES

- 1 INSTALL 6" SERVICE LATERAL AT 2.0%. EXTEND BEYOND PAVEMENT, CAP AND MARK FOR FUTURE CONNECTION.
- 2 CONSTRUCT 4" DIAMETER CONCRETE MANHOLE.
- 3 CONCRETE ENCASE SANITARY SEWER 10' EACH SIDE OF CROSSING. SEE DETAIL S4.8 ON SHEET C7.91.



KEY MAP



### ABBREVIATIONS

ASSY	ASSEMBLY
BP	BOTTOM OF PIPE
ESMT	EASEMENT
ELEV	ELEVATION
EX	EXISTING
DIP	DUCTILE IRON PIPE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FU	FUTURE
GV	GATE VALVE
INV	INVERT
KB	KICK BLOCK / THRUST BLOCK
PR	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE
TP	TOP OF PIPE
W	WITH

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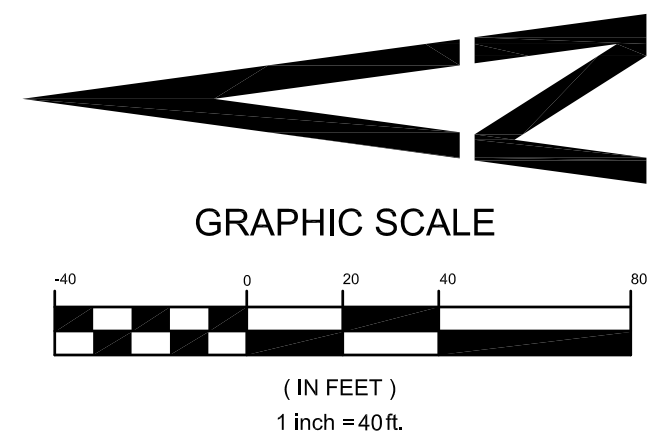
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10/24/17	INITIAL SUBMITTAL	

### SANITARY PLAN & PROFILE

PARKER POINTE  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINTE FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
PARKER, COLORADO

CALL UTILITY NOTIFICATION  
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**BENCHMARK**  
BENCHMARK: DOUGLAS COUNTY SURVEY CONTROL MONUMENT TT15A - 3" DIAMETER DOUGLAS COUNTY GIS ALUMINUM CAP AT THE NE CORNER OF STROH ROAD AND SOUTH PARKER ROAD (US HIGHWAY 83) ELEVATION: 5970.79 FEET (NAVD 1988 DATUM)

design by: JWD  
approved by: JWD  
project no.: 2015-015

date: 10/01/17

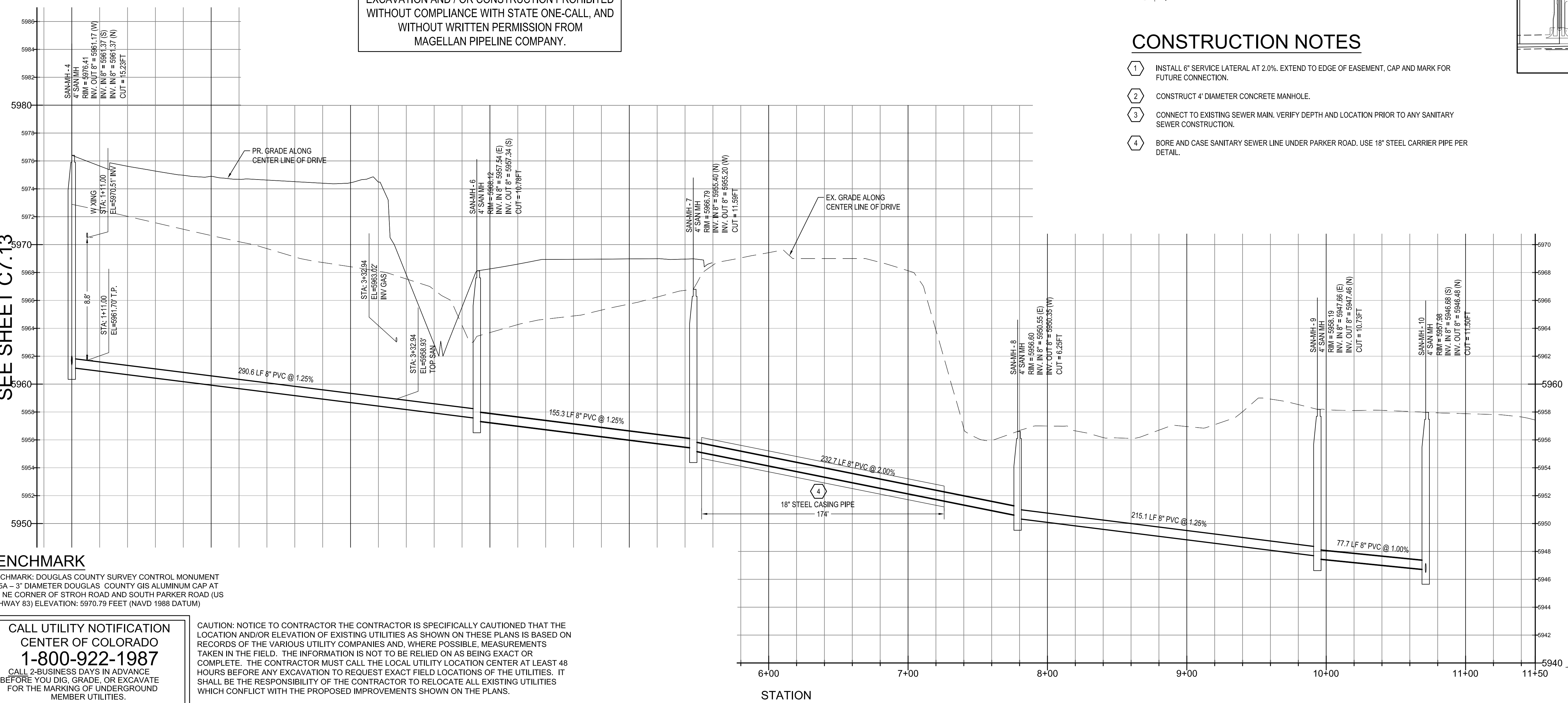
SHEET  
**C7.14**



6901 SOUTH PIERCE STREET, SUITE 315, LITTLETON, CO 80120 303-226-0698  
WWW.PERCEPTIONDESIGNGROUP.COM

I:\PDG-MA\PUBLIC\PROJECTS\2015-015 PARKER AND STROH.DWG WATER AND SANITARY PLANS\2015-015 CDS -SANITARY PLAN.DWG 2/11/2019 8:14 PM

SEE SHEET C7.14



**WARNING**  
HIGH-PRESSURE PIPELINE(S)  
EXCAVATION AND / OR CONSTRUCTION PROHIBITED  
WITHOUT COMPLIANCE WITH STATE ONE-CALL, AND  
WITHOUT WRITTEN PERMISSION FROM  
MAGELLAN PIPELINE COMPANY.

**CONSTRUCTION NOTES**

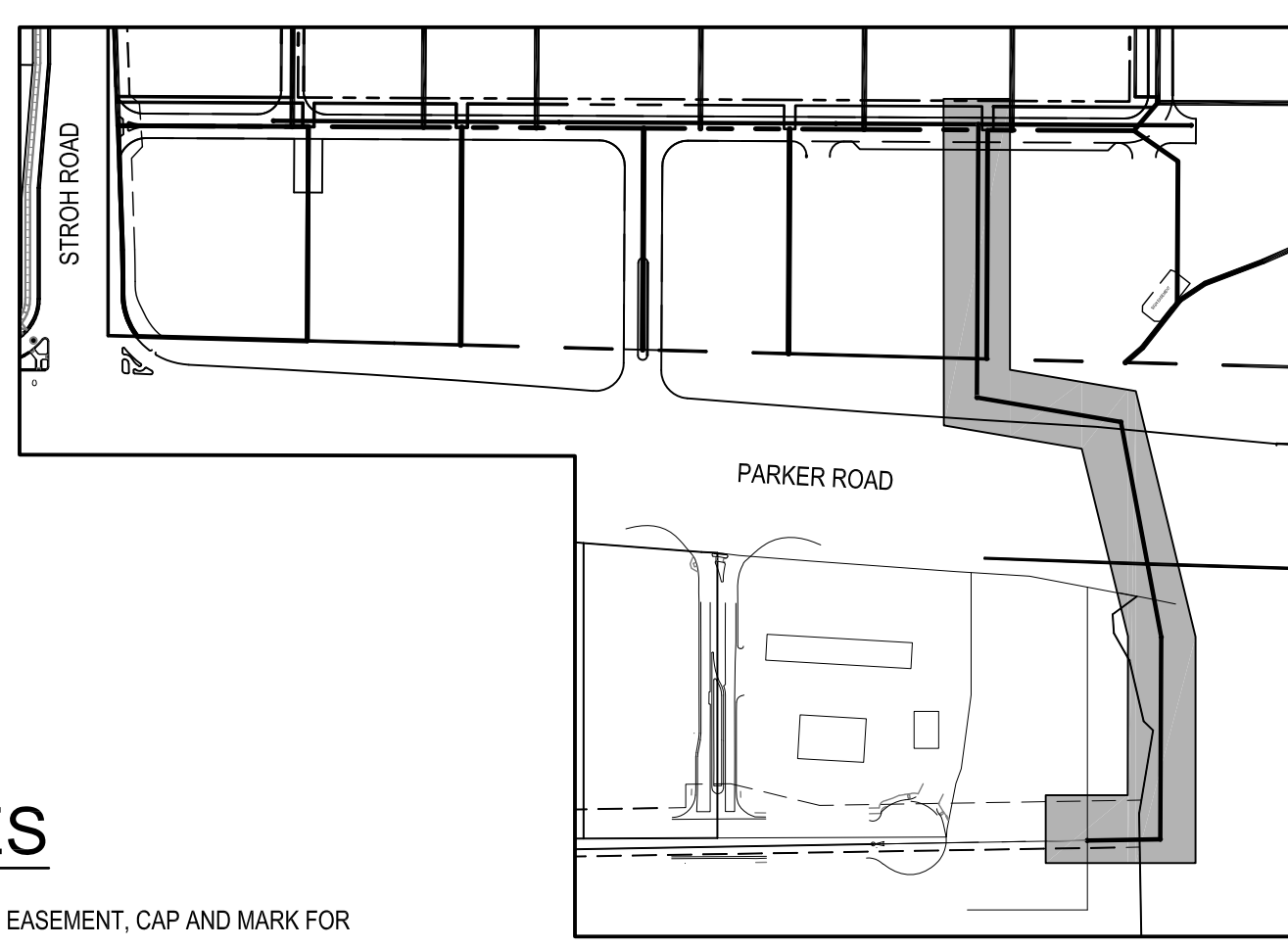
- 1 INSTALL 6" SERVICE LATERAL AT 2.0%. EXTEND TO EDGE OF EASEMENT, CAP AND MARK FOR FUTURE CONNECTION.
- 2 CONSTRUCT 4' DIAMETER CONCRETE MANHOLE.
- 3 CONNECT TO EXISTING SEWER MAIN. VERIFY DEPTH AND LOCATION PRIOR TO ANY SANITARY SEWER CONSTRUCTION.
- 4 BORE AND CASE SANITARY SEWER LINE UNDER PARKER ROAD. USE 18" STEEL CARRIER PIPE PER DETAIL.

