**Final Report** 

# SOUTH BAY CITIES RAILROAD STUDY

**BNSF Harbor Subdivision** 

Southern California Association of Governments in association with South Bay Cities Council of Governments



HE

1618

.S687



Prepared by Wilbur Smith Associates in association with Schiermeyer Consulting Services Cheryl Downey

February 28, 2002



# South Bay Cities Railroad Study BNSF Harbor Subdivision

**Final Report** 

Prepared for:

# Southern California Association of Governments In Coordination with South Bay Cities Council of Governments

The preparation of this report was financed in part through grants from the United States Department of Transportation – Federal Highway Administration and the Federal Transit Administration – under provisions of the Transportation Equity Act of the 21<sup>st</sup> Century. Additional financial assistance was provided by the California State Department of Transportation.

Prepared by:



Wilbur Smith Associates Schiermeyer Consulting Services Cheryl Downey

February 28, 2002

# TABLE OF CONTENTS

# **Executive Summary**

1

2

Project Overview	
How the Study was done	ES-1
Recommendations	ES-2
Next Steps	ES-2
Introduction	
1.1 Purpose of the Study	1-1
1.2 Study Process	1-2
1.3 Agencies Consulted	
1.4 Legal Framework	
1.4.1 Shared Use Agreement for the Harbor Subdivision	1-4
1.4.2 Alameda Corridor Use and Operating Agreement	
1.4.3 Funding Sources	
1.4.4 Abandoned Crossings	
Existing Conditions	
2.1 Railroad Corridor Description	2-1
2.1.1 Train Speeds	
2.1.2 At-grade Crossings	2-3
2.1.3 Right of Way Widths	2-4
2.1.4 Utility Easements in Corridor	
2.1.5 Track Classification Standards	2-7
2.2 Corridor Demographics	
2.2.1 Land Use	2-8
2.2.2 Population	2-12
2.2.3 Employment	2-13
2.3 Railroad Operations	
2.3.1 Shippers	
2.3.2 Trains and Hours of Operation	
2.3.3 Train Length and Speed	
2.3.4 Line Maintenance	
2.3.5 Yards, Sidings, Leased Tracks, Storage, and Switching Activ	ity 2-18
2.4 Vehicular Traffic Operations	
2.4.1 Vehicular Traffic Volumes	
2.4.2 Crossing Delays	
2.4.3 Nearby Intersection Delays	2-22
2.5 Safety	2-23

	2.5	.1 Definitions	2-23
	2.5	.2 Railroad Protection Devices	2-24
	2.5	.3 At-grade Crossing Accidents/Incidents	2-24
		.4 Railroad Accidents/Incidents	2-28
	2.5	.5 Nearby Accidents	2-28
3	Future Con	nditions	
	3.1 Futu	re Corridor Demographics	3-1
		.1 Land Use	3-1
		.2 Population	3-1
		.3 Employment	3-2
	3.2 Futu	re Freight Rail Operations	3-3
	3.2	.1 Shippers	3-3
		.2 Trains and Hours of Operations	3-4
	3.2	.3 Train Lengths and Speed	3-4
	3.2	.4 Line Maintenance	3-4
	3.2	.5 Yards, Sidings, Leased Tracks, Storage, and Switching Activity	3-5
	3.2	.6 Alameda Corridor Capacity	3-5
	3.2	7.7 Air Quality and Noise	3-5
	3.3 Futu	re Vehicular Traffic Operations	3-7
	3.3	.1 Planned Railroad Grade Separation Projects	3-7
		.2 VehicleTraffic Volumes	3-7
	3.3	.3 Crossing Delays	3-7
	3.3	.4 Nearby Intersection Delays	3-10
	3.4 Safe	ty	3-10
	3.4	.1 Changes to At-grade Crossing Warning Devices	3-10
	3.4	2.2 Crossing and Railroad Accidents	3-12
	3.5 Oth	er Railroad and Transit Alternatives	3-12
	3.5	.1 Green Line Extension to Los Angeles International Airport	3-13
	3.5	.2 High Speed Rail to LAX	3-14
	3.5	.3 Conventional Rail Passenger Service to LAX	3-14
	3.5	.4 New Light Rail or Bus Rapid Transit to LAX	3-16
	3.5	.5 Rail Shuttle Service from South Bay Points	3-17
	3.5	.6 Extension of Metro Green Line to Torrance	3-19
	3.5	.7 Service to Long Beach	3-20
	3.5	.8 Summary of Alternative Rail Uses of the Right of Way	3-20
	3.6 Oth	er Alternative Uses of the Right of Way	3-21
		.1 Widen Adjacent Streets	3-21
		.2 Linear Parkway or Trail	3-22
		.3 Expand Adjoining Uses	3-23
		.4 Utility Corridors	3-23

## 4 Findings and Recommendations

4.1 Findi	ngs	4-1
	Corridor Demographics	4-1
4.1.	2 Future Rail Operations	4-1
4.1.	3 Vehicular Operations	4-2
4.1.	4 Safety	4-2
4.1.	5 Alternative Uses	4-2
( 0 D	1	4.2
4.2 Reco	mmendations	4-3
4.2.	1 Maintain Existing Protection at Crossings	4-3
4.2.	2 Traffic Improvements Should be Implemented	4-3
4.2.	3 Alternative Uses Should be Explored	4-3
4.3 Next	Steps	4-3

## APPENDICES

- A Technical Advisory Committee Meeting Attendees
- B Legal Agreements
- C Rail Line Abandonment
- D Railroad Crossing Inventory
- E California PUC General Order No. 135
- F Vehicular Delay and LOS Analysis
- G CPUC Standard At-grade Railroad Warning Signs and Signals
- H FRA Accident/Incident Summaries
- I Population and Employment Data

# TABLES AND FIGURES

Table 2-1	Maximum Train Speed along the Harbor Subdivision Line	2-1
Table 2-2	At-grade Railroad Crossings Characteristics in the Study Area	2-3
Table 2-3	Right of Way Widths in the Study Area by Segment	2-6
Table 2-4	FRA Track Classifications	2-7
Table 2-5	Types of Land Uses near Highway-Railroad At-grade Crossings	2-9
Table 2-6	South Bay Cities Population Growth	2-13
Table 2-7	South Bay Cities Employment Growth	2-14
Table 2-8	BNSF Traffic from Redondo Junction to Watson Yard, 1993 vs. 1997	2-15
Table 2-9	Major Shippers on the Harbor Subdivision Line	2-15
Table 2-10	ADT Volumes at Railroad Crossings in the Study Area	2-19
Table 2-11	Estimated Delays and Queuing at Crossings in the Study Area	2-21
Table 2-12	Warning Devices at Railroad Crossings in the Study Area	2-25

#### TABLE OF CONTENTS

Table 2-13	Annual Accidents at Crossings	2-27
Table 2-24	Annual Accidents and Warning Devices at Crossings	2-27
Table 3-1	South Bay Cities Population Growth Forecasts	3-2
Table 3-2	South Bay Cities Employment Growth Forecasts	3-3
Table 3-3	Estimated ADT Volumes 2005 and 2015	3-8
Table 3-4	Estimated Delays at Railroad Crossings 2005 and 2015	3-9
Figure 2-1	Harbor Subdivision	2-2
Figure 2-2	At-grade Crossings in the Study Area	2-5
Figure 2-3	Land Uses Adjacent to the Railroad Corridor	2-11
Figure 2-4	Total Trains per Day - Harbor Subdivision	2-16
Figure 2-5	Number of Accidents/Incidents at Crossings in the Study Area	2-26
Figure 3-1	Local Trains per Day - Harbor Subdivision	3-6

# Executive Summary SOUTH BAY CITIES RAILROAD STUDY

# **PROJECT OVERVIEW**

The opening of the Alameda Corridor in April 2002 will change the operations on the Harbor Subdivision in a significant way. At present, the 27.6-mile route provides access for the Burlington Northern Santa Fe Railway (BNSF) to the Ports of Los Angeles and Long Beach from its downtown Los Angeles railhead. The subdivision line, which winds west toward El Segundo and then south toward Wilmington, hosts 20 one-way trains per day at present. When the Alameda Corridor opens, traffic on the subdivision will drop by two thirds or more through the South Bay cities. Only local traffic, originating and terminating on the line, will remain.

At the same time, this year's decline in rail traffic on the subdivision provides an opportunity: South Bay city and regional transportation planners can begin an analysis of the grade crossing improvements that will be needed and the potential alternative uses of the right of way.

Accordingly, the purpose of this study has been to identify:

- The rail volume that will remain on the Harbor Subdivision and how it will be handled;
- The impact of this rail volume on future traffic levels at grade crossings in the study area stretching 18.5 miles from Inglewood to Wilmington;
- The need for future grade crossing improvements, given the decline in rail volume;
- Potential safety improvements at key grade crossings, and their cost; and
- Alternative uses for the Harbor Subdivision.

# HOW THE STUDY WAS DONE

To accomplish these objectives, the study team performed three essential tasks. First, the team determined existing rail traffic and vehicular delay conditions in the study area. Second, the team calculated future delay conditions in order to understand how tomorrow will be different from today. Finally, the team assessed grade crossing improvement needs and alternative uses of the right of way, given the future freight rail volume remaining on the line.

This study required continuing contact with stakeholders. South Bay cities provided the study team with their key issues of concern and their plans for grade crossing improvements, and offered comment on working papers. BNSF provided its operating plans for the line following the opening of the Alameda Corridor. The right of way owner, the Los Angeles County Metropolitan Transportation Authority, provided its opinion on potential uses and how these relate to current planning efforts involving the Harbor Subdivision.

The study team utilized this input in developing its analysis, findings, and recommendations. Key findings include the following:

- The entire length of Harbor Subdivision will remain an active freight rail corridor, though volume will be reduced.
- While only local traffic will remain on the line, this traffic will grow, albeit at a relatively low rate.
- Vehicular delays at study area crossings will decline dramatically with the diversion of port-related traffic to the Alameda Corridor.
- There are only two grade separation projects planned in the study area. These will
  proceed regardless of the decline in rail traffic.
- At-grade crossings in the study area have the highest levels of protection, and have
  relatively low accident rates as a result.
- Additional safety improvements can be implemented without great cost.
- There are a number of potential alternative uses including such diverse concepts as high speed rail, light rail, commuter rail, and pedestrian and bicycle paths.

# RECOMMENDATIONS

The findings dictated the following recommendations:

- As the entire rail line will remain active, all existing grade crossing protections will have to be maintained. Some segments of the line will see only occasional trains. Even so, none of the protections should be withdrawn.
- While the crossings have the highest level of protection available, additional traffic safety
  improvement (e.g., improved signage and stripping) can be implemented with minor
  costs.
- Alternative uses should be explored in terms of their feasibility. However, these uses must provide for the local freight rail service that will continue on the subdivision.

# NEXT STEPS

The next step for this project is distribution of the Final Report to stakeholders – adjacent cities, the Southern California Association of Governments, the Los Angeles County Metropolitan Transportation Authority, and the Burlington Northern Santa Fe Railway, among others – who will have an interest in the alternative uses of the Harbor Subdivision. It is hoped that this document might provide the impetus for a discussion of possible alternatives. Ultimately, it will be up to the South Bay cities themselves to decide on alternative uses that work for them, all the while incorporating the freight operations that will continue.

# 1.1 PURPOSE OF THE STUDY

The South Bay Cities Railroad Study is intended to assess the changes that will occur along the Burlington Northern Santa Fe Railway (BNSF) Harbor Subdivision line following the opening of the Alameda Corridor in 2002. The Harbor Subdivision extends from central Los Angeles to just east of Watson Yard in Wilmington, and currently is the BNSF route to the ports of Los Angeles and Long Beach. All BNSF port-related rail traffic will shift to the Alameda railroad corridor, as well as the through traffic of Union Pacific Railroad (UP) lines further to the east. The Alameda Corridor itself is a 20-mile grade separated route centered along Alameda Street, extending from downtown Los Angeles BNSF and UP rail heads to the Ports of Los Angeles and Long Beach.

As the majority of traffic on the Harbor Subdivision is port related, rail traffic over the line will be significantly reduced when the Alameda Corridor opens. The shift of port-related traffic will affect the need for improvement or separation of grade crossings, and will have implications both for land uses along the right of way, and for alternative uses of the right of way.

For the purposes of this study, representatives of various jurisdictions along the right of way served as the study's Technical Advisory Committee (TAC). These representatives are all participants in the Infrastructure Working Group of the South Bay Cities Council of Governments (SBCCOG). The TAC decided to include in the study area the segment of the Harbor Subdivision line between milepost 8 and milepost 26.5 on the outskirts of Watson Yard<sup>1</sup>. This segment includes the cities of Los Angeles, Inglewood, El Segundo, Hawthorne, Redondo Beach, Lawndale, Torrance, and Carson. The study area having been defined, the study's consultant team focused on understanding the current rail operations in the area, and how these will change once the Alameda corridor is opened in the spring of 2002. With this understanding, the team began its analysis of grade crossing improvements and safety enhancements that would be appropriate given the reduction of train volume on the line. The team also considered alternative uses for the portions of the right of way in the study area.

This chapter first discusses the process followed during the course of this project. Second, the agencies contacted for input and comment are noted. Third, the legal framework for future freight operations on the line is presented, along with funding sources for railroad-highway grade crossing improvements. Subsequent chapters detail existing conditions (Chapter 2), future conditions and alternative uses of the right of way (Chapter 3), and finally findings and recommendations (Chapter 4).

<sup>&</sup>lt;sup>1</sup> Milepost 26.5 is just outside the Watson Yard. The milepost number for the yard itself is 26.6. The Harbor Subdivision extends to milepost 27.6 at West Thenard and a crossing of the Union Pacific Railroad, and to milepost 28 at Anaheim Street and a connection with the Pacific Harbor Line, the terminal and switching carrier serving the San Pedro Bay ports. However, the line beyond the 26.5 is not in the study area.

# 1.2 STUDY PROCESS

The process involved in completing this draft study involved three meetings with the TAC, field visits to grade crossings along the length of the Harbor Subdivision, follow-up with study stakeholders, and a hi-rail trip on the line through the study area.

**TAC Meetings:** Three meetings were held with representatives from the SBCCOG Infrastructure Working Group and the consultant team. The Infrastructure Working Group representatives were from cities along or nearby the Harbor Subdivision, as well as from the County of Los Angeles and Los Angeles World Airports. The meetings were held June 27 and September 26, 2001, in El Segundo. At the first meeting, the participants defined the 16-mile study area as between Crenshaw Boulevard in Inglewood and Watson Yard in Wilmington, as this is the area of primary concern to the South Bay Cities. At the request of the consultants, the participants also cited specific concerns and agreed to provide the basic information on land use, traffic volumes at crossings, and planned grade crossing improvements.

At the second meeting, the consultant team presented findings on current and future conditions along the Harbor Subdivision, inclusive of railroad operations, vehicular traffic operations, atgrade crossing safety and land use. Also, participants discussed alternative uses of the right of way, and made numerous suggestions on items to include in the study report. The consultant team distributed working papers on existing and future conditions to the Infrastructure Working Group participants prior to the meeting, and group participants offered comments on these work products.

The third meeting, held December 20, was to refine the project's draft report. Names of the TAC members and other stakeholders who attended the meetings appear in Appendix A.

*Field Visits:* In June and again in September, the consultant team visited all public and private intersections in the study area in order to understand first hand any traffic delay and safety issues pertaining to these crossings. The team also inspected the right of way outside of the study area, from Crenshaw Boulevard to Malabar Yard (at milepost 1.5), in order to understand its suitability for alternative uses in connection with the right of way inside the study area.

*Follow-up with Study Stakeholders:* Apart from the TAC meetings, the study team contacted some study stakeholders for previously requested information, or for comment on alternative uses. To obtain additional information, the team telephoned and/or e-mailed representatives of the Cities



**BNSF Hi-Rail Trip Vehicle** 

of Lawndale, Inglewood, Torrance, and El Segundo, and the Los Angeles County Department of

Public Works. The team also contacted the Lawndale, Redondo Beach, and Torrance representatives for comment on the potential pedestrian/bicycle paths along the right of way.

*Hi-rail Trip:* In June, BNSF hosted the consultant team on a trip in a utility van equipped with retractable steel guiding wheels on the Harbor Subdivision through the study area. While BNSF was under no obligation to provide this trip, the trip was invaluable in facilitating an understanding of the rail operations on the line, safety issues at various crossings, and even potential alternative uses of the right of way.

