COUNTY OF SAN JOAQUIN

DEPARTMENT OF PUBLIC WORKS
P.O. BOX 1810-1810 E. HAZELTON AVENUE
STOCKTON, CALIFORNIA 95201
(209) 468-3000
FAX # (209) 468-9324

Permit No: **PS-1802535**
Date Issued: 07/12/2018
Start Date: 07/15/2018
Exp. Date: 08/15/2018
Project No: PWP730052
Quad: SW

UE/CR/PM NO:31179011

ENCROACHMENT PERMIT

To: PACIFIC GAS & ELECTRIC - STOCKTON
PO BOX 930
STOCKTON, CA 95201

Encroachment Type:

TCP			

Location:
N/S GRANT LINE RD 350' W/O BANTA RD

In compliance with your request of **07/12/2018** , permission is hereby granted to do work in County right-of-way as shown on attached application and subject to all the terms, conditions and restrictions written below or printed as general or special provisions on any part of this form. See reverse side and attached sheet, if any.

Trench excavations for service connections will not be permitted within ten feet (10') of pavement centerline unless otherwise approved by the Director. Surface of trench patches shall match in kind and be smooth and even with that of abutting surface. Special attention shall be given to depth of utilities through roadside area in anticipation of future drainage facilities, road profile and/or frontage development. All underground utility facilities are to be established and accurately dimensioned on sketches from surveyed centerline of road right of way, or from right of way (border) lines.

Permittee shall call the Department of Public Works, Field Engineering Division (Permit Inspections) at (209)953-7421 at least forty-eight hours prior to beginning any work within the County right of way. All work performed under this permit shall conform to the rules and regulations pertaining to safety established by the California Division of Industrial Safety and Cal-OSHA.

The jobsite shall be kept in a safe condition at all times by the daily removal of any excess dirt or debris which might be a hazard to either pedestrian or automobile traffic. All necessary traffic convenience and warning devices and personnel shall be provided, placed and maintained by and at the sole expense of the Permittee in accordance with the latest edition of the CALTRANS Manual of Traffic Control.

After completion of the work permitted herein, all debris, lumber, barricades, or any excess material shall be removed and the jobsite left in a neat workmanlike manner. Immediately following completion of construction permitted herein, Permittee shall fill out and mail notice of completion (see attached post card) provided by Grantor.

Special Comments:

Traffic Control Per MUTCD

FORMS:

SS/WW, R-29		

Est. Permit Fee: $436.00

KRIS BALAJI, Director
Department of Public Works

By: _____
Permit Section

WHITE	-Permittee
GOLDENROD	-PWD Central File
YELLOW	-Field Inspection
PINK	-Permit Section

ENCROACHMENT PERMIT GENERAL PROVISIONS

13-1

1. This permit is issued under and subject to all laws and ordinances of agencies governing the encroachment herein permitted. See the following references:
   STREETS AND HIGHWAYS CODE
   1. Division 1, Chapter 3
   2. Division 2, Chapter 2, Section 942
   3. Division 2, Chapter 4, Section 1126
   4. Division 2, Chapter 5.5 and Chapter 6

   SAN JOAQUIN COUNTY ORDINANCES NUMBERED: 324, 441, 648, 662, 672, 695, 700, 860, 892, 3359, and 3675.

2. It is understood and agreed by the Permittee that the performance of any work under this permit shall constitute an acceptance of all the provisions contained herein and failure on the Permittee's part to comply with any provision will be cause for revocation of this permit. Except as otherwise provided for public agencies and franchise holders, this permit is revocable on five days notice.

3. All work shall be done subject to the supervision of and the satisfaction of the grantor. The Permittee shall at all times during the progress of the work keep the County Highway in as neat and clean condition as is possible and upon completion of the work authorized herein, shall leave the County Highway in a thoroughly neat, clean and usable condition.

4. The Permittee also agrees by the acceptance of this permit to properly maintain any encroachment structure placed by the Permittee on any part of the County Highway and to immediately repair any damage to any portion of the highway, which occurs as a result of the maintenance of the said encroachment structure, until such time as the Permittee may be relieved of the responsibility for such maintenance by the County of San Joaquin.

5. The Permittee also agrees by the acceptance of this permit to make, at its own expense, such repairs as may be deemed necessary by the County Department of Public Works.

6. It is further agreed by the Permittee that whenever construction, reconstruction or maintenance work upon the highway is necessary, the installation provided for herein shall, upon request of the County Department of Public Works, be immediately moved or removed by and at the sole expense of the Permittee.

7. No material used for fill or backfill in the construction of the encroachment shall be borrowed or taken from within the County right of way.

8. All work shall be planned and carried out with as little inconvenience as possible to the traveling public. No material shall be stacked within eight feet (8') of the edge of the pavement or traveled way unless otherwise provided herein. Adequate provision shall be made for the protection of the traveling public. Traffic control standards shall be utilized including barricades; approved signs and lights; and flagmen, as required by the particular work in progress.

9. The Permittee, by the acceptance of this permit, shall assume full responsibility for all liability for personal injury or damage to property which may arise out of the work herein permitted or which may arise out of the failure of the part of the Permittee to properly perform the work provided under this permit. In the event any claim of such liability is made against the County of San Joaquin or any department, official or employee thereof, the Permittee shall defend, indemnify, and hold each of them harmless for such claim.

10. All backfill material is to be moistened as necessary and thoroughly compacted with mechanical means. If required by the County Director of Public Works, such backfill shall consist of gravel or crushed rock. The Permittee shall maintain the surface over structures placed hereunder as may be necessary to insure the return of the roadway to a completely stable condition and until relieved of such responsibility by the County Department of Public Works. Wherever a gravel, crushed rock or asphalt surface is removed or damaged in the course of work related to the permitted encroachment, such material shall either be separately stored and replaced in the roadway as nearly as possible in its original state or shall be replaced in kind, and the roadway shall be left in at least as good a condition as it was before the commencement of operations of placing the encroachment structure.

11. Whenever it becomes necessary to secure permission from abutting property owners for the proposed work, such authority must be secured by the Permittee prior to starting work.

12. The current and future safety and convenience of the traveling public shall be given every consideration in the location and methods of construction utilized.

13. The Permittee is responsible for the preservation of survey monuments located within the area of work herein permitted. Prior to the start of construction, survey monuments that potentially may be disturbed shall be located and referenced by a Licensed Land Surveyor, and a Corner Record filed with the County Surveyor. Any Survey Monuments disturbed during the course of construction shall be reestablished by a Licensed Land Surveyor and another Corner Record filed with the County Surveyor. (Land Surveyors' Act Section 8771)

14. Prior to any excavation, the Permittee shall notify USA North (Underground Service Alert of Northern California and Nevada) at 811 or 800-227-2600 forty-eight (48) hours in advance.

APPLICATION FOR ENCROACHMENT PERMIT

PLEASE PRINT:

Date 6/12/2018

To: San Joaquin County
Department of Public Works

PG&E PM 31179011
(Applicant Name)

4040 West Lane
(Mailing Address)

Stockton, CA 95204
(City, State, Zip Code)

(209) 470 - 2300
(Area Code - Telephone Number)

s6pz@pge.com
(Email Address)

OFFICE USE ONLY

JOB #		REF #	
APN		CR #	
EXP. DATE			
VALID	TO		DRIVEWAYS:
STREET			*
AREA	QUAD		*
TYPE			*
FORMS			
NOTES			

Sketch (Detailed plans may be submitted)

