

# STATE OF TEXAS DEPARTMENT OF TRANSPORTATION

|                 |           |                   |             |
|-----------------|-----------|-------------------|-------------|
| FED. ROAD       | STATE     | PROJECT NO.       | SHEET NO.   |
| 06              | TEXAS     | STP 2010 (596) MM | I           |
| STATE DIST. NO. | COUNTY    | STATE CONTROL NO. | HIGHWAY NO. |
| HOU             | FORT BEND | 0912-34-144       | CS          |

## INDEX OF SHEETS

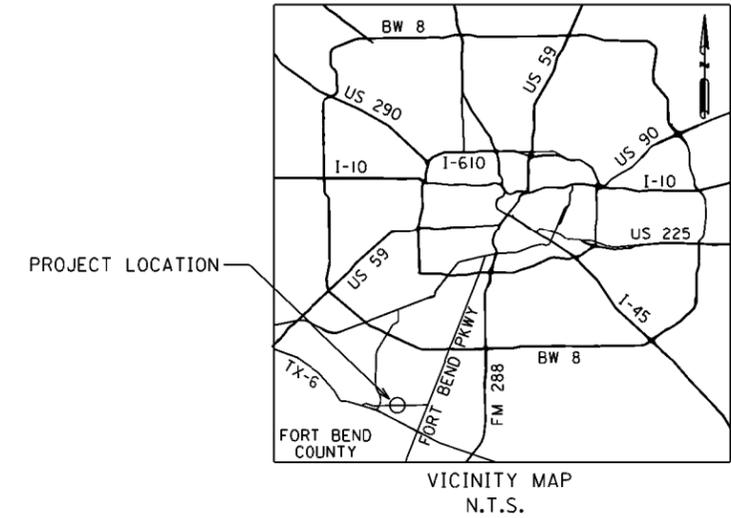
| SHEET NO. | DESCRIPTION  |
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## PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

PROJECT NO. STP 2010 (596) MM  
CONTROL NO. 0912-34-144

ROADWAY IMPROVEMENT  
FROM TRAMMEL FRESNO RD, FORT BEND PKWAY TO FM 521

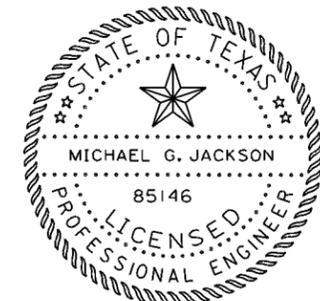
UNION PACIFIC RAILROAD  
PROPOSED CONCRETE PLANKING AND RAILROAD SIGNALS  
ON TRAMMEL FRESNO ROAD  
FORT BEND COUNTY HOUSTON DISTRICT



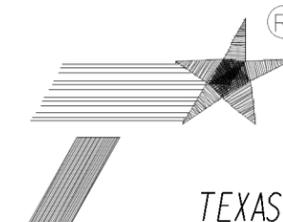
PROJECT LOCATION  
TRAMMEL FRESNO ROAD  
STA. 217+14.71  
UPRR MILE POINT 09.73  
DOT NO. 447 872C  
POPP INDUSTRIAL LEAD



## EXHIBIT "A"



THE SEAL APPEARING ON THIS DOCUMENT WAS  
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No. 85146 ON 7/25/14  
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ENGINEER IS AN OFFENSE UNDER THE TEXAS  
ENGINEERING PRACTICE ACT.



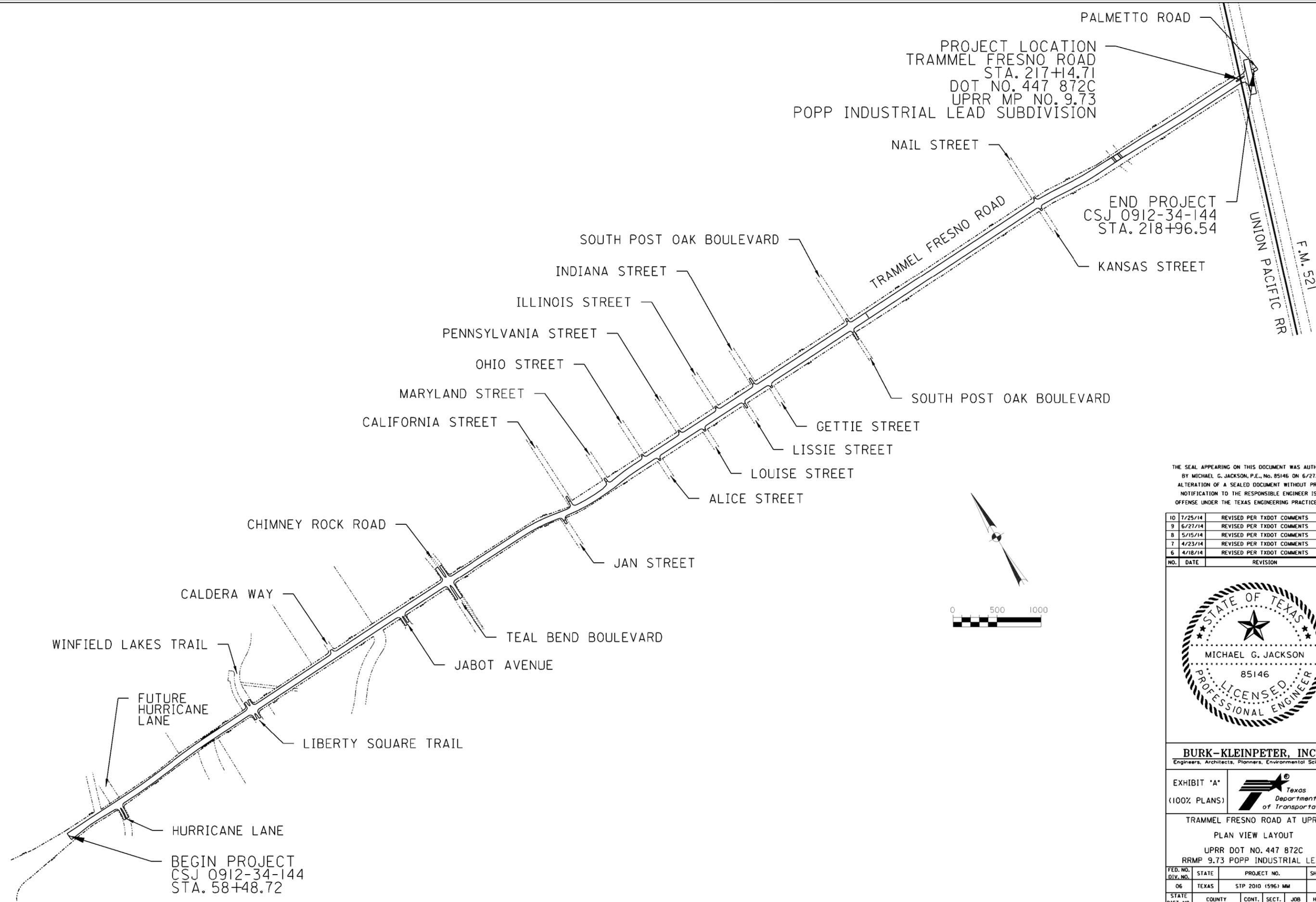
TEXAS DEPARTMENT OF TRANSPORTATION

COUNTY FORT BEND PROJ. NO. 0912-34-144  
HWY. NO. \_\_\_\_\_ LETTING DATE: FEBRUARY 2015  
DATE ACCEPTED \_\_\_\_\_

**NOTE:**

ASSOCIATION OF AMERICAN RAILROAD SIGNAL SECTION  
SPECIFICATIONS SHALL GOVERN ON THIS PROJECT.

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PROJECT LOCATION  
 TRAMMEL FRESNO ROAD  
 STA. 217+14.71  
 DOT NO. 447 872C  
 UPRR MP NO. 9.73  
 POP INDUSTRIAL LEAD SUBDIVISION

END PROJECT  
 CSJ 0912-34-144  
 STA. 218+96.54

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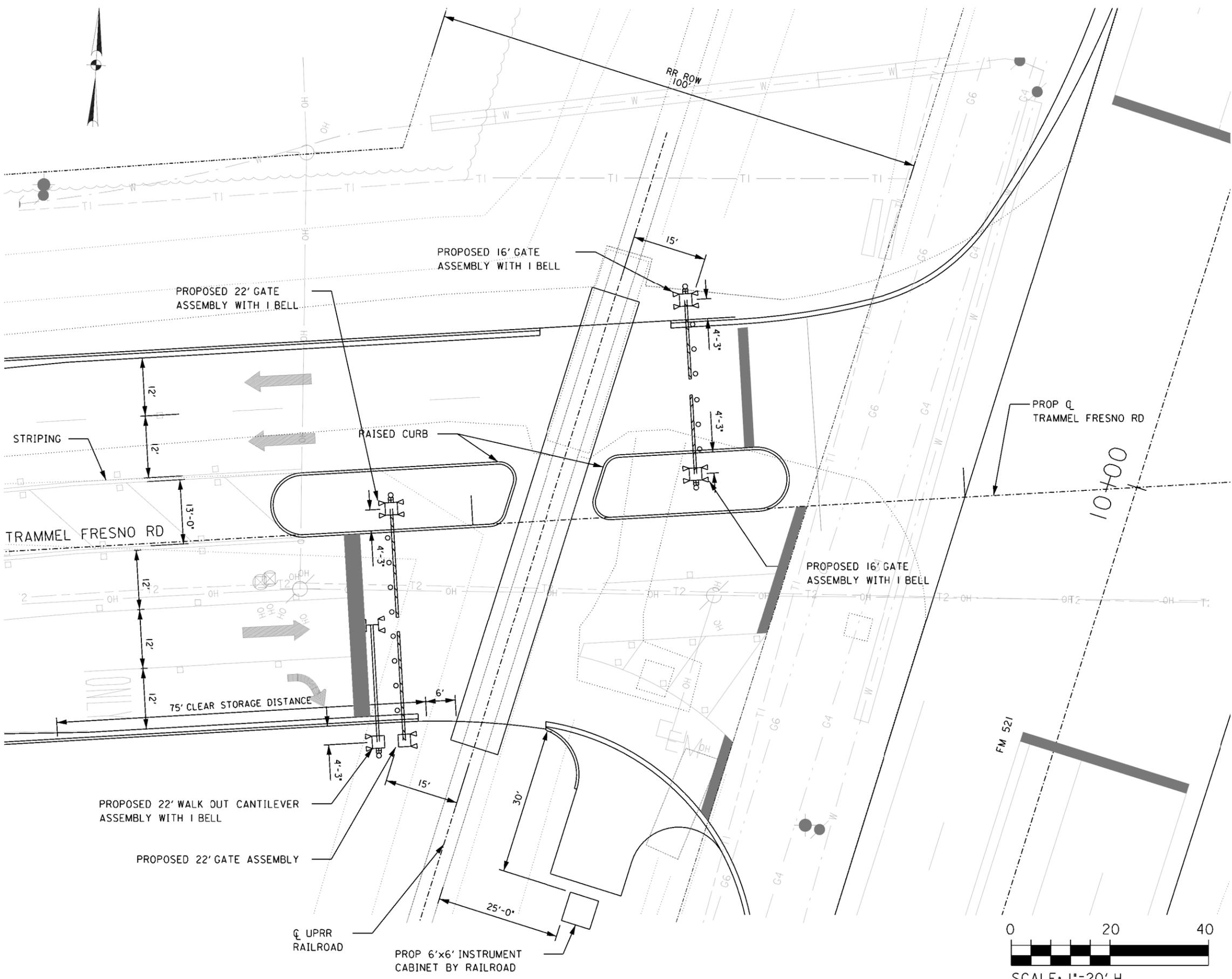