# 1.3 AGENCIES CONSULTED

Throughout the course of this study, the consultant team contacted numerous agencies for input relevant to the current and future operation of the Harbor Subdivision. These agencies included:

- Members of the South Bay Cities Council of Governments through which the Harbor Subdivision runs. These included representatives of the cities of Los Angeles, Inglewood, El Segundo, Hawthorne, Redondo Beach, Lawndale, Torrance, and Carson, Los Angeles World Airports, and the County of Los Angeles. The members provided detail on traffic counts, land use, and planned grade crossing improvements, and comment on intermediate work products.
- The Los Angeles County Metropolitan Transportation Authority (LACMTA), which
  owns the Harbor Subdivision. LACMTA provided insights on potential alternative uses
  of the right of way, as well as the text of the 1992 LACTC/ATSF Harbor Subdivision
  purchase/sale agreement.
- The Rail Crossing Engineering Division of the California Public Utilities Commission (CPUC), which provided train/vehicle accident data for Harbor Subdivision crossings and information regarding the procedures required for modifying railroad crossing protection devices and railroad abandonment. In California, the CPUC retains oversight for safety at public and private highway-railroad grade crossings.
- The Federal Railroad Administration (FRA), which was the source for highway-rail grade crossing descriptions as well as reports on train accidents on the subdivision. The FRA retains oversight for safety of railroad operations outside of grade crossings.
- The Alameda Corridor Transportation Authority (ACTA), which provided the text of the Alameda Corridor Use and Operating Agreement.
- North San Diego County Transportation District, which provided an update on its Oceanside-Escondido Diesel Multiple Unit (DMU) project, which served as the basis for an alternative use concept for the Harbor Subdivision.

As previously noted, BNSF provided the consultant team with a hi-rail trip of the line through the 18.5-mile study area. BNSF also provided extensive information on current and projected train operations and maintenance practices. The study team provided the railroad the study's work products for its review and comment.

# 1.4 LEGAL FRAMEWORK

# 1.4.1 Shared Use Agreement for the Harbor Subdivision

Until 1992, the Atchison, Topeka and Santa Fe Railway (ATSF) owned the Harbor Subdivision. The subdivision linked with the ATSF main line at Redondo Junction (subdivision milepost 0.0), which provides access to the national freight rail system. Just as now, the subdivision was ATSF's route to the Ports of Los Angeles and Long Beach, and served large petrochemical shippers in the South Bay area.

In 1992, the ATSF sold the Harbor Subdivision to the Los Angeles County Transportation Commission (LACTC). According to the terms of the "Shared Use Agreement"<sup>2</sup>, the ATSF retained a freight rail service easement to serve shippers on the line and access the San Pedro Bay area ports. The purchase was intended to permit the implementation of passenger and/or commuter rail services on the line. However these services never materialized.

The responsibility for maintaining the line was to remain with ATSF until such time as portrelated traffic could be shifted to a "consolidated port route," which has become known as the Alameda Corridor. After the shift, the responsibility was to fall to the LACTC. (As a practical matter, the railroad maintains the portion of the right of way required exclusively for freight rail operations. Should there be segments used for both freight and transit operations, the agency would maintain them.)

The ATSF agreed to shift all its port-related or "overhead" traffic to the corridor. If the shift did not occur, LACTC could demand that ATSF buy back the line, and ATSF would be obligated to comply. The relevant excerpt from the agreement, the "Put Option", appears in Appendix B.

In 1995, the ATSF was purchased by the Burlington Northern Railroad, and the combined company became known as the Burlington Northern Santa Fe Railway. Also, in 1993, the LACTC merged with the Southern California Regional Transit District (SCRTD) to become the present day Los Angeles County Metropolitan Transportation Authority (LACMTA). BNSF and LACMTA are now the responsible parties to the 1992 agreement signed by their predecessor entities. No passenger service has yet been initiated, though introduction of such service was implied in the agreement. Therefore, as a practical matter, BNSF will continue to maintain the Harbor Subdivision after the opening of the Alameda Corridor, as it will be the sole user of the line.

# 1.4.2 Alameda Corridor Use and Operating Agreement

Per the terms of this 1998 agreement<sup>3</sup>, BNSF and the Union Pacific Railroad (UP) were given the right to use the Alameda Corridor for all through train movements between the San Pedro Bay ports and downtown Los Angeles. Should blockage of the corridor occur, rail traffic would

364940

<sup>&</sup>lt;sup>2</sup> Shared Use Agreement (Harbor Subdivision and Mission Tower Segment), dated October 30, 1992, between ATSF and the LACTC. This document was obtained by the LACTC's successor, the Los Angeles County Metropolitan Transportation

Authority. An excerpt of the agreement pertaining to the "buy back" provision is included for reference in Appendix B.

<sup>&</sup>lt;sup>3</sup> Alameda Corridor Use and Operating Agreement, dated October 12, 1998, by and among The City of Long Beach, the City of Los Angeles, the Alameda Corridor Transportation Authority, BNSF and UP. An excerpt of the agreement pertaining to the use of the Harbor Subdivision through mid 2003 is included for reference in Appendix B.

detour to other routes that could include the UP San Pedro Branch, the traditional UP port route to the east, and even the Harbor Subdivision. However, the agreement specified that the Harbor Subdivision will be available as a detour route only through June 29, 2003. That is to say, it will not be a long-term detour route. Relevant excerpts from this agreement appear in Appendix B.

Per the 1992 ATSF/LACTC agreement, BNSF has a perpetual easement for serving shippers located along the Harbor Subdivision. At the same time, BNSF is not prevented from using the Harbor Subdivision for regular port-related shipments by either the 1992 agreement or the 1998 ACTA agreement after June 2003. If it were to do so, however, there would be substantial costs. Firstly, the LACMTA could demand that the railroad buy the line back. Secondly, BNSF would still be required to pay ACTA a charge of \$15 per loaded TEU<sup>4</sup> and \$4 per empty TEU for port-related shipments on or off the Alameda Corridor. BNSF, accordingly, has every incentive to use the Alameda Corridor in order to avoid these costs.

As far as diversion routes, there are two. These are the UP's Wilmington and San Pedro Branches. Should the corridor be closed down, these two routes could handle the flows. BNSF does have trackage right over the UP lines in case of an Alameda Corridor blockage. Only in the case of a major emergency, therefore, is it imaginable the BNSF would make regular use of the Harbor Subdivision for anything other than local traffic originating and terminating on the line.

# 1.4.3 Funding Sources

Sources of funds that may be available to local jurisdictions such as cities and counties, for railroad-highway grade improvements include federal and state agencies, and the railroad industry. The following is a brief description of these potential funding sources.

### **Federal Sources**

Section 130 of Title 23 of the United States Code (23 U.S.C. 130), commonly referred to as the Section 130 program, provides federal funds to improve existing highway-rail grade crossings. The purpose of the Section 130 program is to reduce the number, severity and potential for hazards to vehicles, bicycles and pedestrians at crossings. Fifty percent of the Section 130 funds are apportioned to the states according to the ratio of the number of public crossings in each state to the total number of public crossings in the nation. The remainder is apportioned on the basis of population, area, and road mileage of each State compared to the total in the nation.

In California, the Section 130 Program is a cooperative effort between the Federal Highway Administration (FHWA), the California Department of Transportation (Caltrans), the California Public Utilities Commission (CPUC), railroad companies and local agencies. Caltrans in cooperation with the CPUC was delegated the authority by FHWA to manage this program.

Federal Section 130 funds may be used for, but are not limited to, the following type of crossing improvement projects.

364940

<sup>&</sup>lt;sup>4</sup> TEU means "20-foot equivalent unit". TEU is a standard way of measuring sea-containers. A conventional 40-foot long seacontainer is equal to two TEUs. The fee for such a container moving through the Alameda Corridor would be \$30.

- Crossing elimination by new grade separations, relocation of highways, relocation of railroads, and crossing closure<sup>5</sup> without other construction.
- · Reconstruction of existing grade separation.
- Crossing improvement by:
  - installation of standard signs and pavement markings;
  - installation or replacement of active warning devices, including track circuit improvements and interconnection with highway intersection traffic signals;
  - crossing illumination;
  - crossing surface improvements; and
  - general site improvements

The CPUC recommends the types of improvements that are needed to eliminate vehicular and pedestrian hazards. Moreover, in order to qualify for Section 130 Program funds, the railroad/highway at-grade crossings must be included on the list of public crossings recommended for improvement by the CPUC.

For projects completed with Section 130 funds, the federal share of the improvement costs are 90 percent. States, local governments and other involved parties may participate in the remaining 10 percent share of the costs. In the case of local crossings (as opposed to State highway crossings), the commitment to pay the 10 percent is established through the execution of a Program Supplement Agreement to the Master Agreement between the state and the local agency with jurisdiction for the highway/railroad grade crossing.

State law cannot require railroads to share in the cost of work at railroad-highway grade crossings improvement projects that use federal aid. On the other hand, railroads are, under certain conditions, required to contribute to federally funded closures of grade crossings. As specified by Title 23 U.S.C. 130(b) and 49 Code of Federal Regulations (CFR) 1.48:

- The railroad share of projects that involve the closing of grade crossings at which active warning devices are in place or have been ordered installed by the CPUC shall be five percent (5%). A railroad may be willing to contribute a greater share if certain concessions are made, e.g., closure of one or more crossings. Also, other parties may voluntarily assume the railroad's share. The shared costs are to include costs for preliminary engineering, right of way, and construction as described below.
  - Where a crossing is eliminated by grade separation, the structure and approaches required to transition to a theoretical highway profile that would have been constructed if there were no railroad present, for the number of lanes on the existing highway and in accordance with Caltrans' current design standards.
  - Where another facility, such as a highway or waterway requiring a bridge structure, is located within the limits of a grade separation project, the estimated cost of a theoretical structure and approaches as described above to eliminate the railroad-

<sup>&</sup>lt;sup>5</sup> See discussion about the difference between closure and abandonment in the following section of this chapter (Section 1.4.4)

highway grade crossing without considering the presence of the waterway or other highway.

- Where a grade crossing is eliminated by railroad or highway relocation, the actual cost
  of the relocation project, or the estimated cost of a structure and approaches under
  specified conditions.
- There shall be no required railroad share of the costs for grade crossing improvements
  that involve the elimination of grade crossings at which active warning devices are not in
  place nor have been ordered installed by the CPUC.

At least one-half of the Section 130 Program funds must be used for the installation of protective devices at railway-highway crossings, which the FHWA has defined to include crossbucks, warning signs, pavement markings, flashing light signals, automatic gates, crossing surfaces and illumination. The remaining funds may be used for any type of eligible improvement.

Section 130 funding is not available for removal of abandoned railroad tracks on previously abandoned railroads. On the other hand, if a railroad crossing is on the CPUC recommended list of projects and the railroad chooses to abandon the crossing rather than improve it, the cost for track removal and other abandonment costs at the crossing will be eligible under this program.

Another federal program that provides funds for railroad-highway grade crossings is the Highway Bridge Replacement and Rehabilitation Program. All highway bridges on public roads, regardless of existing ownership or maintenance responsibility, could be eligible under this program. The federal share in this program is 80 percent. To be eligible for these funds, the highway bridge over the railroad must be included in the state's bridge inventory and be placed onto the state's prioritized implementation schedule.

In addition to the specific programs mentioned above, other regular federal-aid highway funds might be used for improvements at crossings. The federal share is the normal pro-rata share for the federal-aid highway funds involved, e.g., 75 percent for primary funds. However, under the provisions of the law, certain categories of funds may be increased up to 100 percent of the cost of preliminary engineering and construction. In this case, right-of-way costs remain at 75 percent.

Other requirements pertaining to the use of federal funds are as follows:

- Federal funds are not eligible when costs are incurred solely for the benefit of the railroad.
- For grade separations, federal funds may be used in the cost to provide space for more tracks than are in place when the railroad establishes, to the satisfaction of the CPUC, Caltrans and FHWA, that it has a definite demand and plans for installation of the additional tracks within a reasonable amount of time. Specifically, the railroad companies must file an application with the CPUC for authority to add any such tracks at a crossing and the level of funding participation, based on an approved application, will require CPUC, Caltrans and FHWA concurrence.

• The federal share of the cost of a grade separation project shall be based on the cost to provide horizontal and/or vertical clearances used by the railroad in its normal practice, subject to limitations as agreed to periodically by FHWA, Caltrans and the CPUC.

There are a number of federally funded railroad relocation and demonstration projects. These projects are site specific and are dependent upon annual authorization and appropriation by Congress.

#### State Funding

The State of California has established a State Grade Crossing Improvement Program for funding of railroad-highway grade crossing improvements. Funding is available through the Clean Air and Transportation Improvement Act of 1990 and is obtained through local agency applications with the California Transportation Commission (CTC). Through this program, the state participates in the funding of railroad-highway grade crossing improvement projects with matching shares for projects financed under the Federal-aid highway program. In addition, Caltrans sometimes finances the entire crossing project, if the crossing is on a State highway.

Caltrans provides for the maintenance of the highway approach and for traffic control devices not located on the railroad right-of-way at State highway crossings. Typically, these include advance warning signs and pavement markings. The state contributes with 100 percent for the maintenance of new street crossings requested by public agencies, and with 50 percent for the maintenance of existing crossings upgraded with either federal or state funds.

#### **Railroad Funding**

Except in certain instances, railroads cannot be required to contribute to the costs of most improvement projects that are financed with federal funds. However, railroads often volunteer to participate if they receive some benefit from the project. For example, if a project includes closure of one or more crossings, the railroad may benefit from reduced maintenance costs. Railroads also may assist in low-cost improvements such as changes in railroad operations, track improvements, right of way clearance, and others. It should be noted, however, that the maintenance costs incurred by railroads are increased significantly with the installation of additional traffic control devices.

### 1.4.4 Abandoned Crossings

Abandonment of a highway-railroad grade crossing occurs when railroad traffic is removed from conflict with at-grade vehicular traffic through the cessation of all railroad operation, or removal of tracks from the crossing. As opposed to abandonment, closure of a highway-railroad crossing occurs when vehicular traffic is removed from conflict with the railroad through the construction of physical barriers that prevent such conflicts or the removal of the roadway. Because of safety and operational problems that may occur at abandoned crossings, the desirable action is to remove all traffic control devices related to the crossing, and to remove or pave over the tracks as soon as a rail line has been identified as officially abandoned.

The difficulty is in establishing that a railroad line has been abandoned. For instance, a railroad may discontinue service over a line or a track, with the possibility that another railroad may later purchase or lease the line to resume operations. Such lines are called inactive lines. Another

type of inactive rail line is one whose service is seasonal (during a particular time of the year) or sporadic (only a few times a year) tied to the specific requirements of the customers served by the railroad. A third type of inactive rail line is that where infrequent rail service may occur for maintenance or other rail related purposes. If lines are inactive (but not abandoned) highway-rail crossing protection devices should not be removed. Appendix C describes the necessary procedures for abandonment of a rail line.

From the comments received from BNSF regarding the railroad's operating plans for the line, it is clear that the Harbor Subdivision is not a candidate for abandonment. At the same time, it is likely that portions of the line will, for all practical purposes, become inactive, with the transfer of port-related traffic to the Alameda Corridor.

This page intentionally left blank

1

# 2.1 RAILROAD CORRIDOR DESCRIPTION

The Harbor Subdivision extends approximately 27.6 miles from Redondo Junction in Central Los Angeles to a terminal railroad serving the San Pedro Bay ports. From north to south, the Harbor Subdivision line departs from the BNSF main line at Redondo Junction near downtown Los Angeles. It runs first west and then south 14.8 miles to El Segundo. It continues south, through residential, commercial and industrial areas for 11.7 miles before reaching Watson Yard in Wilmington. Access to the San Pedro Bay ports is another 1.1 miles to the east at a connection with the Pacific Harbor Line, the terminal railroad serving the Ports of Los Angeles and Long Beach, at West Thenard. The line is unsignalized. Trains progress along the track under authority granted by the BNSF dispatcher over radio. The subdivision from Redondo Junction to Watson Yard is shown as Figure 2.1.

# 2.1.1. Train Speeds

The Harbor Subdivision is mostly a single-track alignment with one siding about 5,000 feet long approximately midway on the line at milepost 13.6 and two sidings (3,400 and 4,200 feet long), one either side of the right of way at milepost 23.3. Yard trackage in Alcoa Yard at milepost 20.1 serves as siding track. Train speeds are limited throughout the length of the line as shown in Table 2-1.

Location	Maximum Speed
Milepost 0.0 to 1.6	12 mph
Milepost 1.6 to 2.5	15 mph
Milepost 2.5	10 mph
Milepost 2.5 to14.5	20 mph
Milepost 14.5	10 mph
Milepost 14.5-26.5	20 mph
Milepost 26.5-27.6	20 mph

Source: BNSF Operating Timetable 2/25/01

There are 174 railroad crossings in the *full 26.5-mile Harbor Subdivision line*, of which 26 are either overpasses or under passes. Of the 148 at-grade railroad crossings, five are private; that is, crossings that are not open to general public use. There is an average of approximately 5.5 at-grade railroad crossings per mile.

