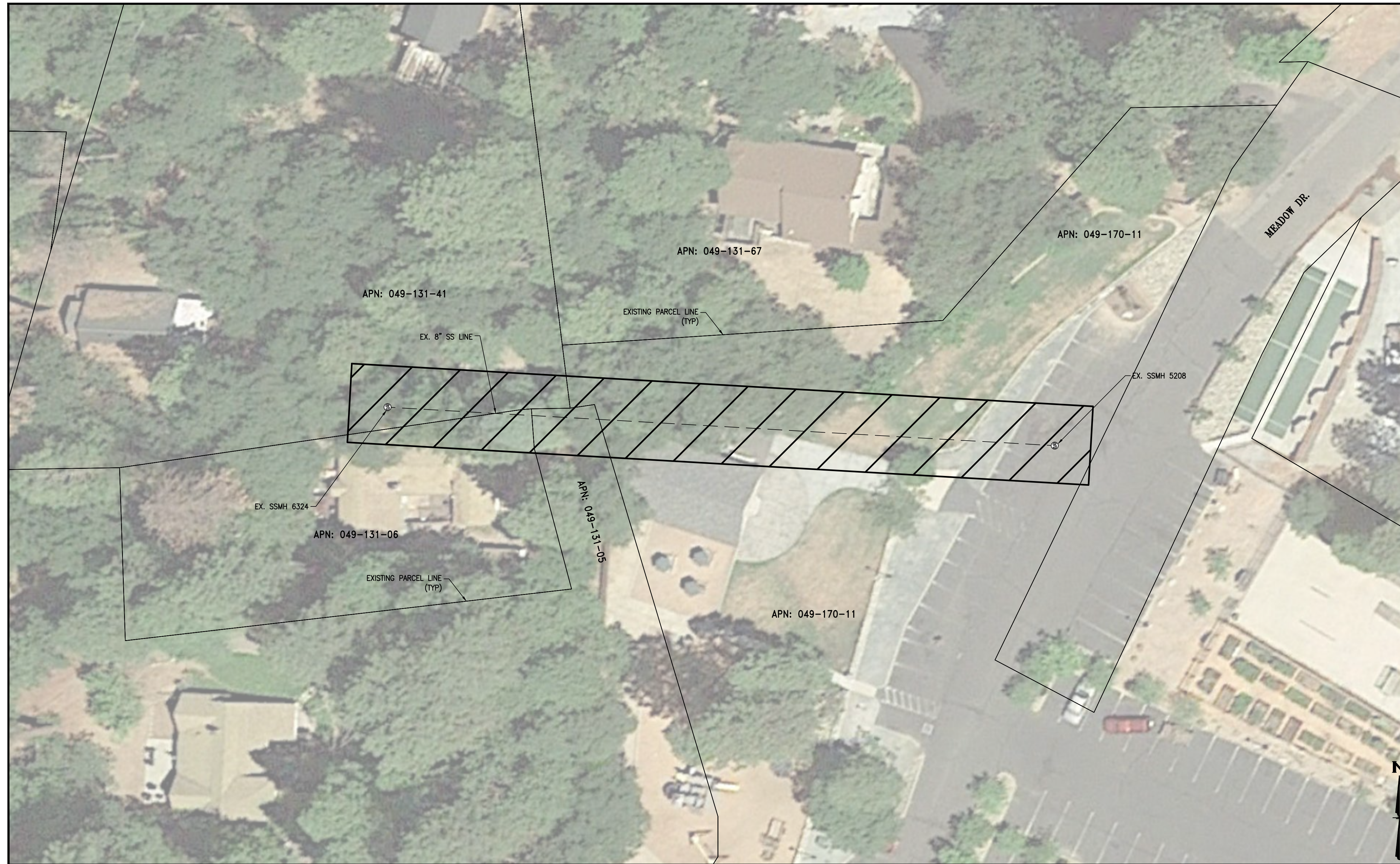


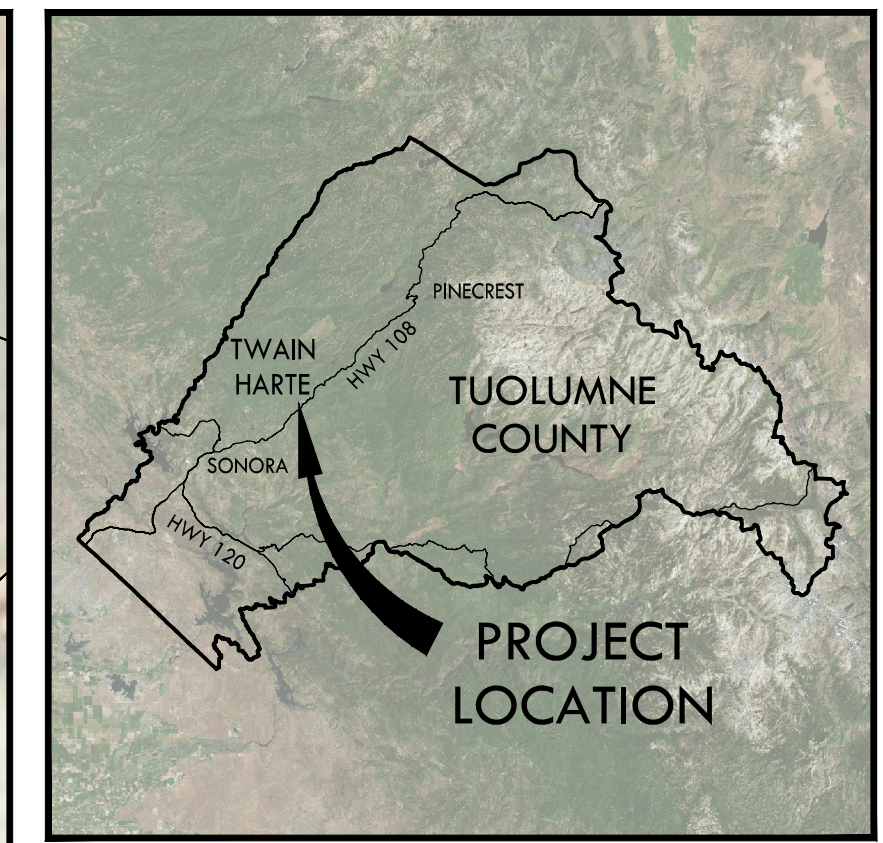


# TWAIN HARTE COMMUNITY SERVICES DISTRICT PARK SEWER LINE REPLACEMENT PROJECT

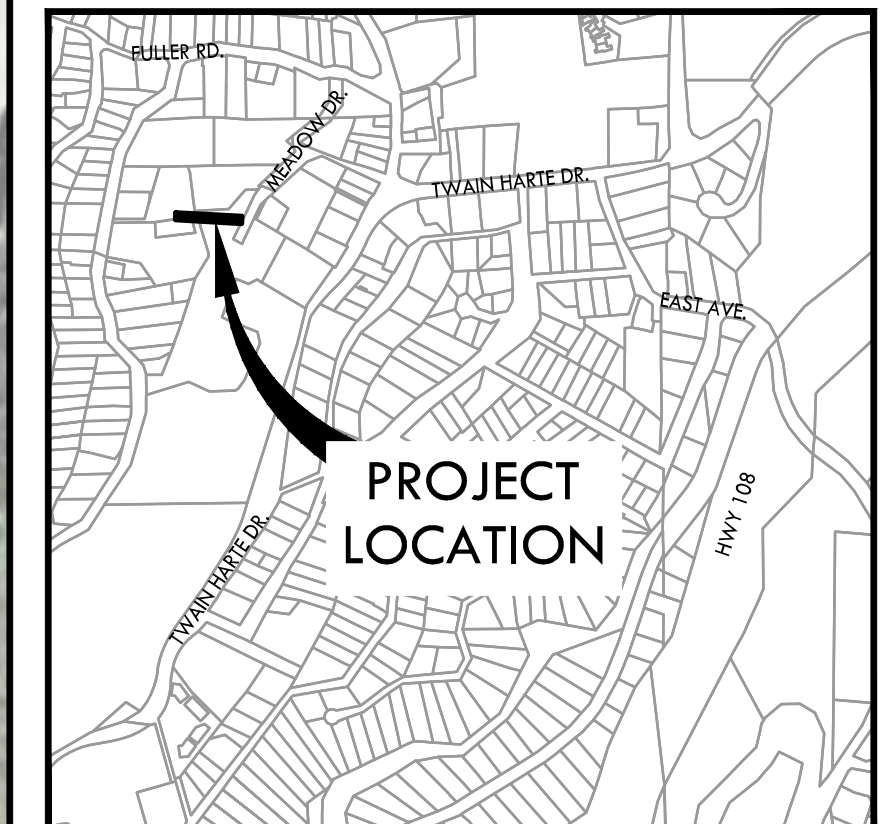
TWAIN HARTE, CALIFORNIA



PROJECT SITE



VICINITY MAP



LOCATION MAP

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| SHEET       | DRAWING | NAME                            |
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**APPROVALS**