**BURK-KLEINPETER, INC.**  
 Engineers, Architects, Planners, Environmental Scientists



EXHIBIT 'A'  
 (100% PLANS)  
 TRAMMEL FRESNO ROAD AT UPRR  
 PLAN VIEW LAYOUT  
 UPRR DOT NO. 447 872C  
 RRMP 9.73 POP INDUSTRIAL LEAD

| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
|-----------------|-----------|-------------------|--------------|
| 06              | TEXAS     | STP 2010 (596) MM | 2            |
| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| HOU             | FORT BEND | 0912 34           | 144 CS       |



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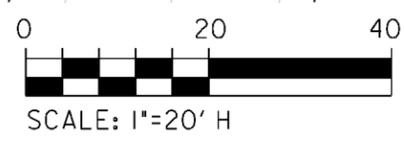


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TRAMMEL FRESNO ROAD AT UPRR  
RAILROAD SIGNAL LAYOUT  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

|                 |           |                   |              |
|-----------------|-----------|-------------------|--------------|
| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
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| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| HOU             | FORT BEND | 0912 34           | 144 CS       |



GENERAL NOTES

- TOTAL TRAINS: 4 THROUGH TRAINS PER DAY  
TYPICAL SPEED RANGE: 40 MPH  
NO. OF SWITCH MOVES: 0  
NO SCHEDULED PASSENGER SERVICE  
SPECIAL VEHICLE MOVES: 0
- DESIGN SPEED: 45 MPH  
AVERAGE DAILY TRAFFIC: 10,000 (2011)  
13,600 (2031)  
FUNCTIONAL CLASSIFICATION:  
EXIST: RURAL MINOR ARTERIAL  
PROP: URBAN COLLECTOR
- EXISTING 133 LB RAIL

WORK TO BE PERFORMED BY THE RAILROAD AT THE STATE'S EXPENSE

- SIGNAL CIRCUITS ARE DESIGNED TO GIVE 20 SECONDS MINIMUM WARNING TIME, PLUS 1 SECOND CLEARANCE TIME, PLUS 5 SECONDS BUFFER TIME, PLUS 5 SECONDS EQUIPMENT RESPONSE TIME, PLUS 17 SECONDS OF ADVANCE TRAFFIC SIGNAL PREEMPTION FOR A TOTAL OF 48 SECONDS APPROACH TIME, PRIOR TO THE ARRIVAL OF THE FASTEST TRAIN AT THIS CROSSING. REFER TO SIGNAL CIRCUIT LAYOUT FOR TOTAL APPROACH TIME.
- CONSTANT WARNING CIRCUITS ARE TO BE USED AT THIS LOCATION. UPGRADES REQUIRED; POSSIBLE REMOTE HOUSE FOR CIRCUIT CAPABILITY.
- CONDUIT, FILL DIRT AND CRUSHED COVER ROCK TO BE FURNISHED IN PLACE BY THE RAILROAD COMPANY OR ITS CONTRACTOR AT STATE'S EXPENSE.
- THE RAILROAD COMPANY OR ITS CONTRACTOR WILL REMOVE AND REPLACE THE EXISTING GATES AND DISPOSE OF THE FOUNDATIONS.
- THE RAILROAD COMPANY OR ITS CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN SIGN MOUNTING BRACKETS FOR THE REPORT SIGN (I-13) AT THE STATES EXPENSE.

PREEMPTION SPECIFIC GENERAL NOTES

- EXISTING TRAFFIC SIGNAL AT THIS LOCATION.
- EXISTING RAILROAD SIGNALS AT THIS LOCATION.
- REPLACEMENT OF CONTROLLER WITH CONSTANT WARNING CIRCUIT.
- EXISTING PREEMPTION AT THIS LOCATION, SIMULTANEOUS.
- WIRED CONNECTION IS PROPOSED FOR THIS LOCATION (STANDARD WIRED CONNECTION IS A 4 CONDUCTOR HOOK-UP WITH 7 CONDUCTOR WIRE).
- NO BORING REQUIRED.
- THE RAILROAD OR ITS CONTRACTOR WILL FURNISH AND INSTALL A RELAY TO PROVIDE ADVANCE PREEMPTION TO EXISTING TRAFFIC SIGNAL. NORMALLY A CLOSED CIRCUIT IS REQUIRED BETWEEN THE CONTROL RELAY OF THE GRADE CROSSING WARNING DEVICE AND THE TRAFFIC SIGNAL CONTROLLER OR FLASHER AS STATED IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- THE RAILROAD OR ITS CONTRACTOR AGREES TO CONNECT THE PREEMPTION CONDUCTOR WIRE INTO THE RAIL SIGNAL SYSTEM.

DESCRIPTION OF PROJECT

- 4 COMPLETE FLASHING LIGHTS WITH (2-22'; 2-16') GATE ASSEMBLIES AND 3 BELLS
- 1 COMPLETE 22' WALKOUT CANTILEVER ASSEMBLY WITH 1 BELL

WORK TO BE PERFORMED BY THE STATE'S CONTRACTOR

- THE STATE'S CONTRACTOR WILL FURNISH AND INSTALL OR REPLACE THE APPROPRIATE PAVEMENT MARKINGS AS OUTLINED ON THE ATTACHED LAYOUT AND STANDARD SHEET AND IN ACCORDANCE WITH THE GUIDELINES IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- THE STATE'S CONTRACTOR WILL FURNISH AND INSTALL OR REPLACE THE FOLLOWING SIGNS IN ACCORDANCE WITH THE GUIDELINES IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND THE STANDARD HIGHWAY SIGN DESIGNS MANUAL FOR TEXAS (SHSD): 2 EA. (W10-1), 2 EA. (W10-2), ADDITIONAL SIGNS TO BE ADDED: 2 EA. R8-8
- THE STATE'S CONTRACTOR SHALL INSTALL THE RAISED MEDIAN AS WELL AS CURB AND GUTTER.

PREEMPTION SPECIFIC GENERAL NOTES

- TxDOT DISTRICT WILL COMPLETE THE PREEMPTION TIMING FORM.
- TxDOT DISTRICT WILL APPROVE THE PREEMPTION TIMING FORM.
- THE STATE'S CONTRACTOR AGREES TO INSTALL THE PREEMPTION CONDUCTOR WIRE FURNISHED BY THE RAILROAD AT THE STATE'S EXPENSE.
- THE STATE'S CONTRACTOR AGREES TO CONNECT THE PREEMPTION CONDUCTOR WIRE INTO THE HIGHWAY SIGNAL SYSTEM.
- THE STATE'S CONTRACTOR AGREES TO MAINTAIN THE TRAFFIC SIGNAL AND PREEMPTION EQUIPMENT.

WORK TO BE PERFORMED BY THE STATE

- THE STATE AGREES TO MAINTAIN THE PAVEMENT MARKINGS AND ADVANCE WARNING SIGNS PLACED ALONG THE ROADWAYS UNDER THEIR JURISDICTION IN ACCORDANCE WITH THE GUIDELINES IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AS SHOWN ON THE LAYOUT AND STANDARD SHEETS AS ACKNOWLEDGED ON THE TITLE SHEET.
- THE STATE AGREES TO TRIM AND MAINTAIN TREES AND VEGETATION FOR ADEQUATE VISIBILITY OF THE CROSSING SIGNALS AND ADVANCE WARNING SIGNS AS ACKNOWLEDGED ON THE TITLE SHEET.

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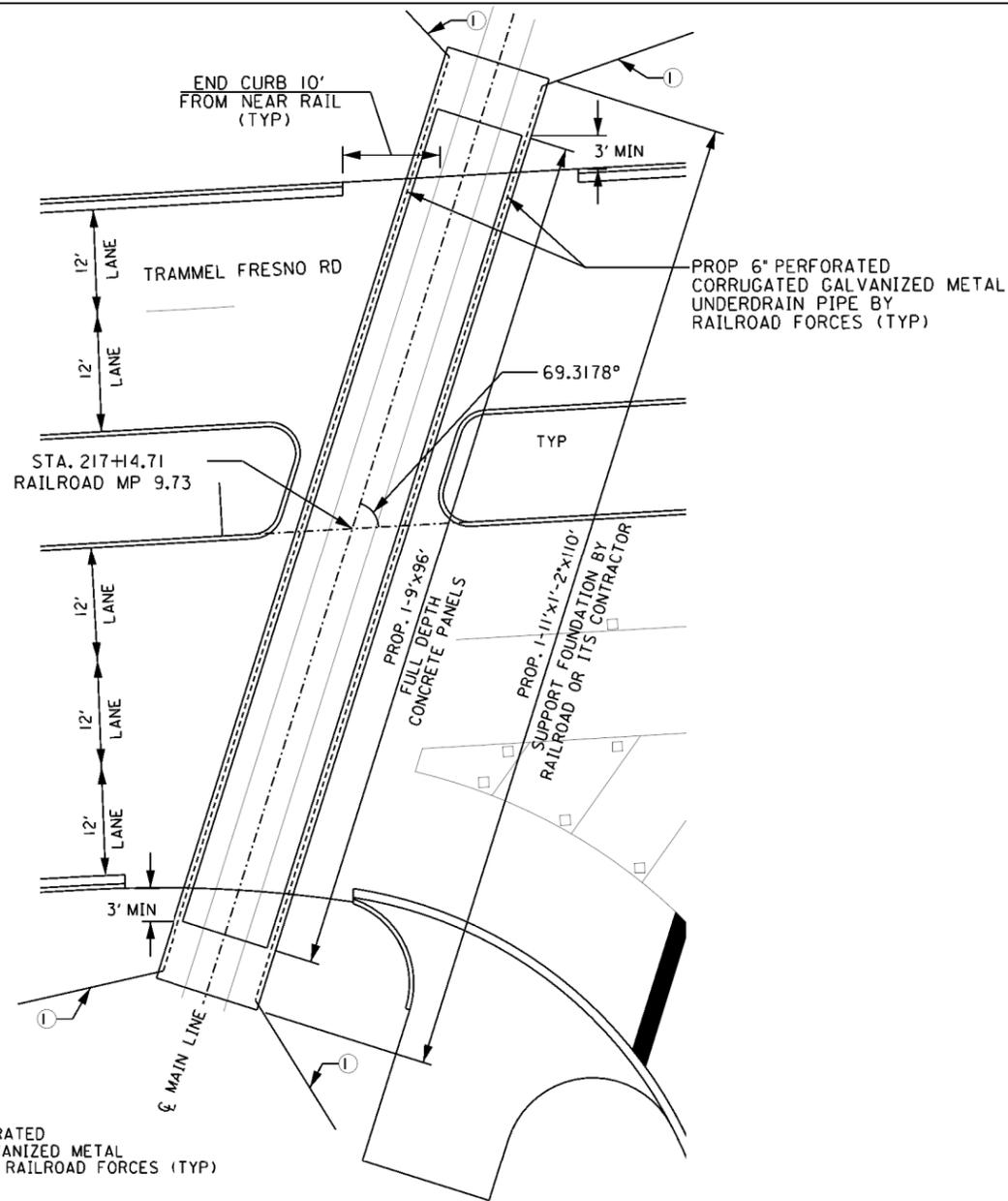