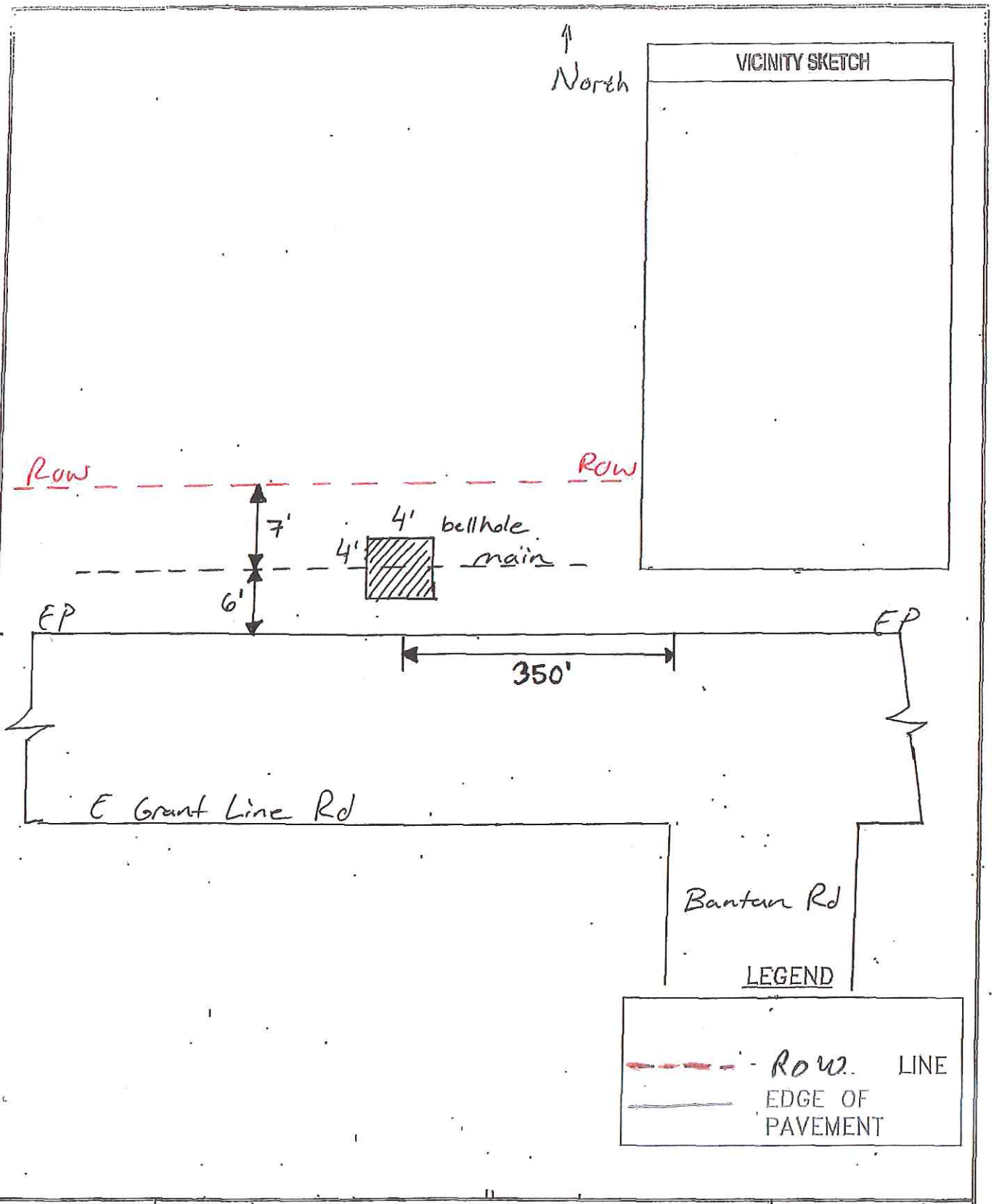
Crew to call SJ County Inspector at (209) 953-7421 **48** to **72** hours **before** work starts.
When calling, crew shall request "rain clearance" for any work during winter months
November through March

The undersigned hereby applies for permission to excavate, construct and/or otherwise encroach on County Highway Right-of-Way on the NORTH side of Grant Line Rd, approximately 350' WEST of Banta Rd
by performing the following work (description of work):
Traffic control, excavation of gas pipe, test station installation, pole-mounted rectifier installation, backfill and restoration

Work will commence on or after 7/15/2018 for approximately 5 days.

I, the undersigned, certify that I am the owner of the respective property, or am qualified to represent the owner and agree to do the work described above in accordance with the rules and regulations of San Joaquin County and subject to inspection and approval.

Sean Peitz Permit Facilitator 6/12/2018
Signature of Applicant - Title Date



EST:
ADE:
SUPV:
REP:
PLNR:
SCALE:
DATE:

PERMIT. SKETCH

PACIFIC GAS AND ELECTRIC COMPANY

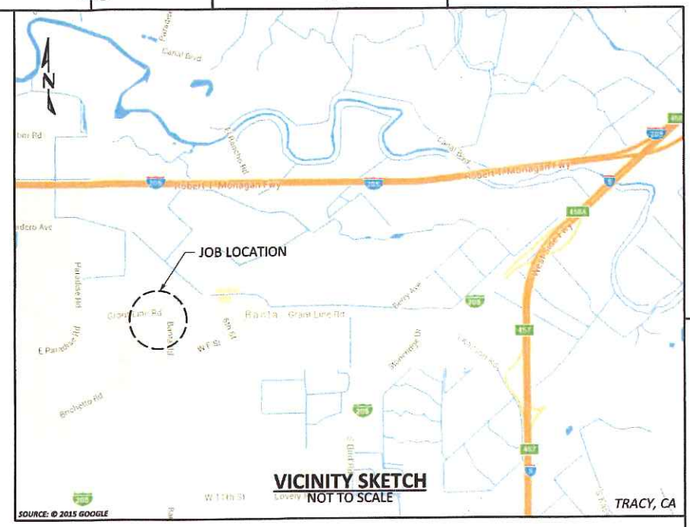
CO:
SD:
NOTIF:
OTHER:
SHT: 1 OF 1 SHEETS

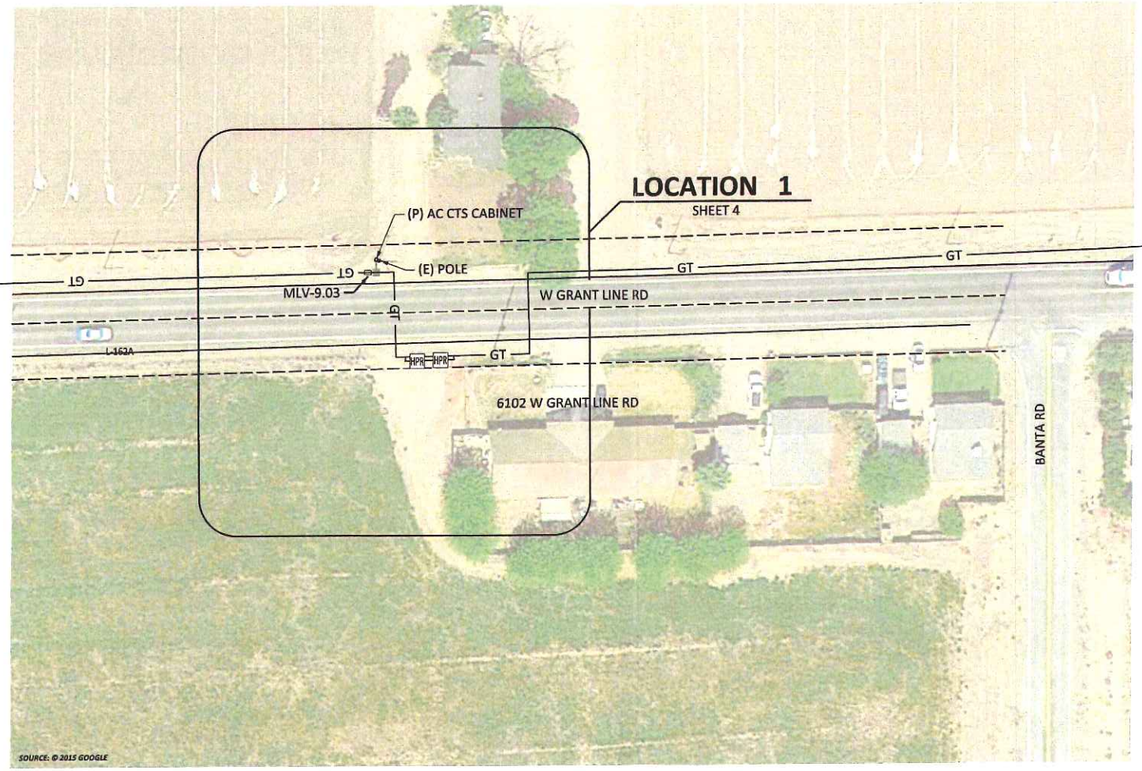
PM #
3117901 1

REV.

CP AREA # T-162
WALL MAP 3114
PLAT G5
SAN JOAQUIN COUNTY

LINE 162A, MP 9.03
INSTALL A/C CTS
TRACY, CALIFORNIA





SCHEDULE OF SHEETS

PLAN VIEW
SCALE: 1" = 40'

SAFETY PLEDGE
I ALWAYS PUT SAFETY FIRST.
I LOOK FOR AND ACT TO RESOLVE UNSAFE SITUATIONS.
I HELP AND ENCOURAGE OTHERS TO ACT SAFELY.