APPROVED BY THE TWAIN HARTE COMMUNITY SERVICES DISTRICT  
  
 BY TOM TROTTI, GENERAL MANAGER DATE 8/20/2018

**BLACKWATER**  
 CONSULTING ENGINEERS, INC.  
 605 STANDFORD AVE., SUITE N, MODesto, CA 95350 PH. 209.322.1920

| REV | DATE | DESCRIPTION | APP |
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**COVER SHEET**  
 TWAIN HARTE COMMUNITY SERVICES DISTRICT  
 PARK SEWER LINE REPLACEMENT PROJECT

DESIGNED BY  
KVK  
 DRAWN BY  
KVK  
 CHECKED BY  
JB  
 JOB NO.  
J14074  
 DATE  
JUNE 2018  
 DRAWING  
G-01  
 SHEET NO.  
1 OF 4

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## CONTACTS

### REGULATORY AGENCY/OWNER:

TWAIN HARTE COMMUNITY SERVICES DISTRICT  
22912 VANTAGE POINT DRIVE  
P.O. BOX 649  
TWAIN HARTE, CA 95383  
GENERAL MANAGER: TOM TROTT, P.E.  
T:209.586.3172

### ENGINEER:

BLACK WATER CONSULTING ENGINEERS, INC.  
605 STANDIFORD AVE, STE. N  
MODESTO, CA 95350  
ENGINEER: JEFF BLACK, P.E.  
T:209.322.1817

## GENERAL CONSTRUCTION NOTES

- CONTRACTOR SHALL CONSIDER THE INFORMATION PRESENTED IN THESE NOTES AS PART OF THE CONSTRUCTION DOCUMENTS.
- PRIOR TO ANY WORK BEING PERFORMED, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES FOR A PRE-CONSTRUCTION CONFERENCE. CONTRACTOR SHALL ALSO NOTIFY THE OWNERS AND ENGINEER SEVENTY-TWO (72) HOURS PRIOR TO MEETING DATE.
- ENGINEER OF RECORD MUST APPROVE ANY SUBSTITUTIONS. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN THE DRAWINGS AND OTHER DETAILS; OR EXISTING CONDITIONS NOT SHOWN OR DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS PRIOR TO COMMENCEMENT OF WORK. MATERIALS PROCURED PRIOR TO RESOLUTION OF CONFLICTS SHALL BE AT THE CONTRACTOR'S RISK.
- ALL WORK IS NEW UNLESS INDICATED AS EXISTING.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE GOVERNING BUILDING JURISDICTION AND/OR THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THE PROJECT.
- THE DRAWINGS AND SPECIFICATIONS REPRESENT THE CONTEMPLATED PROJECT, AND DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE CONSTRUCTION AND ALL ADJACENT PROPERTIES DURING CONSTRUCTION.
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING TAKING EXTRA PRECAUTIONS TO ENSURE THE SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, ENGINEER, STATE, AND THE TUOLUMNE COUNTY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER. THE WORK AREA IS A PUBLIC PARK THAT WILL REMAIN IN USE DURING CONSTRUCTION AS WELL AS A BACKYARD OF A RESIDENCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
  - CLEANING THE JOB SITE AT THE END OF EACH PHASE OF WORK.
  - REMOVING AND DISPOSING OF ALL TRASH, SCRAP AND UNUSED MATERIAL AT THEIR OWN EXPENSE IN A TIMELY MANNER.
  - MAINTAINING THE SITE IN A NEAT, SAFE AND ORDERLY MANNER AT ALL TIMES.
  - KEEPING MATERIALS, EQUIPMENT AND TRASH OUT OF THE WAY OF PUBLIC PARK FACILITIES SO AS TO NOT DELAY THE JOB.
  - PROVIDING THEIR OWN SAFETY, TRAFFIC CONTROL PERMITS, RETESTING AND REINSPECTION.
  - PROVIDING ALL WATER AND POWER AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
  - SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO REGULATORY AGENCY'S STANDARD SPECIFICATIONS.
  - FIELD CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER.
  - THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN, OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT ISSUE OF THE "CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" ADOPTED BY THE CALIFORNIA DEPARTMENT OF TRANSPORTATION.
- THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL PIPING AND CONDUITS, STRUCTURES AND OTHER FACILITIES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR.
- PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
- WE CALL YOUR ATTENTION TO TITLE 8 CALIFORNIA ADMINISTRATION CODE SECTION 1540 (A) (1) OF THE CONSTRUCTION SAFETY ORDERS ISSUED BY THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD PURSUANT TO THE CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT OF 1973 AS AMENDED WHICH STATES: (1) PRIOR TO OPENING AN EXCAVATION EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E. SEWER, WATER, FUEL, ELECTRICAL LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.
- ALL DIMENSIONS SHOWN ON DRAWINGS SHALL BE VERIFIED WITH EXISTING CONDITIONS. DO NOT SCALE DRAWINGS. ENGINEER OF RECORD MUST APPROVE ANY SUBSTITUTIONS. IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN THE DRAWINGS AND OTHER DETAILS; OR EXISTING CONDITIONS NOT SHOWN OR DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS PRIOR TO COMMENCEMENT OF WORK. MATERIALS PROCURED PRIOR TO RESOLUTION OF CONFLICTS SHALL BE AT THE CONTRACTOR'S RISK.
- THESE PLANS HAVE BEEN CHECKED BY TWAIN HARTE COMMUNITY SERVICES DISTRICT

- AND/OR AUTHORIZED REPRESENTATIVE, BUT SUCH CHECKING OR APPROVAL DOES NOT RELIEVE THE CONTRACTOR FROM HIS/HER RESPONSIBILITY TO CORRECT ERRORS, OMISSIONS OR MAKE CHANGES REQUIRED BY CONDITIONS DISCOVERED IN THE FIELD DURING THE COURSE OF CONSTRUCTION.
- THE CONTRACTOR SHALL CONTROL DUST AT ALL TIMES. DUST CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IMPLEMENTED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL GUIDELINES (INCLUDING, BUT NOT LIMITED TO THE SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT).
  - ALL LINES ABANDONED DURING CONSTRUCTION SHALL BE REMOVED.
  - ALL INDEPENDENT LABORATORY INSPECTION REQUESTED BY THE ENGINEER SHALL BE PAID FOR BY THE DISTRICT WITH RE-TESTING BEING PAID FOR BY THE CONTRACTOR. ROADWAY SUBGRADE, SUB-BASE, BASE, AND TRENCH BACKFILL COMPACTION TESTING SHALL BE PERFORMED BY A SOILS LAB CONTRACTING WITH TWAIN HARTE COMMUNITY SERVICES DISTRICT. R-VALUE TESTING OF THE PAVEMENT SUB-GRADE SHALL BE PERFORMED PRIOR TO THE INSTALLMENT OF BASE ROCK, OR AS REQUIRED BY THE OWNER. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED TO SCHEDULE ALL INSPECTION / TESTING SERVICES.
  - ALL TRENCHES SHALL BE BACK FILLED IN ACCORDANCE WITH TWAIN HARTE COMMUNITY SERVICES DISTRICT SPECIFICATIONS AND IMPROVEMENTS STANDARDS.
  - PRIOR TO INITIATING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY FEDERAL, STATE AND LOCAL PERMITS AND/OR AUTHORIZATIONS HAVE BEEN OBTAINED.
  - THE CONTRACTOR MAY USE THE DISTRICT'S WELL SITE ACROSS THE STREET (MEADOW DRIVE) AS A STAGING AREA.