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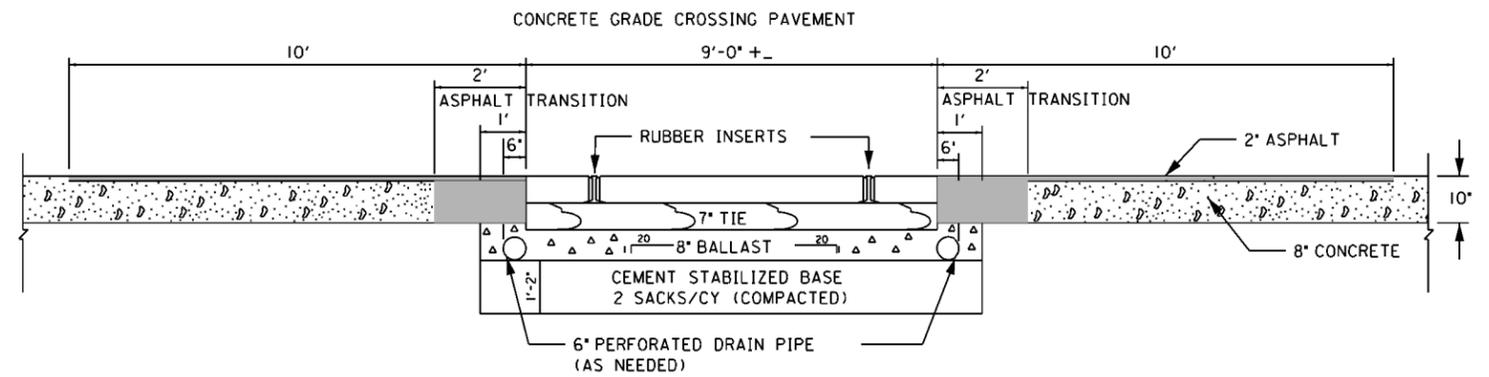
TRAMMEL FRESNO ROAD AT UPRR  
RAILROAD SIGNAL  
GENERAL NOTES  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
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| H04             | FORT BEND | 0912 34           | 144 CS       |



① PROP 6" NON-PERFORATED CORRUGATED GALVANIZED METAL OUTFALL PIPE BY RAILROAD FORCES (TYP)

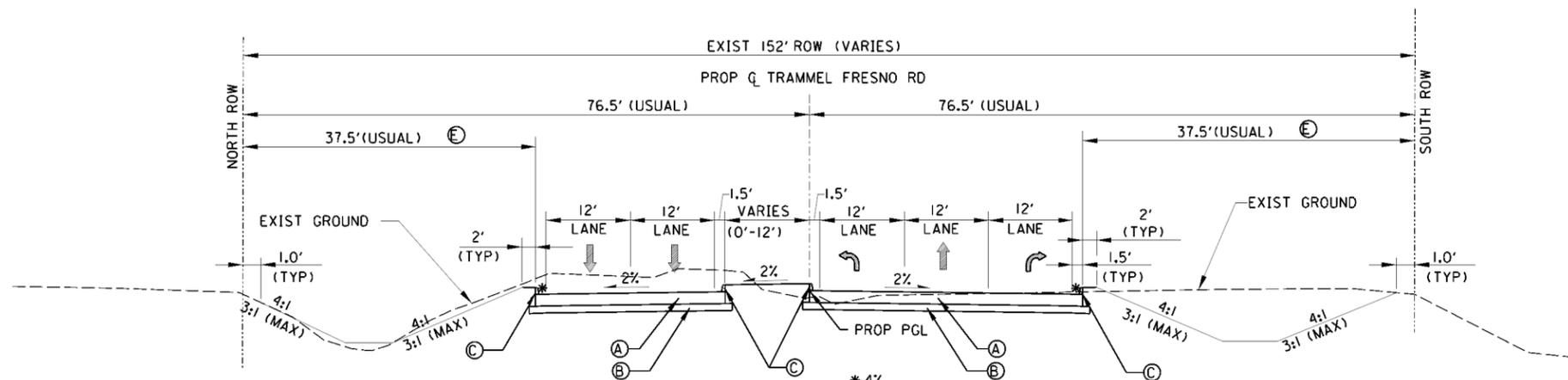
LAYOUT  
SCALE: 1"=40'



TYPICAL SECTION  
UNION PACIFIC RAILROAD  
NOT TO SCALE

LEGEND

- (A) 10' CONC PAVEMENT (JRCP)
- (B) 6" LIME TREATED SUBGRADE
- (C) 6" TY II MONO CURB
- (D) 4" CONC SIDEWALK AND BASE
- (E) HYDROMULCH SEEDING



PROPOSED TYPICAL SECTION W/ MEDIAN  
NOT TO SCALE

NOTE:  
SEE PLAN SHEETS FOR CURB LIMITS

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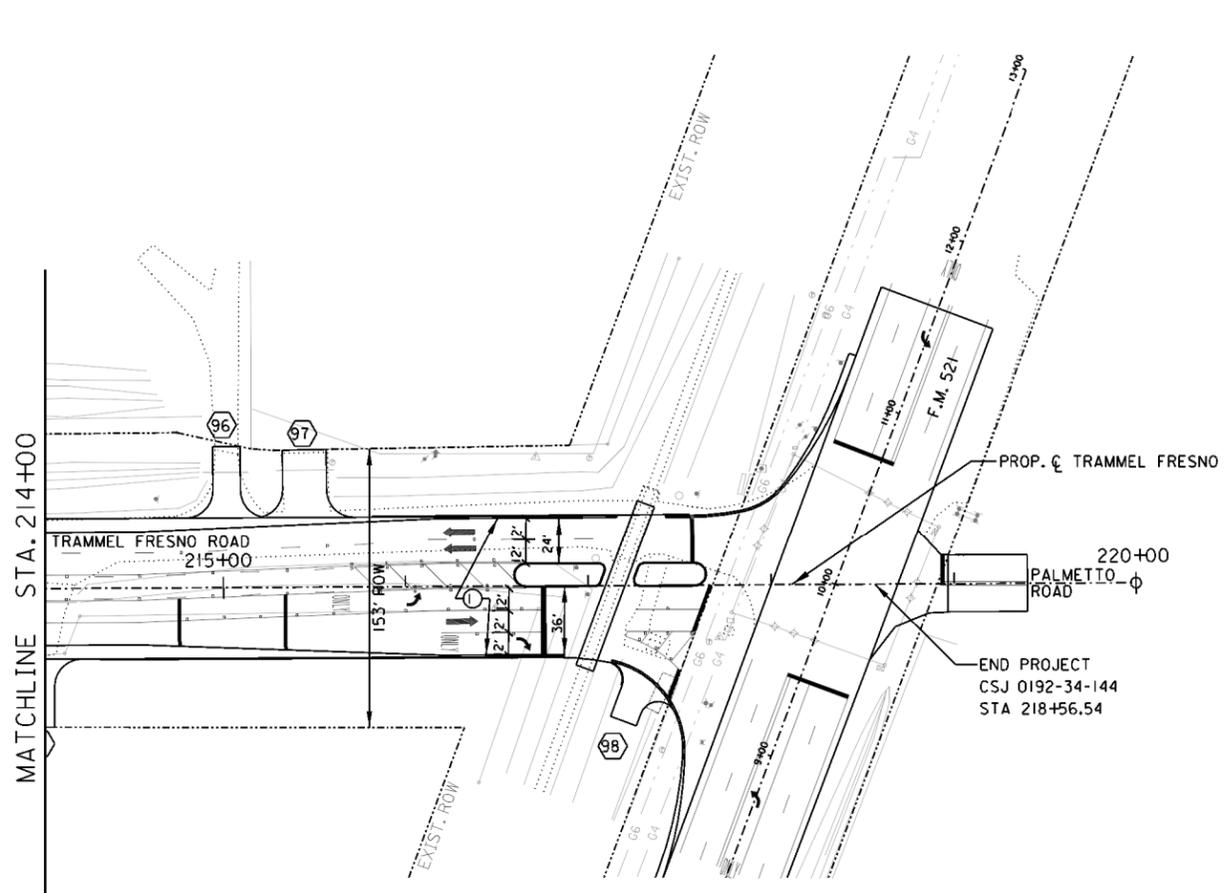


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EXHIBIT 'A'  
(100% PLANS)

TRAMMEL FRESNO ROAD AT UPRR  
GRADE CROSSING  
PLANKING LAYOUT  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
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| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| H04             | FORT BEND | 0912 34           | 144 CS       |



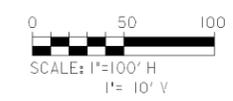
**LEGEND**

- ① 10" JRCP, 6" LTS
- ② TY II MONO CURB
- ③ 4" CONCRETE SIDEWALK
- ④ HANDICAPPED RAMP TYPE 9
- ⑤ HANDICAPPED RAMP TYPE 7

**NOTES:**

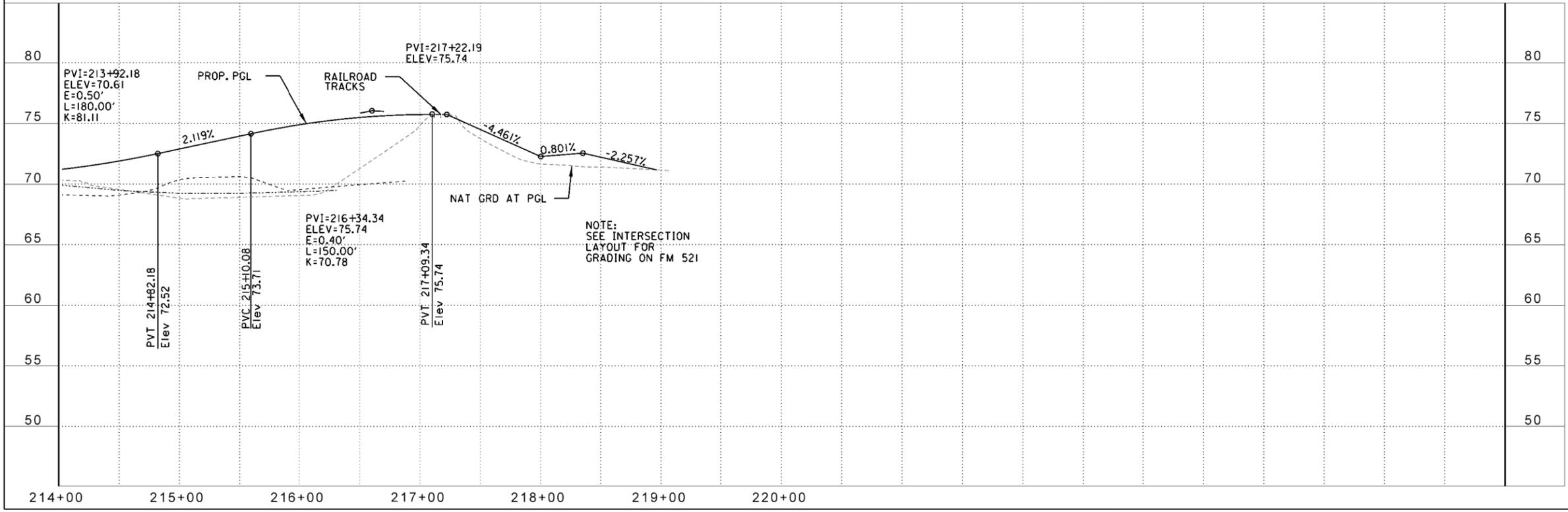
1. SEE INTERSECTION LAYOUTS FOR INTERSECTION DETAILS.
2. SEE DRIVEWAY SUMMARIES AND MISC DRIVEWAY DETAIL SHEETS.
3. SEE DRAINAGE PLAN & PROFILE FOR DRAINAGE INFORMATION.
4. SEE SURVEY CONTROL LAYOUTS FOR CONTROL POINT INFORMATION.

