



# 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-1700137  
Date Issued: 01/19/2017  
Start Date: 02/01/2017  
Exp. Date: 06/01/2017  
Project No: PWP730052  
Quad: NW

UE/CR/PM NO:31233171

## ENCROACHMENT PERMIT

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

**Encroachment Type:**

Trench			
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**Location:**

n/s eight mile rd 100' e/o oak grove park

In compliance with your request of **01/19/2017**, 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:** \$494.85

KRIS BALAJI, Director  
Department of Public Works

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

By:

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 11/15/16

To: San Joaquin County  
Department of Public Works

PGE  
(Applicant Name)

4040 West Ln  
(Mailing Address)

Stockton CA 95204  
(City, State, Zip Code)

408-316-1767  
(Area Code - Telephone Number)

OFFICE USE ONLY		
JOB #	<u>730052</u>	REF #
APN		CR #
EXP. DATE	<u>6-1-17</u>	
VALID	<u>2-1-17</u>	TO <u>6-1-17</u>
STREET	<u>Eight Mile Rd</u>	
AREA	<u>Stockton</u>	QUAD <u>NW</u>
TYPE	<u>Trench</u>	
FORMS	<u>SSWW R29</u>	
NOTES		

Sketch (Detailed plans may be submitted)

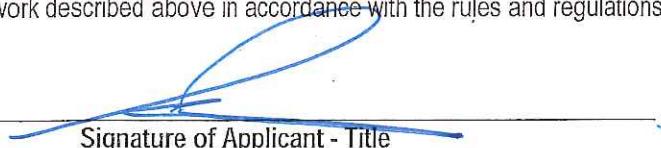
SEE ATTACHED SKETCH

3123 3171

The undersigned hereby applies for permission to excavate, construct and/or otherwise encroach on County Highway Right-of-Way on the North side of Bear 8 mile K1 approximately 100 feet/mile East of Oak Grove Rd, by performing the following work (description of work):  
To upgrade existing PGE Reg/Mon vaults with SCADA monitoring equipment as well as the installation of HTU cabinets

Work will commence on or about 02/01/17 for approximately 120 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.



Signature of Applicant - Title

11/15/16

Date

CONTACT LIST					
C.O.: ENGINEERING AND PLANNING DEPT. C.S.: E&I BLDG. BOLINER CANYON RD. N.O.T.C.: 11133577 S.P.E.: SCOT HARRIS S.P.H.: 916.678.3450					10
EST. E&I BLDG. BOLINER CANYON RD.	AGE: SCOT HARRIS	SUPR. E&I BLDG. BOLINER	EPIC: MC PRICE	PLN: F-325-244-0282	SCALE: 1:100
ENGINNEERING AND PLANNING DEPT.	AGE: SCOT HARRIS	SUPR. E&I BLDG. BOLINER	PACIFIC GAS AND ELECTRIC COMPANY	DATE: 6/26/16	REV.: 10
6121 BOLINER CANYON RD. SAN MATEO, CA 94563	PHONE: 916.678.3450	EMAIL: 11133577	FAX: 916.678.3503	FILE #:	31233171

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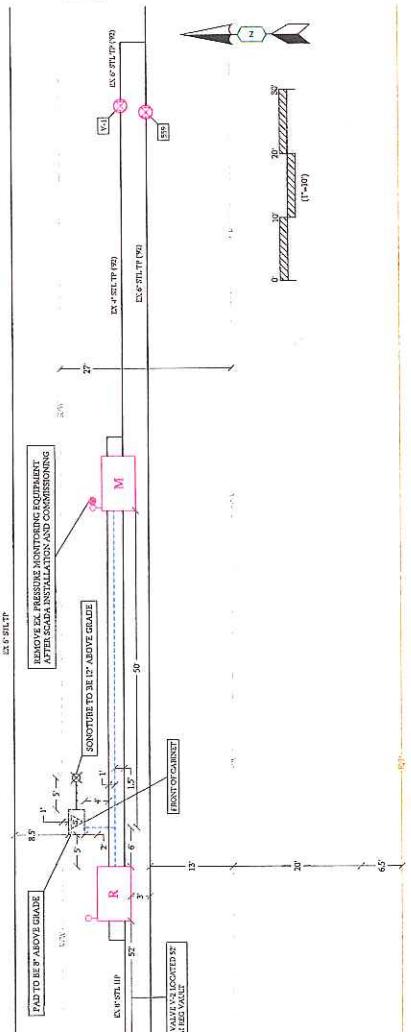
SHEET 1 - PLAN VIEW  
SHEET 2 - BILL OF MATERIALS  
SHEET 3 - CONDUIT LAYOUT  
SHEET 4 - P.D. LAYOUT  
SHEET 5 - PAN & RIGID LAYOUT  
SHEET 6 - WIRING LAYOUT  
SHEET 7 - CABINET LAYOUT  
SHEET 8 - POWER SOURCE & ANTENNA DETAIL

