

*STAFF REPORT**CITY OF OCEANSIDE*

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DATE: September 10, 2014

TO: Honorable Mayor and City Councilmembers

FROM: Development Services Department

SUBJECT: **APPROVAL OF A PROFESSIONAL SERVICES AGREEMENT TO DEVELOP CONSTRUCTION DRAWINGS FOR THE RAILROAD QUIET ZONE PROJECT**

**SYNOPSIS**

Staff recommends that the City Council approve a Professional Services Agreement with RailPros, Inc., of Irvine in an amount not to exceed \$642,488 to develop construction drawings for railroad crossing and related safety improvements for a "Quiet Zone" along Oceanside's coastal rail corridor; and authorize the City Manager to execute the agreement.

**BACKGROUND**

On August 17, 2013, the City executed a Professional Services Agreement with RailPros, Inc., for railroad engineering services to assist in the establishment of a quiet zone in accordance with the procedures outlined in the Final Rule on the Use of Locomotive Horns at Highway–Rail Grade Crossings published in the Federal Register by the Federal Railroad Administration (FRA). RailPros' work product consisted of coordination with stakeholders, additional study of improvement options, the preparation of new documents, and updating documentation previously prepared and submitted for the five at-grade rail crossings along Oceanside's coastal rail corridor.

**ANALYSIS**

RailPros has completed a project study report (Attachment A), which identifies the required improvements for the quiet zone, reviews timelines, and identifies funding options. The Professional Services Agreement provides the scope of services which RailPros will complete: final engineering design for the project, coordination through out the permitting and approval process.

It is anticipated that the project design will take approximately one year to complete. Much of the physical work will be performed within the North County Transit District (NCTD) railroad right-of-way. Therefore, multi-agency coordination is required and timelines associated with construction and implementation may be highly variable. The implementation phase may require public outreach and education to eliminate the

expectation that there will be no more noise at or near the rail crossings. For example, bells on railroad crossing equipment will continue to sound and locomotive engineers will maintain the right to sound the locomotive horn if a safety issue is present.

There are many components of train operations which contribute to residents' overall noise perception. While eliminating the routine sounding of horns at each of the five Oceanside crossings will help, the overall benefits perceived by nearby residents cannot be precisely defined.

Based upon the most recent diagnostic effort, project construction costs are estimated to be \$7 to \$8 million for Oceanside's five coastal rail corridor crossings: Surf Rider Way, Mission Avenue, Wisconsin Avenue, Oceanside Boulevard, and Cassidy Street. Prior to committing to construction, staff will return with funding options, including the use of current and short-term borrowed use of TransNet funds.

SANDAG only accepts engineering firms to do railroad design work if they have been vetted by themselves or another responsible transportation agency. RailPros is among a small group of engineering consulting firms whose qualification and experience has been pre-screened and pre-selected for on-call task orders by SANDAG and its member agencies. RailPros is currently working for SANDAG on Los Angeles-San Diego-San Luis Obispo Rail Corridor (LOSSAN) related projects, and has the staff availability to also work on the Oceanside Quiet Zone project.

RailPros is currently negotiating contract fees with SANDAG. The current hourly rates, including audited overhead and fee, provided with the scope of work and fee are the same rates being negotiated with SANDAG. Additionally, RailPros is providing Oceanside with a task order ceiling price of \$642,488.

The City of Oceanside "Procurement of Goods and Services" policy requires a qualifications-based selection process for hiring engineering and other professional consultants. SANDAG has followed an equivalent procedure as specified in the procurement policy in selecting RailPros. No Oceanside engineering firm is prequalified by SANDAG or has railroad infrastructure design experience.

Section 28A.24(b) of the Oceanside Municipal Code also allows shared-agency purchases in place of project-specific bidding. The SANDAG Services Agreement with RailPros provides that "Portions of the contract value awarded to the Consultant may be assigned to and used by one of the Coordinating Agencies (defined as inclusive of SANDAG member agencies)."

Because of complications with Federal oversight issues, SANDAG will not allow formal assignment of its existing RailPros contract to the City of Oceanside. For this reason, staff recommends execution of an entirely separate Professional Services Agreement (Attachment B) between the City and RailPros. However, this agreement uses the same hourly rates being negotiated and cost controls as the SANDAG RailPros contract to meet the intent of the City's purchasing policy for both the qualifications-based selection process and the shared-agency pricing.

**FISCAL IMPACT**

The contract price with RailPros is not to exceed \$642,488. The FY 2014-2015 CIP budget includes \$650,000 in new project funds in account 902135400212, Mainline Railroad Crossing Safety Improvements. The funding source is the TransNet ½ cent sales tax program under Fund 212. Therefore, sufficient funds are available.

**INSURANCE REQUIREMENTS**

The City's standard insurance requirements will be met.

**COMMISSION OR COMMITTEE REPORT**

Does not apply.

**CITY ATTORNEY'S ANALYSIS**

The referenced documents have been reviewed by the City Attorney and approved as to form.

**RECOMMENDATION**

Staff recommends that the City Council approve a Professional Services Agreement with RailPros, Inc., of Irvine in an amount not to exceed \$642,488 to develop construction drawings for railroad crossing and related safety improvements for a "Quiet Zone" along Oceanside's coastal rail corridor; and authorize the City Manager to execute the agreement.

PREPARED BY:

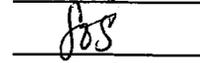
  
\_\_\_\_\_  
Gary Kellison  
Senior Civil Engineer

SUBMITTED BY:

  
\_\_\_\_\_  
Steven R. Jepsen  
City Manager

REVIEWED BY:

Michelle Skaggs Lawrence, Deputy City Manager  
Scott O. Smith, City Engineer  
James R. Riley, Financial Services Director

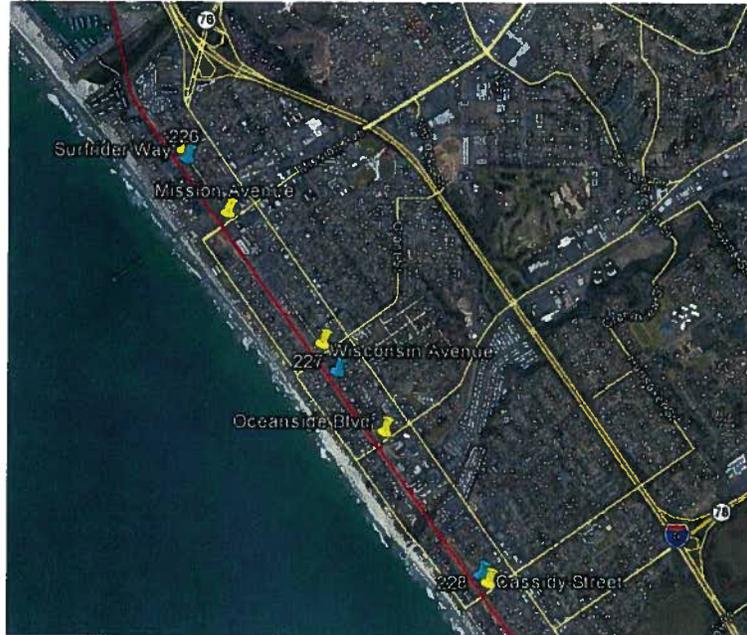
  
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Attachment A – Oceanside Quiet Zone Project Study Report  
Attachment B – Professional Services Agreement

**Project Study Report**

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**Oceanside Quiet Zone – San Diego Subdivision  
(MP 225.9-228.0)**



**City of Oceanside** - [www.ci.oceanside.ca.us](http://www.ci.oceanside.ca.us)

August 26, 2014

Oceanside Quiet Zone

**Project Study Report**

**Oceanside Quiet Zone – San Diego Subdivision  
(MP 225.9-228.0)**

Submitted:  Date 8/26/2014  
 Robert Williams, P.E.  
 RailPros Inc.  
[www.railpros.com](http://www.railpros.com)

| Revision | Author      | Organization | Date     | Description  |
|----------|-------------|--------------|----------|--------------|
| 0        | R. Williams | RailPros     | 07/18/14 | PSR Issued   |
| 1        | R. Williams | RailPros     | 08/26/14 | PSR Revision |
|          |             |              |          |              |
|          |             |              |          |              |

| Current Rev. | Approved by: | Organization | Date    | Signature   |
|--------------|--------------|--------------|---------|---|
| 1            | S. Smith     | Oceanside    | 8-26-14 |  |

## Project Study Report

### Project Description

The project involves the implementation of safety improvements at 5 crossings in the City of Oceanside, including Surf rider Way, Mission Avenue, Wisconsin Avenue, Oceanside Boulevard and Cassidy Street, and the establishment of a quiet zone. The project includes the construction of civil improvements to the roadway, sidewalks, driveways and railroad equipment, including relocation of existing equipment and signage, relocation of driveways, installation of pedestrian treatments, traffic signals, walkways, signage, striping and landscaping. The project also includes installation of updates and improvements to the railroad signal system. Concept level cost estimate for the Project is \$8.0 million projected cost in year of expenditure. Oceanside is directly responsible for funding and implementation of the Project. Stakeholders involved in review and approval of the project design include NCTD, California Public Utilities Commission (CPUC) and the Federal Railroad Administration (FRA).

### Project Location

The proposed project is located in the City of Oceanside at each of the 5 crossings listed above, between railroad milepost (MP) 225.9-228.0 on the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Corridor. Surf rider Way is the northernmost crossing and Cassidy Street is the southernmost crossing in the project.

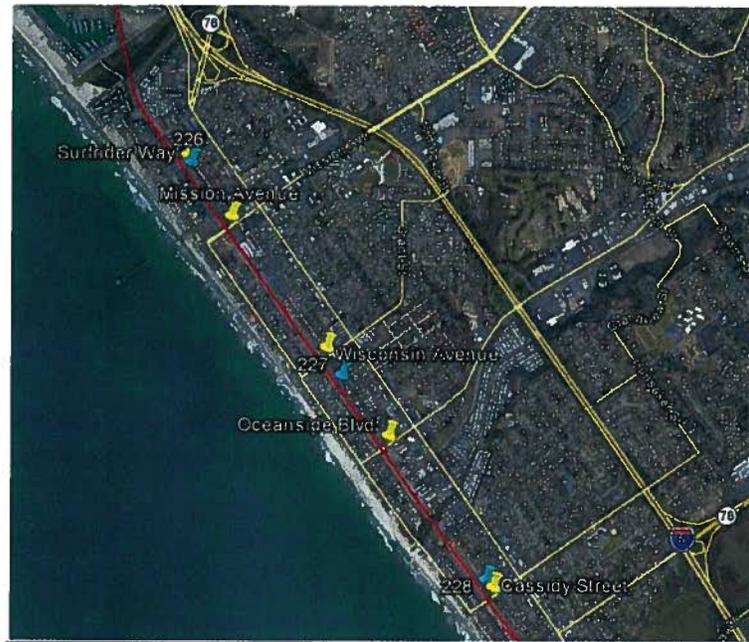


Figure 2: Project Site – MP 225.9-228.0

## Project Study Report

### Project History

In 2005 the City of Oceanside began contemplating the feasibility of implementing safety enhancements and improvements over at-grade crossings within the City limits with the intention of establishing a quiet zone, in accordance with Federal regulation, that would limit the sounding of horns when trains pass through the City. The City progressed through several iterations of conceptual development working with the railroads, the CPUC and the FRA to establish the requirements for improving the crossings. These improvements were detailed in the diagnostic field meeting notes of November 1, 2006 and the previous concept exhibits.

Previous concepts also included improvements that have since been implemented by other projects. Of particular note are the improvements at Cassidy Street and Oceanside Boulevard.

Over the subsequent years the understanding of how quiet zones function and what improvements create the most benefit, to both the railroad and the travelling public, have evolved. Due in part to this added experience and understanding, the requirements, preferences and opinions of the railroads and CPUC staff have evolved as well.

Revised Concept Exhibits have been prepared for the City are included in attachment to this Project Study Report (PSR) as Exhibit 1 – Project Concept Layout Plans and Exhibit 2 – Project Concept Cost Estimate.

On January 16, 2014 the City held a field diagnostic meeting, inviting all stakeholders to participate. Minutes from that meeting detail the stakeholder recommendations for the crossings, particularly from the CPUC, many of which have been incorporated into the Project Concept Layout Plans. The Stakeholder Field Diagnostic Meeting Minutes are included in Exhibit 3.

### Current Rail Service

The following railroads operators use the LOSSAN Corridor track through the project location:

#### *North County Transit District*

NCTD operates Coaster commuter services, serving 8 stations located in coastal communities between Oceanside and San Diego. The service provides 22 Coaster trains per day Monday through Friday (24 during baseball season), 26 on Friday nights from April through September, 12 per day on Saturday and 8 per day on Sundays and holidays. Cities served include Oceanside, Carlsbad, Encinitas, Solana Beach, and San Diego.

NCTD also operates Sprinter light rail commuter services, serving 15 stations connecting Oceanside, Vista, San Marcos and Escondido. The SPRINTER runs every 30 minutes in

## Project Study Report

each direction Monday through Friday, from approximately 4 am to 9 pm, and totaling 68 trains. Friday night an additional 10 trains are provided. 55 trains are provided on Saturday and 50 trains run on Sundays and holidays.

### *Amtrak*

Amtrak operates 23 Pacific Surfliner trains per day. Major cities served are San Diego, Solana Beach, Oceanside, Los Angeles, Santa Barbara, and San Luis Obispo.

### *BNSF Railway*

The BNSF Railway (BNSF) operates freight rail service throughout the San Diego portion of the LOSSAN corridor, seven days per week. Typically, four (4) to six (6) freight trains per day are operated. The BNSF freight service is both local and national in scope; with the LOSSAN corridor connecting to the entire North American rail network.

### *Southern California Regional Rail Authority (SCRRA)*

SCRRA operates the Metrolink commuter rail service on the San Diego portion of the LOSSAN corridor from the Orange County line to the Oceanside Transit Center, seven days per week. Metrolink service provides seventeen (17) trains per day Monday through Friday and twelve (12) trains per day Saturday and Sunday.

## **Project Purpose and Need**

The purpose of the Oceanside Quiet Zone Project is to improve vehicular, pedestrian and rail safety conditions within the project area; and improve the quality of life within the Oceanside community between beaches, schools, commercial areas, and residential neighborhoods by limiting the sounding of train horns. The Project is an important part of the City's plans to redevelop, revitalize and generally improve the downtown and surrounding areas.

## **TRAFFIC AND ACCIDENT DATA**

Current traffic and accident data support the need for the proposed safety improvements, particularly the pedestrian treatments. Within the last five years there have been significant incidents at the Surfrider Way, Mission Avenue, Wisconsin Avenue and Cassidy Street at-grade crossings, including several fatalities, the majority involving pedestrians. Accident history data obtained from the FRA for each crossing are included in Exhibit 4 – FRA Highway-Grade Crossing Accident Reports.

## **PROPOSED RAIL SERVICE EXPANSION**

The San Diego - LOSSAN Corridor Project Prioritization Analysis (2009) advises that mid-term service expansion, which equates roughly to year 2025, will expand service to 93 trains each weekday. This expansion would provide 20 to 28 more trains than 2008, with more service throughout the day for all operators except Metrolink. COASTER trains would run about every 25 minutes in the peak-direction, and about every 90 minutes in the mid-day and evenings. Amtrak would have consistent hourly service in both directions throughout the day. BNSF would add a second manifest train in the mid-day.

## Project Study Report

### Project Benefits

The project benefits the City, the travelling public, residents, businesses and the surrounding community by both improving safety at the crossings and improving quality of life by limiting train horns through the implementation of the quiet zone.

### Scope of Work

**The Scope of Work for the Oceanside Quiet Zone project includes the following:**

- Develop Project Concept (Completed in conjunction with this PSR)
  - Concept Alternative Layouts and Cost Estimate
  - Concept Quiet Zone Calculations
  - Project Study Report
- Prepare design documents and reports for construction as follows;
  - 30% Preliminary Engineering and Design Alternatives
  - 90% Design Plan set
  - 100% Bid ready Design Plan set and Construction Specifications
- Prepare Quiet Zone Notices and Documentation as follows;
  - Preliminary Quiet Zone Calculations
  - Notice of Intent to Establish a New Quiet Zone (NOI)
  - Response to NOI Comments
  - Alternative Safety Measure Application to the FRA (may not be required)
  - Final Quiet Zone Calculations
  - Notice of Establishment (NOE)
- Obtain environmental clearance as necessary, see Environmental Clearance and Permits section of this PSR;
- Obtain permits (including CPUC Permitting) as outlined in the Environmental Clearance and Permits section of this PSR;
- Coordinate C&M Agreement between the City and NCTD
- Coordinate Easement Between the City and NCTD, as necessary

**The Physical Scope required to complete the project includes:**

- Relocate railroad signal equipment
- Construct/install pedestrian gates
- Construct civil, drainage, and landscaping improvements
- Install railroad interconnected traffic signals at Mission Avenue
- Upgrade railroad warning devices with LED flashers and new gate arms, as needed
- Replace railroad signal houses, as needed

**Project Study Report**

- Modify railroad signal system

**Coordination With NCTD**

Significant coordination with NCTD will be required through final design of the project. All project deliverables should be submitted to NCTD for review and approval prior to integration into the project. A Construction and Maintenance (C&M) Agreement between the City of Oceanside and NCTD will be required prior to construction. The C&M Agreement will detail the agreed upon project duties, construction requirements, funding commitments, and post-construction maintenance responsibilities of NCTD, and the City.

**Project Schedule**

Project Milestones

|   |                  |
|---|------------------|
| Concept, Estimate, Plans and Project Study Report Approved    | August 2014      |
| Funding Awarded & Project Notice to Proceed (NTP)             | NTP              |
| Begin Design Phase – Preliminary Engineering                  | NTP + 1 Month    |
| End Preliminary Engineering                                   | NTP + 3 Month    |
| Begin PS&E  | NTP + 3 Months   |
| End Design Phase (Ready to List for Advertising Milestone)    | NTP + 12 Months  |
| Construction Funded and Construction Notice to Proceed (CNTP) | CNTP             |
| Begin Construction (Contractor Mobilized)                     | CNTP + 1 Months  |
| End Construction (Construction Contract Acceptance Milestone) | CNTP + 12 Months |
| Begin Closeout Phase  | CNTP + 12 Months |
| End Closeout Phase  | CNTP + 18 Months |

**Environmental Clearance and Permits**

**ENVIRONMENTAL STATUS**

The project development will occur within developed City of Oceanside roadway and NCTD railroad right-of-way. Additional environmental impacts are not anticipated and further development of the environmental status and necessary permits will be further identified during the PS&E phase. It is currently anticipated that the project will be exempt from CEQA and NEPA, however, based on the funding sources for construction, additional permitting may be necessary.

**PERMITS**

The following regulatory agency permits may be required prior to construction:

| Permit or Approval                | Responsible Agency  | Approximate Time Frame    |
|-----------------------------------|---------------------|---------------------------|
| Federal                           |                     |                           |
| NEPA (if Federal funding is used) | Federal lead agency | At 30% Design + 12 months |

**Oceanside Quiet Zone**

**Project Study Report**

| <b>Permit or Approval</b>  | <b>Responsible Agency</b>  | <b>Approximate Time Frame</b> |
|--|--|-------------------------------|
| Section 106 State Historic Preservation Act                          | Federal lead agency  | At 30% Design + 6 months      |
| <b>State</b>   |  |                               |
| CEQA   | State lead agency  | At 30% Design + 12 months     |
| Section 402 – NPDES General Construction Activity Storm Water Permit | State Water Resources Control Board  | At 30% Design + 3 months      |
| Coastal Development Permit   | California Coastal Commission or local agency with certified local coastal program | At 30% Design + 12 months     |
| Coastal Consistency Determination                                    | California Coastal Commission (San Francisco)                                      | At 30% Design + 12 months     |
| Rail Crossings GO-88   | California Public Utilities Commission   | At 30% Design + 6 months      |
| <b>City</b>  |  |                               |
| Grading Permit   | City of Oceanside  | Prior to Start Construction   |

**Project Cost**

**COST ESTIMATE**

A revised cost estimate is provided in the attachments to this PSR.

One significant change from previous cost estimates is the inclusion of additional railroad signal equipment. Based upon communication with the railroad, it was previously assumed that most of the railroad signal houses had adequate capacity for the proposed improvements. Recently, a high level review of the existing railroad equipment and capacity performed by NCTD's Railroad Signal Consultant determined that several of the houses may need to be upgraded or replaced in order to account for the proposed changes to the grade crossing warning system, in particular, the addition of the pedestrian gates.

**Project Funding**

**Funding**

This project is funded through the design phase, including Preliminary Engineering and PS&E Final Design, by the City of Oceanside with eligible TransNet sales tax funds.

The construction phase is not currently funded. Construction of proposed improvements are eligible for TransNet sales tax funds received by the City of Oceanside, as well as for the City of Oceanside General Fund allocations. Limited pedestrian safety improvements at Mission Avenue are eligible for Caltrans Section 130 funding.

Additionally, SANDAG is currently developing improvements at Surfriider Way as part of their Eastbrook to Shell double track project (currently not funded for construction) that will include relocation or replacement of signal equipment and other proposed

## Project Study Report

improvements that will need to be coordinated with this project. In addition to general coordination, there may be a possibility to jointly expedite implementation of improvements for one project or the other, potentially resulting in an opportunity for cost sharing or savings between the two projects.

Funding Alternatives for the construction phase will be developed further and identified during the Design Phase.

### Next Steps

#### **DESIGN PHASE**

As outlined in the sections above, the next step is to begin the Preliminary Engineering and Environmental phase to develop more detailed design alternatives, begin the environmental and permitting processes and ultimately establish a preferred design alternative to move forward into the next design phase. The full design phase will consist of preparing final plans, specifications and estimates for construction (see scope of work section above).

The City expects to select a designer and begin the design phase in the 3<sup>rd</sup> quarter of 2014.

#### **CONSTRUCTION PHASE**

The construction phase of the project can begin upon completion of the design phase and contingent upon funding being provided.

#### **PHASING CONSTRUCTION IMPLEMENTATION**

Based on the level of funding available, in order to expedite construction and implementation of the quiet zone in key areas, the City may choose to phase construction of portions of the project. The preferred phasing alternative, in lieu of full implementation at all five crossings, would be to implement the safety improvements at the 3 northernmost crossings, Surf Rider Way, Mission Avenue and Wisconsin Avenue, and establish an initial quiet zone throughout the downtown region. These crossings have the most significant vehicular and pedestrian traffic due to the freeway, beach, transit center and downtown area access. These locations also have the most significant accident history and would greatly benefit from the safety improvements proposed. Additionally the quality of life in the downtown area would greatly benefit from reduced train horn noise provided by the implementation of the quiet zone. Quiet zone calculations for different phasing alternatives are shown attached in the back of this PSR (See Exhibit 5 – Quiet Zone Calculations for Phasing Alternatives).

At Oceanside Boulevard and Cassidy Street, to the south, the City may opt to implement selected improvements, such as median, driveway, sidewalk and signing and striping improvements as part of the initial phase of construction, or alternatively to implement all improvements at the two southern crossings in a separate construction phase. The quiet zone at these crossing would likely be established separately from the northern crossings upon completion of this construction phase.

## Project Study Report

The determination to phase construction implementation will need to be made prior to the completion of the design phase. The designer will need to develop phase specific construction drawings and documentation for the construction contract.

The main benefit to phasing construction is to expedite implementation of improvements and the establishment of a quiet zone at selected crossing with limited funding available.

While many of the potential drawbacks to phasing are minimal or can be mitigated with effective planning and outreach, it is important to identify them. Some potential drawbacks to phasing include:

- Additional design details
- Additional permitting/environmental requirements or submittals
- Additional construction costs – multiple mobilizations, additional contract requirements, increased material costs
- Additional quiet zone implementation effort and ongoing record keeping requirements
- Train horn noise “leakage” from the non-quiet zone area
- Resident/travelling public concerns and confusion between quiet zone and non-quiet zone areas

**Project Study Report**

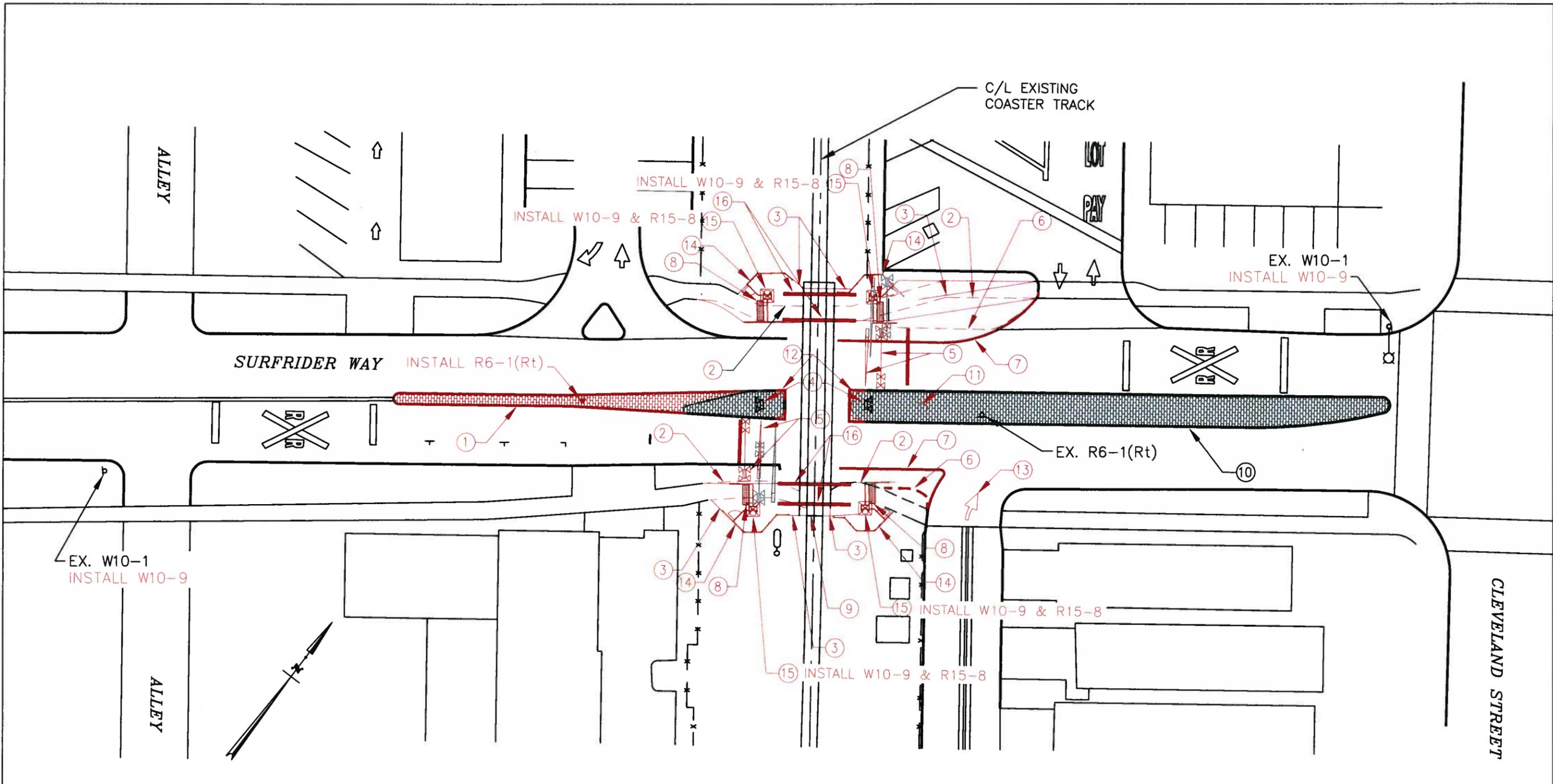
**Exhibits**

- 1. Project Concept Layout Plans**
- 2. Project Concept Cost Estimate**
- 3. Stakeholder Field Diagnostic Meeting Minutes**
- 4. FRA Highway-Rail Grade Crossing Accident Reports**
- 5. Quiet Zone Calculations for Phasing Alternatives**
- 6. NCTD Track Chart**