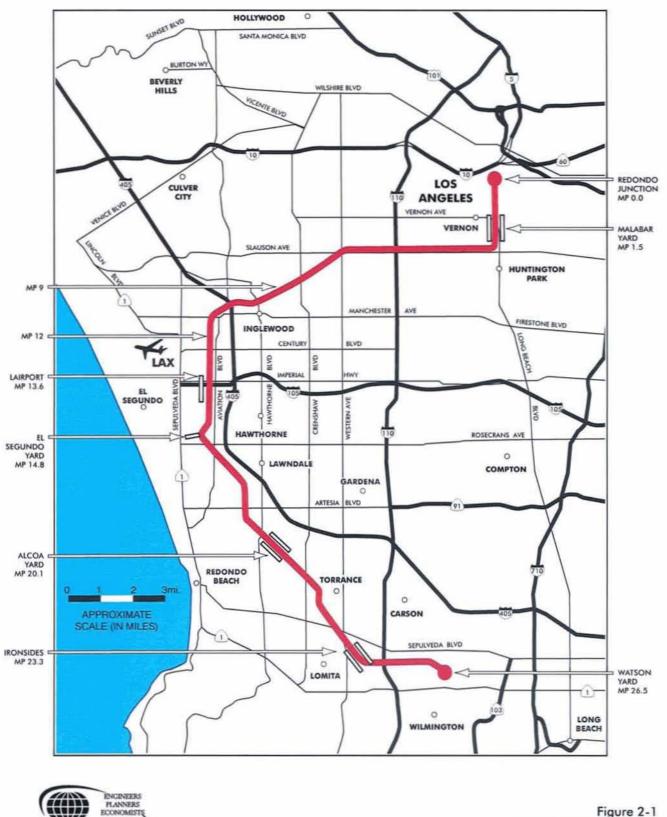


Figure 2-1 HARBOR SUBDIVISION 364940\Base/1-30-02

Wilbur Smith Associates

# 2.1.2 At-grade Crossings

The railroad corridor *study area* of the Harbor Subdivision line encompasses 18.5 miles, from milepost 8.00 east of Crenshaw Boulevard in Los Angeles to milepost 26.50 at the outskirts of Watson Yard. The study area contains 50 at-grade railroad crossings (about three crossings per mile on average), two of which are pedestrian-only crossings. Three of the 48 at-grade highway-railroad crossings are private vehicular crossings. The locations of the at-grade crossings are shown in Figure 2-2, while their description is summarized in Table 2-2. Appendix D contains a summary description of each of the crossings in the Harbor Subdivision line taken from the FRA and CPUC databases. Pedestrian-only and private at-grade crossing types are noted in Table 2-2. All others are motor vehicle public highway-rail crossings.

No.	Milepost	Cross-street Name	City	Crossing Type
1	8.03	CRENSHAW BLVD	LOS ANGELES	
2	8.14	VICTORIA AVE	LOS ANGELES	
2 3 4 5	8.23	BRYNHURST AVE	LOS ANGELES	
4	8.32	WEST BLVD	LOS ANGELES	
5	8.60	REDONDO BLVD	INGLEWOOD	
6	9.13	CENTINELA AVE	INGLEWOOD	
7	9.59	LA BREA AVE	INGLEWOOD	
8	9.82	IVY AVE	INGLEWOOD	
9	9.94	EUCALYPTUS AVE	INGLEWOOD	
10	10.21	NORTH CEDAR AVE	INGLEWOOD	
11	10.36	OAK ST	INGLEWOOD	
12	10.52	HYDE PARK BLVD	INGLEWOOD	
13	10.63	LA CIENEGA BLVD (I-405 EXIT)	INGLEWOOD	
14	10.82	HINDRY AVE	INGLEWOOD	
15	11.11	MANCHESTER BLVD	INGLEWOOD	
16	11.63	ARBOR VITAE ST	INGLEWOOD	
17	12.36	104 <sup>TH</sup> ST	LOS ANGELES	
18	12.92	111 <sup>TH</sup> ST	LOS ANGELES	
19	13.13	IMPERIAL HWY	LOS ANGELES	
20	13.37	118 TH ST	EL SEGUNDO	
21	13.62	120 <sup>TH</sup> ST	EL SEGUNDO	
22	13.89	124 <sup>TH</sup> ST	EL SEGUNDO	Private Crossing
23	14.69	DOUGLAS ST	EL SEGUNDO	The gold prover of the present of
24	14.79	CHAPMAN WY	EL SEGUNDO	Private Crossing
25	15.08	DOUGLAS/ROSECRANS STATION	EL SEGUNDO	Pedestrian-only Crossing
26	16.10	MARINE AVE	HAWTHORNE/RI	EDONDO BEACH
27	16.74	INGLEWOOD AVE	REDONDO BEAC	H/LAWNDALE
28	16.87	MANHATTAN BEACH BLVD	LAWNDALE	
29	16.94	159 <sup>TH</sup> ST	LAWNDALE	
30	17.01	160 <sup>TH</sup> ST	LAWNDALE	
31	17.08	161 <sup>ST</sup> ST	LAWNDALE	
32	17.14	162 <sup>ND</sup> ST	LAWNDALE	
33	17.62	170 <sup>TH</sup> ST	LAWNDALE	
34	18.38	182 <sup>ND</sup> ST	TORRANCE/RED	ONDO BEACH
35	21.24	TORRANCE BLVD	TORRANCE	
36	21.36	EL DORADO ST	TORRANCE	Pedestrian-only Crossing

Table 2-2 At-grade Bailroad Crossings Characteristics in the Study Area

364940	
SOUTH BAY CITIES RAILROAD STUDY	
FINAL REPORT	

No.	Milepost	Cross-street Name	City	Crossing Type
37	21.48	SONOMA ST	TORRANCE	
38	21.60	CARSON ST	TORRANCE	
39	22.10	WASHINGTON AVE	TORRANCE	
40	22.24	ARLINGTON AVE	TORRANCE	
41	22.49	CABRILLO AVE	TORRANCE	
42	22.57	BORDER AVE	TORRANCE	
43	22.78	SEPULVEDA BLVD	TORRANCE	
44	23.03	WESTERN AVE	TORRANCE/CIT	Y OF LOS ANGELES
45	24.79	S FIGUEROA ST	CARSON	
46	24.92	N.A.	CARSON	Private Crossing
47	25.94	AVALON BLVD	CARSON	
48	26.04	BROAD AVE	LOS ANGELES	
49	26.11	LAKME AVE	LOS ANGELES	
50	26.36	WILMINGTON AVE	CARSON	

Table 2-2 At-grade Railroad Crossings Characteristics in the Study Area

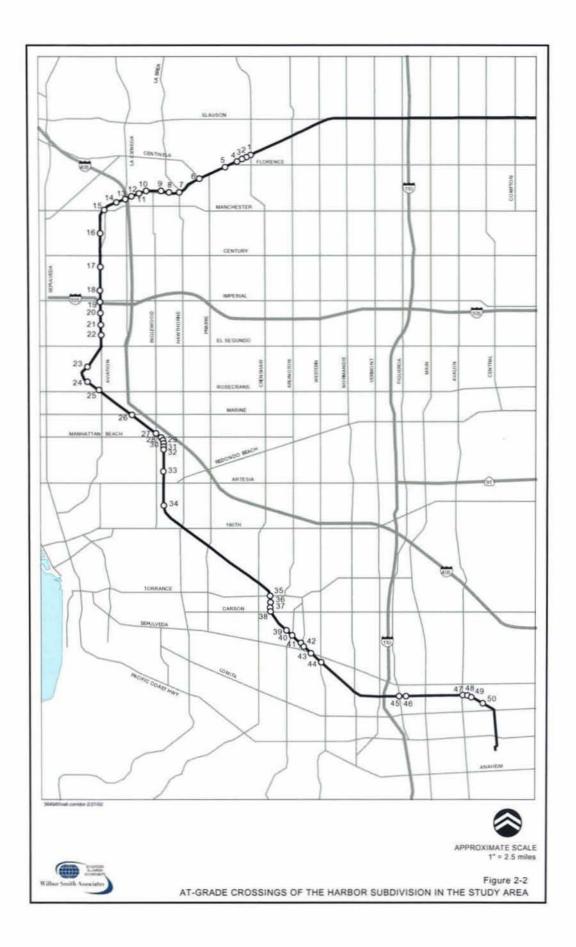
Source: California PUC, BNSF Railroad, Wilbur Smith Associates

#### 2.1.3 Right of Way Widths

The width of the right of way varies through the length of the study area from a low of about 40 feet to a high of about 140 feet. For the most part, widths narrow from near Chapman Way in El Segundo northward. The widths between at-grade crossings appear in Table 2-3 in page 2-6.



William Green Park - City of Lawndale (M.P. 17.5)



From Milepost/Cross-street Name		From Milepost/Cross-street Name To Milepost/Cross-street Name		
8.03	CRENSHAW BLVD	(feet) 100		
8.14	VICTORIA AVE	8.14 8.23	VICTORIA AVE BRYNHURST AVE	55
8.23	BRYNHURST AVE	8.32	WEST BLVD	55
8.32	WEST BLVD	8.60	REDONDO BLVD	55
8.60	REDONDO BLVD	9.13	CENTINELA AVE	55
9.13	CENTINELA AVE	9.13	LA BREA AVE	55
9.59	LA BREA AVE	9.82	IVY AVE	55
9.82	IVY AVE	9.94	EUCALYPTUS AVE	40-55
9.94	EUCALYPTUS AVE	10.36	OAK ST	40-55
10.36	OAK ST	10.50	HYDE PARK BLVD	60
10.50	HYDE PARK BLVD	10.52		1 (Sec. 2.1)
			LA CIENEGA BLVD (I-405 EXIT)	60
10.63 10.82	LA CIENEGA BLVD (I-405 EXIT) HINDRY AVE	10.82	HINDRY AVE	55
11.11	MANCHESTER BLVD	11.63	MANCHESTER BLVD	55
1.63	ARBOR VITAE ST	12.36	ARBOR VITAE ST 104 <sup>TH</sup> ST	35-65
2.36	104 <sup>TH</sup> ST	12.30	104 ST 111 <sup>TH</sup> ST	55-60
2.30	104 ST 111 <sup>TH</sup> ST	12.92	IMPERIAL HWY	55-60
3.13	IMPERIAL HWY	13.13	118 <sup>TH</sup> ST	55 45-60
	118 <sup>TH</sup> ST	13.62	118 S1 120 <sup>TH</sup> ST	
3.37	118 ST 120 <sup>TH</sup> ST		120 <sup></sup> ST 124 <sup>TH</sup> ST	60-70
3.62	120 ST 124 <sup>TH</sup> ST	13.89		60
3.89		14.69	DOUGLAS ST	60
4.69	DOUGLAS ST	14.79	CHAPMAN WAY	60
4.79	CHAPMAN WAY	15.08	DOUGLAS/ROSECRANS STATION	60-100
5.08	DOUGLAS/ROSECRANS STATION	16.10	MARINE AVE	100-140
6.10	MARINE AVE	16.74	INGLEWOOD AVE	80-100
6.74	INGLEWOOD AVE	16.87	MANHATTAN BEACH BLVD	100
6.87	MANHATTAN BEACH BLVD	16.94	159 <sup>TH</sup> ST	80
6.94	159 <sup>TH</sup> ST 160 <sup>TH</sup> ST	17.01	160 <sup>TH</sup> ST	100
7.01	160 <sup>-11</sup> ST 161 <sup>ST</sup> ST	17.08	161 <sup>ST</sup> ST	100
7.08	161 <sup>-0</sup> SI	17.14	162 <sup>ND</sup> ST	100
7.14	162 <sup>ND</sup> ST	17.62	170 <sup>TH</sup> ST	100
7.62	170 <sup>TH</sup> ST	18.32	182 <sup>nd</sup> ST	70-140
8.32	182 <sup>ND</sup> ST	21.24	TORRANCE BLVD	60-120
1.24	TORRANCE BLVD	21.36	EL DORADO ST	60
1.36	EL DORADO ST	21.48	SONOMA ST	60
1.48	SONOMA ST	21.60	CARSON ST	60
1.60	CARSON ST	22.10	WASHINGTON AVE	50-100
2.10	WASHINGTON AVE	22.24	ARLINGTON AVE	60
2.24	ARLINGTON AVE	22.49	CABRILLO AVE	60
2.49	CABRILLO AVE	22.57	BORDER AVE	60
2.57	BORDER AVE	22.78	SEPULVEDA BLVD	50-60
2.78	SEPULVEDA BLVD	23.03	WESTERN AVE	100
3.03	WESTERN AVE	24.79	SOUTH FIGUEROA ST	100-130
4.79	SOUTH FIGUEROA ST	24.92	N.A.	100-110
4.92	N.A.	25.94	AVALON BLVD	110
5.94	AVALON BLVD	26.04	BROAD AVE	110
6.04	BROAD AVE	26.11	LAKME AVE	100
6.11	LAKME AVE	26.36	WILMINGTON AVE	100
6.36	WILMINGTON AVE	26.50	LOMITA BLVD (in Watson Yard)	100

Table 2-3 Right of Way Widths in the Study Area by Segment

Note: Right-of-way widths are approximate. Width of viaduct over Century appears less than 20 feet. Other viaducts have similar widths

Source: Los Angeles County Tax Assessor maps

#### 2.1.4 Utility Easements in Corridor

According to the subdivision's owner, the Los Angeles County Metropolitan Transportation Authority (LACMTA), there are perhaps hundreds of terminable lease and license agreements along the right of way. Most license agreements are for transverse (perpendicular) crossings, but many are for longitudinal use of the right of way. These include crude oil pipelines, natural gas pipelines, aviation fuel pipelines, and fiber optic lines, among others. For the most part, these license agreements can be terminated. The exceptions are BNSF's permanent easements for freight rail services and for fiber optics. These were part of 1992 agreement for the purchase of the Harbor Subdivision by the former Los Angeles County Transportation Commission (LACTC) from the former ATSF Railway. The relevant provisions are included in Appendix B.

#### 2.1.5 Track Classification Standards

A review of Federal Railroad Administration (FRA) reports of recent-year train accidents along the Harbor Subdivision indicates that the track is maintained to Class 2 standards. The FRA, an agency within the United States Department of Transportation, has oversight for the safety of railroad operations.

The FRA has established standard track classifications and related standards of maintenance reflecting differences in classification. The basic difference between classifications is that higher classifications permit higher train operating speeds, but require higher standards of maintenance and inspection to warrant the higher speeds. Most railroads maintain their track to a particular classification based on the relative importance of the line and the maintenance budget that they determine is appropriate for the nature of the rail traffic moved over the line. Secondary tracks used principally for switching will be maintained to low classifications, while main line tracks carrying high volumes of time-sensitive freight will be maintained to high classifications.

Table 2-4 FRA Track Classifications					
Class Type	Maximum Freight Speed (mph)	Maximum Passenger Speed (mph)			
Excepted Track	10	Not Permitted			
Class 1 Track	10	15			
Class 2 Track	25	30			
Class 3 Track	40	60			
Class 4 Track	60	80			
Class 5 Track	80	90			

Note: Classes 6 through 9 apply to higher speed operation and are not shown here *Source: FRA* 

Adherence to track maintenance standards is enforced by periodic unannounced inspections of the track by qualified FRA inspectors, often working in conjunction with state regulatory agencies. Where inspectors find track that does not meet the standards, slow orders are imposed requiring operation at speeds commensurate with actual conditions until repairs are completed to restore the track to its intended class. Track inspections may be by visual inspection of track conditions on the ground, and by operation of track geometry cars containing electronic measuring and recording instruments.

The most critical standards that apply to track classifications include:

- <u>Gage</u> measures differences in the distance between the rails. Higher classifications have less tolerance for variations in track gage.
- <u>Alignment</u> measures horizontal variations within a specified distance along the track. Higher classifications have less tolerance for variations in alignment.
- <u>Curve elevation</u> (or super elevation) measures the height of the outside rail of a curve in relation to the inside rail. Maximum speeds are specified based on a combination of elevation and the sharpness of the curve.
- <u>Surface</u> measures the vertical variations within a specified distance along the track. Higher classifications have less tolerance for variations.
- <u>Track structure</u> measures the condition of ballast, crossties, track assembly fittings, and the physical condition of the rails. For each characteristic, higher standards of construction and maintenance apply to the higher track classifications.

The FRA regulations specify how often railroads are required to make their own inspections of track, with the higher classifications requiring more frequent inspections. Special inspections are required following any event that might cause damage to the track structure to ensure safety of train operations. Railroads are required to maintain records demonstrating compliance with the inspection requirements, and documenting maintenance activities necessary to support each track classification. Given the current freight volume on the Harbor Subdivision and the line's Class 2 status, the line requires two inspections per week (per 49 CFR 213.233 Track Inspections).

