

# CARWASH PARKER WATER AND SANITARY CONSTRUCTION PLANS

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 9 AND THE SOUTHWEST QUARTER OF SECTION 10,  
TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE 6TH P.M.,  
LOT 2 OF DOUGLAS 234 FILING 6  
TOWN OF PARKER, COUNTY OF DOUGLAS, STATE OF COLORADO

## APPLICANT/OWNER

TWIN STAR ENERGY, LLC  
7671 SHAFFER PARKWAY  
LITTLETON, CO 80127  
C/O: MARK PERRINO  
P: (303) 898-2603

## OWNERS'S REP

MAPCM  
6415 CHEROKEE DRIVE  
SEDALIA, CO. 80135  
ATTN: MARK A PERRINO  
P: (303) 537-2603

## ARCHITECT

101, ARCHITECTURE LLC  
8400 E. CRESCENT PARKWAY, SUITE 160  
GREENWOOD VILLAGE, CO 80111  
ATTN: BUDDY POPPITT, LEED AP  
P: (720) 881-1600

## GAS SERVICE

XCEL ENERGY  
1123 WEST 3RD AVENUE  
DENVER, CO 80223  
ATTN: DONNA GEORGE  
P: (303) 571-3306

## ELECTRICAL SERVICE

IREA  
5496 US HWY 85  
SEDALIA, CO 80135  
ATTN: BROOKS KAUFMAN  
P: (720) 805 3331

## TELEPHONE

CENTURYLINK  
1801 CALIFORNIA STREET, SUITE 240  
DENVER, CO 80202  
ATTN: WILLIAM BENSON  
WILLIAM.BENSON2@LUMEN.COM

## TRAFFIC ENGINEER

RICK ENGINEERING COMPANY  
9801 EAST EASTER AVE.  
CENTENNIAL, CO 80112  
ATTN: JACK SCANLON, PE  
P: (303) 537-8020

## ENGINEERING CONSULTANT

ENTITLEMENT AND ENGINEERING SOLUTIONS, INC.  
501 S CHERRY STREET, SUITE 300  
GLENDALE, CO 80246  
ATTN: LANDIS GORDON, PE  
P: (618) 670-1512

## LANDSCAPE ARCHITECT

VALERIAN  
970 YUMA STREET SUITE 130  
DENVER, CO 80204  
ATTN: BRENT KASLON  
P: (303) 347-1200

## SURVEYOR

RICK ENGINEERING COMPANY  
9801 EAST EASTER AVE.  
CENTENNIAL, CO 80112  
ATTN: ROBERT HENNESSY, PLS  
P: (303) 537-8020

## WATER/SANITARY SEWER

PARKER WATER AND SANITATION DISTRICT  
18100 E. WOODMAN DRIVE  
PARKER, CO 80134  
ATTN: ROBERT RAMSEY  
P: (720) 842-4260

## FIRE DEPARTMENT

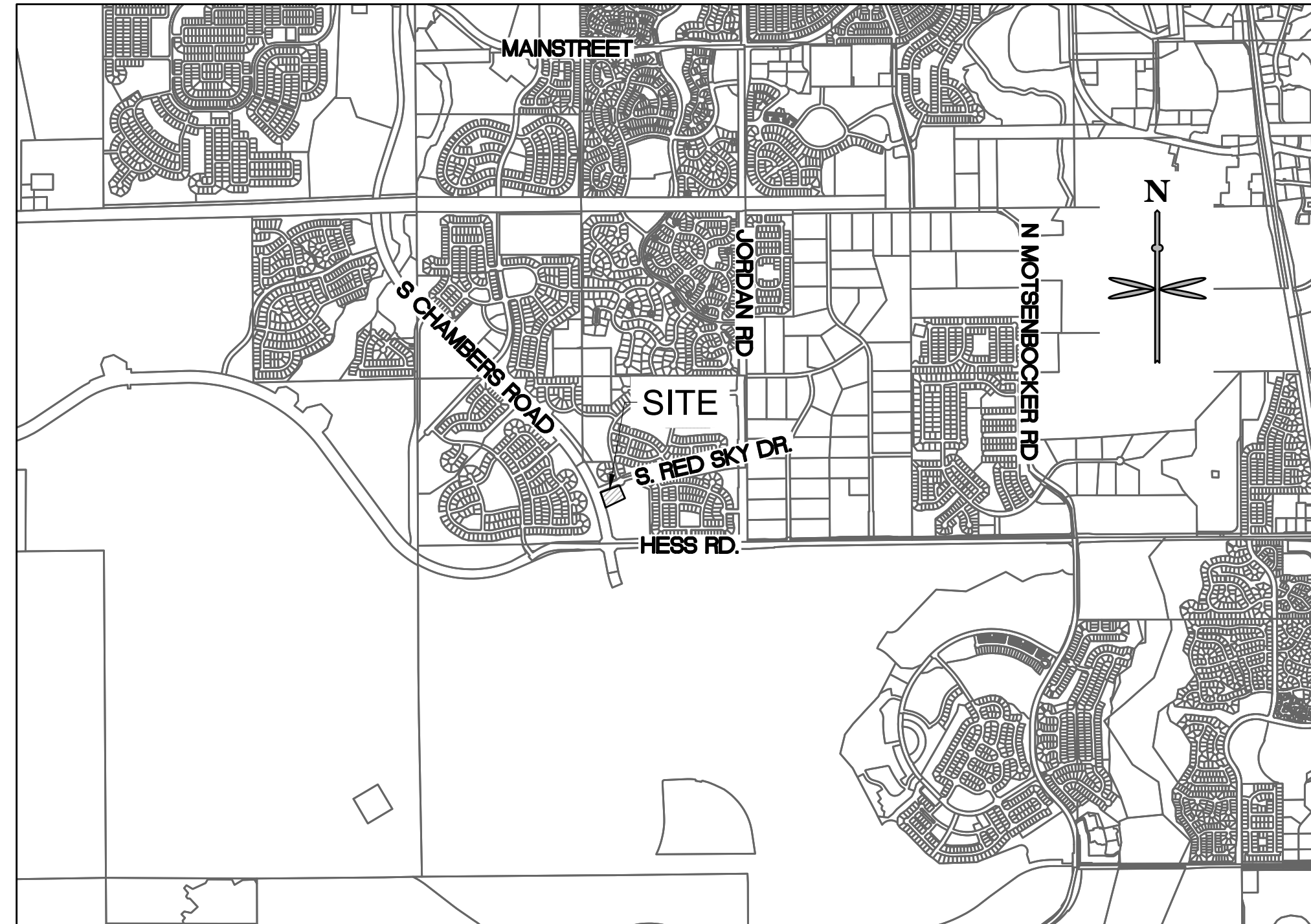
SOUTH METRO FIRE RESCUE AUTHORITY  
9195 E. MINERAL AVE.  
CENTENNIAL, CO 80112  
ATTN: RANDY CAPRA  
P: (303) 805-3169

## TOWN OF PARKER PLAN REVIEW

20120 E. MAINSTREET  
PARKER, CO 80138  
ATTN: BRIANNA SIMON  
P: (303) 805-3338

## GEOTECHNICAL ENGINEER

TERRACON  
10625 W. 1-70 FRONTAGE ROAD N, SUITE 3  
WHEAT RIDGE, CO 80033  
ATTN: JOHN HAAS  
P: (303) 454 5290



VICINITY MAP

SCALE: 1" = 2000'

## PWSD MATERIALS LIST\*

- DOMESTIC WATER
- 45 LF - 2" TYPE K COPPER PIPE
  - 2" DOMESTIC CURB STOP
  - 2" TAPPING SLEEVE + VALVE

- SANITARY SERVICE
- 145 LF - 4" PVC PIPE
  - 1 EA. - PRIVATE RECLAIM SYSTEM WITH SAND OIL INTERCEPTOR
  - 1 EA. - SAMPLING MANHOLE

\*QUANTITIES ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO ORDERING AND INSTALL.

## SHEET LIST TABLE

| SHEET NUMBER | SHEET TITLE                           |
|--------------|---------------------------------------|
| U0.0         | PARKER WATER AND SANITARY COVER       |
| U0.1         | PWSD STANDARD NOTES                   |
| U1.0         | UTILITY PLAN                          |
| U2.0         | WATER & SANITARY SEWER DETAILS        |
| U2.1         | WATER & SANITARY SEWER DETAILS        |
| U2.2         | WATER & SANITARY SEWER DETAILS        |
| L-3          | IRRIGATION PLAN                       |
| L-4          | IRRIGATION DETAILS AND SPECIFICATIONS |
| L-5          | IRRIGATION DETAILS                    |

## BENCHMARK:

THE PRIMARY BENCHMARK USED TO DETERMINE THE BASIS OF ELEVATIONS FOR THE MAP IS BY GPS OBSERVATION NAVD88. A SITE BENCH MARCH HAS BEEN SET AT THE NORTHWEST CORNER OF A DRAIN INLET ON CHAMBERS ROAD, APPROXIMATELY 200'± NORTH OF HESS ROAD. ELEVATION = 6075.31

## BASIS OF BEARING:

THE BASIS OF BEARING IS THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 29 TOWNSHIP 6 SOUTH, RANGE 66 WEST, 6TH PRINCIPAL MERIDIAN, BEARING SOUTH 89°15'13" WEST AS SHOWN ON FINAL PLAT DOUGLAS 234 FILING NO. 1.

## FLOODPLAIN NOTE:

BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES IN ZONE X OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER T6SR66WS29 AND DATED MARCH 16, 2016 - SUBJECT PROPERTY IS NOT IN A SPECIAL FLOOD HAZARD AREA.



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: *Robert Ramsey*  
(DISTRICT REPRESENTATIVE)

DATE: 06/09/2022

APPROVED FOR CONSTRUCTION:  
PARKER WATER AND SANITATION DISTRICT

BY: *Robert Ramsey*

DATE: 06/09/2022

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.

BY: *John Haas*  
FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE DATE: 06/02/2022

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

**811** CALL UTILITY NOTIFICATION CENTER OF COLORADO  
1-800-922-1987 or 811  
CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.  
Know what's below. Call before you dig.

| No. | REVISION | BY | DATE |
|-----|----------|----|------|
|     |          |    |      |
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|     |          |    |      |
|     |          |    |      |



PWSD CONSTRUCTION PLANS LOT 2  
CARWASH  
12191 SLICEROO DRIVE, PARKER, CO 80134  
PARKER WATER AND SANITARY COVER

PROJECT NO: TWS015.01  
DESIGNED BY: LCG  
DRAWN BY: JLG  
DATE: 4/12/2022

**U0.0**

**GENERAL NOTES:**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PWSO 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 PWSO IMMEDIATELY.
- PWSO 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 PWSO 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 REMEDIATED 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 PARKER WATER AND SANITATION DISTRICT PAGE 1.7 DISTRICT PLAN APPROVAL PROCEDURES 2017 REVISION 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 PWSO AND THE DISTRICT ENGINEER AND ONE (1) COPY OF THE LATEST PWSO SPECIFICATION MANUAL.

**WATER SYSTEM NOTES:**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PWSO ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST REVISION.
- ALL WATER MAINS SHALL BE PER PWSO 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 PWSO 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 PWSO 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 PWSO 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 PWSO 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 PARKER WATER AND SANITATION DISTRICT PAGE 1.8 DISTRICT PLAN APPROVAL PROCEDURES 2017 REVISION. 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 PWSO SPECIFICATIONS. CHLORINATION OF FINISHED PIPELINE COMPLETED BEFORE HYDROSTATIC TESTING.
16. HYDROSTATIC TESTING: ALL WATER MAINS SHALL BE TESTED PER THE REQUIREMENTS OF THE PWSO SPECIFICATIONS UP TO MINIMUM OF 150 PSI IN THE PRESENCE OF A PWSO INSPECTOR/ENGINEER.

**SANITARY SEWER SYSTEM NOTES:**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE PWSO 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 PWSO 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 RAM-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.
10. 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. PARKER WATER AND SANITATION DISTRICT PAGE 1.9 DISTRICT PLAN APPROVAL PROCEDURES 2017 REVISION
- THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE PWSO AND THE DISTRICT ENGINEER AND ONE (1) COPY OF THE LATEST PWSO SPECIFICATION MANUAL.
- ALL SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE PWSO 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 PWSO 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 PWSO. 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.

**EES UTILITY NOTES:**

- UTILITY SERVICE INSTALLATION AND MATERIALS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PWSO SPECIFICATIONS.
- ALL SEWER SERVICE PIPE SHALL BE POLYVINYL CHLORIDE GRAVITY PIPE (PVC) SDR 35, MINIMUM BURY DEPTH PWSO WATER REQUIREMENTS.
- CONTRACTOR TO FIELD VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION, WHETHER SHOWN ON THE PLANS OR NOT. REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
- AT PROPOSED UTILITY CROSSINGS, CONTRACTOR IS TO VERIFY THE REQUIRED GRADES AND CLEARANCES PRIOR TO COMMENCING CONSTRUCTION. ANY REQUIRED CHANGES ARE TO BE COORDINATED DIRECTLY WITH ENGINEER.
- PIPE LENGTHS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR.
- UTILITY BURY DEPTH SHALL CONFORM TO PWSO UTILITY STANDARDS.
- REFER TO PWSO UTILITY STANDARDS AND FOR SANITARY SEWER TRENCHING BACKFILL REQUIREMENTS.
- ALL EXISTING UTILITIES TO REMAIN UNLESS OTHERWISE NOTED. PROTECT IN PLACE FROM DAMAGE.
- SANITARY SEWER PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION AND INSTALLATION OF ALL UTILITY WORK.
- SEE STORM AND SANITARY PLAN AND PROFILE SHEETS FOR DETAILED INFORMATION.
- PWSO IS NOT RESPONSIBLE FOR THE MAINTENANCE OF PRIVATE STORM PIPE OR INFRASTRUCTURE.