Oceanside Quiet Zone

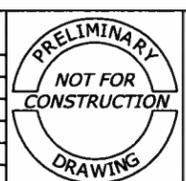
Project Study Report

Project Concept Layout Plans



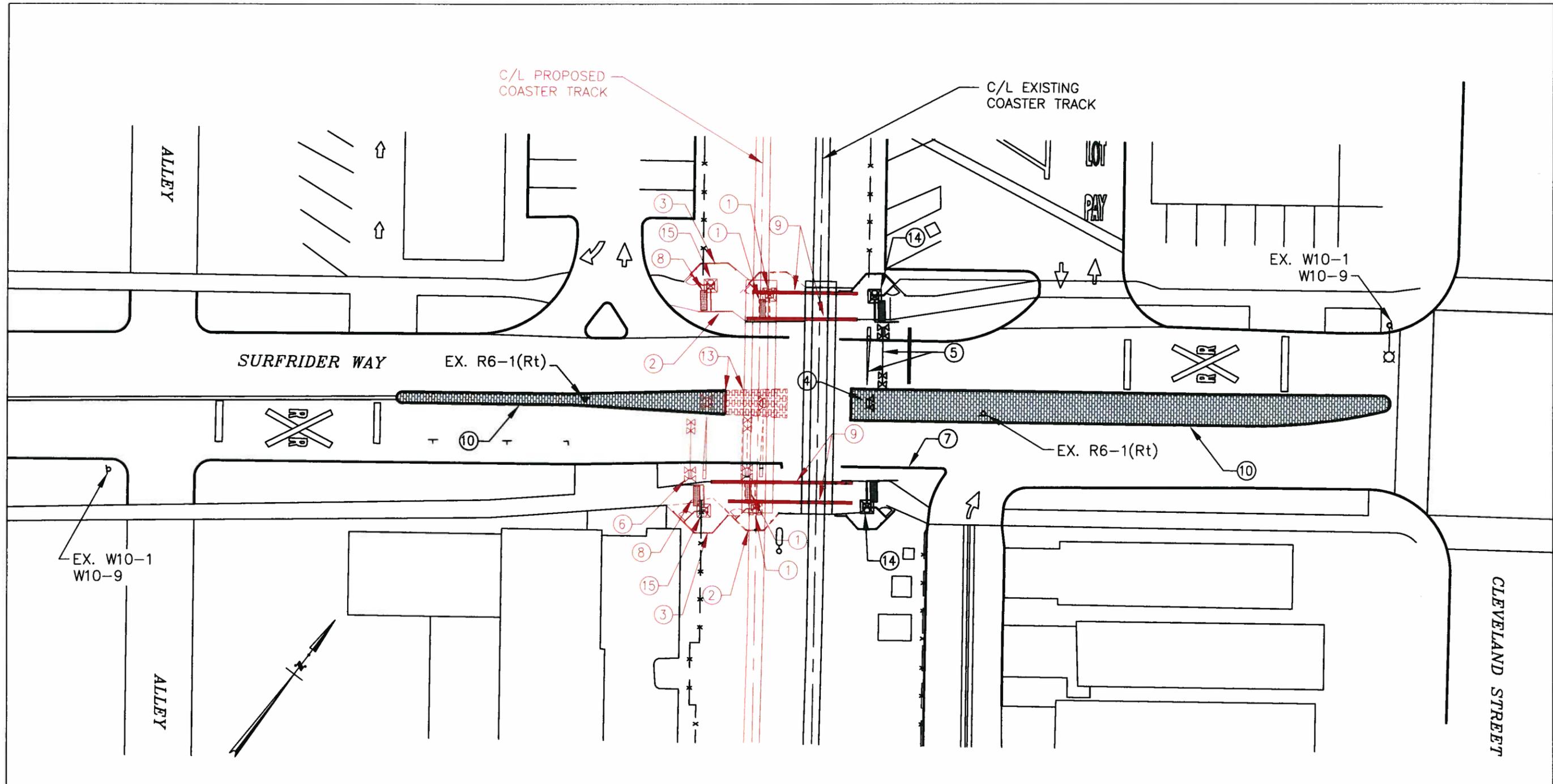
- ① EXTEND WESTERLY MEDIAN BEYOND DRIVEWAYS OR ADD CHANNELIZATION DEVICES
- ② DEMOLISH AND REMOVE EXISTING SIDEWALK
- ③ CONSTRUCT SIDEWALK
- ④ EXISTING NO. 8 TO REMAIN; UPGRADE FLASHERS TO CURRENT STANDARDS
- ⑤ RELOCATED NO. 9A TO REMAIN; UPGRADE FLASHERS AND GATES TO CURRENT STANDARDS
- ⑥ DEMOLISH AND REMOVE EXISTING CURB AND GUTTER
- ⑦ CONSTRUCT NEW CURB AND GUTTER
- ⑧ PROPOSED DETECTABLE WARNING STRIP
- ⑨ EXTEND CROSSING PANEL
- ⑩ EXISTING RAISED MEDIAN TO REMAIN
- ⑪ REMOVE/TRIM VEGETATION
- ⑫ RECONSTRUCT MEDIAN NOSE TO BE SQUARED OFF
- ⑬ RECONFIGURE ALLEY DRIVEWAY FOR EXIT ONLY
- ⑭ CONSTRUCT CHANNELIZATION FENCING
- ⑮ PROPOSED NO. 9 PEDESTRIAN GATE AND SWING GATE PER METROLINK STANDARDS
- ⑯ PROPOSED CROSSWALK EDGE LINE

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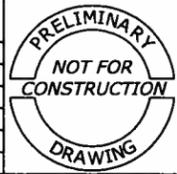
**CITY OF OCEANSIDE, CA  
RAILROAD QUIET ZONE**

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| <b>SURFRIDER WAY<br/>CONCEPTUAL PLAN</b> |               | DWG. NO.<br><b>1A</b>          |
| SCALE: 1" = 30'                          | SIZE: 11"x17" | SHEET 1A OF 5                  |
| DESIGNED: EH                             | DRAWN: JD     | CHECKED: EH DATE: MAY 12, 2014 |



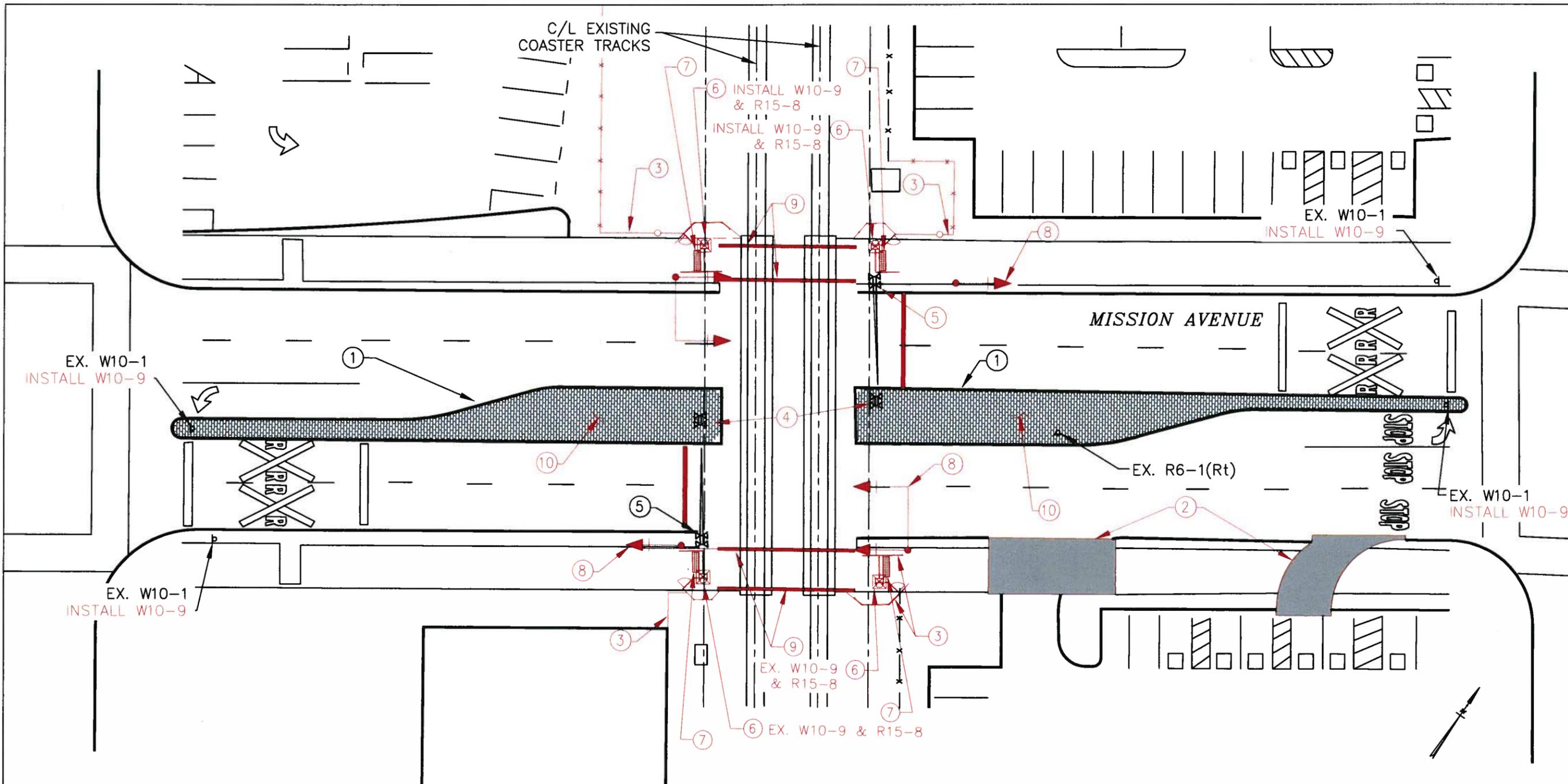
- ① REMOVE EXISTING EQUIPMENT
- ② DEMOLISH AND REMOVE EXISTING SIDEWALK
- ③ CONSTRUCT SIDEWALK
- ④ EXISTING NO. 8 TO REMAIN
- ⑤ EXISTING NO. 9A TO REMAIN
- ⑥ RELOCATED NO. 9A TO REMAIN; UPGRADE FLASHERS AND GATES TO CURRENT STANDARDS
- ⑦ CURB AND GUTTER
- ⑧ PROPOSED DETECTABLE WARNING STRIP
- ⑨ PROPOSED CROSSWALK EDGE LINE
- ⑩ EXISTING RAISED MEDIAN TO REMAIN
- ⑪ CONSTRUCT CHANNELIZATION FENCING
- ⑫ PROPOSED NO. 9 PEDESTRIAN GATE AND SWING GATE PER METROLINK STANDARDS
- ⑬ REMOVE EXISTING CONFLICTING MEDIAN AND RECONSTRUCT MEDIAN NOSE
- ⑭ EXISTING NO. 9 PEDESTRIAN GATE AND SWING GATE

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CITY OF OCEANSIDE, CA  
RAILROAD QUIET ZONE

|  |               |                                |
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| <b>SURFRIDER WAY<br/>CONCEPTUAL PLAN</b> |               | DWG. NO.<br><b>1B</b>          |
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| DESIGNED: EH                             | DRAWN: JD     | CHECKED: EH DATE: MAY 12, 2014 |



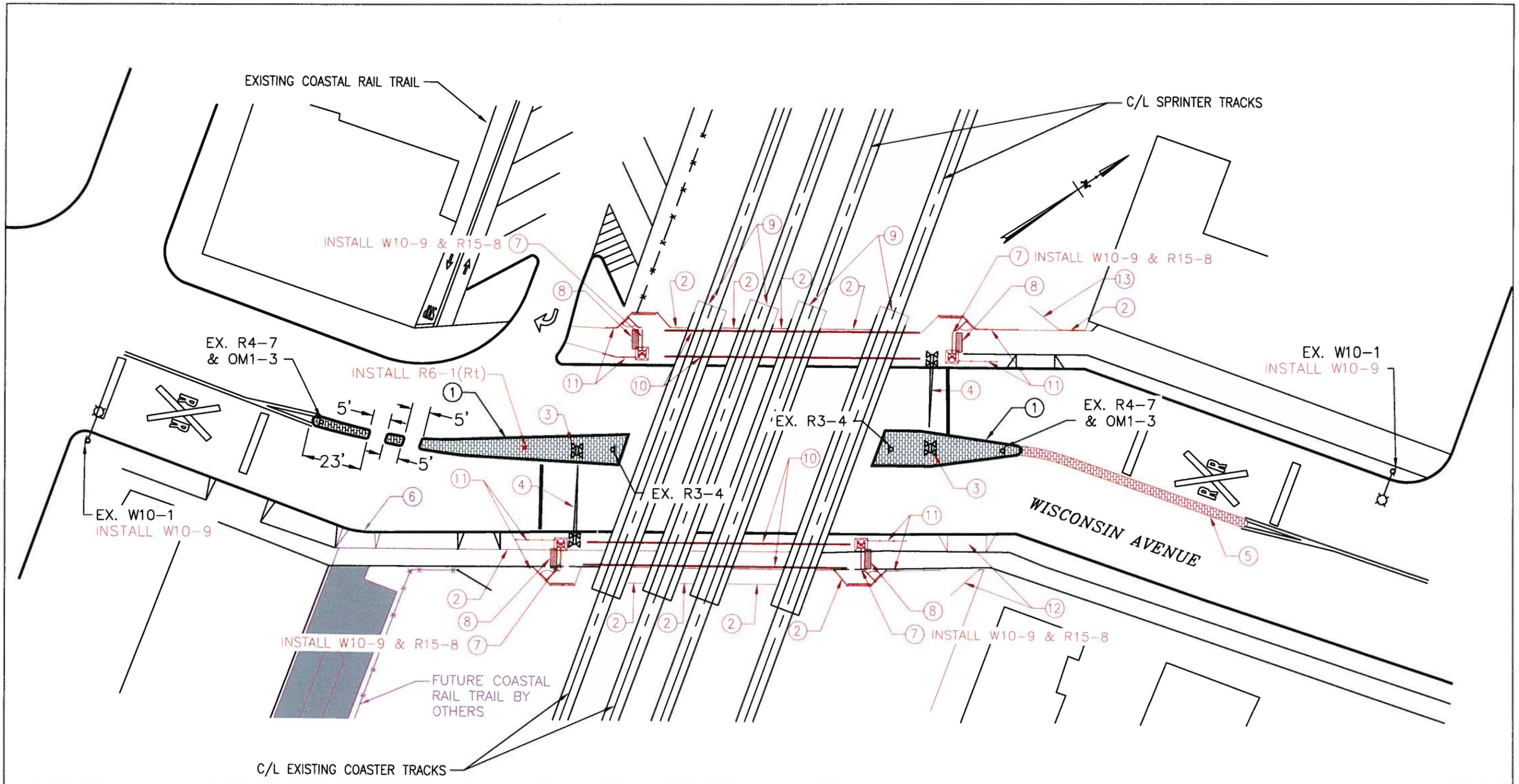
- ① EXISTING MEDIAN WITH 6" MIN. CURBS
- ② CLOSE EXISTING DRIVEWAY OR RELOCATE DRIVEWAY TO BE 60' MINIMUM FROM GATE
- ③ CONSTRUCT PEDESTRIAN RAILING/CHANNELIZATION
- ④ EXISTING NO. 8 TO REMAIN; UPGRADE FLASHERS AND GATES TO CURRENT STANDARDS
- ⑤ EXISTING NO. 9 TO REMAIN; UPGRADE FLASHERS AND GATES TO CURRENT STANDARDS
- ⑥ PROPOSED NO. 9 PEDESTRIAN GATE AND SWING GATE PER METROLINK STANDARDS
- ⑦ PROPOSED DETECTABLE WARNING STRIP
- ⑧ FUTURE QUEUE-CUTTER SIGNAL TO BE INSTALLED WHEN ADJACENT INTERSECTIONS ARE SIGNALIZED AND/OR WHEN REQUIRED BY QUEUING STUDY
- ⑨ PROPOSED CROSSWALK EDGE LINE
- ⑩ REMOVE/TRIM VEGETATION

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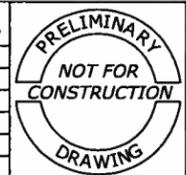
CITY OF OCEANSIDE, CA  
RAILROAD QUIET ZONE

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| <b>MISSION STREET<br/>CONCEPTUAL PLAN</b> |               |              | DWG. NO.<br><b>2</b> |
| SCALE: 1" = 30'                           | SIZE: 11"x17" | SHEET 2 OF 5 |                      |
| DESIGNED: EH                              | DRAWN: JD     | CHECKED: EH  | DATE: MAY 12, 2014   |



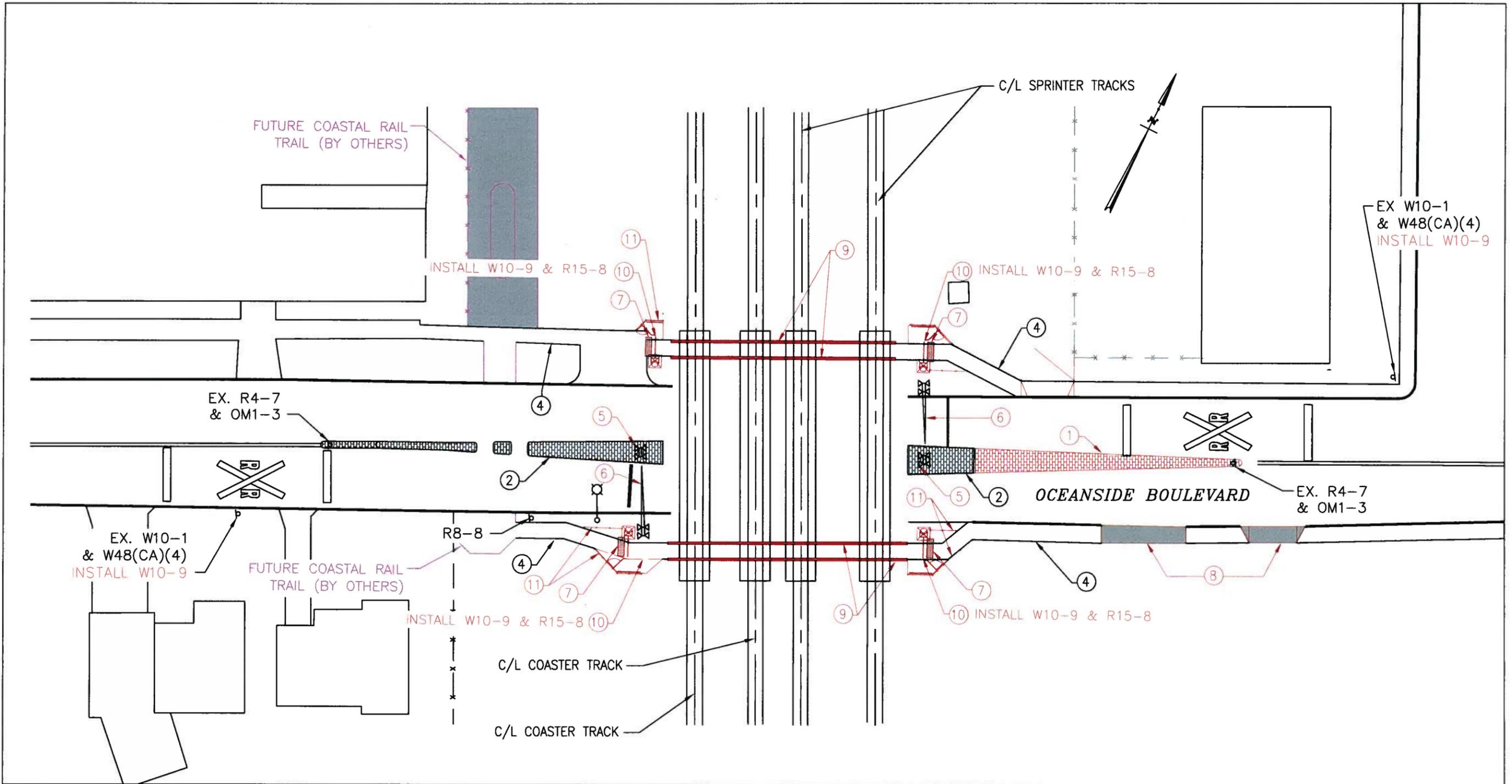
- |   |   |   |                                   |
|---|---|---|-----------------------------------|
| ① EXISTING MEDIAN   | ④ RELOCATED NO. 9A TO REMAIN; UPGRADE FLASHERS AND GATES TO CURRENT STANDARDS | ⑧ PROPOSED DETECTABLE WARNING STRIP           | ⑫ PROPOSED ACCESS GATE & DRIVEWAY |
| ② PROPOSED SIDEWALK   | ⑤ EXTEND EAST MEDIAN OR ADD CHANNELIZATION DEVICES                            | ⑨ EXTEND TRACK PANEL                          | ⑬ PROPOSED ACCESS GATE            |
| ③ EXISTING NO. 8 TO REMAIN; UPGRADE FLASHERS TO CURRENT STANDARDS | ⑥ PROPOSED DRIVEWAY (BY OTHERS)   | ⑩ PROPOSED CROSSWALK EDGE LINE                |                                   |
|   | ⑦ PROPOSED NO. 9 PEDESTRIAN GATE AND SWING GATE                               | ⑪ CONSTRUCT PEDESTRIAN RAILING/CHANNELIZATION |                                   |

| REV. | DATE | DESCRIPTION | BY | APP. |
|------|------|-------------|----|------|
|      |      |             |    |      |
|      |      |             |    |      |
|      |      |             |    |      |
|      |      |             |    |      |



**CITY OF OCEANSIDE, CA  
RAILROAD QUIET ZONE**

|   |               |                                |
|---|---------------|--------------------------------|
| <b>WISCONSIN AVENUE<br/>CONCEPTUAL PLAN</b> |               | DWG. NO.<br><b>3</b>           |
| SCALE: 1" = 30'                             | SIZE: 11"x17" | SHEET 3 OF 5                   |
| DESIGNED: EH                                | DRAWN: JD     | CHECKED: EH DATE: MAY 12, 2014 |



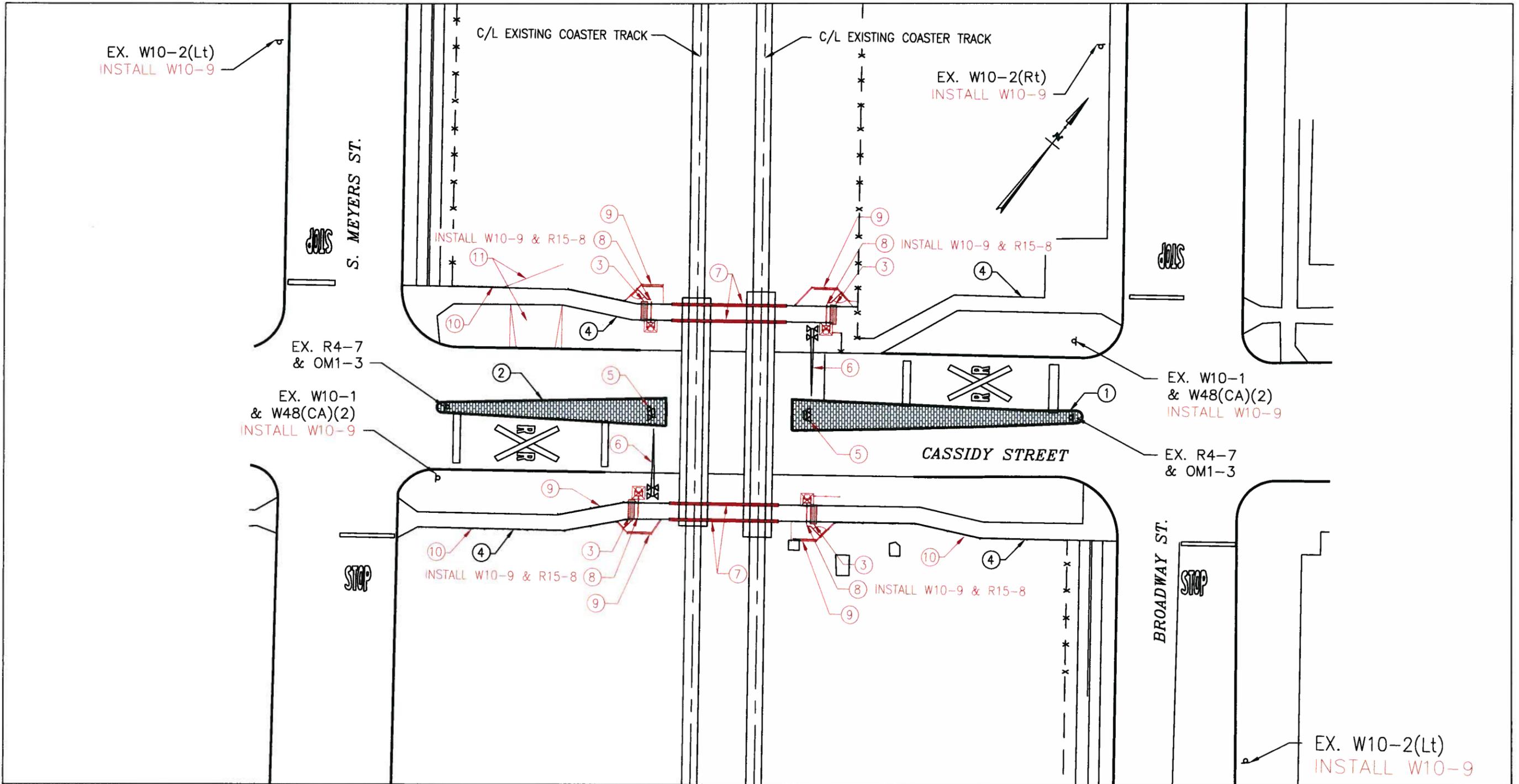
- ① RECONSTRUCT/RAISE EAST MEDIAN WITH 6" MIN. CURBS
- ② EXISTING MEDIAN WITH 6" MIN. CURBS
- ③ CONSTRUCT WEST MEDIAN WITH 6" MIN. CURBS
- ④ EXISTING SIDEWALK
- ⑤ EXISTING NO. 8 TO REMAIN; UPGRADE FLASHERS TO CURRENT STANDARDS
- ⑥ RELOCATED NO. 9A TO REMAIN; UPGRADE FLASHERS AND GATES TO CURRENT STANDARDS
- ⑦ PROPOSED DETECTABLE WARNING STRIP
- ⑧ CLOSE EXISTING DRIVEWAY OR RELOCATE DRIVEWAY TO BE 60' MINIMUM FROM GATE
- ⑨ PROPOSED CROSSWALK EDGE LINE
- ⑩ PROPOSED NO. 9 PEDESTRIAN GATE AND SWING GATE
- ⑪ CONSTRUCT PEDESTRIAN RAILING/CHANNELIZATION

| REV. | DATE | DESCRIPTION | BY | APP. |
|------|------|-------------|----|------|
|      |      |             |    |      |
|      |      |             |    |      |
|      |      |             |    |      |
|      |      |             |    |      |



**CITY OF OCEANSIDE, CA  
RAILROAD QUIET ZONE**

|  |               |                                |
|--|---------------|--------------------------------|
| <b>OCEANSIDE BOULEVARD<br/>CONCEPTUAL PLAN</b> |               | DWG. NO.<br><b>4</b>           |
| SCALE: 1" = 30'                                | SIZE: 11"x17" | SHEET 4 OF 5                   |
| DESIGNED: EH                                   | DRAWN: JD     | CHECKED: EH DATE: MAY 12, 2014 |



- ① EAST MEDIAN WITH 6" MIN. CURBS
- ② WEST MEDIAN WITH 6" MIN. CURBS
- ③ PROPOSED DETECTABLE WARNING STRIP
- ④ EXISTING SIDEWALK PROTECT IN PLACE/RESTORE
- ⑤ EXISTING NO. 8 TO REMAIN; UPGRADE FLASHERS TO CURRENT STANDARDS
- ⑥ RELOCATED NO. 9A TO REMAIN; UPGRADE FLASHERS AND GATES TO CURRENT STANDARDS
- ⑦ PROPOSED CROSSWALK EDGE LINE
- ⑧ PROPOSED NO. 9 PEDESTRIAN GATE AND SWING GATE
- ⑨ CONSTRUCT PEDESTRIAN SIDEWALK/RAILING/CHANNELIZATION
- ⑩ CONSTRUCT FENCE
- ⑪ CONSTRUCT ACCESS GATE AND DRIVEWAY

| REV. | DATE | DESCRIPTION | BY | APP. |
|------|------|-------------|----|------|
|      |      |             |    |      |
|      |      |             |    |      |
|      |      |             |    |      |
|      |      |             |    |      |



**CITY OF OCEANSIDE, CA  
RAILROAD QUIET ZONE**

|   |               |              |                      |
|---|---------------|--------------|----------------------|
| <b>CASSIDY STREET<br/>CONCEPTUAL PLAN</b> |               |              | DWG. NO.<br><b>5</b> |
| SCALE: 1" = 30'                           | SIZE: 11"x17" | SHEET 5 OF 5 |                      |
| DESIGNED: EH                              | DRAWN: JD     | CHECKED: EH  | DATE: MAY 12, 2014   |

**Oceanside Quiet Zone**

**Project Study Report**

**Project Concept Cost Estimate**

|           |  |
|-----------|--|
| Project:  | Oceanside Quiet Zone                     |
| Estimate: | Total Project Budget - Conceptual Design |
| By:       | RailPros, Inc.                           |
| Date:     | July 18, 2014                            |

| Description  | Quantity | Unit | Unit Cost (Low) | Unit Cost (High) | Total (Low)        | Total (High)       |
|--|----------|------|-----------------|------------------|--------------------|--------------------|
| Project Costs  |          |      |                 |                  |                    |                    |
| City Costs   |          |      |                 |                  | \$1,496,494        | \$2,610,866        |
| NCTD Costs   |          |      |                 |                  | \$4,913,500        | \$4,913,500        |
| <b>Total - Construction and Non-Construction Costs</b> |          |      |                 |                  | <b>\$6,409,994</b> | <b>\$7,524,366</b> |
|  |          |      |                 |                  |                    |                    |
| Escalation - 2 Years                                   | 3.0%     |      |                 |                  | \$390,369          | \$458,234          |
|  |          |      |                 |                  |                    |                    |
| <b>TOTAL - Current Estimate</b>                        |          |      |                 |                  | <b>\$6,800,363</b> | <b>\$7,982,600</b> |
|  |          |      |                 |                  |                    |                    |
|  |          |      |                 |                  | <b>\$7,000,000</b> | <b>\$8,000,000</b> |

**ROUNDED**

|           |  |
|-----------|--|
| Project:  | Oceanside Quiet Zone                     |
| Estimate: | Total Project Budget - Conceptual Design |
| By:       | RailPros, Inc.                           |
| Date:     | July 18, 2014                            |

| <b>Location Costs</b> |  | <b>Total<br/>(Low)</b> | <b>Total<br/>(High)</b> |
|-----------------------|--|------------------------|-------------------------|
|-----------------------|--|------------------------|-------------------------|

|  |      |                    |                    |
|--|------|--------------------|--------------------|
| Surfrider Way - CITY                                   |      | \$480,939          | \$665,660          |
| Surfrider Way - NCTD                                   |      | \$1,280,300        | \$1,280,300        |
| <b>Total - Construction and Non-Construction Costs</b> |      | <b>\$1,761,239</b> | <b>\$1,945,960</b> |
| Escalation - 2 Years                                   | 3.0% | \$107,259          | \$118,509          |
| <b>Total - Surfrider Way</b>                           |      | <b>\$1,868,499</b> | <b>\$2,064,469</b> |

|  |      |                    |                    |
|--|------|--------------------|--------------------|
| Mission Avenue - CITY                                  |      | \$216,793          | \$765,081          |
| Mission Avenue - NCTD                                  |      | \$987,350          | \$987,350          |
| <b>Total - Construction and Non-Construction Costs</b> |      | <b>\$1,204,143</b> | <b>\$1,752,431</b> |
| Escalation - 2 Years                                   | 3.0% | \$73,332           | \$106,723          |
| <b>Total - Mission Avenue</b>                          |      | <b>\$1,277,476</b> | <b>\$1,859,154</b> |

|  |      |                    |                    |
|--|------|--------------------|--------------------|
| Wisconsin Street - CITY                                |      | \$393,363          | \$550,039          |
| Wisconsin Street - NCTD                                |      | \$671,150          | \$671,150          |
| <b>Total - Construction and Non-Construction Costs</b> |      | <b>\$1,064,513</b> | <b>\$1,221,189</b> |
| Escalation - 2 Years                                   | 3.0% | \$64,829           | \$74,370           |
| <b>Total - Wisconsin Street</b>                        |      | <b>\$1,129,342</b> | <b>\$1,295,559</b> |

|  |      |                    |                    |
|--|------|--------------------|--------------------|
| Oceanside Boulevard - CITY                             |      | \$237,245          | \$355,569          |
| Oceanside Boulevard - NCTD                             |      | \$987,350          | \$987,350          |
| <b>Total - Construction and Non-Construction Costs</b> |      | <b>\$1,224,595</b> | <b>\$1,342,919</b> |
| Escalation - 2 Years                                   | 3.0% | \$74,578           | \$81,784           |
| <b>Total - Oceanside Boulevard</b>                     |      | <b>\$1,299,173</b> | <b>\$1,424,703</b> |

|  |      |                    |                    |
|--|------|--------------------|--------------------|
| Cassidy Street - CITY                                  |      | \$161,514          | \$270,201          |
| Cassidy Street - NCTD                                  |      | \$987,350          | \$987,350          |
| <b>Total - Construction and Non-Construction Costs</b> |      | <b>\$1,148,864</b> | <b>\$1,257,551</b> |
| Escalation - 2 Years                                   | 3.0% | \$69,966           | \$76,585           |
| <b>Total - Cassidy Street</b>                          |      | <b>\$1,218,830</b> | <b>\$1,334,135</b> |

**Oceanside Quiet Zone  
NCTD Preliminary Cost Estimate  
July 18, 2014**

| Description/Location                                  | Unit | Quantity | Unit Price | Cost | LOW RANGE           | HIGH RANGE          |
|---|------|----------|------------|------|---------------------|---------------------|
| <b>Signal</b>   |      |          |            |      |                     |                     |
| Surfrider Way (MP 225.9)                              |      |          |            |      |                     |                     |
| <b>RR Construction Subtotal - Surfrider Way</b>       |      |          |            |      | <b>\$ 1,280,300</b> | <b>\$ 1,280,300</b> |
| Mission Avenue (MP 226.2)                             |      |          |            |      |                     |                     |
| <b>RR Construction Subtotal - Mission Avenue</b>      |      |          |            |      | <b>\$ 987,350</b>   | <b>\$ 987,350</b>   |
| Wisconsin Avenue (MP 226.8)                           |      |          |            |      |                     |                     |
| <b>RR Construction Subtotal - Wisconsin Avenue</b>    |      |          |            |      | <b>\$ 671,150</b>   | <b>\$ 671,150</b>   |
| Oceanside Boulevard (MP 227.2)                        |      |          |            |      |                     |                     |
| <b>RR Construction Subtotal - Oceanside Boulevard</b> |      |          |            |      | <b>\$ 987,350</b>   | <b>\$ 987,350</b>   |
| Cassidy Street (MP 228.0)                             |      |          |            |      |                     |                     |
| <b>RR Construction Subtotal - Cassidy Street</b>      |      |          |            |      | <b>\$ 987,350</b>   | <b>\$ 987,350</b>   |
| <b>RR Signal Subtotal</b>                             |      |          |            |      | <b>\$ 4,913,500</b> | <b>\$ 4,913,500</b> |

**NOTES**

1. Based on recent NCTD review, it is anticipated that the railroad signal houses at several of the crossings will need to be replaced to accommodate ped gate equipment. Revised railroad costs reflect the recent input and direction from NCTD.