## STANDARDS FOR THE WORK

- PIPE FITTINGS, WIRING, AND SUPPORTS SHALL BE PROVIDED TO PRODUCE COMPLETE, OPERABLE SYSTEMS WITH ALL ELEMENTS PROPERLY INTERCONNECTED AS SHOWN TO MEET THE PERFORMANCE INTENT AS INTERPRETED BY THE OWNER. IF A SPECIFIED DIMENSION LOCATION IS NOT SHOWN FOR INTERCONNECTIONS OR SMALLER SYSTEM ELEMENTS, THE CONTRACTOR SHALL SELECT APPROPRIATE LOCATIONS AND SHOW THEM ON THE SHOP DRAWING SUBMITTALS FOR REVIEW.
- EQUIPMENT AND MATERIALS SHALL BE NEW AND WITHOUT IMPERFECTIONS AND SHALL BE CONSTRUCTED IN A NEAT AND WORKMANLIKE MANNER; ALIGNED, LEVELED, CLEANED AND DUSTED FOR SATISFACTORY OPERATION. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARD PRACTICES FOR THIS TYPE OF WORK.
- ALL MATERIAL AND WORK SHALL CONFORM TO TWAIN HARTE COMMUNITY SERVICES DISTRICT DESIGN AND CONSTRUCTION STANDARDS AND TUOLUMNE COUNTY SPECIFICATIONS AND IMPROVEMENT STANDARDS. ALL IMPROVEMENTS ARE SUBJECT TO THE INSPECTION AND APPROVAL OF TWAIN HARTE COMMUNITY SERVICES DISTRICT.
- ASBESTOS CEMENT PIPE (ACP) OR VITRIFIED CLAY PIPE (VCP) FITTINGS SHALL NOT BE USED.
- MANHOLES, VALVES, CLEAN OUTS, ETC. SHALL BE BROUGHT TO FINISH GRADE BY THE CONTRACTOR AFTER THE FINAL PAVING COURSE IS PLACED.

## EXISTING CONDITIONS NOTES

- FIELD VERIFY ALL CONDITIONS. WHERE EXISTING CONDITIONS VARY SIGNIFICANTLY FROM THOSE SHOWN ON THESE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONTINUED CONSTRUCTION RELATED TO SUBJECT CONDITIONS.
- ALL EXISTING CONNECTIONS AND ELEMENTS TO BE REPLACED SHALL BE REPLACED OR RE-ATTACHED TO MATCH EXISTING CONDITIONS. INSPECTION IS REQUIRED FOR ALL WORK UNLESS APPROVED BY RESPONSIBLE ENGINEER OF RECORD.
- EXISTING STREETS THAT REQUIRE RECONSTRUCTION AS A RESULT OF THE CONSTRUCTION TRAFFIC SHALL REMAIN OPEN AT ALL TIMES WITH ADEQUATE DETOURS DURING RECONSTRUCTION. RECONSTRUCTION OF EXISTING STREETS SHALL INCLUDE UPGRADING OF THE AFFECTED PAVEMENT AREA TO MEET ORIGINAL STANDARDS TO PROVIDE A SOUND STRUCTURAL SECTION. THE TWAIN HARTE COMMUNITY SERVICES DISTRICT ENGINEER SHALL APPROVE ALL IMPROVEMENTS.
- WHENEVER EXISTING FACILITIES (INCLUDING BUT NOT LIMITED TO LANDSCAPING, CONCRETE, AND LANDSCAPING FEATURES) ARE REMOVED, DAMAGED, BROKEN OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, AFTER PROPER BACKFILLING AND/OR CONSTRUCTION, WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, ENGINEER AND THE RESPECTIVE REGULATORY AUTHORITY.
- THE CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCHMARKS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSE FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE. ALL STREET MONUMENTS, LOT CORNERS, BENCHMARKS, AND OTHER PERMANENT PIPE MONUMENTS DISTURBED DURING THE PROCESS OF CONSTRUCTION SHALL BE REPLACED BY A LICENSED CIVIL ENGINEER OR SURVEYOR PRIOR TO ACCEPTANCE OF THE IMPROVEMENTS BY TWAIN HARTE COMMUNITY SERVICES DISTRICT.
- THE INFORMATION SHOWN ON THE PLANS WITH REGARD TO THE EXISTING UTILITIES AND/OR IMPROVEMENTS WAS DERIVED FROM FIELD INVESTIGATIONS AND/OR RECORD INFORMATION. THE ENGINEER DOES NOT GUARANTEE THESE LOCATIONS TO BE EITHER TRUE OR EXACT. PRIOR TO CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING IMPROVEMENTS AND TO EXPOSE UNDERGROUND UTILITIES RELATED TO THE PROJECT, INCLUDING BUT NOT LIMITED TO SEWER, STORM DRAIN, WATER, IRRIGATION, GAS, ELECTRICAL, ETC. AND SHALL NOTIFY THE ENGINEER AND OWNER IN WRITING FOURTY-EIGHT (48) HOURS IN ADVANCE OF EXPOSING THE UTILITIES SO THAT THE EXACT LOCATION AND ELEVATION CAN BE VERIFIED AND DOCUMENTED. IF LOCATION AND/OR ELEVATION DIFFERS FROM THAT SHOWN ON THE DESIGN PLANS, PROVISIONS TO ACCOMMODATE NEW LOCATION/ELEVATION MUST BE MADE PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITIES. THE CONTRACTOR SHALL DO NO EXCAVATION UNTIL ALL UTILITY AGENCIES AND THE TUOLUMNE COUNTY DEPARTMENT OF PUBLIC WORKS HAVE BEEN NOTIFIED AND HAVE BEEN GIVEN THE OPPORTUNITY TO MARK THEIR FACILITIES IN THE FIELD. THE CONTRACTOR SHALL CALL U.S.A. AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO DOING ANY EXCAVATING.
- EXISTING CURB AND SIDEWALK WITHIN THE PROJECT LIMITS THAT ARE DAMAGED OR DISPLACED, EVEN THOUGH THEY WERE NOT TO BE REMOVED, SHALL BE REPLACED PER TUOLUMNE COUNTY STANDARDS EVEN IF DAMAGE OR DISPLACEMENT OCCURRED PRIOR TO ANY WORK PERFORMED BY THE CONTRACTOR. THE CONTRACTOR SHALL ALSO PROTECT AND RESTORE (IF DAMAGED) PRIVATE DRIVEWAYS, BUILDINGS, LANDSCAPING,

- FENCING, WALLS, SURFACE HARDSCAPES, AND OTHER PRIVATE FACILITIES SURROUNDING THE WORK AREA. NO TREES SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE IMPROVEMENT PLANS. ALL TREES CONFLICTING WITH GRADING, UTILITIES, OR OTHER IMPROVEMENTS, OR OVERHANGING THE SIDEWALK OR PAVEMENT TO FORM A NUISANCE OR HAZARD, SHALL BE TRIMMED OR PROPERLY TREATED AND SEALED. THE DRIP LINE OF TREES TO BE SAVED WILL BE FENCED, AND NO GRADING SHALL TAKE PLACE WITHIN THE FENCED AREA.
- EXISTING UTILITIES SHALL NOT BE INTERRUPTED UNTIL THE UTILITY COMPANY HAS PROVIDED ALTERNATIVE SERVICE FACILITIES. THE CONTRACTOR SHALL COOPERATE AND COORDINATE WORK WITH THE APPROPRIATE AGENCIES AND UTILITY COMPANIES.
  - PRIOR TO TRENCHING FOR ANY SEWER, WATER, OR STORM DRAIN PIPE, THE CONTRACTOR SHALL VERIFY IN THE FIELD, THE SIZE AND LOCATION OF THE EXISTING PIPE AT THE POINT OF CONNECTION. ANY DEVIATION FROM THE PLANS SHALL BE RESOLVED BY THE DESIGN ENGINEER PRIOR TO TRENCHING. ANY DAMAGE CAUSED BY TRENCHING TO EXISTING UNDERGROUND UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
  - CONTRACTOR SHALL COORDINATE LOCATIONS OF NEW UTILITY LINES WITH EXISTING PRIOR TO CONSTRUCTION.
  - THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES. THE LOCATION AND SIZE OF ANY EXISTING UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS IS APPROXIMATE. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY SHOULD ANY EXISTING UTILITY LOCATIONS CONFLICT WITH NEW WORK.

## RESTORATION OF EXISTING CONDITIONS

- FENCES THAT NEED TO BE REMOVED DURING CONSTRUCTION SHALL BE REMOVED TO THE NEAREST POST BEYOND THE AREA OF CONSTRUCTION. CONTRACTOR SHALL MATCH REPLACEMENT FENCE WITH THE EXISTING FENCE.
- CONTRACTOR SHALL CONSTRUCT TEMPORARY FENCING WHERE EXISTING FENCE IS REMOVED TO PREVENT UNWANTED CROSSING OF THE PREVIOUS FENCE LINE. THE WORK AREA (INCLUDING BUT NOT LIMITED TO ALL UNSUPERVISED EQUIPMENT OR OPEN TRENCHES) SHALL ALSO BE FENCED OFF WITH TEMPORARY FENCING TO KEEP THE PUBLIC SAFE DURING OPERATIONS.