# 2.2 CORRIDOR DEMOGRAPHICS

### 2.2.1 Land Use

For the most part, the Harbor Subdivision extends through developed communities with wellestablished land use patterns that have developed with frequent rail traffic in place on the Harbor Subdivision. Figure 2-3 illustrates the general categories of land use within about one mile of each grade crossing. Table 2-5 shows similar information and identifies each grade crossing within the study area.

			Land Uses Near Highw		_	_	lan L	_	_	Ĭ	
No.	Milepost	City	Cross-street Name	Low Density Residential	Med. Density Residential	Office and Commercial	Light Industry	Heavy Industry	Public	Significant Uses and Features	
1	8.03	LOS ANGELES	CRENSHAW BLVD	V	V	V	V				
2	8.14	LOS ANGELES	VICTORIA AVE	V	V	V	V				
3	8.23	LOS ANGELES	BRYNHURST AVE	V	V	V	V				
4	8.32	LOS ANGELES	WEST BLVD	V	V	V	V				
5	8.60	INGLEWOOD	REDONDO BLVD	V	V	V	V		V	Centinela Park	
6	9.13	INGLEWOOD	CENTINELA AVE	1	V	V	V		V	Centinela Park, Freeman Hospital	
7	9.59	INGLEWOOD	LA BREA AVE		V	V	V		V	Crozier Jr. High, Inglewood High	
8	9.82	INGLEWOOD	IVY AVE		V	Ń	V		V	Crozier Jr. High, Inglewood High	
9	9.94	INGLEWOOD	EUCALYPTUS AVE		V	V	V		N	National Guard Armory	
10	10.21	INGLEWOOD	NORTH CEDAR AVE		N	V	V				
11	10.36	INGLEWOOD	OAK ST	V	V	V	V				
12	10.52	INGLEWOOD	HYDE PARK BLVD	V	V	V	V	V	V		
13	10.63	INGLEWOOD	LA CIENEGA BLVD	V	V	V	V	V	V	I-405 exit	
14	10.82	INGLEWOOD	HINDRY AVE	V	V	V	V	$\checkmark$	V		
15	11.11	INGLEWOOD	MANCHESTER BLVD		V	V	V	$\checkmark$	V		
16	11.63	INGLEWOOD	ARBOR VITAE ST		V		V	V	V	LAX, Univ. of West LA	
17	12.36	LOS ANGELES	104 <sup>TH</sup> ST		V			V		LAX	
18	12.92	LOS ANGELES	111 <sup>TH</sup> ST		V			V		LAX	
19	13.13	LOS ANGELES	IMPERIAL HWY		V	$\checkmark$		V		LAX, Freeway Access, Green Line Station	
20	13.37	EL SEGUNDO	118 TH ST	V		V					
21	13.62	EL SEGUNDO	120 <sup>TH</sup> ST	V		V					
22	13.89	EL SEGUNDO	124 <sup>TH</sup> ST	V		V					
23	14.69	EL SEGUNDO	DOUGLAS ST			V	V				
24	14.79	EL SEGUNDO	CHAPMAN WAY			V	V			Green Line Station	
25	15.08	EL SEGUNDO	DOUGLAS/ROSECRANS STATION	V		V	$\checkmark$				
26	16.10	HAWTHORNE	MARINE AVE		V	V	V			Green Line Station	
27	16.74	REDONDO B.	INGLEWOOD AVE	V	V	V	V			Freeway Access	
28	16.87	LAWNDALE	MANHATTAN BLVD	V		V	V				
29	16.94	LAWNDALE	159 <sup>TH</sup> ST	V		V					
30	17.01	LAWNDALE	160 <sup>TH</sup> ST	$\checkmark$		V					
31	17.08	LAWNDALE	161 <sup>ST</sup> ST	V		V					
32	17.14	LAWNDALE	162 <sup>nd</sup> ST	V		V					
33	17.62	LAWNDALE	170 <sup>TH</sup> ST	V	V	V			V	Green Park	
34	18.38	TORRANCE	182 <sup>nd</sup> ST	V	V	V	V		V	El Nido Park	
35	21.24	TORRANCE	TORRANCE BLVD	V	V	V	V				
36	21.36	TORRANCE	EL DORADO ST	V	V	V	V				
37	21.48	TORRANCE	SONOMA ST	V	V	V	V				
38	21.60	TORRANCE	CARSON ST	V	V	V	V		N	Torrance High, Nativity	

Table 2-5 Types of Land Uses Near Highway-Railroad At-Grade Crossings

WILBUR SMITH ASSOCIATES FEBRUARY 28, 2002

				Exis	Existing/Gen. Plan Land Uses					
No.	Milepost	City	Cross-street Name	Low Density Residential	Med. Density Residential	Office and Commercial	Light Industry	Heavy Industry	Public	Significant Uses and Features
										School, Fire Dept. Access
39	22.10	TORRANCE	WASHINGTON AVE	1	V	V			V	Torrance High, Wilson Park
40	22.24	TORRANCE	ARLINGTON AVE	×	1	V			٨	Wilson Park, Torrance High, Torrance Park, Torrance Elementary
41	22.49	TORRANCE	CABRILLO AVE	V	V	V			V	Torrance Park, Torrance High, Torrance Elementary, National Guard Armory
42	22.57	TORRANCE	BORDER AVE	V	V	$\checkmark$				Torrance Park, National Guard Armory
43	22.78	TORRANCE	SEPULVEDA BLVD	V	V	V	V			
44	23.03	TORRANCE	WESTERN AVE	V	V	V	V			
45	24.79	CARSON	S FIGUEROA ST	V		V		N		
46	24.92	CARSON	N.A.	V		Ń				
47	25.94	CARSON	AVALON BLVD	V		N				
48	26.04	LOS ANGELES	BROAD AVE	V		V				
49	26.11	LOS ANGELES	LAKME AVE	V		V				
50	26.36	CARSON	WILMINGTON AVE	$\checkmark$	V		V	N		

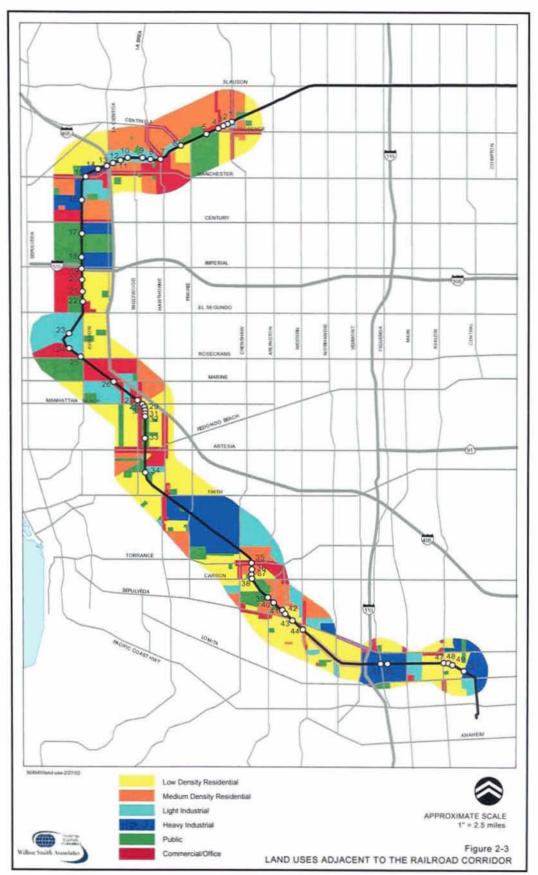
Table 2-5 Types of Land Uses Near Highway-Railroad At-Grade Crossings

Source: Local Jurisdictions, Wilbur Smith Associates

Once the rail line turns south, it follows a somewhat parallel course to the I-405 freeway. At the north end of the study area, from Crenshaw Blvd west to Manchester Blvd, the predominant land use is low and medium density residential. Commercial uses line several of the major streets, and the Inglewood commercial district is south of the rail line centered at Manchester and Hawthorne Boulevards. There is a small amount of industrial use close to the railroad.

Industrial and commercial uses predominate in the vicinity of the Los Angeles airport (LAX), with some residential use east of the rail line and Aviation Boulevard. South of the airport, from Imperial Highway to El Segundo Boulevard, the rail line passes through mixed-use commercial areas and then veers through industrial sections of the City of El Segundo, down to Rosecrans Avenue. The west side of Aviation Boulevard through this section of the corridor is predominately residential.

From Rosecrans Avenue to 190<sup>th</sup> Street, the adjacent land exhibits a mixture of residential, commercial, and industrial use, again with a significant amount of commercial use along the major streets.



SOUTH BAY CITIES RAILROAD STUDY

From 190<sup>th</sup> Street to Crenshaw Boulevard, land use is predominantly heavy industrial, including the Exxon-Mobil oil refinery. From Crenshaw Boulevard to Carson Street land use consists of mostly low density residential.

From Carson Street south to beyond Sepulveda Boulevard, land use again exhibits a mixed pattern of residential, industrial, and commercial use. The rail line passes by several schools including Torrance High school just south of Carson Street. Fire Station No. 1 (Main) on Carson Street is one-quarter mile west of the line. Carson Street and Sepulveda Boulevard are major Fire Department access routes.

After crossing Western Avenue the line continues south through mixed residential, commercial and industrial areas. The line passes nearby high schools and grade schools just north of Lomita. The Bay Harbor Hospital is located on nearby Lomita Boulevard.

At the southernmost portion of the line, industrial use predominates near Figueroa Street, with another area of residential uses centered near Avalon Boulevard. There is also a moderate presence of commercial use on Vermont Avenue and Figueroa Street.

### 2.2.2 Population

This section summarizes the current population demographics of the South Bay cities region and compares them to those of 1990. The statistics for 1990 and 2000 population levels come from U.S. Census counts<sup>1</sup>.

As shown in Table 2-6, the South Bay Cities were home to approximately 730,000 people in the year 2000, an increase from about 685,100 in 1990, which represents growth of approximately 6.5 percent, or about 0.6 percent per year. Growth rates for individual cities from 1990 to 2000 ranged from 1.5 percent to 17.9 percent. In 2000, Torrance was the most populated South Bay city with about 138,000 people. Inglewood (112,600), Carson (89,700), and Hawthorne (84,100) were the next three most populated cities. Rolling Hills (2,050) and Rolling Hills Estates (7,680) were the least populated.

<sup>&</sup>lt;sup>1</sup> U.S. Census population data for 1990 and 2000 does not include unincorporated County population.

1990-2000			
City	1990	2000	Annual Growth Rate
Carson	84,000	89,700	0.7%
El Segundo	15,200	16,000	0.5%
Gardena	49,800	57,700	1.5%
Hawthorne	71,300	84,100	1.7%
Hermosa Beach	18,200	18,600	0.2%
Inglewood	109,600	112,600	0.3%
Lawndale	27,300	31,700	1.5%
Lomita	19,400	20,000	0.3%
Manhattan Beach	32,100	33,900	0.5%
Palos Verdes Estates	13,500	13,300	-0.1%
Rancho Palos Verdes	41,700	41,100	-0.1%
Redondo Beach	60,200	63,300	0.5%
Rolling Hills	1,870	2,050	0.9%
Rolling Hills Estates	7,790	7,680	-0.1%
Torrance	133,100	137,900	0.4%
TOTAL	685,060	729,630	0.6%

Table 2-6 South Bay Cities Population Growth

Source: U.S. Census Bureau

It should be noted that some cities, such as Hermosa Beach and Gardena, are not immediately adjacent to the Harbor Subdivision line. They have been included because they are considered as regional generators that contribute to vehicular traffic across the railroad corridor.

# 2.2.3 Employment

Statistics for employment growth in the 1990-2000 period were taken from SCAG's 2001 Regional Transportation Plan. At the time of this report, there were not actual Year 2000 employment statistics available from SCAG.

As shown in Table 2-7 on the next page, according to employment estimates obtained from SCAG, there were approximately 436,400 jobs in the South Bay Cities in the year 2000. Torrance was home to about 109,300 jobs, nearly double the total from any other South Bay City. The cities of Carson and El Segundo were the next largest employment centers, each providing well over 50,000 jobs and exhibiting some of the highest employment growth rates in the South Bay cities between 1997 and 2000.

	1997-2000		
City	1997	2000	Annual Growth Rate
Carson	55,200	57,300	1.3%
El Segundo	52,700	55,900	2.0%
Gardena	35,000	34,700	-0.3%
Hawthorne	34,000	33,900	-0.2%
Hermosa Beach	8,700	8,790	0.3%
Inglewood	50,000	50,400	0.2%
Lawndale	7,330	7,410	0.3%
Lomita	7,800	7,890	0.4%
Manhattan Beach	13,800	13,900	0.3%
Palos Verdes Estates	1,300	1,300	0.3%
Rancho Palos Verdes	4,300	4,300	0.3%
Redondo Beach	24,300	24,500	0.3%
Rolling Hills	270	270	0.5%
Rolling Hills Estates	4,620	4,670	0.3%
Torrance	105,500	109,300	1.2%
Unincorporated County	21,100	21,900	1.4%
TOTAL	425,920	436,430	0.8%

Table 2-7
South Bay Cities Employment Growth
1007 2000

Source: Southern California Association of Governments

## 2.3 RAILROAD OPERATIONS

The former Atchison, Topeka and Santa Fe Railway (now BNSF) sold the Harbor Subdivision to the Los Angeles Country Metropolitan Transportation Authority in 1992, but retained the rights to run freight trains and service the line's shippers. The railroad's intention, of course, was to transfer its port-related through traffic to the Alameda Corridor when construction of the \$2 billion project was completed. This transfer is anticipated to happen in April 2002.

In the recent past, traffic on the line has been increasing. BNSF quantifies train activity in terms of millions of gross ton-miles per mile (MGTM/M) over specific segments of track. As can be seen in the Table 2-8, traffic on the line has increased in both directions over the 1993-1997 period. The increases in traffic have been driven by increases in international containerized traffic to and from the San Pedro Bay ports. Carload business at the ports has also been increasing<sup>2</sup>, and some of this traffic is traveling the Harbor Subdivision as well.

364940

<sup>&</sup>lt;sup>2</sup> Per conversation with Andrew Fox, president, Pacific Harbor Line, the switching and terminal railroad serving the Ports of Los Angeles and Long Beach.

Table 2-8
Harbor Subdivision Line - BNSF Traffic in Millions of Gross Ton-miles
per Mile from Redondo Junction to Watson Yard
1993 vs. 1997

Segment	1993	1997
Redondo Junction to El Segundo - eastbound	4.0	6.3
Redondo Junction to El Segundo - westbound	3.7	5.9
El Segundo to Watson - eastbound	4.6	7.1
El Segundo to Watson - westbound	4.5	6.6
Company DNICE Dotter of		

Source: BNSF Railroad

Reflective of current conditions, a volume of 13.7 MGTM/M (a combined total of both eastbound and westbound traffic for 1997) on the line is a moderate level of activity, equating to about 20 trains a day on average, which is summarized in Figure 2-4.

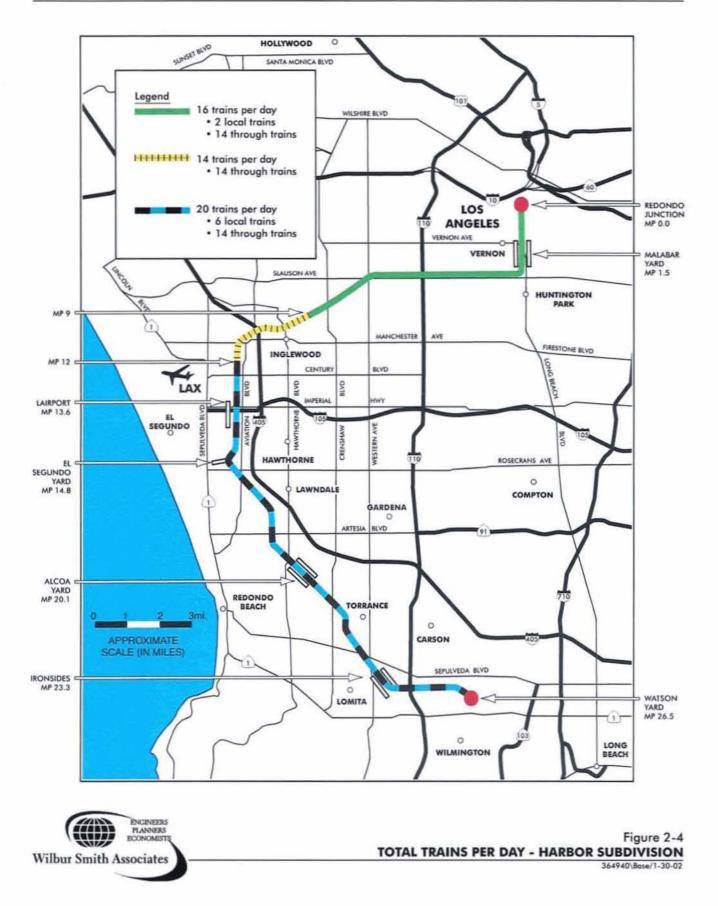
#### 2.3.1 Shippers

Port-Related Shippers: Of the 20 trains a day on the Harbor Subdivision, the majority consists of double-stack trains, manifest trains and slab trains going to or from the Ports of Los Angeles and Long Beach. Double-stack trains carry sea containers set one on top of another in articulated five-unit cars. Manifest trains are trains with conventional carload traffic: tank cars, boxcars, flat cars, hopper cars, gondolas, etc. Slab trains carry steel slabs that are bound for a steel rolling mill in Fontana in the San Bernardino Valley.