**Oceanside Quiet Zone  
NCTD Preliminary Cost Estimate  
July 18, 2014**

| Description/Location                                   |  | Unit | Quantity | Unit Price<br>(Low) | Unit Price<br>(High) | LOW<br>RANGE        | HIGH<br>RANGE       |
|--|--|------|----------|---------------------|----------------------|---------------------|---------------------|
| <b>Signal</b>  |  |      |          |                     |                      |                     |                     |
| <b>Surfrider Way (MP 225.9)</b>                        |  |      |          |                     |                      |                     |                     |
| 1  | install 8x10 instrument house, control equipment, power supply, cabling, ped gates in all 4 quadrants, relocate curbside gates and cantilever structures | LS   | 1        | \$ 806,000          | \$ 806,000           | \$ 806,000          | \$ 806,000          |
| <b>RR Civil</b>  |  |      |          |                     |                      |                     |                     |
|  | Surfrider Way (MP 225.9)   | LS   | 1        | \$ 20,000           | \$ 20,000            | \$ 20,000           | \$ 20,000           |
| <b>RR Construction Subtotal</b>                        |  |      |          |                     |                      | <b>\$ 826,000</b>   | <b>\$ 826,000</b>   |
| Soft Costs: Design, CM, PM, and NCTD Staff Time at 25% |  |      |          |                     |                      | \$ 206,500          | \$ 206,500          |
| Contingency at 30%                                     |  |      |          |                     |                      | \$ 247,800          | \$ 247,800          |
| <b>Estimated Project Total</b>                         |  |      |          |                     |                      | <b>\$ 1,280,300</b> | <b>\$ 1,280,300</b> |

**NOTES**

1. Assumption: Existing house will be replaced with larger house to accommodate ped gate equipment

**Oceanside Quiet Zone  
NCTD Preliminary Cost Estimate - Mission Avenue  
July 18, 2014**

| Description/Location                                   |   | Unit | Quantity | Unit Price<br>(Low) | Unit Price<br>(High) | LOW<br>RANGE      | HIGH<br>RANGE     |
|--|---|------|----------|---------------------|----------------------|-------------------|-------------------|
| <b>Signal</b>  |   |      |          |                     |                      |                   |                   |
| <b>Mission Avenue (MP 226.2)</b>                       |   |      |          |                     |                      |                   |                   |
| 1  | install 8x10 instrument house, control equipment, power supply, cabling, ped gates in all 4 quadrants | LS   | 1        | \$ 617,000          | \$ 617,000           | \$ 617,000        | \$ 617,000        |
| <b>RR Civil</b>  |   |      |          |                     |                      |                   |                   |
|  | Mission Avenue (MP 226.2)   | LS   | 1        | \$ 20,000           | \$ 20,000            | \$ 20,000         | \$ 20,000         |
| <b>RR Construction Subtotal</b>                        |   |      |          |                     |                      | <b>\$ 637,000</b> | <b>\$ 637,000</b> |
| Soft Costs: Design, CM, PM, and NCTD Staff Time at 25% |   |      |          |                     |                      | \$ 159,250        | \$ 159,250        |
| Contingency at 30%                                     |   |      |          |                     |                      | \$ 191,100        | \$ 191,100        |
| <b>Estimated Project Total</b>                         |   |      |          |                     |                      | <b>\$ 987,350</b> | <b>\$ 987,350</b> |

**NOTES**

1. Assumption: Existing house will be replaced with larger house to accommodate ped gate equipment

**Oceanside Quiet Zone  
NCTD Preliminary Cost Estimate - Wisconsin Avenue  
July 18, 2014**

| Description/Location                                   |   | Unit | Quantity | Unit Price<br>(Low) | Unit Price<br>(High) | LOW<br>RANGE      | HIGH<br>RANGE     |
|--|---|------|----------|---------------------|----------------------|-------------------|-------------------|
| <b>Signal</b>  |   |      |          |                     |                      |                   |                   |
| <b>Wisconsin Avenue (MP 226.8)</b>                     |   |      |          |                     |                      |                   |                   |
| 1  | Ped gate control equipment, power supply, cabling, ped gates in all 4 quadrants | LS   | 1        | \$ 413,000          | \$ 413,000           | \$ 413,000        | \$ 413,000        |
| <b>RR Civil</b>  |   |      |          |                     |                      |                   |                   |
|  | Wisconsin Avenue (MP 226.8)   | LS   | 1        | \$ 20,000           | \$ 20,000            | \$ 20,000         | \$ 20,000         |
| <b>RR Construction Subtotal</b>                        |   |      |          |                     |                      | <b>\$ 433,000</b> | <b>\$ 433,000</b> |
| Soft Costs: Design, CM, PM, and NCTD Staff Time at 25% |   |      |          |                     |                      | \$ 108,250        | \$ 108,250        |
| Contingency at 30%                                     |   |      |          |                     |                      | \$ 129,900        | \$ 129,900        |
| <b>Estimated Project Total</b>                         |   |      |          |                     |                      | <b>\$ 671,150</b> | <b>\$ 671,150</b> |

**NOTES**

1. Assumption: Existing house has capacity for additional ped gate equipment

**Oceanside Quiet Zone  
NCTD Preliminary Cost Estimate - Oceanside Boulevard  
July 18, 2014**

| Description/Location                                   |   | Unit | Quantity | Unit Price<br>(Low) | Unit Price<br>(High) | LOW<br>RANGE      | HIGH<br>RANGE     |
|--|---|------|----------|---------------------|----------------------|-------------------|-------------------|
| <b>Signal</b>  |   |      |          |                     |                      |                   |                   |
| <b>Oceanside Boulevard (MP 227.2)</b>                  |   |      |          |                     |                      |                   |                   |
| 1  | install 8x10 instrument house, control equipment, power supply, cabling, ped gates in all 4 quadrants | LS   | 1        | \$ 617,000          | \$ 617,000           | \$ 617,000        | \$ 617,000        |
| <b>RR Civil</b>  |   |      |          |                     |                      |                   |                   |
|  | Oceanside Boulevard (MP 227.2)  | LS   | 1        | \$ 20,000           | \$ 20,000            | \$ 20,000         | \$ 20,000         |
| <b>RR Construction Subtotal</b>                        |   |      |          |                     |                      | <b>\$ 637,000</b> | <b>\$ 637,000</b> |
| Soft Costs: Design, CM, PM, and NCTD Staff Time at 25% |   |      |          |                     |                      | \$ 159,250        | \$ 159,250        |
| Contingency at 30%                                     |   |      |          |                     |                      | \$ 191,100        | \$ 191,100        |
| <b>Estimated Project Total</b>                         |   |      |          |                     |                      | <b>\$ 987,350</b> | <b>\$ 987,350</b> |

**NOTES**

1. Assumption: Existing house will be replaced with larger house to accommodate ped gate equipment

**Oceanside Quiet Zone  
NCTD Preliminary Cost Estimate - Cassidy Street  
July 18, 2014**

| Description/Location                                   |   | Unit | Quantity | Unit Price | Unit Price | LOW               | HIGH              |
|--|---|------|----------|------------|------------|-------------------|-------------------|
| <b>Signal</b>  |   |      |          | (Low)      | (High)     | RANGE             | RANGE             |
| <b>Cassidy Street (MP 228.0)</b>                       |   |      |          |            |            |                   |                   |
| 1  | install 8x10 instrument house, control equipment, power supply, cabling, ped gates in all 4 quadrants | LS   | 1        | \$ 617,000 | \$ 617,000 | \$ 617,000        | \$ 617,000        |
| <b>RR Civil</b>  |   |      |          |            |            |                   |                   |
|  | Cassidy Street (MP 228.0)   | LS   | 1        | \$ 20,000  | \$ 20,000  | \$ 20,000         | \$ 20,000         |
| <b>RR Construction Subtotal</b>                        |   |      |          |            |            | <b>\$ 637,000</b> | <b>\$ 637,000</b> |
| Soft Costs: Design, CM, PM, and NCTD Staff Time at 25% |   |      |          |            |            | \$ 159,250        | \$ 159,250        |
| Contingency at 30%                                     |   |      |          |            |            | \$ 191,100        | \$ 191,100        |
| <b>Estimated Project Total</b>                         |   |      |          |            |            | <b>\$ 987,350</b> | <b>\$ 987,350</b> |

**NOTES**

1. Assumption: Existing house will be replaced with larger house to accommodate ped gate equipment

|           |                                    |
|-----------|------------------------------------|
| Project:  | Oceanside Quiet Zone               |
| Estimate: | Grade Crossing - Conceptual Design |
| Location: | Crossings - Summary                |
| By:       | RailPros, Inc.                     |
| Date:     | July 18, 2014                      |

| Description                                   | Quantity | Unit        | Unit Cost (Low) | Unit Cost (High) | Cost (Low) | Total (Low)        | Cost (High) | Total (High)       |
|---|----------|-------------|-----------------|------------------|------------|--------------------|-------------|--------------------|
| <b>Demolish and Remove</b>                    |          |             |                 |                  |            |                    |             |                    |
| Median  | 120      | LF          | \$100           | \$150            | \$12,000   |                    | \$18,000    |                    |
| Curb  | 0        | LF          | \$20            | \$30             | \$0        |                    | \$0         |                    |
| Curb and gutter                               | 282      | LF          | \$20            | \$30             | \$5,640    |                    | \$8,460     |                    |
| Curb ramp                                     | 1        | EA          | \$800           | \$1,000          | \$800      |                    | \$1,000     |                    |
| Driveway                                      | 1300     | SF          | \$5             | \$10             | \$6,500    |                    | \$13,000    |                    |
| Sidewalk                                      | 2500     | SF          | \$5             | \$10             | \$12,500   |                    | \$25,000    |                    |
| Landscaped Area                               | 500      | SF          | \$2             | \$5              | \$1,000    |                    | \$2,500     |                    |
| Chain-link fence                              | 0        | LF          | \$5             | \$7              | \$0        |                    | \$0         |                    |
| Tubular steel fence                           | 0        | LF          | \$15            | \$20             | \$0        |                    | \$0         |                    |
| Pedestrian railing                            | 0        | LF          | \$20            | \$25             | \$0        |                    | \$0         |                    |
| Asphalt Paving - 4"                           | 1250     | SF          | \$5             | \$10             | \$6,250    |                    | \$12,500    |                    |
| Crossing Panel                                | 0        | TF          | \$40            | \$50             | \$0        |                    | \$0         |                    |
| Signing and Striping                          | 3000     | Lane Foot   | \$5             | \$10             | \$15,000   |                    | \$30,000    |                    |
| <b>SUBTOTAL - Demolish and Remove</b>         |          |             |                 |                  |            | <b>\$59,690</b>    |             | <b>\$110,460</b>   |
| <b>Construct New</b>                          |          |             |                 |                  |            |                    |             |                    |
| Median  | 304      | LF          | \$300           | \$400            | \$91,200   |                    | \$121,600   |                    |
| Curb  | 0        | LF          | \$50            | \$60             | \$0        |                    | \$0         |                    |
| Curb and gutter                               | 332      | LF          | \$50            | \$60             | \$16,600   |                    | \$19,920    |                    |
| Curb ramp                                     | 2        | EA          | \$4,000         | \$5,000          | \$8,000    |                    | \$10,000    |                    |
| Driveway                                      | 2300     | SF          | \$50            | \$60             | \$115,000  |                    | \$138,000   |                    |
| Sidewalk                                      | 4020     | SF          | \$40            | \$50             | \$160,800  |                    | \$201,000   |                    |
| Landscaped Area                               | 500      | SF          | \$30            | \$40             | \$15,000   |                    | \$20,000    |                    |
| Fencing                                       | 1090     | LF          | \$20            | \$120            | \$21,800   |                    | \$130,800   |                    |
| Pedestrian railing                            | 1130     | LF          | \$100           | \$120            | \$113,000  |                    | \$135,600   |                    |
| Detectable warning strip                      | 160      | LF          | \$100           | \$150            | \$16,000   |                    | \$24,000    |                    |
| Pedestrian swing gate                         | 20       | EA          | \$1,000         | \$2,000          | \$20,000   |                    | \$40,000    |                    |
| Asphalt Paving - 4"                           | 100      | SF          | \$20            | \$30             | \$2,000    |                    | \$3,000     |                    |
| Crossing Panel                                | 10       | TF          | \$400           | \$1,200          | \$4,000    |                    | \$12,000    |                    |
| Signing and Striping                          | 3000     | Lane Feet   | \$15            | \$20             | \$45,000   |                    | \$60,000    |                    |
| Queue-Cutter Traffic Signal (HIGH Range Only) | 1        | EA          | \$0             | \$200,000        | \$0        |                    | \$200,000   |                    |
| <b>SUBTOTAL - Construct New</b>               |          |             |                 |                  |            | <b>\$628,400</b>   |             | <b>\$1,115,920</b> |
| <b>Other Costs</b>                            |          |             |                 |                  |            |                    |             |                    |
| Mobilization and Demobilization               | 10.0%    |             |                 |                  |            | \$68,145           |             | \$122,306          |
| Design  | 12.0%    |             |                 |                  |            | \$89,951           |             | \$161,444          |
| Design Support During Construction            | 8.0%     |             |                 |                  |            | \$59,968           |             | \$107,629          |
| <b>SUBTOTAL - Other Costs</b>                 |          |             |                 |                  |            | <b>\$218,064</b>   |             | <b>\$391,379</b>   |
| <b>TOTAL - Construction + Other Costs</b>     |          |             |                 |                  |            | <b>\$906,154</b>   |             | <b>\$1,617,759</b> |
| <b>Contingency</b>                            |          |             |                 |                  |            |                    |             |                    |
|   | 30.0%    |             |                 |                  |            | \$269,854          |             | \$485,328          |
| <b>SUBTOTAL</b>                               |          |             |                 |                  |            | <b>\$1,176,008</b> |             | <b>\$2,103,087</b> |
| <b>Non-Construction Costs</b>                 |          |             |                 |                  |            |                    |             |                    |
| Environmental and Permitting                  |          |             |                 |                  |            | \$20,000           |             | \$20,000           |
| Quiet Zone Processing                         |          |             |                 |                  |            | \$30,000           |             | \$30,000           |
| Project Management                            | 5.0%     |             |                 |                  |            | \$58,468           |             | \$104,939          |
| Construction Management                       | 8.0%     |             |                 |                  |            | \$93,549           |             | \$167,902          |
| City Administration                           | 5.0%     |             |                 |                  |            | \$58,468           |             | \$104,939          |
| NCTD Flag Protection                          | 20       | Person-Days | \$600           | \$800            | \$60,000   |                    | \$80,000    |                    |
| <b>SUBTOTAL - Non-Construction Costs</b>      |          |             |                 |                  |            | <b>\$320,486</b>   |             | <b>\$507,779</b>   |
| <b>TOTAL</b>                                  |          |             |                 |                  |            | <b>\$1,496,494</b> |             | <b>\$2,610,866</b> |

|           |                                    |
|-----------|------------------------------------|
| Project:  | Oceanside Quiet Zone               |
| Estimate: | Grade Crossing - Conceptual Design |
| Location: | Surfrider Way                      |
| By:       | RailPros, Inc.                     |
| Date:     | July 18, 2014                      |

| Description                                   | Quantity | Unit        | Unit Cost (Low) | Unit Cost (High) | Cost (Low) | Cost (High) | Total (Low)      | Total (High)     |
|---|----------|-------------|-----------------|------------------|------------|-------------|------------------|------------------|
| <b>Demolish and Remove</b>                    |          |             |                 |                  |            |             |                  |                  |
| Median  | 40       | LF          | \$100           | \$150            | \$4,000    |             |                  | \$6,000          |
| Curb  |          | LF          | \$20            | \$30             | \$0        |             |                  | \$0              |
| Curb and gutter                               | 100      | LF          | \$20            | \$30             | \$2,000    |             |                  | \$3,000          |
| Curb ramp                                     |          | EA          | \$800           | \$1,000          | \$0        |             |                  | \$0              |
| Driveway                                      | 300      | SF          | \$5             | \$10             | \$1,500    |             |                  | \$3,000          |
| Sidewalk                                      | 800      | SF          | \$5             | \$10             | \$4,000    |             |                  | \$8,000          |
| Landscaped Area                               | 300      | SF          | \$2             | \$5              | \$600      |             |                  | \$1,500          |
| Chain-link fence                              |          | LF          | \$5             | \$7              | \$0        |             |                  | \$0              |
| Tubular steel fence                           |          | LF          | \$15            | \$20             | \$0        |             |                  | \$0              |
| Pedestrian railing                            |          | LF          | \$20            | \$25             | \$0        |             |                  | \$0              |
| Asphalt Paving - 4"                           | 650      | SF          | \$5             | \$10             | \$3,250    |             |                  | \$6,500          |
| Crossing Panel                                | 0        | TF          | \$40            | \$50             | \$0        |             |                  | \$0              |
| Signing and Striping                          | 1000     | Lane Foot   | \$5             | \$10             | \$5,000    |             |                  | \$10,000         |
| <b>SUBTOTAL - Demolish and Remove</b>         |          |             |                 |                  |            |             | <b>\$20,350</b>  | <b>\$38,000</b>  |
| <b>Construct New</b>                          |          |             |                 |                  |            |             |                  |                  |
| Median  | 150      | LF          | \$300           | \$400            | \$45,000   |             |                  | \$60,000         |
| Curb  |          | LF          | \$50            | \$60             | \$0        |             |                  | \$0              |
| Curb and gutter                               | 150      | LF          | \$30            | \$50             | \$4,500    |             |                  | \$7,500          |
| Curb ramp                                     | 2        | EA          | \$4,000         | \$5,000          | \$8,000    |             |                  | \$10,000         |
| Driveway                                      | 300      | SF          | \$50            | \$60             | \$15,000   |             |                  | \$18,000         |
| Sidewalk                                      | 1500     | SF          | \$40            | \$50             | \$60,000   |             |                  | \$75,000         |
| Landscaped Area                               | 500      | SF          | \$30            | \$40             | \$15,000   |             |                  | \$20,000         |
| Fencing                                       | 30       | LF          | \$20            | \$120            | \$600      |             |                  | \$3,600          |
| Pedestrian railing                            | 300      | LF          | \$100           | \$120            | \$30,000   |             |                  | \$36,000         |
| Detectable warning strip                      | 32       | LF          | \$100           | \$150            | \$3,200    |             |                  | \$4,800          |
| Pedestrian swing gate                         | 4        | EA          | \$1,000         | \$2,000          | \$4,000    |             |                  | \$8,000          |
| Asphalt Paving - 4"                           | 100      | SF          | \$20            | \$30             | \$2,000    |             |                  | \$3,000          |
| Crossing Panel                                | 10       | TF          | \$400           | \$1,200          | \$4,000    |             |                  | \$12,000         |
| Signing and Striping                          | 1000     | Lane Feet   | \$15            | \$20             | \$15,000   |             |                  | \$20,000         |
| Queue-Cutter Traffic Signal (HIGH Range Only) | 0        | EA          | \$0             | \$200,000        | \$0        |             |                  | \$0              |
| <b>SUBTOTAL - Construct New</b>               |          |             |                 |                  |            |             | <b>\$206,300</b> | <b>\$277,900</b> |
| <b>Other Costs</b>                            |          |             |                 |                  |            |             |                  |                  |
| Mobilization and Demobilization               | 10.0%    |             |                 |                  |            |             | \$22,665         | \$31,590         |
| Design  | 12.0%    |             |                 |                  |            |             | \$29,918         | \$41,699         |
| Design Support During Construction            | 8.0%     |             |                 |                  |            |             | \$19,945         | \$27,799         |
| <b>SUBTOTAL - Other Costs</b>                 |          |             |                 |                  |            |             | <b>\$72,528</b>  | <b>\$101,088</b> |
| <b>TOTAL - Construction + Other Costs</b>     |          |             |                 |                  |            |             | <b>\$299,178</b> | <b>\$416,988</b> |
| <b>Contingency</b>                            |          |             |                 |                  |            |             |                  |                  |
|   | 30.0%    |             |                 |                  |            |             | \$89,753         | \$125,096        |
| <b>SUBTOTAL</b>                               |          |             |                 |                  |            |             | <b>\$388,931</b> | <b>\$542,084</b> |
| <b>Non-Construction Costs</b>                 |          |             |                 |                  |            |             |                  |                  |
| Environmental and Permitting                  |          |             |                 |                  |            |             | \$4,000          | \$4,000          |
| Quiet Zone Processing                         |          |             |                 |                  |            |             | \$6,000          | \$6,000          |
| Project Management                            | 5.0%     |             |                 |                  |            |             | \$19,447         | \$27,104         |
| Construction Management                       | 8.0%     |             |                 |                  |            |             | \$31,115         | \$43,367         |
| City Administration                           | 5.0%     |             |                 |                  |            |             | \$19,447         | \$27,104         |
| NCTD Flag Protection                          | 20       | Person-Days | \$600           | \$800            | \$12,000   |             |                  | \$16,000         |
| <b>SUBTOTAL - Non-Construction Costs</b>      |          |             |                 |                  |            |             | <b>\$92,008</b>  | <b>\$123,575</b> |
| <b>TOTAL</b>                                  |          |             |                 |                  |            |             | <b>\$480,939</b> | <b>\$665,660</b> |

|           |                                    |
|-----------|------------------------------------|
| Project:  | Oceanside Quiet Zone               |
| Estimate: | Grade Crossing - Conceptual Design |
| Location: | Mission Avenue                     |
| By:       | RailPros, Inc.                     |
| Date:     | July 18, 2014                      |

| Description                                   | Quantity | Unit        | Unit Cost (Low) | Unit Cost (High) | Cost (Low) | Total (Low)      | Cost (High) | Total (High)     |
|---|----------|-------------|-----------------|------------------|------------|------------------|-------------|------------------|
| <b>Demolish and Remove</b>                    |          |             |                 |                  |            |                  |             |                  |
| Median  |          | LF          | \$100           | \$150            | \$0        |                  | \$0         |                  |
| Curb  |          | LF          | \$20            | \$30             | \$0        |                  | \$0         |                  |
| Curb and gutter                               | 40       | LF          | \$20            | \$30             | \$800      |                  | \$1,200     |                  |
| Curb ramp                                     |          | EA          | \$800           | \$1,000          | \$0        |                  | \$0         |                  |
| Driveway                                      | 800      | SF          | \$5             | \$10             | \$4,000    |                  | \$8,000     |                  |
| Sidewalk                                      |          | SF          | \$5             | \$10             | \$0        |                  | \$0         |                  |
| Landscaped Area                               |          | SF          | \$2             | \$5              | \$0        |                  | \$0         |                  |
| Chain-link fence                              |          | LF          | \$5             | \$7              | \$0        |                  | \$0         |                  |
| Tubular steel fence                           |          | LF          | \$15            | \$20             | \$0        |                  | \$0         |                  |
| Pedestrian railing                            |          | LF          | \$20            | \$25             | \$0        |                  | \$0         |                  |
| Asphalt Paving - 4"                           |          | SF          | \$5             | \$10             | \$0        |                  | \$0         |                  |
| Crossing Panel                                |          | TF          | \$40            | \$50             | \$0        |                  | \$0         |                  |
| Signing and Striping                          | 500      | Lane Foot   | \$5             | \$10             | \$2,500    |                  | \$5,000     |                  |
| <b>SUBTOTAL - Demolish and Remove</b>         |          |             |                 |                  |            | <b>\$7,300</b>   |             | <b>\$14,200</b>  |
| <b>Construct New</b>                          |          |             |                 |                  |            |                  |             |                  |
| Median  |          | LF          | \$300           | \$400            | \$0        |                  | \$0         |                  |
| Curb  |          | LF          | \$50            | \$60             | \$0        |                  | \$0         |                  |
| Curb and gutter                               | 40       | LF          | \$30            | \$50             | \$1,200    |                  | \$2,000     |                  |
| Curb ramp                                     |          | EA          | \$4,000         | \$5,000          | \$0        |                  | \$0         |                  |
| Driveway                                      | 800      | SF          | \$50            | \$60             | \$40,000   |                  | \$48,000    |                  |
| Sidewalk                                      |          | SF          | \$40            | \$50             | \$0        |                  | \$0         |                  |
| Landscaped Area                               |          | SF          | \$30            | \$40             | \$0        |                  | \$0         |                  |
| Fencing                                       | 400      | LF          | \$20            | \$120            | \$8,000    |                  | \$48,000    |                  |
| Pedestrian railing                            | 250      | LF          | \$100           | \$120            | \$25,000   |                  | \$30,000    |                  |
| Detectable warning strip                      | 32       | LF          | \$100           | \$150            | \$3,200    |                  | \$4,800     |                  |
| Pedestrian swing gate                         | 4        | EA          | \$1,000         | \$2,000          | \$4,000    |                  | \$8,000     |                  |
| Asphalt Paving - 4"                           |          | SF          | \$20            | \$30             | \$0        |                  | \$0         |                  |
| Crossing Panel                                |          | TF          | \$400           | \$1,200          | \$0        |                  | \$0         |                  |
| Signing and Striping                          | 500      | Lane Feet   | \$15            | \$20             | \$7,500    |                  | \$10,000    |                  |
| Queue-Cutter Traffic Signal (HIGH Range Only) | 1        | EA          | \$0             | \$200,000        | \$0        |                  | \$200,000   |                  |
| <b>SUBTOTAL - Construct New</b>               |          |             |                 |                  |            | <b>\$88,900</b>  |             | <b>\$350,800</b> |
| <b>Other Costs</b>                            |          |             |                 |                  |            |                  |             |                  |
| Mobilization and Demobilization               | 10.0%    |             |                 |                  |            | \$9,620          |             | \$36,500         |
| Design  | 12.0%    |             |                 |                  |            | \$12,698         |             | \$48,180         |
| Design Support During Construction            | 8.0%     |             |                 |                  |            | \$8,466          |             | \$32,120         |
| <b>SUBTOTAL - Other Costs</b>                 |          |             |                 |                  |            | <b>\$30,784</b>  |             | <b>\$116,800</b> |
| <b>TOTAL - Construction + Other Costs</b>     |          |             |                 |                  |            | <b>\$126,984</b> |             | <b>\$481,800</b> |
| <b>Contingency</b>                            |          |             |                 |                  |            |                  |             |                  |
|   | 30.0%    |             |                 |                  |            | \$38,095         |             | \$144,540        |
| <b>TOTAL</b>                                  |          |             |                 |                  |            | <b>\$165,079</b> |             | <b>\$626,340</b> |
| <b>Non-Construction Costs</b>                 |          |             |                 |                  |            |                  |             |                  |
| Environmental and Permitting                  |          |             |                 |                  |            | \$4,000          |             | \$4,000          |
| Quiet Zone Processing                         |          |             |                 |                  |            | \$6,000          |             | \$6,000          |
| Project Management                            | 5.0%     |             |                 |                  |            | \$8,254          |             | \$31,317         |
| Construction Management                       | 8.0%     |             |                 |                  |            | \$13,206         |             | \$50,107         |
| City Administration                           | 5.0%     |             |                 |                  |            | \$8,254          |             | \$31,317         |
| NCTD Flag Protection                          | 20       | Person-Days | \$600           | \$800            |            | 12000            |             | \$16,000         |
| <b>SUBTOTAL - Non-Construction Costs</b>      |          |             |                 |                  |            | <b>\$51,714</b>  |             | <b>\$138,741</b> |
| <b>TOTAL</b>                                  |          |             |                 |                  |            | <b>\$216,793</b> |             | <b>\$765,081</b> |

|           |                                    |
|-----------|------------------------------------|
| Project:  | Oceanside Quiet Zone               |
| Estimate: | Grade Crossing - Conceptual Design |
| Location: | Wisconsin Street                   |
| By:       | RailPros, Inc.                     |
| Date:     | July 18, 2014                      |