## DEWATERING

- DEWATERING PLANS FOR ALL TRENCHES SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER AS THERE ARE KNOWN HIGH GROUNDWATER LEVELS IN THE CONSTRUCTION AREA.

## SHORING AND BRACING

- THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 5' OR MORE. SAID PROTECTION IS REQUIRED AND MUST BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT AND THE STATE REGULATIONS.

### ABBREVIATIONS

|            |                            |       |                          |
|------------|----------------------------|-------|--------------------------|
| AB         | AGGREGATE BASE             | NTS   | NOT TO SCALE             |
| ALT        | ALTERNATE                  | OC    | ON CENTER                |
| AVE        | AVENUE                     | OHE   | OVERHEAD ELECTRIC        |
| BFP        | BACK FLOW PREVENTER        | P.C.  | POINT OF CURVATURE       |
| BTWN       | BETWEEN                    | PG&E  | PACIFIC GAS AND ELECTRIC |
| BY         | BUTTERFLY VALVE            | PL    | PROPERTY LINE            |
| CIP        | CAST IN PLACE              | PT    | POINT                    |
| CMP        | CORRUGATED METAL PIPE      | P.T.  | POINT OF TANGENT         |
| CONC OR CC | CONCRETE                   | R     | RADIUS                   |
| DIA        | DIAMETER                   | RCP   | REINFORCED CONCRETE PIPE |
| DIP        | DUCTILE IRON PIPE          | R.D.  | RELETIVE DENSITY         |
| EX         | EXISTING                   | RD    | ROAD                     |
| FDN        | FOUNDATION                 | REINF | REINFORCED               |
| FF         | FINISH FLOOR               | REQ'D | REQUIRED                 |
| FG         | FINISH GRADE               | RT    | RIGHT                    |
| FH         | FIRE HYDRANT               | S     | SLOPE / SOUTH            |
| GR         | GRATE                      | SHT   | SHEET                    |
| GV         | GATE VALVE                 | SIM   | SIMILAR                  |
| HORIZ      | HORIZONTAL                 | SS    | SANITARY SEWER           |
| HT         | HEIGHT                     | SST   | STAINLESS STEEL          |
| ID         | INSIDE DIAMETER            | ST    | STREET                   |
| INV        | INVERT                     | STD   | STANDARD                 |
| IRR        | IRRIGATION                 | STL   | STEEL                    |
| LF         | LINEAL FEET OR LINEAR FEET | TEMP  | TEMPORARY                |
| LT         | LEFT                       | TG    | TOP OF GRATE             |
| MAX        | MAXIMUM                    | THRU  | THROUGH                  |
| MFR        | MANUFACTURER               | TYP   | TYPICAL                  |
| MGD        | MILLION GALLONS PER DAY    | UON   | UNLESS OTHERWISE NOTED   |
| MIN        | MINIMUM                    | VERT  | VERTICAL                 |
| N          | NORTH / NEW                | W     | WATER / WEST             |
| NIC        | NOT INCLUDED               | WM    | WATER METER              |



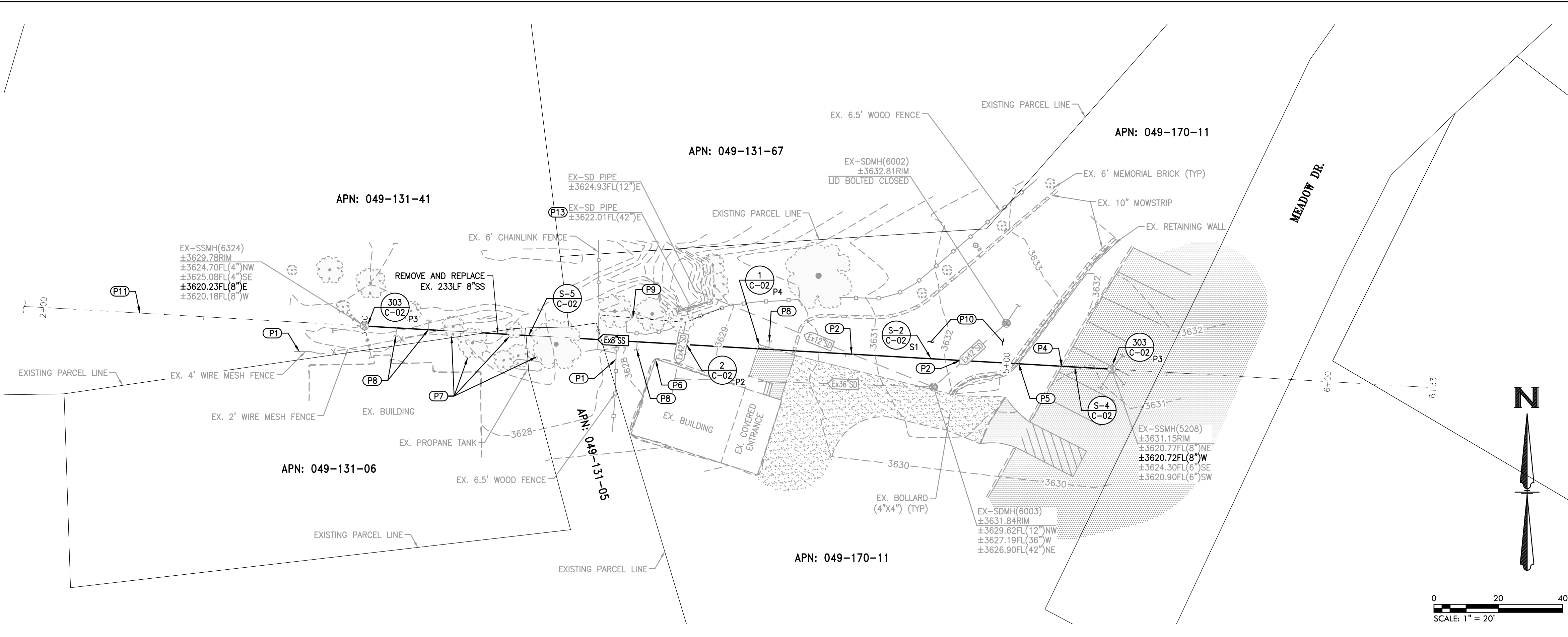
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| BLACK WATER CONSULTING ENGINEERS, INC.<br>605 STANDIFORD AVE., SUITE N, MODESTO, CA 95350 PH. 209.322.1820 | APP         |  |
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## ABBREVIATIONS AND GENERAL NOTES

### TWAIN HARTE COMMUNITY SERVICES DISTRICT PARK SEWER LINE REPLACEMENT PROJECT

|                     |
|---------------------|
| DESIGNED BY<br>KVK  |
| DRAWN BY<br>KVK     |
| CHECKED BY<br>JB    |
| JOB NO.<br>J14074   |
| DATE<br>JUNE 2018   |
| DRAWING<br>G-02     |
| SHEET NO.<br>2 OF 4 |