LEGEND			
GEOPHYSICAL SURVEYORS	RJL	PROPERTY LINE	
SHEATHED CONDUCTORS	ADT	IRON OR VINYL LANTENTS	
SHEET LAYERS	PIPE	PIPE OR PAYMENT	
WIRING LAYOUT	WLL	WALL LOCATING	
POLE ELECTRICAL CIRCUITS	PFCL		
SCADA RIGID LINE INSTLL	SRIL		
PIPE VALVE LOCATIONS	VVL		
SCADA UT CABINETS (POWER)	SUC		
INSULATED VALVE LOCATIONS	IVL		
ACUTRON AUT. TUNING	AUT		
VENTVANE LOCATIONS	VNL		
SCADA RTU CABINETS	RTU		
INCORPORATED DESIGN EDITION	IDE		

### VICINITY SKETCH



### EIGHT MILE RD.



### OPERATING DATA

WM:2945CR
CPA:T-108-C
HIS: STOCKTON EP.
TIA:X02
SCADA RTU NAME: ST SAD 1366
MAP INLET: 720 PSIG
MAP: STREET: 412 PSIG
MAP: OUTLET: 60 PSIG

### PROPOSED RTU CABINET (STREET VIEW)

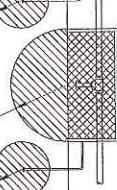
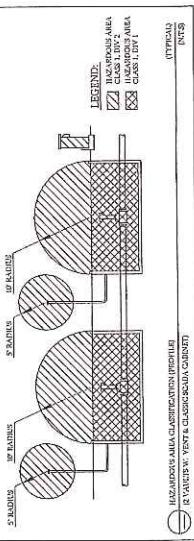


### GAS NOTES

\* PAGE WILL TRENCH AND BACKFILL.  
PAGE WILL INSTALL ALL FACILITIES.  
-CC GATE TO OBTAIN AS-BUILT DIA WINGS OF REGULATOR TO IDENTIFY LOCATION OF EXISTING CONTROL-SENSE LINES. CONTACT  
TO DETERMINE REQUIREMENTS IN TD-441P-05 WHEN WORKING NEAR TRANSMISSION AND FOREIGN FACILITIES.  
-CC GATE TO NOTIFY CONTRACTOR TO REBURY EXISTING TUBING AND INSULATING FITTINGS.  
-CONTACT GAS PLANNER DAVE RYAN @ (209) 942-1626 TO REVIEW ANY TEMPORARY OPERATING CHANGE THAT EXISTS BEYOND ONE DAY.  
-INSTALL 1/8" WIDE WARNING TAPE WITH THE WORDS "CAUTION: GAS LINE BURIED BELOW" IN RED, NYLON TAPING AROUND  
TRENCHES PER LR-16. DO NOT INSTALL IN PLATE ELECTRICAL TRENCH.  
-COAT ALL EXPOSED STEEL PIPE AND FITTINGS EXCEPT RIGID CONDUIT WITH THE WORDS "GAS LINE IN CONDUIT" (CODE RED)  
EACH SCADA CONDUIT FOR ITS LENGTH, IN THE COUPLE AREA WHERE GAS LINE IS LOCATED.  
INSTALL ACCORDING TO TD-441P-05.  
-INSTALL RTU PAD IN GRADE, SEE SHEET FOR DETAIL.  
-INSTALL SCADA CONDUIT STUB-UPS AT RTU CABINET PER RECOMMENDED LAYOUT. SEE SHEET 3 FOR DETAIL.  
-FOLLOW DOCUMENT DT246. FIGURE 8 & 10 FOR INSTALLATION DETAILS OF CONNECTING ELECTRIC SOURCE TO SCADA  
COAT TO HAZARDOUS AREA. CLASSIFICATION DETAIL ON SHEET 1.  
-CONTACT TELLY LYNN (1597-351-8045) FOR QUESTIONS ON RADIO EQUIPMENT.  
-OBURN APPROXIMATELY 100' FROM SCADA TO RTU. ENSURE SCADA EQUIPMENT IS ALREADY CONNECTED. SCADA EQUIPMENT PER TD-441P-01  
-RE MOVE EXISTING PRESSURE MONITORING EQUIPMENT AFTER COMMISSIONING NEW SCADA EQUIPMENT.