| Description                                   | Quantity | Unit        | Unit Cost (Low) | Unit Cost (High) | Cost (Low) | Total (Low)      | Cost (High) | Total (High)     |
|---|----------|-------------|-----------------|------------------|------------|------------------|-------------|------------------|
| <b>Demolish and Remove</b>                    |          |             |                 |                  |            |                  |             |                  |
| Median  |          | LF          | \$100           | \$150            | \$0        |                  | \$0         |                  |
| Curb  |          | LF          | \$20            | \$30             | \$0        |                  | \$0         |                  |
| Curb and gutter                               | 40       | LF          | \$20            | \$30             | \$800      |                  | \$1,200     |                  |
| Curb ramp                                     | 1        | EA          | \$800           | \$1,000          | \$800      |                  | \$1,000     |                  |
| Driveway                                      |          | SF          | \$5             | \$10             | \$0        |                  | \$0         |                  |
| Sidewalk                                      | 1400     | SF          | \$5             | \$10             | \$7,000    |                  | \$14,000    |                  |
| Landscaped Area                               |          | SF          | \$2             | \$5              | \$0        |                  | \$0         |                  |
| Chain-link fence                              |          | LF          | \$5             | \$7              | \$0        |                  | \$0         |                  |
| Tubular steel fence                           |          | LF          | \$15            | \$20             | \$0        |                  | \$0         |                  |
| Pedestrian railing                            |          | LF          | \$20            | \$25             | \$0        |                  | \$0         |                  |
| Asphalt Paving - 4"                           | 600      | SF          | \$5             | \$10             | \$3,000    |                  | \$6,000     |                  |
| Crossing Panel                                |          | TF          | \$40            | \$50             | \$0        |                  | \$0         |                  |
| Signing and Striping                          | 500      | Lane Foot   | \$5             | \$10             | \$2,500    |                  | \$5,000     |                  |
| <b>SUBTOTAL - Demolish and Remove</b>         |          |             |                 |                  |            | <b>\$14,100</b>  |             | <b>\$27,200</b>  |
| <b>Construct New</b>                          |          |             |                 |                  |            |                  |             |                  |
| Median  | 74       | LF          | \$300           | \$400            | \$22,200   |                  | \$29,600    |                  |
| Curb  |          | LF          | \$50            | \$60             | \$0        |                  | \$0         |                  |
| Curb and gutter                               | 40       | LF          | \$30            | \$50             | \$1,200    |                  | \$2,000     |                  |
| Curb ramp                                     |          | EA          | \$4,000         | \$5,000          | \$0        |                  | \$0         |                  |
| Driveway                                      | 400      | SF          | \$50            | \$60             | \$20,000   |                  | \$24,000    |                  |
| Sidewalk                                      | 2200     | SF          | \$40            | \$50             | \$88,000   |                  | \$110,000   |                  |
| Landscaped Area                               |          | SF          | \$30            | \$40             | \$0        |                  | \$0         |                  |
| Fencing                                       | 160      | LF          | \$20            | \$120            | \$3,200    |                  | \$19,200    |                  |
| Pedestrian railing                            | 200      | LF          | \$100           | \$120            | \$20,000   |                  | \$24,000    |                  |
| Detectable warning strip                      | 32       | LF          | \$100           | \$150            | \$3,200    |                  | \$4,800     |                  |
| Pedestrian swing gate                         | 4        | EA          | \$1,000         | \$2,000          | \$4,000    |                  | \$8,000     |                  |
| Asphalt Paving - 4"                           |          | SF          | \$20            | \$30             | \$0        |                  | \$0         |                  |
| Crossing Panel                                | 0        | TF          | \$400           | \$1,200          | \$0        |                  | \$0         |                  |
| Signing and Striping                          | 500      | Lane Feet   | \$15            | \$20             | \$7,500    |                  | \$10,000    |                  |
| Queue-Cutter Traffic Signal (HIGH Range Only) | 0        | EA          | \$0             | \$200,000        | \$0        |                  | \$0         |                  |
| <b>SUBTOTAL - Construct New</b>               |          |             |                 |                  |            | <b>\$169,300</b> |             | <b>\$231,600</b> |
| <b>Other Costs</b>                            |          |             |                 |                  |            |                  |             |                  |
| Mobilization and Demobilization               | 10.0%    |             |                 |                  |            | \$18,340         |             | \$25,880         |
| Design  | 12.0%    |             |                 |                  |            | \$24,209         |             | \$34,162         |
| Design Support During Construction            | 8.0%     |             |                 |                  |            | \$16,139         |             | \$22,774         |
| <b>SUBTOTAL - Other Costs</b>                 |          |             |                 |                  |            | <b>\$58,688</b>  |             | <b>\$82,816</b>  |
| <b>TOTAL - Construction + Other Costs</b>     |          |             |                 |                  |            | <b>\$242,088</b> |             | <b>\$341,616</b> |
| <b>Contingency</b>                            |          |             |                 |                  |            |                  |             |                  |
|   | 30.0%    |             |                 |                  |            | \$72,626         |             | \$102,485        |
| <b>TOTAL</b>                                  |          |             |                 |                  |            | <b>\$314,714</b> |             | <b>\$444,101</b> |
| <b>Non-Construction Costs</b>                 |          |             |                 |                  |            |                  |             |                  |
| Environmental and Permitting                  |          |             |                 |                  |            | \$4,000          |             | \$4,000          |
| Quiet Zone Processing                         |          |             |                 |                  |            | \$6,000          |             | \$6,000          |
| Project Management                            | 5.0%     |             |                 |                  |            | \$15,736         |             | \$22,205         |
| Construction Management                       | 8.0%     |             |                 |                  |            | \$25,177         |             | \$35,528         |
| City Administration                           | 5.0%     |             |                 |                  |            | \$15,736         |             | \$22,205         |
| NCTD Flag Protection                          | 20       | Person-Days | \$600           | \$800            |            | 12000            |             | \$16,000         |
| <b>SUBTOTAL - Non-Construction Costs</b>      |          |             |                 |                  |            | <b>\$78,649</b>  |             | <b>\$105,938</b> |
| <b>TOTAL</b>                                  |          |             |                 |                  |            | <b>\$393,363</b> |             | <b>\$550,039</b> |

|           |                                    |
|-----------|------------------------------------|
| Project:  | Oceanside Quiet Zone               |
| Estimate: | Grade Crossing - Conceptual Design |
| Location: | Oceanside Boulevard                |
| By:       | RallPros, Inc.                     |
| Date:     | July 18, 2014                      |

| Description                                   | Quantity | Unit        | Unit Cost (Low) | Unit Cost (High) | Cost (Low) | Cost (High) | Total (Low) | Total (High) |
|---|----------|-------------|-----------------|------------------|------------|-------------|-------------|--------------|
| <b>Demolish and Remove</b>                    |          |             |                 |                  |            |             |             |              |
| Median  | 80       | LF          | \$100           | \$150            | \$8,000    |             |             | \$12,000     |
| Curb  |          | LF          | \$20            | \$30             | \$0        |             |             | \$0          |
| Curb and gutter                               | 62       | LF          | \$20            | \$30             | \$1,240    |             |             | \$1,860      |
| Curb ramp                                     |          | EA          | \$800           | \$1,000          | \$0        |             |             | \$0          |
| Driveway                                      | 200      | SF          | \$5             | \$10             | \$1,000    |             |             | \$2,000      |
| Sidewalk                                      | 200      | SF          | \$5             | \$10             | \$1,000    |             |             | \$2,000      |
| Landscaped Area                               |          | SF          | \$2             | \$5              | \$0        |             |             | \$0          |
| Chain-link fence                              |          | LF          | \$5             | \$7              | \$0        |             |             | \$0          |
| Tubular steel fence                           |          | LF          | \$15            | \$20             | \$0        |             |             | \$0          |
| Pedestrian railing                            |          | LF          | \$20            | \$25             | \$0        |             |             | \$0          |
| Asphalt Paving - 4"                           |          | SF          | \$5             | \$10             | \$0        |             |             | \$0          |
| Crossing Panel                                |          | TF          | \$40            | \$50             | \$0        |             |             | \$0          |
| Signing and Striping                          | 500      | Lane Foot   | \$5             | \$10             | \$2,500    |             |             | \$5,000      |
| <b>SUBTOTAL - Demolish and Remove</b>         |          |             |                 |                  |            |             | \$13,740    | \$22,860     |
| <b>Construct New</b>                          |          |             |                 |                  |            |             |             |              |
| Median  | 80       | LF          | \$300           | \$400            | \$24,000   |             |             | \$32,000     |
| Curb  |          | LF          | \$50            | \$60             | \$0        |             |             | \$0          |
| Curb and gutter                               | 62       | LF          | \$30            | \$50             | \$1,860    |             |             | \$3,100      |
| Curb ramp                                     |          | EA          | \$4,000         | \$5,000          | \$0        |             |             | \$0          |
| Driveway                                      | 400      | SF          | \$50            | \$60             | \$20,000   |             |             | \$24,000     |
| Sidewalk                                      | 200      | SF          | \$40            | \$50             | \$8,000    |             |             | \$10,000     |
| Landscaped Area                               |          | SF          | \$30            | \$40             | \$0        |             |             | \$0          |
| Fencing                                       | 200      | LF          | \$20            | \$120            | \$4,000    |             |             | \$24,000     |
| Pedestrian railing                            | 200      | LF          | \$100           | \$120            | \$20,000   |             |             | \$24,000     |
| Detectable warning strip                      | 32       | LF          | \$100           | \$150            | \$3,200    |             |             | \$4,800      |
| Pedestrian swing gate                         | 4        | EA          | \$1,000         | \$2,000          | \$4,000    |             |             | \$8,000      |
| Asphalt Paving - 4"                           |          | SF          | \$20            | \$30             | \$0        |             |             | \$0          |
| Crossing Panel                                |          | TF          | \$400           | \$1,200          | \$0        |             |             | \$0          |
| Signing and Striping                          | 500      | Lane Feet   | \$15            | \$20             | \$7,500    |             |             | \$10,000     |
| Queue-Cutter Traffic Signal (HIGH Range Only) | 0        | EA          | \$0             | \$200,000        | \$0        |             |             | \$0          |
| <b>SUBTOTAL - Construct New</b>               |          |             |                 |                  |            |             | \$92,560    | \$139,900    |
| <b>Other Costs</b>                            |          |             |                 |                  |            |             |             |              |
| Mobilization and Demobilization               | 10.0%    |             |                 |                  |            |             | \$10,630    | \$16,276     |
| Design  | 12.0%    |             |                 |                  |            |             | \$14,032    | \$21,484     |
| Design Support During Construction            | 8.0%     |             |                 |                  |            |             | \$9,354     | \$14,323     |
| <b>SUBTOTAL - Other Costs</b>                 |          |             |                 |                  |            |             | \$34,016    | \$52,083     |
| <b>TOTAL - Construction + Other Costs</b>     |          |             |                 |                  |            |             | \$140,316   | \$214,843    |
| <b>Contingency</b>                            |          |             |                 |                  |            |             |             |              |
|   | 30.0%    |             |                 |                  |            |             | \$42,095    | \$64,453     |
| <b>TOTAL</b>                                  |          |             |                 |                  |            |             | \$182,411   | \$279,296    |
| <b>Non-Construction Costs</b>                 |          |             |                 |                  |            |             |             |              |
| Environmental and Permitting                  |          |             |                 |                  |            |             | \$4,000     | \$4,000      |
| Quiet Zone Processing                         |          |             |                 |                  |            |             | \$6,000     | \$6,000      |
| Project Management                            | 5.0%     |             |                 |                  |            |             | \$9,121     | \$13,965     |
| Construction Management                       | 8.0%     |             |                 |                  |            |             | \$14,593    | \$22,344     |
| City Administration                           | 5.0%     |             |                 |                  |            |             | \$9,121     | \$13,965     |
| NCTD Flag Protection                          | 20       | Person-Days | \$600           | \$800            |            |             | 12000       | \$16,000     |
| <b>SUBTOTAL - Non-Construction Costs</b>      |          |             |                 |                  |            |             | \$54,834    | \$76,273     |
| <b>TOTAL</b>                                  |          |             |                 |                  |            |             | \$237,245   | \$355,569    |

|           |                                    |
|-----------|------------------------------------|
| Project:  | Oceanside Quiet Zone               |
| Estimate: | Grade Crossing - Conceptual Design |
| Location: | Cassidy Street                     |
| By:       | RailPros, Inc.                     |
| Date:     | July 18, 2014                      |

| Description                                   | Quantity | Unit        | Unit Cost (Low) | Unit Cost (High) | Cost (Low) | Cost (High) | Total (Low) | Total (High) |
|---|----------|-------------|-----------------|------------------|------------|-------------|-------------|--------------|
| <b>Demolish and Remove</b>                    |          |             |                 |                  |            |             |             |              |
| Median  |          | LF          | \$100           | \$150            | \$0        | \$0         | \$0         | \$0          |
| Curb  |          | LF          | \$20            | \$30             | \$0        | \$0         | \$0         | \$0          |
| Curb and gutter                               | 40       | LF          | \$20            | \$30             | \$800      | \$1,200     | \$1,200     | \$1,200      |
| Curb ramp                                     |          | EA          | \$800           | \$1,000          | \$0        | \$0         | \$0         | \$0          |
| Driveway                                      |          | SF          | \$5             | \$10             | \$0        | \$0         | \$0         | \$0          |
| Sidewalk                                      | 100      | SF          | \$5             | \$10             | \$500      | \$1,000     | \$1,000     | \$1,000      |
| Landscaped Area                               | 200      | SF          | \$2             | \$5              | \$400      | \$1,000     | \$1,000     | \$1,000      |
| Chain-link fence                              |          | LF          | \$5             | \$7              | \$0        | \$0         | \$0         | \$0          |
| Tubular steel fence                           |          | LF          | \$15            | \$20             | \$0        | \$0         | \$0         | \$0          |
| Pedestrian railing                            |          | LF          | \$20            | \$25             | \$0        | \$0         | \$0         | \$0          |
| Asphalt Paving - 4"                           |          | SF          | \$5             | \$10             | \$0        | \$0         | \$0         | \$0          |
| Crossing Panel                                |          | TF          | \$40            | \$50             | \$0        | \$0         | \$0         | \$0          |
| Signing and Striping                          | 500      | Lane Foot   | \$5             | \$10             | \$2,500    | \$5,000     | \$2,500     | \$5,000      |
| <b>SUBTOTAL - Demolish and Remove</b>         |          |             |                 |                  |            |             | \$4,200     | \$8,200      |
| <b>Construct New</b>                          |          |             |                 |                  |            |             |             |              |
| Landscaped Area                               |          | LF          | \$300           | \$400            | \$0        | \$0         | \$0         | \$0          |
| Curb  |          | LF          | \$50            | \$60             | \$0        | \$0         | \$0         | \$0          |
| Curb and gutter                               | 40       | LF          | \$30            | \$50             | \$1,200    | \$2,000     | \$2,000     | \$2,000      |
| Curb ramp                                     |          | EA          | \$4,000         | \$5,000          | \$0        | \$0         | \$0         | \$0          |
| Driveway                                      | 400      | SF          | \$50            | \$60             | \$20,000   | \$24,000    | \$24,000    | \$24,000     |
| Sidewalk                                      | 120      | SF          | \$40            | \$50             | \$4,800    | \$6,000     | \$6,000     | \$6,000      |
| Landscaped Area                               |          | SF          | \$30            | \$40             | \$0        | \$0         | \$0         | \$0          |
| Fencing                                       | 300      | LF          | \$20            | \$120            | \$6,000    | \$36,000    | \$6,000     | \$36,000     |
| Pedestrian railing                            | 180      | LF          | \$100           | \$120            | \$18,000   | \$21,600    | \$18,000    | \$21,600     |
| Detectable warning strip                      | 32       | LF          | \$100           | \$150            | \$3,200    | \$4,800     | \$3,200     | \$4,800      |
| Pedestrian swing gate                         | 4        | EA          | \$1,000         | \$2,000          | \$4,000    | \$8,000     | \$4,000     | \$8,000      |
| Asphalt Paving - 4"                           |          | SF          | \$20            | \$30             | \$0        | \$0         | \$0         | \$0          |
| Crossing Panel                                |          | TF          | \$400           | \$1,200          | \$0        | \$0         | \$0         | \$0          |
| Signing and Striping                          | 500      | Lane Feet   | \$15            | \$20             | \$7,500    | \$10,000    | \$7,500     | \$10,000     |
| Queue-Cutter Traffic Signal (HIGH Range Only) |          | EA          | \$0             | \$200,000        | \$0        | \$0         | \$0         | \$0          |
| <b>SUBTOTAL - Construct New</b>               |          |             |                 |                  |            |             | \$64,700    | \$112,400    |
| <b>Other Costs</b>                            |          |             |                 |                  |            |             |             |              |
| Mobilization and Demobilization               | 10.0%    |             |                 |                  |            |             | \$6,890     | \$12,060     |
| Design  | 12.0%    |             |                 |                  |            |             | \$9,095     | \$15,919     |
| Design Support During Construction            | 8.0%     |             |                 |                  |            |             | \$6,063     | \$10,613     |
| <b>SUBTOTAL - Other Costs</b>                 |          |             |                 |                  |            |             | \$22,048    | \$38,592     |
| <b>TOTAL - Construction + Other Costs</b>     |          |             |                 |                  |            |             | \$90,948    | \$159,192    |
| <b>Contingency</b>                            |          |             |                 |                  |            |             |             |              |
|   | 30.0%    |             |                 |                  |            |             | \$27,284    | \$47,758     |
| <b>TOTAL</b>                                  |          |             |                 |                  |            |             | \$118,232   | \$206,950    |
| <b>Non-Construction Costs</b>                 |          |             |                 |                  |            |             |             |              |
| Environmental and Permitting                  |          |             |                 |                  |            |             | \$4,000     | \$4,000      |
| Quiet Zone Processing                         |          |             |                 |                  |            |             | \$6,000     | \$6,000      |
| Project Management                            | 5.0%     |             |                 |                  |            |             | \$5,912     | \$10,347     |
| Construction Management                       | 8.0%     |             |                 |                  |            |             | \$9,459     | \$16,556     |
| City Administration                           | 5.0%     |             |                 |                  |            |             | \$5,912     | \$10,347     |
| NCTD Flag Protection                          | 20       | Person-Days | \$600           | \$800            |            |             | 12000       | \$16,000     |
| <b>SUBTOTAL - Non-Construction Costs</b>      |          |             |                 |                  |            |             | \$43,282    | \$63,251     |
| <b>TOTAL</b>                                  |          |             |                 |                  |            |             | \$161,514   | \$270,201    |

**Oceanside Quiet Zone**

**Project Study Report**

**Stakeholder Field Diagnostic Meeting Minutes**



**City of Oceanside  
Stakeholder Field Diagnostic Meeting Minutes**

**Date:** January 16, 2014, 8:00 am – 10:30 am  
**Location:** Oceanside Crossings (Surfrider Way, Mission Avenue, Wisconsin Avenue, Oceanside Boulevard, Cassidy Street), Oceanside, CA

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**I. Safety Briefing and Introductions**

A Safety Briefing was conducted by Dino Minter. Robert Williams thanked the group for attending and then everyone introduced themselves and their project role. See attached sign-in sheet detailing the meeting attendees, including CPUC, NCTD, Amtrak and City of Oceanside.

FRA staff were invited but were not present at this meeting.

**II. Project Background**

Previously, the Oceanside Double Track Project installed double track at Mission Avenue, Wisconsin Avenue, Oceanside Boulevard and Cassidy Street. Improvements included the installation of medians and minor improvements to the crossing approaches.

Subsequently, the City of Oceanside studied the possibility of implementing improvements at crossings throughout the City in order to establish a quiet zone. A diagnostic meeting was held in November of 2006 to discuss the proposed improvements, conceptual exhibits were prepared and a Notice of Intent to Create a new quiet zone (NOI) was submitted in 2009.

The City has prepared and distributed revised concept level exhibits to all attendees. These exhibits are based on more current crossing data, standards and practices. The concept level exhibits do not include exact dimensions, and do not include all signage and marking details. The meeting was intended to get further feedback regarding the conceptual improvements and discuss general safety concerns at these locations.

**III. General Comments**

CPUC staff recommended that the project include pedestrian treatments, pedestrian channelization, pedestrian gates, an emergency exit swing gates generally consistent with Metrolink Standards.

CPUC staff recommended that detectable warning be maintained on all sidewalk approaches to the tracks, placed at least 12 feet from the track and just in advance of the automatic warning devices where present.



CPUC staff noted that the existing gate arm striping is outdated and the recommended the project include updating the gate arms per the current standard at all crossings (See CAMUTCD Part 8 Section 8C.04 and Figure 8C-1).

CPUC GO 75-D requires that "Light emitting diode (LED) arrays shall be used for all flashing light signals." When the warning devices are modified, incandescent flashers should be upgraded to new LED flashers consistent with the requirements. (CPUC GO 75-D Section 9.4)

CPUC staff recommended that future concept plans include backlight flasher pairs at all existing flasher locations (except for median-mounted warning devices, GO 75-D Section 10). The City will work with NCTD to determine what, if any, other equipment should be upgraded.

CPUC staff recommended that NCTD should upgrade the Emergency Notification System (ENS) signs consistent with federal requirements. NCTD staff commented that they already have plans to upgrade these signs at all locations under a separate project.

CPUC staff recommended the median ends be made square at the crossings to better deter motorists from circumventing the gates. Median curbs should be at 10 feet from track centerline.

CPUC staff recommended that signing and striping at all crossing be updated per the current CAMUTCD. There were a few minor discrepancies in placement of RXR advance warning markings, placement of the W10-1 sign adjacent to the RXR marking, and use of a single stop limit line 8 feet in advance of the gate arms.

If a Quiet Zone were implemented, W10-9 signs should be consistent with MUTCD which requires that stand-alone W10-9 signs use the diamond shape.

CPUC staff recommended that object markers and/or reflectors be installed on medians at all crossings to improve visibility, particularly where vertical profile or horizontal curves increase the likelihood of motorists striking the median.

CPUC staff recommended that pedestrian gates and associated safety treatments be installed as part of crossing improvement projects along the NCTD Coaster mainline through northern San Diego County. Although proposed train horn restrictions may be one factor justifying such improvements, other existing factors at many of the crossings include the high number of trains, both passenger and commuter, high pedestrian traffic, high train speeds and history of pedestrian related accidents. Most crossings on the corridor are planned to have at least 2 tracks, which will allow an increase in train speeds and train frequency, and are urbanized areas with limited visibility between crossing users and approaching trains.

CPUC staff suggested the City consider a partial quiet zone. NCTD responded that they are opposed to a partial time based quiet zone, but would support the City's decision to implement a 24-hour quiet zone.

#### **IV. Crossing Comments**

##### **a. Surfrider Way**

It is recommended that the bells be upgraded to new electronic bells.

CPUC staff suggested lowering the bell height to not less than 8 feet for better pedestrian warning in the NE quadrant. This change may require taller gate arm masts. Currently the bells are located on the top of the cantilever masts over 20 feet above ground.

CPUC staff recommended removing trees and vegetation in the medians that are obstructing the warning device, particularly anything (that can grow to a height of) three feet or more.

The phasing and timing of improvements including the future double track was discussed.

CPUC staff recommended reconfiguring the existing city parking lot driveway on the NW quadrant to exit-only, similar to the configuration at the Wisconsin Avenue crossing. CPUC staff suggested that it would reduce the potential for queuing on the track. The driveway currently provides entry and exit with a tight entry immediately adjacent to the tracks. If pedestrians are crossing the driveway as a vehicle attempts to enter, this can lead to queuing on the tracks. A future second track will further reduce the distance between the track and the driveway. This change would not reduce parking as there is alternative access to the lot from Windward Way, Neptune Way, and Pacific St. The City commented that the public would be less likely to use the parking because those access points are around the block.

NO LEFT TURN signs should be placed facing the adjacent driveways.

The City is reluctant to make any modifications that would reduce parking. They City is required to replace any lost parking spot at a 1-1 ratio by the coastal commission.

**b. Mission Avenue**

TASI suggested that pedestrian railing or fencing should extend sufficient to keep pedestrians in adjacent parking lots from entering the ROW and circumventing the proposed pedestrian treatments. This additional fencing should be shown on both the northeast and southeast quadrants in the conceptual layouts.

CPUC staff noted that vegetation and trees in the medians particularly the palmetto tree and anything (that can grow to a height of) three feet or more that obstruct the warning devices should be removed. A new palm tree has recently been installed in the sidewalk in the SW quadrant. CPUC noted that the tree should be removed as it obstructs the existing No. 8 warning device flashers. Subsequent to the field diagnostic meeting, the palm tree has been removed.

TASI noted that flashers at this location have already been upgraded to LED.

The City commented that the intersections to the East and West of the crossing may be signalized in the future and that future Queue-Cutter signals may be installed at the

crossing for preemption of the traffic signals. PRE noted that this will impact the crossing detection equipment by requiring longer approaches for the signal system.

**c. Wisconsin Avenue**

TASI suggested that pedestrian railing or channelization on the street side should keep pedestrians from entering the street to circumvent the warning devices.

The subject was not discussed in detail during the field diagnostic meeting; however, the CPUC has subsequently made the comments that follow, for both Wisconsin Avenue and Oceanside Boulevard, regarding a separate SANDAG project known as the Coastal Rail Trail. The "Coastal Rail Trail" is under construction just west of the crossing. SANDAG is the lead agency on the project. The medians include gaps to provide cyclists a crosswalk across the roadway. CPUC staff has concerns that this crosswalk could result in queuing of vehicles onto the track. It is not clear whether SANDAG or City of Oceanside held a diagnostic meeting to consider the safety of this future crosswalk.

Subsequent to this Oceanside Crossings diagnostic meeting, a separate diagnostic meeting was held for SANDAG's Coastal Rail Trail project and determinations relating to that project are currently being reviewed and discussed by the Coastal Rail Trail project stakeholders.

**d. Oceanside Boulevard**

TASI, Amtrak and CPUC recommended that pedestrian gates and channelization be installed using the same standards as the northern crossings, particularly due to sight limitations, multiple tracks and lots of trains at high speeds.

The "Coastal Rail Trail" is under construction just west of the crossing. CPUC staff has the same concerns as the Wisconsin Avenue location.

**e. Cassidy Street**

TASI, Amtrak and CPUC recommended that pedestrian gates and channelization be installed using the same standards as the northern crossings, particularly due to sight limitations, multiple tracks and lots of trains at high speeds.

CPUC suggested removing trees and vegetation near the fence in the NE quadrant.

TASI suggested that fencing or riprap be used in the SW quadrant to deter pedestrians entering the ROW outside of the sidewalk.

**V. Revised Conceptual Exhibits**



RailPros has updated the Conceptual Exhibits to show many of the proposed improvements at each crossing. These Exhibits are included in attachment to these minutes for all parties involved in the diagnostic process for review. Additional detail and other items not currently shown in the revised Conceptual Exhibits will be incorporated in the 30% Preliminary Engineering Plans that will be developed during the next phase of design.