- PROTECTION NOTES**
- (P1) REMOVE AND REPLACE EXISTING FENCING IF REQUIRED FOR CONSTRUCTION.
  - (P2) CONTRACTOR TO USE EXTREME CAUTION WHEN EXCAVATING AROUND EXISTING STORM DRAIN PIPE, PROTECT EXISTING STORM DRAIN CULVERTS.
  - (P3) CONTRACTOR TO PROTECT EXISTING SANITARY SEWER MANHOLES.
  - (P4) CONTRACTOR TO MAKE A CLEAN SAWCUT AS NEEDED FOR REMOVING A PORTION OF THE EXISTING CONCRETE PAD, AND RESTORE IT AFTER CONSTRUCTION. CONTRACTOR TO PROTECT THE REMAINDER OF THE EXISTING CONCRETE PAD AND CONCRETE CURB.
  - (P5) CONTRACTOR TO PROTECT EXISTING ROCK RETAINING WALL AND REPAIR IF DAMAGED DURING CONSTRUCTION. THE DEPTH OF THE RETAINING WALL FOOTING IS UNKNOWN.
  - (P6) CONTRACTOR TO PROTECT EXISTING BUILDING DURING CONSTRUCTION.
  - (P7) CONTRACTOR TO PROTECT OR TRIM EXISTING TREES WITHIN TRENCH ZONE WHERE POSSIBLE. CONTRACTOR TO OBTAIN THE APPROVAL OF THE CONSTRUCTION MANAGER PRIOR TO EXCAVATION OR REMOVAL OF ANY TREES DURING CONSTRUCTION.
  - (P8) CONTRACTOR TO RECONNECT EXISTING SEWER LATERALS.
  - (P9) CONTRACTOR TO PLACE A CONSTRUCTION FENCE IN THIS LOCATION TO PROTECT THE CREEK AND RIPARIAN AREA NORTH OF THE EXISTING HEADWALL. THIS AREA IS TO NOT BE DISTURBED.
  - (P10) CONTRACTOR TO REPAIR EXISTING IRRIGATION LINES IN THE GRASS AREA OF PARK. THE LOCATIONS ARE CURRENTLY UNKNOWN.
  - (P11) ALIGNMENT OF SS DOWNSTREAM OF SSMH 6324 (STA 3+00) WAS NOT SURVEYED FOR THIS PROJECT AND ITS LOCATION IS SHOWN CONCEPTUALLY. THERE EXISTS A MH AT ±STA 0+00 THAT IS AVAILABLE FOR BY-PASS PUMPING OR DEWATERING, IF NECESSARY.
  - (P12) THCSO INSPECTIONS INDICATE THE EXISTING SEWER PIPE "SAGS" BETWEEN ±4+00 AND ±5+00, AND MAY NEED TO BE PUMPED OUT WHEN REMOVED.
  - (P13) WITHOUT DISTURBING THE EXISTING CREEK CHANNEL, CONTRACTOR SHALL TEMPORARILY "SLIP" THE EXISTING 42" SD USING TEMPORARY PIPE AND SAND BAGS. ALL WORK SHALL BE SET INSIDE THE EXISTING PIPE AND INSTALLED UNDER THE INSPECTION OF A THCSO REPRESENTATIVE. TEMPORARY WORKINGS SHALL BE REMOVED BY THE CONTRACTOR BEFORE PROJECT COMPLETION. THE MATERIAL AND SIZE AND SCHEDULE OF TEMPORARY PIPING SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL PRIOR TO INSTALLATION.
- GENERAL NOTES**
1. THE CONTRACTOR'S PRIMARY ACCESS TO THE PROJECT SITE SHALL BE FROM MEADOW DRIVE. ACCESS FROM THE WEST SHALL BE LIMITED AND ONLY AS APPROVED BY THE CONSTRUCTION MANAGER.
- SEWER NOTES**
- (S1) CONTRACTOR TO REMOVE EXISTING SANITARY SEWER LINE AND INSTALL NEW SEWER LINE PER PLANS.
  - (S2) THE MINIMUM SLOPE ON TUOLUMNE UTILITIES DISTRICT STD DWG 303 DOES NOT APPLY FOR THIS PROJECT.
  - (S3) CONTRACTOR RESPONSIBLE FOR BYPASSING THE ENTIRE SEWER FLOW LINE DURING CONSTRUCTION.
  - (S4) CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING EXCAVATED AREAS IF NECESSARY.

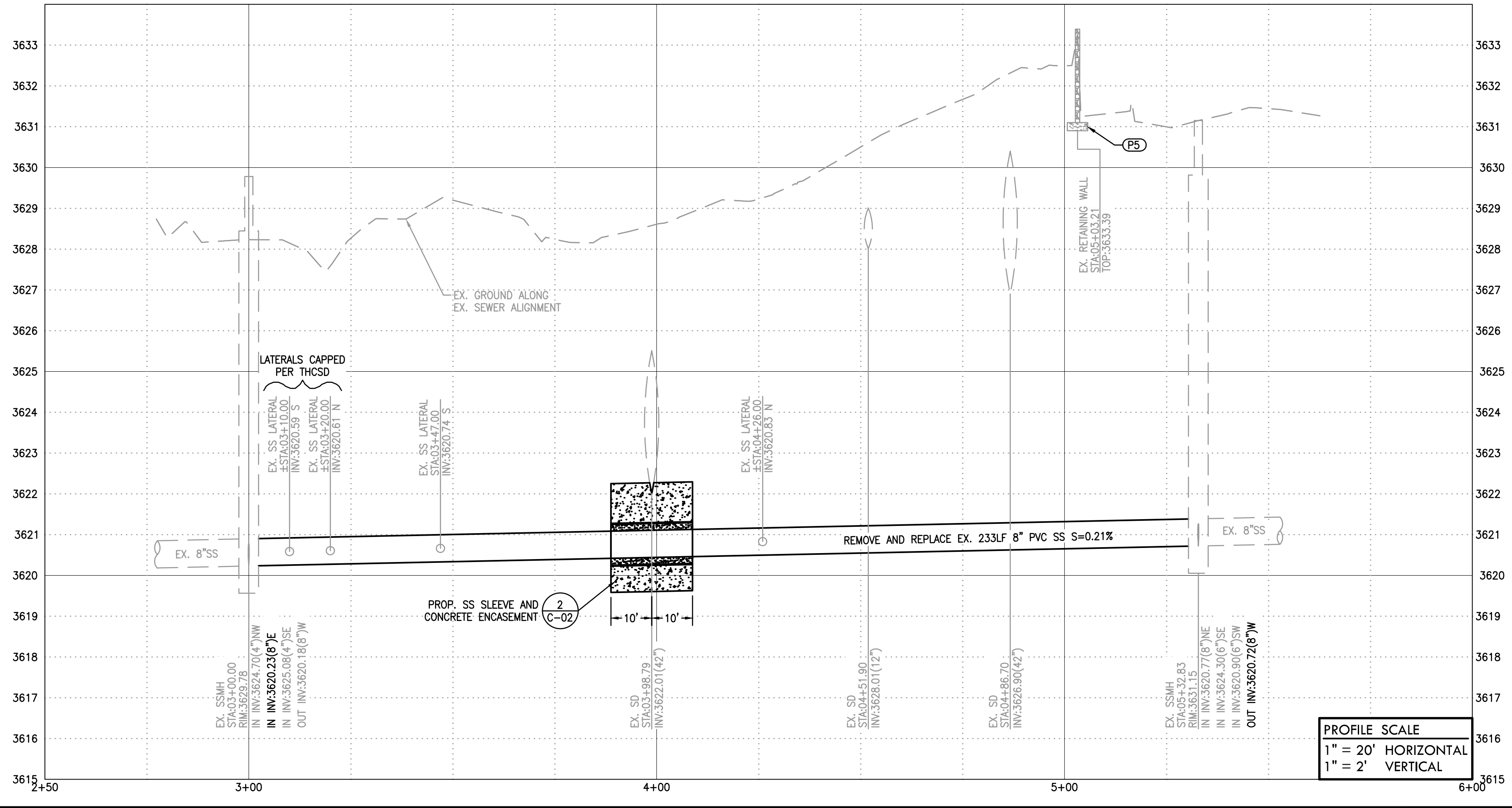


**BLACKWATER CONSULTING ENGINEERS, INC.**  
 605 STANDFORD AVE., SUITE N, MODESTO, CA 95350 PH. 209.322.1820

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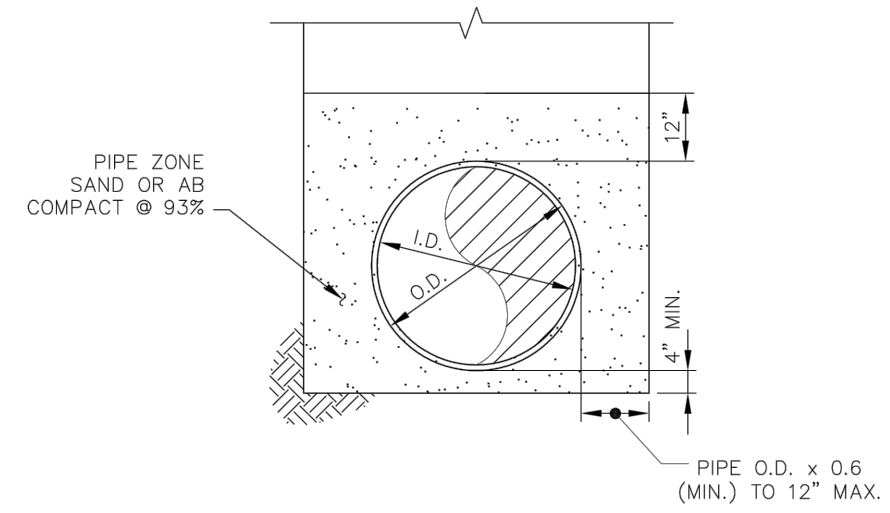
**PLAN AND PROFILE**  
**TWAIN HARTE COMMUNITY SERVICES DISTRICT**  
**PARK SEWER LINE REPLACEMENT PROJECT**

|             |           |
|-------------|-----------|
| DESIGNED BY | KVK       |
| DRAWN BY    | KVK       |
| CHECKED BY  | JB        |
| JOB NO.     | J14074    |
| DATE        | JUNE 2018 |
| DRAWING     | C-01      |
| SHEET NO.   | 3 OF 4    |



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- NOTES:
- SEE STANDARD SPECIFICATIONS FOR BEDDING MATERIAL REQUIREMENTS.
  - A VERTICAL TRENCH MAY NOT BE ABLE TO BE MAINTAINED. CONTRACTOR SHALL USE APPROPRIATE TRENCH SHORING AND OTHER EQUIPMENT TO MINIMIZE TRENCH WIDTH.