**ABBREVIATIONS**

ASSY	ASSEMBLY
BP	BOTTOM OF PIPE
ESMT	EASEMENT
ELEV	ELEVATION
EX	EXISTING
DIP	DUCTILE IRON PIPE
FG	FINISHED GRADE
FL	FIRE HYDRANT
FU	FUTURE
GV	GATE VALVE
INV	INVERT
KB	KICK BLOCK / THRUST BLOCK
PR	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE
TP	TOP OF PIPE
WI	WITH

**LEGEND**

	PROPERTY LINE
	LOT LINE
	PROPOSED EASEMENT / SETBACK
	EXISTING RIGHT-OF-WAY
	PROPOSED SAWCUT LINE
	PROPOSED CURB
	PROPOSED FLOW LINE
	PROPOSED PANLIP
	PROPOSED SANITARY SEWER
	EXISTING SANITARY SEWER
	PROPOSED WATERLINE
	EXISTING WATERLINE
	PROPOSED STORM SEWER
	EXISTING STORM SEWER
	EXISTING / PROPOSED SANITARY MANHOLE *
	EXISTING / PROPOSED CLEAN OUT *
	UNDERGROUND UTILITY CROSSING



**KEY MAP**

**BENCHMARK**  
BENCHMARK: DOUGLAS COUNTY SURVEY CONTROL MONUMENT  
TT15A - 3" DIAMETER DOUGLAS COUNTY GIS ALUMINUM CAP AT  
THE NE CORNER OF STROH ROAD AND SOUTH PARKER ROAD (US  
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PREPARED UNDER THE DIRECT SUPERVISION OF JERRY W. DAVIDSON, P.E. COLORADO REG # 30226 FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP, INC.

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10/24/17	INITIAL SUBMITTAL	

**SANITARY PLAN & PROFILE**

design by: JWD  
approved by: JWD  
project no.: 2015-015

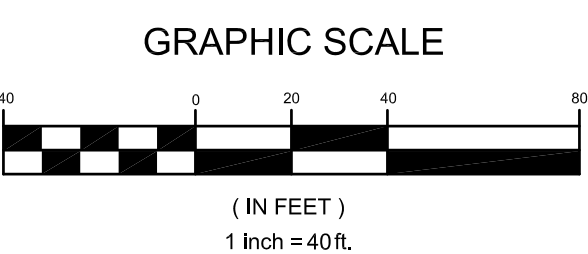
date: 10/01/17

SHEET  
**C7.15**



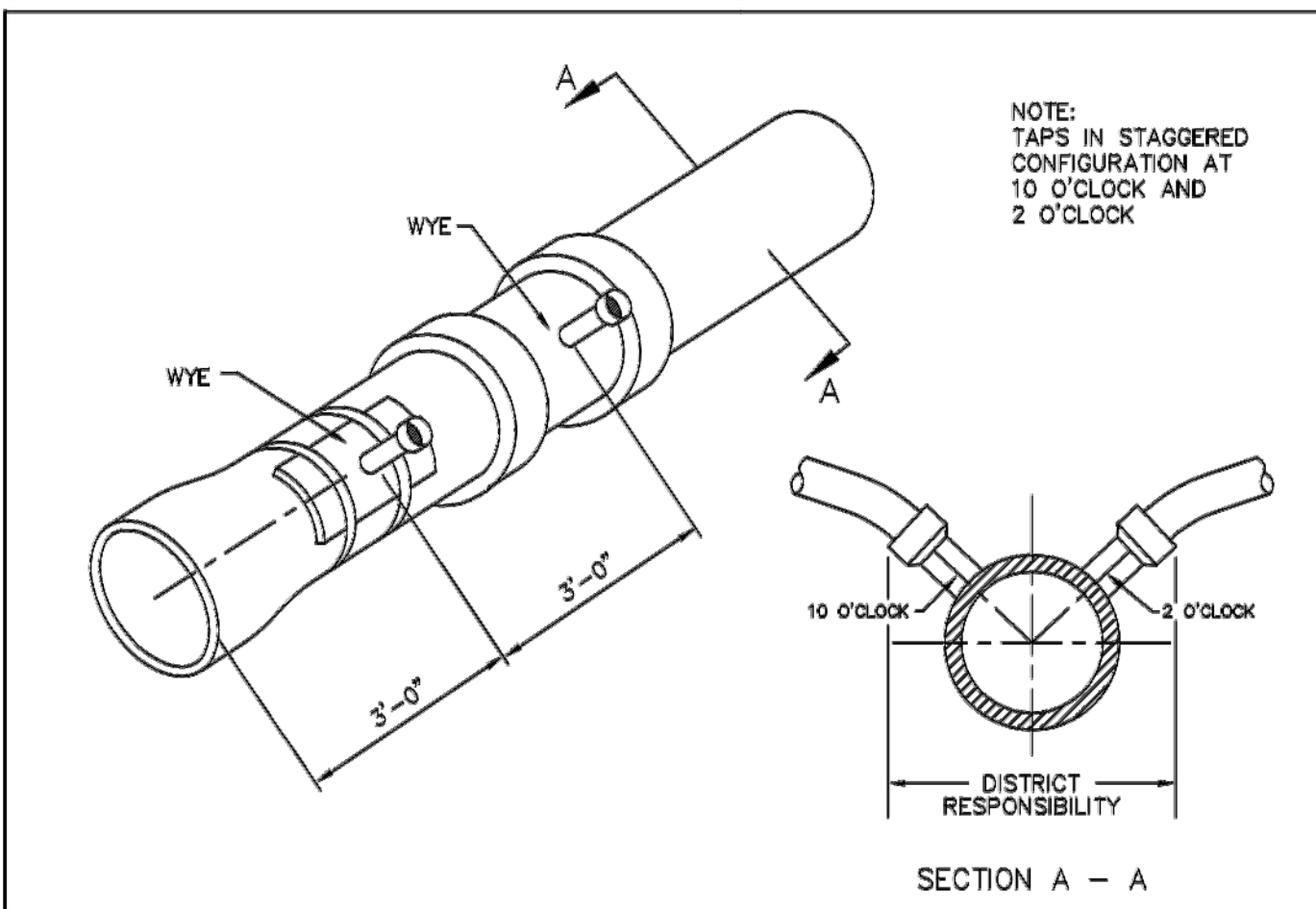
6901 SOUTH PIERCE STREET SUITE 315, LITTLETON, CO 80120 303.259.8688  
WWW.PERCEPTIONDESIGNGROUP.COM

PARKER POINTE  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINTE FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
PARKER, COLORADO





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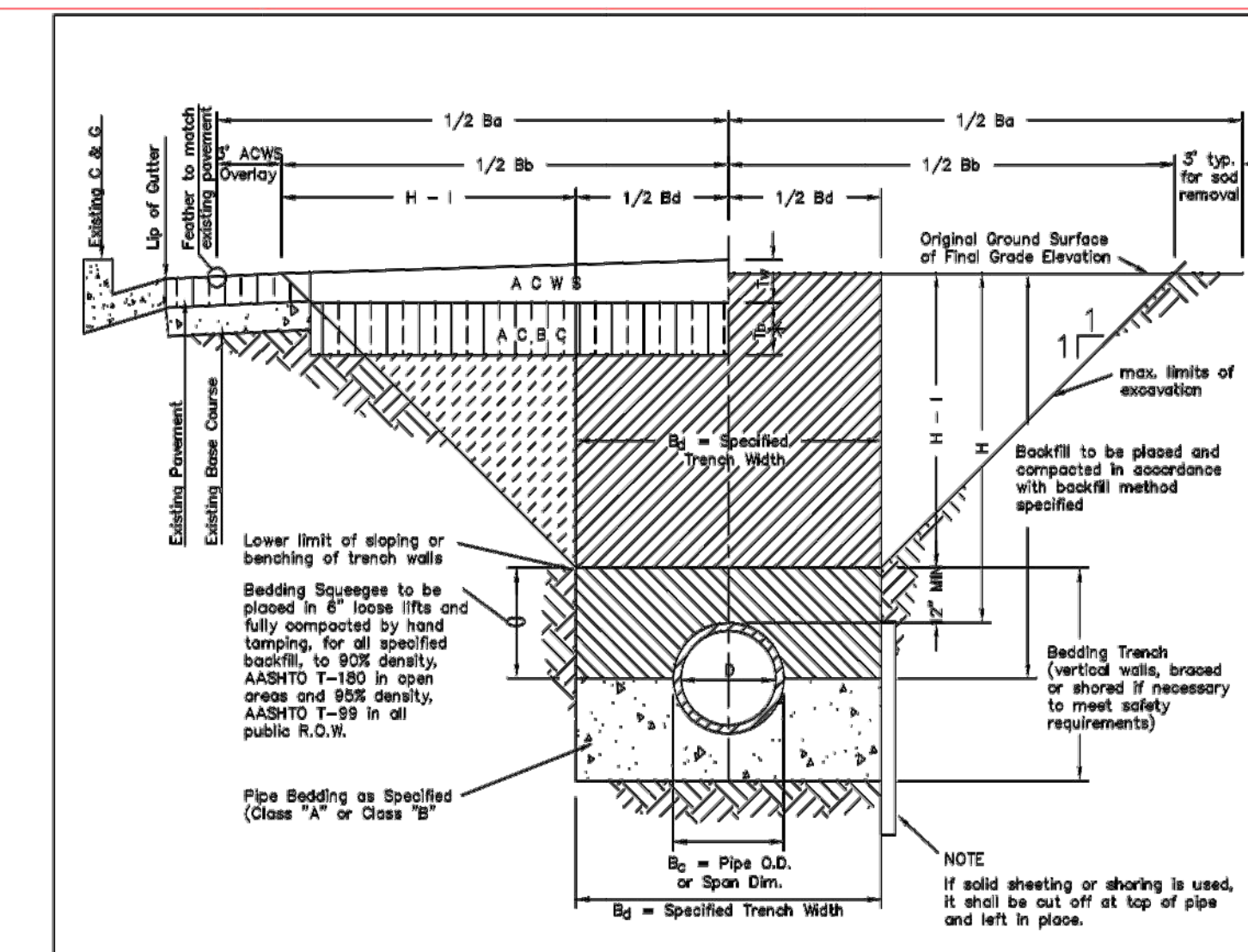
Sewer service connections shall be positioned at either the 2 o'clock or the 10 o'clock position on the circumference of the sewer main. On new installations, tee or wye fittings shall be used. When tapping into existing sewer main, a saddle connection and approved coring method shall be used. The minimum distance between service connections made along the pipe shall be 3 feet. The minimum distance from either the bell or spigot end of a pipe shall be 3 feet. The minimum distance from the center of a manhole to a service connection shall be either 7 feet or the transition point from the manhole trench to the normal pipe trench, whichever is greater. A maximum of 4 sewer service connections shall be allowed per 20 foot length of pipe. In all cases, a specific soils investigation should be conducted to assure that the external loading will be within allowable limits regardless of the number of taps involved.