VI. List of Attendees

| Name             | Company   | Title                              | Phone        | Email  |
|------------------|-----------|------------------------------------|--------------|--|
| Robert Williams  | RailPros  | Project Manager                    | 714-797-7809 | <a href="mailto:robert.williams@railpros.com">robert.williams@railpros.com</a> |
| Chris Coffman    | RailPros  | Sr. Civil Engineer                 | 714-734-8765 | <a href="mailto:chris.coffman@railpros.com">chris.coffman@railpros.com</a>     |
| Dino Minter      | TASI      | Signal Inspector                   | 760-622-1234 |  |
| CJ Gagner        | PRE       | Signal Inspector                   | 760-805-7917 | <a href="mailto:cjgagner@pacrail.com">cjgagner@pacrail.com</a>                 |
| Robert Paladino  | NCTD      | Signal Engineer                    | 760-966-6788 | <a href="mailto:rpaladino@nctd.org">rpaladino@nctd.org</a>                     |
| Robby Smith      | TASI      | Manager MOS                        | 760-828-1828 | <a href="mailto:rsmith@tasi.com">rsmith@tasi.com</a>                           |
| Steve McDowell   | Amtrak    | Director C&S                       | 213-507-5809 | <a href="mailto:mcdowes@amtrak.com">mcdowes@amtrak.com</a>                     |
| Ron Hyatt        | Amtrak    | RFE                                | 760-250-3794 | <a href="mailto:hyattr@amtrak.com">hyattr@amtrak.com</a>                       |
| Kevin Schumacher | CPUC      | Engineer                           | 415-310-9807 | <a href="mailto:shk@cpuc.ca.gov">shk@cpuc.ca.gov</a>                           |
| Carlo Groag      | CPUC      | Sr. Engineer                       | 213-576-7187 | <a href="mailto:cag@cpuc.ca.gov">cag@cpuc.ca.gov</a>                           |
| Nick Brzezinski  | HNTB      | Engineer                           | 858-336-3748 | <a href="mailto:nbrzezinski@hntb.com">nbrzezinski@hntb.com</a>                 |
| Susan Pastoriza  | NCTD      | System Safety Compliance Inspector | 760-445-6825 | <a href="mailto:spastoriza@nctd.org">spastoriza@nctd.org</a>                   |
| Nicholas Freeman | NCTD      | Deputy Chief Operations Officer    | 760-966-6682 | <a href="mailto:nfreeman@nctd.org">nfreeman@nctd.org</a>                       |
| Eric Hankinson   | RailPros  | Principal                          | 714-734-8765 | <a href="mailto:eric.hankinson@railpros.com">eric.hankinson@railpros.com</a>   |
| Scott Smith      | Oceanside | City Engineer                      | 760-435-5074 | <a href="mailto:ssmith@ci.oceanside.ca.us">ssmith@ci.oceanside.ca.us</a>       |

| Name             | Company  | Title                               | Phone                        | Email                              |
|------------------|----------|-------------------------------------|------------------------------|------------------------------------|
| Robert Williams  | RailPros | PM                                  | 714-797-7809                 | robert.williams@railpros.com       |
| CHILL COFFMAN    | RailPros | SR CIVIL                            | 714-734-8765                 | chill.coffman@railpros.com         |
| Dino Minter      | TASI     | Sig Insp.                           | 760 622-1254                 | dino.minter@railpros.com           |
| CS Gaspar        | PRIE     | Sig Eng                             | 760 805 7917                 | CSgaspar@pri.com                   |
| Robert Petuch    | NCTD     | Sr Eng                              | 760 966 6700                 | rp@nctd.org                        |
| Robbyenke        | TASI     | Manager                             |                              | paladino@nctd.org                  |
| Steve McDowell   | Amtrak   | Director CS                         | 760 828 1828<br>413 507 5809 | smc@amtrak.com<br>mcdow@amtrak.com |
| RON HARR         | AMTRAK   | RFE                                 | 760-250-3794                 | rharr@amtrak.com                   |
| KEVIN SCHUMACHER | CPUC     | Eng                                 | 415-310-9807                 | SHK@CPUC.CA.GOV                    |
| Carlo Cragg      | CPUC     | Sr. Eng                             | 213-576-7157                 | cragg@cpuc.ca.gov                  |
| Nich Brzezinski  | HAUTO    | Eng                                 | 858 336 3740                 | nbrzezinski@hauto.com              |
| SUSAN PASTORIZA  | NCTD     | SYSTEMS SAFETY COMPLIANCE INSPECTOR | 760 415 6805                 | SPASTORIZA@NCTD.ORG                |
| NICHOLAS FREEMAN | NCTD     |                                     | 760-966-6682                 | NFREEMAN@NCTD.ORG                  |

**Oceanside Quiet Zone**

**Project Study Report**

**FRA Highway-Rail Grade Crossing Accident Reports**

**HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT**

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

OMB Approval No. 2130-0500

|   |  |  |  |
|---|--|--|--|
| Name Of   |  | Alphabetic Code  | RR Accident/Incident No.   |
| 1. Reporting Railroad<br><b>Amtrak [ATK]</b>  |  | 1a. <b>ATK</b>   | 1b. <b>117160</b>  |
| 2. Other Railroad Involved in Train Accident/Incident   |  | 2a.  | 2b.  |
| 3. Railroad Responsible for Track Maintenance<br><b>San Diego Northern Rwy [SDNX]</b>   |  | 3a. <b>SDNX</b>  | 3b. <b>XXX</b>   |
| 4. U.S. DOT-AAR Grade Crossing ID No. <b>026813M</b>  |  | 5. Date of Accident/Incident <b>09/18/10</b>   | 6. Time of Accident/Incident <b>11:58 PM</b>   |
| 7. Nearest Railroad Station<br><b>OCEANSIDE</b>   |  | 8. Division<br><b>SWD</b>  | 9. County<br><b>SAN DIEGO</b>  |
|   |  | 10. State<br>Abbr. <b>06</b>   | Code<br><b>CA</b>  |
| 11. City (if in a city) <b>OCEANSIDE</b>  |  | 12. Highway Name or No. <b>SURFRIDER WAY</b>   |  |
|   |  | <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private  |  |
| Highway User Involved   |  | Rail Equipment Involved  |  |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify)<br>Code<br><b>K</b>  |  | 17. Equipment<br>1. Train (units pulling) 4. Car(s) (moving)<br>2. Train (units pushing) 5. Car(s) (standing)<br>3. Train (standing) 6. Light loco(s) (moving)<br>7. Light loco(s) (standing) 8. Other (specify)<br>A. Train pulling- RCL<br>B. Train pushing- RCL<br>C. Train standing- RCL<br>Code<br><b>1</b> |  |
| 14. Vehicle Speed<br>(est. mph at impact)   |  | 18. Position of Car Unit in Train<br><b>1</b>  |  |
| 15. Direction (geographical)<br>1. North 2. South 3. East 4. West<br>Code<br><b>3</b>   |  | 19. Circumstance<br>1. Rail equipment struck highway user<br>2. Rail equipment struck by highway user<br>Code<br><b>1</b>  |  |
| 16. Position<br>1. Stalled on crossing 3. Moving over crossing<br>2. Stopped on Crossing 4. Trapped<br>Code<br><b>3</b>   |  | 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br>Code<br><b>4</b>   |  |
| 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br>Code<br><b>4</b>   |  | 20c. State the name and quantity of the hazardous material released, if any  |  |
| 21. Temperature<br>(specify if minus) <b>63</b> °F  |  | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark<br>Code<br><b>4</b>  |  |
| 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow<br>Code<br><b>4</b>  |  | 24. Type of Equipment<br>Consist 1. Freight train 4. Work train 7. Yard/Switching<br>(single entry) 2. Passenger train 5. Single car 8. Light loco(s)<br>3. Commuter train 6. Cut of cars 9. Main./inspect. car<br>Code<br><b>2</b>  |  |
| 25. Track Type Used by Rail<br>Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry<br>Code<br><b>1</b>  |  | 26. Track Number or Name<br><b>SINGLE MAIN TRACK</b>   |  |
| 27. FRA Track Class<br><b>5</b>   | 28. Number of Locomotive Units<br><b>1</b> | 29. Number of Cars<br><b>6</b>   | 30. Consist Speed (Recorded if available)<br>R. Recorded <b>4R</b> mph<br>E. Estimated<br>Code<br><b>E</b> |
| 31. Time Table Direction<br>1. North 2. South 3. East 4. West<br>Code<br><b>2</b>   |  | 32. Type of Crossing<br>1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew<br>2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify)<br>3. Standard FLS 6. Audible 9. Watchman 12. None<br>Code(s)<br><b>01 02 03 06 07</b>   |  |
| 33. Signaled Crossing<br>Warning<br>Code<br><b>20 sec warn min (1);</b>   |  | 34. Whistle Ban<br>1. Yes<br>2. No<br>3. Unknown<br>Code<br><b>2</b>   |  |
| 35. Location of Warning<br>1. Both Sides<br>2. Side of Vehicle Approach<br>3. Opposite Side of Vehicle Approach<br>Code<br><b>1</b>   |  | 36. Crossing Warning Interconnected with Highway Signals<br>1. Yes 2. No 3. Unknown<br>Code<br><b>2</b>  |  |
| 37. Crossing Illuminated by Street Lights or Special Lights<br>1. Yes 2. No 3. Unknown<br>Code<br><b>2</b>  |  | 38. Driver's Age<br><b>46</b>  |  |
| 39. Driver's Gender<br>1. Male<br>2. Female<br>Code<br><b>1</b>   |  | 40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown<br>Code<br><b>-</b>   |  |
| 41. Driver<br>1. Drove around or thru the gate 4. Stopped on crossing<br>2. Stopped and then proceeded 5. Other (specify)<br>3. Did not stop<br>Code<br><b>-</b>  |  | 42. Driver Passed Standing Highway Vehicle<br>1. Yes 2. No 3. Unknown<br>Code<br><b>-</b>  |  |
| 43. View of Track Obscured by (primary obstruction)<br>1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify)<br>2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obstructed<br>Code<br><b>8</b> |  | 44. Driver was<br>1. Killed 2. Injured 3. Uninjured<br>Code<br><b>-</b>  |  |
| 45. Was Driver in the Vehicle?<br>1. Yes 2. No<br>Code<br><b>-</b>  |  | Casualties to:<br>Killed Injured   |  |
| 46. Highway-Rail Crossing Users<br><b>1</b> Killed <b>0</b> Injured   |  | 47. Highway Vehicle Property Damage (est. dollar damage)<br><b>\$0</b>   |  |
| 48. Total Number of Highway-Rail Crossing Users (include driver)<br><b>1</b>  |  | 49. Railroad Employees<br><b>0</b>   |  |
| 50. Total Number of People on Train (include passengers and crew)<br><b>53</b>  |  | 51. Is a Rail Equipment Accident / Incident Report Being Filed<br>1. Yes 2. No<br>Code<br><b>2</b>   |  |
| 52. Passengers on Train<br><b>0</b>   |  | 53a. Special Study Block   |  |
| 53b. Special Study Block  |  | 54. Narrative Description<br><b>TRAIN 796 OPERATING WITH LOCOMOTIVE E/452 AND 6 CARS STRUCK A PEDESTRIAN AT MP225.93, SURFRIDER WAY CROSSING.</b>  |  |
| 55. Typed Name and Title  |  | 56. Signature  |  |
|   |  | 57. Date   |  |

**HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT**

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

OMB Approval No. 2130-0500

|   |  |  |   |
|---|--|--|---|
| Name Of   |  | Alphabetic Code  | RR Accident/Incident No.                      |
| 1. Reporting Railroad<br><b>Atchison, Topeka &amp; Santa Fe Rwy Co. [ATSF]</b>  |  | 1a. <b>ATSF</b>  | 1b. <b>310385203</b>                          |
| 2. Other Railroad Involved in Train Accident/Incident<br><b>Amtrak [ATK]</b>  |  | 2a. <b>ATK</b>   | 2b. <b>030685A</b>                            |
| 3. Railroad Responsible for Track Maintenance<br><b>Atchison, Topeka &amp; Santa Fe Rwy Co. [ATSF]</b>  |  | 3a. <b>ATSF</b>  | 3b. <b>310385203</b>                          |
| 4. U.S. DOT-AAR Grade Crossing ID No. <b>026813M</b>  |  | 5. Date of Accident/Incident <b>03/06/85</b>   | 6. Time of Accident/Incident <b>08:47 PM</b>  |
| 7. Nearest Railroad Station<br><b>OCEANSIDE</b>   |  | 8. Division  | 9. County<br><b>SAN DIEGO</b>                 |
|   |  |  | 10. State Code<br>Abbr. <b>06</b>   <b>CA</b> |
| 11. City (if in a city) <b>OCEANSIDE</b>  |  | 12. Highway Name or No. <b>6TH ST</b> <b>Surfrider Way</b> <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private   |   |
| Highway User Involved   |  | Rail Equipment Involved  |   |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify)<br>Code <b>A</b> |  | 17. Equipment<br>1. Train (units pulling) 4. Car(s) (moving) 8. Other (specify)<br>2. Train (units pushing) 5. Car(s) (standing) A. Train pulling- RCL<br>3. Train (standing) 6. Light loco(s) (moving) B. Train pushing- RCL<br>7. Light loco(s) (standing) C. Train standing- RCL<br>Code <b>1</b> |   |
| 14. Vehicle Speed<br>(est. mph at impact) <b>10</b>   |  | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West<br>Code <b>4</b>   |   |
| 16. Position<br>1. Stalled on crossing 3. Moving over crossing<br>2. Stopped on Crossing 4. Trapped<br>Code <b>3</b>  |  | 18. Position of Car Unit in Train<br><b>1</b>  |   |
| 19. Circumstance<br>1. Rail equipment struck highway user<br>2. Rail equipment struck by highway user<br>Code <b>1</b>  |  | 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br>Code <b>4</b>  |   |
| 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br>Code   |  | 20c. State the name and quantity of the hazardous material released, if any  |   |
| 21. Temperature<br>(specify if minus) <b>48</b> °F  |  | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark<br>Code <b>4</b>   |   |
| 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow<br>Code <b>1</b>   |  | 24. Type of Equipment<br>Consist 1. Freight train 4. Work train 7. Yard/Switching<br>(single entry) 2. Passenger train 5. Single car 8. Light loco(s)<br>3. Commuter train 6. Cut of cars 9. Main./inspect. car<br>Code <b>2</b>   |   |
| 25. Track Type Used by Rail Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry<br>Code <b>1</b>  |  | 26. Track Number or Name<br><b>MAIN</b>  |   |
| 27. FRA Track Class<br><b>2</b>   |  | 28. Number of Locomotive Units<br><b>1</b>   |   |
| 29. Number of Cars<br><b>4</b>  |  | 30. Consist Speed (Recorded if available)<br>R. Recorded <b>22</b> mph<br>E. Estimated<br>Code <b>E</b>  |   |
| 31. Time Table Direction<br>1. North 2. South 3. East 4. West<br>Code <b>4</b>  |  | 32. Type of Crossing<br>1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew<br>2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify)<br>Warning 3. Standard FLS 6. Audible 9. Watchman 12. None<br>Code(s) <b>01 03 06</b>  |   |
| 33. Signaled Crossing Warning<br><b>20 sec warn min (1);</b>  |  | 34. Whistle Ban<br>1. Yes<br>2. No<br>3. Unknown<br>Code   |   |
| 35. Location of Warning<br>1. Both Sides<br>2. Side of Vehicle Approach<br>3. Opposite Side of Vehicle Approach<br>Code <b>1</b>  |  | 36. Crossing Warning Interconnected with Highway Signals<br>1. Yes 2. No 3. Unknown<br>Code <b>3</b>   |   |
| 37. Crossing Illuminated by Street Lights or Special Lights<br>1. Yes 2. No 3. Unknown<br>Code <b>3</b>   |  | 38. Driver's Age<br>39. Driver's Gender<br>1. Male<br>2. Female<br>Code  |   |
| 40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown<br>Code <b>2</b>   |  | 41. Driver<br>1. Drove around or thru the gate 4. Stopped on crossing<br>2. Stopped and then proceeded 5. Other (specify)<br>3. Did not stop<br>Code <b>1</b>  |   |
| 42. Driver Passed Standing Highway Vehicle<br>1. Yes 2. No 3. Unknown<br>Code <b>2</b>  |  | 43. View of Track Obscured by (primary obstruction)<br>1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify)<br>2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obstructed<br>Code <b>8</b>   |   |
| Casualties to:  |  | 44. Driver was<br>1. Killed 2. Injured 3. Uninjured<br>Code <b>3</b>   |   |
| 45. Was Driver in the Vehicle?<br>1. Yes 2. No<br>Code <b>1</b>   |  | 46. Highway-Rail Crossing Users<br><b>0</b> Killed <b>0</b> Injured  |   |
| 47. Highway Vehicle Property Damage (est. dollar damage)<br><b>\$1,000</b>  |  | 48. Total Number of Highway-Rail Crossing Users (include driver)<br><b>1</b>   |   |
| 49. Railroad Employees<br><b>0</b>  |  | 50. Total Number of People on Train (include passengers and crew)<br><b>0</b>  |   |
| 51. Is a Rail Equipment Accident / Incident Report Being Filed<br>1. Yes 2. No<br>Code <b>2</b>   |  | 52. Passengers on Train<br><b>0</b>  |   |
| 53a. Special Study Block  |  | 53b. Special Study Block   |   |
| 54. Narrative Description   |  |  |   |
| 55. Typed Name and Title  |  | 56. Signature  |   |
|   |  |  |   |
|   |  | 57. Date   |   |

**HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT**

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

OMB Approval No. 2130-0500

|  |  |   |  |
|--|--|---|--|
| Name Of  |  | Alphabetic Code   | RR Accident/Incident No.                     |
| 1. Reporting Railroad<br><b>Amtrak [ATK]</b>   |  | 1a. <b>ATK</b>  | 1b. <b>030685A</b>                           |
| 2. Other Railroad Involved in Train Accident/Incident<br><b>Atchison, Topeka &amp; Santa Fe Rwy Co. [ATSF]</b>   |  | 2a. <b>ATSF</b>   | 2b. <b>310385203</b>                         |
| 3. Railroad Responsible for Track Maintenance<br><b>Atchison, Topeka &amp; Santa Fe Rwy Co. [ATSF]</b>   |  | 3a. <b>ATSF</b>   | 3b. <b>310385203</b>                         |
| 4. U.S. DOT-AAR Grade Crossing ID No. <b>026813M</b>   |  | 5. Date of Accident/Incident <b>03/06/85</b>  | 6. Time of Accident/Incident <b>08:47 PM</b> |
| 7. Nearest Railroad Station<br><b>OCEANSIDE</b>  |  | 8. Division<br><b>SAN DIEGO</b>   | 9. County<br><b>SAN DIEGO</b>                |
| 10. State<br>Abbr. <b>06</b> Code <b>CA</b>  |  | 11. City (if in a city) <b>OCEANSIDE</b>  |  |
| 12. Highway Name or No. <b>6TH ST</b>  |  | <b>Surfrider Way</b>  |  |
| <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private  |  |   |  |
| Highway User Involved  |  | Rail Equipment Involved   |  |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify)       |  | Code<br><b>A</b>  |  |
| 14. Vehicle Speed<br>(est. mph at impact) <b>30</b>  |  | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West<br><b>4</b>   |  |
| 16. Position<br>1. Stalled on crossing 3. Moving over crossing<br>2. Stopped on Crossing 4. Trapped<br><b>3</b>  |  | 17. Equipment<br>1. Train (units pulling) 4. Car(s) (moving)<br>2. Train (units pushing) 5. Car(s) (standing)<br>3. Train (standing) 7. Light loco(s) (standing)  |  |
| 18. Position of Car Unit in Train<br><b>1</b>  |  | 19. Circumstance<br>1. Rail equipment struck highway user<br>2. Rail equipment struck by highway user<br><b>1</b>   |  |
| 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br><b>4</b> |  | 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br><b>4</b>   |  |
| 20c. State the name and quantity of the hazardous material released, if any  |  |   |  |
| 21. Temperature<br>(specify if minus) <b>48</b> °F   |  | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark<br><b>4</b>   |  |
| 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow<br><b>1</b>   |  | 24. Type of Equipment<br>Consist 1. Freight train 4. Work train 7. Yard/Switching<br>(single entry) 2. Passenger train 5. Single car 8. Light loco(s)<br>3. Commuter train 6. Cut of cars 9. Main./inspect. car<br><b>2</b>     |  |
| 25. Track Type Used by Rail Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry<br><b>1</b>  |  | 26. Track Number or Name<br><b>MAIN</b>   |  |
| 27. FRA Track Class<br><b>2</b>  |  | 28. Number of Locomotive Units<br><b>1</b>  |  |
| 29. Number of Cars<br><b>4</b>   |  | 30. Consist Speed (Recorded if available)<br>R. Recorded <b>22</b> mph<br>E. Estimated<br><b>E</b>  |  |
| 31. Time Table Direction<br>1. North 2. South 3. East 4. West<br><b>4</b>  |  | 32. Type of Crossing<br>1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew<br>2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify)<br>Warning 3. Standard FLS 6. Audible 9. Watchman 12. None        |  |
| 33. Signaled Crossing Warning<br><b>20 sec warn min (1);</b>   |  | 34. Whistle Ban<br>1. Yes<br>2. No<br>3. Unknown  |  |
| 35. Location of Warning<br>1. Both Sides<br>2. Side of Vehicle Approach<br>3. Opposite Side of Vehicle Approach<br><b>1</b>  |  | 36. Crossing Warning Interconnected with Highway Signals<br>1. Yes 2. No 3. Unknown<br><b>3</b>   |  |
| 37. Crossing Illuminated by Street Lights or Special Lights<br>1. Yes 2. No 3. Unknown<br><b>3</b>   |  | 38. Driver's Age<br>39. Driver's Gender<br>1. Male<br>2. Female<br><b>1</b>   |  |
| 40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown<br><b>2</b>   |  | 41. Driver<br>1. Drove around or thru the gate 4. Stopped on crossing<br>2. Stopped and then proceeded 5. Other (specify)<br>3. Did not stop<br><b>1</b>  |  |
| 42. Driver Passed Standing Highway Vehicle<br>1. Yes 2. No 3. Unknown<br><b>2</b>  |  | 43. View of Track Obscured by (primary obstruction)<br>1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify)<br>2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obscured<br><b>8</b> |  |
| Casualties to:   |  | 44. Driver was<br>1. Killed 2. Injured 3. Uninjured<br><b>3</b>   |  |
| 45. Was Driver in the Vehicle?<br>1. Yes 2. No<br><b>1</b>   |  | 46. Highway-Rail Crossing Users<br><b>0</b>   |  |
| 47. Highway Vehicle Property Damage (est. dollar damage)<br><b>\$1,000</b>   |  | 48. Total Number of Highway-Rail Crossing Users (include driver)<br><b>1</b>  |  |
| 49. Railroad Employees<br><b>0</b>   |  | 50. Total Number of People on Train (include passengers and crew)<br><b>0</b>   |  |
| 51. Is a Rail Equipment Accident / Incident Report Being Filed<br>1. Yes 2. No<br><b>2</b>   |  | 52. Passengers on Train<br><b>0</b>   |  |
| 53a. Special Study Block   |  | 53b. Special Study Block  |  |
| 54. Narrative Description  |  |   |  |
| 55. Typed Name and Title   |  | 56. Signature   |  |
|  |  |   |  |
|  |  | 57. Date  |  |

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

|   |  |  |  |  |  |   |  |   |
|---|--|--|--|--|--|---|--|---|
| 1. Name of Reporting Railroad<br>BNSF Rwy Co. [BNSF]  |  |  | 1a. Alphabetic Code<br>BNSF  |  |  | 1b. Railroad Accident/Incident No.<br>CA0613202   |  |   |
| 2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident  |  |  | 2a. Alphabetic Code  |  |  | 2b. Railroad Accident/Incident No.  |  |   |
| 3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry)<br>San Diego Northern Rwy [SDNX]   |  |  | 3a. Alphabetic Code<br>SDNX  |  |  | 3b. Railroad Accident/Incident No.<br>XXX   |  |   |
| 4. U.S. DOT Grade Crossing ID No.<br><br>027062B  |  |  | 5. Date of Accident/Incident<br>month   day   year<br>0   6   2   5   2013   |  |  | 6. Time of Accident/Incident<br>9:55 AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>   |  |   |
| 7. Nearest Railroad Station<br>OCEANSIDE  |  |  | 8. Subdivision<br>SAN DIEGO  |  |  | 9. County<br>SAN DIEGO  |  |   |
| 10. State<br>Abbr. CA   |  |  | Code<br>06   |  |  |   |  |   |
| 11. City (if in a city)<br>OCEANSIDE  |  |  | 12. Highway Name or No.<br>MISSION AVE   |  |  | Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>   |  |   |
| Highway User Involved   |  |  |  |  | Rail Equipment Involved  |   |  |   |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify) Code<br>K  |  |  |  |  | 17. Equipment<br>1. Train (units pulling)<br>2. Train (units pushing)<br>3. Train (standing)<br>4. Car(s) (moving)<br>5. Car(s) (standing)<br>6. Light loco(s) (moving)<br>7. Light loco(s) (standing)<br>8. Other (specify)<br>A. Train pulling- RCL<br>B. Train pushing- RCL<br>C. Train standing- RCL<br>D. EMU Locomotive(s)<br>E. DMU Locomotive(s) Code<br>1 |   |  |   |
| 14. Vehicle Speed (est. mph at impact)  |  | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West                                    |  | Code<br>2  |  | 18. Position of Car Unit in Train<br><br>1  |  |   |
| 16. Position<br>1. Stalled or stuck on crossing<br>2. Stopped on Crossing<br>3. Moving over crossing<br>4. Trapped on crossing by traffic<br>5. Blocked on crossing by gates<br>Code<br>3   |  |  |  |  | 19. Circumstance<br>1. Rail equipment struck highway user<br>2. Rail equipment struck by highway user<br>Code<br>1   |   |  |   |
| 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br>Code<br>2   |  |  |  |  | 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br>Code<br>4   |   |  |   |
| 20c. State here the name and quantity of the hazardous material released, if any  |  |  |  |  |  |   |  |   |
| 21. Temperature (specify if minus) 68 °F  |  | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark<br>Code<br>4                         |  |  | 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow<br>Code<br>1  |   |  |   |
| 24. Type of Equipment (single entry)<br>1. Freight Train<br>2. Passenger Train-Pulling<br>3. Commuter Train-Pulling<br>4. Work Train<br>5. Single Car<br>6. Cut of cars<br>7. Yard/Switching<br>8. Light loco(s)<br>9. Maint./Inspect. car<br>A. Spec. MoW Equip.<br>B. Passenger Train-Pushing<br>C. Commuter Train-Pushing<br>D. EMU<br>E. DMU<br>Code<br>1 |  | 25. Track Type Used by Rail Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry<br>Code<br>1 |  | 26. Track Number or Name<br>SINGLE MAIN  |  |   |  |   |
| 27. FRA Track Class (1-9,X)<br>4  |  | 28. Number of Locomotive Units<br>2  |  | 29. Number of Cars<br>52   |  | 30. Consist Speed (Recorded speed if available)<br>R. Recorded<br>E. Estimated<br>37 mph<br>Code<br>R   |  | 31. Time Table Direction<br>1. North 3. East<br>2. South 4. West<br>Code<br>4 |
| 32. Type of Crossing Warning<br>1. Gates<br>2. Cantilever FLS<br>3. Standard FLS<br>4. Wig wags<br>5. Hwy. traffic signals<br>6. Audible<br>7. Crossbucks<br>8. Stop signs<br>9. Watchman<br>10. Flagged by crew<br>11. Other (specify)<br>12. None<br>Code(s)<br>01 03   |  |  |  |  | 33. Signaled Crossing Warning (See reverse side for instructions and codes)<br>Code<br>1   |   | 34. Roadway Conditions<br>A. Dry<br>B. Wet<br>C. Snow/Slush<br>D. Ice<br>E. Sand, Mud, Dirt, Oil, Gravel<br>F. Water (Standing, Moving)<br>Code<br>A |   |
| 35. Location of Warning<br>1. Both Sides<br>2. Side of Vehicle Approach<br>3. Opposite Side of Vehicle Approach<br>Code<br>1  |  |  | 36. Crossing Warning Interconnected with Highway Signals<br>1. Yes 2. No 3. Unknown<br>Code<br>1   |  |  | 37. Crossing Illuminated by Street Lights or Special Lights<br>1. Yes 2. No 3. Unknown<br>Code<br>1   |  |   |
| 38. Highway User's Age<br>22  |  | 39. Highway User's Gender<br>1. Male<br>2. Female<br>Code<br>1                                       |  | 40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown<br>Code<br>2 |  | 41. Highway User<br>1. Went around the gate<br>2. Stopped and then proceeded<br>3. Did not stop<br>4. Stopped on crossing<br>5. Other (specify)<br>6. Went around/thru temporary barricade (if yes, see instructions)<br>7. Went thru the gate<br>8. Suicide/Attempted suicide<br>Code<br>5 |  |   |
| 42. Driver Passed Standing Highway Vehicle<br>1. Yes 2. No 3. Unknown<br>Code   |  |  | 43. View of Track Obscured by (primary obstruction)<br>1. Permanent Structure<br>2. Standing railroad equipment<br>3. Passing Train<br>4. Topography<br>5. Vegetation<br>6. Highway Vehicles<br>7. Other (specify)<br>8. Not Obscured<br>Code<br>8 |  |  |   |  |   |
| Casualties to:  |  | Killed   |  | Injured  |  | 44. Driver was<br>1. Killed 2. Injured 3. Uninjured   |  | 45. Was Driver in the Vehicle?<br>1. Yes 2. No<br>Code                        |
| 46. Highway-Rail Crossing Users<br>0  |  | 0  |  | 47. Highway Vehicle Property Damage (est. dollar damage)   |  | 48. Total Number of Vehicle Occupants (including driver)<br>0   |  |   |
| 49. Railroad Employees<br>0   |  | 0  |  | 50. Total Number of People on Train (include passengers and train crew)<br>1   |  | 51. Is a Rail Equipment Accident / Incident Report Being Filed<br>1. Yes 2. No<br>Code<br>2   |  |   |
| 52. Passengers on Train<br>0  |  | 0  |  |  |  |   |  |   |
| 53a. Special Study Block  |  | Video Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                     |  | Video Used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  |  | 53b. Special Study Block  |  |   |
| 54. Narrative Description (Be specific, and continue on separate sheet if necessary)<br>41: RAN FROM BUNGALOW.  |  |  |  |  |  |   |  |   |
| 55. Typed Name and Title  |  |  |  |  | 56. Signature  |   | 57. Date   |   |

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

|  |  |  |   |  |  |   |  |            |
|--|--|--|---|--|--|---|--|------------|
| 1. Name of Reporting Railroad<br>BNSF Rwy Co. [BNSF]   |  |  | 1a. Alphabetic Code<br>BNSF   |  |  | 1b. Railroad Accident/Incident No.<br>CA0113203   |  |            |
| 2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident   |  |  | 2a. Alphabetic Code   |  |  | 2b. Railroad Accident/Incident No.  |  |            |
| 3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry)<br>BNSF Rwy Co. [BNSF]  |  |  | 3a. Alphabetic Code<br>BNSF   |  |  | 3b. Railroad Accident/Incident No.<br>CA0113203   |  |            |
| 4. U.S. DOT Grade Crossing ID No.<br><b>027062B</b>  |  |  | 5. Date of Accident/Incident<br>month   day   year<br>0   1   1   8   2013  |  |  | 6. Time of Accident/Incident<br>9:55 AM <input type="checkbox"/> PM <input checked="" type="checkbox"/> |  |            |
| 7. Nearest Railroad Station<br>OCEANSIDE   |  | 8. Subdivision<br>SAN DIEGO NORTHERN   |   | 9. County<br>SAN DIEGO   |  | 10. State<br>Abbr. CA   |  | Code<br>06 |
| 11. City (if in a city)  |  |  | 12. Highway Name or No.<br>MISSION AVE  |  |  | Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>                             |  |            |
| Highway User Involved  |  |  |   |  | Rail Equipment Involved  |   |  |            |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify) Code<br>K   |  |  |   |  | 17. Equipment<br>1. Train (units pulling) 2. Train (units pushing) 3. Train (standing)<br>4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify) Code<br>1 |   |  |            |
| 14. Vehicle Speed (est. mph at impact)   |  | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West Code<br>3  |   | 18. Position of Car Unit in Train<br>1   |  |   |  |            |
| 16. Position<br>1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing<br>4. Trapped on crossing by traffic 5. Blocked on crossing by gates Code<br>3  |  |  | 19. Circumstance<br>1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code<br>1      |  |  |   |  |            |
| 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither Code<br>2   |  |  | 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither Code<br>4 |  |  |   |  |            |
| 20c. State here the name and quantity of the hazardous material released, if any   |  |  |   |  |  |   |  |            |
| 21. Temperature (specify if minus) 62 °F   |  | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark Code<br>4  |   | 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code<br>1   |  |   |  |            |
| 24. Type of Equipment Consist (single entry)<br>1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train<br>5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s)<br>9. Maint./inspect. car A. Spec. MoW Equip. B. Passenger Train-Pushing C. Commuter Train-Pushing<br>D. EMU E. DMU Code<br>1 |  |  | 25. Track Type Used by Rail Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry Code<br>1                 |  | 26. Track Number or Name<br>MAIN 2 TRACK   |   |  |            |
| 27. FRA Track Class (1-9,X)<br>4   | 28. Number of Locomotive Units<br>3                      | 29. Number of Cars<br>68   | 30. Consist Speed (Recorded speed if available)<br>R. Recorded 42 mph E. Estimated R                              |  | 31. Time Table Direction<br>1. North 2. South 3. East 4. West Code<br>4  |   |  |            |
| 32. Type of Crossing Warning<br>1. Gates 2. Cantilever FLS 3. Standard FLS<br>4. Wig wags 5. Hwy. traffic signals 6. Audible<br>7. Crossbucks 8. Stop signs 9. Watchman<br>10. Flagged by crew 11. Other (specify) 12. None<br>Code(s) 01 03   |  |  | 33. Signaled Crossing Warning (See reverse side for instructions and codes) Code<br>1                             |  | 34. Roadway Conditions<br>A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code<br>A   |   |  |            |
| 35. Location of Warning<br>1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code<br>1  |  | 36. Crossing Warning Interconnected with Highway Signals<br>1. Yes 2. No 3. Unknown Code<br>1  |   | 37. Crossing Illuminated by Street Lights or Special Lights<br>1. Yes 2. No 3. Unknown Code<br>1   |  |   |  |            |
| 38. Highway User's Age<br>29   | 39. Highway User's Gender<br>1. Male 2. Female Code<br>1 | 40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown Code<br>2  |   | 41. Highway User<br>1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing<br>5. Other (specify) 6. Went around/thru temporary barricade (if yes, see instructions) 7. Went thru the gate 8. Suicide/Attempted suicide Code<br>5 |  |   |  |            |
| 42. Driver Passed Standing Highway Vehicle<br>1. Yes 2. No 3. Unknown Code   |  | 43. View of Track Obscured by (primary obstruction)<br>1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obscured Code<br>8 |   | 44. Driver was<br>1. Killed 2. Injured 3. Uninjured Code<br>45. Was Driver in the Vehicle?<br>1. Yes 2. No Code  |  |   |  |            |
| 46. Highway-Rail Crossing Users<br>Killed 1 Injured 0  |  | 47. Highway Vehicle Property Damage (est. dollar damage)   |   | 48. Total Number of Vehicle Occupants (including driver) 0   |  |   |  |            |
| 49. Railroad Employees 0   |  | 50. Total Number of People on Train (include passengers and train crew) 3  |   | 51. Is a Rail Equipment Accident / Incident Report Being Filed<br>1. Yes 2. No Code<br>2   |  |   |  |            |
| 52. Passengers on Train 0  |  | 53a. Special Study Block<br>Video Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Video Used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                            |   | 53b. Special Study Block   |  |   |  |            |
| 54. Narrative Description (Be specific, and continue on separate sheet if necessary)<br>41: TRESPASSER   |  |  |   |  |  |   |  |            |
| 55. Typed Name and Title   |  |  | 56. Signature   |  |  | 57. Date  |  |            |