STANDARD DETAILS NOT FOR CONSTRUCTION

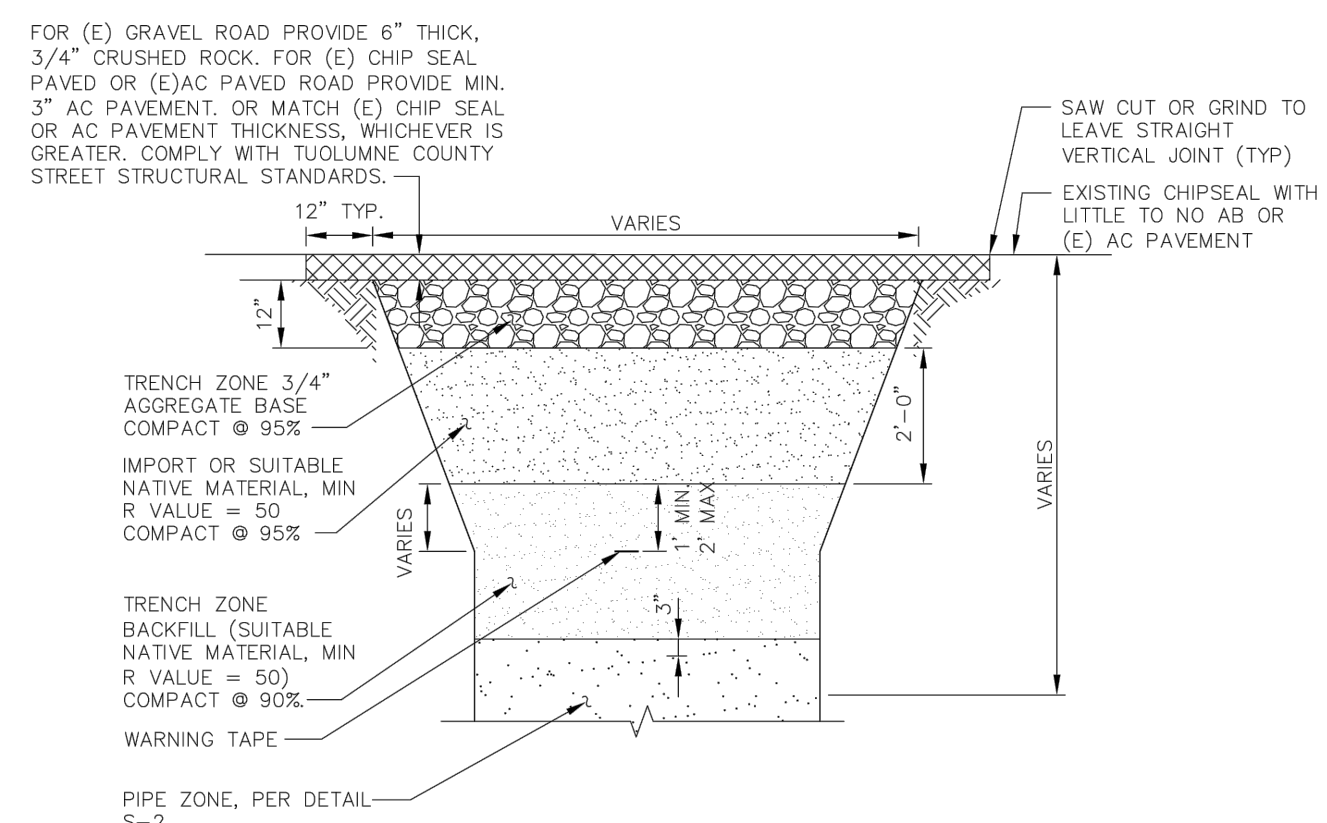
Twain Harte Community Services District

**PIPE BEDDING**

22933 TWAIN HARTE DRIVE  
P.O. BOX 649  
TWAIN HARTE, CA 95383

SCALE: NONE APPROVED BY: SN  
DATE: NOVEMBER 2006 DRAWN BY: RN

**S-2**



- NOTE:
- SEE STANDARD SPECIFICATIONS FOR BACKFILL MATERIAL REQUIREMENTS.
  - A VERTICAL TRENCH MAY NOT BE ABLE TO BE MAINTAINED. CONTRACTOR SHALL USE APPROPRIATE TRENCH SHORING AND OTHER EQUIPMENT TO MINIMIZE TRENCH WIDTH.
  - WORK IN COUNTY ROADS SHALL COMPLY WITH TUOLUMNE COUNTY STANDARDS, WHICH MAY REQUIRE SLURRY CEMENT BACKFILL.



STANDARD DETAILS NOT FOR CONSTRUCTION

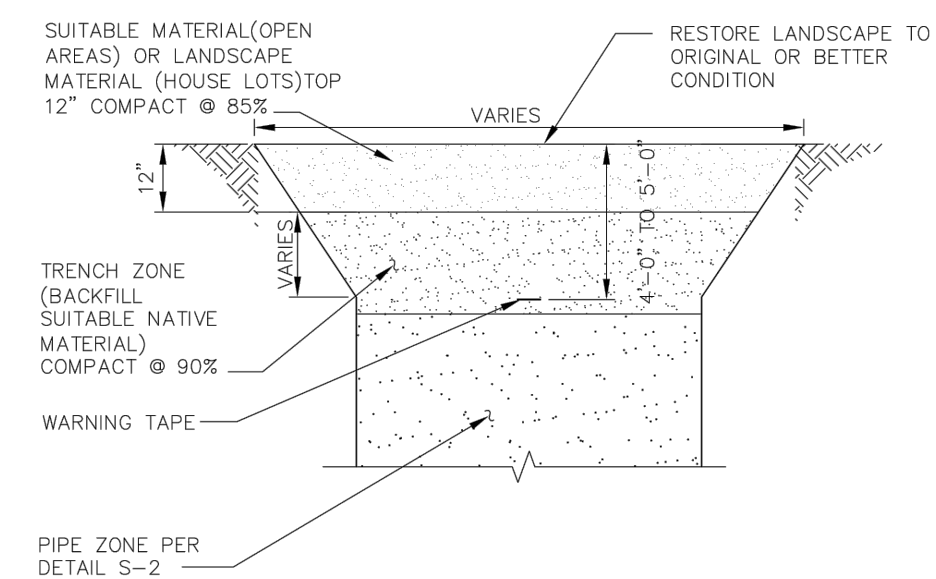
Twain Harte Community Services District

**TRENCH ZONE ASPHALT PAVED SURFACE**

22933 TWAIN HARTE DRIVE  
P.O. BOX 649  
TWAIN HARTE, CA 95383

SCALE: NONE APPROVED BY: SN  
DATE: NOVEMBER 2006 DRAWN BY: RN

**S-4**



- NOTE:
- SEE STANDARD SPECIFICATION FOR BACKFILL MATERIAL REQUIREMENTS.
  - A VERTICAL TRENCH MAY NOT BE ABLE TO BE MAINTAINED. CONTRACTOR SHALL USE APPROPRIATE TRENCH SHORING AND OTHER EQUIPMENT TO MINIMIZE TRENCH WIDTH.