Major Local Shippers: Major local shippers are defined as being located along the line and having a rail traffic volume consisting of multiple carloads daily. Four companies fit this description. These are cited in the Table 2-9 below.

Shipper	Commodity	Location and Milepost
Chevron Corp.	Chemicals	El Segundo, milepost 14.8
Exxon-Mobil	Chemicals	Alcoa (Torrance), milepost 20.1
Dow/Union Carbide	Chemicals	Alcoa (Torrance), milepost 20.1
Armin Plastics	Chemicals	Alcoa (Torrance), milepost 20.1

There are other shippers along the route that have smaller volumes and less frequent shipments. In addition, there are various businesses that have access to the line and sidings, but do not currently utilize rail services. BNSF is not aggressively pursuing this business now, but these shippers could begin shipping again at any time. Were they to do so, however, additional traffic likely would be minor. Once a year, a circus train parks a mile north of El Segundo at Lairport, milepost 13.6. There are no active shippers between mileposts 9 and 12.



# 2.3.2 Trains and Hours of Operation

Double-stack trains dominate both port-related traffic and total traffic on the line. These trains are concentrated around the time of arrival of container ships from Asia. These mostly arrive at the end of each week. As a result, traffic on the line is heaviest Friday through Monday. There are three locals operating on the line regularly south of LAX. The first local goes north from Watson Yard at 7 a.m., and switches cars at Chevron in El Segundo. It then travels south to Exxon-Mobil at Alcoa where it switches cars during the afternoon, before returning to Watson Yard. The second local departs north from Watson at 9 a.m. to Alcoa. The third departs north from Watson Yard at 3 p.m. to Alcoa. All trains operate 12-hour shifts.

As there are no active shippers between milepost 9 and 12, the area between Inglewood and the east side of LAX, there is no local service. Only port-related through trains operate here. Local trains east of milepost 9 to Malabar Yard in Vernon (outside of the study area) are infrequent, due to the lack of local traffic. For this study, one round trip (two local trains) per day is assumed operating from BNSF's Hobart Yard near downtown Los Angeles to Malabar Yard and milepost 9. BNSF defined the volume of trains between specific mileposts. For example, the railroad specified that there was no local traffic picked up or delivered between milepost 9 and 12. The consultant team, however, observed no potential for local traffic between milepost 8.1 and milepost 14.8, except for the annual circus train.

# 2.3.3 Train Length and Speed

The two factors that dictate how long streets are blocked by train traffic are train length and speed. The majority of the port-related traffic consists of double-stack trains. These are regularly as long as 7,500 feet, and sometimes longer. Local train length naturally varies according to shipper demand. That being said, there are currently about 9,000 local carloads a year generated on the line between Watson and El Segundo. The study assumes a conservative high-side average of 700-foot-long local trains. All trains have a maximum speed restriction of 20 mph. Field observations indicate that the actual speeds are typically half to one third of the maximum allowed.

# 2.3.4 Line Maintenance

BNSF currently maintains the line to a level commensurate with the train volume including both local carload traffic and port-related traffic. According to FRA records, the tracks are maintained to at least Class 2 standards, which permit a maximum speed for freight trains of 25 mph (see Section 2.1.5).

The largest maintenance expense on the line is at the at-grade crossings. This expense is a function of the type and configuration of the warning devices and the amount of vehicular traffic, not train traffic. The maintenance of traffic control and protection devices and roadway surface at the crossings, within the railroad right of way, is the responsibility of BNSF.

# 2.3.5 Yards, Sidings, Leased Tracks, Storage, and Switching Activity

- <u>Yards</u> are where cars are shifted from one train to another for furtherance to destinations out of the area or for distribution to local shippers. There are two yards in the study area. These are Alcoa Yard (M.P. 20.1) and Watson Yard (M.P. 26.5).
- <u>Sidings</u> parallel the main line. These allow trains to pass each other. They are also sometimes used for temporary storage. Sidings are located at Lairport and at Ironsides. There is one siding (about 5,000 feet) at Lairport (M.P.13.6), to the west of the main line. There are two sidings (3,400 and 4,200 feet) at Ironsides (M.P. 23.3), one on either side of the main line. Yard tracks at Alcoa also serve as sidings.
- <u>Leased tracks</u> are where cars can be staged for daily pickups and deliveries, or stored for days and sometimes for months. The tracks are leased to shippers for their use. These exist at El Segundo (M.P. 14.8), which are leased to Chevron. There also are tracks at Alcoa leased to Dow/Union Carbide and Exxon-Mobil.
- <u>Storage</u> refers to the temporary idling of cars on sidings or storage tracks. Cars are stored for periods as short as a few days and as long as several months. On the Harbor Subdivision, storage occurs on leased tracks at El Segundo and Alcoa, and at Ironsides sidings.
- <u>Switching activity</u> is concentrated at El Segundo and Alcoa, where there are daily pickups and deliveries of cars. Traffic impacts at El Segundo would primarily be to a private crossing at Chapman Way and Douglas Street, as trains pick-up and deliver cars at the Chevron facility. There are no impacts at Alcoa, given that there are no nearby crossings. Switching activity at Ironsides can delay traffic at various nearby crossings in southeastern Torrance, including Sepulveda Boulevard and Western Avenue. BNSF reported that it adheres to a 10-minute rule (CPUC General Order No. 135 appears in Appendix E), whereby its trains will not block a crossing for more than 10 minutes.



Siding 2- City of Torrance (M.P. 23.3)



Alcoa Yard - City of Torrance (M.P. 20.1)

Industry track includes "spurs" and "leads", i.e., track that shippers use to load, unload, and store rail cars. Active and unused industry track exists in various places such as west of 67<sup>th</sup> Street in Inglewood, between 118<sup>th</sup> and 120<sup>th</sup> Streets south of Imperial Highway, north of the Inglewood Avenue crossing in Redondo Beach, and south of Carson Street in Torrance.

### 2.4 VEHICULAR TRAFFIC OPERATIONS

### 2.4.1 Vehicular Traffic Volumes

The Harbor Subdivision line intersects with major highway facilities along its 26.5-mile alignment between Redondo Junction and Watson Yard. Although all freeways and most of the major arterial roadways have been grade separated along the alignment, there are still major transportation facilities where highway-railroad at-grade crossings exist.

The nine roadways with estimated average daily traffic volumes over 30,000 vehicles per day include: Sepulveda Boulevard (52,800), Carson Street (35,000) and Western Avenue (30,400) in the City of Torrance, Inglewood Avenue (47,800) in Redondo Beach/Lawndale, Imperial Highway (37,000) in Los Angeles, and La Brea Avenue (32,000), La Cienega Boulevard (32,000), Manchester Avenue (32,000), and Centinela Avenue (31,000) in the City of Inglewood. A summary of daily traffic volumes at all study area crossings is shown in Table 2-10.

No.	Milepost	Cross-street Name	ADT (veh/day)	Data Source
1	8.03	CRENSHAW BLVD	23,500	FRA
2	8.14	VICTORIA AVE	750	FRA
3	8.23	BRYNHURST AVE	700	FRA
2 3 4 5 6 7	8.32	WEST BLVD	5,300	FRA
5	8.60	REDONDO BLVD	7,500	Inglewood
6	9.13	CENTINELA AVE	31,000	Inglewood
7	9.59	LA BREA AVE	32,000	Inglewood
8 9	9.82	IVY AVE	2,500	FRA
9	9.94	EUCALYPTUS AVE	12,500	Inglewood
10	10.21	NORTH CEDAR AVE	800	FRA
11	10.36	OAK ST	3,200	FRA
12	10.52	HYDE PARK BLVD	4,000	FRA
13	10.63	LA CIENEGA BLVD (I-405 EXIT)	32,000	Inglewood
14	10.82	HINDRY ST	4,500	FRA
15	11.11	MANCHESTER BLVD	32,000	Inglewood
16	11.63	ARBOR VITAE ST	18,000	Inglewood
17	12.36	104 <sup>TH</sup> ST	5,500	FRA
18	12.92	111 <sup>TH</sup> ST	6,300	City of L.A.
19	13.13	IMPERIAL HWY	37,000	FRA
20	13.37	118 <sup>TH</sup> ST	800	FRA
21	13.62	120 <sup>TH</sup> ST	1,800	FRA
940				
UTH BA	AY CITIES RAIL	COAD STUDY	1	WILBUR SMITH ASSOC

#### Table 2-10

FINAL REPORT

No.	Milepost	Cross-street Name	ADT (veh/day)		
22	13.89	124 <sup>TH</sup> ST	Private crossing		
23	14.69	DOUGLAS ST	9,200	El Segundo	
24	14.79	CHAPMAN WY	Private crossing		
25	15.08	DOUGLAS/ROSECRANS STATION	Pedestrian crossing		
26	16.10	MARINE AVE	24,800	Hawthorne	
27	16.74	INGLEWOOD AVE	47,800	L.A. County	
28	16.87	MANHATTAN BEACH BLVD	25,300	L.A. County	
29	16.94	159 <sup>тн</sup> ST	600	FRA	
30	17.01	160 <sup>TH</sup> ST	600	FRA	
31	17.08	161 <sup>ST</sup> ST	700	FRA	
32	17.14	162 <sup>ND</sup> ST	2,100	FRA	
33	17.62	170 <sup>TH</sup> ST	2,500	FRA	
34	18.38	182 <sup>ND</sup> ST	10,700	Torrance	
35	21.24	TORRANCE BLVD	27,800	Torrance	
36	21.36	EL DORADO ST	Pedestrian crossing		
37	21.48	SONOMA ST	1,200	Torrance	
38	21.60	CARSON ST	35,000	Torrance	
39	22.10	WASHINGTON AVE	3,800	Torrance	
40	22.24	ARLINGTON AVE	8,100	Torrance	
41	22.49	CABRILLO AVE	10,700	Torrance	
42	22.57	BORDER AVE	900	Torrance	
43	22.78	SEPULVEDA BLVD	52,800	Torrance	
44	23.03	WESTERN AVE	30,400	Torrance	
45	24.79	S. FIGUEROA ST	11,000	FRA	
46	24.92	N.A.	Private crossing		
47	25.94	AVALON BLVD	18,000	FRA	
48	26.04	BROAD AVE	1,100	FRA	
49	26.11	LAKME AVE	1,500	FRA	
50	26.36	WILMINGTON AVE	18,000	FRA	

Table 2-10

Average Daily Traffic (ADT) Volumes at Railroad Crossings in the Study Area

Source: FRA, Local Jurisdictions

### 2.4.2 Crossing Delays

This section evaluates the delays experienced by motor vehicles at the railroad crossings as a result of the presence of a train. The results are summarized in Table 2-11. Appendix F includes a detailed explanation of the methodology used to estimate those delays and the subsequent queuing at the railroad crossings<sup>3</sup>. The relatively high vehicular traffic volumes combined with the relatively slow train operations (usually 20 mph maximum, about 7 mph to 10 mph typically) in the study area combine to produce severe traffic congestion at several locations.

<sup>&</sup>lt;sup>3</sup> The analysis methodology used to evaluate vehicular traffic delays and queuing at the study area crossings has been taken from the National Cooperative Highway Research Program (NCHRP) Report 288, Evaluating Grade-Separated Rail and Highway Crossing Alternatives, published by the Transportation Research Board, National Research Council, Washington D.C., in 1987. See Appendix A, Section IV, pages 34 through 36. Additional methodology information was obtained from the Transportation Research Record (TRR) 1754, Paper No. 01-3051, Methodology for Evaluating Highway-Railway Grade Separations, Washington D.C., 2001, pp. 77-80. A summary of the methodology as it has been applied to this study can be found in Appendix F of this report.

No.	Milepost	Cross-street Name	Average delay (seconds per vehicle)	Estimated LOS at the Crossing	Average queue lengt (feet)
1	8.03	CRENSHAW BLVD	41.4	E	420
2	8.14	VICTORIA AVE	0.0	A	0
3	8.23	BRYNHURST AVE	0.0	A	0
4	8.32	WEST BLVD	40.8	E	180
5 6	8.60	REDONDO BLVD	24.0	С	75
6	9.13	CENTINELA AVE	27.9	D	260
7	9.59	LA BREA AVE	29.3	D	280
8	9.82	IVY AVE	28.8	D	60
9	9.94	EUCALYPTUS AVE	37.4	D	255
10	10.21	NORTH CEDAR AVE	0.0	A	0
11	10.36	OAK ST	22.5	C	60
12	10.52	HYDE PARK BLVD	27.0	D	90
13	10.63	LA CIENEGA BLVD (I-405 EXIT)	29.3	D	360
14	10.82	HINDRY ST	32.0	D	120
15	11.11	MANCHESTER BLVD	24.8	C	205
16	11.63	ARBOR VITAE ST	32.0	D	245
17	12.36	104 <sup>TH</sup> ST	39.3	D	175
18	12.92	111 <sup>TH</sup> ST	45.7	Ē	235
19	13.13	IMPERIAL HWY	30.2	D	290
20	13.37	118 <sup>TH</sup> ST	0.0	Ă	0
21	13.62	120 <sup>TH</sup> ST	20.0	ĉ	15
22	13.89	124 <sup>TH</sup> ST	NA	NA	NA
23	14.69	DOUGLAS ST	97.8	F	390
24	14.09	CHAPMAN WY	NA	NA	NA
25	15.08	DOUGLAS/ROSECRANS STATION	NA	NA	NA
26	16.10	MARINE AVE	46.5	E	490
27	16.74	INGLEWOOD AVE	53.5	E	880
28	16.87	MANHATTAN BEACH BLVD	35.6	D	310
29	16.94	159 <sup>TH</sup> ST	0.0	A	0
30	17.01	160 <sup>TH</sup> ST	0.0	A	0
31	17.01	161 <sup>ST</sup> ST	0.0	A	0
32	17.14	162 <sup>ND</sup> ST	17.1	ĉ	30
33		170 <sup>TH</sup> ST	28.8	D	60
34	17.62	170 ST 182 <sup>ND</sup> ST	67.3	F	590
	18.38		49.2	E	590
35	21.24	TORRANCE BLVD			
36	21.36	EL DORADO ST	NA 30.0	NA D	NA 30
37 38	21.48 21.60	SONOMA ST CARSON ST	43.2	E	515
39	22.10	WASHINGTON AVE	37.9	D	115
40	22.24	ARLINGTON AVE	53.3	E	350
41	22.49	CABRILLO AVE	67.3	F	590
42	22.57	BORDER AVE	0.0	A	0
43	22.78	SEPULVEDA BLVD	36.8	D	500
44	23.03	WESTERN AVE	53.3	E	695
45	24.79	S. FIGUEROA ST	29.5	D	140
46	24.92	N.A.	NA	NA	NA
47	25.94	AVALON BLVD	30.0	D	185
48	26.04	BROAD AVE	32.7	D	30
49	26.11	LAKME AVE	24.0	C	30
50	26.36	WILMINGTON AVE	38.0	D	290

Table 2-11 Estimated Delays and Oueuing at Railroad Crossings in the Study Area

Source: Wilbur Smith Associates; see footnote no. 3

#### 364940 SOUTH BAY CITIES RAILROAD STUDY

FINAL REPORT

The Douglas Street crossing experiences some of the greatest delays because the maximum train speed does not exceed 10 mph, the slowest in the corridor due to the nearby crossing of the BNSF track with the UP railroad. The slow train speed results in an average delay of over one minute per vehicle, more than any other crossing.

For crossings with high volumes of daily traffic, Level of Service (LOS) is an important indicator of delay caused by trains. LOS indicates how the traffic on the main street affects the area by causing delays for the crossing side streets. LOS is measured through grades of A through F, with A meaning there is little or no delay and F meaning there are extremely long delays where there are insufficient gaps in the major traffic stream to allow side street traffic to cross safely. Currently there are ten crossings where individual vehicles experience an average delay per vehicle of 40 seconds or longer (LOS E or F). The ten crossings where vehicles are delayed the longest, in seconds per vehicle are Douglas Street (97.8), 182<sup>nd</sup> Avenue (67.3), Cabrillo Avenue (67.3) Arlington Avenue (53.3), Western Avenue (53.3), Torrance Boulevard (49.2), Marine Avenue (46.5), 111<sup>th</sup> Street (45.7), Crenshaw Boulevard (41.4) and West Boulevard (40.8).