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

**HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT**

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

OMB Approval No. 2130-0500

|  |  |  |   |   |   |
|--|--|--|---|---|---|
| Name Of  |  |  |   | Alphabetic Code   | RR Accident/Incident No.  |
| 1. Reporting Railroad<br>BNSF Rwy Co. [BNSF]   |  |  |   | 1a. BNSF  | 1b. CA0810202   |
| 2. Other Railroad Involved in Train Accident/Incident  |  |  |   | 2a.   | 2b.   |
| 3. Railroad Responsible for Track Maintenance<br>San Diego Northern Rwy [SDNX]   |  |  |   | 3a. SDNX  | 3b. XXX   |
| 4. U.S. DOT-AAR Grade Crossing ID No.<br>026816H   |  | 5. Date of Accident/Incident<br>08/16/10   |   | 6. Time of Accident/Incident<br>08:20 PM  |   |
| 7. Nearest Railroad Station<br>ESCONIDO  |  | 8. Division<br>CALIFORNIA  |   | 9. County<br>SAN DIEGO  |   |
|  |  |  |   | 10. State<br>Abbr. 06   | Code<br>CA  |
| 11. City (if in a city)  |  | 12. Highway Name or No.<br>WISONSIN ST   |   | <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private   |   |
| Highway User Involved  |  |  | Rail Equipment Involved   |   |   |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify)   |  |  | Code<br>K   |   |   |
| 14. Vehicle Speed<br>(est. mph at impact)  |  |  | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West |   |   |
| 16. Position<br>1. Stalled on crossing 3. Moving over crossing<br>2. Stopped on Crossing 4. Trapped  |  |  | Code<br>3   |   |   |
| 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither   |  |  | Code<br>2   |   |   |
| 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither  |  |  | Code<br>4   |   |   |
| 20c. State the name and quantity of the hazardous material released, if any  |  |  |   |   |   |
| 21. Temperature<br>(specify if minus) 68 °F  |  | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark                  |   | Code<br>4   |   |
|  |  | 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow |   | Code<br>1   |   |
| 24. Type of Equipment<br>Consist 1. Freight train 4. Work train 7. Yard/Switching<br>(single entry) 2. Passenger train 5. Single car 8. Light loco(s)<br>3. Commuter train 6. Cut of cars 9. Main./inspect. car          |  |  | A. Spec. MoW Equip<br>Code<br>1                                   |   | 25. Track Type Used by Rail<br>Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry<br>Code<br>1 |
| 26. Track Number or Name<br>SINGLE MAIN  |  |  |   |   |   |
| 27. FRA Track Class<br>4   |  | 28. Number of Locomotive Units<br>3  |   | 29. Number of Cars<br>10  |   |
|  |  | 30. Consist Speed (Recorded if available)<br>R. Recorded<br>E. Estimated 29 mph  |   | Code<br>R   |   |
|  |  |  |   | 31. Time Table Direction<br>1. North 2. South 3. East 4. West<br>Code<br>3  |   |
| 32. Type of Crossing<br>Warning 1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew<br>2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify)<br>3. Standard FLS 6. Audible 9. Watchman 12. None |  |  | 33. Signaled Crossing<br>Warning                                  |   | 34. Whistle Ban<br>1. Yes<br>2. No<br>3. Unknown<br>Code<br>2   |
| Code(s)<br>01 03   |  |  | 20 sec warn min (1);  |   |   |
| 35. Location of Warning<br>1. Both Sides<br>2. Side of Vehicle Approach<br>3. Opposite Side of Vehicle Approach  |  |  | Code<br>1   |   | 36. Crossing Warning Interconnected<br>with Highway Signals<br>1. Yes 2. No 3. Unknown<br>Code<br>2     |
| 37. Crossing Illuminated by Street<br>Lights or Special Lights<br>1. Yes 2. No 3. Unknown  |  |  |   |   | Code<br>1   |
| 38. Driver's Age<br>49   |  | 39. Driver's Gender<br>1. Male<br>2. Female<br>Code<br>1                         |   | 40. Driver Drove Behind or in Front of Train<br>and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown<br>Code   |   |
|  |  |  |   | 41. Driver<br>1. Drove around or thru the gate 4. Stopped on crossing<br>2. Stopped and then proceeded 5. Other (specify)<br>3. Did not stop<br>Code  |   |
| 42. Driver Passed Standing<br>Highway Vehicle<br>1. Yes 2. No 3. Unknown   |  | Code   |   | 43. View of Track Obscured by<br>(primary obstruction)<br>1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify)<br>2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obstructed<br>Code<br>8 |   |
| Casualties to:   |  | Killed   | Injured   | 44. Driver was<br>1. Killed 2. Injured 3. Uninjured<br>Code   |   |
|  |  |  |   | 45. Was Driver in the Vehicle?<br>1. Yes 2. No<br>Code  |   |
| 46. Highway-Rail Crossing Users<br>0   |  | 1  |   | 47. Highway Vehicle Property Damage<br>(est. dollar damage) \$0   |   |
| 48. Total Number of Highway-Rail Crossing Users<br>(include driver) 1  |  |  |   | 49. Railroad Employees<br>0   |   |
| 50. Total Number of People on Train<br>(include passengers and crew) 3   |  | 0  |   | 51. Is a Rail Equipment Accident /<br>Incident Report Being Filed<br>1. Yes 2. No<br>Code<br>2  |   |
| 52. Passengers on Train<br>0   |  | 0  |   |   |   |
| 53a. Special Study Block   |  |  | 53b. Special Study Block  |   |   |
| 54. Narrative Description<br>PEDESTRIAN DIRECTION UNKNOWN  |  |  |   |   |   |
| 55. Typed Name and Title   |  | 56. Signature  |   |   | 57. Date  |

**HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT**

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

OMB Approval No. 2130-0500

|   |  |  |  |
|---|--|--|--|
| Name Of   |  | Alphabetic Code  | RR Accident/Incident No.                 |
| 1. Reporting Railroad<br>San Diego Northern Rwy [SDNX]  |  | 1a. SDNX   | 1b. 08079915                             |
| 2. Other Railroad Involved in Train Accident/Incident   |  | 2a.  | 2b.                                      |
| 3. Railroad Responsible for Track Maintenance<br>San Diego Northern Rwy [SDNX]  |  | 3a. SDNX   | 3b. 08079915                             |
| 4. U.S. DOT-AAR Grade Crossing ID No.<br>026816H  |  | 5. Date of Accident/Incident<br>12/23/08   | 6. Time of Accident/Incident<br>05:04 PM |
| 7. Nearest Railroad Station<br>OCEANSIDE STATION  |  | 8. Division<br>SYSTEM  | 9. County<br>SAN DIEGO                   |
|   |  | 10. State<br>Abbr. 06  | Code<br>CA                               |
| 11. City (if in a city)<br>OCEANSIDE  |  | 12. Highway Name or No.<br>WISCONSIN AVE   |  |
|   |  | <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private  |  |
| Highway User Involved   |  | Rail Equipment Involved  |  |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify)  |  | 17. Equipment<br>1. Train (units pulling) 4. Car(s) (moving)<br>2. Train (units pushing) 5. Car(s) (standing)<br>3. Train (standing) 6. Light loco(s) (moving)<br>7. Light loco(s) (standing)                            |  |
| Code<br>M   |  | 8. Other (specify)<br>A. Train pulling- RCL<br>B. Train pushing- RCL<br>C. Train standing- RCL   |  |
| Code<br>1   |  | Code<br>1  |  |
| 14. Vehicle Speed<br>(est. mph at impact) 3   |  | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West  |  |
| Code<br>1   |  | 18. Position of Car Unit in Train<br>1   |  |
| 16. Position<br>1. Stalled on crossing 3. Moving over crossing<br>2. Stopped on Crossing 4. Trapped   |  | 19. Circumstance<br>1. Rail equipment struck highway user<br>2. Rail equipment struck by highway user  |  |
| Code<br>3   |  | Code<br>1  |  |
| 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither  |  | 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither  |  |
| Code<br>4   |  | Code<br>4  |  |
| 20c. State the name and quantity of the hazardous material released, if any   |  |  |  |
| 21. Temperature<br>(specify if minus) 67 °F   |  | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark  |  |
| Code<br>4   |  | 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow   |  |
| Code<br>4   |  | Code<br>3  |  |
| 24. Type of Equipment<br>Consist 1. Freight train 4. Work train 7. Yard/Switching<br>(single entry) 2. Passenger train 5. Single car 8. Light loco(s)<br>3. Commuter train 6. Cut of cars 9. Main./Inspect. car   |  | 25. Track Type Used by Rail<br>Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry   |  |
| Code<br>2   |  | Code<br>1  |  |
| 26. Track Number or Name<br>ML-1  |  |  |  |
| 27. FRA Track Class<br>5  |  | 28. Number of Locomotive Units<br>1  |  |
| 29. Number of Cars<br>1   |  | 30. Consist Speed (Recorded if available)<br>R. Recorded 43 mph<br>E. Estimated  |  |
| Code<br>R   |  | 31. Time Table Direction<br>1. North 2. South 3. East 4. West  |  |
| Code<br>3   |  | Code<br>3  |  |
| 32. Type of Crossing<br>1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew<br>2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify)<br>Warning 3. Standard FLS 6. Audible 9. Watchman 12. None  |  | 33. Signaled Crossing<br>Warning   |  |
| Code(s)<br>01 03 06 07  |  | 34. Whistle Ban<br>1. Yes<br>2. No<br>3. Unknown   |  |
| Code<br>2   |  | 20 sec warn min (1);<br>Code<br>2  |  |
| 35. Location of Warning<br>1. Both Sides<br>2. Side of Vehicle Approach<br>3. Opposite Side of Vehicle Approach   |  | 36. Crossing Warning Interconnected<br>with Highway Signals<br>1. Yes 2. No 3. Unknown   |  |
| Code<br>1   |  | Code<br>2  |  |
| 37. Crossing Illuminated by Street<br>Lights or Special Lights<br>1. Yes 2. No 3. Unknown   |  | Code<br>1  |  |
| 38. Driver's Age<br>44  |  | 39. Driver's Gender<br>1. Male<br>2. Female  |  |
| Code<br>1   |  | 40. Driver Drove Behind or in Front of Train<br>and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown  |  |
| Code<br>2   |  | 41. Driver<br>1. Drove around or thru the gate 4. Stopped on crossing<br>2. Stopped and then proceeded 5. Other (specify)<br>3. Did not stop   |  |
| Code<br>1   |  | Code<br>1  |  |
| 42. Driver Passed Standing<br>Highway Vehicle<br>1. Yes 2. No 3. Unknown  |  | 43. View of Track Obscured by<br>(primary obstruction)<br>1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify)<br>2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obstructed |  |
| Code<br>3   |  | Code<br>8  |  |
| Casualties to:  |  | 44. Driver was<br>1. Killed 2. Injured 3. Uninjured  |  |
| Killed Injured  |  | Code<br>1  |  |
| Code<br>2   |  | 45. Was Driver in the Vehicle?<br>1. Yes 2. No   |  |
| Code<br>2   |  | Code<br>2  |  |
| 46. Highway-Rail Crossing Users<br>1 0  |  | 47. Highway Vehicle Property Damage<br>(est. dollar damage) \$0  |  |
| Code<br>1   |  | 48. Total Number of Highway-Rail Crossing Users<br>(include driver) 1  |  |
| Code<br>1   |  | Code<br>1  |  |
| 49. Railroad Employees<br>0 0   |  | 50. Total Number of People on Train<br>(include passengers and crew) 49  |  |
| Code<br>0   |  | Code<br>49   |  |
| 52. Passengers on Train<br>0 0  |  | 51. Is a Rail Equipment Accident /<br>Incident Report Being Filed<br>1. Yes 2. No  |  |
| Code<br>0   |  | Code<br>2  |  |
| 53a. Special Study Block  |  | 53b. Special Study Block   |  |
| 54. Narrative Description<br>ON DECEMBER 23, 2008 AT APPROXIMATELY 5:04 PM, EASTBOUND TRAIN #54 TRAIN OPERATOR REPORTED TO SPRINTER DISPATCH HE HAD MADE CONTACT WITH A BICYCLIST AT WISCONSIN AVENUE MILEPOST 99.7. TRAIN OPERATOR STATED WHILE ON APPROACH TO THE GRADE CROSSING HE OBSERVED AN INDIVIDUAL RIDING A BICYCLE WESTBOUND ON THE SOUTHERN PEDESTRIAN SIDEWALK WAS NOT STOPPING FOR RED LIGHTS AND BELLS. TRAIN OPERATOR SOUNDED HIS HORN SIGNAL ON APPROACH TO THE CROSSING ATTEMPTING TO WARN THE CYCLIST. AS TRAIN #54 ENTERED WI |  |  |  |
| 55. Typed Name and Title  |  | 56. Signature  |  |
|   |  |  |  |
|   |  | 57. Date   |  |

**HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT**

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

OMB Approval No. 2130-0500

|  |   |  |   |
|--|---|--|---|
| Name Of  |   | Alphabetic Code  | RR Accident/Incident No.  |
| 1. Reporting Railroad<br>Amtrak [ATK]  |   | 1a. ATK  | 1b. 106565  |
| 2. Other Railroad Involved in Train Accident/Incident  |   | 2a.  | 2b.   |
| 3. Railroad Responsible for Track Maintenance<br>San Diego Northern Rwy [SDNX]   |   | 3a. SDNX   | 3b. XXX   |
| 4. U.S. DOT-AAR Grade Crossing ID No.<br>026816H   |   | 5. Date of Accident/Incident<br>12/24/07   | 6. Time of Accident/Incident<br>09:06 PM  |
| 7. Nearest Railroad Station<br>OCEANSIDE   |   | 8. Division<br>SWD   | 9. County<br>SAN DIEGO  |
| 10. State<br>Abbr. 06  |   | Code<br>CA   |   |
| 11. City (if in a city)<br>OCEANSIDE   |   | 12. Highway Name or No.<br>WISCONSIN ST  |   |
|  |   | <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private  |   |
| Highway User Involved  |   | Rail Equipment Involved  |   |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify)   |   | Code<br>A  |   |
| 14. Vehicle Speed<br>(est. mph at impact) 25   |   | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West  |   |
| Code<br>3  |   | 18. Position of Car Unit in Train<br>1   |   |
| 16. Position<br>1. Stalled on crossing 3. Moving over crossing<br>2. Stopped on Crossing 4. Trapped  |   | Code<br>3  |   |
| 19. Circumstance<br>1. Rail equipment struck highway user<br>2. Rail equipment struck by highway user  |   | Code<br>1  |   |
| 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither   |   | Code<br>4  |   |
| 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither  |   | Code<br>4  |   |
| 20c. State the name and quantity of the hazardous material released, if any  |   |  |   |
| 21. Temperature<br>(specify if minus) 60 °F  |   | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark  |   |
| Code<br>4  |   | 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow   |   |
| Code<br>1  |   |  |   |
| 24. Type of Equipment<br>Consist 1. Freight train 4. Work train 7. Yard/Switching<br>(single entry) 2. Passenger train 5. Single car 8. Light loco(s)<br>3. Commuter train 6. Cut of cars 9. Main./inspect. car          |   | A. Spec. MoW Equip<br>Code<br>2  |   |
| 25. Track Type Used by Rail<br>Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry   |   | Code<br>1  |   |
| 26. Track Number or Name<br>MAIN   |   |  |   |
| 27. FRA Track Class<br>5   | 28. Number of Locomotive Units<br>1         | 29. Number of Cars<br>5  | 30. Consist Speed (Recorded if available)<br>R. Recorded 56 mph<br>E. Estimated |
| Code<br>R  |   | 31. Time Table Direction<br>1. North 2. South 3. East 4. West  |   |
| Code<br>4  |   |  |   |
| 32. Type of Crossing<br>1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew<br>2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify)<br>Warning 3. Standard FLS 6. Audible 9. Watchman 12. None |   | 33. Signaled Crossing<br>Warning   |   |
| Code(s)<br>01 03 06  |   | 34. Whistle Ban<br>1. Yes<br>2. No<br>3. Unknown   |   |
| Code<br>3  |   | 20 sec warn min (1);   |   |
| 35. Location of Warning<br>1. Both Sides<br>2. Side of Vehicle Approach<br>3. Opposite Side of Vehicle Approach  |   | Code<br>1  |   |
| 36. Crossing Warning Interconnected<br>with Highway Signals<br>1. Yes 2. No 3. Unknown   |   | Code<br>2  |   |
| 37. Crossing Illuminated by Street<br>Lights or Special Lights<br>1. Yes 2. No 3. Unknown  |   | Code<br>1  |   |
| 38. Driver's Age   | 39. Driver's Gender<br>1. Male<br>2. Female | 40. Driver Drove Behind or in Front of Train<br>and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown                          |   |
| Code<br>1  | Code<br>2                                   | 41. Driver<br>1. Drove around or thru the gate 4. Stopped on crossing<br>2. Stopped and then proceeded 5. Other (specify)<br>3. Did not stop |   |
| Code<br>1  |   |  |   |
| 42. Driver Passed Standing<br>Highway Vehicle<br>1. Yes 2. No 3. Unknown   |   | Code<br>1  |   |
| 43. View of Track Obscured by<br>(primary obstruction)<br>1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify)<br>2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obstructed |   | Code<br>8  |   |
| Casualties to:   |   | Killed   | Injured   |
| 44. Driver was<br>1. Killed 2. Injured 3. Uninjured  |   | Code<br>2  | 45. Was Driver in the Vehicle?<br>1. Yes 2. No                                  |
| Code<br>1  |   | Code<br>1  |   |
| 46. Highway-Rail Crossing Users<br>1   |   | 47. Highway Vehicle Property Damage<br>(est. dollar damage) \$4,000  |   |
| Code<br>1  |   | 48. Total Number of Highway-Rail Crossing Users<br>(include driver) 2  |   |
| 49. Railroad Employees<br>0  |   | 50. Total Number of People on Train<br>(include passengers and crew) 75  |   |
| Code<br>0  |   | Code<br>1  |   |
| 52. Passengers on Train<br>0   |   | 51. Is a Rail Equipment Accident /<br>Incident Report Being Filed<br>1. Yes 2. No  |   |
| Code<br>0  |   | Code<br>1  |   |
| 53a. Special Study Block   |   | 53b. Special Study Block   |   |
| 54. Narrative Description<br>TRAIN #595 OPERATING WITH CAB CAR C/6908 IN THE LEAD, 4 CARS AND LOCOMOTIVE E/459 STRUCK A VEHICLE AT MP226.80, WISCONSIN ST CROSSING.  |   |  |   |
| 55. Typed Name and Title   |   | 56. Signature  |   |
|  |   |  |   |
|  |   | 57. Date   |   |

**HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT**

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

OMB Approval No. 2130-0500

|   |  |   |  |
|---|--|---|--|
| Name Of   |  | Alphabetic Code   | RR Accident/Incident No.                 |
| 1. Reporting Railroad<br>Atchison, Topeka & Santa Fe Rwy Co. [ATSF]   |  | 1a. ATSF  | 1b. 111294200                            |
| 2. Other Railroad Involved in Train Accident/Incident   |  | 2a.   | 2b.                                      |
| 3. Railroad Responsible for Track Maintenance<br>San Diego Northern Rwy [SDNX]  |  | 3a. SDNX  | 3b. XXX                                  |
| 4. U.S. DOT-AAR Grade Crossing ID No.<br>026816H  |  | 5. Date of Accident/Incident<br>12/05/94  | 6. Time of Accident/Incident<br>11:37 PM |
| 7. Nearest Railroad Station<br>OCEANSIDE  |  | 8. Division   | 9. County<br>SAN DIEGO                   |
|   |  | 10. State<br>Abbr. 06   | Code<br>CA                               |
| 11. City (if in a city)<br>OCEANSIDE  |  | 12. Highway Name or No.<br>WISCONSIN ST. <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private  |  |
| Highway User Involved   |  | Rail Equipment Involved   |  |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify)<br>Code<br>K |  | 17. Equipment<br>1. Train (units pulling) 4. Car(s) (moving)<br>2. Train (units pushing) 5. Car(s) (standing)<br>3. Train (standing) 6. Light loco(s) (moving)<br>7. Light loco(s) (standing) 8. Other (specify)<br>Code<br>1             |  |
| 14. Vehicle Speed<br>(est. mph at impact)   |  | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West<br>Code<br>4  |  |
| 16. Position<br>1. Stalled on crossing 3. Moving over crossing<br>2. Stopped on Crossing 4. Trapped<br>Code<br>3  |  | 18. Position of Car Unit in Train<br>1  |  |
| 19. Circumstance<br>1. Rail equipment struck highway user<br>2. Rail equipment struck by highway user<br>Code<br>1  |  | 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br>Code<br>2   |  |
| 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither<br>Code   |  | 20c. State the name and quantity of the hazardous material released, if any   |  |
| 21. Temperature<br>(specify if minus) 60 °F   |  | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark<br>Code<br>4  |  |
| 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow<br>Code<br>2   |  | 24. Type of Equipment<br>Consist 1. Freight train 4. Work train 7. Yard/Switching<br>(single entry) 2. Passenger train 5. Single car 8. Light loco(s)<br>3. Commuter train 6. Cut of cars 9. Main./Inspect. car<br>Code<br>1              |  |
| 25. Track Type Used by Rail<br>Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry<br>Code<br>1   |  | 26. Track Number or Name<br>SINGLE MAIN TRACK   |  |
| 27. FRA Track Class<br>5  |  | 28. Number of Locomotive Units<br>7   |  |
| 29. Number of Cars<br>35  |  | 30. Consist Speed (Recorded if available)<br>R. Recorded 35 mph E. Estimated<br>Code<br>E   |  |
| 31. Time Table Direction<br>1. North 2. South 3. East 4. West<br>Code<br>3  |  | 32. Type of Crossing<br>1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew<br>2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify)<br>Warning 3. Standard FLS 6. Audible 9. Watchman 12. None<br>Code(s)<br>01 |  |
| 33. Signaled Crossing<br>Warning<br>20 sec warn min (1);  |  | 34. Whistle Ban<br>1. Yes<br>2. No<br>3. Unknown<br>Code  |  |
| 35. Location of Warning<br>1. Both Sides<br>2. Side of Vehicle Approach<br>3. Opposite Side of Vehicle Approach<br>Code<br>1  |  | 36. Crossing Warning Interconnected with Highway Signals<br>1. Yes 2. No 3. Unknown<br>Code<br>2  |  |
| 37. Crossing Illuminated by Street Lights or Special Lights<br>1. Yes 2. No 3. Unknown<br>Code<br>3   |  | 38. Driver's Age<br>39. Driver's Gender<br>1. Male<br>2. Female<br>Code   |  |
| 40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown<br>Code  |  | 41. Driver<br>1. Drove around or thru the gate 4. Stopped on crossing<br>2. Stopped and then proceeded 5. Other (specify)<br>3. Did not stop<br>Code  |  |
| 42. Driver Passed Standing Highway Vehicle<br>1. Yes 2. No 3. Unknown<br>Code   |  | 43. View of Track Obscured by (primary obstruction)<br>1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify)<br>2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obstructed<br>Code<br>8        |  |
| Casualties to:  |  | Killed  | Injured                                  |
| 44. Driver was<br>1. Killed 2. Injured 3. Uninjured<br>Code   |  | 45. Was Driver in the Vehicle?<br>1. Yes 2. No<br>Code  |  |
| 46. Highway-Rail Crossing Users<br>0  |  | 47. Highway Vehicle Property Damage (est. dollar damage)<br>\$0   |  |
| 48. Total Number of Highway-Rail Crossing Users (include driver)<br>0   |  | 49. Railroad Employees<br>0   |  |
| 50. Total Number of People on Train (include passengers and crew)<br>0  |  | 51. Is a Rail Equipment Accident / Incident Report Being Filed<br>1. Yes 2. No<br>Code<br>2   |  |
| 52. Passengers on Train<br>0  |  | 53a. Special Study Block  |  |
|   |  | 53b. Special Study Block  |  |
| 54. Narrative Description   |  |   |  |
| 55. Typed Name and Title  |  | 56. Signature   |  |
|   |  | 57. Date  |  |

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

|   |   |  |  |  |  |   |          |            |
|---|---|--|--|--|--|---|----------|------------|
| 1. Name of Reporting Railroad<br>North County Transportation District- Coaster [NCTC]   |   |  | 1a. Alphabetic Code<br>NCTC  |  |  | 1b. Railroad Accident/Incident No.<br>07122013  |          |            |
| 2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident  |   |  | 2a. Alphabetic Code  |  |  | 2b. Railroad Accident/Incident No.  |          |            |
| 3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry)<br>North County Transportation District- Coaster [NCTC]  |   |  | 3a. Alphabetic Code<br>NCTC  |  |  | 3b. Railroad Accident/Incident No.<br>07122013  |          |            |
| 4. U.S. DOT Grade Crossing ID No.<br><br>026818W  |   |  | 5. Date of Accident/Incident<br>month   day   year<br>0   7   1   2   2013                     |  |  | 6. Time of Accident/Incident<br>8:10 AM <input type="checkbox"/> PM <input checked="" type="checkbox"/> |          |            |
| 7. Nearest Railroad Station<br>CP LONGBOARD   |   | 8. Subdivision<br>SAN DIEGO  |  | 9. County<br>SAN DIEGO   |  | 10. State<br>Abbr. CA   |          | Code<br>06 |
| 11. City (if in a city)<br>OCEANSIDE  |   |  | 12. Highway Name or No.<br>CASSIDY STREET  |  |  | Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>                             |          |            |
| Highway User Involved   |   |  |  | Rail Equipment Involved  |  |   |          |            |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify) Code<br>K  |   |  |  | 17. Equipment<br>1. Train (units pulling) 2. Train (units pushing) 3. Train (standing)<br>4. Car(s) (moving) 5. Car(s) (standing) 6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify) Code<br>1   |  |   |          |            |
| 14. Vehicle Speed (est. mph at impact) 0  |   | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West Code<br>4  |  | 18. Position of Car Unit in Train<br><br>1   |  |   |          |            |
| 16. Position<br>1. Stalled or stuck on crossing 2. Stopped on Crossing 3. Moving over crossing<br>4. Trapped on crossing by traffic 5. Blocked on crossing by gates Code<br>2   |   |  |  | 19. Circumstance<br>1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code<br>1   |  |   |          |            |
| 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither Code<br>4  |   |  |  | 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither Code<br>4  |  |   |          |            |
| 20c. State here the name and quantity of the hazardous material released, if any  |   |  |  |  |  |   |          |            |
| 21. Temperature (specify if minus) 60 °F  |   | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark Code<br>4  |  | 23. Weather (single entry)<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow Code<br>1   |  |   |          |            |
| 24. Type of Equipment Consist (single entry)<br>1. Freight Train 2. Passenger Train-Pulling 3. Commuter Train-Pulling 4. Work Train<br>5. Single Car 6. Cut of cars 7. Yard/Switching 8. Light loco(s)<br>9. Maint./inspect. car A. Spec. MoW Equip. C. Commuter Train-Pushing<br>D. EMU E. DMU Code<br>3 |   | 25. Track Type Used by Rail Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry Code<br>1  |  |  | 26. Track Number or Name<br>MAIN TRACK ONE   |   |          |            |
| 27. FRA Track Class (1-9,X) 5   | 28. Number of Locomotive Units 1                      | 29. Number of Cars 6   | 30. Consist Speed (Recorded speed if available)<br>R. Recorded 56 mph E. Estimated R Code<br>R |  | 31. Time Table Direction<br>1. North 2. South 3. East 4. West Code<br>4  |   |          |            |
| 32. Type of Crossing Warning<br>1. Gates 2. Cantilever FLS 3. Standard FLS<br>4. Wig wags 5. Hwy. traffic signals 6. Audible<br>7. Crossbucks 8. Stop signs 9. Watchman<br>10. Flagged by crew 11. Other (specify) 12. None<br>Code(s) 01 03 06   |   |  | 33. Signaled Crossing Warning (See reverse side for instructions and codes) Code<br>1          |  | 34. Roadway Conditions<br>A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code<br>A |   |          |            |
| 35. Location of Warning<br>1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach Code<br>1   |   |  | 36. Crossing Warning Interconnected with Highway Signals<br>1. Yes 2. No 3. Unknown Code<br>2  |  | 37. Crossing Illuminated by Street Lights or Special Lights<br>1. Yes 2. No 3. Unknown Code<br>2                                   |   |          |            |
| 38. Highway User's Age 55   | 39. Highway User's Gender 1. Male 2. Female Code<br>1 | 40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown Code<br>2  |  | 41. Highway User<br>1. Went around the gate 2. Stopped and then proceeded 3. Did not stop 4. Stopped on crossing<br>5. Other (specify) (if yes, see instructions) 6. Went around/thru temporary barricade 7. Went thru the gate 8. Suicide/Attempted suicide Code<br>8 |  |   |          |            |
| 42. Driver Passed Standing Highway Vehicle<br>1. Yes 2. No 3. Unknown Code  |   | 43. View of Track Obscured by (primary obstruction)<br>1. Permanent Structure 2. Standing railroad equipment 3. Passing Train 4. Topography 5. Vegetation 6. Highway Vehicles 7. Other (specify) 8. Not Obscured Code<br>8 |  |  |  |   |          |            |
| Casualties to:<br>Killed Injured  |   | 44. Driver was<br>1. Killed 2. Injured 3. Uninjured  |  | 45. Was Driver in the Vehicle?<br>1. Yes 2. No Code  |  |   |          |            |
| 46. Highway-Rail Crossing Users<br>1 0  |   | 47. Highway Vehicle Property Damage (est. dollar damage) \$0   |  | 48. Total Number of Vehicle Occupants (including driver) 0   |  |   |          |            |
| 49. Railroad Employees 0 0  |   | 50. Total Number of People on Train (include passengers and train crew) 39   |  | 51. Is a Rail Equipment Accident / Incident Report Being Filed<br>1. Yes 2. No Code<br>2   |  |   |          |            |
| 52. Passengers on Train 0 0   |   |  |  |  |  |   |          |            |
| 53a. Special Study Block<br>Video Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Video Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |   | 53b. Special Study Block   |  |  |  |   |          |            |
| 54. Narrative Description (Be specific, and continue on separate sheet if necessary)<br>A 55 YEAR OLD MAN COMMITTED SUICIDE BY STANDING IN FRONT OF TRAIN 665 AT THE CASSIDY STREET CROSSING. FORWARD FACING VIDEO AND WITNESS STATEMENTS IDENTIFY THIS AS A DELIBERATE ACT.                              |   |  |  |  |  |   |          |            |
| 55. Typed Name and Title  |   |  |  | 56. Signature  |  |   | 57. Date |            |