### WORK RECAP

\* PAGE TO INSTALL PROPOSED RTU CABINET AND PAD  
-PAGE TO INSTALL SCADA SENSILINES, SCADA CONDUITS, AND PG&E ELECTRIC CONDUIT  
-PAGE TO INSTALL 2" RIGID STEEL CONDUIT, PVC COATED FOR SCADA POWER (CD) FROM ORIGINAL SOURCE TO RTU CABINET  
-PAGE TO COAT FOR SCADA COMM. CD FROM ORIGINAL SOURCE TO RTU CABINET  
-PAGE TO INSTALL 1/8" RIGID STEEL CONDUIT, PVC COATED, FOR FUTURE SCADA SIGNAL (CS) FROM REGULATOR VALVE TO RTU CABINET  
-PAGE TO INSTALL 1/8" RIGID CONDUIT PVC COATED FOR SCADA SIGNAL (CS) FROM REGULATOR VALVE TO RTU CABINET  
-PAGE TO INSTALL 1/8" RIGID CONDUIT PVC COATED FOR SCADA SIGNAL (CS) FROM REGULATOR VALVE TO RTU CABINET  
-PAGE TO INSTALL 1/8" RIGID CONDUIT PVC COATED FOR SCADA SIGNAL (CS) FROM REGULATOR VALVE TO RTU CABINET  
-PAGE TO UTILIZE 1/8" EXISTING STEEL TAPES FOR RENGIN LINES (S1-S2, S3, S4, S5) FROM MONITOR VALVE TO RTU CABINET  
-PAGE TO INSTALL PIPE SUPPORTS UPSTREAM OF EXISTING FILTERS ON RUN 1 & 2  
-PAGE TO INFAL PIPE SUPPORTS UPSTREAM OF EXISTING FILTERS ON RUN 1 & 2



HAZARDOUS AREA CLASSIFICATION

(2) VARIOUS: VENT & CLASS D(S) CAVITY





NOTE: ALL FITTINGS ON PROPOSED PIPING ARE SEMI-INTEGRATED UNLESS INDICATED OTHERWISE. EXISTING SERVICES AND TAKERS ARE SHOWN AS IS.	NAME: SCADA SYSTEM	
ADDRESS: 6121 BODINGER CANYON RD.	PHONE: 949-424-3303	FAX: 949-424-3303
ENGINEERING AND PLANNING DEPT.	TELE: 949-424-3303	TELE: 949-424-3303
SUPPLY: GARDEN GROVE	TELE: 714-990-0000	TELE: 714-990-0000
PLANT: NEW PRICE	TELE: 714-990-0000	TELE: 714-990-0000
OTHERS:	TELE: 714-990-0000	TELE: 714-990-0000
NOTICE: 11118577	TELE: 714-990-0000	TELE: 714-990-0000
SD:	TELE: 714-990-0000	TELE: 714-990-0000
COD:	TELE: 714-990-0000	TELE: 714-990-0000
REVIEWER: SAN MATEO, CA DATE: 8/29/18 PAGE: 1 OF 8 SHEETS:	REVIEWER: PACIFIC GAS AND ELECTRIC COMPANY DATE: 8/29/18 PAGE: 1 OF 8 SHEETS:	REVIEWER: SAN MATEO, CA DATE: 8/29/18 PAGE: 1 OF 8 SHEETS:
31233171	31233171	31233171

**PIPING & INSTRUMENTATION DIAGRAM**  
(NPS 3)

NOTE: ALL FITTINGS ON PROPOSED PIPING ARE SEMI-INTEGRATED UNLESS INDICATED OTHERWISE.  
EXISTING SERVICES AND TAKERS ARE SHOWN AS IS.

**SYMBOL LEGEND**

- Valve, normally open (CO)
- Valve, normally closed (NC)
- Normally valve (CPDN)
- Normally valve (CPDN)
- Small valve (SMALL)
- Small valve (SMALL)
- Valve passing filter (FV)
- Isolator filter
- Regulator
- Actuator w/ isolator
- Line size change w/ fitting
- Orifice reducing flow element
- SCADA input/output
- Differential station
- Turbine/turbor
- Level monitor
- Digital input
- Wireless Conn.
- Pneumatic
- Electric
- Inserting fitting
- Instrumentation