**APPROVED**  
 Jun 09 2022  
**PARKER WATER AND  
 SANITATION DISTRICT**

P:\TWINSTAR ENERGY\CO. PARKER - CHAMBERS & HESS\06 CAD\SITE PLAN\LOT 1\COVER SHEET.DWG



**CALL UTILITY NOTIFICATION CENTER OF COLORADO**  
**1-800-922-1987 or 811**

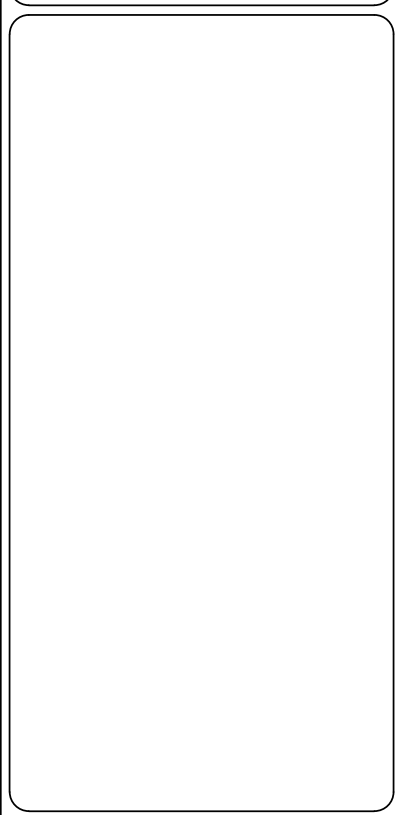
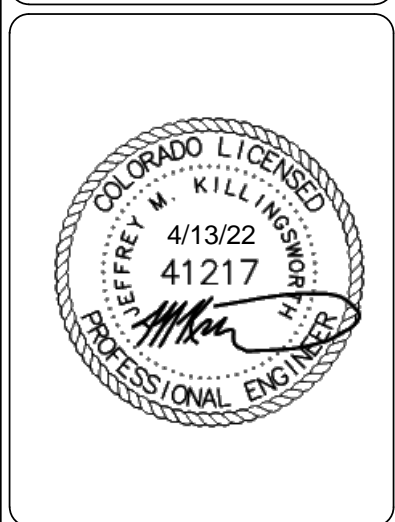
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**Know what's below.  
 Call before you dig.**

|     |          |      |  |  |  |
|-----|----------|------|--|--|--|
| No. | REVISION | DATE |  |  |  |
|     |          | BY   |  |  |  |



**EES**  
 ENGINEERING AND  
 ENVIRONMENTAL  
 SOLUTIONS, INC.  
 501 S Cherry St, Suite 300  
 Glendale, CO 80248  
 303.572.7997 www.ees.us.com



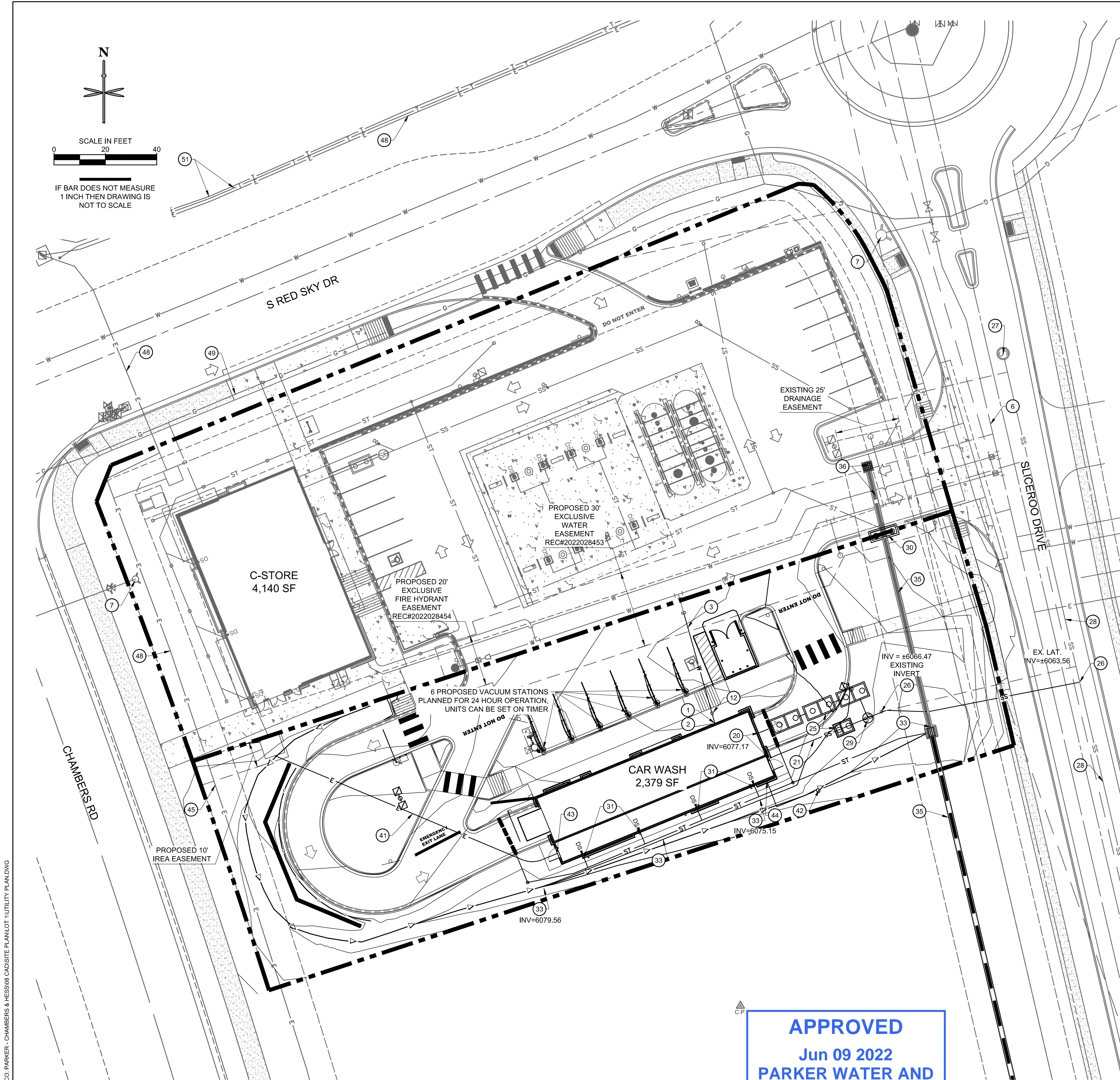
**PWSO CONSTRUCTION PLANS LOT 2**

**CARWASH**

12191 SLICEROO DRIVE, PARKER, CO 80134

**PWSO STANDARD NOTES**

|              |           |
|--------------|-----------|
| PROJECT NO:  | TWS015.01 |
| DESIGNED BY: | LCG       |
| DRAWN BY:    | JLG       |
| DATE:        | 4/12/2022 |
| <b>U0.1</b>  |           |



**WATER**

- 1 PROPOSED 1.5" TYPE K COPPER LINE (C-STORE), 2" (CAR WASH) DOMESTIC WATER CONNECTION TO BUILDING. STUB 5' OFF OF BUILDING. REFER TO PLUMBING PLANS UNDER SEPARATE COVER FOR CONTINUATION.
- 2 PROPOSED 1.5" DOMESTIC INTERIOR WATER METER (C-STORE), 2" INTERIOR WATER METER (CARWASH).
- 3 PR. 73 LF - 1.5" TYPE K COPPER LINE (C-STORE), 45 LF - 2" (CAR WASH) DOMESTIC WATER TAP.
- 4 PR. 8" X 8" TEE.
- 5 PROPOSED FDC WITH KNOX BOX.
- 6 8" PVC WATER MAIN BY MASTER DEVELOPER.
- 7 F.H. (EXISTING OR BY MASTER DEVELOPER).
- 8 PR. FIRE HYDRANT, 6" VALVE, 6"X8" REDUCER.
- 9 PR. ±267 LF 4" DIP FIRE LINE (PRIVATE). (VERIFY W/ MEP).
- 10 PR. 8" X 4" TS&V, 4" UFL DIP, 4" PLUG (BY OTHERS).
- 11 PR. 3/4" IRRIGATION LINE, VALVE, METER.
- 12 PR. 1.5" DOMESTIC CURB STOP (C-STORE), 2" DOMESTIC CURB STOP (CARWASH).
- 13 PR. ±217 LF 8" PVC FIRE LINE.
- 14 PR. ±13 LF 6" DIP LINE.
- 15 PR. 8"X1.5" TAPPING SLEEVE W/ SADDLE.
- 16 PR. 8"X2" TAPPING SLEEVE W/ SADDLE.
- 17 PR. 8"X2" TAPPING SLEEVE W/ SADDLE.
- 18 1/2" IRRIGATION CURB STOP VALVE + TRAFFIC-RATED COVER.
- 19 1/2" IRRIGATION METER PIT.

**SANITARY SEWER**

- 20 PROPOSED 4" SANITARY SEWER STUB 5 FEET OFF BUILDING. REFER TO PLUMBING PLANS UNDER SEPARATE COVER FOR CONTINUATION.
- 21 PROPOSED 4" PVC SDR 35 SANITARY SEWER SERVICE @ 2.1% SLOPE.
- 22 PROPOSED HS-20 TRAFFIC RATED SANITARY SEWER CLEANOUT.
- 23 PROPOSED 45" BEND W/ HS-20 TRAFFIC RATED SANITARY SEWER CLEANOUT.
- 24 PR. 1,200 GAL. GREASE INTERCEPTOR. (VERIFY W/ MEP).
- 25 PR. PRIVATE RECLAIM SYSTEM WITH SAND OIL INTERCEPTOR. (VERIFY W/ MEP).
- 26 PR. 4"X6" RED. CONN. TO EX. 6" SAN. STUB. C.O. ATG.
- 27 EXISTING SANITARY MANHOLE BY MASTER DEVELOPER.
- 28 EX. 8" PVC MAIN.
- 29 PROPOSED SAMPLING MANHOLE.