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION (FRA)

HIGHWAY-RAIL GRADE CROSSING  
ACCIDENT/INCIDENT REPORT

OMB Approval No. 2130-0500

|  |                                   |   |   |   |  |   |          |  |
|--|-----------------------------------|---|---|---|--|---|----------|--|
| 1. Name of Reporting Railroad<br><b>Amtrak [ATK]</b>   |                                   |   | 1a. Alphabetic Code<br><b>ATK</b>   |   |  | 1b. Railroad Accident/Incident No.<br><b>30510WSD01</b>   |          |  |
| 2. Name of Other Railroad or Other Entity Filing for Equipment Involved in Train Accident/Incident   |                                   |   | 2a. Alphabetic Code   |   |  | 2b. Railroad Accident/Incident No.  |          |  |
| 3. Name of Railroad or Other Entity Responsible for Track Maintenance (single entry)<br><b>North County Transit District [NCDX]</b>  |                                   |   | 3a. Alphabetic Code<br><b>NCDX</b>  |   |  | 3b. Railroad Accident/Incident No.<br><b>XXX</b>  |          |  |
| 4. U.S. DOT Grade Crossing ID No.<br><b>026818W</b>  |                                   |   | 5. Date of Accident/Incident<br>month   day   year<br><b>0   5   1   0   1993</b>             |   |  | 6. Time of Accident/Incident<br><b>1:34</b> AM <input type="checkbox"/> PM <input checked="" type="checkbox"/>                |          |  |
| 7. Nearest Railroad Station<br><b>OCEANSIDE</b>  |                                   | 8. Subdivision  |   | 9. County<br><b>SAN DIEGO</b>   |  | 10. State<br>Abbr. <b>CA</b>  |          | Code<br><b>06</b>  |
| 11. City (if in a city) <b>OCEANSIDE</b>   |                                   |   | 12. Highway Name or No. <b>CASSIDY ST MP 228.0</b>  |   |  | Public <input checked="" type="checkbox"/> Private <input type="checkbox"/>   |          |  |
| Highway User Involved  |                                   |   |   | Rail Equipment Involved   |  |   |          |  |
| 13. Type<br>C. Truck-trailer F. Bus J. Other Motor Vehicle<br>A. Auto D. Pick-up truck G. School Bus K. Pedestrian<br>B. Truck E. Van H. Motorcycle M. Other (specify) Code<br>M   |                                   |   |   | 17. Equipment<br>4. Car(s) (moving) A. Train pulling- RCL<br>1. Train (units pulling) 5. Car(s) (standing) B. Train pushing- RCL<br>2. Train (units pushing) 6. Light loco(s) (moving) C. Train standing- RCL<br>3. Train (standing) 7. Light loco(s) (standing) D. EMU Locomotive(s) Code<br>8. Other (specify) E. DMU Locomotive(s) 1 |  |   |          |  |
| 14. Vehicle Speed (est. mph at impact) <b>8</b>  |                                   | 15. Direction (geographical)<br>1. North 2. South 3. East 4. West Code<br>3   |   | 18. Position of Car Unit in Train<br><b>1</b>   |  |   |          |  |
| 16. Position<br>1. Stalled or stuck on crossing 4. Trapped on crossing by traffic<br>2. Stopped on Crossing 5. Blocked on crossing by gates Code<br>3. Moving over crossing 3  |                                   |   |   | 19. Circumstance<br>1. Rail equipment struck highway user 2. Rail equipment struck by highway user Code<br>2  |  |   |          |  |
| 20a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither Code<br>4   |                                   |   |   | 20b. Was there a hazardous materials release by<br>1. Highway User 2. Rail Equipment 3. Both 4. Neither Code  |  |   |          |  |
| 20c. State here the name and quantity of the hazardous material released, if any   |                                   |   |   |   |  |   |          |  |
| 21. Temperature (specify if minus) <b>87</b> °F  |                                   | 22. Visibility (single entry)<br>1. Dawn 2. Day 3. Dusk 4. Dark Code<br>2   |   | 23. Weather (single entry) Code<br>1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow 1   |  |   |          |  |
| 24. Type of Equipment Consist (single entry)<br>1. Freight Train 5. Single Car 9. Maint./inspect. car D. EMU<br>2. Passenger Train-Pulling 6. Cut of cars A. Spec. MoW Equip. E. DMU<br>3. Commuter Train-Pulling 7. Yard/Switching B. Passenger Train-Pushing<br>4. Work Train 8. Light loco(s) C. Commuter Train-Pushing Code<br>2 |                                   | 25. Track Type Used by Rail Equipment Involved<br>1. Main 2. Yard 3. Siding 4. Industry Code<br>1   |   |   | 26. Track Number or Name<br><b>SINGLE MAIN TRACK</b> |   |          |  |
| 27. FRA Track Class (1-9,X) <b>5</b>   |                                   | 28. Number of Locomotive Units <b>2</b>   |   | 29. Number of Cars <b>10</b>  |  | 30. Consist Speed (Recorded speed if available)<br>R. Recorded <b>90 mph</b> Code<br>E. Estimated <b>E</b>                    |          | 31. Time Table Direction<br>1. North 3. East<br>2. South 4. West Code<br>4 |
| 32. Type of Crossing Warning<br>1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew<br>2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify)<br>3. Standard FLS 6. Audible 9. Watchman 12. None<br>Code(s) <b>01 05 06</b>  |                                   |   |   | 33. Signaled Crossing Warning (See reverse side for instructions and codes) Code<br>1   |  | 34. Roadway Conditions<br>A. Dry B. Wet C. Snow/Slush D. Ice E. Sand, Mud, Dirt, Oil, Gravel F. Water (Standing, Moving) Code |          |  |
| 35. Location of Warning<br>1. Both Sides<br>2. Side of Vehicle Approach<br>3. Opposite Side of Vehicle Approach Code<br>1  |                                   |   | 36. Crossing Warning Interconnected with Highway Signals<br>1. Yes 2. No 3. Unknown Code<br>3 |   |  | 37. Crossing Illuminated by Street Lights or Special Lights<br>1. Yes 2. No 3. Unknown Code<br>3                              |          |  |
| 38. Highway User's Age<br>1. Male Code<br>2. Female  | 39. Highway User's Gender<br>Code | 40. Highway User Went Behind or in Front of Train and Struck or was Struck by Second Train<br>1. Yes 2. No 3. Unknown Code<br>2   |   | 41. Highway User<br>1. Went around the gate<br>2. Stopped and then proceeded<br>3. Did not stop<br>4. Stopped on crossing<br>5. Other (specify)<br>6. Went around/thru temporary barricade (if yes, see instructions)<br>7. Went thru the gate<br>8. Suicide/Attempted suicide Code<br>1  |  |   |          |  |
| 42. Driver Passed Standing Highway Vehicle<br>1. Yes 2. No 3. Unknown Code<br>2  |                                   | 43. View of Track Obscured by (primary obstruction)<br>1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify)<br>2. Standing railroad equipment 4. Topography 6. Highway Vehicles 8. Not Obscured Code<br>8 |   | 44. Driver was<br>1. Killed 2. Injured 3. Uninjured Code<br>1   |  | 45. Was Driver in the Vehicle?<br>1. Yes 2. No  |          |  |
| 46. Highway-Rail Crossing Users<br>1 0   |                                   | 47. Highway Vehicle Property Damage (est. dollar damage) <b>\$200</b>   |   | 48. Total Number of Vehicle Occupants (including driver) <b>1</b>   |  |   |          |  |
| 49. Railroad Employees<br>0 0  |                                   | 50. Total Number of People on Train (include passengers and train crew)   |   | 51. Is a Rail Equipment Accident / Incident Report Being Filed<br>1. Yes 2. No Code<br>2  |  |   |          |  |
| 52. Passengers on Train<br>0 0   |                                   | 53a. Special Study Block<br>Video Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Video Used? <input type="checkbox"/> Yes <input type="checkbox"/> No   |   | 53b. Special Study Block  |  |   |          |  |
| 54. Narrative Description (Be specific, and continue on separate sheet if necessary)   |                                   |   |   |   |  |   |          |  |
| 55. Typed Name and Title   |                                   |   |   | 56. Signature   |  |   | 57. Date |  |

NOTE: This report is part of the reporting railroad's accident report pursuant to the accident reports statute and, as such shall not "be admitted as evidence or used for any purpose in any suit or action for damages growing out of any matter mentioned in said report..." 49 U.S.C. 20903. See 49 C.F.R. 225.7 (b).

**Oceanside Quiet Zone**

**Project Study Report**

**Quiet Zone Calculations for Phasing Alternatives**

| Quiet Zone Risk Index Calculation |                 |        |                     | QZ Name: Oceanside Quiet Zone |         |            |   |                         |                              |
|-----------------------------------|-----------------|--------|---------------------|-------------------------------|---------|------------|---|-------------------------|------------------------------|
| FRA Crossing #                    | CPUC Crossing # | MP     | Street              | Warning Device                | PRE SSM | Risk Index | Proposed Improvements   | MSSM Effectiveness Rate | Risk Index with Improvements |
| 026818W                           | 106-228.00      | 227.96 | Cassidy Street      | Gates                         | 13      | 145,867.42 | SSM - Existing Medians of 82' and 68' with adjacent crossings. Raise medians to 6" as required. Improve Pedestrian path of travel delineation. (pedestrian suicide in 2013).  |                         | 29,173.48                    |
| 026817P                           | 106-227.20      | 227.25 | Oceanside Boulevard | Gates                         |         | 55,464.32  | MSSM - Existing 102' and 108' median w/ coastal rail trail crossing access @ +45' from warning device on west. Relocate driveway and raise medians to 6" as required. Effectiveness rate reduced by median break on west by 25%. Improve Pedestrian path of travel delineation.   | 0.6                     | 22,185.73                    |
| 026816H                           | 106-226.80      | 226.8  | Wisconsin Avenue    | Gates                         |         | 239,217.20 | MSSM - Existing 102' median w/ coastal rail trail crossing access @ +50' from warning device west of tracks, extend existing 40' median east of tracks to 100'. Effectiveness rate reduced due to median break on west and existing driveway (@ +20' from warning device on NW quadrant) by 40%. Improve Pedestrian Access, safety and visibility (pedestrian injured in 2010, bicyclist killed in 2008). | 0.48                    | 124,392.94                   |
| 027062B                           | 106-226.20      | 226.2  | Mission Avenue      | Gates                         | 13      | 239,217.20 | SSM - existing 100'+ medians. Close/reconfigure driveway, raise medians to 6" as required. Improve Pedestrian Access, safety and visibility (1 pedestrian fatality and 1 pedestrian injury both in 2013). Provide interconnection for future traffic signals.   |                         | 47,843.44                    |
| 026813M                           | 106-225.90      | 225.93 | Surfrider Way       | Gates                         |         | 151,931.85 | MSSM - Extend median and/or channelization to 100' effectiveness rate reduced due to existing driveways (@ about 25' on NW and SE, 50' on NE and 30' on SW Quadrants) by 75%. Improve Pedestrian Access, safety and visibility (Pedestrian Fatality in 2010 on a dark foggy night).   | 0.2                     | 121,545.48                   |

Risk Index with Horns (RIWH) 99,720.59  
 Quiet Zone Risk Index (QZRI) 69,028.22 PASS

LEGEND:  
 Risk Index from FRA Quiet Zone Calculator  
 Proposed ASM/MSSM Effectiveness Rate\*

SSM 13 - Medians (0.8 effectiveness rate)  
 SSM 10 - 4 Quad Gates (0.77 effectiveness rate)  
 SSM 11 - 4 Quad Gates with Medians (0.92 effectiveness rate)

Quiet Zone Risk Index Calculation

QZ Name: Oceanside Quiet Zone

| FRA Crossing # | CPUC Crossing # | MP     | Street           | Warning Device | PRE SSM | Risk Index | Proposed Improvements   | MSSM Effectiveness Rate | Risk Index with Improvements |
|----------------|-----------------|--------|------------------|----------------|---------|------------|---|-------------------------|------------------------------|
| 026816H        | 106-226.80      | 226.8  | Wisconsin Avenue | Gates          |         | 239,217.20 | MSSM - Existing 102' median w/ coastal rail trail crossing access @ +/-50' from warning device west of tracks, extend existing 40' median east of tracks to 100'. Effectiveness rate reduced due to median break on west and existing driveway (@ +/-20' from warning device on NW quadrant) by 40%. Improve Pedestrian Access, safety and visibility (pedestrian injured in 2010, bicyclist killed in 2008). | 0.48                    | 124,352.94                   |
| 027062B        | 106-226.20      | 226.2  | Mission Avenue   | Gates          | 13      | 239,217.20 | SSM - existing 100'+ medians. Close/reconfigure driveway, raise medians to 6" as required. Improve Pedestrian Access, safety and visibility (1 pedestrian fatality and 1 pedestrian injury both in 2013). Provide interconnection for future traffic signals.   |                         | 47,843.44                    |
| 026813M        | 106-225.90      | 225.93 | Surfrider Way    | Gates          |         | 151,931.85 | MSSM - Extend median and/or channelization to 100' effectiveness rate reduced due to existing driveways (@ about 25' on NW and SE, 50' on NE and 30' on SW Quadrants) by 75%. Improve Pedestrian Access, safety and visibility (Pedestrian Fatality in 2010 on a dark foggy night).   | 0.2                     | 121,545.48                   |

LEGEND:

Risk Index from FRA Quiet Zone Calculator  
Proposed ASM/MSSM Effectiveness Rate\*

SSM 13 - Medians (0.8 effectiveness rate)

SSM 10 - 4 Quad Gates (0.77 effectiveness rate)

SSM 11 - 4 Quad Gates with Medians (0.92 effectiveness rate)

Risk Index with Horns (RIMH) 125,968.19  
Quiet Zone Risk Index (QZRI) 97,927.29 PASS

| Quiet Zone Risk Index Calculation |                 |        |                     | QZ Name: Oceanside Quiet Zone |         |            |   |                         |                              |
|-----------------------------------|-----------------|--------|---------------------|-------------------------------|---------|------------|---|-------------------------|------------------------------|
| FRA Crossing #                    | CPUC Crossing # | MP     | Street              | Warning Device                | PRE SSM | Risk Index | Proposed Improvements   | MSSM Effectiveness Rate | Risk Index with Improvements |
| 026818W                           | 106-228.00      | 227.96 | Cassidy Street      | Gates                         | 13      | 145,867.42 | SSM - Existing Medians of 82' and 68' with adjacent crossings. Raise medians to 6" as required. Improve Pedestrian path of travel delineation. (pedestrian suicide in 2013).  |                         | 29,173.48                    |
| 026817P                           | 106-227.20      | 227.25 | Oceanside Boulevard | Gates                         |         | 55,464.32  | MSSM - Existing 102' and 108' median w/ coastal rail trail crossing access @ +45' from warning device on west. Relocate driveway and raise medians to 6" as required. Effectiveness rate reduced by median break on west by 25%. Improve Pedestrian path of travel delineation. | 0.6                     | 22,185.73                    |

LEGEND: Risk Index from FRA Quiet Zone Calculator  
 Proposed ASM/MSSM Effectiveness Rate\*  
 Risk Index with Horns (RIWH) 60,349.19  
 Quiet Zone Risk Index (QZRI) 25,679.61 PASS

SSM 13 - Medians (0.8 effectiveness rate)  
 SSM 10 - 4 Quad Gates (0.77 effectiveness rate)  
 SSM 11 - 4 Quad Gates with Medians (0.92 effectiveness rate)

Quiet Zone Risk Index Calculation

| OZ Name: Oceanside Quiet Zone |                 |       |                  |                |         |     |            |  |                         |                              |
|-------------------------------|-----------------|-------|------------------|----------------|---------|-----|------------|--|-------------------------|------------------------------|
| FRA Crossing #                | CPUC Crossing # | MP    | Street           | Warning Device | PRE SSM | SSM | Risk Index | Proposed Improvements  | MSSM Effectiveness Rate | Risk Index with Improvements |
| 026816H                       | 106-226.80      | 226.8 | Wisconsin Avenue | Gates          |         |     | 239,217.20 | MSSM - Existing 102' median w/ coastal rail trail crossing access @ +/-50' from warning device west of tracks, extend existing 40' median east of tracks to 100'. Effectiveness rate reduced due to median break on west and existing driveway (@ +/-20' from warning device on NW quadrant) by 40%.<br>Improve Pedestrian Access, safety and visibility (pedestrian injured in 2010, bicyclist killed in 2008). | 0.48                    | 124,392.94                   |

LEGEND:

Risk Index from FRA Quiet Zone Calculator  
Proposed ASM/MSSM Effectiveness Rate\*

- SSM 13 - Medians (0.8 effectiveness rate)
- SSM 10 - 4 Quad Gates (0.77 effectiveness rate)
- SSM 11 - 4 Quad Gates with Medians (0.92 effectiveness rate)

Risk Index with Horns (RIWH) 143,410.71  
Quiet Zone Risk Index (QZRI) 124,392.94 PASS

| Quiet Zone Risk Index Calculation |                 |       |                | QZ Name: Oceanside Quiet Zone |         |            |   |                         |                              |
|-----------------------------------|-----------------|-------|----------------|-------------------------------|---------|------------|---|-------------------------|------------------------------|
| FRA Crossing #                    | CPUC Crossing # | MP    | Street         | Warning Device                | PRE SSM | Risk Index | Proposed Improvements   | MSSM Effectiveness Rate | Risk Index with Improvements |
| 027062B                           | 106-226.20      | 226.2 | Mission Avenue | Gates                         | 13      | 239,217.20 | SSM - existing 100'+ medians. Close/reconfigure driveway, raise medians to 6" as required. Improve Pedestrian Access, safety and visibility (1 pedestrian fatality and 1 pedestrian injury both in 2013). Provide interconnection for future traffic signals. |                         | 47,843.44                    |

LEGEND: Risk Index from FRA Quiet Zone Calculator 143,410.71  
 Proposed ASM/MSSM Effectiveness Rate\* 47,843.44 PASS

- SSM 13 - Medians (0.8 effectiveness rate)
- SSM 10 - 4 Quad Gates (0.77 effectiveness rate)
- SSM 11 - 4 Quad Gates with Medians (0.92 effectiveness rate)

| Quiet Zone Risk Index Calculation |                 |        |               | QZ Name: Oceanside Quiet Zone |             |            |   |                         |                              |
|-----------------------------------|-----------------|--------|---------------|-------------------------------|-------------|------------|---|-------------------------|------------------------------|
| FRA Crossing #                    | CPUC Crossing # | MP     | Street        | Warning Device                | PRE SSM SSM | Risk Index | Proposed Improvements   | MSSM Effectiveness Rate | Risk Index with Improvements |
| 026813M                           | 106-225-90      | 225.93 | Surfrider Way | Gates                         |             | 151,931.85 | MSSM - Extend median and/or channelization to 100' effectiveness rate reduced due to existing driveways (@ about 25' on NW and SE, 50' on NE and 30' on SW Quadrants) by 75%. Improve Pedestrian Access, safety and visibility (pedestrian fatality in 2010 on a dark foggy night). | 0.2                     | 121,545.48                   |

Risk Index with Horns (RIWH) 91,083.14  
 Quiet Zone Risk Index (QZRI) 121,545.48 FAIL

LEGEND:  
 Risk Index from FRA Quiet Zone Calculator  
 Proposed ASM/MSSM Effectiveness Rate\*

- SSM 13 - Medians (0.8 effectiveness rate)
- SSM 10 - 4 Quad Gates (0.77 effectiveness rate)
- SSM 11 - 4 Quad Gates with Medians (0.92 effectiveness rate)

Quiet Zone Risk Index Calculation

QZ Name: Oceanside Quiet Zone

| FRA Crossing # | CPUC Crossing # | MP     | Street         | Warning Device | PRE SSM | Risk Index | Proposed Improvements   | MSSM Effectiveness Rate | Risk Index with Improvements |
|----------------|-----------------|--------|----------------|----------------|---------|------------|---|-------------------------|------------------------------|
| 027062B        | 106-226.20      | 226.2  | Mission Avenue | Gates          | 13      | 239,217.20 | SSM - existing 100'+ medians. Close/reconfigure driveway, raise medians to 6" as required. Improve Pedestrian Access, safety and visibility (1 pedestrian fatality and 1 pedestrian injury both in 2013). Provide interconnection for future traffic signals.                       |                         | 47,843.44                    |
| 026813M        | 106-225.90      | 225.93 | Surfrider Way  | Gates          |         | 151,931.85 | MSSM - Extend median and/or channelization to 100' effectiveness rate reduced due to existing driveways (@ about 25' on NW and SE, 50' on NE and 30' on SW Quadrants) by 75%. Improve Pedestrian Access, safety and visibility (Pedestrian Fatality in 2010 on a dark foggy night). | 0.2                     | 121,545.48                   |

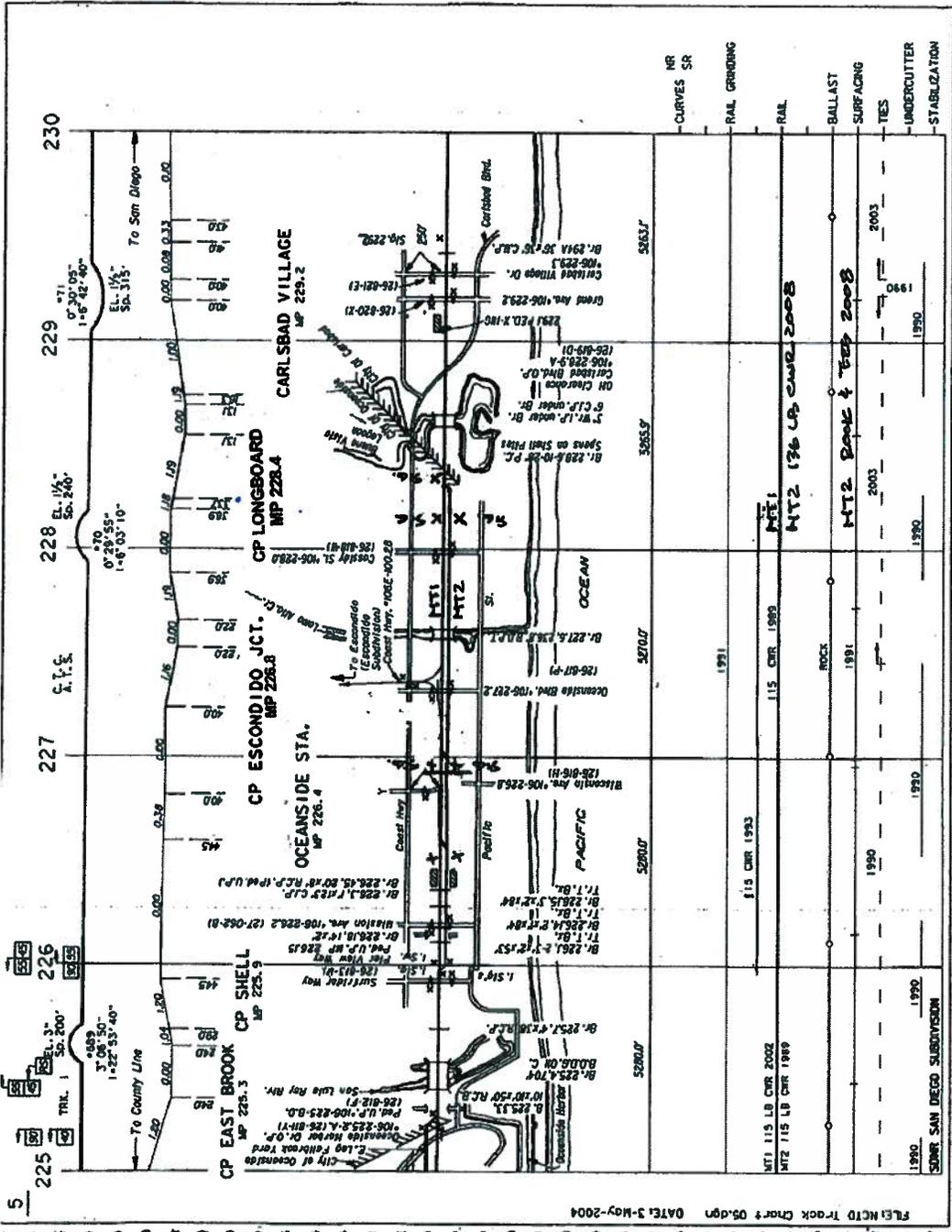
Risk Index with Horns (RIWH) 117,246.93  
 Quiet Zone Risk Index (QZRI) 84,694.46 PASS

LEGEND:  
 Risk Index from FRA Quiet Zone Calculator  
 Proposed ASM/MSSM Effectiveness Rate\*

SSM 13 - Medians (0.8 effectiveness rate)  
 SSM 10 - 4 Quad Gates (0.77 effectiveness rate)  
 SSM 11 - 4 Quad Gates with Medians (0.92 effectiveness rate)

Oceanside Quiet Zone

Project Study Report  
NCTD Track Chart



FILE NCTD Track Chart 05.dgn DATE: 3-May-2004

## CITY OF OCEANSIDE

**PROFESSIONAL SERVICES AGREEMENT**

**PROJECT: MAINLINE RAILROAD CROSSING SAFETY IMPROVEMENTS  
ACCOUNT#902135400212.5703.10600 (TransNet)**

THIS AGREEMENT, dated September 10, 2014, for identification purposes, is made and entered into by and between the CITY OF OCEANSIDE, a municipal corporation, hereinafter designated as "CITY"; and RailPros, Inc., hereinafter designated as "CONSULTANT."

**NOW THEREFORE, THE PARTIES MUTUALLY AGREE AS FOLLOWS:**

1. **SCOPE OF WORK.** The project is more particularly described as follows: The CONSULTANT will provide engineering design services for the creation of a Federal Rail Administration-qualified Quiet Zone on the coastal rail corridor in the City of Oceanside. The design services shall include the at-grade crossing improvements and railroad communications infrastructure improvements identified in the attached exhibits: "Oceanside Quiet Zone Engineering Services," subconsultant "Proposal Fee Letter for Oceanside Quiet Zone" by San Dieguito Engineering, and "RailPros Fee Proposal," attached hereto and incorporated herein as Exhibit A.
2. **INDEPENDENT CONTRACTOR.** CONSULTANT'S relationship to the CITY shall be that of an independent contractor. CONSULTANT shall have no authority, express or implied, to act on behalf of the CITY as an agent, or to bind the CITY to any obligation whatsoever, unless specifically authorized in writing by the City Engineer. The CONSULTANT shall not be authorized to communicate directly with, nor in any way direct the actions of, any bidder or the construction contractor for this project without the prior written authorization by the City Engineer. CONSULTANT shall be solely responsible for the performance of any of its employees, agents, or subcontractors under this Agreement. CONSULTANT shall report to the CITY any and all employees, agents, and consultants performing work in connection with this project, and all shall be subject to the approval of the CITY.
3. **WORKERS' COMPENSATION.** Pursuant to Labor Code section 1861, the CONSULTANT hereby certifies that the CONSULTANT is aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and the CONSULTANT will comply with such provisions, and provide certification of such compliance as a part of this Agreement.

## Mainline Railroad Crossing Safety Improvements

### 4. LIABILITY INSURANCE.

4.1. CONSULTANT shall, throughout the duration of this Agreement maintain comprehensive general liability and property damage insurance, or commercial general liability insurance, covering all operations of CONSULTANT, its agents and employees, performed in connection with this Agreement including but not limited to premises and automobile.

4.2 CONSULTANT shall maintain liability insurance in the following minimum limits:

Comprehensive General Liability Insurance  
(bodily injury and property damage)

|                                      |               |
|--------------------------------------|---------------|
| Combined Single Limit Per Occurrence | \$ 1,000,000  |
| General Aggregate                    | \$ 2,000,000* |

Commercial General Liability Insurance  
(bodily injury and property damage)

|  |              |
|--|--------------|
| General limit per occurrence             | \$ 1,000,000 |
| General limit project specific aggregate | \$ 2,000,000 |

|                                       |              |
|---------------------------------------|--------------|
| <u>Automobile Liability Insurance</u> | \$ 1,000,000 |
|---------------------------------------|--------------|

\*General aggregate per year, or part thereof, with respect to losses or other acts or omissions of CONSULTANT under this Agreement.

4.3 If coverage is provided through a Commercial General Liability Insurance policy, a minimum of 50% of each of the aggregate limits shall remain available at all times. If over 50% of any aggregate limit has been paid or reserved, the CITY may require additional coverage to be purchased by the CONSULTANT to restore the required limits. The CONSULTANT shall also notify the CITY'S Project Manager promptly of all losses or claims over \$25,000 resulting from work performed under this contract, or any loss or claim against the CONSULTANT resulting from any of the CONSULTANT'S work.

4.4 All insurance companies affording coverage to the CONSULTANT for the purposes of this Section shall add the City of Oceanside as "additional insured" under the designated insurance policy for all work performed under this agreement. Insurance coverage provided to the City as additional insured shall be primary insurance and other insurance maintained by the City of Oceanside, its officers, agents, and employees shall be excess only and not contributing with insurance provided pursuant to this Section.