GAS TRANSMISSION ESTIMATING & DESIGN

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

ZERO IN ON SAFETY

NO.	DATE	DESCRIPTION	PM/SPEC	DWN	CHKD	SUPV	APVD BY
2		ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	
1	6/6/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	
0	5/16/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	

REVISIONS

APPROVED BY
PSRS 40364
SUPV K1F7
DSGN MDGR
DWN MDGR
CHKD RAMA
OK
DATE 2/28/2017
SCALES AS SHOWN

PIPELINE - TITLE & INDEX
L- 162A MP 9.03
INSTALL A/C CTS
TRACY, CALIFORNIA

GAS TRANSMISSION & DISTRIBUTION
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

BILL OF MATL SHEET 5
DWG LIST SHEET 1
TRACKING NUMBER C-715
SHEET NO. 1 OF 5 SHEETS
31179011 2

31179011-S001-TI.dgn
28-FEB-2017 08:35AM
Estimating.pan

SUMMARY OF PROPOSED WORK:

1. INSTALL (1) CABINET ON EXISTING POLE.
2. INSTALL (1) RMU UNIT .
3. INSTALL (1) COUPON MONITOR STATION .
4. RETURN SITE TO ORIGINAL CONDITION.

SEQUENCE OF OPERATIONS:

1. READ ALL DOCUMENTATION FOR PROJECT
2. EXCAVATE PIPELINE.
3. INSTALL WIRE LEADS AND CONDUIT.
4. INSTALL CABINET AND RMU UNIT
5. CONTACT CORROSION VMECHANIC PRIOR TO PUTTING IN SERVICE.
6. RETURN SITE TO ORIGINAL CONDITION.

CONSTRUCTION NOTES:

GENERAL REQUIREMENTS:

1. UNDERGROUND SERVICE ALERT :
   CALL 811 (1-800-227-2600) A MINIMUM OF 2 BUSINESS DAYS (NOT INCLUDING INITIAL DAY OF CONTACT) IN ADVANCE FOR THE MARKING OF UNDERGROUND UTILITIES, INCLUDING ALL NON-UTILITIES BEFORE YOU DIG, GRADE, OR EXCAVATE.

2. UTILITY NOTES:
   A. DIMENSIONS SHOWN ON THESE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION FROM SEVERAL SOURCES, AND SHALL BE VERIFIED IN THE FIELD BY CONSTRUCTION PERSONNEL PRIOR TO FABRICATION.
   B. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES, PROPERTY LINES, AND OTHER SUBSTRUCTURES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE, UNLESS OTHERWISE NOTED. CONSTRUCTION PERSONNEL ARE RESPONSIBLE FOR MAKING ALL DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AND OTHER SUBSTRUCTURES AS NECESSARY TO AVOID DAMAGE OR ENCROACHMENTS.
   C. PROSPECTING IS REQUIRED AHEAD OF WORK. ALL OFFSETS OR ROPING WILL NEED TO BE APPROVED BY THE PG&E PROJECT ENGINEER (PED), AND REDLINED DETAILS SHOWN ON PROFILE AND CONSTRUCTION DETAIL SHEETS OF EACH ADDITIONAL SUBSTRUCTURE.
   D. ALL EXCAVATIONS WITHIN EXISTING STATIONS SHALL BE HAND DUG OR EXCAVATED USING SOFT DIG METHODS (e.g. VACUUM EXCAVATIONS OR SIMILAR).

3. ELBOWS AND FIELD BENDS:
   A. ALL BENDS ARE SMOOTH FIELD BENDS, EXCEPT WHERE ELBOWS ARE SHOWN. FIELD BENDS SHALL BE MADE IN ACCORDANCE WITH A-36, SECTION 4D. FIELD BENDS MAY BE USED IN LIEU OF ELBOWS WHEN PREAPPROVED BY THE PG&E PROJECT ENGINEER (PED).
   B. IN ORDER TO AVOID EXCESSIVE STRAIN ON THE PIPELINE, THERE SHALL BE A MINIMUM SEPARATION OF 5 FEET BETWEEN A ROPED SECTION OF PIPELINE AND ANY ELBOWS OR FIELD BENDS.
   C. ALL ANGLES SHOWN IN THE PLAN AND PROFILE ARE APPROXIMATE AND SHALL BE CUT TO SUIT FIELD CONDITIONS.

4. SEPARATION FROM OTHER STRUCTURES:
   A. CROSSING UNDERGROUND FACILITIES: PG&E PIPELINE MUST BE INSTALLED WITH AT LEAST 24 INCHES OF CLEARANCE FROM ANY OTHER SUBSTRUCTURE/UTILITY NOT ASSOCIATED WITH THE PIPELINE UNLESS NOTED ON THE DRAWINGS.
   B. PARALLELING UNDERGROUND FACILITIES: THIS PIPELINE MUST BE INSTALLED WITH AT LEAST 5 FEET OF CLEARANCE FROM ANY OTHER UNDERGROUND STRUCTURE/UTILITY NOT ASSOCIATED WITH THE PIPELINE UNLESS NOTED ON THE DRAWINGS.

5. RESTORATION AND CLEAN UP:
   A. RESTORATION OF PUBLIC STREETS, SIDEWALKS, CURBS, ETC. ABOVE PIPE BEDDING SHALL BE IN ACCORDANCE WITH THE LATEST CITY, COUNTY, OR AGENCY STANDARDS.
   B. WHERE EVER THERE ARE ROW CROPS, THE TOPSOIL SHALL BE REMOVED TO A DEPTH OF 12" AND STORED ON SITE. UPON COMPLETION OF CONSTRUCTION, THE TOPSOIL SHALL BE RESTORED. TAKE CARE TO PREVENT MIXING OF TOPSOIL AND SUBSOIL.

6. EXISTING GIRTH WELDS, AT TIE-IN LOCATIONS, SHALL BE IDENTIFIED AND REMOVED IF PRACTICAL.

7. WELDING REQUIREMENTS:
   A. ALL ARC WELDING IS TO BE PERFORMED IN ACCORDANCE WITH THE GAS WELDING CONTROL MANUAL TD-4160M. ALL CANS OR SPOOLS SHALL BE A MINIMUM LENGTH OF ONE PIPE DIAMETER, WHENEVER POSSIBLE.
   B. INSTALL TEST STATIONS WITH THERMITE WELD CONNECTION IN ACCORDANCE WITH GAS T & D CORROSION CONTROL MANUAL O-10, O-10.1 AND O-10.2.

8. WELDING:
   WHEN INTERNAL MISALIGNMENT EXCEEDS 0.094", BACKWELD ANY GIRTH WELD WHERE THERE IS ACCESS TO THE INSIDE OF THE WELD. WHERE THERE IS NO ACCESS TO THE INSIDE OF THE WELD, MACHINE BORING OR GRINDING IS REQUIRED. BACKWELDING, GRINDING, OR BORING MUST BE DONE IN ACCORDANCE WITH THE APPROPRIATE UTILITY PROCEDURE IN THE GAS WELDING CONTROL MANUAL TD-4160M.

9. STRENGTH TEST REQUIREMENTS
   A. STRENGTH TESTING SHALL MEET PRESSURE AND DURATION REQUIREMENTS OF GAS STANDARD A-34 AND SHALL BE CONDUCTED IN ACCORDANCE WITH UTILITY PROCEDURE TD-4137S.
   B. ALL WELDS THAT HAVE NOT BEEN STRENGTH TESTED AND ALL FITTINGS SHALL BE SOAP TESTED AT 100 PSI AND AT OPERATING PRESSURE BEFORE COATING CAN OCCUR.

10. PAINTING AND COATING REQUIREMENTS:
    A. ALL EXPOSED PIPE AND FITTINGS ARE TO BE PAINTED IN ACCORDANCE WITH GAS STANDARD E-30. ALL COATING ON BURIED PIPE AND FITTINGS ARE TO BE APPLIED IN ACCORDANCE WITH GAS STANDARD E-35.
    B. FOR COATING SELECTIONS ON BURIED PIPE, SEE DIRECT BURIAL COATING SELECTIONS TABLE.

11. DOCUMENTATION OF INSPECTION OF EXISTING PIPELINE:
    WHENEVER EXISTING BURIED GAS FACILITIES ARE EXCAVATED DURING ENGINEERING OR DURING CONSTRUCTION, AN A-FORM (TD-4110P-03-F01) SHALL BE COMPLETED FOR THE GENERAL INSPECTION. THIS ALSO APPLIES TO GAS FACILITIES BEING DEACTIVATED. THE COMPLETED A-FORM SHALL BE SUBMITTED WITH THE AS-BUILT PACKAGE.

12. TIE-IN AND CLEARANCE PROCEDURE TO BE PREPARED AND PERFORMED IN ACCORDANCE WITH THE FOLLOWING WORK PROCEDURES:
    A. WP 4100-01, HOT AND COLD WORK METHODS FOR NATURAL GAS TRANSMISSION PIPELINE SHUTDOWN AND TIE-IN.
    B. WP 4100-10, GAS CLEARANCE PROCEDURES FOR FACILITIES OPERATING OVER 60 PSIG.