The longest queues in the corridor occur at the crossings for Inglewood Avenue (about 880 feet per lane), Western Avenue (700 feet), Cabrillo Avenue (590 feet) and Sepulveda Boulevard (500 feet). It should also be noted that the southbound queuing at La Cienega (I-405 off-ramp) extends in some instances onto the freeway.

### 2.4.3 Nearby Intersection Delays

As described in the previous section, closure of major arterial crossings due to trains can cause delays of up to five or six minutes on streets such as Inglewood Avenue, Manhattan Beach

Boulevard, Sepulveda Boulevard, and Western Avenue. Delays on these major arterials cause delays at nearby intersections as well when queue lengths grow. The LOS declines at the intersections feeding or adjacent to the major arterials where the queue lengths have grown due to crossing closures. In addition, the angle at which the railroad line traverses the mostly northsouth orthogonal grid roadway system further exacerbates traffic congestion in the area.



Through Freight Train at Arbor Vitae – City of Inglewood (M.P. 11.6)

For example, the railroad crossings at Inglewood Avenue (north-south) and at Manhattan Beach Boulevard (east-west), which are located about 500 feet apart, are activated simultaneously. As a result, all traffic in the area comes to a standstill when a train is present, for durations of up to five or six minutes. A similar condition occurs at the two railroad crossings of Sepulveda Boulevard (east-west) and Western Avenue (north-south) in the City of Torrance. In the case of the City of Torrance, freight trains virtually stop all east-west vehicular traffic traveling across all major arterial roadways such as Torrance Boulevard, Carson Street and Sepulveda Boulevard. The exceptions are 190<sup>th</sup> Street, Hawthorne Boulevard, and Crenshaw Boulevard, which are grade separated in Torrance.

### 2.5 SAFETY

This section discusses the different elements that provide safety and protection along the Harbor Subdivision.

### 2.5.1 Definitions

The FRA and the CPUC require that each calendar year railroads in California provide them with accident and incident reports under the requirements of 49 CFR Part 225 of the Code of Federal Regulations (FRA) and General Order 22-B (CPUC). The FRA has oversight for safety on rail lines, and the CPUC has oversight for safety at California at-grade crossings.

For FRA and CPUC reporting purposes, an accident or incident is defined as one of the following:

- An impact between railroad on-track equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, or pedestrian at a highway-rail grade crossing;
- Any collision, derailment, fire, explosion, act of God, or other event involving operation
  of railroad on-track equipment that results in more than the current monetary threshold
  for the reporting year (\$6,600 in 1999) in damages to railroad on-track equipment,
  signals, track, track structures and roadbed;
- Any event arising from the operation of a railroad which results in:
  - Death to any person
  - Injury to any person that requires medical treatment
  - Injury to a railroad employee that results in:
    - a) A day away from work,
    - b) Restricted work activity or job transfer, or
    - c) Loss of consciousness; or
  - Occupational illness

Accidents and incidents are typically grouped under two major categories, (i) railroad accidents that include collisions, derailments, fires, explosions, natural disasters and other events involving the operation of standing or moving on-track equipment, and (ii) accidents and incidents occurring at railroad-highway grade crossings.

### 2.5.2 Railroad Protection Devices

Railroad protection devices are those traffic control elements (signs, signals, markings or other elements) that regulate, guide or warn of the potential presence of a train at a railroad-highway grade crossing. These devices can be grouped under two categories, depending on their specific characteristics:

- <u>Passive</u> Those devices that indicate the presence of a crossing but which do not change aspect upon approach or presence of a train. They typically consist of signs and markings located at or in advance of the crossing.
- <u>Active</u> Those devices activated by the approach or presence of a train, such as flashing light signals, automatic gates and similar devices, as well as manually operated devices and crossing watchmen, all of which display to motorists positive warning of the approach or presence of a train.

Appendix G presents the standard railroad protection devices required by the CPUC for the protection of crossings at grade roads, highways and streets with railroads in California.

As indicated above, the 18.5-mile study area within the Harbor Subdivision line includes 50 atgrade crossings. Virtually all of the crossings are protected by means of train-activated mechanisms such as flashing lights and automatic gates. Only two crossings are protected exclusively by passive control devices (cross bucks and/or signs), i.e., a private crossing at Chapman Way (milepost 14.8) and a pedestrian crossing at El Dorado Street in the City of Torrance. Table 2-12 summarizes the types of warning control devices at each crossing. Figure 2-5 indicates the number of accidents between 1975 and 2000 and their locations.

### 2.5.3 At-grade Crossing Accidents/Incidents

According to FRA accident and incident data for the Harbor Subdivision line in the study area, there have been 39 reportable accidents at the 50 at-grade crossings from 1975 until July 2001, averaging approximately 1.5 accidents per year or 0.08 per route-mile per year. Table 2-13 summarizes the number of accidents for the study area for particular periods, while Figure 2-5 and Table 2-14 identify their location and type of warning device.

The analysis of Tables 2-13 and 2-14 does not identify a particular trend or issue regarding railroad safety in the corridor. The calculated accident rate of about 0.03 accidents per public atgrade crossing per year is relatively low and similar to the State's average (approximately 0.02). It should also be noted that the two highest accident locations, Imperial Highway and La Brea Avenue, also are among those with the highest volumes of vehicular traffic. The combination of existing vehicular traffic volumes, rail traffic and low accident rates defines these crossings as low hazard locations and, as a result, are ranked low in the State's grade separation program priority list.

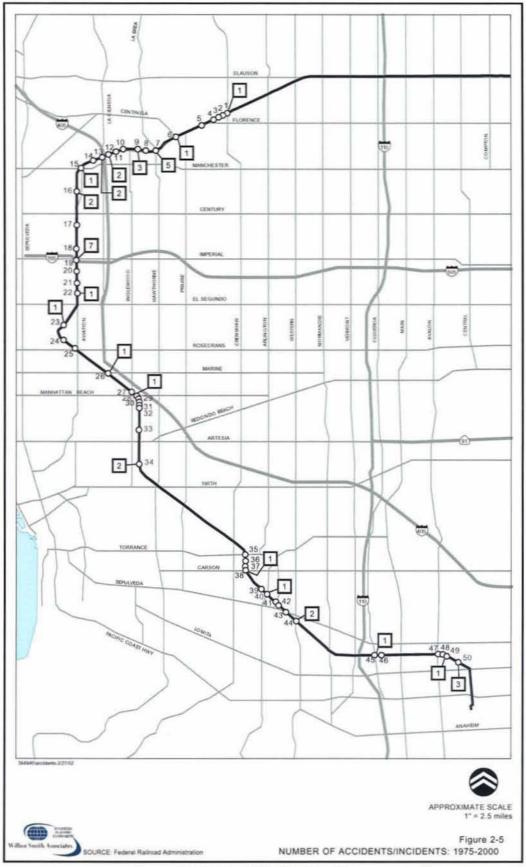
No.	Milepost	Cross-street Name	Warning Device	Data Source
1	8.03	CRENSHAW BLVD	4(9)	CPUC
2	8.14	VICTORIA AVE	1(8) 2(9)	CPUC
3	8.23	BRYNHURST AVE	2(9)	CPUC
3 4	8.32	WEST BLVD	3(9)	CPUC
	8.60	REDONDO BLVD	2(9)	CPUC
5	9.13	CENTINELA AVE	4(9)	CPUC
7	9.59	LA BREA AVE	4(9)	CPUC
8	9.82	IVY AVE	2(9)	CPUC
9	9.94	EUCALYPTUS AVE	2(9)	CPUC
10	10.21	NORTH CEDAR AVE	2(9)	CPUC
11	10.36	OAK ST	2(9A)	CPUC
12	10.52	HYDE PARK BLVD	2(9)	CPUC
13	10.63	LA CIENEGA BLVD (I-405 EXIT)	4(9)	CPUC
14	10.82	HINDRY AVE	2(9)	CPUC
15	11.11	MANCHESTER BLVD	4(9)	CPUC
16	11.63	ARBOR VITAE ST	2(9)	CPUC
17	12.36	104 <sup>TH</sup> ST	2(9)	CPUC
18	12.92	111 <sup>TH</sup> ST	2(9)	CPUC
19	13.13	IMPERIAL HWY	1(9) 3(9A)	CPUC
20	13.37	118 <sup>TH</sup> ST	2(9)	CPUC
21	13.62	120 <sup>TH</sup> ST	2(9)	CPUC
22	13.89	124 <sup>TH</sup> ST	2(9)	CPUC
23	14.69	DOUGLAS ST	2(8) 2(9)	CPUC
24	14.79	CHAPMAN WAY	2(0) 2()) 2(1-R)	BNSF/WSA
25	15.08	DOUGLAS/ROSECRANS STATION	2(1-K) 2(8)	BNSF/WSA
26	16.10	MARINE AVE	2(9) 2(9A)	CPUC
27	16.74	INGLEWOOD AVE	2(9A)	CPUC
28	16.87	MANHATTAN BEACH BLVD	4(9)	CPUC
28	16.94	159 <sup>TH</sup> ST	2(9)	CPUC
30	17.01	160 <sup>TH</sup> ST		CPUC
31	17.01	161 <sup>ST</sup> ST	2(9)	CPUC
		161 ST 162 <sup>ND</sup> ST	2(9)	
32 33	17.14	170 <sup>TH</sup> ST	2(9)	CPUC
	17.62	170 ST 182 <sup>ND</sup> ST	2(9)	CPUC
34	18.38		2(9)	CPUC
35	21.24	TORRANCE BLVD	1(8) 1(9) 2(9A)	CPUC
36	21.36	EL DORADO ST	2(1-D)	WSA
37	21.48	SONOMA ST	2(9)	CPUC
38	21.60	CARSON ST	2(8) 2(9)	CPUC
39	22.10	WASHINGTON AVE	2(9)	CPUC
40	22.24	ARLINGTON AVE	2(8) 2(9)	CPUC
41	22.49	CABRILLO AVE	2(9)	CPUC
42	22.57	BORDER AVE	2(9)	CPUC
43	22.78	SEPULVEDA BLVD	1(8) 4(9)	CPUC
44	23.03	WESTERN AVE	4(9)	CPUC
45	24.79	S FIGUEROA ST	4(9)	CPUC
46	24.92	N.A.	2(8)	WSA
47	25.94	AVALON BLVD	4(9)	CPUC
48	26.04	BROAD AVE	2(9)	CPUC
49	26.11	LAKME AVE	2(9)	CPUC
50	26.36	WILMINGTON AVE	2(9)	CPUC

Table 2-12 Types of Warning Devices at At-grade Railroad Crossings in the Study Area

Notes: (1-D) – Pedestrian and bicycle railroad grade crossing sign mounted on a post (1-R) – Cross buck sign mounted on a post

(8) - Highway crossing signal assembly, flashing light type

(6) – Highway crossing signal assembly, hashing right type
 (9) – Highway crossing signal assembly, automatic gate type
 (9A) – Highway crossing signal assembly, automatic gate type with cantilever arm
 Source: California PUC, BNSF railroad, Wilbur Smith Associates



SOUTH BAY CITIES RAILROAD STUDY

Period	No. of Accidents		
1975-1979	9		
1980-1984	5		
1985-1989	7		
1990-1994	7		
1995-1999	6		
2000-2001*	5		
Total	39		
ote: * until July 2001			
Source: FRA			

Table 2-13 Annual Number of Accidents at At-grade Railroad Crossings on the Harbor Subdivision Line

Table 2-14 Number of Accidents at At-grade Railroad Crossings in the Study Area 1975-2001\*

No.	Milepost	Cross-street Name	Warning Device	No. of Accidents
1	8.03	CRENSHAW BLVD	4(9)	1
6	9.13	CENTINELA AVE	4(9)	1
7	9.59	LA BREA AVE	4(9)	5
9	9.94	EUCALYPTUS AVE	2(9)	3
12	10.52	HYDE PARK BLVD	2(9)	2
13	10.63	LA CIENEGA BLVD (I-405 EXIT)	4(9)	2
15	11.11	MANCHESTER BLVD	4(9)	1
16	11.63	ARBOR VITAE ST	2(9)	2
19	13.13	IMPERIAL HWY	1(9) 3(9A)	7
22	13.89	124 <sup>TH</sup> ST	2(9)	1
23	14.69	DOUGLAS ST	2(8) 2(9)	1
26	16.10	MARINE AVE	2(9) 2(9A)	1
28	16.87	MANHATTAN BEACH BLVD	4(9)	1
34	18.38	182 <sup>ND</sup> ST	2(9)	2
38	21.6	CARSON ST	2(8) 2(9)	1
40	22.24	ARLINGTON AVE	2(8) 2(9)	1
44	23.03	WESTERN AVE	4(9)	2
45	24.79	S FIGUEROA ST	4(9)	1
49	26.11	LAKME AVE	2(9)	1
50	26.36	WILMINGTON AVE	2(9)	3

Notes:

\* until July 2001

(8) - Highway crossing signal assembly, flashing light type

(9) - Highway crossing signal assembly, automatic gate type

(9A) - Highway crossing signal assembly, automatic gate type with cantilever arm

Source: FRA, California PUC

### 2.5.4 Railroad Accidents/Incidents

This section summarizes the accident/incident data reported annually by railroads to the CPUC and the FRA for the Harbor Subdivision line since 1975. As indicated in Section 2.5.1, the train accidents summarized in this section are subject to threshold reporting requirements set by the FRA. The reports themselves are not always comprehensive due to inconsistencies in the quality of information provided by the reporting party. For example, exact locations of accidents may not be known because the milepost number may not have been included in the report. Appendix H contains the 39 FRA highway-rail accidents/incident reports for the study area for the last 26 years. All entries in Appendix H are on the Harbor Subdivision line but not necessarily in the study area. Any accidents that did not occur in the study area were included only because they could not be eliminated with confidence, and because the study's preference was to err on the side of caution.

According to the FRA files, there have been 44 reported train-only accidents on the Harbor Subdivision line from 1975 until July 2001, averaging approximately two accidents a year. Twenty-one accidents were caused by either human error or train handling. Eleven accidents were due to worn out or defective equipment. Seven accidents were reported due to switching problems. Three accidents were due to faulty track alignments. Two accidents were due to damage to the rail or switch. These railroad incidents are summarized in Appendix H Table 1.

Both accidents involving vandalism occurred in the last three years. One accident occurred at or near the El Segundo Station in May 1998. Vandalism was reported to have caused damage to the switch and resulted in the derailment of three cars. The second reported accident occurred at or near the Los Angeles Station in August 1999. The track was determined to have been damaged by vandalism and resulted in the derailment of five cars.

There were only two reported non-crossing related injuries reported in the Project corridor to the FRA 1975 – July 2001, both suffered by railroad employees.

### 2.5.5 Nearby Accidents

Although some of the cities in the area provided traffic collision information in the vicinity of the railroad crossings, it was not possible to determine from the data the impacts that the presence of a train at the crossing may have had in the accident, if any. The aim of the analysis would have been to identify railroad accidents that:

- Occur adjacent to the Harbor Subdivision crossings; and
- May be associated with queues at railway crossings caused by passing trains; or
- May be caused by motorists seeking to avoid the queues.

Research showed that accidents away from the crossing are not reported in terms of relation to train crossings. Thus, the close proximity of crossings to the accident intersections makes it difficult to determine accidents caused by normal street traffic disruption or due to train operations.

# 3.1 FUTURE CORRIDOR DEMOGRAPHICS

As of April 2002, most of the train traffic on the Harbor Subdivision will emigrate to the Alameda Corridor. This traffic is port-related traffic – mostly containerized traffic traveling in trains often longer than a mile. Only modest traffic, originating and terminating on the line, will remain. Also, the trains themselves will be comparatively short – typically several hundred feet in length. These changes have implications for land use, as well as rail operations and vehicular delays at crossings through the study area, as well as for alternative uses of the right of way.

This section captures demographics through the study area. It discusses what the implications on land uses in the study area will likely be due to the reduction in rail traffic. It also discusses how the area's population and employment growth will bear on future crossing delays.

### 3.1.1 Land Use

Land uses along the subdivision have developed with frequent rail traffic already occurring. While land use will change over time, the extent of the changes will be minor. There may be modest increases in residential densities. Also, shifts in occupancy of commercial structures among office, retail, and service commercial uses are to be expected. A review of land use plans for the communities along the rail line suggests that no major changes from existing patterns should be expected.