10

5

4

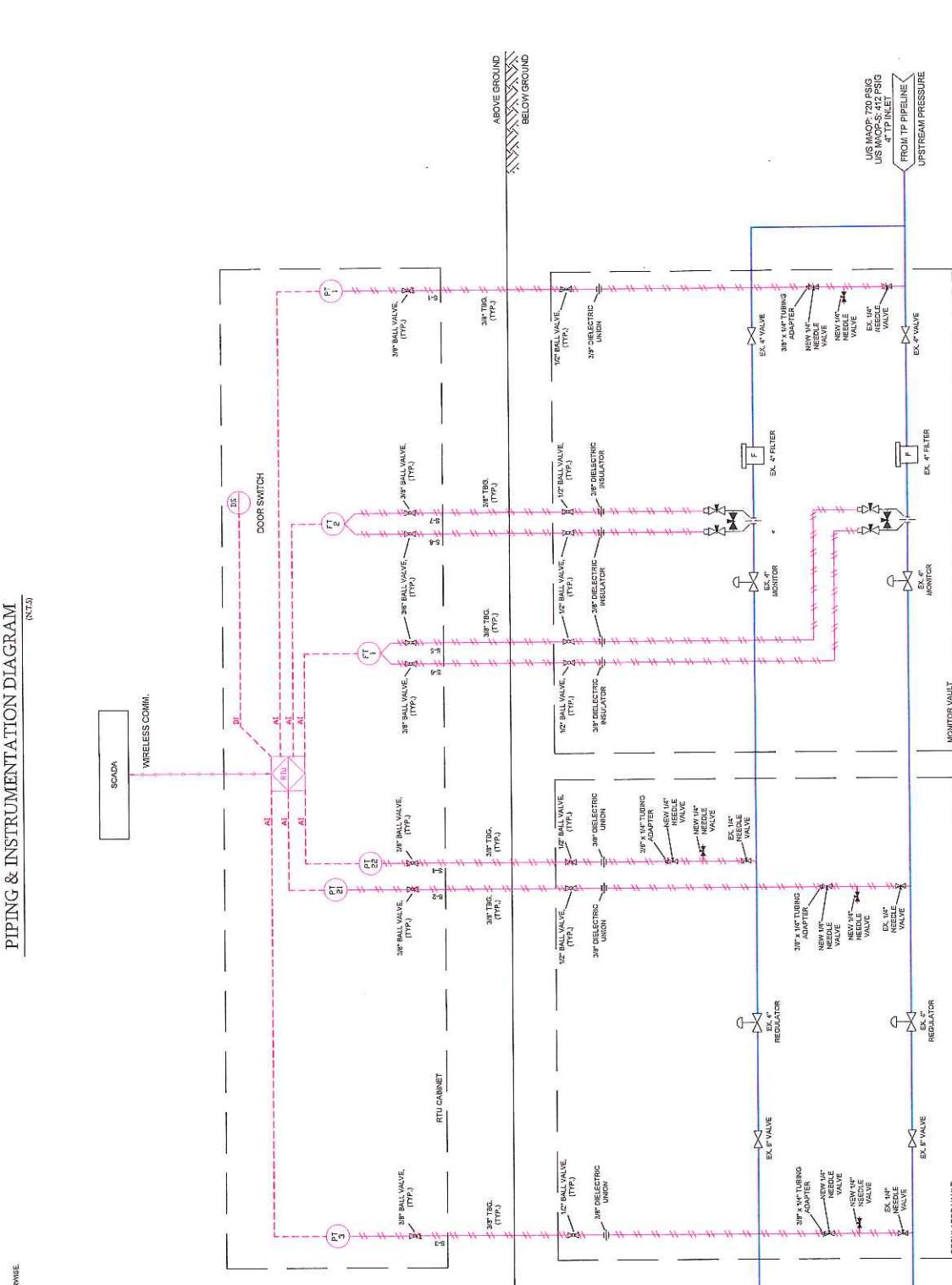
3

2

1

Above Ground

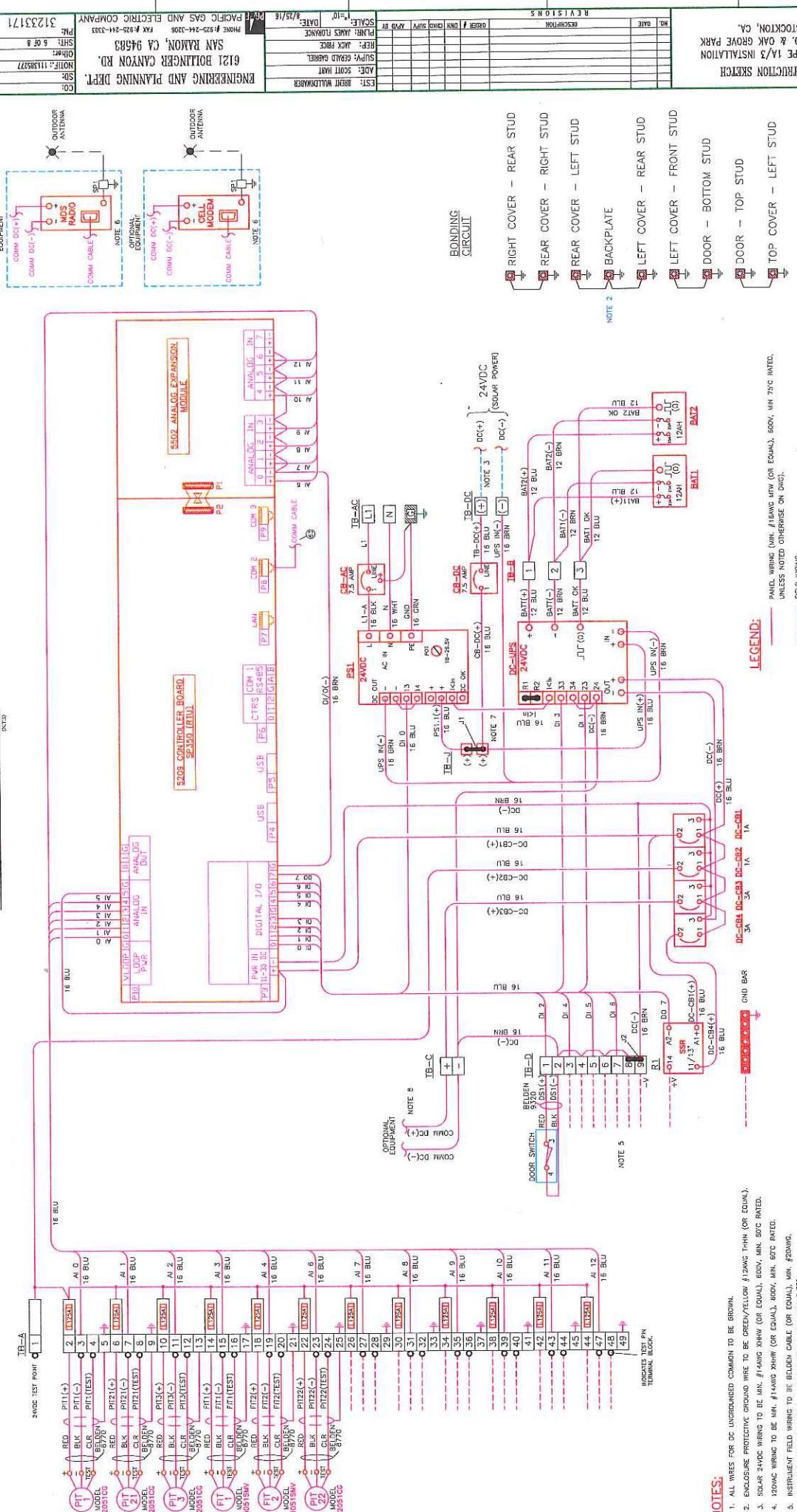
Below Ground





CONSTRUCTION SKETCH		SCADA TYPE I/A/3 INSTALLATION		STOCKTON, CA.	
8 MILE RD. & 1/3 PROVE PARK					
NOTE: 11186577		6121 BODINGER CANYON RD.	SAN MARON, CA 94583	PHONE: 425-242-3000	FAX: 425-242-3333
SP:		EST: 1987 BODINGER CANYON DEPT.	AGE: 2007 HART	SPARE: MUX RACK	SHOTS: 6 OF 8 SHEETS
CQ:		OUTDOOR EQUIPMENT	OUTDOOR ANTENNA	OUTDOOR ANTENNA	REV: E