⬡ DRIVEWAY



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TRAMMEL FRESNO ROAD AT UPRR  
PLAN AND PROFILE  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
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| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| H04             | FORT BEND | 0912 34           | 144 CS       |

TRAFFIC DATA:

1. TOTAL TRAINS: 4 THROUGH TRAINS PER DAY  
TYPICAL SPEED RANGE: 40 MPH  
NO. OF SWITCH MOVES: 0  
NO SCHEDULED PASSENGER SERVICE  
SPECIAL VEHICLE MOVES: 0
2. DESIGN SPEED: 45 MPH  
AVERAGE DAILY TRAFFIC: 10,000 (2011)  
13,600 (2031)  
FUNCTIONAL CLASSIFICATION:  
EXIST: RURAL MINOR ARTERIAL  
PROP: URBAN COLLECTOR
3. EXISTING 133 LB RAIL

WORK TO BE PERFORMED BY RAILROAD

1. PROPOSED 1 - 104' CONCRETE CROSSING TO BE CONSTRUCTED IN FULL WIDTH.
2. REMOVE 40' EXISTING CONCRETE, PLANKING AND ASPHALT CROSSING MATERIAL.
3. REMOVE RAILS AND TIES THROUGH THE CROSSING TO ALLOW FOR THE INSTALLATION OF CEMENT STABILIZED BASE AND UNDER DRAIN SYSTEM IF REQUIRED BY ENGINEER.
4. EXCAVATE THE EXISTING SUBGRADE BASE MATERIAL IF REQUIRED AT ENGINEER'S DISCRETION.
5. FURNISH AND INSTALL NEW STABILIZED BASE MATERIAL IF REQUIRED.
6. FURNISH AND INSTALL FILTER FABRIC MEMBRANE WITH 6" PERFORATED DRAINAGE PIPE WHERE REQUIRED.
7. FURNISH AND INSTALL NEW CREOSOTE TREATED TIMBER CROSS TIES AND ROCK BALLAST.
8. PROVIDE CONTINUOUS WELDING OF RAILS THROUGH THE CROSSING.
9. FURNISH AND INSTALL ONE FULL DEPTH CONCRETE CROSSING PANELS.
10. RAISE RAIL TO ROADWAY ELEVATION.
11. CROSSING SHALL BE RESTORED TO PROVIDE SAFE PASSAGE OF TRAFFIC EACH NIGHT.
12. REMOVE NORTHERN 8' CROSSING PANEL AFTER TRAFFIC IS SHIFTED TO THE SOUTHERN PORTION OF TRAMMEL FRESNO ROAD (THE NEW ALIGNMENT OF TRAMMEL FRESNO ROAD SHIFTS SLIGHTLY TO THE SOUTH).

WORK TO BE PERFORMED BY THE STATE'S CONTRACTOR

1. FURNISH AND INSTALL BARRICADES AND TRAFFIC CONTROL.
2. ALLOW TRACK SETTLEMENT, AND REPAIR ROADWAY TO PROVIDE SMOOTH AND EVEN CROSSINGS.
3. FURNISH, INSTALL, APPROPRIATE PAVEMENT MARKINGS AND ADVANCE WARNING SIGNS IN ACCORDANCE WITH THE PLANS AND THE GUIDELINES IN THE TEXAS MUTCD.
4. END CURB 10' FROM NEAR RAIL.

GENERAL NOTES

1. CEMENT STABILIZED BASE MATERIAL SHALL CONFORM TO ITEM 276 OF THE SPECIFICATION BOOK.
2. CEMENT STABILIZED BASE FOUNDATION TO EXTEND A MINIMUM OF TEN FEET BEYOND THE END OF PANELS.
3. PIPE UNDERDRAIN SHALL BE PERFORATED CORRUGATED GALVANIZED METAL PIPE, EXCEPT AS SHOWN.
4. CONCRETE PLANKING WILL EXTEND A MINIMUM OF 3 FEET BEYOND EDGE OF ROADWAY.

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Engineers, Architects, Planners, Environmental Scientists

EXHIBIT 'A'  
(100% PLANS)

TRAMMEL FRESNO ROAD AT UPRR  
PLANKING NOTES  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
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| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| HOU             | FORT BEND | 0912 34           | 144 CS       |

**PART 1 - GENERAL**

**1.01 DESCRIPTION**

This project includes construction work within the Right-of-Way and/or properties of the Railroad Company and adjacent to its tracks, wire lines and other facilities. These sheets describe the minimum special requirements for coordination with the Railroad when working upon, over or under Railroad Right-of-Way or when impacting current or future Railroad operations. Coordinate with the Railroad while performing the work outlined herein, and afford the same cooperation with the Railroad as with TxDOT. Complete all submittals and work in accordance with TxDOT Standard Specifications, Railroad Guidelines and AREMA recommendations as modified by these minimum special requirements or as directed in writing by the Railroad Designated Representative.

For purposes of this project, the Railroad Designated Representative is the person or persons designated by the Railroad Manager of Industry and Public Projects to handle specific tasks related to the project.

**1.02 RAILROAD CONTACTS**

The primary Railroad point of contact for this project and the contact for Railroad flagging services and track work, can be obtained by contacting the TxDOT Area Engineer responsible for the project.

**1.03 REQUEST FOR INFORMATION / CLARIFICATION**

Submit Requests for Information ("RFI") involving work within any Railroad Right-Of-Way to the TxDOT Engineer. The TxDOT Engineer will submit the RFI to the Railroad Designated Representative for review and approval for RFI's corresponding to work within Railroad Right-Of-Way. Allow six (6) weeks total time for review and approval, which includes four (4) weeks for review and approval by the Railroad.

**1.04 PLANS / SPECIFICATIONS**

TxDOT has received written Railroad approval of the plans and specifications for this project. Any revisions or changes in the plans after award of the Contract must have the approval of TxDOT and the Railroad.

**PART 2 - UTILITIES AND FIBER OPTIC**

Construct all utility installations in accordance with current AREMA recommendations, Railroad, TxDOT and owning utility specifications and requirements. Railroad general guidelines can be found on the Railroad website or by contacting the Railroad Designated Representative.

**PART 3 - CONSTRUCTION**

**3.01 GENERAL**

- A. Perform all work in compliance with all applicable Railroad, FRA and TxDOT rules and regulations. Arrange and conduct work in a manner that does not endanger or interfere with the safe operation of the tracks and property of the Railroad and the traffic moving on such tracks, or the wires, signals and other property of the Railroad, its tenants or licensees, at or in the vicinity of the Work. The Contractor is responsible for train delay cost and lost revenue claims due to any delays or interruption of train operations resulting from Contractor's construction or other activities.
- B. Construction activities within 12 feet of the operational tracks will only be allowed if absolutely necessary and the Railroad's Designated Representative grants approval. Construction activities within 12 feet of the operational track(s) preferably allow the tracks to stay operational. In such cases, coordination and approval by the Railroad Track Manager is required with regard to schedule, flagging, and slow orders. See Sections 3.07 and 3.08 for additional information.
- C. Provide track protection for all work equipment (including rubber tired equipment) operating within 25 feet from nearest rail.
- D. The Contractor is also advised that new railroad facilities within the project may be built by the Railroad. If applicable, these facilities are delineated in the plans. Be aware of the limits of responsibilities and coordinate efforts with the Railroad and TxDOT.

**3.02 RAILROAD OPERATIONS**

- A. Trains and/or equipment are expected on any track, at any time, in either direction. Become familiar with the train schedules in this location and structure bid assuming intermittent track windows in this period, as defined in Paragraph B that follows.
- B. All railroad tracks within and adjacent to the Contract Site are active, and rail traffic over these facilities shall be maintained throughout the Project. Activities may include both through moves and switching moves to local customers. Railroad traffic and operations will occur continuously throughout the day and night on these tracks and shall be maintained at all times as defined herein. Coordinate and schedule the work so that construction activities do not interfere with railroad operations.
- C. Coordinate work windows with TxDOT and the Railroad's Designated Representative. Types of work windows include Conditional Work Windows and Absolute Work Windows, as defined below:

- 1. Conditional Work Window: A Conditional Work Window is a period of time that railroad operations have priority over construction activities. When construction activities may occur on and/or adjacent to the railroad tracks within 25 feet of the nearest track, a Railroad flag person will be required. At the direction of the Railroad flag person, upon approach of a train, and when trains are present on the tracks, the tracks must be cleared (i.e., no construction equipment, materials or personnel within 25 feet, or as directed by the Railroad Designated Representative, from the tracks). Conditional Work Windows are available for the Project.
- 2. Absolute Work Window: An Absolute Work Window is a period of time that construction activities are given priority over railroad operations. During this time frame the designated railroad track(s) will be inactive for train movements and may be fouled by the Contractor. At the end of an Absolute Work Window the railroad tracks and/or signals must be completely operational for train operations and all Railroad, Public Utilities Commission (PUC) and Federal Railroad Administration (FRA) requirements, codes and regulations for operational tracks must be satisfied. In the situation where the operating tracks and/or signals have been affected, the Railroad will perform inspections of the work prior to placing that track back into service. Railroad flag persons will be required for construction activities requiring an Absolute Work Window. Absolute Work Windows will not generally be granted. Any request will require a detailed explanation for Railroad review.

**3.03 RIGHT OF ENTRY, ADVANCE NOTICE AND WORK STOPPAGES**

- A. Prior to beginning any work on or over the property of, or affecting the facilities of the Railroad, enter into a "Contractor's Right of Entry Agreement" with Railroad. The fee for processing the agreement is the responsibility of the Contractor. Submit a copy of the executed agreement and the insurance policies, binders, certificates and endorsements set forth therein to TxDOT prior to commencing work on Railroad property. Within the right of entry agreement, specify working time frames, flagging and inspection requirements, and any other items specified by the Railroad.
- B. Give advance notice to the Railroad as required in the "Contractor's Right of Entry Agreement" before commencing work in connection with construction upon or over Railroad Right-of-Way and observe the Railroad's rules and regulations with respect thereto.
- C. Perform all work upon Railroad Right-of-Way in a manner to avoid interference with or endanger the operations of the Railroad. Whenever work may affect the operations or safety of trains, submit the work method to the Railroad Designated Representative for approval. Approval does not relieve the Contractor from liability. Do not commence any work which requires flagging service or inspection service until the flagging protection required by the Railroad is available at the job site. See Section 3.18 for railroad flagging requirements.
- D. Make requests in writing for both Absolute and Conditional Work Windows, at least two weeks in advance of any work. Include in the written request:
  - 1. Exactly what the work entails.
  - 2. The days and hours that work will be performed.
  - 3. The exact location of work, and proximity to the tracks.
  - 4. The type of window requested and the amount of time requested.
  - 5. The designated contact person.

Provide a written confirmation notice to the Railroad at least 48 hours before commencing work in connection with approved work windows when work is within 25 feet of any track center line. Perform all work in accordance with previously approved work plans.

- E. Make provisions to protect operations and property of the Railroad should a condition arising from, or in connection with the work, require immediate and unusual action. If in the judgment of the Railroad Designated Representative such provisions are insufficient, the Railroad Designated Representative may require or provide such provisions as deemed necessary. In any event, such provisions shall be at the Contractor's expense and without cost to the Railroad or TxDOT. The Railroad or TxDOT shall have the right to order the Contractor to temporarily cease operations in the event of an emergency or, if in the opinion of the Railroad Designated Representative, the Contractor's operations could endanger railroad operations. In the event of such an order, immediately notify TxDOT of the order.

**3.04 INSURANCE**

Do not begin work upon or over Railroad Right-of-Way until furnishing the Railroad with the insurance policies, binders, certificates and endorsements required by the "Contractor's Right-of-Entry Agreement", and until the Railroad Designated Representative has advised TxDOT that such insurance is in accordance with the Agreement. Further information on insurance requirements appear in the Special Provisions to Item 7 of the TxDOT Standard Specifications and/or the project General Notes.

**3.05 RAILROAD SAFETY ORIENTATION**

Complete the Railroad course "Orientation for Contractor's Safety", and maintain current registration prior to working on Railroad property. This orientation is available at [www.contractororientation.com](http://www.contractororientation.com). This course is required to be completed annually by Contractor and Subcontractor personnel working on site.

"KCS/TEXMEX will not accept on-track safety training certificates from other railroads. Contractor's employees entering the KCS railroad shall hold current certificates at all times. The training can be had by contacting Larry Slater of TrackSense Inc. at 330-847-8661 or by email at [lslater@neo.rr.com](mailto:lslater@neo.rr.com)."

**3.06 COOPERATION**

The Railroad will cooperate with Contractor so that work may be conducted in an efficient manner, and will cooperate with Contractor in enabling use of Railroad Right-of-Way in performing the work.