The primary impact of the reduction in rail traffic will be to modestly increase the desirability of locating in areas near the rail line. Over time, communities along the line might anticipate sustained or increased residential values, and some increase in commercial attractiveness. These impacts probably are not measurable, and causative factors unrelated to the amount of rail traffic will continue to be more important. Also, a relatively unattractive railroad right of way can be a negative influence on perceptions of both residential and commercial attractiveness, regardless of the volume of train service. This impact might be countered by a program of tree or shrub planting along the right of way in those areas where width and railroad operating conditions are favorable.

# 3.1.2 Population

SCAG projections of the South Bay cities' total population shown in Table 3-1 indicate growth from 2000 to 2005 of about 0.8 percent per year. The greatest individual city growth rate between 2000 and 2005 is 1.4 percent per year for Carson, adding nearly 7,000 residents. Inglewood will add about 5,500 residents during the same time period. Manhattan Beach and Torrance exhibit the lowest growth rates of the study area at 0.3 percent between 2000 and 2005. Between 2005 and 2010, population growth rates are projected to slow in every city with Lawndale and Palos Verdes Estates exhibiting the highest growth rates projected at 0.3 percent. After 2005, the regional growth will slow to a rate of 0.1 percent per year up to 2015. More detailed population information is shown in Appendix I.

		2005-20	015			
City	2005	Annual Growth	2010	Annual Growth	2015	Annual Growth
Carson	100,900	1.4%	101,700	0.1%	102,400	0.1%
El Segundo	17,400	0.8%	17,600	0.2%	17,700	0.1%
Gardena	63,600	1.2%	64,300	0.2%	64,900	0.2%
Hawthorne	81,900	0.6%	82,000	0.0%	82,000	0.0%
Hermosa Beach	19,600	0.4%	19,600	0.0%	19,600	0.0%
Inglewood	126,600	0.9%	127,300	0.1%	127,900	0.1%
Lawndale	33,400	1.3%	33,900	0.3%	34,300	0.3%
Lomita	22,500	1.3%	22,700	0.2%	22,900	0.2%
Manhattan Beach	35,400	0.3%	35,400	0.0%	35,500	0.0%
Palos Verdes Estates	15,000	0.7%	15,300	0.3%	15,600	0.3%
Rancho Palos Verdes	46,200	0.8%	46,500	0.1%	46,800	0.1%
Redondo Beach	68,700	0.7%	68,800	0.0%	68,900	0.0%
Rolling Hills	2,100	0.8%	2,100	0.1%	2,100	0.1%
Rolling Hills Estates	8,900	0.8%	8,900	0.1%	9,000	0.1%
Torrance	145,600	0.3%	145,600	0.0%	145,700	0.0%
Unincorporated County	118,600	0.6%	118,600	0.0%	118,600	0.0%
Total South Bay Cities	906,400	0.8%	910,300	0.1%	913,900	0.1%
0.0010 2001 070						

Table 3-1 South Bay Cities Population Growth Forecasts 2005-2015

Source: SCAG 2001 RTP

### 3.1.3 Employment

SCAG projections of the South Bay cities' total employment shown in Table 3-2 indicate growth at 0.8 percent annually from 2000 to 2005. El Segundo is projected to add almost 6,000 jobs between 2000 and 2005, the highest of all growth rates at 2 percent. A decline in jobs of - 0.3 and -0.2 percent each year between 2000 and 2005 was projected for the cities of Gardena and Hawthorne respectively. By 2010, Gardena and Hawthorne employment will grow again but at only 0.2 percent or less a year.

Total employment in the South Bay cities is expected to grow at a rate of 0.9 percent a year between 2005 and 2010. From 2010 to 2015 the yearly employment growth rate slows slightly to 0.5 percent per year. Generating 12,900 new jobs, El Segundo exhibits the highest rate of employment growth of all the cities in the study area. Employment there will rise from 55,900 in 2000 to 68,800 in 2015.

		2005-20	015			
City	2005	Annual Growth	2010	Annual Growth	2015	Annual Growth
Carson	61,100	1.3%	64,300	1.0%	66,200	0.6%
El Segundo	61,800	2.0%	66,200	1.4%	68,800	0.8%
Gardena	34,200	-0.3%	34,600	0.2%	34,800	0.1%
Hawthorne	33,600	-0.2%	34,000	0.2%	34,200	0.1%
Hermosa Beach	8,900	0.3%	9,200	0.5%	9,300	0.3%
Inglewood	51,000	0.2%	52,400	0.6%	53,300	0.3%
Lawndale	7,500	0.3%	7,800	0.6%	7,900	0.4%
Lomita	8,000	0.4%	8,200	0.5%	8,400	0.3%
Manhattan Beach	14,100	0.3%	14,500	0.6%	14,700	0.3%
Palos Verdes Estates	1,300	0.3%	1,300	0.5%	1,400	0.4%
Rancho Palos Verdes	4,400	0.3%	4,500	0.6%	4,600	0.3%
Redondo Beach	24,900	0.3%	25,600	0.5%	26,000	0.3%
Rolling Hills	300	0.5%	300	0.4%	300	0.3%
Rolling Hills Estates	4,700	0.3%	4,900	0.5%	4,900	0.3%
Torrance	115,900	1.2%	122,800	1.2%	126,900	0.7%
Unincorporated County	23,500	1.4%	25,100	1.4%	26,100	0.8%
Total South Bay Cities	455,200	0.8%	475,700	0.9%	487,800	0.5%
0						

Table 3-2 South Bay Cities Employment Growth Forecasts 2005-2015

Source: SCAG 2001 RTP

# 3.2 FUTURE FREIGHT RAIL OPERATIONS

The opening of the Alameda Corridor in 2002 will have a major impact on rail traffic currently moving on the BNSF's Harbor Subdivision. Specifically, BNSF through traffic moving between the Ports of Los Angeles and Long Beach and the railroad's downtown Los Angeles railhead will shift to the Alameda Corridor, which runs east of the BNSF on a route parallel to and about midway between the Harbor Freeway and the Long Beach Freeway. These trains include the double-stack, manifest and slab trains discussed in the previous chapter. What will remain on the Harbor Subdivision will be local traffic. This activity will be concentrated in El Segundo and Alcoa Yard.

Rail operations for the foreseeable future are described below and are also summarized in Figure 3-1. The narrative that follows below describes future subdivision operations as railroad officials envision them.

### 3.2.1 Shippers

The major local shippers identified in Chapter 2 will be the same. These are located between El Segundo and Watson Yard, and will be served by locals originating in Watson Yard. While any inactive shippers may become active again, it is difficult to predict the future volumes, except to say that such volumes would be minor. Railroad officials reported that they are not aware of any

new shippers forecasted to use the line. Circus train operations at Lairport (Milepost 13.6) will remain as they are today.

Shippers on the subdivision between Redondo Junction (Milepost 0.0) and milepost 9 in Inglewood will be served by locals originating downtown in Hobart Yard. Most of the traffic on this portion of the Harbor Subdivision will be outside the study area, going between Malabar Yard and Hobart Yard. Once the Alameda Corridor opens, rail traffic between milepost 9 and Malabar Yard will be light and infrequent.

There are not likely to be any active shippers between mileposts 9 and 12. As a result, BNSF anticipates no regular service in this segment.

### 3.2.2 Trains and Hours of Operations

- <u>Through trains</u> will cease following the opening of the Alameda Corridor in 2002, consistent with the prevailing agreements cited in Chapter 1. During the course of this study, BNSF indicated that there are no planned through movements on the Harbor Subdivision, including the shuttling of locomotives between Redondo Junction (Milepost 0.0) near downtown and Watson Yard (Milepost 26.5). The line will not be available even as a detour route, assuming a blocked Alameda Corridor, after June 2003.
- <u>Local train operations</u> should continue unchanged between El Segundo (Milepost 14.8) and Watson Yard after Alameda Corridor opens. As stated, BNSF has no plans to operate trains between milepost 12 north of El Segundo and milepost 9 in Inglewood. As a practical matter, there should be no regular volume north of El Segundo (Milepost 14.8), other than the annual circus train stored at Lairport. Nor should there be any volume to speak of west of Malabar Yard (Milepost 1.5). Nevertheless, BNSF indicated that occasionally it could operate between milepost 12 and Malabar Yard<sup>1</sup>. Future local train volumes appear in Figure 3-1. It should be expected that weekend volume might be somewhat less than that on weekdays.

### 3.2.3 Train Length and Speed

Local train length should grow slowly over time due to increasing traffic. BNSF network planners estimate that carload traffic (as compared to intermodal container traffic) will grow at 1 to 2 percent per year, which is the historical average. The current 20-mph speed restriction will not change.

### 3.2.4 Line Maintenance

Once the port-related traffic shifts to the Alameda Corridor, the line will require less ongoing maintenance to retain its present condition. BNSF indicated that it does not foresee any major change in its maintenance practices following the shift in through traffic. Accordingly, the study assumes the line will be maintained to its current Class 2 standards. With the decrease in

364940

<sup>&</sup>lt;sup>1</sup> According to Inglewood city officials, the BNSF had at one time indicated that it would abandon the use of the Harbor Subdivision through Inglewood. However, repeated comments from the railroad made with reference to this study indicated that BNSF intends to operate and maintain the line through Inglewood, even if only for occasional trains.

volume, the line will require inspections once a week versus twice a week now. This is a level appropriate for the volume and type of traffic remaining on the line.

As a result of daily local trains going between El Segundo and Watson Yard, the annual circus train to Lairport, occasional other trains between Malabar Yard and milepost 12, and regular local service from downtown to Malabar Yard, the entire length of the subdivision will have to be maintained. BNSF expressed this conclusion.

### 3.2.5 Yards, Sidings, Lease Track, Storage and Switching Activity

None of these facilities and activities will change as a result of the shift in through traffic to the Alameda Corridor. The facilities will remain necessary to serve local customers after the corridor's opening. Switching activity pertains to local shippers, and therefore will not change with the shift of port-related traffic from the line.

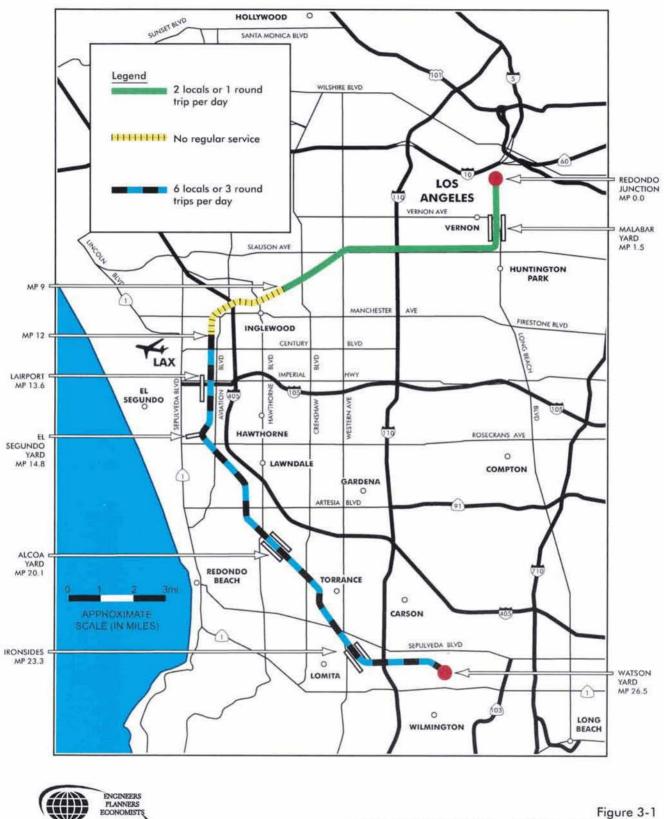
# 3.2.6 Alameda Corridor Capacity

In the event of blockages on the Alameda Corridor or overflow traffic, the Harbor Subdivision may see trains carrying port-related traffic detoured onto the line. However, the line will not be available for detours past mid 2003, per the 1998 Alameda Corridor Use and Operating Agreement. From that point forward, the detour routes will be the UP's Wilmington and San Pedro Branches. These two routes will have to handle diversions of UP and BNSF port-related train traffic to and from Los Angeles. While there may be capacity constraints on these routes, these will last until the corridor blockages or overflow conditions can be resolved. Only in case of an emergency is it imaginable that the Harbor Subdivision will be employed for port-related train traffic beyond June 2003.

# 3.2.7 Air Quality and Noise

There obviously will be a reduction in noise levels, particularly near grade crossings, as fewer trains will be sounding crossing warnings, and grade crossing bells will be operating less often. The reduced number of trains will mean less operating noise – diesel locomotive noise and wheel noise. To the extent that fewer trains mean less delay and queuing at-grade crossings, there may be a slight reduction in vehicular traffic noise since more cars and trucks will be able to pass through the area with greater ease.

The reduction in train operations will contribute slightly to a reduction in air pollution in the Los Angeles basin, since the Alameda Corridor will provide a shorter route with a more steady train speed. The reduction in vehicular idling time at grade crossings as a result of reduced numbers of trains also will lessen air pollution, but the scale of the reduction will be minor. Delays at traffic lights or due to traffic conditions unrelated to the rail line and the total volume of traffic on highways and local streets are the prime contributors to air pollution. These will be unchanged by the reduced rail traffic.



LOCAL TRAINS PER DAY - HARBOR SUBDIVISION

Wilbur Smith Associates –

364940\Base/1-30-02

# 3.3 FUTURE VEHICULAR TRAFFIC OPERATIONS

### 3.3.1 Planned Railroad Grade Separation Projects

Two cities have plans for railroad separation projects in the study area. The cities indicated that the two projects would proceed, irrespective of any change in rail operations on the Harbor Subdivision.

- The City of El Segundo has a plan to connect Douglas Street, which is divided now by the Harbor Subdivision right of way, with an undercrossing. The connection would permit travel between Rosecrans Avenue on the south and El Segundo Boulevard on the north. The project is fully funded with a combination of local, state, and federal funds. It is under design and expected to be under construction within 12 to 18 months.
- The *City of Torrance* has a plan to connect the east and west portions of Del Amo Boulevard, which is divided by the Harbor Subdivision, with an overcrossing. The project would connect two sections of a major thoroughfare while avoiding the potentially severe delays associated with BNSF switching at the Exxon-Mobil Refinery. The overcrossing will fly over a set of six tracks at Alcoa Yard, where switching activity occurs daily. The grade separation and street connection project will cost about \$18 million, and is fully funded with a combination of state, LACMTA and local funds. It is undergoing environmental clearance, and should be completed within a year.

# 3.3.2 Vehicle Traffic Volumes

Table 3-3 summarizes the average daily traffic (ADT) expected for the years 2005 and 2015 at the railroad crossings in the study area. The ADT has been calculated using the current daily vehicular volumes identified in Chapter 2 of this report, and applying a 1 percent annual growth rate in vehicular traffic. This growth rate is based on the growth in population and employment expected to occur in the South Bay Cities region (0.8%), as discussed in Section 3.1.1 and 3.1.2 of this document.

# 3.3.3 Crossing Delays

This section evaluates the future delays estimated for motor vehicles at the railroad crossings in the years 2005 and 2015 as a result of the presence of a train. The results are summarized in Table 3-4. Appendix F includes a detailed explanation of the methodology used to estimate those delays.

As Table 3-4 indicates, the elimination of through train traffic along the Harbor Subdivision results in all crossings operating at a LOS A, even with the expected increase in the number of vehicles traveling across the crossing, and shown in Table 3-3.