13. COATING REMOVAL:
    A. PERFORM THE FOLLOWING STEPS, IN ACCORDANCE WITH TD-4711P-01, BEFORE REMOVING ASPHALTIC PIPE WRAP ON PIPELINES INSTALLED PRIOR TO 1972 (BASED ON PG&E ANALYSIS, PIPE INSTALLED IN 1972 OR LATER DOES NOT HAVE PIPE WRAP THAT CONTAINS ASBESTOS):
       1. REFER TO THE "EXISTING PIPE SPECS (PRE-1972)" STAMP TO DETERMINE IF A SAMPLE HAS BEEN COLLECTED OR IF A SAMPLE IS REQUIRED:
          a. "YES" REPRESENTS HISTORICAL RESULTS ARE AVAILABLE SHOWING THAT PIPE WRAP CONTAINS ASBESTOS. NO SAMPLE IS REQUIRED.
          b. "NO" REPRESENTS HISTORICAL RESULTS ARE AVAILABLE AND THE PIPE WRAP DOES NOT CONTAIN ASBESTOS (CONTENT WAS NON DETECT). NO SAMPLE IS REQUIRED.
          c. "UNKNOWN" REPRESENTS NO HISTORICAL RESULTS ARE AVAILABLE. A SAMPLE IS REQUIRED IF THE PIPE INSTALLATION DATE IS PRIOR TO 1972.
       2. WHEN A PIPE WRAP SAMPLE IS REQUIRED TO BE ANALYZED FOR ASBESTOS:
          a. COLLECT SAMPLE PER TD-4711P-01 AND COMPLETE CHAIN OF CUSTODY FORM TD-4711P-01-F01.
          b. FILE PINK COPY OF THE CHAIN OF CUSTODY FORM AND FINAL LABORATORY RESULTS WITH THE AS-BUILTS.
       3. WHEN REMOVING PIPE WRAP THAT CONTAINS ASBESTOS, OR FOR EMERGENCY WORK, FOLLOW TD-4711P-01 "PIPE WRAP REMOVAL, HANDLING AND DISPOSAL".

CATHODIC PROTECTION NOTES:

1. THE PERSON FILLING OUT THE A-FORM (TD-4110P-03-F01) IS RESPONSIBLE FOR BOTH THE INTERNAL CORROSION AND EXTERNAL CORROSION INSPECTION OF THE PIPELINE.

2. UPON COMPLETION OF BORINGS, CONTACT THE CORROSION SUPERVISOR FOR THE LOCAL AREA/DIVISION TO PERFORM CURRENT DRAIN TESTS ON THE PIPELINE SEGMENT THAT WAS INSTALLED IN THE BORE. THE CURRENT DRAIN TEST MUST BE PERFORMED PRIOR TO WELDING PIPE ON EITHER SIDE OF THE BORE.

3. FOR THE INSTALLATION OF THE OMNIMETRIX RECTIFIER REMOTE MONITOR, CONTACT THE CORROSION SUPERVISOR FOR THE LOCAL AREA/DIVISION.

4. BONDING CABLES TO BE INSTALLED ACROSS PIPELINE CUT-OUTS AT ALL LOCATIONS THE PIPELINE IS SEVERED PRIOR TO REMOVAL. CHAIN CLAMPS, MAGNETIC CLAMPS, OR OTHER CONSTRUCTION MANAGEMENT APPROVED CLAMPS AND #6 (MIN) STRANDED CABLE SHALL BE UTILIZED. CLAMPS TO REMAIN IN PLACE UNTIL PIPELINE IS TIED IN.

RETIREMENT PROCEDURE FOR EXISTING PIPE:

1. GT&D UTILITY WORK PROCEDURE TD 9500P-16, "DEACTIVATION AND/OR RETIREMENT OF UNDERGROUND GAS FACILITIES," SHALL BE FOLLOWED.

2. THE EXISTING PIPE SECTIONS SHALL HAVE FREE LIQUIDS REMOVED AND BE 100% PURGED PER GAS DESIGN STANDARD A-38, "PROCEDURES FOR PURGING GAS FACILITIES."

3. THE PIPE SHALL BE SECTIONALIZED AT INTERVALS AS SPECIFIED IN THE RETIREMENT PLAN. THE LOCATIONS CALLED OUT ARE APPROXIMATE AND ARE SUBJECT TO FIELD VERIFICATION TO IDENTIFY THE MOST OPTIMUM LOCATION IN THAT VICINITY. ACCURATE SURVEY DATA MAY NOT BE AVAILABLE FOR THESE LOCATIONS SO USE CAUTION DURING EXCAVATION AND WHEN IDENTIFYING THE PIPELINE TO BE RETIRED. OTHER ACTIVE PIPELINES MAY BE IN THE AREA.

4. AT EACH SUCH LOCATION NOTED ABOVE, A PIECE OF PIPE AT LEAST 24" LONG SHALL BE REMOVED. INSTALL A 1" HIGH PRESSURE SAVE-A-VALVE (H-17491, M022287) TO CHECK FOR PRODUCT AND PRESSURE PRIOR TO CUTTING INTO THE PIPELINE. THE OPEN ENDS OF THE RETIRED PIPE SHALL BE SEALED BY THE MOST APPROPRIATE METHOD OUTLINED IN GT&D UTILITY WORK PROCEDURE TD-9500P-16. BACKFILL MUST BE THOROUGHLY COMPACTED IN PLACE OF THE REMOVED SECTION OF PIPE.

DESIGN CHANGE PROCEDURE

MAINTENANCE AND CONSTRUCTION PERSONNEL MUST OBTAIN APPROVAL FROM THE RESPONSIBLE ENGINEER (RE) BEFORE MAKING ANY DESIGN CHANGE TO GAS FACILITIES PER WP-4900.

JOB SPECIFIC NOTES

ALL FIELD CHANGES REQUIRE APPROVAL BY PROJECT ENGINEER (PED). SEE CONTACT INFORMATION.

CONTACT INFORMATION:

PROJECT MANAGER	----	BRENT MAEDA	925-413-9348
CORROSION ENGINEER	----	JASON KLECHKA	925-719-2774
PIPELINE ENGINEER (PLE)	----	WAYNE GILBERT	925-551-1849
ESTIMATOR / DESIGNER	----	MATT GOODWIN	209-471-3698
CONSTRUCTION MANAGER	----	CAROLINA FURNAGUERA	415-722-0842
LAND PLANNER	----	KATIE WEBBER	925-786-2433
LOCAL CORROSION MECHANIC	----	BILL BELASKI	209-406-7844

REFERENCE DRAWINGS:

OPERATING MAPS	----	384507 LATHROP- TRACY AREA LINES 2, 162, 304, & 401
OPERATING DIAGRAMS	----	N/A
PLAT SHEETS	----	3114 G5

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

ZERO IN ON SAFETY

NO.	DATE	DESCRIPTION	PM/SPEC	DWN	CHKD	SUPV	APVD BY
2		ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	
1	6/6/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	
0	5/16/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	

REVISIONS

APPROVED BY: PSRS 40364; SUPV K1F7; DSGN MDGR; DWN MDGR; CHKD RAMA; OK; DATE 2/28/2017; SCALES AS SHOWN

PIPELINE - CONSTRUCTION NOTES
L- 162A MP 9.03
INSTALL A/C CTS
TRACY, CALIFORNIA

GAS TRANSMISSION & DISTRIBUTION
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

GAS TRANSMISSION ESTIMATING & DESIGN

BILL OF MATL SHEET 5
DWG LIST SHEET 1
TRACKING NUMBER C-715
SHEET NO. 2 OF 5 SHEETS
31179011 | 2

Estimating.pen

DIRECT BURIAL COATING SELECTIONS LISTED IN ORDER OF PREFERENCE	
MAIN LINE COATING	FBE
MINOR REPAIRS	3M SCOTCHKOTE 323, PROTAL 7200, FBE
TIE-IN WELDS	3M SCOTCHKOTE 323, PROTAL 7200, FBE
GIRTH WELDS	3M SCOTCHKOTE 323, PROTAL 7200, FBE
BUTT WELDED FITTINGS	3M SCOTCHKOTE 323, PROTAL 7200, FBE
VALVE ASSEMBLIES	3M SCOTCHKOTE 323, PROTAL 7200, DEVGRIP 238
SHORT SEGMENTS OF PIPE	3M SCOTCHKOTE 323, PROTAL 7200, FBE
AIR-TO-SOIL TRANSITIONS	PROTAL 7200 / PSX 700
PRESSURE CONTROL FITTINGS	BODY: PROTAL 7200 FLANGE: WAX TAPE
TIE-INS/COATING TRANSITIONS	PROTAL 7200, WAX TAPE, POLYKEN TAPE
BORED COATING SELECTIONS LISTED IN ORDER OF PREFERENCE	
MAIN LINE COATING	ARC APPLIED OVER FBE
MINOR REPAIRS	PROTAL 7200, POWERCRETE J, 3M SCOTCHKOTE 323
TIE-IN WELDS	ARC OVER FBE, PROTAL 7200, POWERCRETE J

NOTES:
1) CONTACT THE PIPELINE ENGINEER (PLE) TO REQUEST A VARIANCE FROM THE ABOVE COATING SELECTIONS.
2) ALL COATINGS ARE TO BE APPLIED IN ACCORDANCE WITH GS&S E-30 AND E-35.