**3.07 MINIMUM CONSTRUCTION CLEARANCES FOR FALSEWORK AND OTHER TEMPORARY STRUCTURES**

Abide by the following minimum temporary clearances during the course of construction:  
 A. 15' - 0" (BNSF) and 12'-0" (UPRR & KCS) horizontal from centerline of track  
 B. 21' - 0" vertically above top of rail.

For construction clearance less than listed above, obtain local Railroad Operating Unit review and approval.

**3.08 APPROVAL OF REDUCED CLEARANCES**

- A. Maintain minimum track clearances during construction as specified in Section 3.07.
- B. Submit any proposed infringement on the specified minimum clearances to the Railroad Designated Representative through TxDOT at least 30 days in advance of the work. Do not proceed with such infringement until written approval by the Railroad Designated Representative.
- C. Do not commence work involving an approved infringement until receiving written assurance from the Railroad Designated Representative that arrangements have been made for any necessary flagging service.

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|-----|---------|----------------------------|------|
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| 6   | 4/18/14 | REVISED PER TxDOT COMMENTS | MCR  |
| NO. | DATE    | REVISION                   | APP. |



**BURK-KLEINPETER, INC.**  
 Engineers, Architects, Planners, Environmental Scientists

EXHIBIT 'A'  
 (100% PLANS)

TRAMMEL FRESNO ROAD AT UPRR  
 RAILROAD REQUIREMENTS FOR  
 NON-BRIDGE CONSTRUCTION PROJECTS  
 UPRR DOT NO. 447 872C  
 RRMP 9.73 POPP INDUSTRIAL LEAD

| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
|-----------------|-----------|-------------------|--------------|
| 06              | TEXAS     | STP 2010 (596) MM | 8            |
| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| H0J             | FORT BEND | 0912 34           | 144 CS       |

3.09 MAINTENANCE OF RAILROAD FACILITIES

- A. Maintain all ditches and drainage structures free of silt or other obstructions resulting from contractor's operations. Repair eroded areas and any other damage within Railroad Right-of Way and repair any other damage to the property of the Railroad, or its tenants.
- B. Perform all such maintenance and repair of damages due to the Contractor's operations at Contractor's expense.
- C. Submit a proposed method of erosion control for review by the Railroad prior to beginning any grading on the Project Site. Comply with all applicable local, state and federal regulations when developing and implementing such erosion control.

3.10 SITE INSPECTIONS BY RAILROAD'S DESIGNATED REPRESENTATIVE

- A. In addition to the office reviews of construction submittals, site inspections may be performed by the Railroad Designated Representative at significant points during construction, including the following if applicable:
  - 1. Pre-construction meetings.
  - 2. Pile driving/drilling of caissons or drilled shafts.
  - 3. Reinforcement and concrete placement for railroad bridge substructure and/or superstructure.
  - 4. Erection of precast concrete or steel bridge superstructure.
  - 5. Placement of waterproofing (prior to placing ballast on bridge deck).
  - 6. Completion of the bridge structure.
- B. Site inspection is not limited to the milestone events listed above. Site visits to check progress of the work may be performed at any time throughout the construction as deemed necessary by the Railroad.
- C. Provide a detailed construction schedule, including the proposed temporary horizontal and vertical clearances and construction sequence for all work to TxDOT for submittal to the Railroad Designated Representative for review prior to commencement of work. Include the anticipated dates when the above listed events will occur. Update this schedule for the above listed events as necessary and each month at a minimum to allow the Railroad to schedule site inspections.

3.11 RAILROAD REPRESENTATIVES

Railroad representatives, conductors, flag person or watch person will be provided by the Railroad at expense of TxDOT to protect Railroad facilities, property and movements of its trains or engines. In general, the Railroad will furnish such personnel or other protective services as follows:

- A. When any part of any equipment is standing or being operated within 25 feet, measured horizontally, from centerline of any track on which trains may operate, or when any object is off the ground and any dimension thereof could extend inside the 25 foot limit, or when any erection or construction activities are in progress within such limits, regardless of elevation above or below track.
- B. For any excavation below elevation of track subgrade if, in the opinion of the Railroad Designated Representative, track or other Railroad facilities may be subject to settlement or movement.
- C. During any clearing, grubbing, excavation or grading in proximity to Railroad facilities, which, in the opinion of the Railroad Designated Representative, may endanger Railroad facilities or operations.
- D. During any contractor's operations when, in the opinion of the Railroad Designated Representative, Railroad facilities, including, but not limited to, tracks, buildings, signals, wire lines, or pipe lines, may be endangered.
- E. Arrange with the Railroad Designated Representative to provide the adequate number of flag persons to accomplish the work.

3.12 COMMUNICATIONS AND SIGNAL LINES

If required, the Railroad will rearrange its communications and signal lines, its grade crossing warning devices, train signals and tracks, and facilities that are in use and maintained by the Railroad's forces in connection with its operation at expense of TxDOT. This work by the Railroad will be done by its own forces and it is not a part of the Work under this Contract.

3.13 TRAFFIC CONTROL

Coordinate any operations that control traffic across or around Railroad facilities with the Railroad Designated Representative.

3.14 CONSTRUCTION EXCAVATIONS

- A. Take special precaution and care in connection with excavating and shoring. Excavations for construction of footings, piers, columns, walls or other facilities that require shoring shall comply with requirements of TxDOT, OSHA, AREMA and Railroad "Guidelines for Temporary Shoring".
- B. The project plans indicate whether there are fiber optic lines or other such telecommunications systems that require consideration. Regardless, contact the necessary call center to determine if such cable systems are present:

UPRR 1-800-336-9193  
7:00 AM to 9:00 PM CST Monday-Friday except holidays,  
staffed 24 hrs/day for emergencies  
48 hrs notice required

BNSF 1-800-533-2891  
24 hour number  
5 working days notice required

KCS 1-800-344-8377  
Texas One Call, a 24 hour number  
48 hrs notice required, excluding weekends and holidays

If a telecommunications system is buried anywhere on or near Railroad property, coordinate with TxDOT, the Railroad and the Telecommunication Company(ies) to arrange for relocation or protective measures prior to beginning work on or near Railroad property. Refer to the project General Notes for additional information.

3.15 RAILROAD FLAGGING

Railroad flagging will be required for any work within 25 ft horizontally of the track. Provisions for flagging are also described in Item 7.16 "Work Near Railroads" in the TxDOT Standard Specifications.

3.16 CLEANING OF RIGHT-OF-WAY

When work is complete, remove all tools, implements, and other materials brought into Railroad Right-of-Way and leave the Right-of-Way in a clean and presentable condition to satisfaction of TxDOT and the Railroad.

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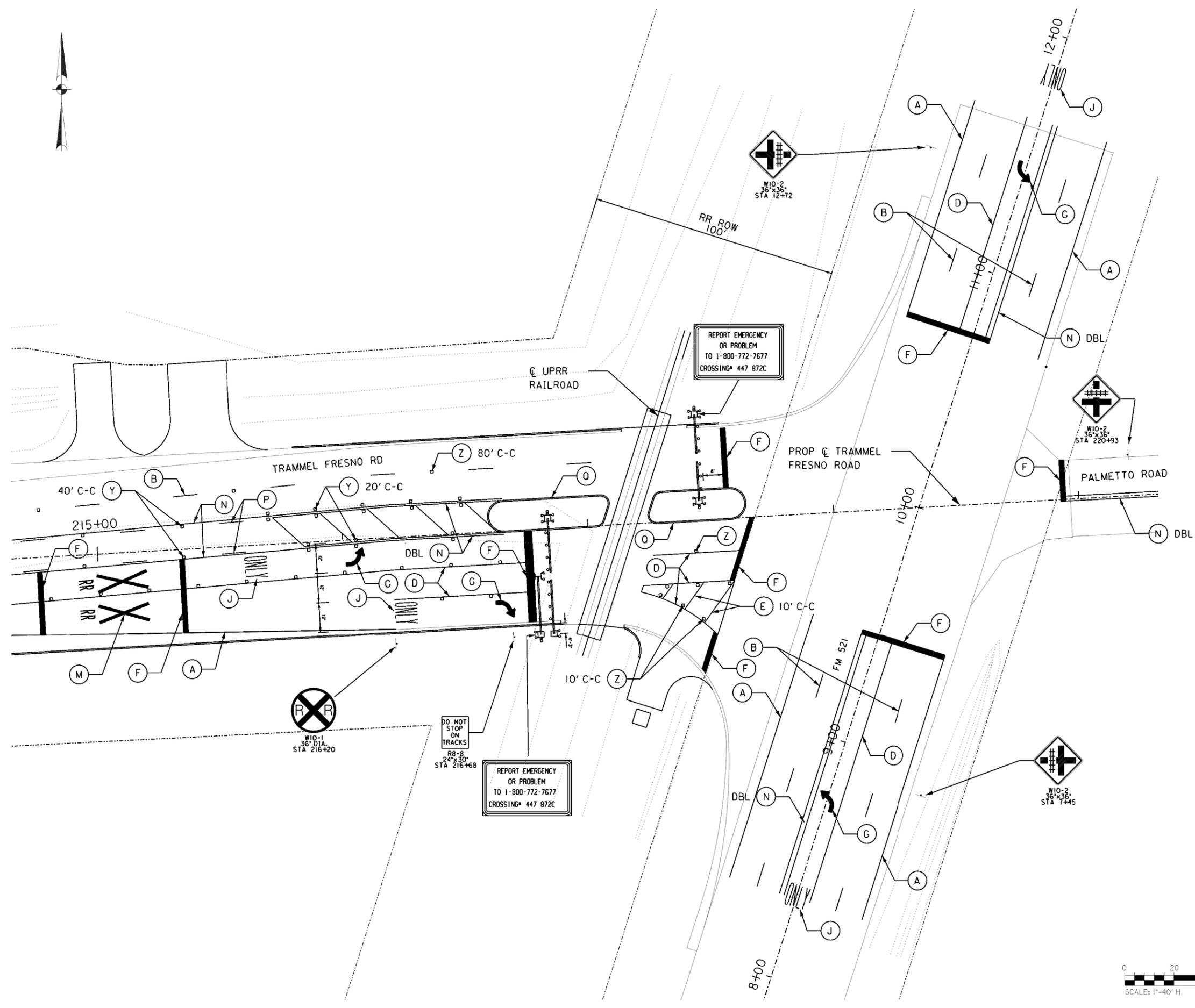
**BURK-KLEINPETER, INC.**  
Engineers, Architects, Planners, Environmental Scientists



EXHIBIT 'A'  
(100% PLANS)

TRAMMEL FRESNO ROAD AT UPRR  
RAILROAD REQUIREMENTS FOR  
NON-BRIDGE CONSTRUCTION PROJECTS  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
|-----------------|-----------|-------------------|--------------|
| 06              | TEXAS     | STP 2010 (596) MM | 9            |
| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| H04             | FORT BEND | 0912 34           | 144 CS       |



LEGEND

- (A) REFL PAV MRK TY I (W) (4") (SLD)
- (B) REFL PAV MRK TY I (W) (4") (BRK)
- (C) REFL PAV MRK TY I (W) (4") (DOT)
- (D) REFL PAV MRK TY I (W) (8") (SLD)
- (E) REFL PAV MRK TY I (W) (12") (SLD)
- (F) REFL PAV MRK TY I (W) (24") (SLD)
- (G) REFL PAV MRK TY I (W) (ARROW)
- (H) REFL PAV MRK TY I (W) (DBL ARROW)
- (J) REFL PAV MRK TY I (W) (WORD)
- (M) REFL PAV MRK TY I (W) (RR XING)
- (N) REFL PAV MRK TY I (Y) (4") (SLD)
- (P) REFL PAV MRK TY I (Y) (4") (BRK)
- (Q) REFL PAV MRK TY I (Y) (8") (SLD)
- (R) REFL PAV MRK TY I (Y) (24") (SLD)
- (S) REFL PAV MRK TY II (W) (8") (SLD)
- (T) REFL PAV MRK TY II (W) (12") (SLD)
- (U) REFL PAV MRK TY II (Y) (12") (SLD)
- (V) REFL PAV MRK TY II (Y) (MED NOSE)
- (W) RAIS PAV MRKR CL B (REFL) TY I-A
- (X) RAIS PAV MRKR CL B (REFL) TY I-C
- (Y) RAIS PAV MRKR CL B (REFL) TY II-A-A
- (Z) RAIS PAV MRKR CL B (REFL) TY II-C-R
- ▣ PROPOSED SMALL SIGNS

NOTE:

1. STATIONS AND OFFSETS ARE RELATIVE TO TRAMMEL FRESNO ROAD BASELINE UNLESS OTHERWISE NOTED.
2. PAVEMENT MARKING DONE BY TXDOT.
3. SIGN SPACING TO BE DETERMINED IN THE FIELD OR TO BE PLACED AT THE EXISTING LOCATION.