STANDARD DETAILS NOT FOR CONSTRUCTION

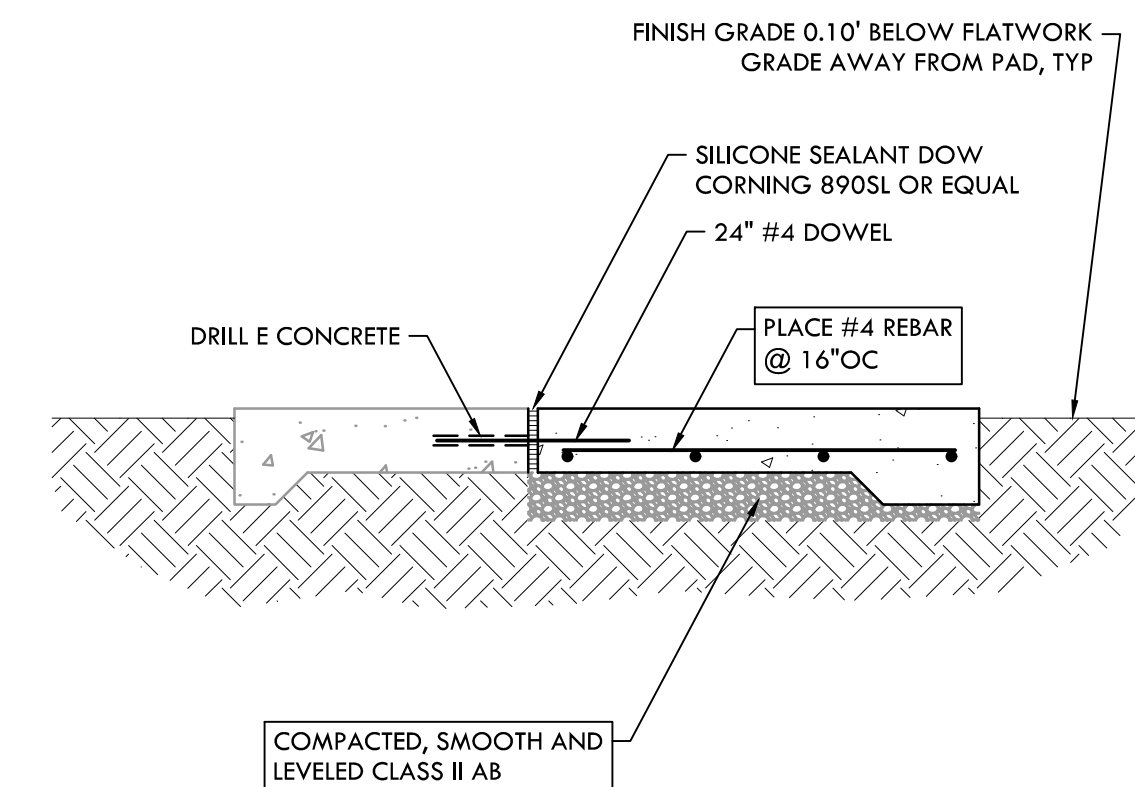
Twain Harte Community Services District

**TRENCH ZONE OPEN AREAS**

22933 TWAIN HARTE DRIVE  
P.O. BOX 649  
TWAIN HARTE, CA 95383

SCALE: NONE APPROVED BY: SN  
DATE: NOVEMBER 2006 DRAWN BY: RN

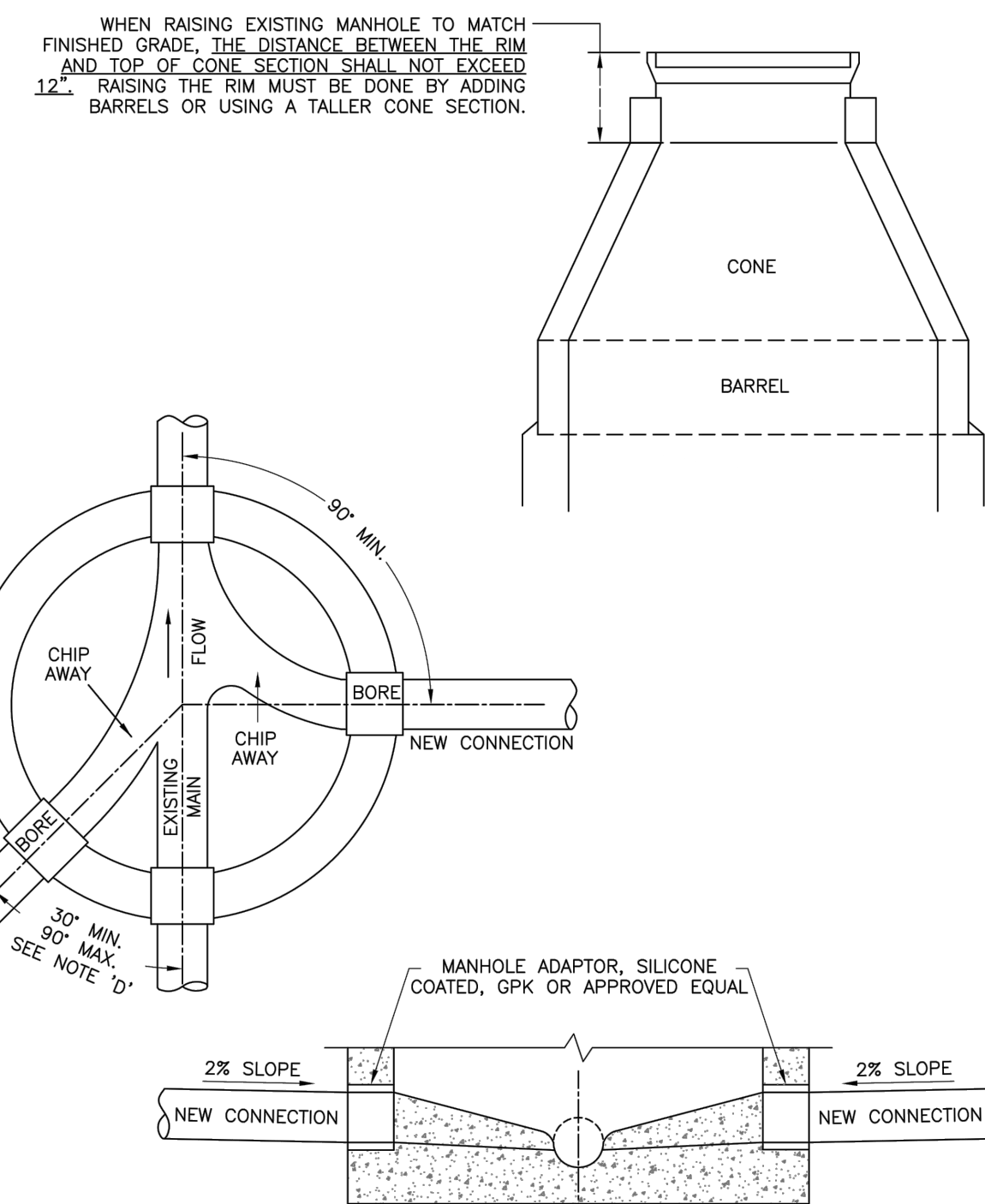
**S-5**



- NOTES:
- MATCH EXISTING CONCRETE HEIGHT AND THICKNESS.
  - RECOMPACT 6" SUBGRADE TO 90% R.D.
  - AT JOINT USE 1/2"x24" DOWELS AT 16"OC AND 6" FROM EDGE OF PAD. DOWELS TO BE SET LEVEL. ALIGN DOWELS WITH CONCRETE REINFORCEMENT.