DOMESTIC SEWER TAPPING DETAIL

PARKER WATER & SANITATION DISTRICT	
DOMESTIC SEWER TAPPING DETAIL	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	4/01 1/08 1/16 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET 34.13



TYPICAL TRENCH DETAIL

$T_b$  = Thickness of Asphaltic Concrete Base Course (A C B C)  
 $T_w$  = Thickness of Asphaltic Concrete Wearing Surface (A C W S)  
 $T_o$  = Total Asphalt Thickness ( $T_b + T_w$ )  
 $B_o$  = Outside Pipe or Conduit Span Dimension  
 $B_d$  = Specified Bedding Trench Width and Max Bedding Trench Width at a point 12" above Top of Pipe (See Note 2)  
 $B_p$  = Max. Pay Width of Asphaltic Concrete Base Course (or Asphaltic Concrete Cold Mix) (See Note 3)  
 $B_w$  = Max. Pay Width of Asphaltic Concrete Wearing Surface or Soil Replacement. (See Note 3)  
 $H$  = Depth of Surface to Top of Pipe  
 $H-1$  = Depth from Surface to 1 ft. above Top of Pipe

**NOTES**

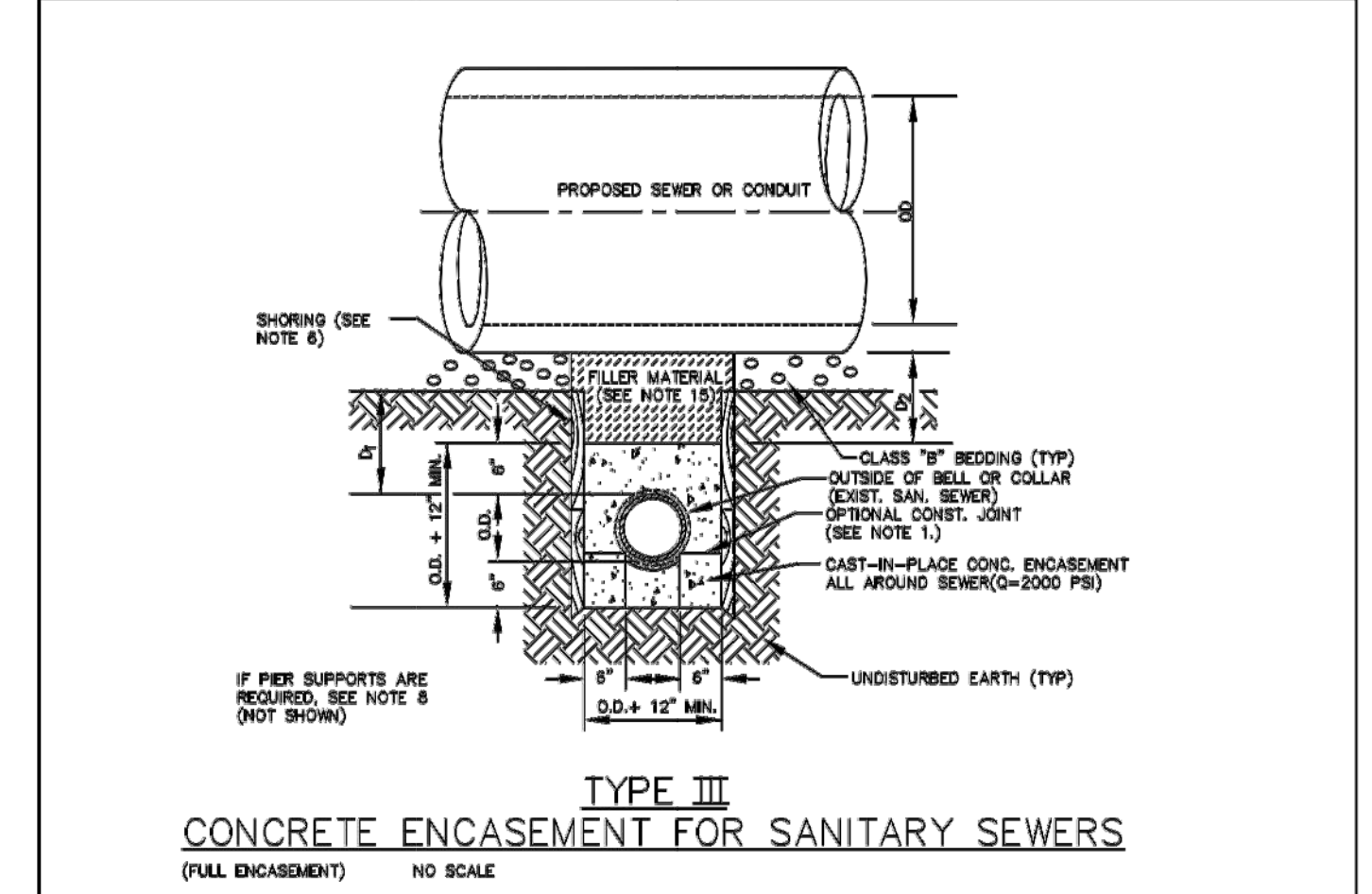
1. Sloping or benching of trench side walls, where permitted shall be in accordance with applicable Federal, State and Local safety regulations.
2. Trench shall be brood and shored as necessary to afford safe working conditions or to protect adjacent utilities, structures, etc., unless otherwise specified on the plans. No pavement will be made for removal, replacement or relocation of curb and gutter utilities, sidewalks, structures, etc. outside the maximum limits of excavation as shown and the contractor shall be responsible for protection of same.
3. If dimension " $B_w$ " is  $\leq 5'$ , then existing asphalt pavement shall be removed and replaced up to the gutter. Maximum asphalt pay width,  $B_p$  &  $B_w$  shall then be based upon this actual width.

STREET WIDTH	ASPHALTIC BASE COURSE (T <sub>b</sub> )	ASPHALTIC WEARING SURFACE (T <sub>w</sub> )	TOTAL THICKNESS (T <sub>o</sub> )
UP TO 36'	4"	2"	6"
36' TO 44'	4"	3"	7"
44' TO 48'	6"	3"	9"
WIDER THAN 48'	6"	3"	9"

PARKER WATER & SANITATION DISTRICT	
SEWER TRENCHING AND BEDDING DETAIL	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	3/98 1/16 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET 34.1



TYPE III CONCRETE ENCASEMENT FOR SANITARY SEWERS (FULL ENCASEMENT) NO SCALE

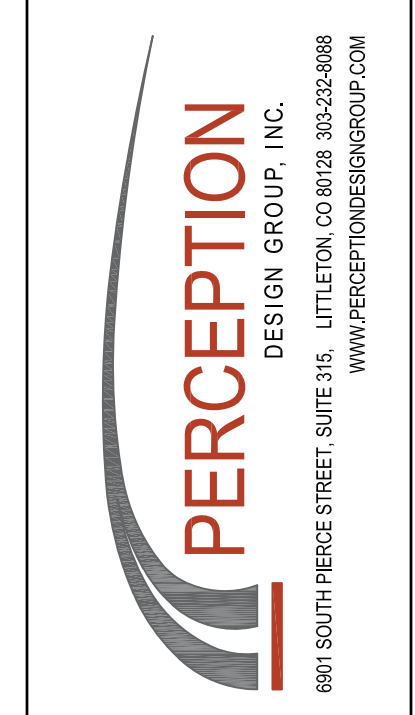
**GENERAL NOTES FOR TYPE III & III ENCASEMENT**

1. CONCRETE TO BE CAST AGAINST UNDISTURBED SOIL OR SHORING. IF OPTIONAL CONSTRUCTION JOINT IS USED & BOTTOM HALF OF ENCASEMENT IS POURED SEPARATELY, A ONE INCH LAYER OF SAND OR MORTAR SHALL BE PLACED BETWEEN BOTTOM OF SANITARY SEWER AND TOP OF CONCRETE.
2. LENGTH OF ENCASEMENT FOR:
  - (a) TYPE I & TYPE II ENCASEMENT SHALL EXTEND FULL TRENCH WIDTH EXCAVATED FOR PROPOSED SEWER OR CONDUIT.
  - (b) TYPE III ENCASEMENT SHALL EXTEND AT LEAST 10 FEET EACH SIDE OF WATER MAIN.
3. UNLESS OTHERWISE NOTED ON PLAN/PROFILE DRAWINGS, TYPE III & III ENCASEMENTS NEED NOT BE REINFORCED. REINFORCEMENT, IF REQUIRED, TO BE SPECIFIED AND DETAILED SEPARATELY ON PLAN & PROFILE DRAWINGS.
4. TYPE I, II OR III ENCASEMENTS ARE REQUIRED UNDER FOLLOWING CONDITIONS:
  - (a) TYPE I OR TYPE II IF  $D_o \leq 18"$  ( $D_o \leq 12"$ ) EXCEPT FOR SANITARY SEWER CROSSING OVER OR UNDER WATER MAINS.
  - (b) TYPE II IS REQUIRED FOR SANITARY SEWERS CROSSING UNDER WATER MAINS WATER MAINS AND  $D_o \leq 24"$  ( $D_o \leq 18"$ ).
  - (c) TYPE III IS REQUIRED FOR SANITARY SEWERS CROSSING OVER TOP OF WATER MAINS, REGARDLESS OF DIMENSION  $D_o$ .
  - (d) EXCEPT FOR UNUSUAL CIRCUMSTANCES, WATER MAIN CROSSINGS, OR WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, TYPE I ENCASEMENT WILL NORMALLY BE SATISFACTORY.
  - (e) IF THE SANITARY SEWER IS REPLACED OR CONSTRUCTED OF DUCTILE IRON PIPE (AWWA C-150 OR C-151), CONCRETE ENCASEMENT MAY NOT BE REQUIRED.
5. FILLER MATERIAL BETWEEN CONDUITS TO BE:
  - (a) APPROVED COMPRESSIBLE MATERIAL SUCH AS STYROFOAM, ETC. IF  $D_o \leq 4'$  &  $L \leq 6'$ .
  - (b) COMPACTED CLASS "B" BEDDING IF  $D_o$  &  $L > 6'$ .
  - (c) IF  $D_o > 6'$  FOR TYPE III ENCASEMENT POUR CONCRETE ON UNDISTURBED SOIL.
6. SHORING OR SHEETING, IF USED, TO BE CUT OFF AT TOP OF ENCASEMENT.
7. THESE ENCASEMENT DETAILS MAY ALSO BE APPLICABLE FOR CONDUITS OTHER THAN STORM OR SANITARY SEWER INSTALLATIONS.
8. IN CERTAIN SITUATIONS WHERE CONDUIT DIAMETER "D" IS EXTREMELY LARGE, PIER SUPPORTS ON EACH SIDE OF SANITARY SEWER MAY ALSO BE REQUIRED. IF REQUIRED, SUPPORTS SHALL BE SPECIFIED AND DETAILED SEPARATELY ON PLAN AND PROFILE DRAWINGS.
9. CONCRETE ENCASED PIPING SHALL BE LINED WITH FELT LAYER.

PARKER WATER & SANITATION DISTRICT	
CONCRETE ENCASEMENT TYPE III	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	3/98 1/16 10/16
DIRECTOR OF ENGINEERING	

2016 REVISION

SHEET 34.8



PREPARED UNDER THE DIRECT SUPERVISION OF HENRY W. DAVIDSON, P.E. COLORADO REG # 30226 FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP, INC.