DATE: 6/25/16	DESIGNER: DATE: 6/25/16	SCALE: 1:10	SCALE: 1:10	DATE: 6/25/16	DATE: 6/25/16
NO. 100	REVISIONS	0000	0000	0000	0000
1	2	3	4	5	6
7	8	9	10		

### WIRING LAYOUT

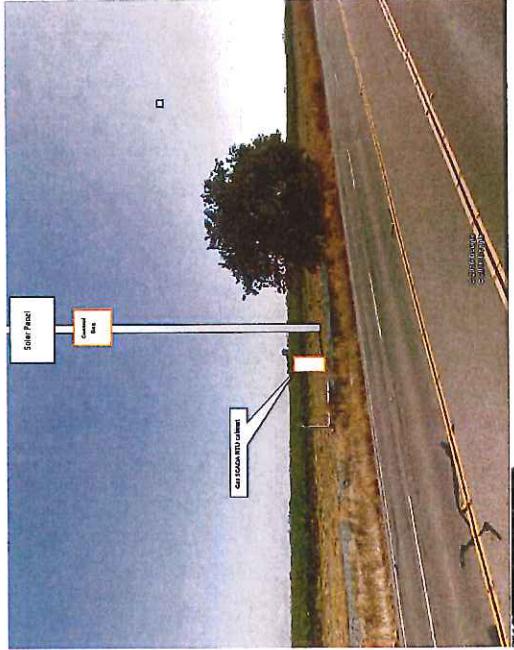
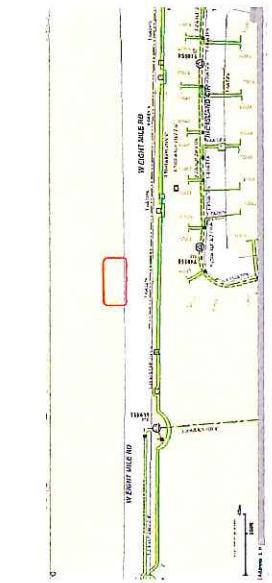




CONSTRUCTION SHEET	SCADA TYPE 1A/2 INSTALLATION	8 MILE RD & OAK GROVE PARK
STOCKTON, CA.		
DATE: 8/25/16	DESIGNER:	PHOTO #:
SCALE: 1=60	BLOCK #:	NAME OF SURVEY AND SHEET:
PLATE #: 31233171	SHR:	REV.:
PROJECT #:		
6121 BOTTINGER CANYON RD.		
SAN RAMON, CA 94583		
RECEIVED: 8/25/2016		
SHEETS: 8 of 8		