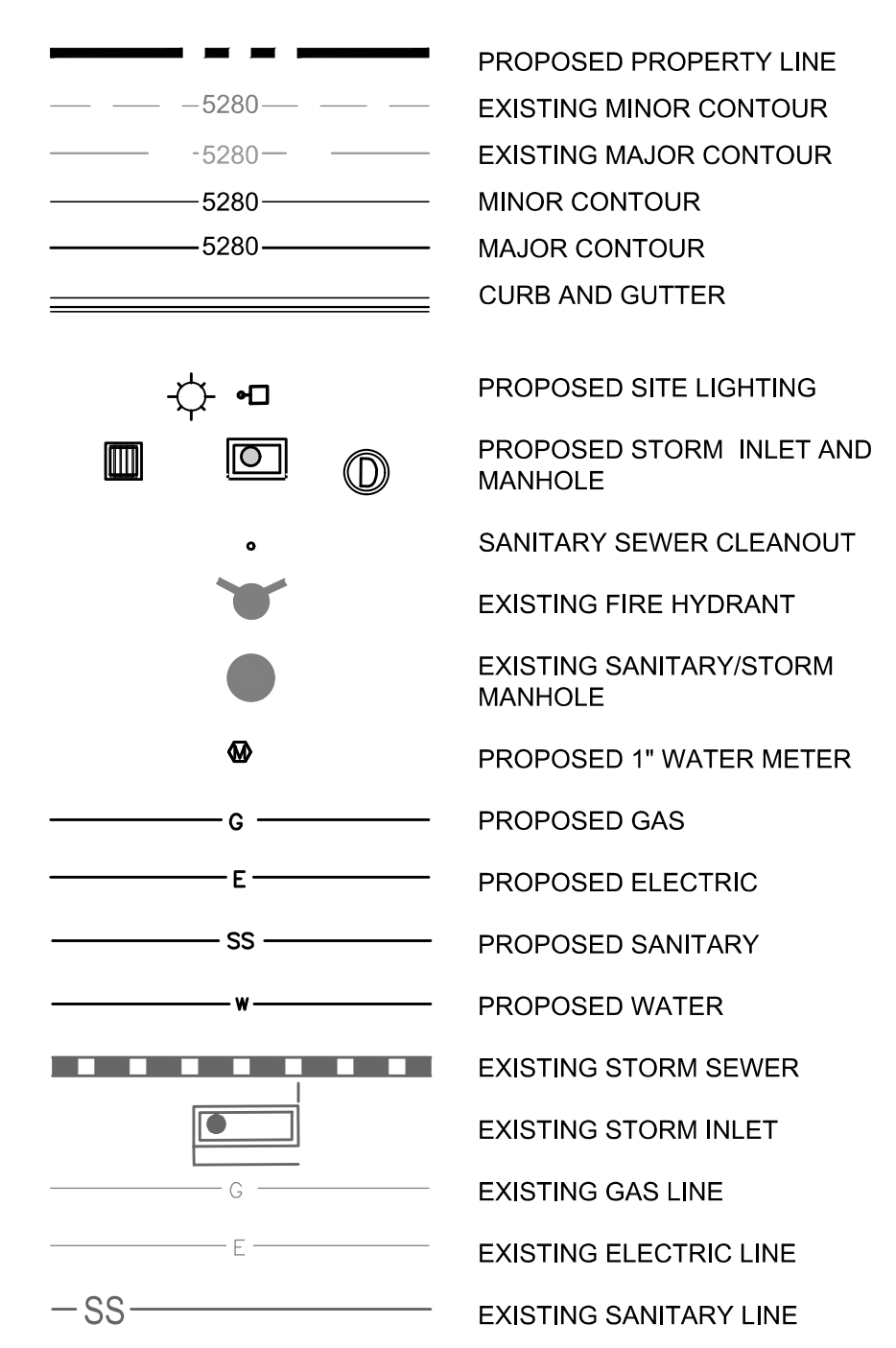
**STORM SEWER**

- 30 PROPOSED PRIVATE CDOT 10" TYPE R INLET. CONNECTION TO EXISTING PRIVATE STORM SEWER PROVIDED BY BY MASTER DEVELOPER. CONTRACTOR TO VERIFY INVERTS AND NOTIFY ENGINEER OF ANY DISCREPANCY. SEE SHEET C3.0 FOR INVERTS.
- 31 PROPOSED DOWNSPOUT LOCATION.
- 32 PROPOSED BURIED DOWNSPOUT. SEE SHEET C3.1.
- 33 EXISTING PRIVATE STORM SEWER, INLET OR MANHOLE BY MASTER DEVELOPER. PROTECT IN PLACE.
- 34 PROPOSED STORM CLEANOUT.
- 35 PRIVATE 18" STORM SEWER PIPE BY MASTER DEVELOPER. PROTECT IN PLACE.
- 36 PRIVATE STORM SEWER OR INLET BY MASTER DEVELOPER TO BE REMOVED.
- 37 PROPOSED PRIVATE LANDSCAPE DRAIN.

**DRY UTILITIES**

- 40 PROPOSED 8" X 8" ELECTRICAL TRANSFORMER PAD. REFER TO MEP PLANS FOR TRANSFORMER DESIGN UNDER SEPARATE COVER.
- 41 PROPOSED ELECTRIC LINE. (APPROXIMATE LOCATION, CONTRACTOR TO COORDINATE WITH PROJECT MEP AND UTILITY COMPANY PRIOR TO ANY CONSTRUCTION).
- 42 PROPOSED GAS LINE. (APPROXIMATE LOCATION, CONTRACTOR TO COORDINATE WITH PROJECT MEP AND UTILITY COMPANY PRIOR TO ANY CONSTRUCTION).
- 43 PROPOSED ELECTRICAL METER. (LOCATION FOR REFERENCE ONLY).
- 44 PROPOSED GAS METER. (LOCATION FOR REFERENCE ONLY).
- 45 PROPOSED ELECTRIC LINE CONNECTION TO EXISTING LINE. (LOCATION FOR REFERENCE ONLY).
- 46 PROPOSED GAS LINE CONNECTION TO EXISTING LINE. (LOCATION FOR REFERENCE ONLY).

**UTILITY LEGEND**



**UTILITY NOTES:**

1. CONSTRUCT ALL WET UTILITIES IN ACCORDANCE WITH THE TOWN OF PARKER STANDARDS AND DETAILS.
2. ALL PROPOSED EASEMENTS MUST BE RECORDED PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS.
3. THE MINIMUM SEPARATION BETWEEN WATERLINES, SANITARY SEWER AND STORM SEWER LINES IS 10 FEET.
4. THE MINIMUM SEPARATION BETWEEN WATER SERVICE LINES IS 3 FEET.
5. THE SITE IS LOCATED WITHIN THE TOWN OF PARKER 7D WATER PRESSURE ZONE.
6. THE CONTRACTOR SHALL NOTIFY ENGINEER AND FIELD VERIFY TYPE, SIZE, AND LOCATION OF EXISTING UTILITIES PRIOR TO UTILITY CONSTRUCTION.
7. THE CONTRACTOR SHALL NOTIFY THE TOWN OF PARKER OF ANY WORK THAT IS REQUIRED SHUTDOWN OR INTERRUPTION OF SERVICE OF EXISTING WATER MAINS TWO WEEKS PRIOR TO THE PROPOSED SHUTDOWN OR INTERRUPTION UNLESS OTHERWISE APPROVED BY THE UTILITIES DEPARTMENT.

**DRY UTILITIES CONT.:**

- 47 PROPOSED LIGHT POLE, BASE AND FIXTURE (SEE PHOTOMETRIC PLAN UNDER SEPARATE COVER).
- 48 EXISTING UNDERGROUND ELECTRIC.
- 49 EXISTING UNDERGROUND GAS LINE.
- 50 EXISTING UNDERGROUND COMMUNICATION LINE.
- 51 EXISTING TELECOMMUNICATION LINE.
- 52 PROPOSED SWITCH CABINET.

**APPROVED**  
 Jun 09 2022  
**PARKER WATER AND SANITATION DISTRICT**

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.

*[Signature]* 06/02/2022  
 FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE DATE

(NOTE - UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENT 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.

*[Signature]* 06/13/2022  
 Town of Parker, Director of Engineering Date

**811** CALL UTILITY NOTIFICATION CENTER OF COLORADO  
 1-800-922-1987 or 811

CALL 3-BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

Know what's below. Call before you dig.