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05/25/18		THIRD SUBMITTAL
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SANITARY SEWER DETAILS  
 PARKER POINT  
 LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINT FILING NO. 1  
 SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
 PARKER, COLORADO

design by: JWD  
 approved by: JWD  
 project no.: 2015-015

date: 10/01/17

SHEET  
**C7.91**

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**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:**

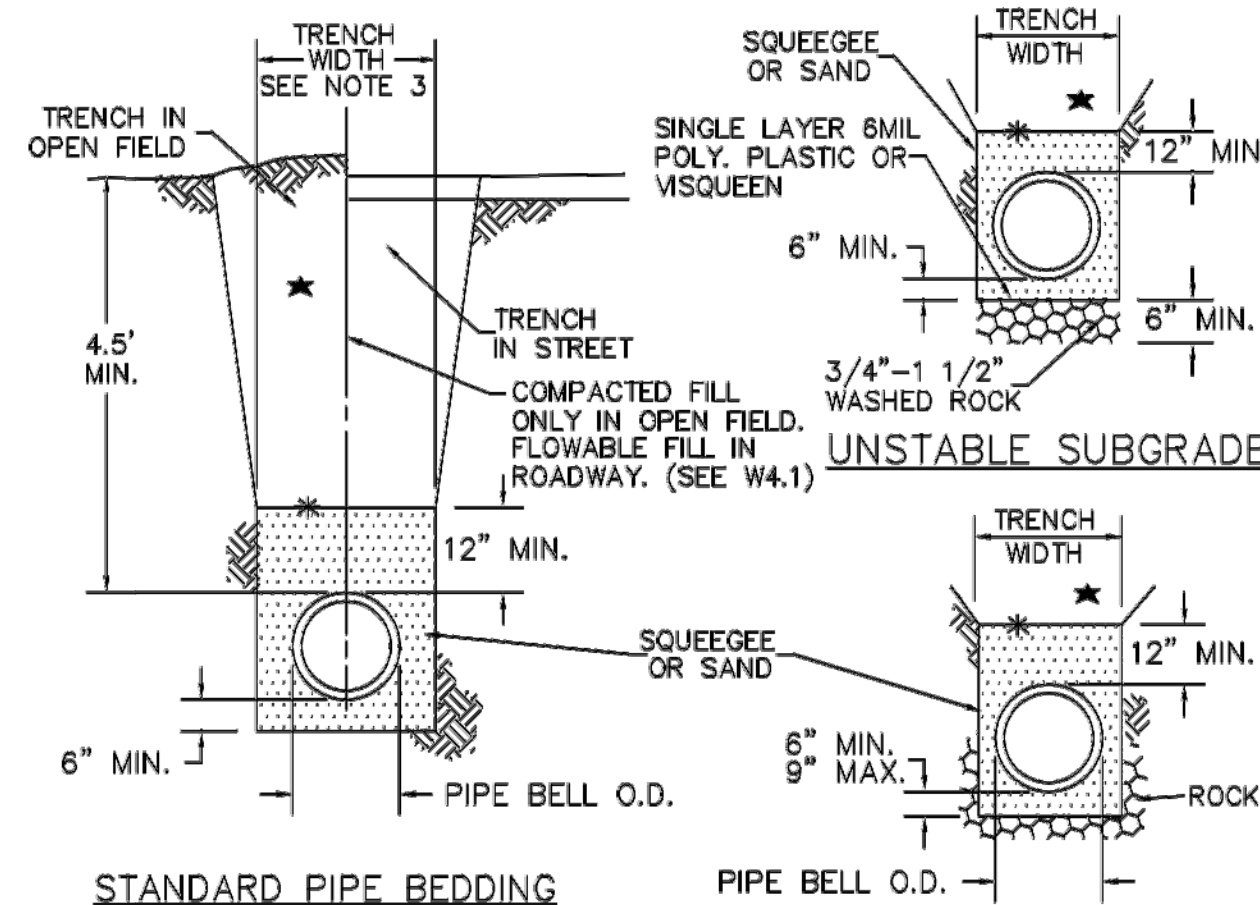
- WATER**
1. ACCEPTABLE PIPE MATERIALS SHALL BE K-COPPER TUBING. (3/4" MIN.)
  2. APPROVED BEDDING TO BE SQUEEGEE.
  3. ONLY ONE COUPLING WILL BE ALLOWED BETWEEN THE STUB-IN AND BUILDING. COMPRESSION COUPLINGS WILL NOT BE ALLOWED ON NEW CONSTRUCTION. SILVER SOLDERED JOINTS MUST BE USED ON SERVICES LARGER THAN 3/4". SILVER SOLDERED JOINTS MUST BE INSPECTED BY PWSO PRIOR TO 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 PWSO 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 USED IN MOVING STOPBOXES ON SERVICES LARGER THAN 3/4". SILVER SOLDERED JOINTS MUST BE INSPECTED BY PWSO 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: 2/98

APPROVED: 1/04  
PVR 1/18  
DIRECTOR OF ENGINEERING 10/16

2016 REVISION      SHEET W1.1



**STANDARD PIPE BEDDING**  
 \* MACHINE COMPACTED TRENCH BACKFILL  
 \* LIMIT OF SLOPING OR BENCHING OF TRENCH WALLS  
 \* UNDISTURBED GROUND

**PIPE BEDDING IN ROCK**

- NOTES:**
1. MIN COVER TO BE BELOW FINAL STREET GRADE. CONSTRUCTION OF WATER MAIN MAY NOT START UNTIL FINAL GRADE WITHIN 1 FOOT.
  2. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE PROTECTION OF OTHER UTILITIES AND TO MEET OSHA SAFETY REQUIREMENT.
  3. TRENCH WIDTH SHALL NOT BE MORE THAN 16" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE LAID THEREIN (BELL OR COUPLING O.D. IF APPLICABLE). REFER TO SHEET W4.1 FOR DIMENSIONS.

**PARKER WATER & SANITATION DISTRICT**  
BEDDING DETAILS

SCALE: NONE      DATE: 2/98

APPROVED: 1/18  
PVR 10/16  
DIRECTOR OF ENGINEERING

2016 REVISION      SHEET W4.8

**PIPE BEDDING:**

(a) **Installation of Bedding and Pipe:** 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. Bell holes shall be dug deep enough to provide a minimum of two inches (2") of clearance between the bell 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 bell holes.

Tamping is herein defined as the act of placing approved bedding material under the haunches of the pipe, paying particular attention to voids, bell 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 backfill may then be installed to the groundline. See Chapter 2 of these Standards for backfill and composition of backfill.

Compaction 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 squeegee sand and shall conform to the following limits when tested by means of laboratory sieves:

**Well-Graded Sand for (24-inch or large diameter)**

Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 4	70-100
No. 8	36-93
No. 16	20-80
No. 30	8-65
No. 50	2-30
No. 100	1-10
No. 200	0-3

**Squeegee Sand**  
for use with 20-inch or smaller

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

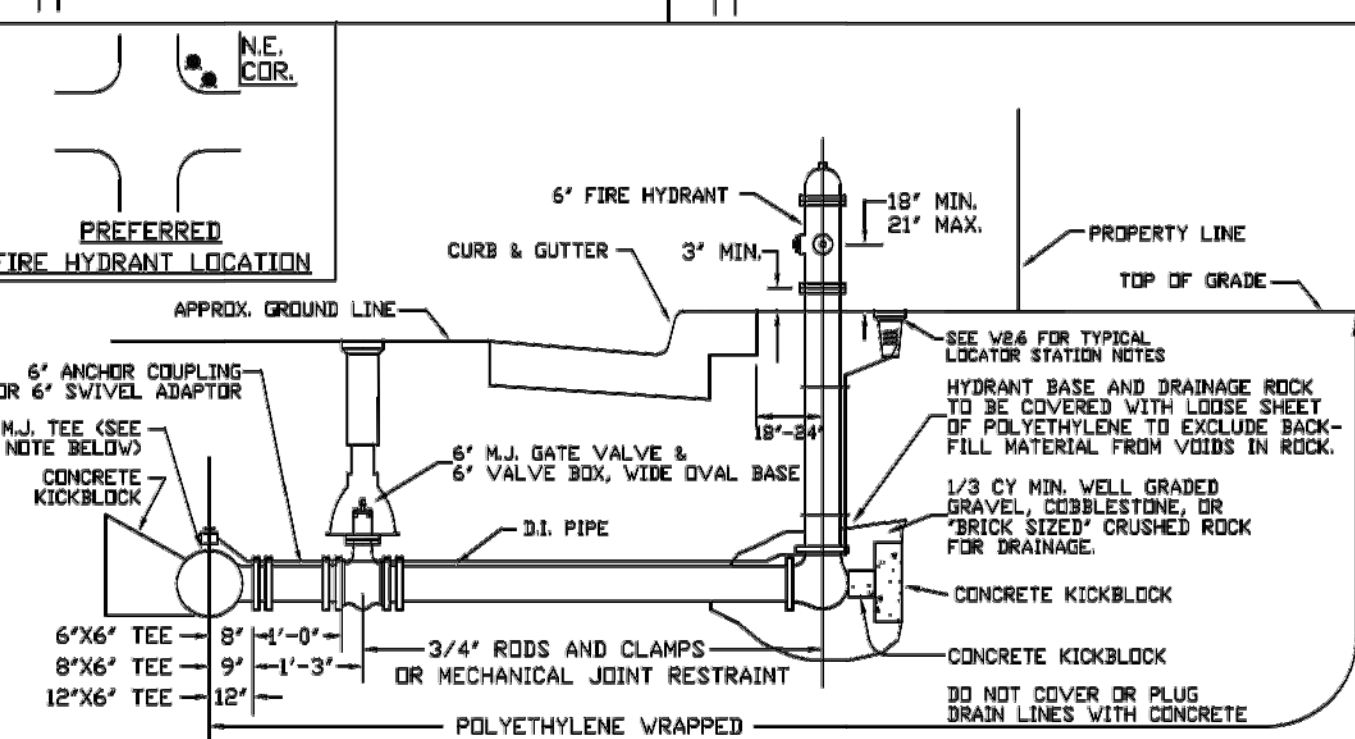
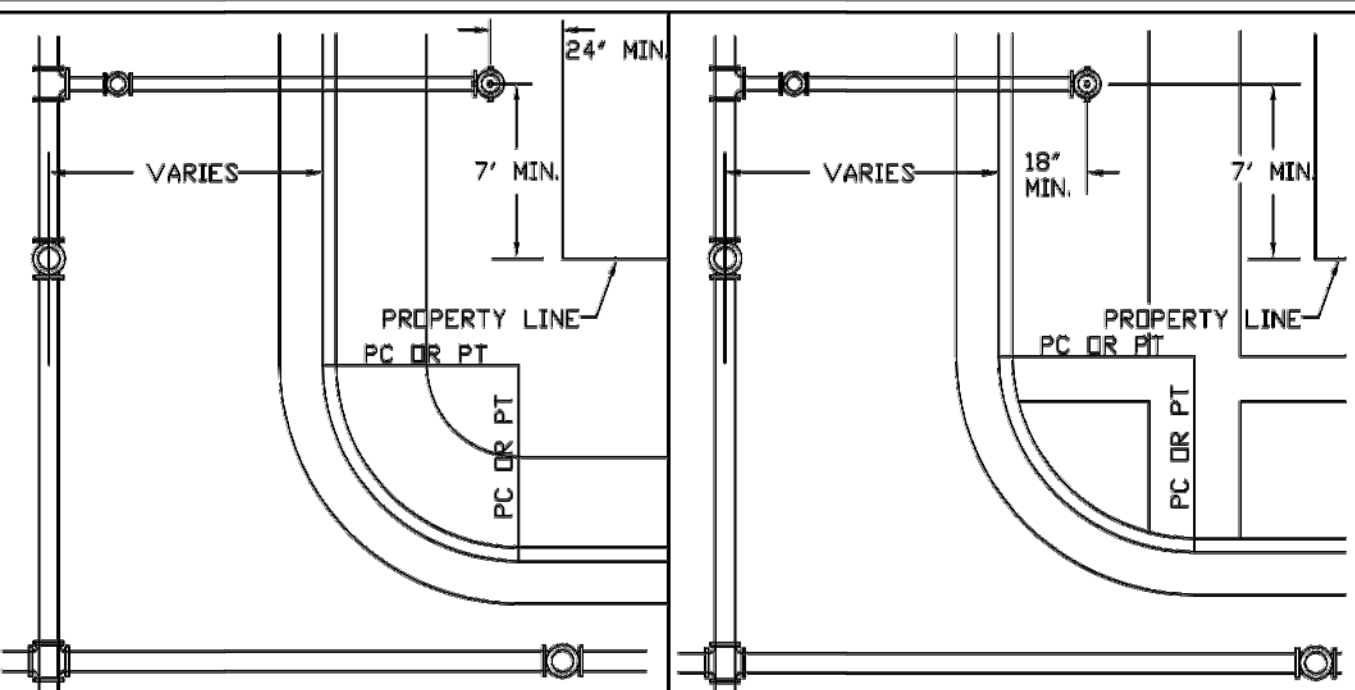
If approved by the District, fines from the trench walls and spoils pile may be used to provide uniform support for the pipe. No rock or stone larger than that allowed by the sieve analysis, or any other detrimental substance, shall be placed closer to the pipe than six inches (6"). Approved bedding 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: 2/98