INTERNAL CORROSION (IC) DESIGN & CONSTRUCTION REVIEW		
IC THREAT (PER RMP-16)	YES	NO
IC REVIEW COMPLETED BY (CORROSION ENGINEER OR DESIGNATE)	LAN ID	DATE
CORROSION ENGINEERING HAS REVIEWED THIS DESIGN AND INCORPORATED ANY NECESSARY IC DESIGN AND CONSTRUCTION CONSIDERATIONS. DOCUMENTATION OF THE REVIEW AND ACTIONS TAKEN ARE IN THE JOB PACKAGE AND INCORPORATED IN THIS DESIGN.		
EDRS ROUTING NUMBER:	-	

INSTALLATION TESTED OR INSPECTED AND NOTED ON DRAWING.
ALL CORROSION LEVELS SATISFACTORY PER PG&E GAS UTILITY STANDARD TD-4181S.

QUALIFIED EMPLOYEE DATE

CORROSION MECHANIC'S SIGNATURE IS REQUIRED WHEN A CPA BOUNDARY IS WITHIN THE SCOPE OF THE PROJECT.

LEGEND:

- GT — GAS TRANSMISSION LINE
- GD — GAS DISTRIBUTION LINE
- GS — GAS SERVICE LINE
- GT (RETIRED) — GAS TRANSMISSION LINE (RETIRED)
- GD (RETIRED) — GAS DISTRIBUTION LINE (RETIRED)
- GS (RETIRED) — GAS SERVICE LINE (RETIRED)
- ET — ELECTRIC TRANSMISSION LINE
- ED — ELECTRIC DISTRIBUTION LINE
- ES — ELECTRIC SERVICE LINE
- T — TELEPHONE LINE
- FO — FIBER OPTIC LINE
- TV — CABLE TV LINE
- SD — STORM DRAIN LINE
- SS — SEWER LINE
- W — WATER LINE
- EDGE OF ROAD
- FACE OF CURB
- UNPAVED ROAD
- RAILROAD
- TEMPORARY EASEMENT
- PROPERTY BOUNDARY
- FENCE
- WALL
- BARRIER
- TEMPORARY BARRIER (TYPE K)
- GUARD RAIL
- DASHED PAVEMENT MARKINGS
- TOE OF SLOPE
- TOP OF SLOPE

- GAS LINE MARKER (ALL)
- GAS LINE MARKER (PADDLE DUAL)
- GAS LINE MARKER (PADDLE SINGLE)
- GAS LINE MARKER (POST)
- GAS LINE INDICATOR (DISC)
- INSULATION JOINT
- PRESSURE CONTROL FITTING
- GAS BOX
- GAS HIGH PRESSURE REGULATOR
- GAS METER
- GAS DISTRIBUTION REGULATOR
- PG&E GAS MANHOLE
- GAS VAULT
- GAS VENT
- PG&E ELECTRIC MANHOLE
- ELECTRIC VAULT
- UTILITY POLE (ELECTRIC)
- UTILITY POLE (OTHER)
- JOINT POLE
- EXISTING ELECTRIC TOWER
- WATER METER
- WATER VALVE

- STORM DRAIN
- SEWER MANHOLE
- FOREIGN MANHOLE
- CABLE TV BOX
- TELECOMM BOX
- TELECOMM MANHOLE
- TELECOMM VAULT
- STREET LIGHT BOX
- TREE
- ANODE
- DEEPWELL ANODE
- COMPUTER AUTOMATED TEST STATION
- COUPON TEST STATION
- ELECTROLYSIS TEST STATION
- POLE-MOUNTED RECTIFIER
- POTHOLE
- CITY/COUNTY MONUMENT
- MONUMENT, SEE DESCRIPTION
- SURVEY CONTROL POINT
- CENTERLINE

- ACCESS ROAD
- LAYDOWN / STAGING / CONSTRUCTION IMPACT AREA
- EXCAVATION / BELL HOLE
- SAFETY ZONE LIMITS
- ENVIRONMENTALLY SENSITIVE AREAS

DETAIL LEGEND:

- PROPOSED GAS TRANSMISSION LINE
- EXISTING GAS TRANSMISSION LINE
- GAS TRANSMISSION LINE (TO BE DEACTIVATED)
- GAS TRANSMISSION LINE (TO BE RETIRED)
- GAS TRANSMISSION LINE (TO BE REMOVED)
- PIPE END CUT (SIDE)
- PIPE END CUT
- GAS VALVE
- FLOW — FLOW ARROW
- TIE-IN WELD
- 5 — MATERIAL OF RECORD ASSET

Acronym	Definition
(E)	Existing
(P)	Proposed
API	American Petroleum Institute
APN	Assessor's Parcel Number
ARC	Abrasion Resistant Coating
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing Materials
ATM	Atmosphere
B	Bare Steel
BBCL	Bell Bell Chill Ring
BC	Back of Curb
BD	Blowdown
BLDG	Building
BOM	Bill of Materials
BTU	British Thermal Units
BW	Back of Walk
BYP	Bypass
CATS	Computer Automated Test Station
CCV	Corrosion Control Volume
CI	Cast Iron
CL	Centerline
CNG	Compressed Natural Gas
CONTR	Contractor
CP	Cathodic Protection
CROP	Conditional Reduction of Pressure
CTR	Center
CTS	Coupon Test Station
CU	Copper
DE	Dead End
DCUST	Distribution Customer
DEG	Degree
DET	Detail
DF	Design Factor
DFM	Distribution Feeder Main
DIST	Distribution

Acronym	Definition
DP	Design Pressure
DPV	Damage Prevention Volume
DR	Distribution Regulator
DREG	District Regulator
DSAW	Double Submerged Arc-Welded
DWA	Deep Well Anode
ELE	Electric
ELEV	Elevation
EM	Electronic Marker
EMS	Engineering Material Specification
ER	Edge of Road
ERW	Electric Resistance Welded
ETS	Electrolysis Test Station
F	Filter
FBE	Fusion Bonded Epoxy
FC	Face of Curb
FDP	Future Design Pressure
FL	Fence Line
FLG	Flange
G	Natural Gas
GM	Natural Gas Main
GR	Grade
GS	Natural Gas Service
GS&S	Gas Standards and Specifications
GW	Natural Gas Well
H	Horizontal
HDD	Horizontal Directional Drill
HFW	High Frequency Weld
HPR	High Pressure Regulator
ILI	In-Line Inspection
JT	Joint Trench
L	Line Number
L/R	Left/Right
LAT	Latitude
LNG	Liquid Natural Gas

Acronym	Definition
LN	Linear Weldable
LNW	Linear Non-Weldable
LONG	Longitude
M	Monitor
MAOP	Maximum Allowable Operating Pressure
MAX	Maximum
MH	Manhole
MIN	Minimum
MLV	Main Line Valve
MOP	Maximum Operating Pressure
MP	Mile Point
MW	Working Monitor
NDE	Non-Destructive Examination
NOP	Normal Operating Pressure
NPC	Non-Protected/Native Coupon
NTS	Not to Scale
OC	On Center
OD	Outside Pipe Diameter
OH	Overhead
P	Pipeline
P/L	Property Line
PC	Protected/Polarized Coupon
PCF	Pressure Control Fitting
PL	Plastic
PLC	Programmable Logic Controllers
PSI	Pounds per Square Inch
RAD	Radius
RE	Reference
REG	Regulator
ROW	Right of Way
S	Screwed
SAWH	Submerged Arc-Welded Helical
SAWL	Submerged Arc-Welded Longitudinal
SCADA	Supervisory Control and Data Acquisition

Acronym	Definition
SD	Storm Drain
SHT	Sheet
SL	Sewer Lateral
SMLS	Seamless
SMYS	Specified Minimum Yield Strength
SPEC	Specification
SS	Sanitary Sewer
SSAW	Single Submerged Arc-Welded
STA	Station
STD	Standard
STL	Steel
STPR	Strength Test Pressure Report
T	Tied (Connected to System)
TD	Technical Document
TT	Top Tap
TCE	Temporary Construction Easement
TCP	Traffic Control Plan
TDW	T. D. Williamson
TSP	Transmission System Planning
TYP	Typical
UG	Underground
UON	Unless Otherwise Noted
USA	Underground Service Alert
UT	Ultra-Sonic Test
V	Valve
VIF	Verify in Field
VOL	Volume
W	Water
WT	Wall Thickness
W/	With
W/O	Without
WOW	Without Locating Wire
WP	Work Procedure
WS	Water Service