|          |  |
|----------|--|
| DATE     |  |
| BY       |  |
| NO.      |  |
| REVISION |  |

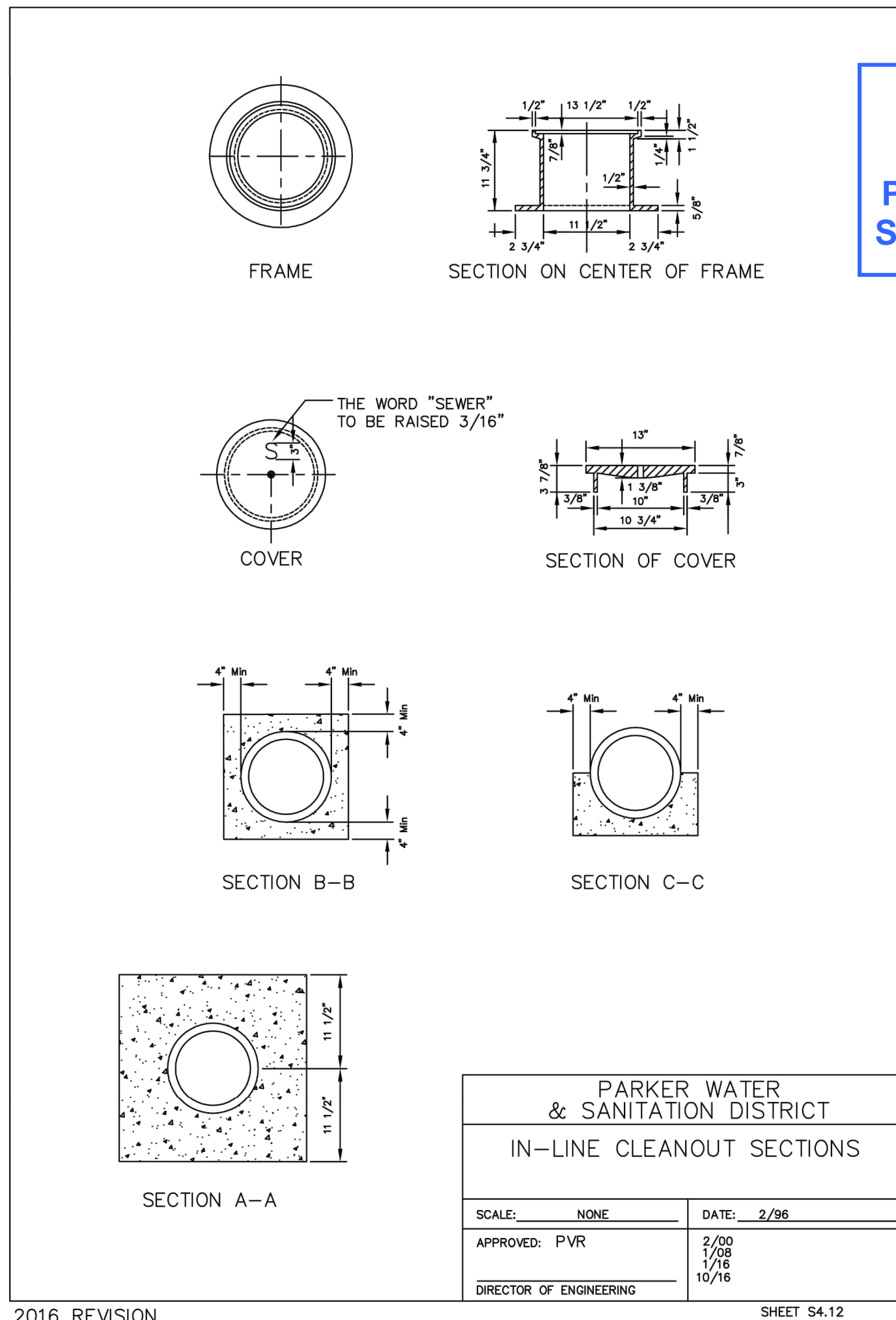
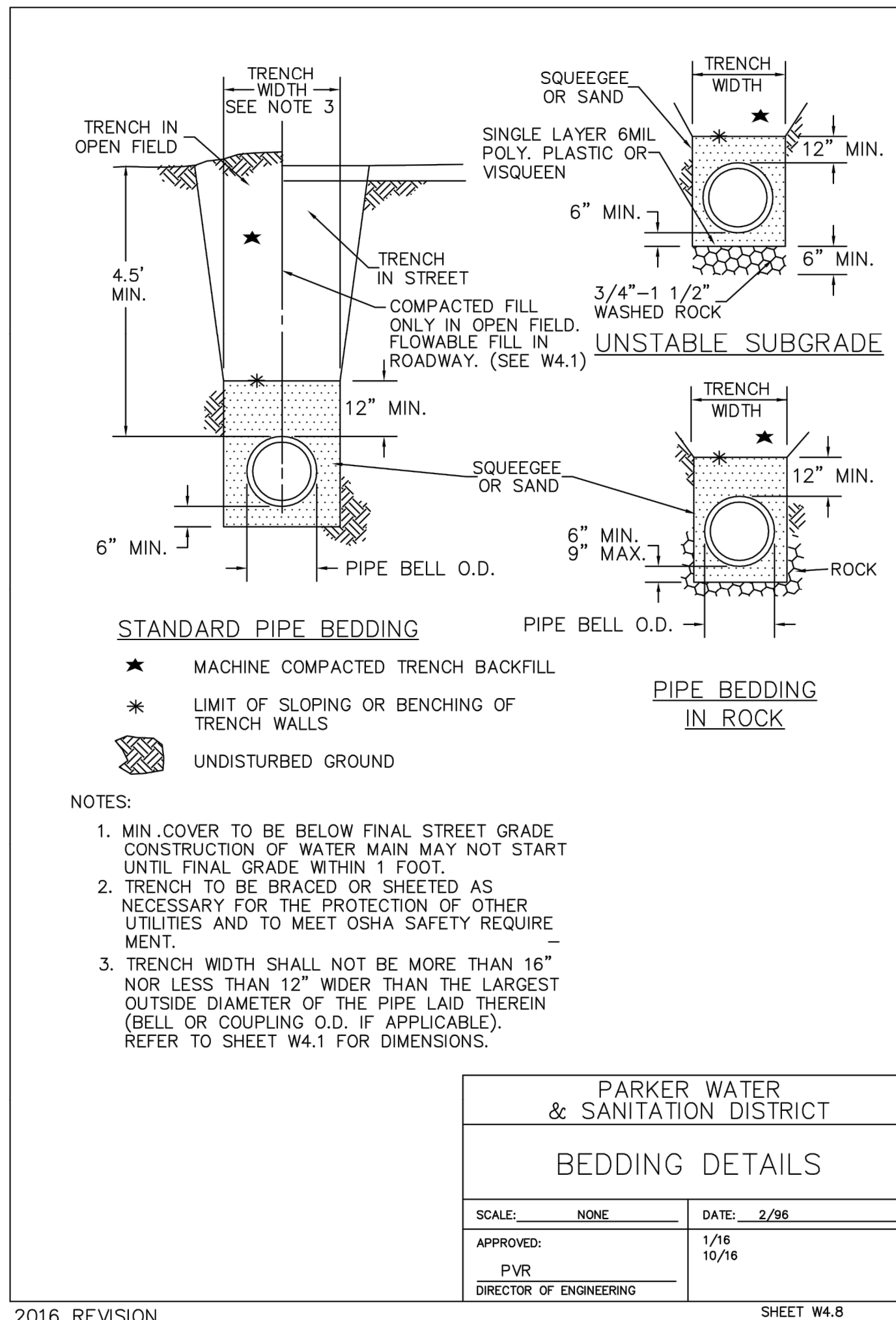
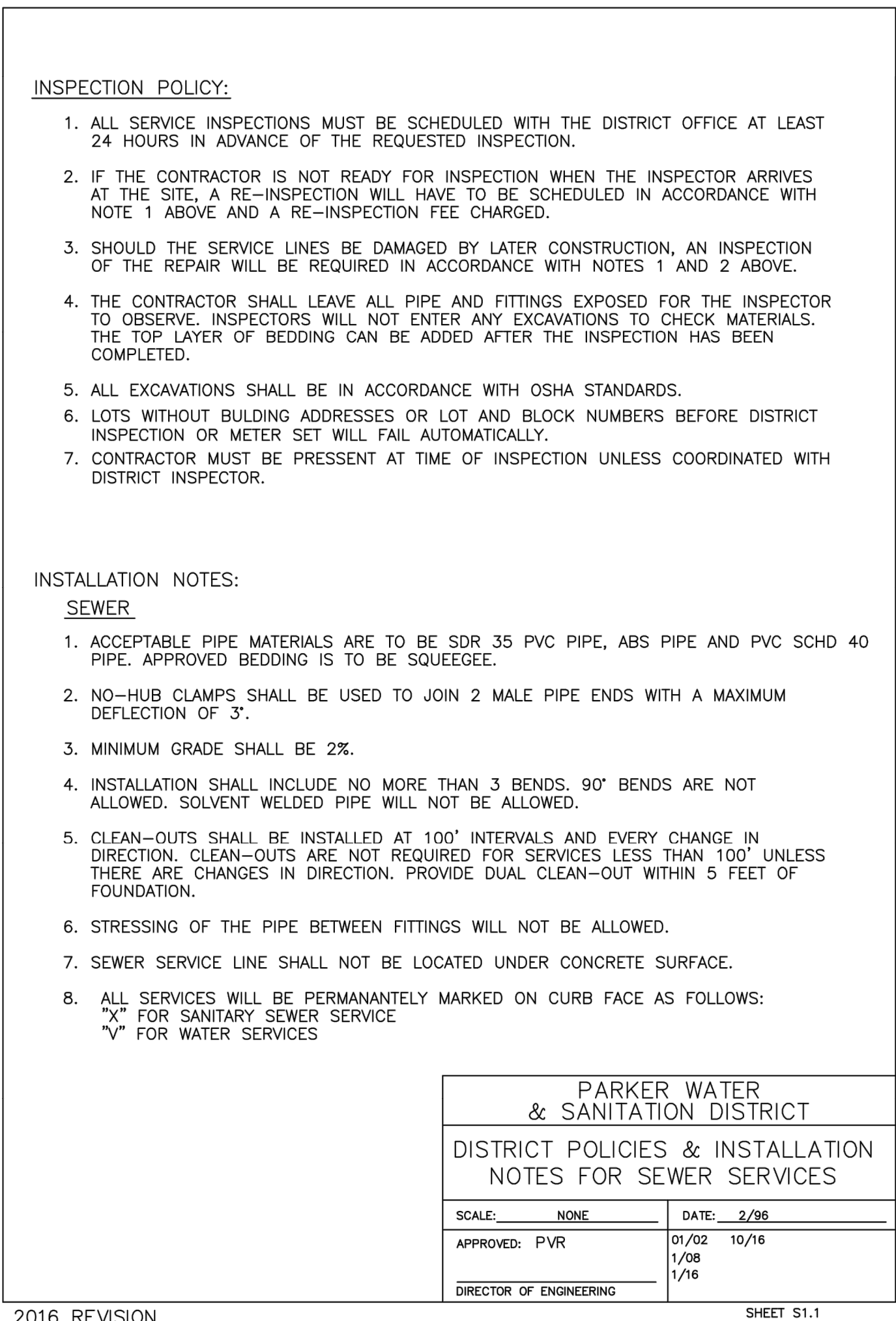
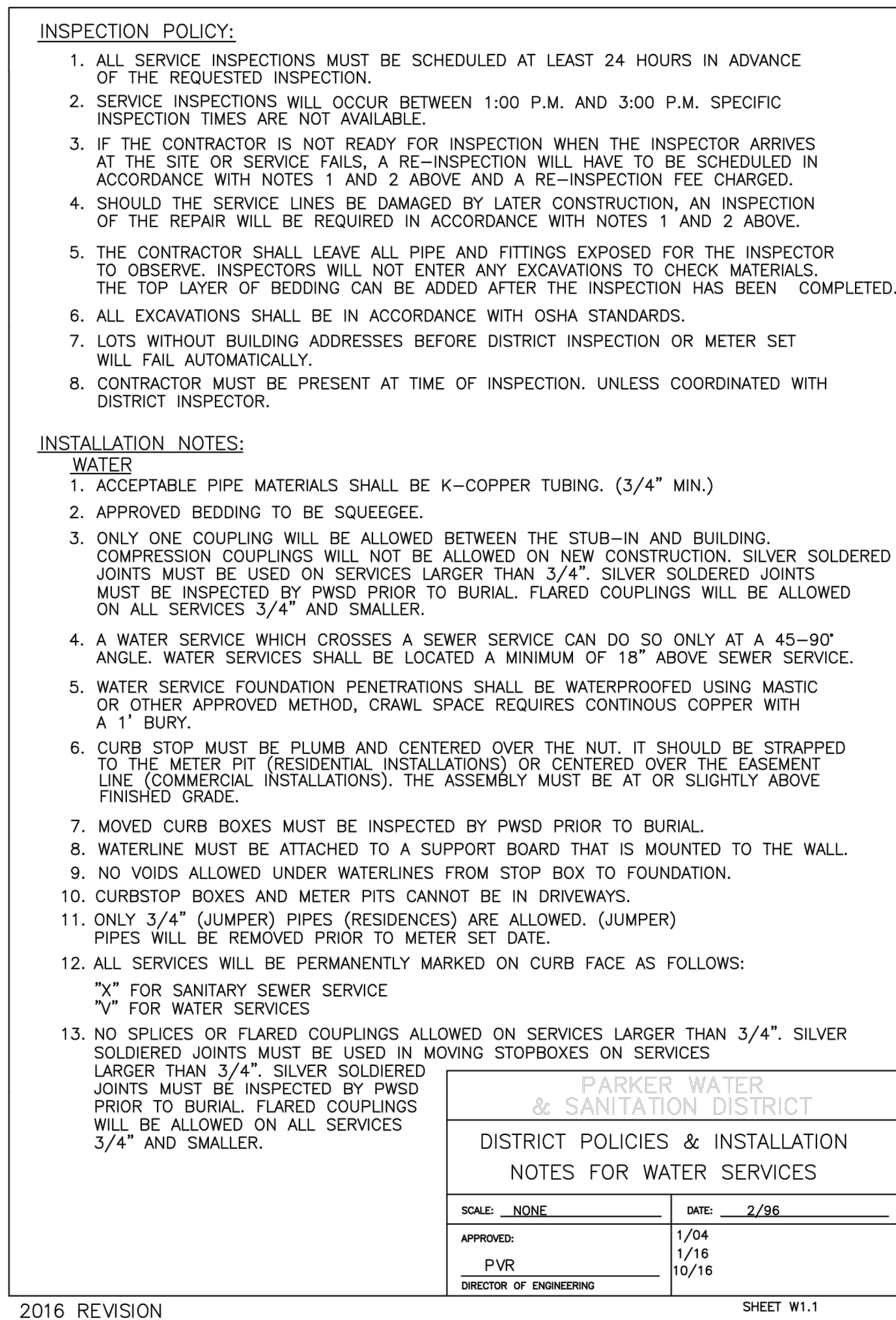
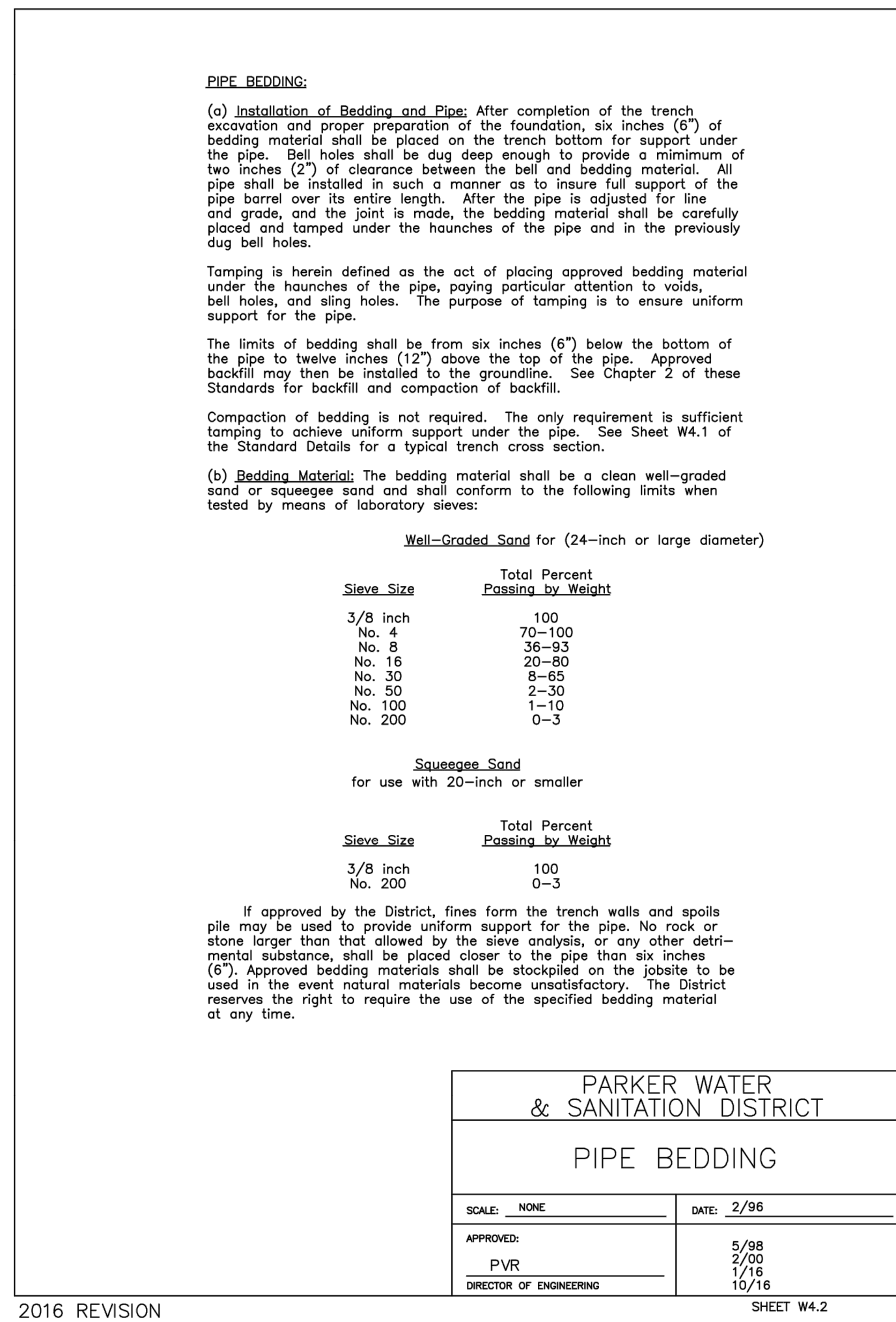
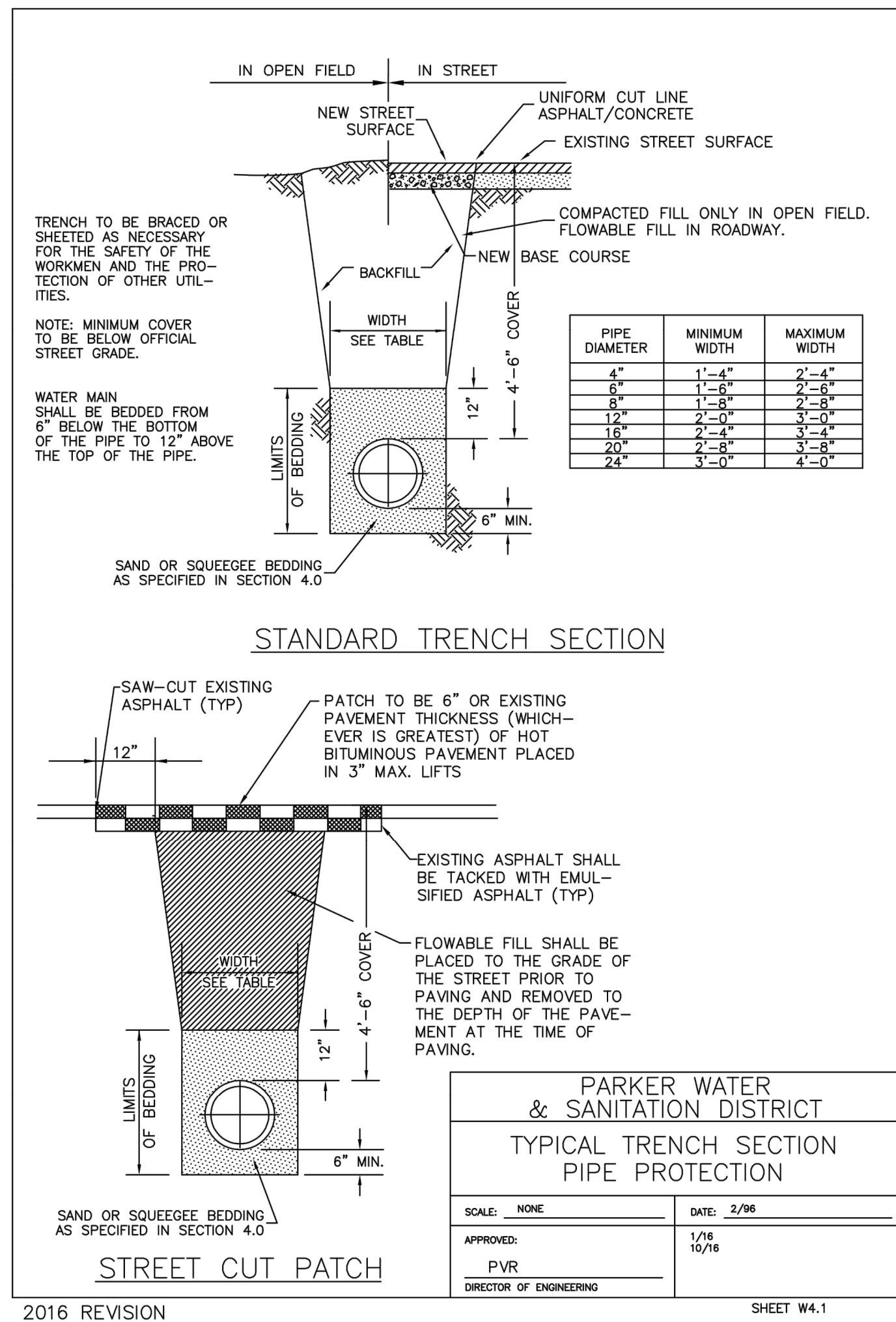
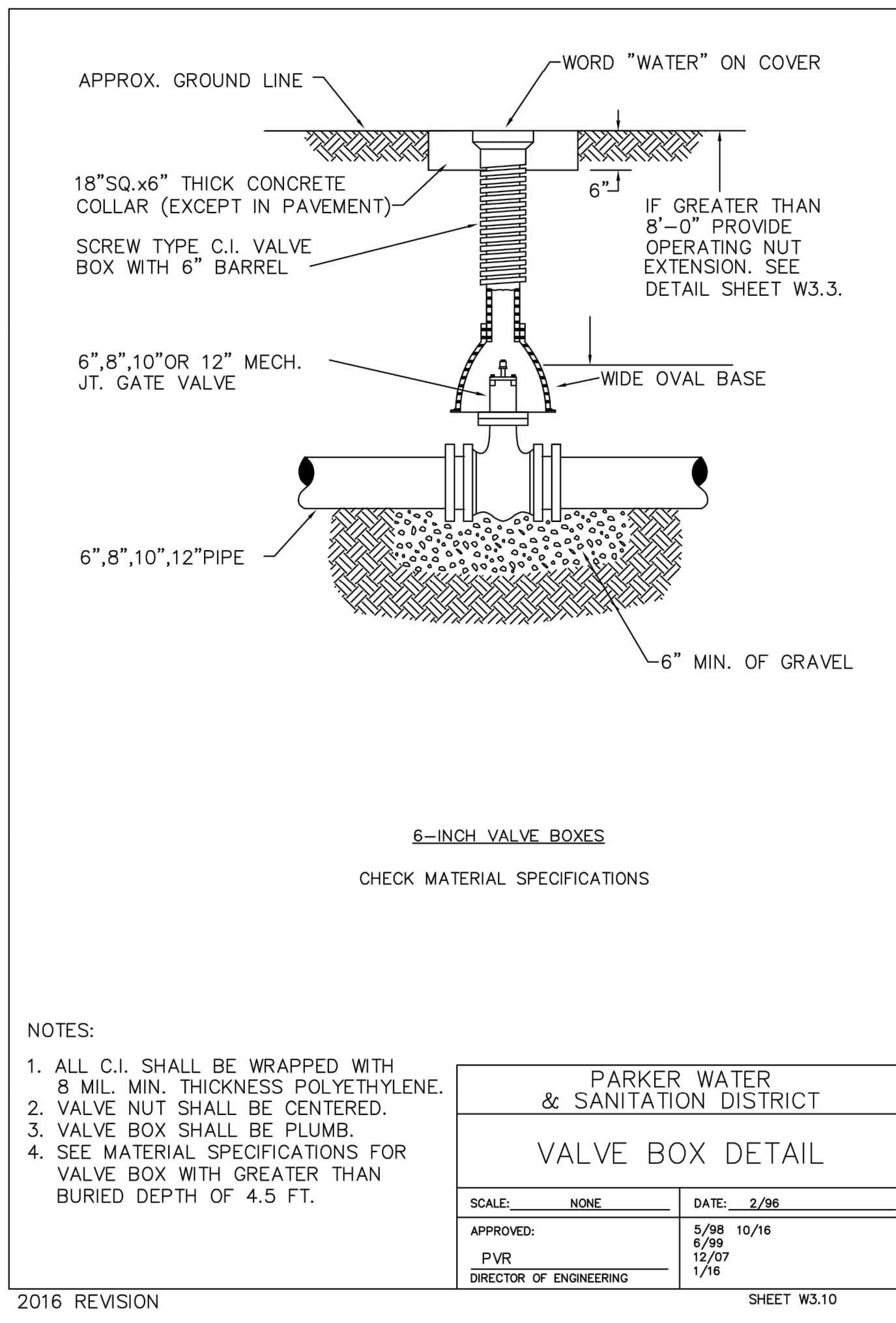
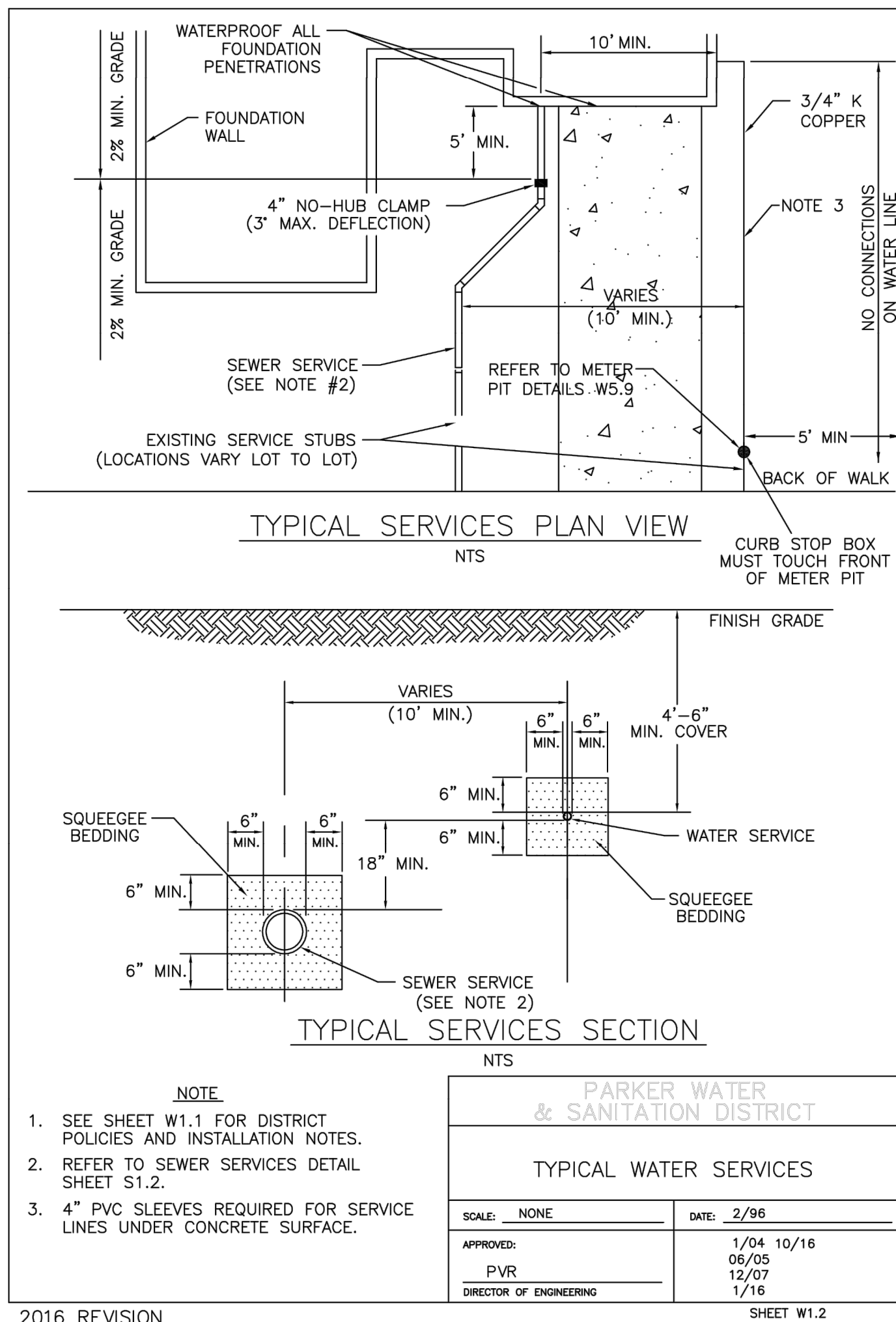
**EES**  
 ENGINEERING AND SOLUTIONS, INC.  
 501 S Cherry St, Suite 300  
 Glendale, CO 80248  
 303.572.7997 www.ees.us.com