APPROVED: 5/98  
PVR 2/03  
DIRECTOR OF ENGINEERING 10/16

2016 REVISION      SHEET W4.2

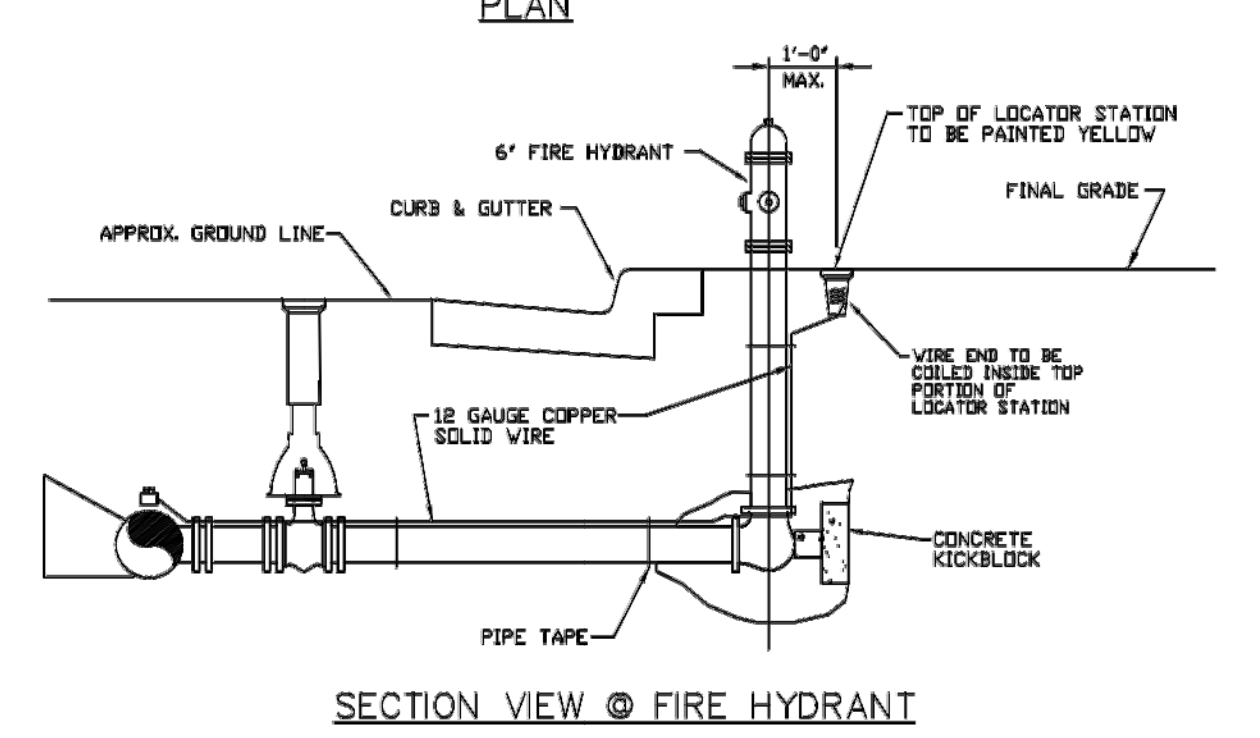
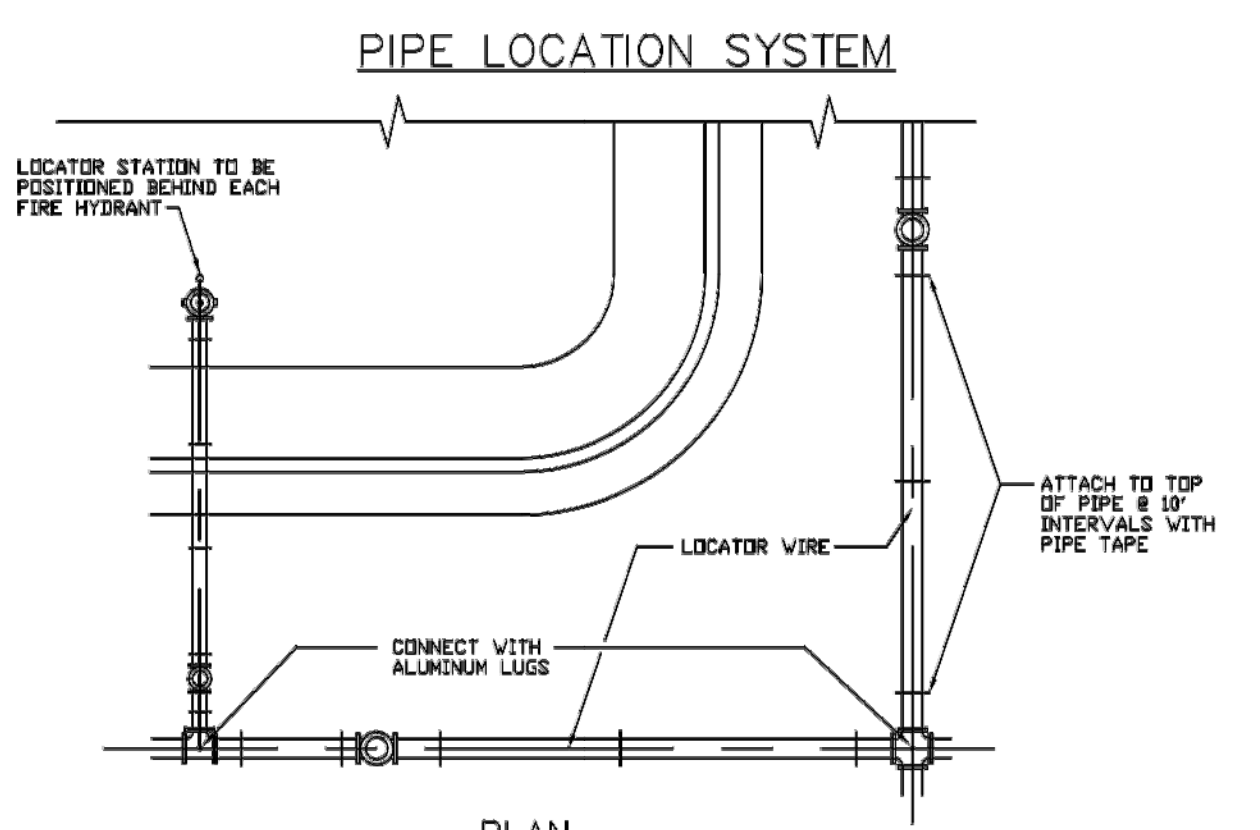


**PARKER WATER & SANITATION DISTRICT**  
FIRE HYDRANTS LOCATION & INSTALLATION

SCALE: NONE      DATE: 2/98

APPROVED: 4/21 10/18  
PVR 01/02  
DIRECTOR OF ENGINEERING 12/07 1/16

2016 REVISION      SHEET W2.5

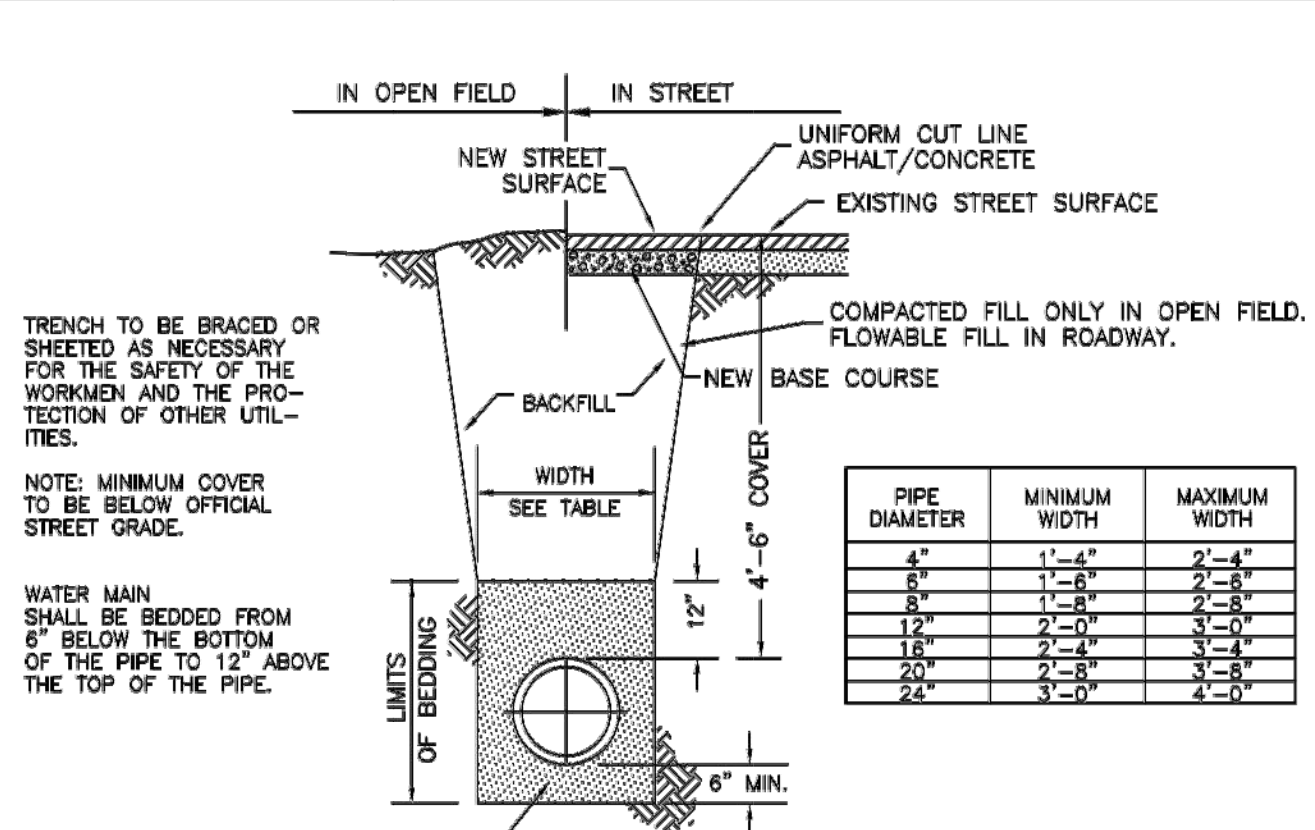


**PARKER WATER & SANITATION DISTRICT**  
LOCATOR WIRE DETAILS

SCALE: NONE      DATE: 2/98

APPROVED: 4/21 10/18  
PVR 01/18  
DIRECTOR OF ENGINEERING 10/18

2016 REVISION      SHEET W2.6



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

SCALE: NONE      DATE: 2/98

APPROVED: 1/78  
PVR 10/16  
DIRECTOR OF ENGINEERING

2016 REVISION      SHEET W4.1



PREPARED UNDER THE DIRECT SUPERVISION OF JERRY W. DAVIDSON, P.E. COLORADO REG # 30226 FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP, INC.