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

ZERO IN ON SAFETY

NO.	DATE	DESCRIPTION	PM/SPEC	DWN	CHKD	SUPV	APVD BY
2		ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	
1	6/6/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	
0	5/16/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	

REVISIONS

APPROVED BY	
PSRS	40364
SUPV	K1F7
DSGN	MDGR
DWN	MDGR
CHKD	RAMA
OK	
DATE	2/28/2017
SCALES	AS SHOWN

GAS TRANSMISSION ESTIMATING & DESIGN

PIPELINE - LEGEND & STAMPS
L- 162A MP 9.03
INSTALL A/C CTS
TRACY, CALIFORNIA

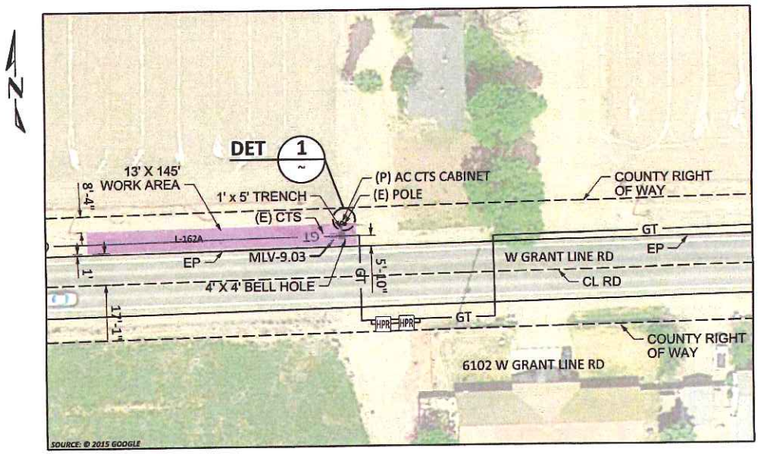
GAS TRANSMISSION & DISTRIBUTION
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

BILL OF MATL	SHEET 5
DWG LIST	SHEET 1
TRACKING NUMBER	C-715
SHEET NO.	3 OF 5 SHEETS
31179011	2

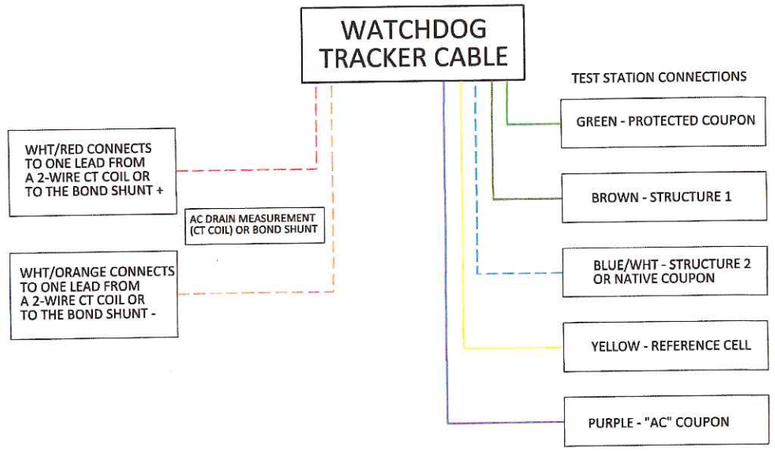
31179011-S003-LS.dgn
28-FEB-2017 06:36AM
Estimating.pen

LOCATION

6001 W GRANTLINE RD
WALL MAP - 3114; PLAT - G5; BLOCK - 1; MP - 9.03
(SCALE: 1" = 40')

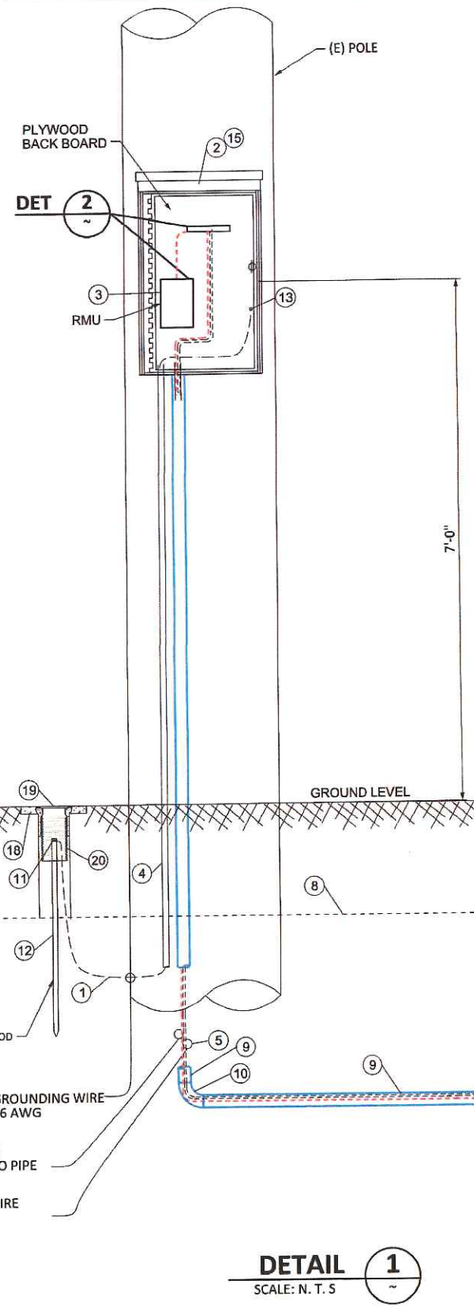


ELECSYS WATCHDOG TRACKER MONITOR WIRING DIAGRAM

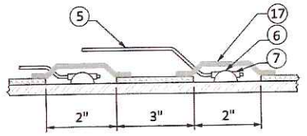


THIS WIRING DIAGRAM ILLUSTRATES ALL OF THE AVAILABLE CONNECTIONS TO THE TRACKER MONITOR UNIT. NOT ALL CONNECTIONS WILL BE USED IN EVERY INSTALLATION. THE PIPELINE WATCHDOG WEB INTERFACE HAS DEFAULT CONFIGURATIONS FOR: "BASIC TEST STATION", "SINGLE COUPON TEST STATION", DUAL COUPON TEST STATION, "TRIPLE COUPON TEST STATION", "CRITICAL BOND", "AC MITIGATION TEST STATION", AND CUSTOM SETTINGS. IF ASSISTANCE IS REQUIRED TO DETERMINE THE CONFIGURATION FOR YOUR APPLICATION, CONTACT TECHNICAL SUPPORT AT (913) 825-6366

DETAIL 2
NTS



DETAIL 1
SCALE: N. T. S



DETAIL 3 ATTACHING THE WIRES TO THE GAS MAIN (CCV O-10) FIGURE 1
SCALE: NTS

GAS TRANSMISSION ESTIMATING & DESIGN

NO.	DATE	DESCRIPTION	PM/SPEC	DWN	CHKD	SUPV	APVD BY
2		ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	
1	6/6/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	
0	5/16/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	

REVISIONS

APPROVED BY	
PSRS	40364
SUPV	K1F7
DSGN	MDGR
DWN	MDGR
CHKD	RAMA
OK	
DATE	2/28/2017
SCALES	AS SHOWN

PIPELINE - DETAILS
L- 162A MP 9.03
INSTALL A/C CTS
TRACY, CALIFORNIA

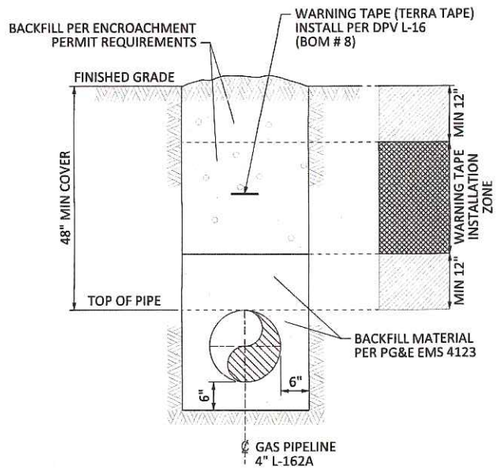
GAS TRANSMISSION & DISTRIBUTION
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