**COLORADO LICENSED**  
 4/13/22  
 41217  
*[Signature]*  
 PROFESSIONAL ENGINEER

**PWSD CONSTRUCTION PLANS LOT 2**  
**CARWASH**  
 12191 SLICEROOD DRIVE, PARKER, CO 80134  
**UTILITY PLAN**

PROJECT NO: TWS015.01  
 DESIGNED BY: LCG  
 DRAWN BY: JLG  
 DATE: 4/12/2022

**U1.0**



**APPROVED**  
Jun 09 2022  
**PARKER WATER AND SANITATION DISTRICT**

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

BY: \_\_\_\_\_

REVISION: \_\_\_\_\_

No. \_\_\_\_\_

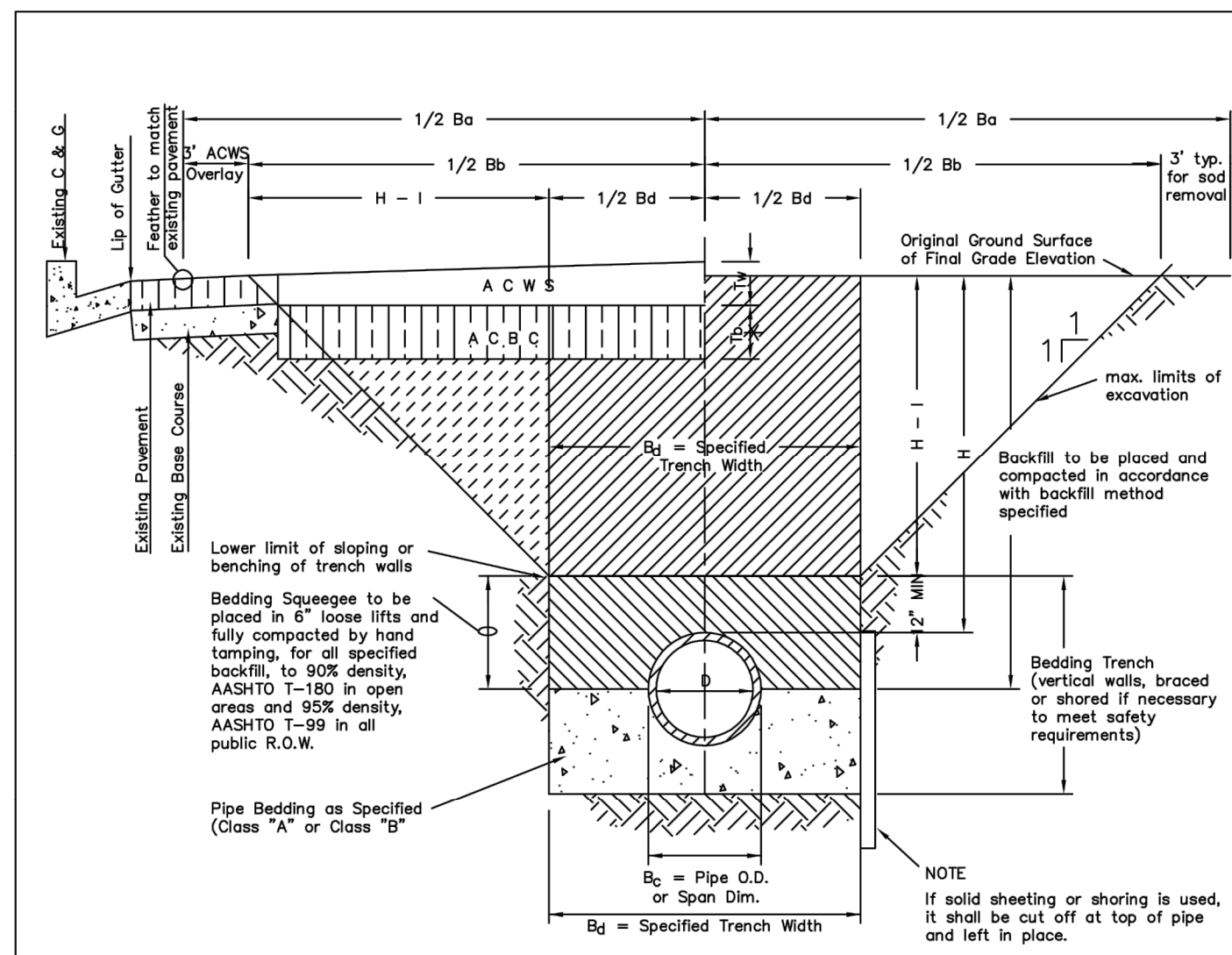
**EES**  
ENGINEERING AND SOLUTIONS, INC.  
501 S Cherry St, Suite 500  
Glendale, CO 80248  
303.572.7997 www.ees.us.com