NO.	DATE	DESCRIPTION
11/01/18	SIXTH SUBMITTAL	
08/31/18	FOURTH SUBMITTAL	
05/25/18	THIRD SUBMITTAL	
03/19/18	PWSO SUBMITTAL	
02/28/18	SECOND SUBMITTAL	
10/24/17	INITIAL SUBMITTAL	

**WATER DETAILS**

PARKER POINT  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINT FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
PARKER, COLORADO

design by: JWD  
approved by: JWD  
project no.: 2015-015

date: 10/01/17

SHEET  
**C7.92**

**11-1/4, 22-1/2, 45° & 90° BENDS**

**DEAD END**

**TEE**

**TYPICAL CROSS SECTION**

SIZE OF PIPE	11-1/4"	22-1/2"	45°	90°	TEE OR DEAD END
4"	1.00	1.00	1.00	1.50	1.50
6"	1.00	1.25	2.25	4.00	3.00
8"	2.00	4.25	8.25	15.25	11.00
10"	3.50	8.50	12.50	23.00	18.50
12"	5.00	13.00	18.50	33.00	26.00
24"	8.50	13.00	25.00	47.00	33.00

**MINIMUM BEARING SURFACE AREA (IN SQUARE FEET)**

**NOTES:**

- ALL VALVES, TEES, BENDS AND PLUGS SHALL BE RESTRAINED AND KICKLOCKED.
- BEARING SURFACES SHOWN IN CHART ARE MINIMUM.
- BASED ON 150 PSI PIPE PRESSURE PLUS WATER HAMMER:  
4" 6" AND 8" WATER HAMMER = 120 PSI  
12" WATER HAMMER = 110 PSI  
16", 20" AND 24" WATER HAMMER = 70 PSI.
- SOIL BEARING CAPACITY = 3,000 LBS./SQ. FT.

**PARKER WATER & SANITATION DISTRICT  
CONCRETE KICKBLOCKS  
BEARING SURFACES AND INSTALLATION**

SCALE: NONE DATE: 2/98  
APPROVED: 4/01 1/16 10/16  
PVR DIRECTOR OF ENGINEERING

2016 REVISION SHEET W3.16

**MECHANICAL JOINT RESTRAINT**

**WEDGE DETAIL**

**BOLT HOLE DETAIL**

NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	J INCHES	F INCHES	M INCHES
4"	2	2	11.12	9.5	7.00	0.88
6"	6	3	13.37	11.75	9.15	1.00
8"	8	4	15.62	14.00	11.20	1.00
10"	8	4	17.88	16.25	13.30	1.25
12"	8	4	17.88	16.25	13.30	1.25

**NOTES:**

- DIMENSIONS FOR 16" AND 20" D.I. PIPE NOT SHOWN.

**PARKER WATER & SANITATION DISTRICT  
MECHANICAL JOINT RESTRAINT DETAILS**

SCALE: NONE DATE: 2/98  
APPROVED: 2/00 12/07 1/16 10/16  
PVR DIRECTOR OF ENGINEERING

2016 REVISION SHEET W3.17

**FIELD INSTALLATION - POLYETHYLENE WRAP**

**STEP 1** - PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.

**STEP 2** - PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.

**STEP 3** - OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

**PARKER WATER & SANITATION DISTRICT  
POLYETHYLENE WRAP**

SCALE: NONE DATE: 2/98  
APPROVED: 1/16 10/16  
PVR DIRECTOR OF ENGINEERING

2016 REVISION SHEET W4.11

**LENGTH OF TIED PIPE**

PIPE SIZE	4"	6"	8"	12"	16"	20"	24"
TEE OR VALVE	3/4" 6.0'	3/4" 13.0'	3/4" 20.0'	3/4" 27.0'	3/4" 34.0'	3/4" 41.0'	3/4" 48.0'
45° BEND	3/4" 2.0'	3/4" 4.0'	3/4" 6.0'	3/4" 8.0'	3/4" 10.0'	3/4" 12.0'	3/4" 14.0'
22-1/2° BEND	3/4" 1.0'	3/4" 2.0'	3/4" 3.0'	3/4" 4.0'	3/4" 5.0'	3/4" 6.0'	3/4" 7.0'
11-1/4° BEND	3/4" 0.0'	3/4" 0.0'	3/4" 1.0'	3/4" 1.0'	3/4" 1.0'	3/4" 2.0'	3/4" 3.0'

**NOTES:**

- LENGTH OF TIED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
- CLAMPS AND RODS NOT ALLOWED FOR 24" AND LARGER PIPES.
- D = DIAMETER, L = LENGTH, G = GRADE, M.S. = MILD STEEL.
- MINIMUM 45° GROUND COVER REQUIRED.
- BASED ON 150 PSI INTERNAL PRESSURE.
- M.S. MEANS MILD STEEL ROD A.S.T.M. STANDARD DESIGNATION A-36.
- A-36 MEANS HIGH STRENGTH ROD A.S.T.M. STANDARD DESIGNATION A-36.
- M.S. SHALL BE A.S.T.M. STANDARD DESIGNATION A-367 GRADE A.
- SEE THE BOND DETAIL DRAWINGS, KICK BLOCKS, THE ROD COUPLING DETAILS, CLAMP DETAILS AND SET CLAMP DETAILS.
- LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE TIED TOGETHER AND IS NOT NECESSARILY THE LENGTH OF THE TIE RODS.
- STAR BOLTS NOT ALLOWED ON PIPE LARGER THAN 16".
- MINIMUM OF 4 RODS REQUIRED ON 16" PIPE IF STAR BOLTS ARE USED.
- TEES ARE TO BE ROUNDED ON BRANCH ONLY.

**PARKER WATER & SANITATION DISTRICT  
LENGTH OF TIED PIPE**

SCALE: NONE DATE: 2/98  
APPROVED: 4/01 1/16 10/16  
PVR DIRECTOR OF ENGINEERING

2016 REVISION SHEET W3.11

**6-INCH VALVE BOXES**

**NOTES:**

- ALL C.I. SHALL BE WRAPPED WITH 8 MIL. MIN. THICKNESS POLYETHYLENE.
- VALVE NUT SHALL BE CENTERED.
- VALVE BOX SHALL BE PLUMB.
- SEE MATERIAL SPECIFICATIONS FOR VALVE BOX WITH GREATER THAN BURIED DEPTH OF 4.5 FT.

**PARKER WATER & SANITATION DISTRICT  
VALVE BOX DETAIL**

SCALE: NONE DATE: 2/98  
APPROVED: 4/01 1/16 10/16  
PVR DIRECTOR OF ENGINEERING

2016 REVISION SHEET W3.10

**CONDUIT OR STORM SEWER CROSSING**

**NOTES:**

- LENGTH OF EXTENSION OF PIPE AND HARNESS RODS SHALL BE IN ACCORDANCE WITH THESE ENGINEERING STANDARDS.
- ALL WATER MAINS TWELVE (12") INCHES OR SMALLER, WHICH CROSS UNDER CONDUITS/STORM SEWER SHALL BE DUCTILE IRON OR PVC PER SPECIFICATIONS.
- A BORED CROSSING MAY BE REQUIRED BY THE ENGINEER.
- CONCRETE KICKBLOCKS PER SHEET W3.16.

**PARKER WATER & SANITATION DISTRICT  
CONDUIT OR STORM SEWER CROSSING**

SCALE: NONE DATE: 2/98  
APPROVED: 5/98 10/16 2/00 12/07 1/16  
PVR DIRECTOR OF ENGINEERING

2016 REVISION SHEET W4.6

**PERCEPTION DESIGN GROUP, INC.**  
6971 SOUTH PIERCE STREET SUITE 315, LITTLETON, CO 80120 303.252.8688  
WWW.PERCEPTIONDESIGNGROUP.COM

PREPARED UNDER THE DIRECT SUPERVISION OF JERRY W. DAVIDSON, P.E. COLORADO REG # 30226 FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP, INC.

NO.	DATE	DESCRIPTION
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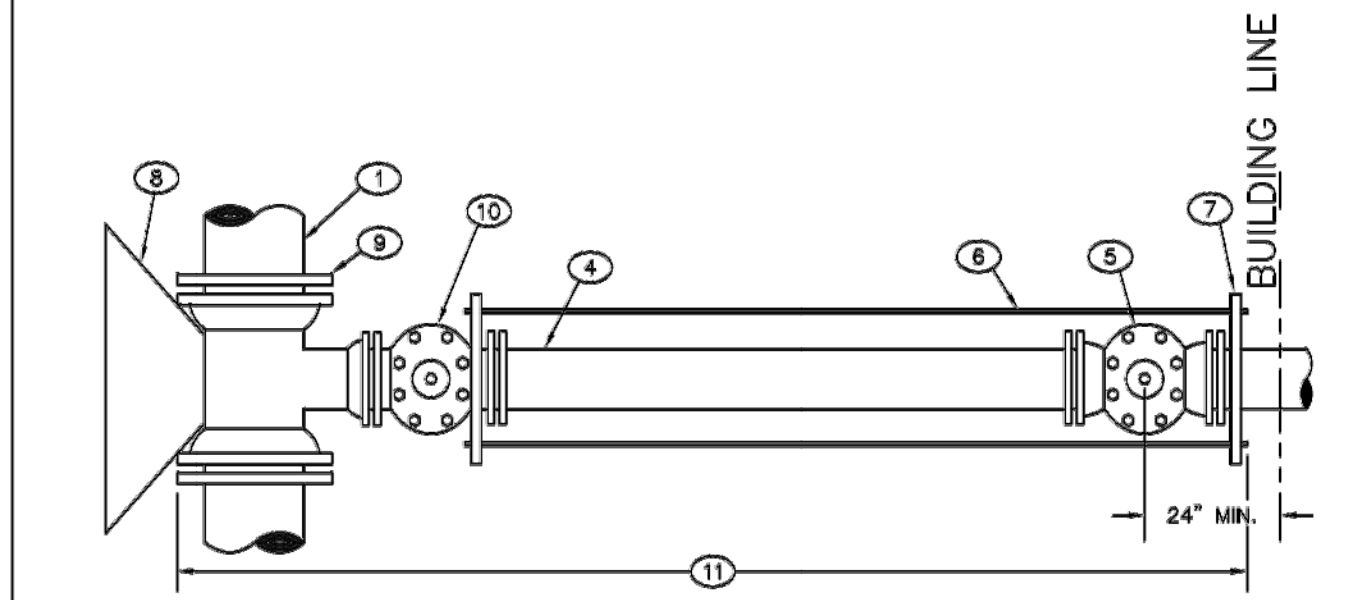
**WATER DETAILS**