BILL OF MATL	SHEET S
DWG LIST	SHEET 1
TRACKING NUMBER	C-715
SHEET NO. 4 OF 5 SHEETS	
31179011	2

31179011-S004-PH.dgn
28-FEB-2017 06:36AM

BILL OF MATERIALS (CAPITAL ORDER # 31179011)

BOM #	MATERIAL DESCRIPTION	MATERIAL CODE #	UNIT	QTY	STANDARD	NOTES
1	WIRE, ELECTRICAL, BARE, COPPER, 6 AWG, SOFT DRAWN, HAND COIL	M290072	EA	100	CCV O-11.1	
2	ORNIMENTAL CABIN ET, 31" H X 20" W X 17" D, 3R -UL LISTED W/ POWDER DARK GREEN FINISH AND PLYWOOD BACK PANEL		EA	1	-	FAR WEST CORROSION
3	WATCHDOG TRACKER, RMU-P2AC-GSM	M042174	EA	1	-	ELECSYS CORP.
4	CONDUIT, 1", PVC, TYPE 2, SCHEDULE 80	M360305	EA	200	CCV O-11.1	
5	WIRE, ELECTRICAL, INSULATED, COPPER, 10 AWG, 600 V, 47 MIL PVC, SOLID 1 CONDUCTOR, BLACK	M294991	EA	500	CCV O-16	
6	CARTRIDGE, BRAZING, CADWELD # CA-15, THERMOWELD # 15P	M159260	EA	1	CCV O-10	
7	SLEEVE, COPPER SPLICING, #14 TO #10, CADWELD # CAB-133-1H, THERMOWELD # A-200	M303755	EA	1	CCV O-10	
8	CP WARNING TAPE		ROLL	1	-	FARWEST CORROSION
9	2" PVC CONDUIT, SCHEDULE 40, 20' LENGTH	M360380	EA	4	CCV O-13.2	
10	2 PVC CONDUIT 90 BEND, SCHEDULE 40 (GLUED TOGETHER TO MAKE A 180 BEND)	M360166	EA	4	CCV O-13.2	
11	CLAMP, GROUND ROD, 5/8", ANDERSON ELECTRIC # GC103-01, DOSSERT # GN-62, ERITECH # HDC58H, ERITECH # SP58, GALVAN # JAB58HH, FOR #6-1/0 AWG COPPER CABLE	M187012	EA	1	CCV O-11.1	
12	GROUND ROD, 5/8" X 8'	M187013	EA	1	-	
13	STATION, TEST COUPON, CC TECHNOLOGIES # CS3100, SMALL PLASTIC CONDUIT AND TERMINAL TEST HEAD CONSTRUCTION, 3" OD X 10' LONG	M560691	EA	1	CCV O-10.2	
14	ELECTRODE, REFERENCE, STEALTH 2, COPPER-COPPER SULFATE, BORIN MANUFACTURING # SRE-007-CUY, WITH 50' OF WIRE	M241423	EA	1	CCV O-71	
15	PADLOCK, CORBIN # 0906SCA, WILSON BOHANNAN # 621, 1-1/4" SHACKLE, STAMPED PG&E, KEYED 3A90909, WITHOUT KEY OR CHAIN	M016583	EA	1	GS&S L-51	
16	# 10 AWG, WIRE FOR NATIVE COUPON, ORANGE COLOR INSULATION		FT	50	-	
17	TAPE, HANDY CAP, 4" X 4", ROYSTON	M562324	EA	2	GS&S E-27	
18	BODY, CONCRETE, VALVE FRAME, CHRISTY # G05, W/O COVER, 10-3/8" DIA X 12" HIGH	M043271	EA	1	GS&S K-40	
19	COVER, VALVE, CAST IRON, YELLOW, CHRISTY # G05CY, FULL TRAFFIC, 11-1/8", TRAFFIC YELLOW WITH EXPOXY CLEAR COAT, MARKED "PG&E GAS"	M446213	EA	1	GS&S K-40	
20	VALVE BOX, EXTENSION, PLASTIC, 8" IPS, BRANDON SUPPLY # 851, BLACK ABS, CORRUGATED, 10 FT LENGTH	M016063	EA	1	GS&S K-40	
21	1 CM SQR AC COUPON WITH 50FT # 12 AWG WIRE, GREEN COLOR INSULATION		EA	1	-	FARWEST CORROSION



TYPICAL TRENCH NON-PAVED AREA
SCALE: NO SCALE NATIVE BACKFILL

NO.	DATE	DESCRIPTION	PM/SPEC	DWN	CHKD	SUPV	APVD BY
2		ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	SPEH
1	6/6/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	
0	5/16/16	ISSUED FOR CONSTRUCTION	31179011	MDGR	RAMA	K1F7	

REVISIONS

APPROVED BY: PSRS 40364; SUPV K1F7; DSGN MDGR; DWN MDGR; CHKD RAMA; OK; DATE 2/28/2017; SCALES AS SHOWN

PIPELINE - BILL OF MATERIALS
L- 162A MP 9.03
INSTALL A/C CTS
TRACY, CALIFORNIA

GAS TRANSMISSION & DISTRIBUTION
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

GAS TRANSMISSION ESTIMATING & DESIGN

BILL OF MATL SHEET 5
DWG LIST SHEET 1
TRACKING NUMBER
SHEET NO. 5 OF 5 SHEETS
31179011 | 2

3117911-8005-PP.dgn 28-FEB-2017 06:36AM Estimating.pen

TABLE 1

TAPER LENGTH CRITERIA AND CHANNELIZING DEVICE SPACING

SPEED (S)	MINIMUM TAPER LENGTH * FOR WIDTH OF OFFSET 12 FEET (W)				MAXIMUM CHANNELIZING DEVICE SPACING		
					X	Y	Z **
	TANGENT 2L	MERGING L	SHIFTING L/2	SHOULDER L/3	TAPER	TANGENT	CONFLICT
mph	ft	ft	ft	ft	ft	ft	ft
20	160	80	40	27	20	40	10
25	250	125	63	42	25	50	12
30	360	180	90	60	30	60	15
35	490	245	123	82	35	70	17
40	640	320	160	107	40	80	20
45	1080	540	270	180	45	90	22
50	1200	600	300	200	50	100	25
55	1320	660	330	220	50	100	25
60	1440	720	360	240	50	100	25
65	1560	780	390	260	50	100	25
70	1680	840	420	280	50	100	25
75	1800	900	450	300	50	100	25

* - For other offsets, use the following merging taper length formula for L:
For speed of 40 mph or less, $L = WS^2/60$
For speed of 45 mph or more, $L = WS$

Where: L = Taper length in feet
W = Width of offset in feet
S = Posted speed limit, off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

** - Use for taper and tangent sections where there are no pavement markings or where there is a conflict between existing pavement markings and channelizers (CA).