1      2      3      4      5      6      7      8      9      10

### POWER SOURCE & ANTENNA DETAIL



### Electric Connection for Gas SCADA Site Survey

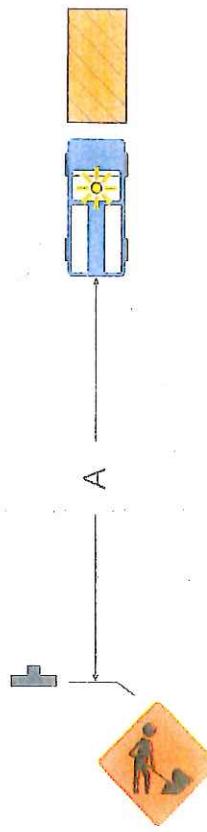
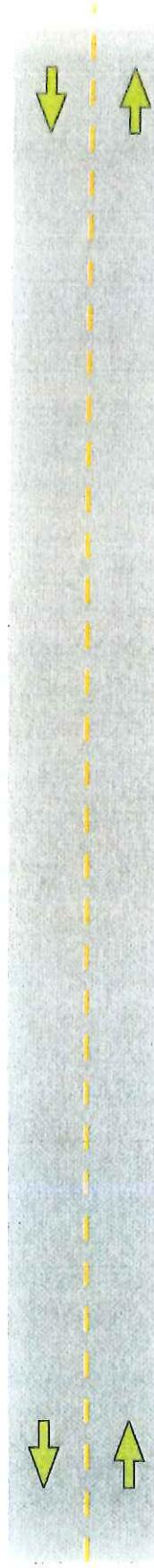
<b>Project Information:</b>	PM#:	31233171	Reg Station / Facility:	STHP 66	
SCADA Type:			Address or Physical Location Description:	City: San Andreas	
<b>Site Information:</b>	Division: Stockton	Map #: S1021	Coordinates:		
Elect. Dist. Map:	Division: Stockton	Map #: S0911	Coordinates:		
Gas Plat Map:					
Survey Information:			Survey Date:	5/19/2016	
Technician:	Kelly Lynch	Transformer CGC#:	NA		
Source Side Device:	NA	Circuit Name:	Eight Mile 2102 (8532202)		
Electric District (UG/0H):	UG	Recommended Electric Connection Configuration:	Install 32ft Streetlight Standard to support Solar equipment		
Electric SCADA Standard:	072248	Page #:	15	Figure #:	8
<b>Construction Notes &amp; Instructions:</b>					
<ol style="list-style-type: none"> <li>Install SCADA cabinet approximately 5ft east and 4ft north of Regulator vault per sketch</li> <li>Install 32ft Streetlight Standard approximately 5ft east of SCADA cabinet to support Solar equipment and antenna.</li> <li>Install approximately 5ft of 1-1/2" (CL) and 1-1/2" (CA) PVC conduit from SCADA cabinet to 32ft Standard for electric/communications cable.</li> <li>Install all ground rods, ground wires and conduits at cabinet and standard per requirements of electric Standard 072248.</li> </ol>					

Page 1 of 8  
Drawing No. 31233171  
Sheet No. 8 of 8  
Scale 1:60  
Drawing Date: 8/25/2016  
Surveyor: [Signature]