PARKER WATER & SANITATION DISTRICT  
LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINT FILING NO. 1  
SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
PARKER, COLORADO

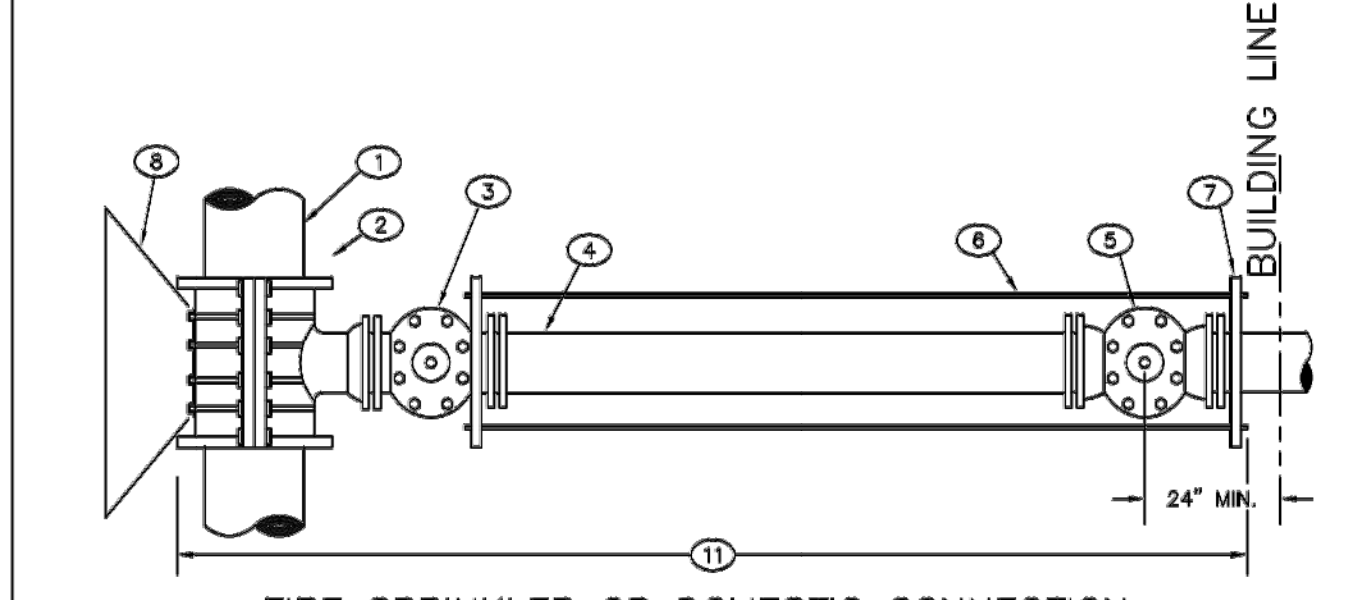
design by: JWD  
approved by: JWD  
project no.: 2015-015  
date: 10/01/17

SHEET **C7.93**

I:\PDG-MAS\PUBLIC\PROJECTS\2015-015 PARKER AND STROH.DWG WATER AND SANITARY PLANS\2015-015 CDS - SAN & WAT DETLS.DWG 11/5/2018 2:31 PM



FIRE SPRINKLER OR DOMESTIC CONNECTION WITH MAIN EXTENSION

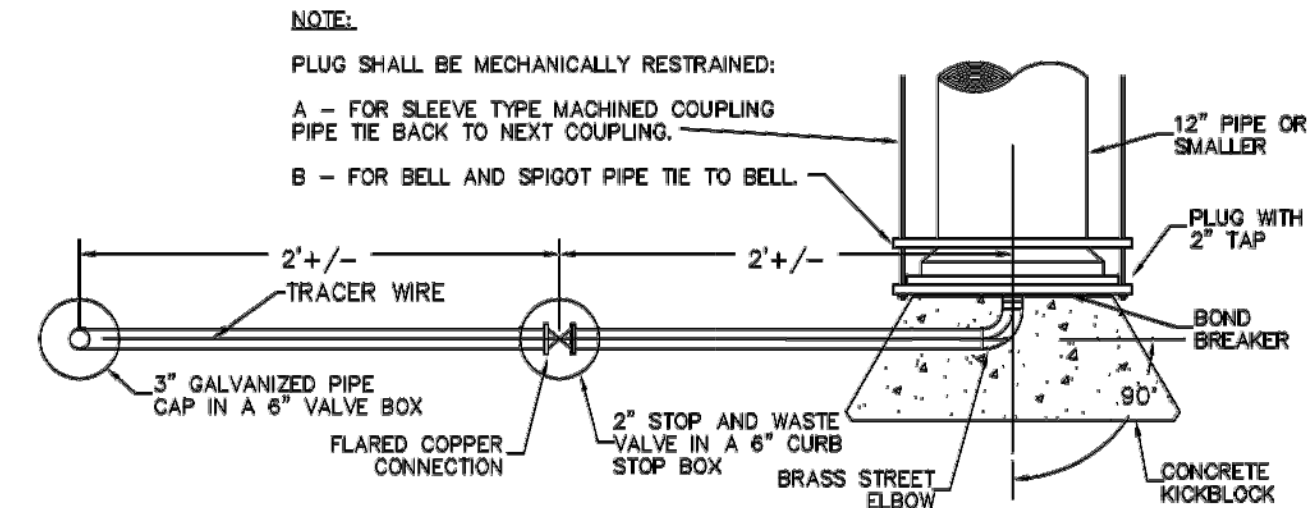


FIRE SPRINKLER OR DOMESTIC CONNECTION

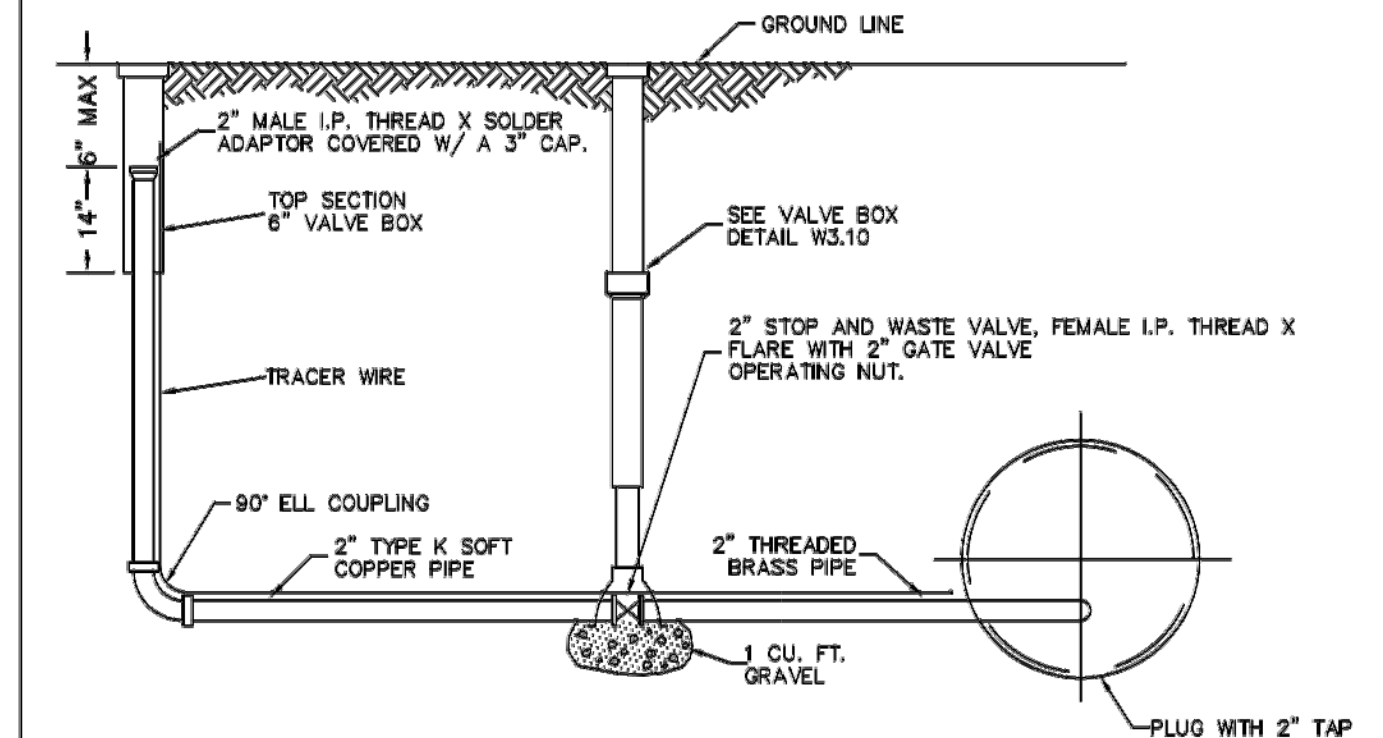
- 1 EXISTING MAIN
- 2 TAPPING SLEEVE
- 3 TAPPING VALVE
- 4 DOUBLE SPIGOT PIPE
- 5 PROPERTY LINE VALVE
- 6 TIE RODS
- 7 PIPE CLAMP
- 8 CONCRETE KICKBLOCK
- 9 M.J. ANCHORING TEE (SWIVEL TEE)
- 10 M.J. VALVE
- 11 POLYETHYLENE WRAPPED

<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>3" AND LARGER DOMESTIC AND FIRE SPRINKLER CONNECTIONS</b>	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	1/16
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.18