**CONCRETE FLATWORK AT EXISTING FLATWORK**

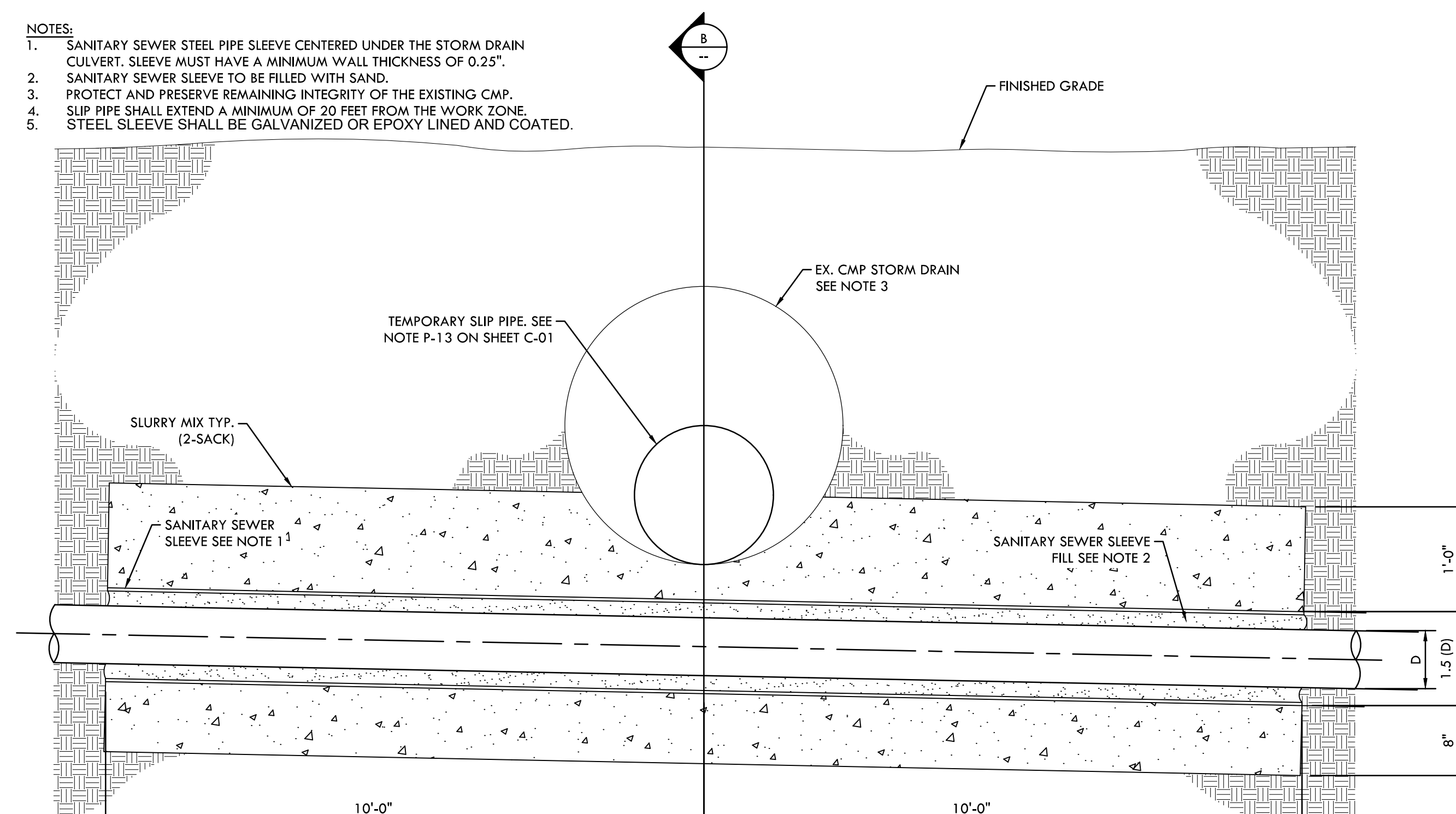
**S-1**



- NOTES:
- NEW CONNECTIONS TO BE BORED 2" LARGER THAN THE PIPE DIAMETER.
  - NEW CONNECTIONS WILL HAVE A MINIMUM SLOPE OF 2%.
  - FLOW CHANNEL FROM THE NEW CONNECTION TO THE EXISTING MAIN SHALL BE CHIPPED AWAY AND MORTARED TO A SMOOTH FINISH.
  - IF TIGHTER ENTRANCE ANGLES ARE REQUIRED DUE TO SITE CONSTRAINTS, USE LONG RADIUS BEND UNDER OF MANHOLE.
  - CONTRACTOR IS RESPONSIBLE FOR DEBRIS REMOVAL AND PREVENTION OF FLOW BLOCKAGE WHILE UNDER CONSTRUCTION.
  - CONTRACTOR SHALL COMPLY WITH ALL CONFINED-SPACE REQUIREMENTS PER CAL-OSHA.

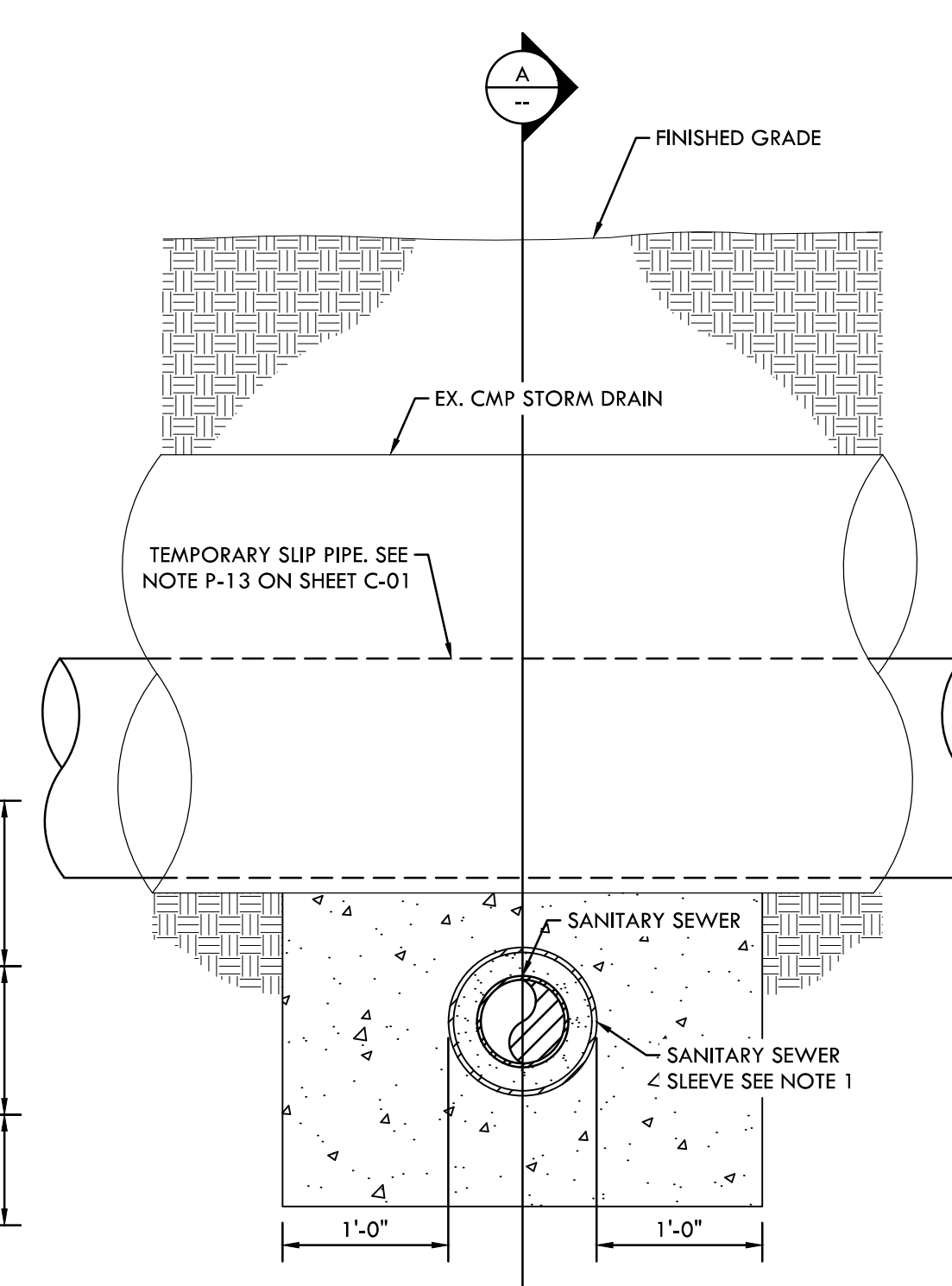
TUOLUMNE UTILITIES DISTRICT  
SEWER CONNECTION TO EXISTING MANHOLE

REV. 08-14-12  
STD. DWS. NO. 303



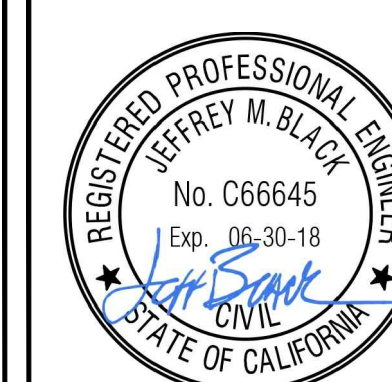
**CONCRETE ENCASEMENT**  
TYPICAL SECTION DETAILS

**S-2**



**SECTION B**  
SECTION VIEW SCALE: NTS

**S-1**



**BLACK WATER**  
CONSULTING ENGINEERS, INC.  
605 STANFORD AVE., SUITE N, MODESTO, CA 95350 PH. 209.322.1920

| REV | DATE | DESCRIPTION | APP |
|-----|------|-------------|-----|
|     |      |             |     |
|     |      |             |     |
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DESIGNED BY: KVK  
DRAWN BY: KVK  
CHECKED BY: JB  
JOB NO.: J14074  
DATE: JUNE 2018  
DRAWING: C-02  
SHEET NO.: 4 OF 4

11/1/07: TRISED ON-CALL TASKS; 07/17/08: PARK SEWER LINE REPLACEMENT; CAD TASK: ENGINEERING DESIGN (MANHOLE) W/PT. 04; DTD: 06/15/2018 11:00:15 AM BY: KEVIN WILLIAMS