## **UTILITY TYPICAL APPLICATIONS**

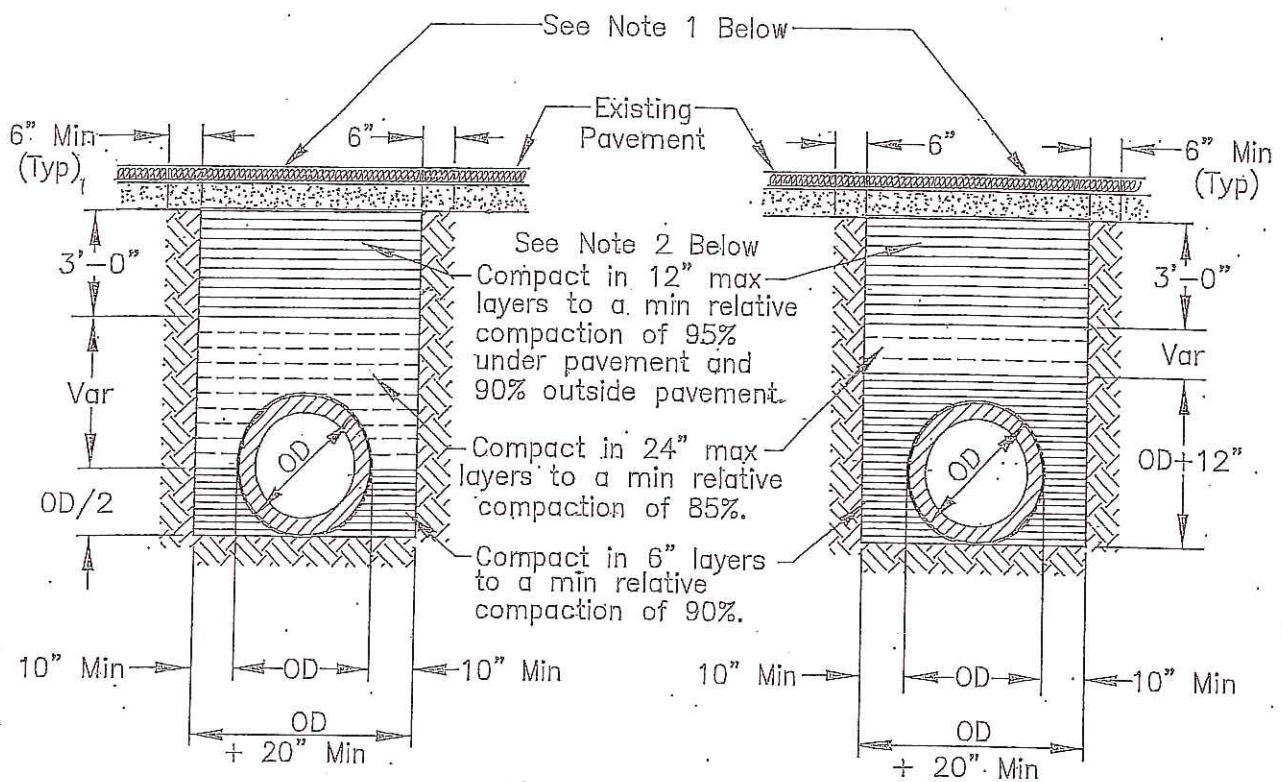
### **UTA-1 Work Beyond the Shoulder**

1. WORKER SYMBOL sign not required if the work space is 15 feet or more from the edge of any roadway. The WORKER SYMBOL sign should be used if motorists may be distracted by the work activity.
2. If the work space is in the median of a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.
3. For short-term, short-duration, or mobile operation, all signs and channelizing devices (cones, etc.) may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



SIGN SPACING	DISTANCE	SEE:
ROAD TYPE	A	• TABLE 1 for Buffer Length (page 26)
Urban - 25 MPH or less	200'	• TABLE 4 for "L" & Channelizer (cones, etc.) Quantity (page 28)
Urban - 30 MPH or more	350'	
Rural	500'	<b>NOTE: LOCAL REGULATIONS MAY VARY.</b>
Expressway/Freeway	1000'	PGEFM1A

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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.

	<b>TYIPCAL TRENCH BACKFILL</b>  <b>COUNTY OF SAN JOAQUIN</b> <small>DEPARTMENT OF PUBLIC WORKS</small>	Approved by:		
No.	Revision	Description	Date	
Date: DEC 2014				Std. Dwg. No. <b>R-29</b>

**GENERAL PROVISIONS**  
**GOVERNING INSTALLATION OF SUBSURFACE STRUCTURES AND PIPELINES WITHIN COUNTY ROAD RIGHTS-OF-WAY.**

**PUBLIC CONVENIENCE AND SAFETY:**

- A. Before obstructing any private driveway entrance or County road traveled way with a trench, spoil bank, equipment or other barrier permitted for any prolonged period of time, the Permittee shall notify the known users of the respective thoroughfare(s) involved, and shall provide access for vehicular and pedestrian traffic to and from the road.
  - 1. Unless otherwise permitted, all work shall be conducted in such a manner that no less than one lane of the existing County road traveled way will be maintained open to public traffic during working hours in a smooth and safe riding condition(s). Two lanes shall be open after working hours.
  - 2. In cases where road closure is permitted, the permission to close the road will be granted under the condition that the Permittee notify the following persons and/or agencies of the time, the period of closure, and the detour route at least twenty-four (24) hours prior to said road closure.
    - a. The County of San Joaquin Public Works Department
    - b. The County of San Joaquin Sheriff's Office
    - c. The local postal service
    - d. The local fire district
    - e. The local school district
    - f. The local residents involved
- B. Should hazardous conditions relative to the installation operations warrant flagmen, as many capable flagmen as may be necessary shall be provided by the Permittee and stationed in advance of work to warn and direct traffic.
- C. Lights, signs and barricades shall be furnished, erected and maintained by the Permittee for the adequate warning and convenience of the public, with particular attention to be taken in this regard after dark.
- D. Any excess dirt and/or debris which might be a hazard to either automobile or pedestrian traffic, uncontrollable by lights, signs and barricades, shall be removed from the jobsite daily.