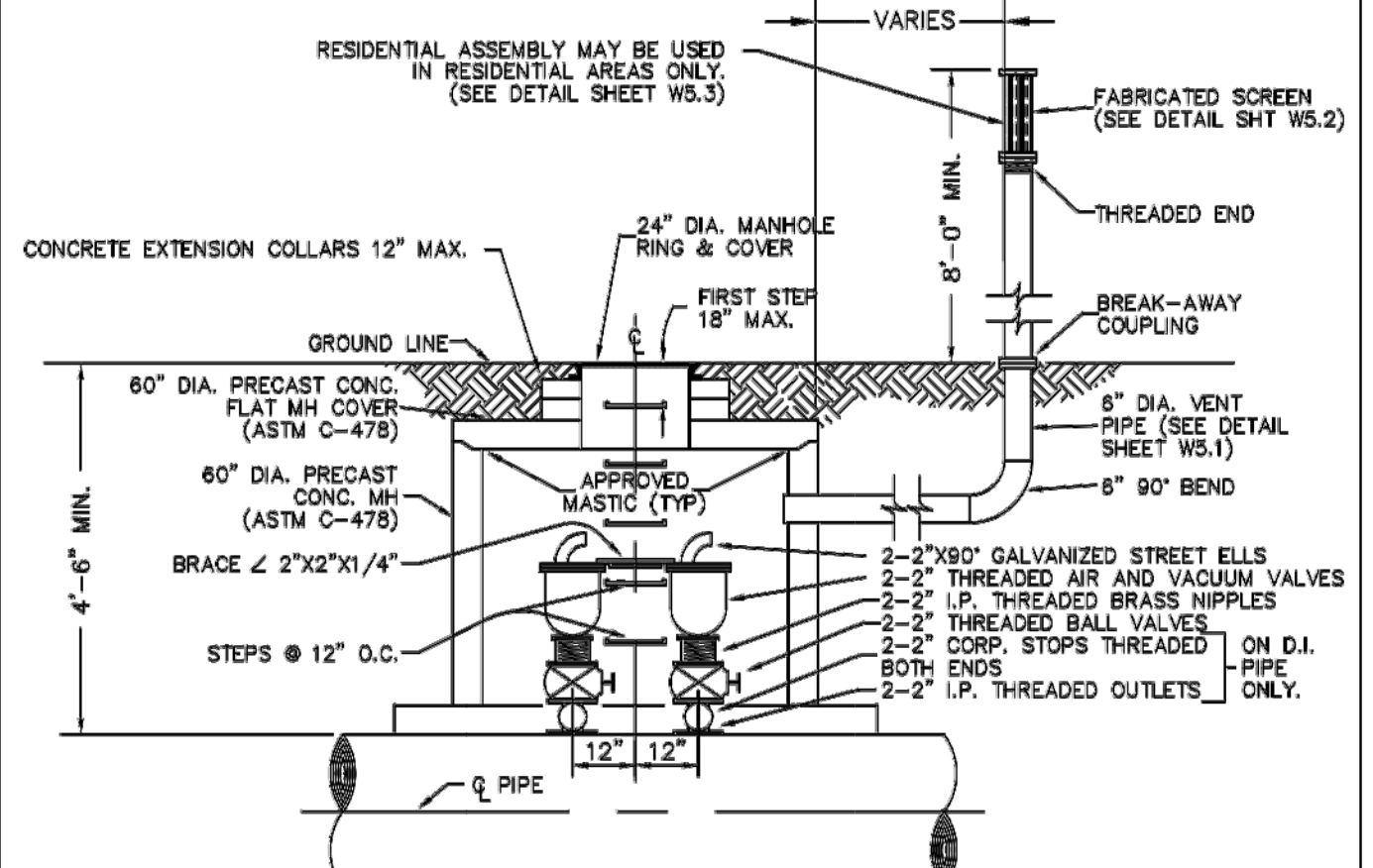
PLAN



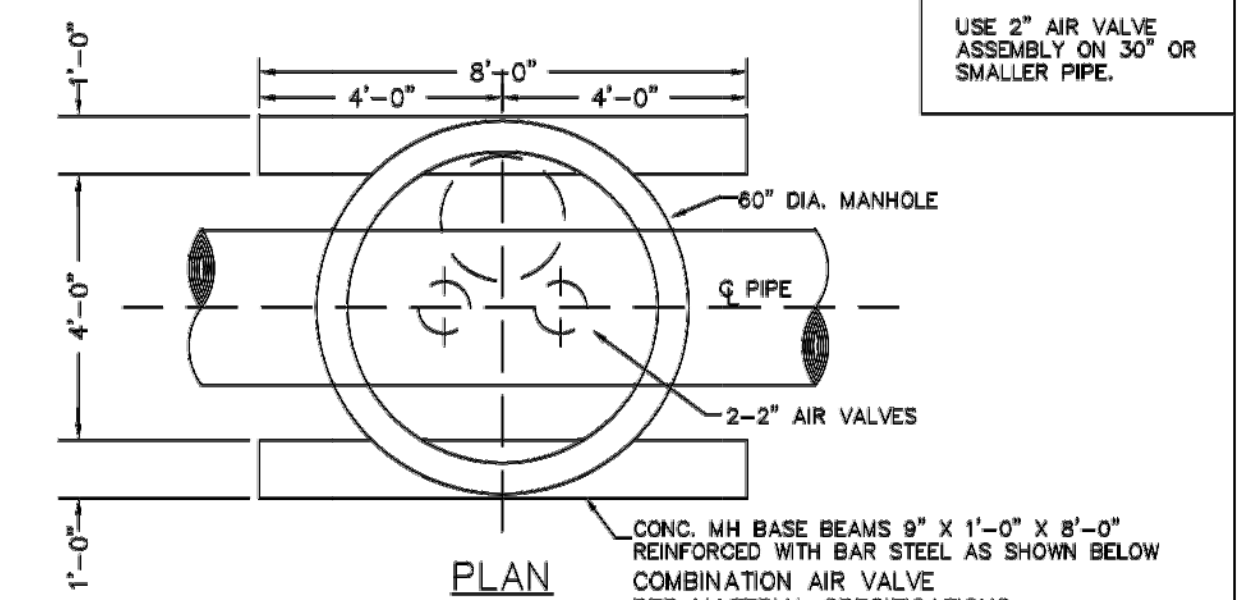
ELEVATION

<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>BLOW-OFF INSTALLATION FOR 12" &amp; SMALLER PIPE</b>	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	4/01
DIRECTOR OF ENGINEERING	

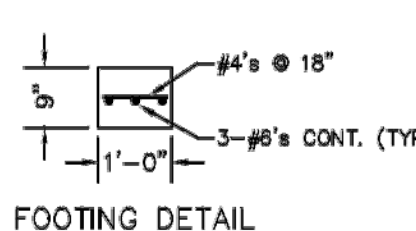
2016 REVISION SHEET W3.7



ELEVATION



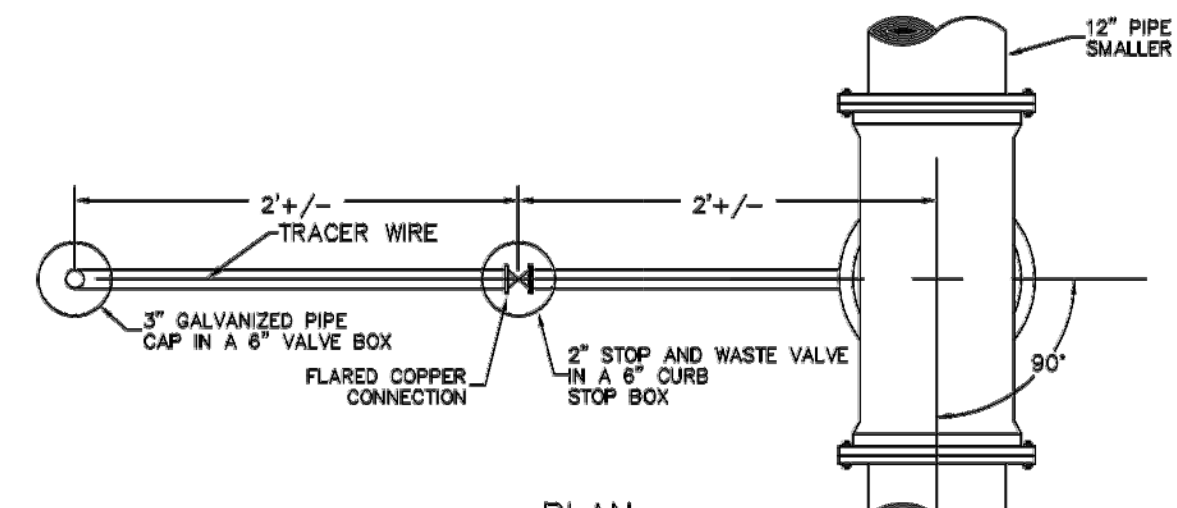
PLAN



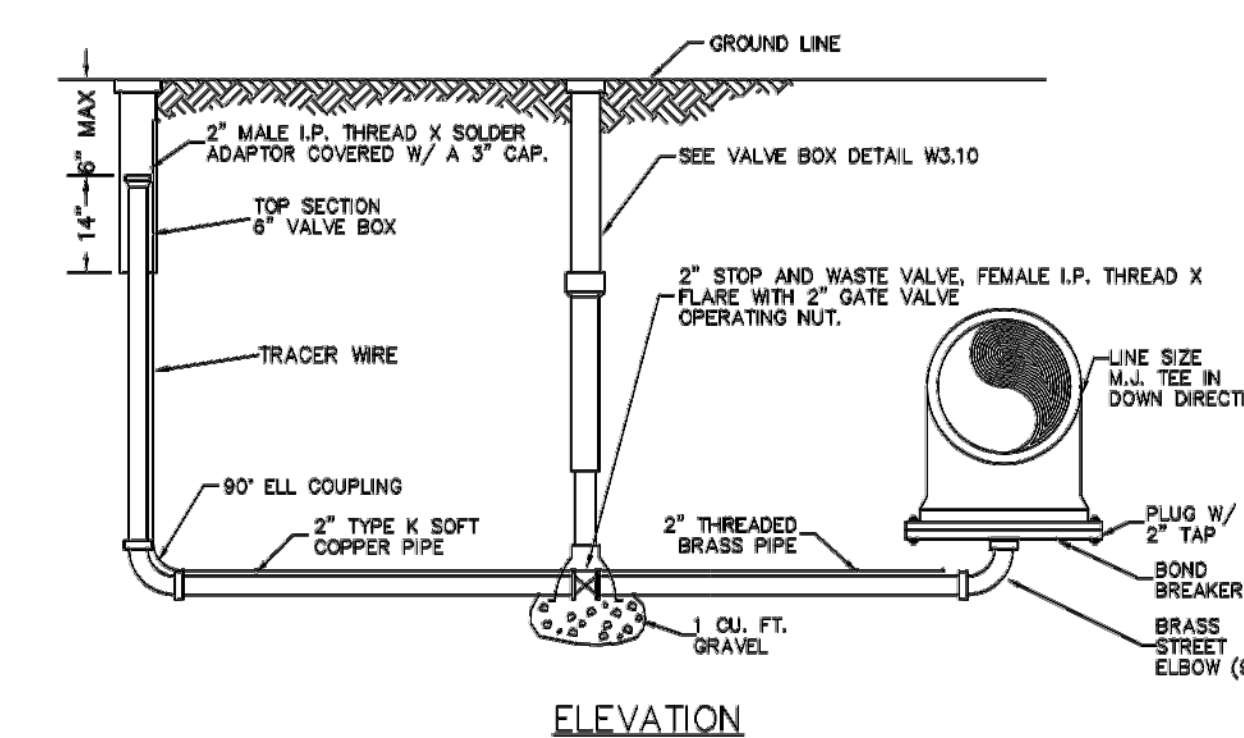
FOOTING DETAIL

<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>AIR AND VACUUM VALVE INSTALLATION</b>	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	4/01
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.6



PLAN



ELEVATION

NOTE: PLUG SHALL BE MECHANICALLY RESTRAINED.

<b>PARKER WATER &amp; SANITATION DISTRICT</b>	
<b>LOW POINT BLOW-OFF WITH SAND TRAP</b>	
SCALE: NONE	DATE: 2/98
APPROVED: PVR	4/01
DIRECTOR OF ENGINEERING	

2016 REVISION SHEET W3.8



PREPARED UNDER THE DIRECT SUPERVISION OF HENRY W. DAVIDSON, P.E. COLORADO REG # 30226 FOR AND ON BEHALF OF PERCEPTION DESIGN GROUP, INC.

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WATER DETAILS  
 PARKER POINT  
 LOTS 1 THRU 15 AND TRACTS A AND B, PARKER POINT FILING NO. 1  
 SOUTHEAST CORNER PARKER ROAD AND STROH ROAD  
 PARKER, COLORADO

design by: JWD  
 approved by: JWD  
 project no.: 2015-015  
 date: 10/01/17

SHEET  
**C7.94**