**PROFESSIONAL ENGINEER**  
4/13/22  
41217

**PWSO CONSTRUCTION PLANS LOT 2**  
**CARWASH**  
12191 SLICEROOD DRIVE, PARKER, CO 80134  
**WATER & SANITARY SEWER DETAILS**

PROJECT NO.: TWS015.01  
DESIGNED BY: LCG  
DRAWN BY: JLG  
DATE: 4/12/2022

**U2.0**



TYPICAL TRENCH DETAIL

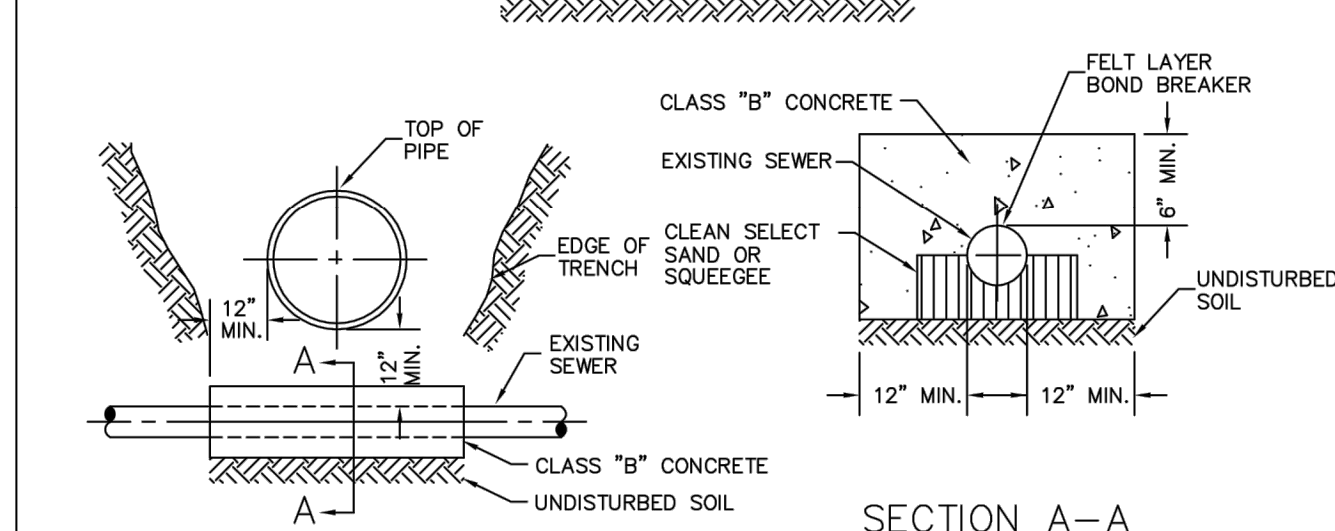
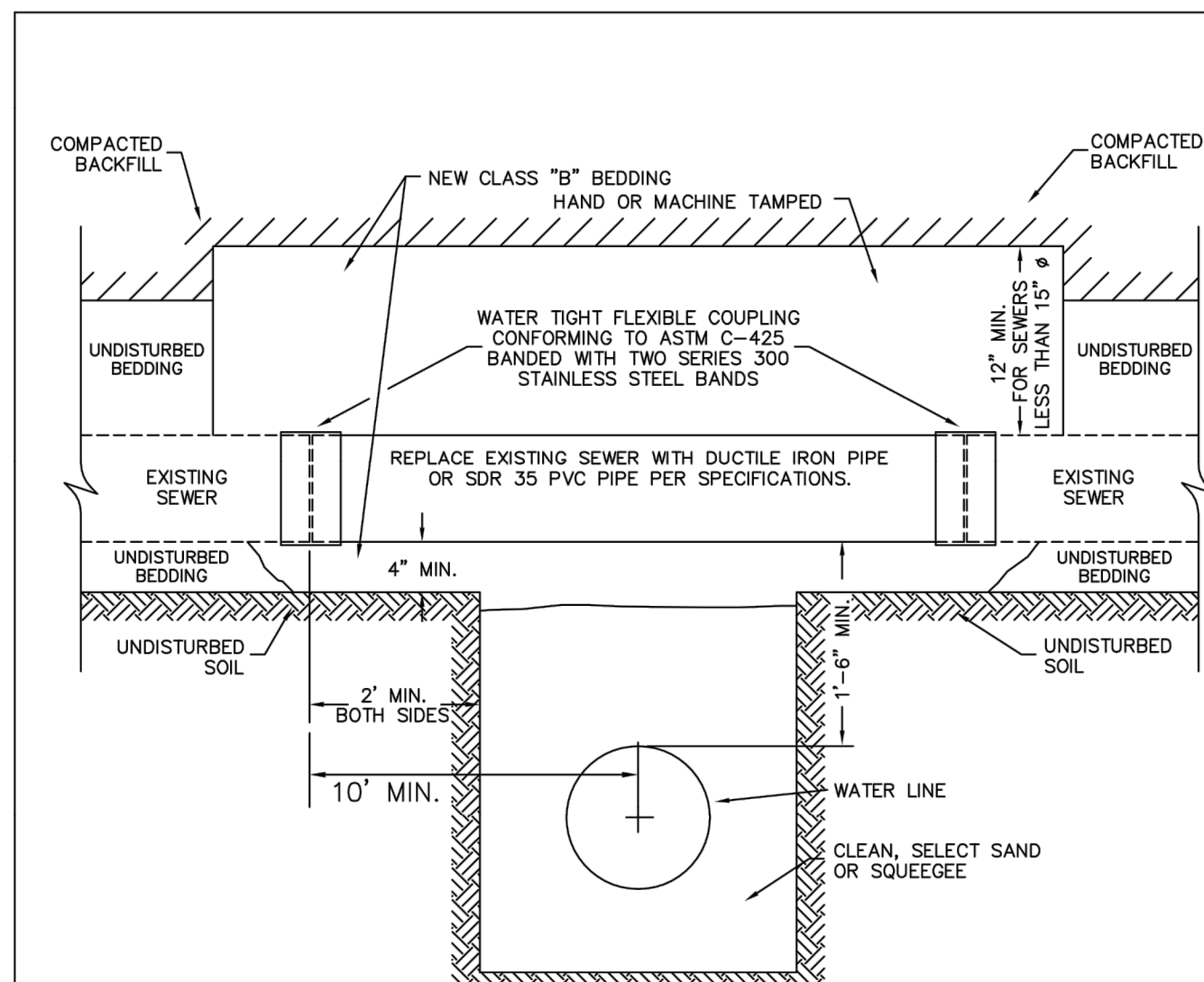
- NOTES
1. Sloping or benching of trench side walls, where permitted shall be in accordance with applicable Federal, State and Local safety regulations.
  2. Trench shall be braced and shored as necessary to afford safe working conditions or to protect adjacent utilities, structures, etc. Unless otherwise 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<sub>2</sub>" is < 5', then existing asphalt pavement shall be removed and replaced up to the gutter. Maximum asphalt pay width, B<sub>2</sub> & B<sub>3</sub>, shall then be based upon this actual width.
- T<sub>2</sub> = Thickness of Asphaltic Concrete Base Course (A C B C)  
 T<sub>3</sub> = Thickness of Asphaltic Concrete Wearing Surface (A C W S)  
 T<sub>4</sub> = Total Asphalt Thickness (T<sub>2</sub> + T<sub>3</sub>)  
 B<sub>1</sub> = Outside Pipe or Conduit Span Dimension  
 B<sub>2</sub> = Specified Bedding Trench Width and Max Bedding Trench Width at a point 12" above Top of Pipe (See Note 2)  
 B<sub>3</sub> = Max. Pay Width of Asphaltic Concrete Base Course (or Asphaltic Concrete Cold Mix) (See Note 3)  
 B<sub>4</sub> = Max. Pay Width of Asphaltic Concrete Wearing Surface or Sod Replacement (See Note 3)  
 H = Depth of Surface to Top of Pipe  
 H-1 = Depth from Surface to 1 ft. above Top of Pipe

TABLE II  
ASPHALT AND BASE COURSE REPLACEMENT SCHEDULE

| STREET WIDTH   | ASPHALTIC BASE COURSE (T <sub>2</sub> ) | ASPHALTIC WEARING SURFACE (T <sub>3</sub> ) | TOTAL THICKNESS (T <sub>4</sub> ) |
|----------------|---|---|-----------------------------------|
| UP TO 36'      | 4"                                      | 2"  | 6"                                |
| 36' TO 44'     | 4"                                      | 3"  | 7"                                |
| 44' TO 48'     | 5"                                      | 3"  | 8"                                |
| WIDER THAN 48' | 6"                                      | 3"  | 9"                                |