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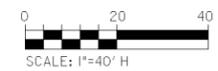


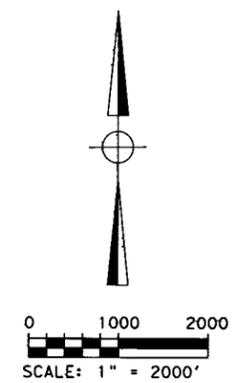
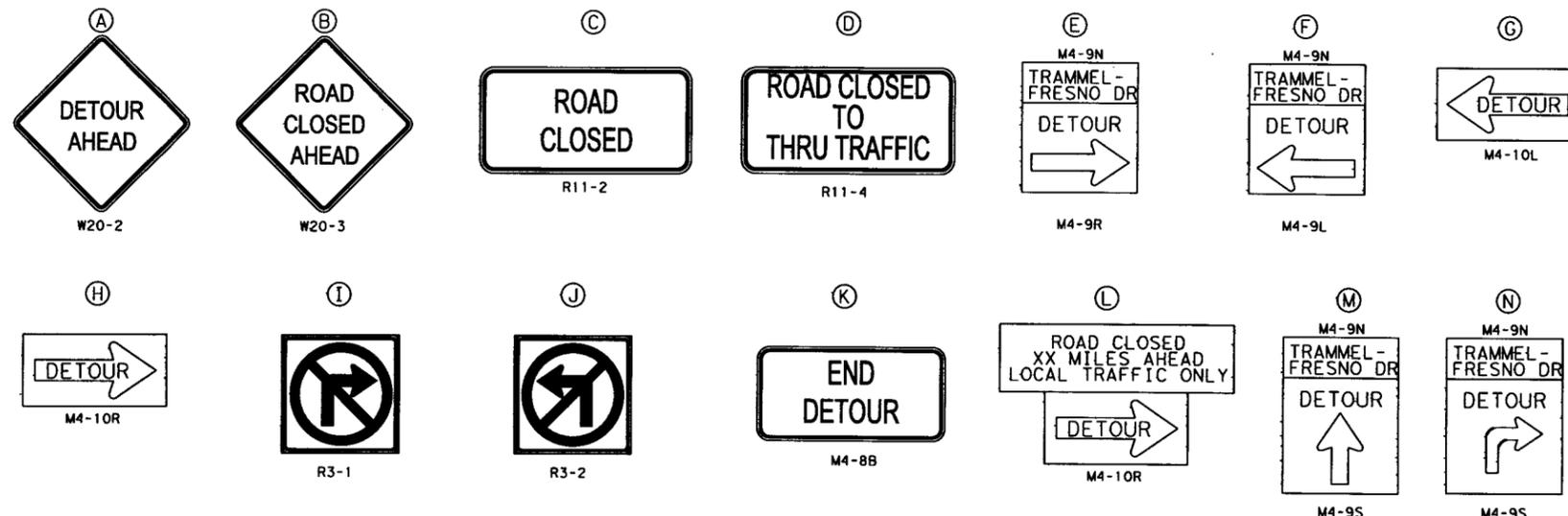
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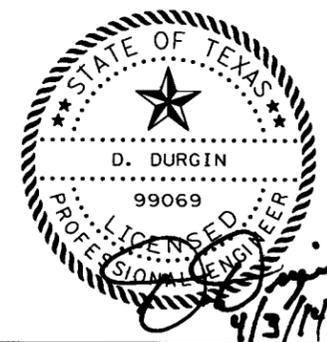
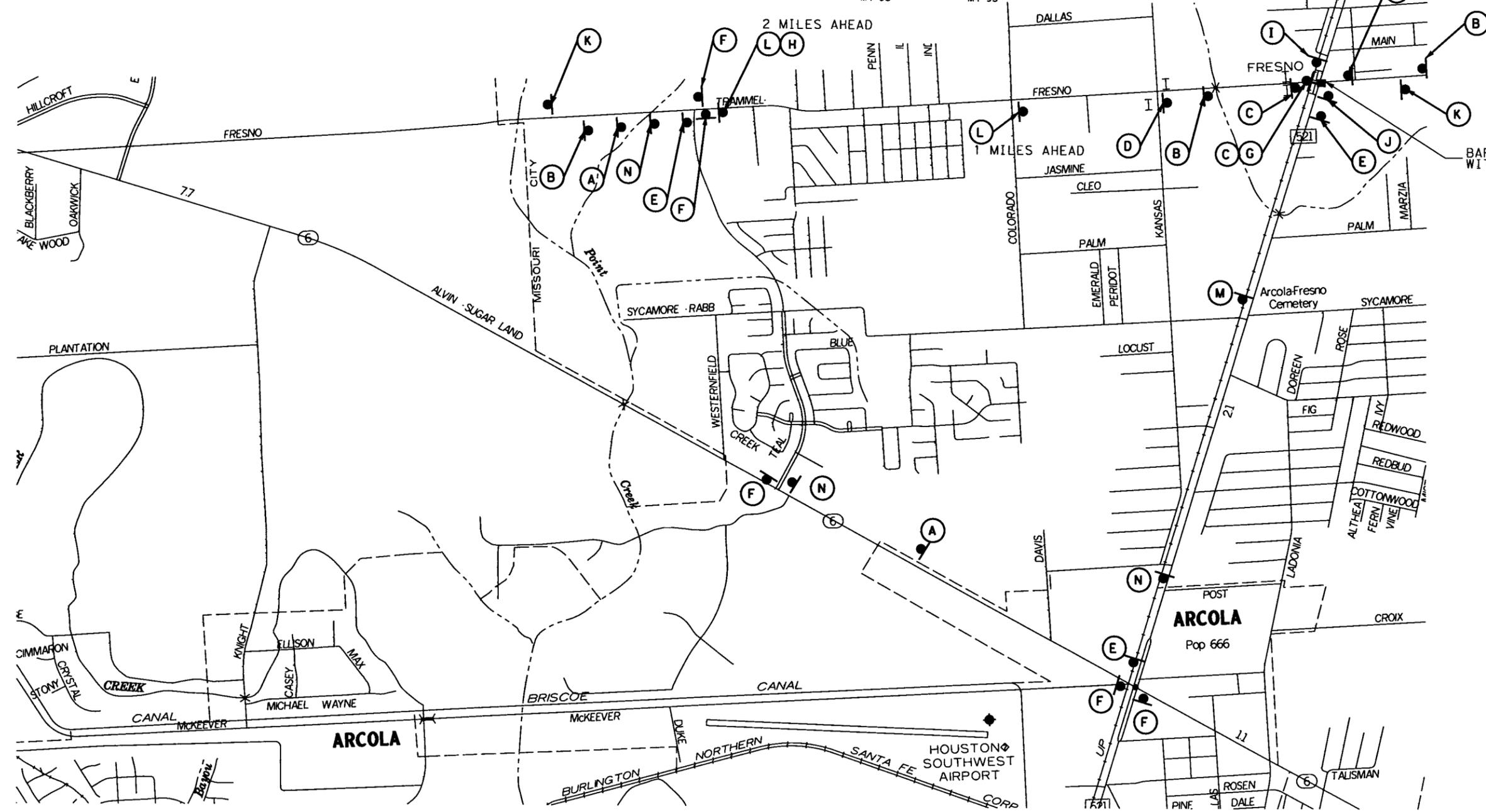
TRAMMEL FRESNO ROAD AT UPRR  
SIGNING & PAVEMENT  
MARKING LAYOUT  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
|-----------------|-----------|-------------------|--------------|
| 06              | TEXAS     | STP 2010 (596) MM | 10           |
| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| HOU             | FORT BEND | 0912 34           | 144 CS       |





- LEGEND**
- SIGN
  - I TYP III BARRICADE
  - CHANNELIZING DEVICES



klotz associates

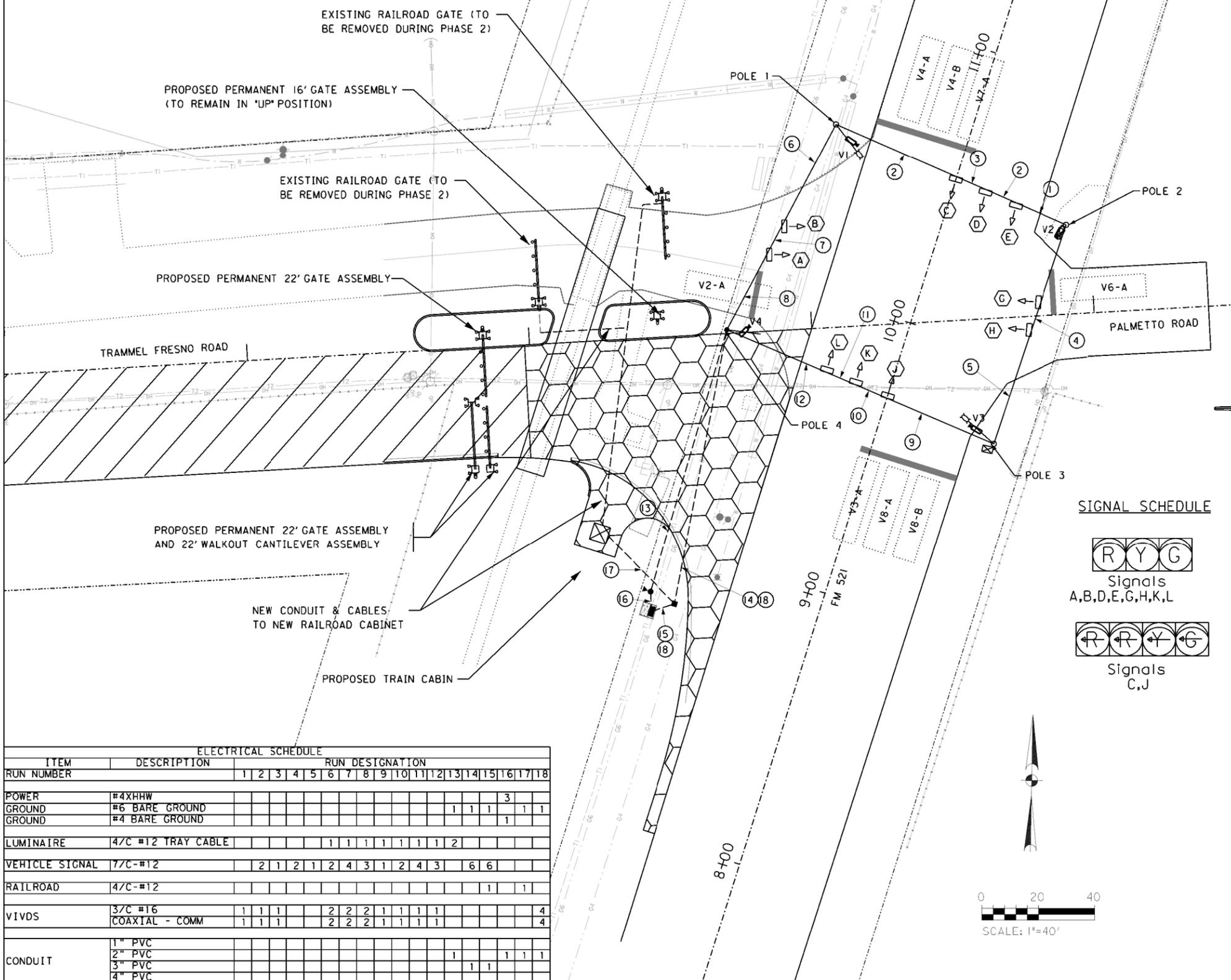
EXHIBIT "A"  
(100% PLANS)