**STRUCTURES:**

- A. Walls of structures shall be such quality and strength that they will resist all pressures and will not crack or be deformed in such a way as to create a hazard or maintenance problem at any time. Therefore, the minimum structural requirements for concrete pipe placed under county road rights-of-way shall conform to the following American Association of State Highway and transportation Officials (AASHTO) designations.
  - 1. For concrete pipe up to and including thirty-three inches (33") inside diameter, extra strength concrete conforming to AASHTO Designation M 170M.
  - 2. For concrete pipe thirty-six inches (36") inside diameter and larger, reinforced concrete pipe conforming to AASHTO Designation M 170M Class III.
  - 3. Plastic pipe conforming to AASHTO Designation M294.
- B. All concrete pipe joints with County road rights-of-way shall be sealed against leakage and/or infiltration with rubber gasket in conformance with Section 65-1:06 of the California Standard Specifications, or with other methods as may be permitted under the Special Provisions.
- C. Cast-in-place concrete pipe, vitrified clay pipe, spiral welded steel pipe, or corrugated aluminum alloy pipe shall not be installed within the County road rights-of-way unless specifically so stated in the Special Provisions, and only under the conditions as provided.
- D. All structures to be buried within the County rights-of-way shall be set at such elevations as to allow minimum coverage of thirty inches (30") to the centerline of the roadways and twelve inches (12") at the bottoms of borrow ditches each side of the roadways. The depths of structures shall be established below a flat plane extending across the rights-of-way, no part of which shall extend above the elevations stated above; manholes, lampholes, valves, etc. not included. Future surface elevations shall be anticipated as nearly as possible and structure elevations shall be established for future adjustments accordingly.
- E. The County hereby reserves the right to specify in the Special Provisions the gage and surface treatment of any galvanized corrugated metal pipe that is to be installed.
- F. All longitudinal utility facilities are to be established (and dimensioned on sketches) from surveyed centerline of road right-of-way, not from right-of-way (border) lines.

**REPAIRS OF THE COUNTY RIGHT-OF-WAY:**

- A. All excavations shall be backfilled and compacted immediately after work therein has been completed.
- B. Trenched shall not be left open farther than 300 feet in advance of pipe laying operations, or 200 feet to the rear thereof, unless otherwise permitted by the Engineer.
- C. Unless otherwise permitted under the Special Provisions, backfill shall be placed and mechanically compacted in such a manner that the relative compaction throughout the entire fill within the County road right-of-way shall conform to the percentages of compaction as shown on the Trench detail.
- D. Backfill material shall be placed in horizontal uniform layers not to exceed in thickness, before compaction, 0.67 foot in the bedding region, one-foot where 90% compaction is required, and two-feet where 80% compaction is required.
- E. No portion of the excavation(s) shall be compacted by ponding or jetting unless a maintenance bond is provided.
- F. Gravel backfill material shall be utilized only where specifically so stated on the face of the permit. It shall be compacted by means of a high-frequency internal vibrator, the compactor to be a size and type approved by the Engineer. Points of compaction shall not be greater than 18" centers and to the full depth of the lift.
- G. All pavements, curbs, gutters, sidewalks, borrow ditches, pipes, head walls, road signs, trees, shrubbery, and/or other permanent road facilities impaired by or as a result of construction operations at the construction site(s) occupied by materials and/or equipment, shall be restored immediately upon backfilling of the excavation to the original grades and cross sections, and to a condition as good as, or better than existing prior to construction.
- H. All surfacing materials of roadways and driveway approaches cut or damaged by or as a result of construction operations, shall be replaced within ONE WEEK following the backfilling of excavation, weather permitting, with compacted layers of surfacing materials at least as thick as the existing, and no less than two inches (2") of asphalt concrete over six inches (6") of aggregate base, both as specified below.
  - 1. Asphalt Concrete: Combined mineral aggregate shall conform to the quality and gradation requirements for Type "B" one-half inch(1/2) maximum aggregate, coarse or medium gradation as specified in Section 39 of the California Standard Specifications. The bituminous binder to be mixed with mineral aggregate shall be paving asphalt having (Grade PG 64-10), unless otherwise directed by the Engineer. Placement of asphalt concrete surfacing shall conform to the applicable provisions of Section 39 of the California Standard Specifications.
  - 2. Aggregate Base: Combined mineral aggregates shall conform to the quality and the grading for three-quarter inch (3/4") maximum size aggregate Class 2 Aggregate Base specified in Section 26 of the California Standard Specifications.
- I. Before acceptance of repairs to the County road rights-of-way, all unsightly and detrimental dirt, dust and/or debris shall be removed and the construction areas left in a neat and presentable condition(s).
  - 1. If necessary, County road traveled way and driveway pavements shall be washed with water to remove dirt and dust.
  - 2. Driveway approaches and field entrance pavements damaged by equipment or spoil banks shall be repaired as directed by the Engineer.
- J. Upon request by the County, any settlement, sagging of surface, or cracking of pavement shall be repaired immediately by and at the sole expense of the Permittee for a period of one year following acceptance of the work.

## SPECIAL PROVISIONS

### Winter Weather Utility Work

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1. **SUPERVISION:** The utility company (permittee) shall furnish full-time supervision of all work to insure compliance with the permit provision.
2. **START OF WORK:** No work within the County right-of-way shall be started until the utility company representative has made an evaluation of weather conditions and has determined the work can be accomplished under the provisions of the permit.
3. **CLEAN PAVEMENT:** Dirt and mud shall not be deposited on the pavement outside the area of work, and if inadvertently tracked onto the road travel way shall be removed immediately.
4. **DAILY RESTORATION:** Private driveways and road intersections shall be restored daily.
5. **WEATHER-TIGHT CONDITIONS:** All trenches shall be filled and compacted, ditches and other drainage facilities regarded and opened, and the entire work area restored to weather-tight condition prior to any rain.