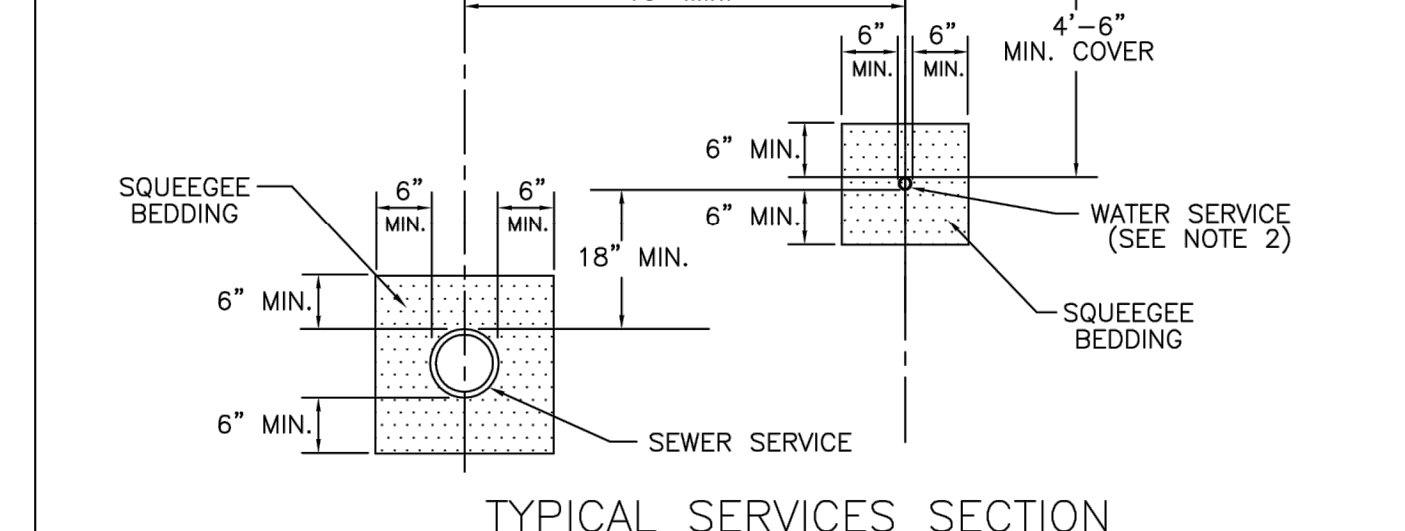
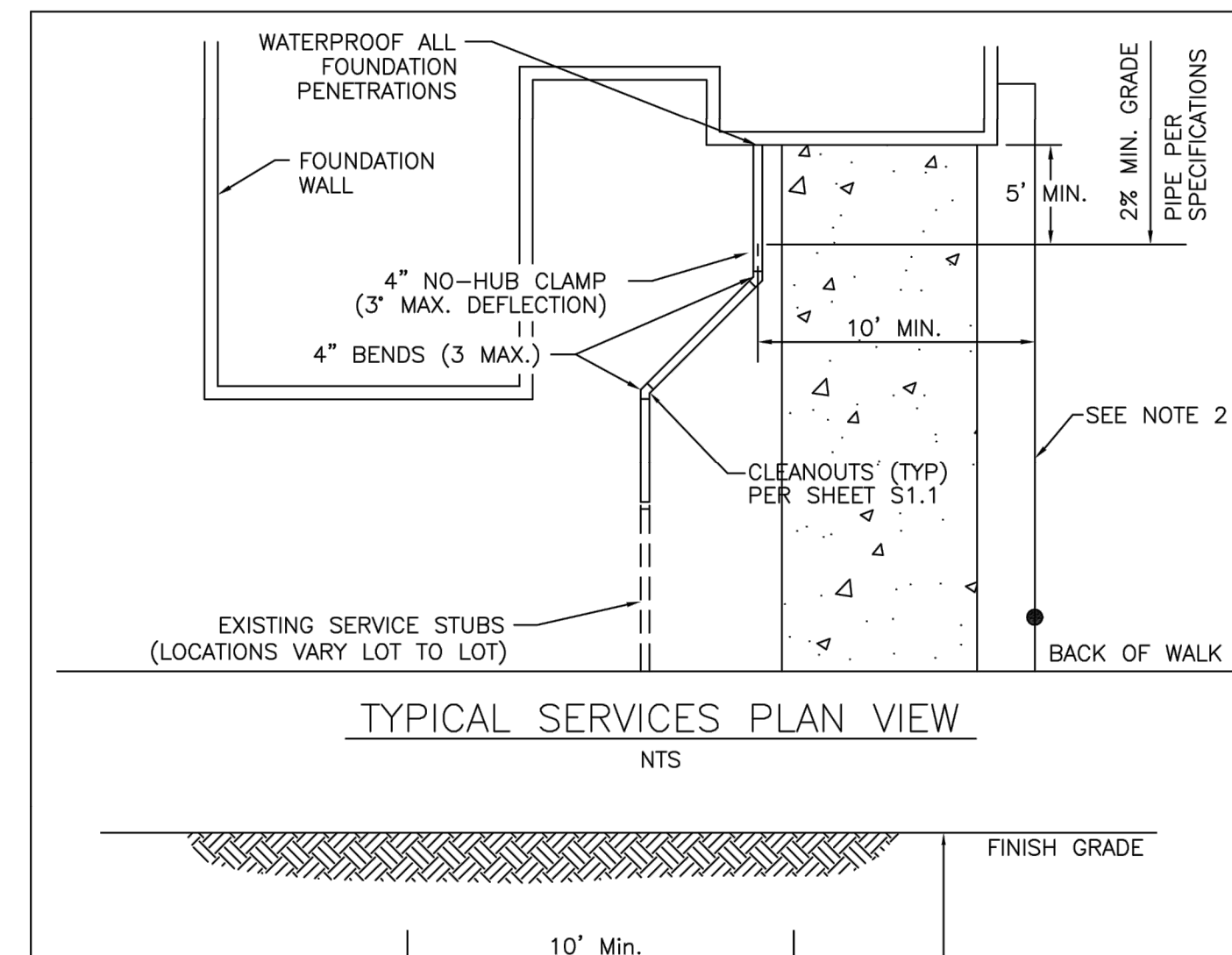
PARKER WATER & SANITATION DISTRICT  
SEWER TRENCHING AND BEDDING DETAIL

SCALE: NONE DATE: 2/96  
 APPROVED: PVR 5/98 1/16 10/16  
 DIRECTOR OF ENGINEERING



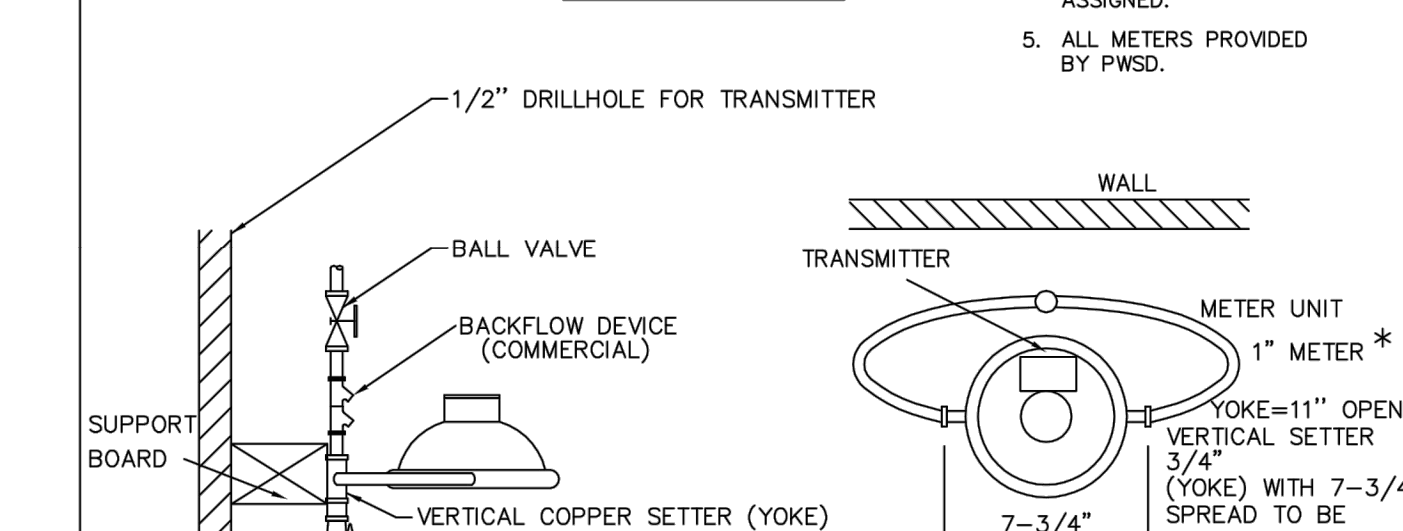
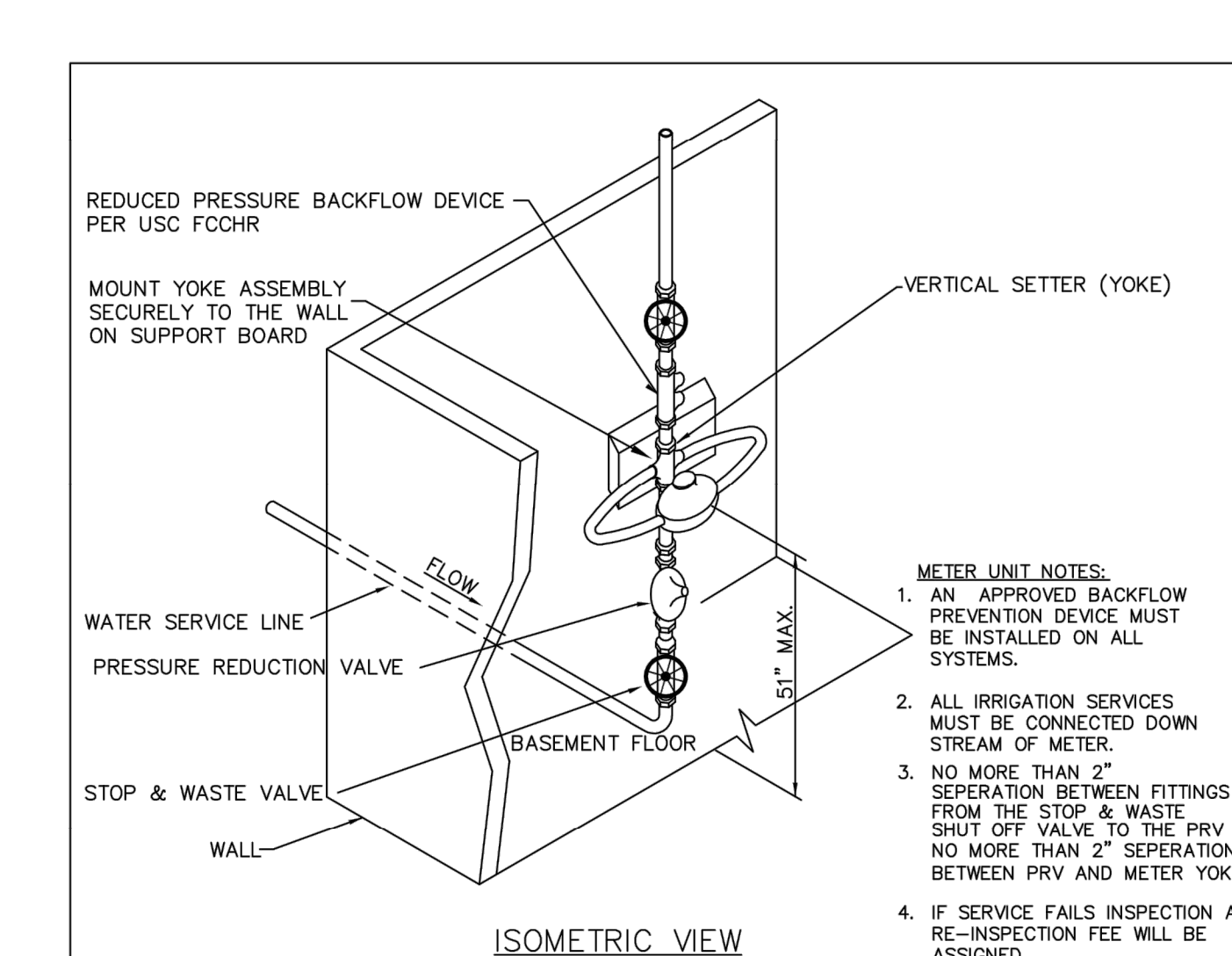
PARKER WATER & SANITATION DISTRICT  
SEWER CROSSING UNDER LESS THAN 18" BETWEEN PIPES

SCALE: NONE DATE: 2/96  
 APPROVED: PVR 1/16 10/16  
 DIRECTOR OF ENGINEERING



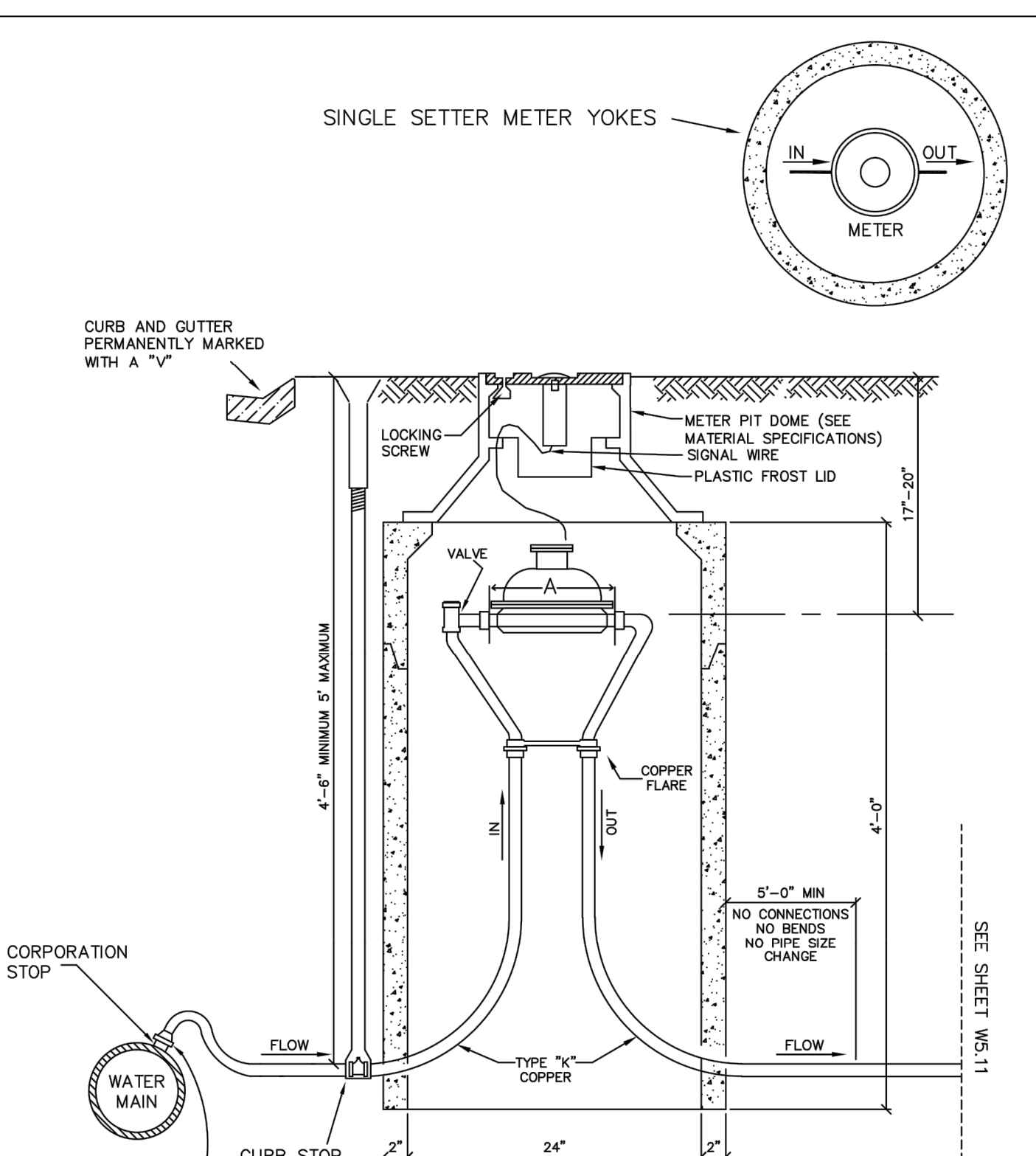
PARKER WATER & SANITATION DISTRICT  
TYPICAL SEWER SERVICES