TRAMMEL FRESNO ROAD AT UPRR  
TRAFFIC CONTROL PLAN  
(PHASE 1A)  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

|                 |           |                   |              |
|-----------------|-----------|-------------------|--------------|
| FED. DIV. NO.   | STATE     | PROJECT NO.       | SHEET NO.    |
| 06              | TEXAS     | STP 2010 (596) MM | 11           |
| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| HOU             | FORT BEND | 0912 34           | 144 CS       |

| POLE AND CONTROLLER LOCATION |           |           |  |
|------------------------------|-----------|-----------|--|
| POLE NO.                     | STATION   | OFFSET    | DESCRIPTION  |
| 1                            | 218+12.61 | 71.54' LT | EXIST STEEL STRAIN POLE, ATTACH: V1                |
| 2                            | 218+91.81 | 31.45' LT | EXIST STEEL STRAIN POLE, ATTACH: LUMINAIRE ARM, V2 |
| 3                            | 218+61.83 | 44.15' RT | EXIST STEEL STRAIN POLE, ATTACH: V3                |
| 4                            | 217+70.10 | 1.30' LT  | TEMPORARY WOODEN POLE, ATTACH: LUMINAIRE ARM, V4   |
| METER                        | 217+37.81 | 89.46' RT | PERMANENT METER AND DISCONNECT                     |
| CONTROLLER                   | 217+37.78 | 96.45' RT | PERMANENT CONTROLLER CABINET                       |

| VIVDS DETECTION |                  |
|-----------------|------------------|
| V1              | V6-A             |
| V2              | V3-A, V8-A, V8-B |
| V3              | V2-A             |
| V4              | V4-A, V4-B, V7-A |



NOTES:

PHASE IA (DETOUR PLAN, SEE SHEET II)

1. THE STATE'S CONTRACTOR SHALL CLOSE ROADWAY AND PROVIDE DETOUR.
2. THE RAILROAD'S CONTRACTOR SHALL REMOVE 40 LF OF EXISTING PANELING AND PROVIDE 104 LF OF NEW PANELING, EXTENDING FROM THE EXISTING NORTHERN LIMIT ON TRAMMEL FRESNO ROAD, SOUTH TO THE NEW SOUTHERN LIMIT OF FINAL ROADWAY.

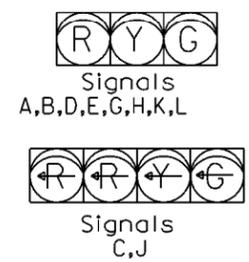
PHASE IB (THIS SHEET)

1. THE STATE'S CONTRACTOR SHALL BUILD BOTH MEDIANS AROUND CROSSING, SOUTHERN SIDE OF ROADWAY, CURB, AND ACCESS DRIVEWAY TO RAILROAD CABIN.
2. THE RAILROAD'S CONTRACTOR SHALL INSTALL BOTH EASTBOUND GATES AND EASTBOUND CANTILEVER, MEDIAN GATE FOR WESTBOUND TRAFFIC, AND PROPOSED TRAIN CABIN WITH CABLING TO EXISTING GATES.
3. THE RAILROAD'S CONTRACTOR SHALL INSTALL SOUTHERNMOST GATE FOR WESTBOUND TRAFFIC.
4. THE STATE'S CONTRACTOR SHALL INSTALL CONDUIT AND TRAFFIC SIGNAL CABLE TO NEW RAILROAD CABIN AND TEST EXISTING SIMULTANEOUS PREEMPTION AT TEMPORARY SIGNAL.
5. THE RAILROAD'S CONTRACTOR SHALL REMOVE THE EXISTING CABIN.

LEGEND

- SIGNAL POLE
- MAST ARM
- ☐ SIGNAL CONTROLLER
- ◀ PROPOSED SIGNAL HEAD
- ◀◻ EXISTING SIGNAL HEAD
- ⊥ OVERHEAD SIGN
- 📷 VIVDS CAMERA
- ▶ OPTICOM DETECTOR
- PULL BOX (TY D)
- ⚡ SERVICE & METER DISCONNECT
- LUMINAIRE & ARM
- - - CONDUIT (TRENCH)
- ▬ CONDUIT (BORE)
- ▭ DETECTION ZONE
- ⬢ HIGH EARLY STRENGTH CONCRETE
- ▨ PERMANENT PAVEMENT

SIGNAL SCHEDULE



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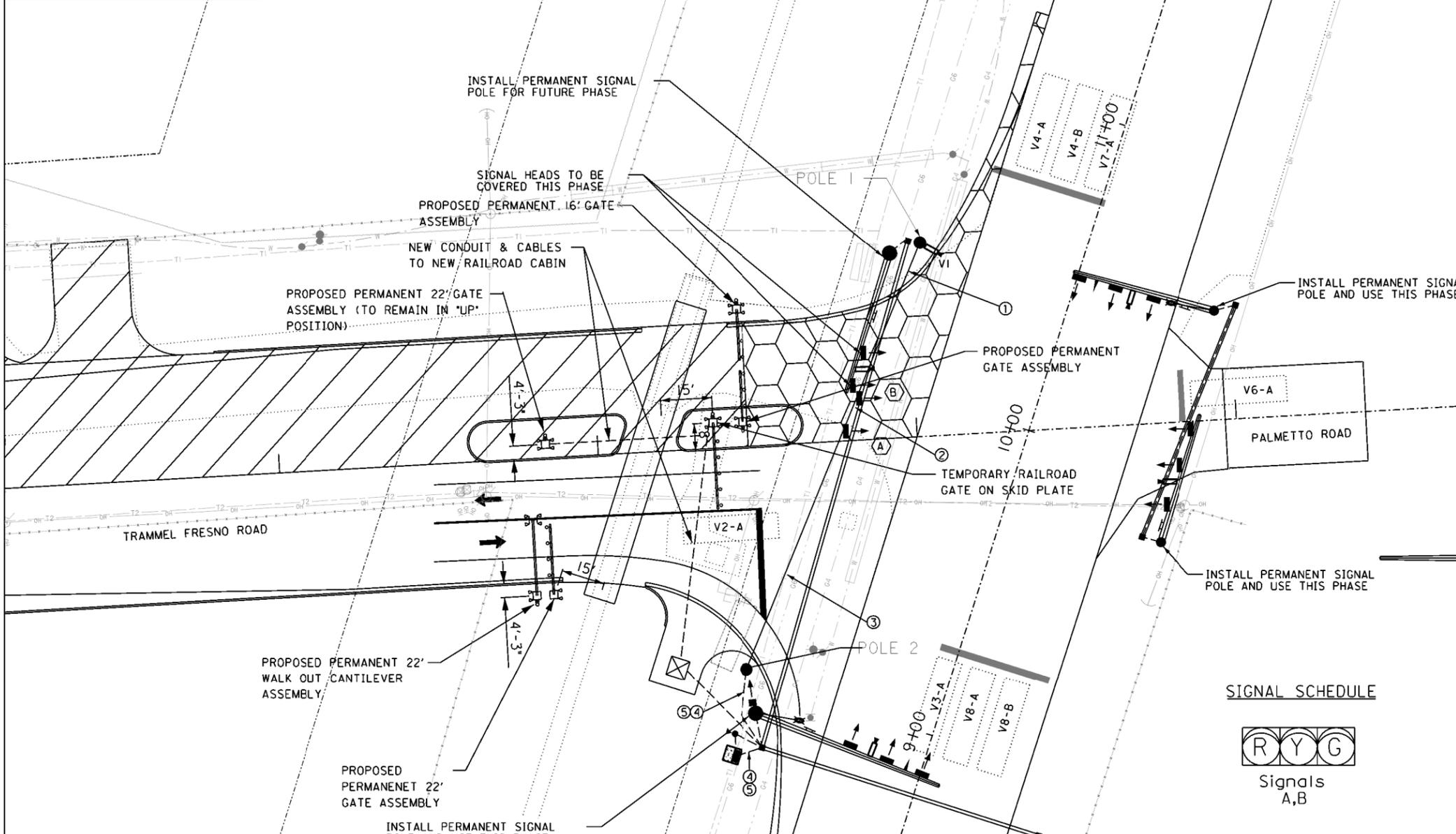
TRAMMEL FRESNO ROAD AT UPRR  
TRAFFIC CONTROL PLAN  
(PHASE IB)  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

| ELECTRICAL SCHEDULE |                        | RUN DESIGNATION |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
|---------------------|------------------------|-----------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|
| ITEM                | DESCRIPTION            | 1               | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| POWER               | #4XHHW                 |                 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    | 3  |
| GROUND              | #6 BARE GROUND         |                 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 1  | 1  |
| GROUND              | #4 BARE GROUND         |                 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 1  | 1  |
| LUMINAIRE           | 4/C #12 TRAY CABLE     |                 |   |   |   |   | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 2  |    |    |    |    |
| VEHICLE SIGNAL      | 7/C-#12                |                 | 2 | 1 | 2 | 1 | 2 | 4 | 3 | 1 | 2  | 4  | 3  |    | 6  | 6  |    |    |    |
| RAILROAD            | 4/C-#12                |                 |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 1  | 1  |    |
| VIVDS               | 3/C #16 COAXIAL - COMM | 1               | 1 | 1 | 1 |   | 2 | 2 | 2 | 1 | 1  | 1  | 1  | 1  |    |    |    |    | 4  |
| CONDUIT             | 1" PVC                 |                 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| CONDUIT             | 2" PVC                 |                 |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 1  | 1  | 1  |
| CONDUIT             | 3" PVC                 |                 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |
| CONDUIT             | 4" PVC                 |                 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |



| POLE AND CONTROLLER LOCATION |           |           |                  |
|------------------------------|-----------|-----------|------------------|
| POLE NO.                     | STATION   | OFFSET    | DESCRIPTION      |
| 1                            | 218+04.24 | 60.57' LT | TEMP WOODEN POLE |
| 2                            | 217+42.58 | 69.46' RT | TEMP WOODEN POLE |

| VIVDS DETECTION |                  |
|-----------------|------------------|
| V1              | V6-A             |
| V2              | V3-A, V8-A, V8-B |
| V3              | V2-A             |
| V4              | V4-A, V4-B, V7-A |



NOTES:

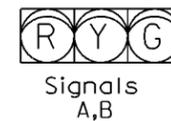
PHASE 2 (THIS SHEET)

1. THE RAILROAD'S CONTRACTOR SHALL ADJUST SOUTHERN GATE FOR EASTBOUND TRAFFIC AND ACTIVATE.
2. THE RAILROAD'S CONTRACTOR SHALL PROVIDE TEMPORARY GATE FOR WESTBOUND TRAFFIC.
3. THE STATE'S CONTRACTOR SHALL BUILD NORTHERN HALF OF ROADWAY, INCLUDING CURB.
4. THE RAILROAD'S CONTRACTOR SHALL REMOVE THE ORIGINAL EASTBOUND AND WESTBOUND GATES.
5. THE RAILROAD'S CONTRACTOR SHALL INSTALL NORTHERNMOST GATE FOR WESTBOUND TRAFFIC.
6. THE RAILROAD'S CONTRACTOR SHALL REMOVE NORTHERN PORTION OF PLANKING SUCH THAT PLANKING EXTENDS 3' PAST END OF PAVEMENT WITH THE REMAINING 96' OF PANELS TO BE CENTERED ON THE PROPOSED ROADWAY.
7. THE RAILROAD'S CONTRACTOR SHALL ADJUST TRACK SIGNALING TO PROVIDE ADVANCED PREEMPTION.