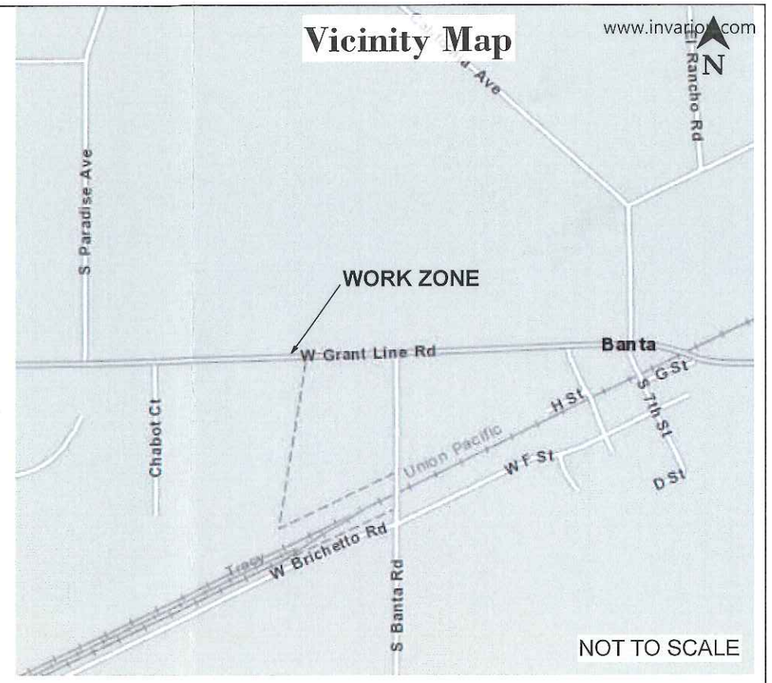
TABLE 3

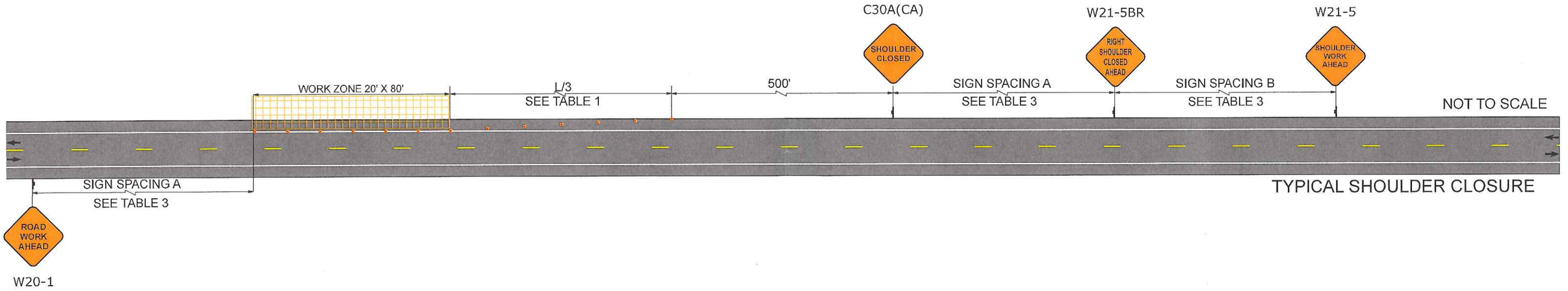
ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS*		
	A	B	C
	ft	ft	ft
URBAN - 25 mph OR LESS	100	100	100
URBAN - MORE THAN 25 mph TO 40 mph	250	250	250
URBAN - MORE THAN 40 mph	350	350	350
RURAL	500	500	500
EXPRESSWAY / FREEWAY	1000	1500	2640

* - The distances are approximate, are intended for guidance purposes only, and should be applied with engineering judgment. These distances should be adjusted by the Engineer for field conditions, if necessary, by increasing or decreasing the recommmended distances.

Vicinity Map

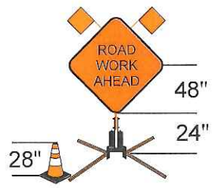




TRAFFIC CONTROL GENERAL NOTES:

1. All traffic control devices shall conform to the latest edition of California Manual on Uniform Traffic Control Devices (MUTCD) and the Standard Specifications for Public Work.
2. High-Level Warning Devices (Flag Trees) Shall consist of minimum of two flags. The flag shall be minimum 16 inches square and be orange or fluorescent red-orange in color.
3. All workers shall be equipped with a reflective vest and hard hat. All Flaggers shall also be equipped with a C28 "Stop/Slow" paddle and be trained in the proper fundamentals of flagging traffic.
4. NO PARKING signs shall be placed 72 hours prior to set up. Signs shall be posted every 50-100 linear feet of occupied space with at least one sign at each end of occupied space.
5. Any conflicting signs will be covered for the duration of the job.
6. Access to residences and businesses shall be maintained at all times. Access to be determined in field by existing conditions.
7. Maintain a safe pedestrian route at all times. Where closures of pedestrian facility is needed, provide detour route with appropriate signage.
8. Minimum travel lane width must be 11' unless otherwise noted or approved.
9. All trenches must be back filled or plated during non-working hours. W8-24 " STEEL PLATE AHEAD" sign must be posted 250 feet advance of any plate that is in the road way.
10. The contractor shall take all necessary precautions to allow emergency vehicles to pass through the construction zones without any delays.
11. Place W20-1 "ROAD WORK AHEAD" sign on any side street or high-volume driveway that is within Traffic control zone.
12. Engineer or his representative has the authority to initiate field changes to assure public safety.

CONE SPACING
25 FEET MAX.



CONSTRUCTION ZONE TRAFFIC CONTROL
STATEWIDE TRAFFIC SAFETY & SIGNS
LICENSE # 975518
Josh DeHart
STATE OF CALIFORNIA

STATEWIDE TRAFFIC SAFETY & SIGNS
130 Grobric Ct
Fairfield, CA 94534
Ph: 707-864-9952

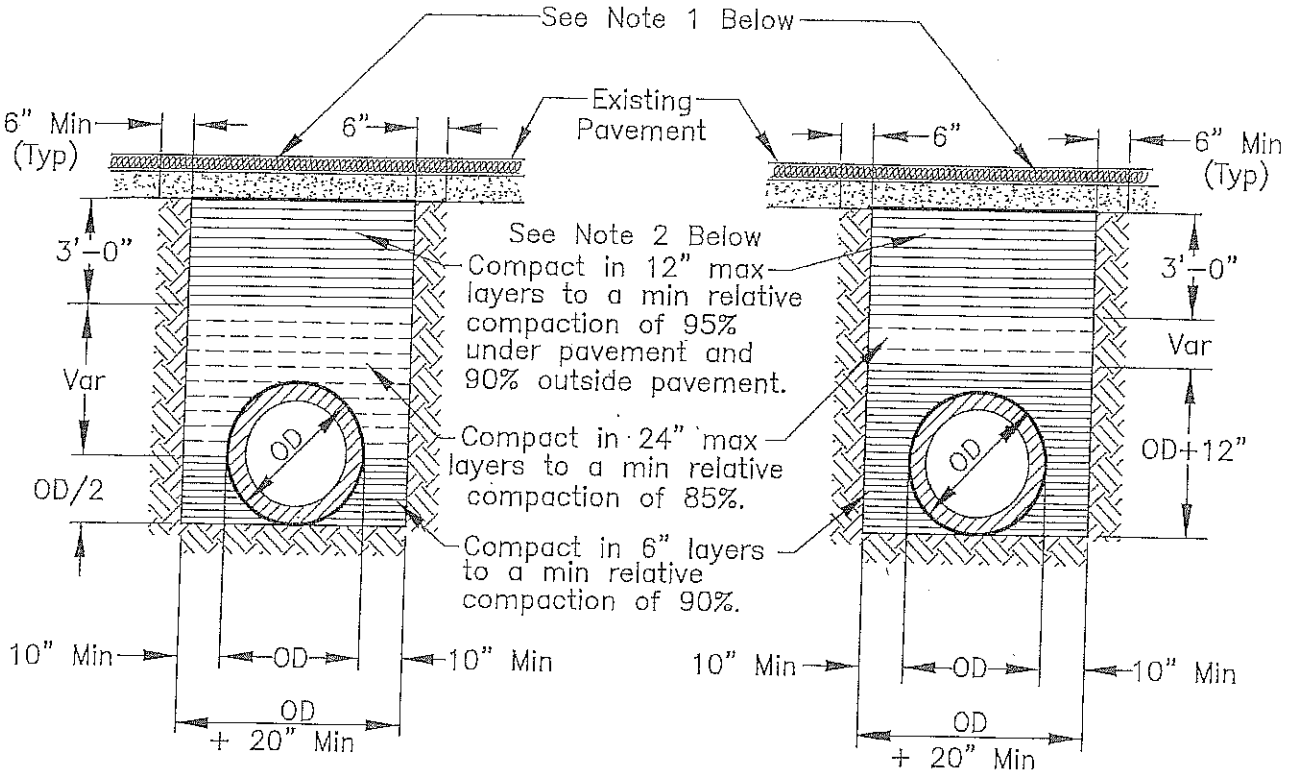
DESIGNED BY: Josh DeHart

JOB LOCATION:
Grant Line Rd, Tracy , CA 95304

CONTRACTOR:
Underground Construction Company, inc.
5145 Industrial Way
Benicia, CA 94510
(707) 764-8800
CONTACT: Denise Salva

PLAN # 18-098
DATE: June 5, 2018
SHEET # 1 OF 1
C-715
PM- 31179011

28" Reflective Cone Sign Work Area



RIGID CONDUIT

FLEXIBLE CONDUIT

NOTES:

1. New pavement shall be 1" thicker than existing pavement, minimum of 0.25 Ft. New base shall be 1" thicker than existing base, min of 0.50 Ft.
2. Select native material or imported granular material as approved by the Director of Public Works. Backfill with materials equal to or better than the existing pavement and base in quality.
3. Relative compaction of materials shall be tested in accordance with the State of California, Dept. of Transportation Testing Manuals, test method No. California 216 or 231.
4. All existing pavement shall be neatly cut to line prior to trench excavation.
5. Jetting or ponding will be permitted within the street right-of-way with a 3 year bond, when approved by the Director of Public Works.
6. When shown by soil composition and compactability, ninety percent (90%) compaction may be used, when approved by the Director of Public Works.
7. Special bedding and backfill requirements may be shown on the plans or specified in the special provisions.

Public Works San Joaquin County
Working for YOU

TYPICAL TRENCH BACKFILL

COUNTY OF SAN JOAQUIN
DEPARTMENT OF PUBLIC WORKS

Date: DEC 2014

Approved by: Thomas M. Flinn

No.	Revision Description	Date

Std. Dwg. No. R-29