SCALE: NONE DATE: 2/96  
 APPROVED: PVR 2/00 01/02 01/16 10/16  
 DIRECTOR OF ENGINEERING



PARKER WATER & SANITATION DISTRICT  
SERVICE LINE, STOP BOX & INSIDE METER SETTING (COMMERCIAL ONLY)

SCALE: NONE DATE: 2/96  
 APPROVED: PVR \* ADDITION 01/04 10/16 06/05 1/16  
 DIRECTOR OF ENGINEERING

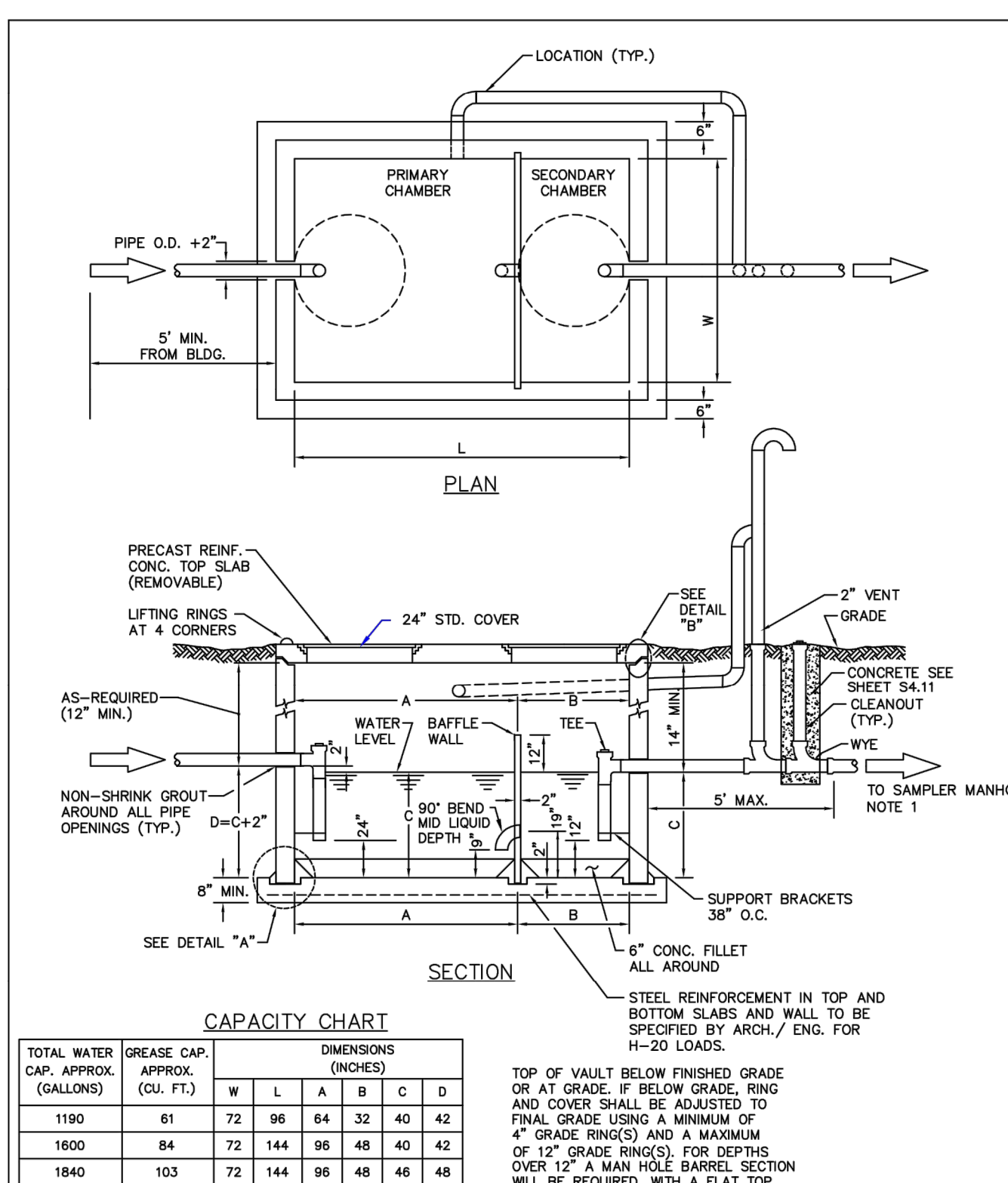


METER SIZE

| METER SIZE | A       |
|------------|---------|
| 3/4"       | 7 3/4"  |
| 1"         | 11 1/4" |

PARKER WATER & SANITATION DISTRICT  
RESIDENTIAL ALL OUTSIDE SETTINGS FOR 3/4" & 1" METERS

SCALE: NONE DATE: 2/96  
 APPROVED: PVR 01/04 01/16 06/05 10/16 01/08 10/18 01/12  
 DIRECTOR OF ENGINEERING

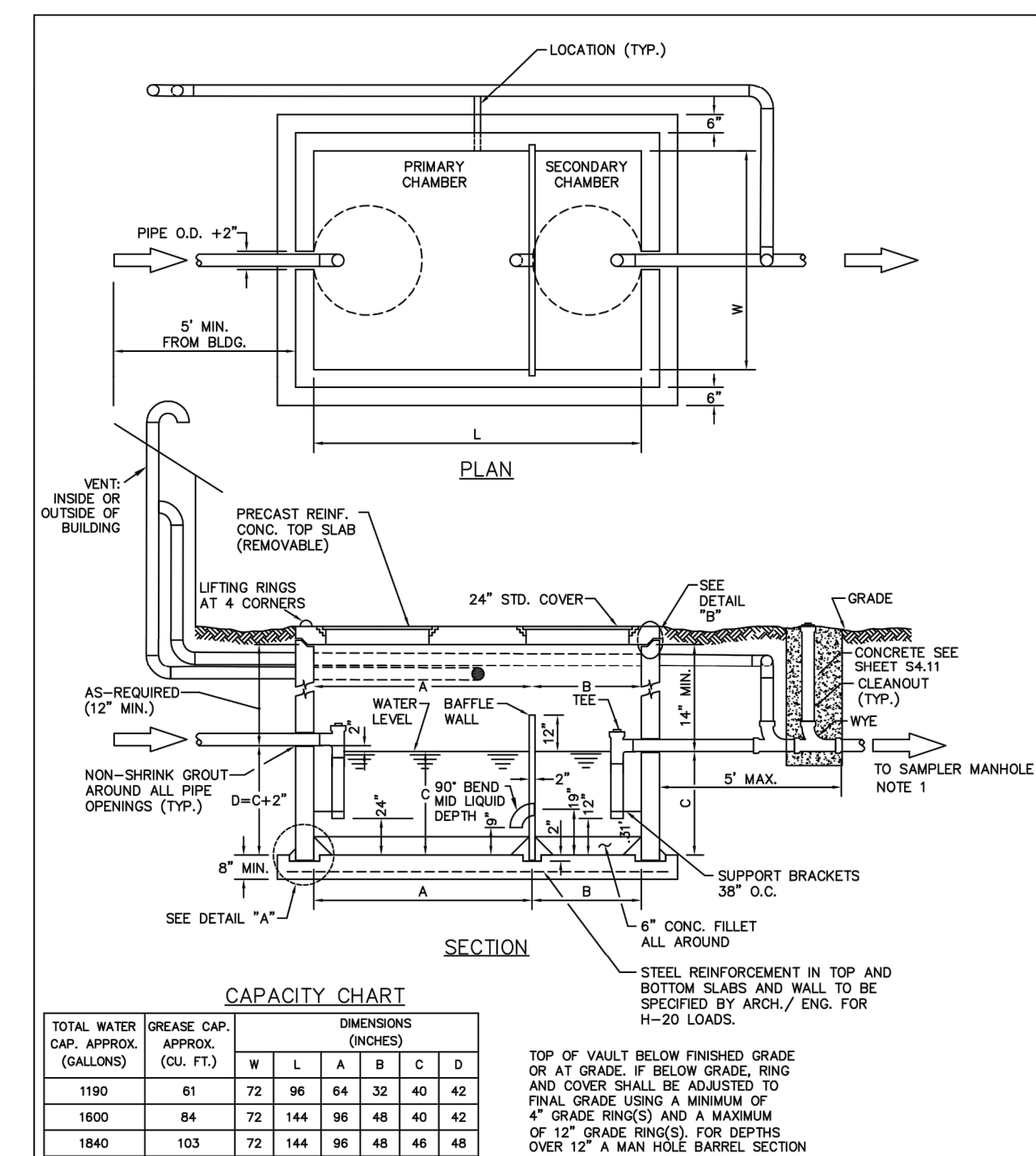


CAPACITY CHART

| TOTAL WATER CAP. APPROX. (GALLONS) | GREASE CAP. APPROX. (CU. FT.) | DIMENSIONS (INCHES) |     |    |    |    |    |
|------------------------------------|-------------------------------|---------------------|-----|----|----|----|----|
|                                    |                               | W                   | L   | A  | B  | C  | D  |
| 1190                               | 61                            | 72                  | 96  | 64 | 32 | 40 | 42 |
| 1600                               | 84                            | 72                  | 144 | 96 | 48 | 40 | 42 |
| 1840                               | 103                           | 72                  | 144 | 96 | 48 | 46 | 48 |
| 2080                               | 117                           | 72                  | 144 | 96 | 48 | 52 | 54 |
| 2560                               | 150                           | 72                  | 144 | 96 | 48 | 64 | 68 |
| 3040                               | 183                           | 72                  | 144 | 96 | 48 | 76 | 78 |
| 3280                               | 202                           | 72                  | 144 | 96 | 48 | 82 | 84 |
| 3520                               | 216                           | 72                  | 144 | 96 | 48 | 88 | 90 |

PARKER WATER & SANITATION DISTRICT  
COMMERCIAL GREASE INTERCEPTOR

SCALE: NONE DATE: 2/96  
 APPROVED: PVR 2/00 01/02 01/16 10/16  
 DIRECTOR OF ENGINEERING



CAPACITY CHART

| TOTAL WATER CAP. APPROX. (GALLONS) | GREASE CAP. APPROX. (CU. FT.) | DIMENSIONS (INCHES) |     |    |    |    |    |
|------------------------------------|-------------------------------|---------------------|-----|----|----|----|----|
|                                    |                               | W                   | L   | A  | B  | C  | D  |
| 1190                               | 61                            | 72                  | 96  | 64 | 32 | 40 | 42 |
| 1600                               | 84                            | 72                  | 144 | 96 | 48 | 40 | 42 |
| 1840                               | 103                           | 72                  | 144 | 96 | 48 | 46 | 48 |
| 2080                               | 117                           | 72                  | 144 | 96 | 48 | 52 | 54 |
| 2560                               | 150                           | 72                  | 144 | 96 | 48 | 64 | 68 |
| 3040                               | 183                           | 72                  | 144 | 96 | 48 | 76 | 78 |
| 3280                               | 202                           | 72                  | 144 | 96 | 48 | 82 | 84 |
| 3520                               | 216                           | 72                  | 144 | 96 | 48 | 88 | 90 |

PARKER WATER & SANITATION DISTRICT  
COMMERCIAL GREASE INTERCEPTOR

SCALE: NONE DATE: 2/96  
 APPROVED: PVR 2/00 01/02 01/16 10/16  
 DIRECTOR OF ENGINEERING

APPROVED  
 Jun 09 2022  
 PARKER WATER AND SANITATION DISTRICT

PROJECT NO.: TWS015.01  
 DESIGNED BY: LCG  
 DRAWN BY: JLG  
 DATE: 4/12/2022

U2.1

REVISION

| No. | REVISION | DATE |
|-----|----------|------|
|     |          |      |

EES ENGINEERING AND SOLUTIONS, INC.  
 501 S Cherry St. Suite 500  
 Glendale, CO 80248  
 303.572.7997 www.ees.us.com

PROFESSIONAL ENGINEER  
 4/13/22  
 41217

PROJ. NO. 2022-001  
 4/13/22

PWD CONSTRUCTION PLANS LOT 2  
 CARWASH  
 12191 SLICEROOD DRIVE, PARKER, CO 80134  
 WATER & SANITARY SEWER DETAILS