LEGEND

- SIGNAL POLE
- MAST ARM
- ◻ SIGNAL CONTROLLER
- ← HORIZONTAL SIGNAL HEAD
- ⊥ SIGN ON MAST ARM
- VIVDS CAMERA
- ▲ OPTICOM DETECTOR
- PULL BOX (TY D)
- SERVICE & METER DISCONNECT
- LUMINAIRE & ARM
- - - CONDUIT (TRENCH)
- ▬ CONDUIT (BORE)
- ▭ DETECTION ZONE
- ▭ HIGH EARLY STRENGTH CONCRETE
- ▭ PERMANENT PAVEMENT

SIGNAL SCHEDULE



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MICHAEL G. JACKSON, P.E., No. 85146 ON 6/27/14. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

| NO. | DATE    | REVISION                   | APP. |
|-----|---------|----------------------------|------|
| 10  | 7/25/14 | REVISED PER TXDOT COMMENTS | MCR  |
| 9   | 6/27/14 | REVISED PER TXDOT COMMENTS | MCR  |
| 8   | 5/15/14 | REVISED PER TXDOT COMMENTS | MCR  |
| 7   | 4/23/14 | REVISED PER TXDOT COMMENTS | MCR  |
| 6   | 4/18/14 | REVISED PER TXDOT COMMENTS | MCR  |



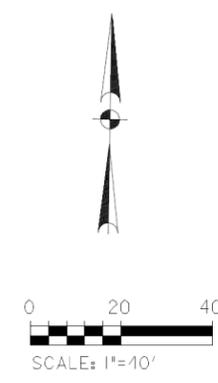
**BURK-KLEINPETER, INC.**  
Engineers, Architects, Planners, Environmental Scientists



TRAMMEL FRESNO ROAD AT UPRR  
TRAFFIC CONTROL PLAN  
(PHASE 2)  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

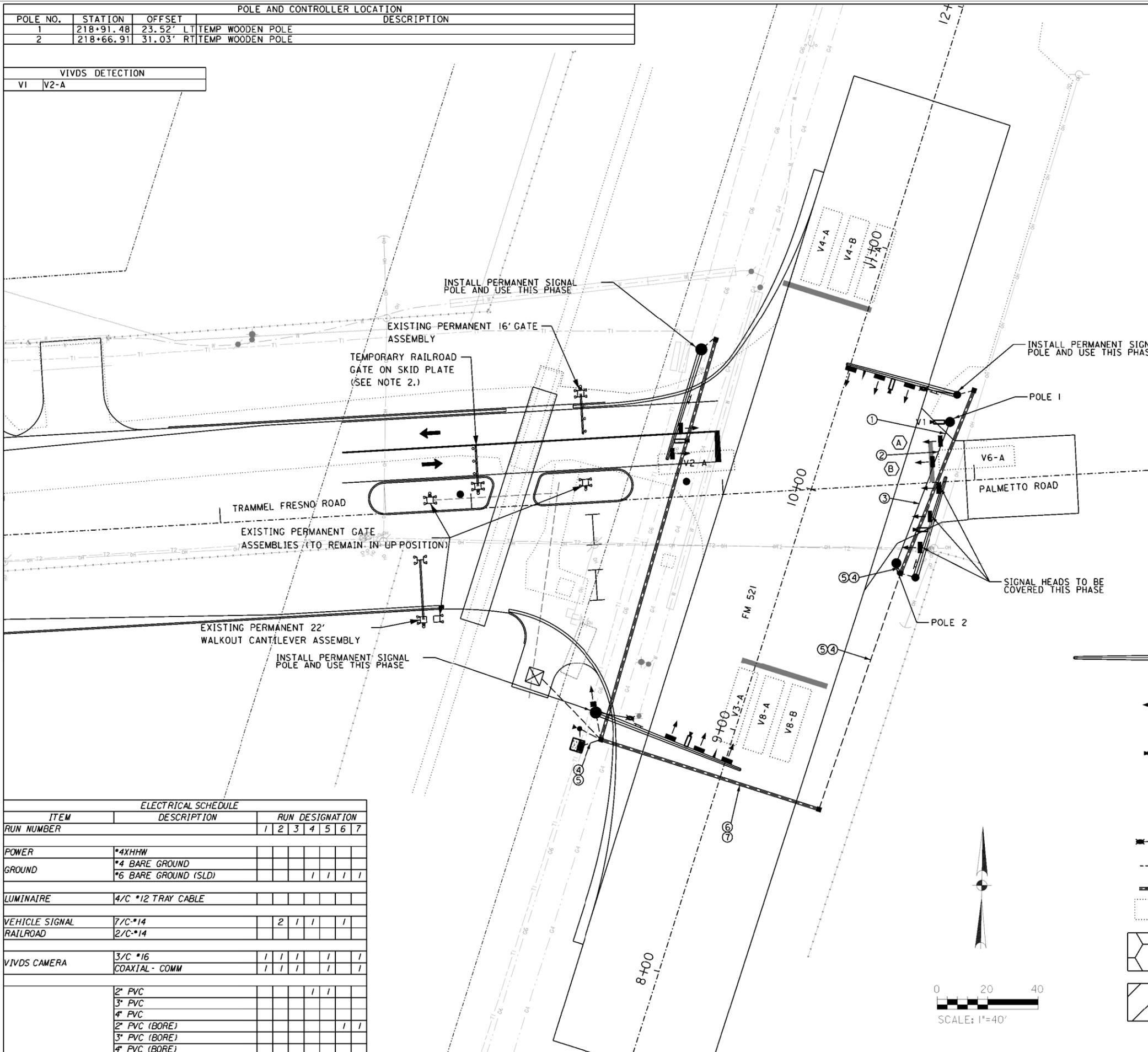
| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
|-----------------|-----------|-------------------|--------------|
| 06              | TEXAS     | STP 2010 (596) MM | 13           |
| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| HOU             | FORT BEND | 0912 34           | 144 CS       |

| ELECTRICAL SCHEDULE     |                      |                 |   |   |   |   |
|-------------------------|----------------------|-----------------|---|---|---|---|
| ITEM                    | DESCRIPTION          | RUN DESIGNATION |   |   |   |   |
| RUN NUMBER              |                      | 1               | 2 | 3 | 4 | 5 |
| POWER                   | *4XHHW               |                 |   |   |   |   |
| GROUND                  | *4 BARE GROUND       |                 |   |   |   |   |
|                         | *6 BARE GROUND (SLD) |                 |   |   | 1 | 1 |
| LUMINAIRE               | 4/C *12 TRAY CABLE   |                 |   |   |   |   |
| VEHICLE SIGNAL RAILROAD | 7/C *12              |                 | 2 | 1 | 1 |   |
|                         | 4/C *12              |                 |   |   |   |   |
| VIVDS CAMERA            | 3/C *16              | 1               | 1 | 1 | 1 | 1 |
|                         | COAXIAL - COMM       | 1               | 1 | 1 | 1 | 1 |
|                         | 2" PVC               |                 |   |   |   | 1 |
|                         | 3" PVC               |                 |   |   |   |   |
|                         | 4" PVC               |                 |   |   |   |   |
|                         | 2" PVC (BORE)        |                 |   |   |   |   |
|                         | 3" PVC (BORE)        |                 |   |   |   |   |



| POLE AND CONTROLLER LOCATION |           |           |                  |
|------------------------------|-----------|-----------|------------------|
| POLE NO.                     | STATION   | OFFSET    | DESCRIPTION      |
| 1                            | 218+91.48 | 23.52' LT | TEMP WOODEN POLE |
| 2                            | 218+66.91 | 31.03' RT | TEMP WOODEN POLE |

| VIVDS DETECTION |      |
|-----------------|------|
| VI              | V2-A |



NOTES:

PHASE 3 (THIS SHEET)

1. THE RAILROAD'S CONTRACTOR SHALL ADJUST TRACK SIGNALING TO PROVIDE ADVANCED PREEMPTION.
2. THE RAILROAD'S CONTRACTOR SHALL RELOCATE TEMPORARY GATE FROM WESTBOUND TRAFFIC DURING PHASE 2 TO EASTBOUND TRAFFIC DURING PHASE 3.

FINAL ROADWAY COMPLETION (FOLLOWING PHASE 3)

3. THE STATE AND RAILROAD WILL JOINTLY TEST ADVANCED PREEMPTION AT NEWLY CONSTRUCTED TRAFFIC SIGNAL.
4. THE RAILROAD'S CONTRACTOR SHALL REMOVE TEMPORARY GATE.
5. THE RAILROAD'S CONTRACTOR SHALL ACTIVATE AND ADJUST ALL NEW GATES.

SIGNAL SCHEDULE



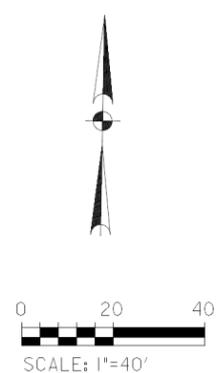
Signals A,B

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LEGEND

- SIGNAL POLE
- MAST ARM
- ⊞ SIGNAL CONTROLLER
- ⊞ HORIZONTAL SIGNAL HEAD
- ⊞ SIGN ON MAST ARM
- ⊞ VIVDS CAMERA
- ⊞ OPTICOM DETECTOR
- ⊞ PULL BOX (TY D)
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- ⊞ LUMINAIRE & ARM
- - - CONDUIT (TRENCH)
- CONDUIT (BORE)
- ⊞ DETECTION ZONE
- ⊞ HIGH EARLY STRENGTH CONCRETE
- ⊞ PERMANENT PAVEMENT



| ELECTRICAL SCHEDULE     |                      | RUN DESIGNATION |   |   |   |   |   |   |
|-------------------------|----------------------|-----------------|---|---|---|---|---|---|
| ITEM                    | DESCRIPTION          | 1               | 2 | 3 | 4 | 5 | 6 | 7 |
| POWER                   | *4XHHW               |                 |   |   |   |   |   |   |
| GROUND                  | *4 BARE GROUND       |                 |   |   |   |   |   |   |
|                         | *6 BARE GROUND (SLD) |                 |   |   |   | 1 | 1 | 1 |
| LUMINAIRE               | 4/C *12 TRAY CABLE   |                 |   |   |   |   |   |   |
| VEHICLE SIGNAL RAILROAD | 7/C *14              |                 | 2 | 1 | 1 |   |   |   |
|                         | 2/C *14              |                 |   |   |   |   |   |   |
| VIVDS CAMERA            | 3/C *16              |                 | 1 | 1 | 1 | 1 | 1 | 1 |
|                         | COAXIAL - COMM       |                 | 1 | 1 | 1 | 1 | 1 | 1 |
|                         | 2" PVC               |                 |   |   |   | 1 | 1 |   |
|                         | 3" PVC               |                 |   |   |   |   |   |   |
|                         | 4" PVC               |                 |   |   |   |   |   |   |
|                         | 2" PVC (BORE)        |                 |   |   |   |   | 1 | 1 |
|                         | 3" PVC (BORE)        |                 |   |   |   |   |   |   |
|                         | 4" PVC (BORE)        |                 |   |   |   |   |   |   |



**BURK-KLEINPETER, INC.**  
Engineers, Architects, Planners, Environmental Scientists

EXHIBIT 'A'  
(100% PLANS)

TRAMMEL FRESNO ROAD AT UPRR  
TRAFFIC CONTROL PLAN  
(PHASE 3)  
UPRR DOT NO. 447 872C  
RRMP 9.73 POPP INDUSTRIAL LEAD

| FED. NO.        | STATE     | PROJECT NO.       | SHEET NO.    |
|-----------------|-----------|-------------------|--------------|
| 06              | TEXAS     | STP 2010 (596) MM | 14           |
| STATE DIST. NO. | COUNTY    | CONT. SECT.       | JOB HWY. NO. |
| H04             | FORT BEND | 0912 34           | 144 CS       |