## **Mainline Railroad Crossing Safety Improvements**

- 4.5 All insurance companies affording coverage to the CONSULTANT pursuant to this agreement shall be insurance organizations admitted by the Insurance Commissioner of the State of California to transact business of insurance in the state or be rated as A-X or higher by A.M. Best.
- 4.6 CONSULTANT shall provide thirty (30) days written notice to the CITY should any policy required by this Agreement be cancelled before the expiration date. For the purposes of this notice requirement, any material change in the policy prior to the expiration shall be considered a cancellation.
- 4.7 CONSULTANT shall provide evidence of compliance with the insurance requirements listed above by providing, at minimum, a Certificate of Insurance and applicable endorsements, in a form satisfactory to the City Attorney, concurrently with the submittal of this Agreement.
- 4.8 CONSULTANT shall provide a substitute Certificate of Insurance no later than thirty (30) days prior to the policy expiration date. Failure by the CONSULTANT to provide such a substitution and extend the policy expiration date shall be considered a default by CONSULTANT and may subject the CONSULTANT to a suspension or termination of work under the Agreement.
- 4.9 Maintenance of insurance by the CONSULTANT as specified in this Agreement shall in no way be interpreted as relieving the CONSULTANT of any responsibility whatsoever and the CONSULTANT may carry, at its own expense, such additional insurance as it deems necessary.
5. **PROFESSIONAL ERRORS AND OMISSIONS INSURANCE.** Throughout the duration of this Agreement and four (4) years thereafter, the CONSULTANT shall maintain professional errors and omissions insurance for work performed in connection with this Agreement in the minimum amount of One Million Dollars (\$1,000,000.00).

CONSULTANT shall provide evidence of compliance with these insurance requirements by providing a Certificate of Insurance.

6. **CONSULTANT'S INDEMNIFICATION OF CITY.** To the greatest extent allowed by law (including, without limitation, California Civil Code section 2782.8), CONSULTANT shall indemnify and hold harmless the CITY and its officers, agents and employees against all claims for damages to persons or property arising out of CONSULTANT'S work, including the negligent acts, errors or omissions or wrongful acts or conduct of the CONSULTANT, or its employees, agents, subcontractors, or others in connection with the execution of the work covered by this Agreement, except for those claims arising from the willful misconduct, sole

## **Mainline Railroad Crossing Safety Improvements**

negligence or active negligence of the CITY, its officers, agents, or employees. CONSULTANT'S indemnification shall include any and all costs, expenses, attorneys' fees, expert fees and liability assessed against or incurred by the CITY, its officers, agents, or employees in defending against such claims or lawsuits, whether the same proceed to judgment or not. Further, CONSULTANT at its own expense shall, upon written request by the CITY, defend any such suit or action brought against the CITY, its officers, agents, or employees founded upon, resulting or arising from the conduct, tortious acts or omissions of the CONSULTANT.

CONSULTANT'S indemnification of CITY shall not be limited by any prior or subsequent declaration by the CONSULTANT.

7. **OWNERSHIP OF DOCUMENTS.** All plans and specifications, including details, computations and other documents, prepared or provided by the CONSULTANT under this Agreement shall be the property of the CITY. The CITY agrees to hold the CONSULTANT free and harmless from any claim arising from any use, other than the purpose intended, of the plans and specifications and all preliminary sketches, schematics, preliminary plans, architectural perspective renderings, working drawings, including details, computation and other documents, prepared or provided by the CONSULTANT. CONSULTANT may retain a copy of all material produced under this Agreement for the purpose of documenting CONSULTANT's participation in this project.
  
8. **COMPENSATION.** CONSULTANT'S compensation for all work performed in accordance with this Agreement, shall not exceed the total contract price of \$642,488.  
  
No work shall be performed by CONSULTANT in excess of the total contract price without prior written approval of the City Engineer. CONSULTANT shall obtain approval by the City Engineer prior to performing any work that results in incidental expenses to CITY.
  
9. **TIMING REQUIREMENTS.** Time is of the essence in the performance of work under this Agreement and the timing requirements shall be strictly adhered to unless otherwise modified in writing. All work shall be completed in every detail to the satisfaction of the Engineer by December 31, 2015.
  
10. **ENTIRE AGREEMENT.** This Agreement comprises the entire integrated understanding between CITY and CONSULTANT concerning the work to be performed for this project and supersedes all prior negotiations, representations, or agreements.

## **Mainline Railroad Crossing Safety Improvements**

11. **INTERPRETATION OF THE AGREEMENT.** The interpretation, validity and enforcement of the Agreement shall be governed by and construed under the laws of the State of California. The Agreement does not limit any other rights or remedies available to CITY.

The CONSULTANT shall be responsible for complying with all local, state, and federal laws whether or not said laws are expressly stated or referred to herein.

Should any provision herein be found or deemed to be invalid, the Agreement shall be construed as not containing such provision, and all other provisions, which are otherwise lawful, shall remain in full force and effect, and to this end the provisions of this Agreement are severable.

12. **AGREEMENT MODIFICATION.** This Agreement may not be modified orally or in any manner other than by an agreement in writing signed by the parties hereto.
13. **TERMINATION OF AGREEMENT.** Either party may terminate this Agreement by providing thirty (30) days written notice to the other party. If any portion of the work is terminated or abandoned by the CITY, then the CITY shall pay CONSULTANT for any work completed up to and including the date of termination or abandonment of this Agreement. The CITY shall be required to compensate CONSULTANT only for work performed in accordance with the Agreement up to and including the date of termination.
14. **SIGNATURES.** The individuals executing this Agreement represent and warrant that they have the right, power, legal capacity and authority to enter into and to execute this Agreement on behalf of the respective legal entities of the CONSULTANT and the CITY.

**Mainline Railroad Crossing Safety Improvements**

IN WITNESS WHEREOF, the parties hereto for themselves, their heirs, executors, administrators, successors, and assigns do hereby agree to the full performance of the covenants herein contained and have caused this Professional Services Agreement to be executed by setting hereunto their signatures on the dates set forth below.

RailPros, Inc.

City of Oceanside

By:   
Eric Hankinson, President

By: \_\_\_\_\_  
Steven R. Jepsen, City Manager

Date: 8/26/14

Date: \_\_\_\_\_

By: \_\_\_\_\_

APPROVED AS TO FORM:

Date: \_\_\_\_\_

  
\_\_\_\_\_  
City Attorney

33-0905680  
Employer ID No.

**NOTARY ACKNOWLEDGMENTS OF CONSULTANT MUST BE ATTACHED.**

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

State of California

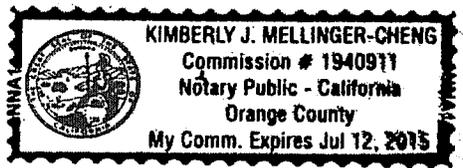
County of Orange }

On 8/26/14 before me, Kimberly Mellinger-Cheng, Notary Public  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Eric Hankinson, President  
Name(s) of Signer(s)

- personally known to me
- (or proved to me on the basis of satisfactory evidence)

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Place Notary Seal Above

Signature [Handwritten Signature]  
Signature of Notary Public

**OPTIONAL**

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

**Description of Attached Document**

Title or Type of Document: Professional Services Agreement

Document Date: 9/10/14 Number of Pages: 6

Signer(s) Other Than Named Above: /

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: \_\_\_\_\_

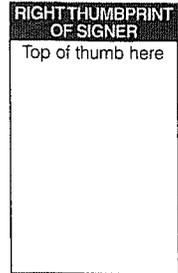
- Individual
- Corporate Officer — Title(s): \_\_\_\_\_
- Partner —  Limited  General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing: \_\_\_\_\_

Signer's Name: \_\_\_\_\_

- Individual
- Corporate Officer — Title(s): \_\_\_\_\_
- Partner —  Limited  General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: \_\_\_\_\_



Signer Is Representing: \_\_\_\_\_



## OCEANSIDE QUIET ZONE ENGINEERING SERVICES

### SCOPE OF WORK

#### Overview, Background and Basis of Design

The Federal Railroad Administration (FRA) has issued a Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings, detailed in 49 CFR Parts 222 and 229 Use of Locomotive Horns at Highway-Rail Grade Crossings; Final Rule (Final Rule). The Final Rule provides the opportunity for localities nationwide to mitigate the effects of train horn noise by establishing new "Quiet Zones."

The City of Oceanside previously contracted with RailPros to begin implementation of a Quiet Zone. This work included holding diagnostic meetings, preparing conceptual exhibits based on stakeholder input and culminated in the submittal of Notice of Intent to Create a New Quiet Zone (NOI) documents in early 2007. Subsequently, some improvements have been implemented at a few crossings including Cassidy Street and Oceanside Boulevard. More recently, RailPros has assisted the City with additional concept development and coordination with the Railroad and regulatory agencies. The Recent effort included holding diagnostic meetings, preparing revised concept plans, estimates and a project study report (PSR) detailing the current proposed improvements.

The City of Oceanside now desires to proceed with the engineering development and preparation of plans and documentation for Construction of the proposed improvements at the crossing with the ultimate goal of the establishment of a Quiet Zone along the North County Transit District's (NCTD) main line, silencing the sounding of train horns at some or all of the following at-grade crossings: Cassidy Street, Oceanside Boulevard, Wisconsin Avenue, Mission Avenue and Surfrider Way. RailPros proposes to assist the City of Oceanside in the development of Plans, Specifications and Estimates in order to construct improvements for the establishment of a Quiet Zone in accordance with the procedures outlined in the Final Rule.

#### Project Elements

The Draft PSR, dated July 18, 2014, identifies the major project physical components as:

- Relocate railroad signal equipment
- Construct/install pedestrian gates
- Construct civil, fencing, drainage, and landscaping improvements
- Install railroad interconnected traffic signals at Mission Avenue
- Upgrade railroad warning devices with LED flashers and new gate arms, as needed
- Replace railroad signal houses, as needed
- Modify railroad signal system

The Design phase of the project, as outlined in the Draft PSR, includes 30% Preliminary Engineering, 90% Pre-Final Engineering and 100% Final Engineering Design Submittals intended to produce Plans, Specification and Estimates for project construction. The design submittals advance the development of the elements and features shown in the Conceptual Plans included in the Draft PSR. Based upon the Conceptual Plans in the Draft PSR, the following elements will be addressed during the design phase.

## *Railroad Engineering Services*

### Civil Design

Civil design will address improvements to the horizontal portions of the project which will include these major elements:

- Field survey will be performed to establish existing grades and identify utilities and other structures pertinent to design. Survey data will be utilized for control, verifying ROW, ensuring proper drainage through any proposed street improvement areas as listed below, and providing location points of utilities and other structures for checking clearances and determination of potential relocations. (See Attachment 2 for Survey Subconsultant Scope and Fee).
- Field investigations for verification and photo reconnaissance.
- Sidewalk modifications will be included to provide proper configuration of “Pedestrian Treatments” in conformance with the current rail safety guidelines including NCTD, CPUC, and FRA. In addition, ADA guidelines will be incorporated into the design to ensure proper accessibility and tactile warning application.
- Existing curbs and gutters will be removed and realigned where necessary to aid with sidewalk modifications and improve channeling of vehicles to the crossing gate.
- Some of the existing medians at these grade crosses are either short in length, or have inadequate height, allowing for potential “drive a-rounds”. To prevent or minimize “drive a-rounds” these “short” medians will be extended in length in raised in height to accomplish this safety improvement.
- In order to meet clearance requirements from crossing gates to road entry ways, some existing driveways will need to be relocated. New driveways will be designed to meet City of Oceanside Standards.
- All improvements will be analyzed for potential impact to drainage especially where curb and gutter and median improvements are being considered, in order to ensure proper drainage is maintained. In addition, analysis will be performed to check for any potential drainage impacts to adjacent properties. Supplemental improvements will be implemented where impacts are determined.
- In conjunction with the proposed relocation of railroad warning devices, replacement of railroad signal houses and installation of new pedestrian gates, structural details for the foundations of these improvements will be developed and included, if necessary.

### Traffic Design

Traffic design improvements will include these major elements:

- Field investigations for verification and photo reconnaissance.
- Signing and Striping Plans will be prepared for each crossing, further refining the design shown in the Project Study Report. The design work includes existing striping to be removed, existing signs to be removed or relocated, proposed striping and proposed signing. Design will be in accordance with the current CA-MUTCD.

## *Railroad Engineering Services*

- Traffic Control Plans will be prepared for each crossing in accordance with City of Oceanside, NCTD and CA-MUTCD standards. Focus will be given to the safety of pedestrians, motorists and workers during construction. Detour plans will be provided as needed as well as part of the design.

### Traffic Signal Design

The PSR indicated that queue cutter signals should be installed for both WB and EB Mission Avenue, when adjacent intersections are signalized and/or when required by queuing study. It is our recommendation that the Traffic Signal work be included as part of the project design now, in order to gain CPUC approval with the other crossing work at this location. The signal design can be “shelf-ready” for when conditions warrant the installation. The traffic signal work would include the following items:

- Preemption Design - The Preemption Design would include one iteration of preemption calculations and discussions with the City and NCTD on proposed operations and interconnection.
- Traffic Signal Design - The Traffic Signal Design will include traffic signal equipment selection and placement (loops, traffic signal poles, lighting), coordination with the RR Warning System Equipment placement, conductor and pull box placement, conductor and pole schedules, notes, phasing plans and operation notes.
- Traffic Signal Interconnect Design - A Traffic Signal interconnect Plan will also need to be developed based on current underground utility information and survey to connect the proposed new queue cutter signals to the future signals at adjacent intersections. It is important that with less than 180’ from the nearest Stop- Controlled intersection, peak traffic flows may warrant these intersections to be run in sequenced operations.

### Railroad Signal Design

Railroad signal design will address these major elements, detailed by location below:

- Surfrider Way – Replace existing crossing house with new 8’x10’ crossing house complete with highway crossing detection equipment, crossing controllers, recorder, batteries and power supplies. New underground cable will be installed. Existing signal mechanisms and cantilever signals will be relocated. New pedestrian gates will be installed in all 4 quadrants. Crossing gates and flashers will be upgraded to current standard.
- Mission Avenue – Replace existing crossing house with new 8’x10’ crossing house complete with highway crossing detection equipment, crossing controllers, recorder, batteries and power supplies. New underground cable will be installed. Install new pedestrian gates in all 4 quadrants. Crossing gates and flashers will be upgraded to current standard.
- Wisconsin Avenue – Install new crossing control equipment for pedestrian gates in existing crossing house. Upgrade existing power supply. Install new pedestrian gates in all 4 quadrants. New underground cable to pedestrian gates will be installed.
- Oceanside Boulevard – Replace existing crossing house with new 8’x10’ crossing house complete with highway crossing detection equipment, crossing controllers, recorder, batteries and power supplies. New underground cable will be installed. Install new pedestrian gates in all 4 quadrants. Crossing gates and flashers will be upgraded to current standard.

## *Railroad Engineering Services*

- Cassidy Street – Replace existing crossing house with new 8'x10' crossing house complete with highway crossing detection equipment, crossing controllers, recorder, batteries and power supplies. New underground cable will be installed. Install new pedestrian gates in all 4 quadrants. Crossing gates and flashers will be upgraded to current standard.

### Specifications

Technical project specifications will be prepared to accompany the design plan set along with an Engineer's Construction Cost Estimate and bid form. Specifications will be based on the most current edition of the Standard Specifications for Public Works Construction (for Civil Work) and NCTD Engineering Standards (for Railroad Civil and Signal Work).

### Estimate

The Engineer's Construction Cost Estimate will include all aspects of work with detailed bid items, quantities and unit pricing based on most current pricing trends. The bid form will be developed from the Engineer's Construction Cost Estimate.

The services to be provided under this scope of work will be broken into separate tasks described below.

## **TASK 1 – Preliminary Engineering 30% Design**

### Services

The purpose of this task is to gather information, coordinate with stakeholders, evaluate design alternatives and prepare and submit preliminary engineering documentation including plans and estimates for the civil improvements, traffic improvements and railroad signal improvements at each crossing. RailPros will assist the City with gathering information, coordinating and preparing preliminary engineering documents by providing the services and deliverables detailed below at each of the five at-grade crossings mentioned above.

RailPros will provide the following general services:

- Coordination with City, Railroads and Regulatory Agencies
- Meetings with City and stakeholders (detailed below)
- Data collection from City, Railroads, Federal Highway Administration (FRA) and California Public Utilities Commission (CPUC)
- Prepare 30% Level Preliminary Engineering Plans and Estimate for Civil Improvements for City review and Comment
- Incorporate City comments into updated 30% Level Preliminary Engineering Plans and Estimate for stakeholder submittal and comments

### Deliverables

RailPros will provide the following deliverables:

- Draft 30% Preliminary Engineering Plans and Estimate for City Review Only
- Updated 30% Preliminary Engineering Plans and Estimate for Stakeholder Review



## *Railroad Engineering Services*

### Meetings

- Up to 2 Design Review Meetings in Oceanside
- Up to 2 conference calls

### **TASK 2 – 90% Level Pre-Final Plans, Specifications and Estimates**

#### Services

The purpose of this task is to advance the development of Plans, Specifications and Estimates to a Pre-Final 90% level.

RailPros will provide the following services:

- Coordination with City, Railroads and Regulatory Agencies
- Meetings with City and stakeholders (detailed below)
- Review and incorporate comments on 30% Design Plans and Estimate
- Progress design plans and estimate to 90% Level for City review and comment
- Prepare 90% Level technical project specifications for City review and comment
- Revise 90% Level Pre-Final Plans, Specifications and Estimate for Stakeholder review and comment

#### Deliverables

RailPros will provide the following deliverables:

- Draft 90% Level Pre-Final Plans
- Draft 90% Level Pre-Final Technical Specifications
- Draft 90% Level Pre-Final Estimate
- Revised 90% Level Pre-Final Engineering Plans
- Revised 90% Level Pre-Final Technical Specifications
- Revised 90% Level Pre-Final Cost Estimate

### Meetings

- Up to 3 Design Review Meetings in Oceanside
- Up to 3 conference calls

### **TASK 3 – Final Plans, Specifications and Estimates**

#### Services

The purpose of this task is to advance the development of Plans, Specifications and Estimates to a Final level.

RailPros will provide the following services:

- Coordination with City, Railroads and Regulatory Agencies
- Meetings with City and stakeholders (detailed below)
- Preparation of Meeting minutes



## *Railroad Engineering Services*

- Review and incorporate comments on 90% Design Plans and Estimate
- Progress design plans, estimate and specifications to Final Level for City review and comment
- Revise plans, specifications and estimate for stakeholder review and comment
- Finalize Plans Specification and Estimate

### Deliverables

RailPros will provide the following deliverables:

- Meeting Minutes
- Draft 100% Level Final Plans, Specifications and Estimate for City Review
- Revised 100% Level Final Engineering Plans, Specifications and Estimate for Stakeholder Review
- Finalized 100% Level Final Engineering Plans, Specifications and Estimate

### Meetings

- Up to 2 Design Review meetings in Oceanside
- Up to 2 conference calls

## **TASK 4 – Project Management, Coordination, Permits, Applications, Agreements Services**

The purpose of this task is to manage the development of contract documents, provide coordination and assist in the preparation of Permits, Applications and Agreements that may be required for the project such as the California Public Utilities Commission (CPUC) General Order 88-B (GO 88-B), Construction and Maintenance Agreement (C&M) between the City and the Railroad and Quiet Zone Documentation. RailPros anticipates provide the following services:

- Coordination with City, Railroads and Regulatory Agencies
- Attend Monthly Progress Meetings
- Develop and maintain project controls, schedule and budget
- Preparation of Draft GO 88-B Documents for each of the 5 grade crossings for City Review and comment
- Revise each GO 88-B based upon City Feedback for submittal to the CPUC
- Update Draft FRA Grade Crossing Inventory Forms to reflect the current conditions at each crossing for City and Railroad review and comment
- Finalize Current Condition Inventory forms based on City and Railroad input and submit to CPUC and FRA
- Prepare Draft Quiet Zone calculations and prepare Quiet Zone Notice of Intent (NOI) documentation for City review and comment
- Prepare Final NOI for submittal to FRA, CPUC, Railroad(s) and other required stakeholders
- Prepare Draft Response to NOI Comments based on stakeholder feedback for City review and comment
- Revise Response to NOI Application Comments for submittal to FRA, CPUC and stakeholders
- Prepare Draft C&M Agreement for City Review and Comment
- Revise Draft C&M Agreement for Railroad review and Comment
- Finalize C&M Agreement for City and Railroad Approval



## *Railroad Engineering Services*

### Deliverables

RailPros will provide the following deliverables:

- Project Schedule
- Draft GO88-B Document for each of the 5 crossings
- Final GO88-B Document for each of the 5 crossings
- Draft FRA Grade Crossing Inventory Forms to reflect the current conditions at each crossing
- Final Current Condition Grade Crossing Inventory forms
- Draft Quiet Zone calculations and prepare Quiet Zone Notice of Intent (NOI) documentation
- Final NOI Documentation
- Draft Response to NOI Comments
- Revise Response to NOI Comments
- Draft C&M Agreement
- Revised Draft C&M Agreement
- Final C&M Agreement

### Meetings

- Up to 12 Monthly Progress Meetings in Oceanside
- Up to 12 conference calls between progress meetings

### **Future Services**

Upon completion of the design services scoped hereinbefore, RailPros is able to provide the following additional services during the bidding and construction phases. A separate proposal scope and fee will be prepared and submitted to the City when the design is in the final stages.

- Bid Support
- Design Services During Construction (DSDC)
- Prepare FRA Grade Crossing Inventory Forms for the post construction conditions at each crossing
- Prepare FRA Application for use of Alternative Safety Measures (FRA Application) with revised Quiet Zone Calculations – as needed
- Prepare Quiet Zone Notice of Establishment (NOE) and Final Quiet Zone Calculations
- Prepare CPUC Form G

### **Assumptions**

1. Total meeting, coordination and participation hours are per the fee breakdown.
2. The City will provide copies of all available existing data, plans, documentation, and any other pertinent information related to the crossings to RailPros.
3. The City will provide all roadway information required by the USDOT crossing inventory form (i.e. system type, functional classification, current ADT, percentage of trucks, and average number of school buses using the crossing).
4. Any Survey, subsurface exploration, design plans, construction drawings, as-built plans, related design or construction estimates or other services not detailed above will not be provided under



## *Railroad Engineering Services*

this proposal. Other services not defined herein may be provided under a separate scope of work as requested by the City.

5. All deliverables will be submitted to the City and stakeholders in electronic format. Any hard-copy reproduction and distribution will be made available upon specific request.
6. Environmental Permits and Applications are not included as part of this scope of services. It is anticipated that the City will provide any necessary permitting for the project.
7. Relocation of existing utilities, modification of existing agreements or preparation of new agreements are not anticipated for the project and are not included in this scope of work.

### **Fee**

Tasks will be performed on a time and materials basis, in accordance with the current rates, terms and conditions of the Contract. Tasks will be assigned by the City and performed by RailPros based on the fee estimate in Attachment 1.





**SDE**

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Engineering | Surveying | Planning

Annie S. Aguilar, PE | Ivan R. Fox, PE | Barry L. Munson, PE, QSD | Andrew G. Karydes, PLS

August 1, 2014

BDPW140709

Mr. Matt Britten, PE  
Senior Project Manager  
RailPros  
401 B Street, Suite 302  
San Diego, CA 92101

**Subject:** Proposal fee Letter for Oceanside Quiet Zone, Oceanside, CA

Dear Mr. Britten,

SDE is pleased to submit our fee proposal letter for professional services work for topographic survey and right of way mapping. SDE has received and reviewed the following documents: "Project Study Draft Report for Oceanside Quiet Zone – San Diego Subdivision (MP 225.9-228.0)", dated July 18, 2014 and Railpros Conceptual Plans for the City of Oceanside, CA Railroad Quiet Zone Drawings 1A, 1B, 2, 3, 4, 5, dated May 12, 2014. Per our discussion and review of the above documents, we have determined the following scope of work.

**Topographic Survey:**

1. Field Survey – Locate the existing railroad crossing equipment located within the NCTD Right of Way (ROW) and along the adjacent sidewalk areas such as the crossing arms, signals, and gates for entry into the ROW at five (5) locations, one of the locations include a driveway entrance, and a localized topographic survey in the parking lot outside the ROW along Mission Avenue will be provided.
2. Utility Sweep - SDE will locate all visible utilities and aboveground utility structures within the railroad ROW.
3. Ground shots will be collected at 10ft intervals and extend beyond end of shown improvements, a minimum of 20ft or beginning of the intersection, (midpoint of curb radius), whichever is least distance.
4. Office Time – Review record data/maps, NAD83 control, process, and analyze survey field data, drafting, and provide deliverable in URS standard title block.
5. Survey Management – Review/analysis/management/meetings.

The deliverable shall be in ACAD Civil3D 2010 format. Survey points shall be contained in the file and one-foot contours shall be revised to represent an accurate topographic survey of the area.

**Topographic Survey Estimate: \$18,400**

**SAN DIEGUITO ENGINEERING, INC.**

sdeinc.com

760.753.5525 | 760.943.8236 fax | 4407 Manchester Avenue | Suite 105 | Encinitas, CA 92024

#### Utility Mapping:

1. Obtain Site Plan and/or Project Area - SDE shall coordinate with Railpros to obtain the project limit for the Line. SDE shall confirm the project limit prior to moving forward with record research. Additional fees to obtain record plans is excluded from this proposal, if required shall be paid for by others.
2. Meetings with Project Manager and AirX - SDE shall meet with the Project Manager to confirm excavation work to be performed. SUE shall be determined if required. If required, SDE shall coordinate with AirX to perform pothole(s) and/or geophysical locate existing utilities.
3. USA (Dig Alert) Members - SDE shall obtain a list from USA for all utility owners within the project area.
4. Contact USA Members - SDE shall send letters to all facility owners within project area to request copies of as-built drawings, proposed construction drawings, and future projects within a two-year time frame.
5. Contact public agencies - SDE shall contact the public agencies that own facilities within the project area to obtain as-built drawings.
6. As-Built Drawings, Proposed Improvement Plans, and Future Projects - SDE shall obtain drawings for all Record Plans (as-built drawings), Proposal Plans, and future projects within the project area. SDE shall scan the drawings and file them as PDF files.
7. SUE Drafting - SDE shall plot all existing and proposed utilities and structures as shown in the Record Plans and proposed plans. Pipe diameters greater than 18" shall be indicated with double lines depicting the outside diameter. Pipe diameters less than 18" shall be indicated with a single line. Line types shall contain a letter for each utility type, i.e., "S" for sewer lines, "E" for electrical lines, "W" for water lines, "FO" for fiber optic lines, "COMM" for communication lines, and "SD" for storm drain lines. If laterals are not shown on the plan, they will not be plotted. The Subsurface Utility Engineering (SUE) mapping will based on Quality Level D, per the ASCE Standard Guidelines CI/ASCE 38-02 publication. Depiction of existing utilities shall be in accordance with ASCE Standard Guidelines CI/ASCA 38-02 publication. Future work will be denoted by a boxed area with description of future improvement. SDE shall rectify as-built record information with the utility sweep file prepared as part of the Topographic Survey. SDE shall annotate all utilities within the project area. Agency name and DWG numbers shall be identified for infrastructures.
8. CAD File Transmittal - SDE shall transmit the final CAD file containing the utilities within the project area based on the results of the above steps.

**Utility Mapping Estimate: \$10,000**

#### Potholing and Geophysical location:

All proposed field work to locate existing utilities to be performed by AirX Utility Surveyors.

1. Potholing (Level A)

AirX Fees to pothole existing utilities vary according to depths. AIRX will pothole to the top of pipes, and to the top and bottom of encasements, however the bottom depths of pipes will need to be calculated. Potholing includes excavation, visual observation, setting witness point, backfill, patching and documentation of depths and location of the utility on a record data sheet. Traffic control plans shall be prepared and processed by AirX. AirX shall provide their own traffic control measures. Assume 4 potholes per location at five rail crossings. (\$25,000 to be confirmed)

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2. Geophysical Locating (Level B)

AIRX will pre-mark all of the pothole locations and notify Underground Service Alert (USA). AIRX will pothole the facilities in accordance with USA Markout. If the requested utilities are not found or if USA Mark-out is incomplete and cannot be verified by AirX, you the Client will be notified. AirX does provide additional locating upon request. It is our experience that the location of PVC and ACP water utilities are often the most difficult to determine for pothole operations. AIRX can provide locating crews that carry many different pieces of locating equipment, including ground penetrating radar and CCTV locating camera equipment. The equipment is state of the art, but limitations exist with each piece of equipment depending on such factors as soil conditions, conductivity of the existing utility, depth and size of the utility, and congestion within the area of other utilities. USA does not mark out any gravity utilities except at the discretion of the presiding utility owner. This usually applies to storm drain, collector sewer and sewer laterals (gravity by nature), and some utility owners are not members of USA. AIRX provides duct rod locating with a sonde transmitter and receiver and/or a tractor driven CCTV with locating and lateral launching system used to identify positioning of sewers and sewer laterals. Assume 8 hours of utility locating at five rail crossings. (\$20,000 to be confirmed)

3. Additional Field Survey-Each pre-stake pothole location shall include 10 lineal feet before and after the pothole along the proposed gas alignment. In the event the pothole location is within 20 feet of another pothole, the pre-mark shall connect the potholes and 10 lineal feet of the proposed gas alignment shall be marked before and after the first and last pothole for in that row of potholes. Surveyors shall also locate existing USA markouts in those areas at the time of pre-staking pothole and incorporate those paint marks into the utility mapping base file. Post PH nails shall be located for potholes as well as any paintmarks from geophysically located utilities. 20 potholes total. (\$5,550)

4. Process point for potholes and rectify the utility mapping base file. (\$2,000)

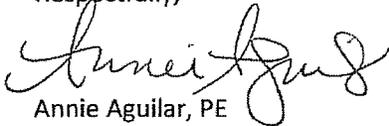
**Potholing and Geophysical Location Estimate: \$51,550**

**Total Cost Estimate: \$79,950**

Assumptions/Exclusions:

1. The vertical and horizontal control for the topographic survey shall be provided.
2. Boundary Surveying is excluded from this scope. Right of way data will be compiled from record maps.
3. The establishment, reestablishment and/or setting of missing or destroyed property corner monuments are not included in this agreement.
4. Sub-surface Utility Survey Mapping is excluded from this scope.
5. Additional record research is excluded from this scope, in addition to site visits and field utility investigations.
6. Geophysical location of existing utilities shall be provided by others.
7. Rectification of existing utilities versus utility features is excluded from this scope.
8. Limit of topographic survey is with an additional 50 feet around all sides.
9. AirX scope and fee are estimates from previous jobs and should be confirmed prior to signature of contract.

Respectfully,



Annie Aguilar, PE

President