No.	Milepost	Cross-street Name		les per day)
10.			2005	2015
1	8.03	CRENSHAW BLVD	24,700	27,300
2	8.14	VICTORIA AVE	800	900
3	8.23	BRYNHURST AVE	700	800
4	8.32	WEST BLVD	5,600	6,200
5	8.60	REDONDO BLVD	7,900	8,700
7 8	9.13	CENTINELA AVE	32,600	36,000
	9.59	LA BREA AVE	33,600	37,100
9	9.82	IVY AVE	2,600	2,900
10	9.94	EUCALYPTUS AVE	13,100	14,500
12	10.21	NORTH CEDAR AVE	800	900
13	10.36	OAK ST	3,400	3,800
12	10.52	HYDE PARK BLVD	4,200	4,600
13	10.63	LA CIENEGA BLVD (I-405 EXIT)	33,600	37,100
14	10.82	HINDR Y	4,700	5,200
15	11.11	MANCHESTER BLVD	33,600	37,100
16	11.63	ARBOR VITAE ST	18,900	20,900
17	12.36	104TH ST	5,800	6,400
18	12.92	111TH ST	6,600	7,300
19	13.13	IMPERIAL HWY	38,900	43,000
20	13.37	118 TH ST	800	900
21	13.62	120TH ST	1,900	2,100
22	13.89	124TH ST	Private	Crossing
23	14.69	DOUGLAS ST	9,700	10,700
24	14.79	CHAPMAN WY	Private	Crossing
25	15.08	DOUGLAS/ROSECRANS STATION	Pedestria	n Crossing
26	16.10	MARINE AVE	26,100	28,800
27	16.74	INGLEWOOD AVE	50,200	55,500
28	16.87	MANHATTAN BEACH BLVD	26,600	29,400
29	16.94	159TH ST	600	700
30	17.01	160TH ST	600	700
31	17.08	161ST ST	700	800
32	17.14	162ND ST	2,200	2,400
33	17.62	170TH ST	2,600	2,900
34	18.38	182ND ST	11,200	12,400
35	21.24	TORRANCE BLVD	29,200	32,300
36	21.36	EL DORADO ST	Pedestria	n Crossing
37	21.48	SONOMA ST	1,300	1,400
38	21.60	CARSON ST	36,800	40,700
39	22.10	WASHINGTON AVE	4,000	4,400
40	22.24	ARLINGTON AVE	8,500	9,400
41	22.49	CABRILLO AVE	11,200	12,400
42	22.57	BORDER AVE	900	1,000
43	22.78	SEPULVEDA BLVD	55,500	61,300
44	23.03	WESTERN AVE	32,000	35,300
45	24.79	S FIGUEROA ST	11,600	12,800
46	24.92	N.A.		Crossing
47	25.94	AVALON BLVD	18,900	20,900
48	26.04	BROAD AVE	1,200	1,300
49	26.11	LAKME AVE	1,600	1,800
50	26.36	WILMINGTON AVE	18,900	20,900

Table 3-3 Estimated Average Daily Traffic (ADT) Volumes Years 2005 and 2015

Source: Wilbur Smith Associates

			Year		Year	
No.	Milepost	Cross-street Name	Avg. delay	LOS at	Avg. delay	LOS at
			(sec./veh.)	Crossing	(sec./veh.)	Crossing
1	8.03	CRENSHAW BLVD	0.0	Α	0.0	A
2	8.14	VICTORIA AVE	0.0	A	0.0	Α
3	8.23	BRYNHURST AVE	0.0	A	0.0	Α
4	8.32	WEST BLVD	0.0	A	0.0	A
5	8.60	REDONDO BLVD	0.0	A	0.0	A
6	9.13	CENTINELA AVE	0.0	A	0.0	A
7	9.59	LA BREA AVE	0.0	A	0.0	A
8	9.82	IVY AVE	0.0	A	0.0	Α
9	9.94	EUCALYPTUS AVE	0.0	A	0.0	A
10	10.21	NORTH CEDAR AVE	0.0	A	0.0	A
11	10.36	OAK ST	0.0	A	0.0	A
12	10.52	HYDE PARK BLVD	0.0	A	0.0	A
13	10.63	LA CIENEGA BLVD (I-405 EXIT)	0.0	A	0.0	A
14	10.82	HINDRY ST	0.0	A	0.0	A
15	11.11	MANCHESTER BLVD	0.0	A	0.0	A
16	11.63	ARBOR VITAE ST	0.0	A	0.0	A
17	12.36	104 <sup>TH</sup> ST	0.2	A	0.2	A
18	12.92	111 <sup>TH</sup> ST	0.2	A	0.2	A
19	13.13	IMPERIAL HWY	0.1	A	0.1	A
20	13.37	118 <sup>TH</sup> ST	0.1	A	0.1	A
21	13.62	120 <sup>TH</sup> ST	0.1	A	0.1	A
22	13.89	124 <sup>TH</sup> ST	NA	NA	NA	NA
23	14.69	DOUGLAS ST	0.3	A	0.3	A
24	14.79	CHAPMAN WY	NA	NA	NA	NA
25	15.08	DOUGLAS/ROSECRANS STATION	NA	NA	NA	NA
26	16.10	MARINE AVE	0.2	A	0.2	A
27	16.74	INGLEWOOD AVE	0.2	A	0.2	A
28	16.87	MANHATTAN BEACH BLVD	0.1	A	0.1	A
29	16.94	159 <sup>TH</sup> ST	0.1	A	0.1	A
30	17.01	160 <sup>TH</sup> ST	0.1	A	0.1	A
31	17.08	161 <sup>ST</sup> ST	0.1	A	0.1	A
32	17.14	162 <sup>ND</sup> ST	0.1	A	0.1	A
33	17.62	170 <sup>TH</sup> ST	0.1	A	0.1	A
34	18.38	182 <sup>ND</sup> ST	0.3	A	0.3	A
35	21.24	TORRANCE BLVD	0.2	A	0.2	A
36	21.24	EL DORADO ST	NA	NA	NA	NA
37	21.30	SONOMA ST	0.1	A	0.1	A
38	21.40	CARSON ST	0.2	A	0.2	A
						A
39 40	22.10	WASHINGTON AVE	0.1 0.2	A	0.1 0.2	A
	22.24	ARLINGTON AVE		A A		A
41	22.49	CABRILLO AVE	0.3		0.3	
42	22.57	BORDER AVE	0.1 0.2	A A	0.1 0.2	A
43	22.78	SEPULVEDA BLVD WESTERN AVE		A	0.2	A
44	23.03		0.2			A
45	24.79	S. FIGUEROA ST	0.1	A	0.1	A
46	24.92	N.A.	NA	NA	NA	NA
47	25.94	AVALON BLVD	0.1	A	0.1	A
48	26.04	BROAD AVE	0.1	A	0.1	A
49	26.11	LAKMEAVE	0.1	A	0.1	A
50	26.36	WILMINGTON AVE	0.2	A	0.2	A

Table 3-4 Estimated Delays at Railroad Crossings in the Study Area Years 2005 and 2015

Source: Wilbur Smith Associates

### 3.3.4 Nearby Intersection Delays

Nearby intersection delays due to crossing delays can be expected to be virtually eliminated in the future with the expected changes in railroad operations on the Harbor Subdivision line. As shown in Table 3-4, the estimates for crossing delays 2005 and 2015 show substantial improvements in delay times per vehicle and the levels of service. As a result, nearby intersection delays due to crossing delays should decrease substantially.

### 3.4 SAFETY

### 3.4.1 Changes to At-grade Crossing Warning Devices

The railroad warning devices currently installed at the at-grade crossings carry out their function appropriately for the level of exposure faced by those crossing the track. On the other hand, even though a substantial decrease in rail traffic is expected in the near future, it is not recommended that the current level of railroad warning and safety be modified in the corridor. Virtually all of the at-grade crossings are equipped with a signal assembly that includes flashing lights and automatic gates. This is the highest level of protection available for an at-grade crossing. The current level of active railroad warning devices would become necessary if any sort of passenger rail service were implemented on the line.

The WSA consulting team has contacted staff from the Rail Crossing Engineering Division of the CPUC regarding the potential elimination of railroad warning devices at those crossings between milepost 9.0 and milepost 12.0, where no train traffic is expected in the future after the opening of the Alameda Corridor. The CPUC staff has indicated that the existing railroad warning devices can only be eliminated if that particular segment is to be abandoned by the railroad<sup>2</sup> and the tracks are removed or, at a minimum, cut at both ends of the crossing. Furthermore, if train service were to be reinstated after the existing warning devices are removed, new devices would have to be installed prior to issuance of an operating permit by the

FRA and the CPUC. These new devices would have to comply with the requirements issued by the CPUC at that time, which, in some instances, might be more restrictive than today's.

Nevertheless, the consulting team has identified some minor operational issues at key at-grade crossings. If these operational issues persist after rail traffic is substantially reduced in 2002, they can be addressed by means of traffic engineering elements. These locations include:



La Brea Avenue (MP 9.59) - Vehicles stopped on tracks

<sup>&</sup>lt;sup>2</sup> See Section 1.2.4 for a detailed discussion of railroad abandonment and the necessary requirements for its implementation, which requires a petition from the railroad operator in front of the Surface Transportation Board and the CPUC.

#### La Brea Avenue (MP 9.59)

Issue: Southbound vehicles stopping on the tracks.

*Potential solutions:* Additional signage and installation of a pre-signal (a signal on the north side of the tracks preventing cars stopping across tracks) and improved striping. *Approximate cost:* \$5,000 to \$50,000

#### La Cienega Boulevard (MP 10.63)

*Issue:* Freeway off-ramp, high rate of speed; some southbound vehicles observed stopping on tracks. *Potential solutions:* Additional signage, improved striping.

Approximate cost: \$5,000 to \$10,000

#### Imperial Highway (MP 13.13)

*Issue:* Very wide intersection and crossing with three train tracks. Queuing over the tracks observed for the eastbound Imperial to southbound Aviation movement. *Potential solutions:* Improved striping, additional signage. *Approximate cost:* \$5,000 to \$10,000

#### Marine Avenue (MP 16.10)

*Issue:* Eastbound and westbound traffic back-up blocks nearby streets and driveways. Potential solutions: Additional striping and signage. *Approximate cost:* \$5,000 to \$10,000

#### Inglewood Avenue (MP 16.74)

*Issue:* Southbound traffic back-up due to Manhattan Beach Boulevard traffic lights and left turn into private driveway across railroad tracks.

Potential solutions: Adjust traffic signal timing, build raised median, prohibit left turn into private driveway.

Approximate cost: \$10,000 to \$50,000

#### Manhattan Beach Boulevard (MP 16.87)

*Issue:* Close proximity to Inglewood Avenue. Traffic back-ups shut down Manhattan Beach Boulevard and Inglewood Avenue.

*Potential solutions:* No traffic engineering solution has been identified; it is expected that the future reduction in the number of trains would greatly reduce the problem. *Approximate cost:* N.A.

#### Torrance Boulevard (MP 21.24)

*Issue:* Westbound traffic backs-up into railroad crossing due to traffic signal at Crenshaw Boulevard and to uneven distribution of traffic among westbound lanes

Potential solution: Adjust signal timing slightly at Crenshaw Boulevard. Approximate cost: \$0



Torrance Boulevard (MP 21.24) – Westbound traffic backs-up into railroad crossing.

#### Carson Street (MP 21.60)

*Issue:* Vehicles traveling eastbound on Carson Street tend to run over and stop beyond the stop line. *Potential solution:* Improve striping. *Approximate cost:* \$5,000

### Sepulveda Boulevard (MP 22.78)

*Issue:* Back-up of vehicular traffic from the railroad crossing to the east and west of the crossing along Sepulveda Boulevard; observed



Carson Street (MP 21.60) – Vehicles stopped on tracks

eastbound traffic back-up from Western Avenue to the railroad crossing and beyond. *Potential solutions:* Signal timing adjustments at Western Avenue, additional signage. *Approximate cost:* \$5,000

### Western Avenue (MP 23.03)

*Issue:* The two Ironsides sidings (one on either side of the main line) located southeast of the railroad crossing; switching operations affect both the Western Avenue crossing and the Sepulveda Boulevard crossing to the northwest.

Potential solutions: revise warning time and gate down operations related to train switching maneuvers and adjust if necessary.

Approximate cost: \$0

It should be noted that the potential solutions identified above are only preliminary suggestions. They should be further evaluated and developed by the local traffic engineers and the railroad operations staff prior to their adoption or implementation.

# 3.4.2 Crossing and Railroad Accidents

The expected decline in future rail traffic on the Harbor Subdivision line suggests that the probability of vehicular and train accidents will decline substantially as well.

# 3.5 OTHER RAILROAD AND TRANSIT ALTERNATIVES

It now appears certain that, despite the major shift of through freight traffic from this route to the new Alameda Corridor in mid-2002, a modest level of freight service will remain along most segments of the Harbor Subdivision. This continuing service means that very little of the right of way will actually be left without any freight service at all. The implication is that alternative uses must be consistent with and/or account for continuing freight rail service on the line. Furthermore, the value of a continuous right of way cannot be disregarded lightly. Whether for utilities, future pedestrian and bikeway trails, or even new passenger service, the Harbor Subdivision is a uniquely valuable resource that should under all circumstances be preserved.

One of the highest potential alternative uses for this line is for rail passenger service. Six such alternatives are presented below. All alternatives will require substantial public investment, but at the same time, they appear to offer local and regional transportation benefits.

### 3.5.1 Green Line Extension to Los Angeles International Airport

The Metro Green Line runs from a terminus at Marine Avenue northward toward LAX and then eastward along the Glenn Anderson (I-105) Freeway to Norwalk. The station closest to LAX is the Aviation/I-105 Station (above Aviation Boulevard), where shuttle services provide a connection to the airport. At one time there was a discussion of a Green Line spur that would terminate near LAX. This proposed spur was eliminated during the final stages of negotiation with the Federal Aviation Administration (FAA). The beginnings of the LAX spur can still be seen at the west end of the elevated station at Aviation Boulevard.

There now appear to be renewed efforts to bring light rail closer to the airport as a result of planning efforts to improve operations at LAX<sup>3</sup>. One extension concept would have the Green Line descend from its elevated platform above Aviation to run parallel to the Harbor Subdivision. It would continue via a new right of way to a connection with the proposed airport People Mover.

The Harbor Subdivision alignment along Aviation Boulevard and just east of the southern set of runways is one of those sections of the route not expected to have any regular freight service. In that regard, it is an excellent candidate for the extension of Metro Green Line service into the airport. However, FAA issues still remain.

In constructing this line extension, attention must be paid to ways of ensuring that the overhead catenary system (by which electrical power comes to the light rail vehicle propulsion motors) is at a much lower height than airport "localizers". (Localizers are the vertical poles with navigational lights used to direct pilots during landings.) This, according to the LACMTA, had been the FAA's key issue. The solution may be in depressing the light rail line relative to the Harbor Subdivision.

A Green Line extension to LAX would provide a new transit alternative for South Bay residents, who could board the service at five stations in the South Bay for trips to the airport. The stations are Marine/Redondo Beach, Douglas/Rosecrans, El Segundo/Nash, Mariposa/Nash, and Aviation/I-105. The link would provide a regional benefit in that residents along the I-105 Corridor, who either seek to use or work at LAX, would have an improved transit option.

There also appears to be interest in extending the Metro Green Line from its eastern terminus at the I-605/I-105 Station to the nearby Metrolink commuter station at Norwalk. A shuttle service runs between the Green Line and Metrolink stations in Norwalk now. Establishment of this link in conjunction with a Green Line extension to LAX would provide another regional benefit, i.e., an improved transit alternative between points served by Metrolink in Riverside and Orange Counties to LAX, as well as other stations along the Green Line.

<sup>&</sup>lt;sup>3</sup> SCAG's RTP shows this project as between the Green Line's Mariposa/Nash Station in El Segundo and Century and Sepulveda Boulevards at LAX. It is described as a light rail system, with completion in 2010. Also, the extension is included in the LACMTA's 20-year plan, designated as a project to be funded outside of the agency.

### 3.5.2 High Speed Rail to LAX

During the past two years, the Southern California Association of Governments (SCAG) has been examining a proposed high-speed, magnetic levitation rail service (Maglev) between LAX, downtown Los Angeles and the Inland Empire. One of the proposed alignments between the downtown area and LAX utilizes the Harbor Subdivision right of way for much of the distance.

The Maglev project has not received a full funding agreement with the federal government, and it is not clear if the project as structured will proceed. Nevertheless, one of the valuable findings from the preparatory work done on that application was the rather substantial ridership forecast for travel in the corridor between the airport and downtown.

In a report prepared for SCAG, the Maglev consultant team found that an all-day service operating on 20-minute headways between LAX and Union Station in downtown Los Angeles would have 7,772 daily passenger boardings. If operated just during the peak commuting period, it would carry 3,452 daily passengers<sup>4</sup>.

Separately, the California High Speed Rail Authority (HSRA) is investigating a high speed rail connection between Los Angeles Union Station (LAUS) and LAX. The agency's consultants have investigated three routes: the Harbor Subdivision, an I-10/I-405 route, and an I-110/I-105 route. The agency eliminated the two freeway routes, with the Harbor Subdivision being retained for further study<sup>5</sup>.

The Maglev or other high speed rail service would have to include a fully grade-separated right of way for trains reaching speeds of 100 mph along portions of the route between downtown and the airport. Whatever the service, a high speed rail access using the Harbor Subdivision for at least part of its route from downtown LA would be expensive. No doubt, the major challenge to this alternative will be finding an adequate funding source.

The benefits that a high speed rail service between LAX and downtown could provide South Bay residents are three. These are a speedy transit link to downtown Los Angeles, transit access to the Metrolink commuter rail system and Amtrak services at LAUS, and access to a future statewide high speed rail system, should that system ever be built.

### 3.5.3 Conventional Rail Passenger Service to LAX

While a Maglev system is clearly capable of far greater speed (and far less travel time) than a conventional train – particularly over great distances – the difference between Maglev and conventional rail in the 16-mile corridor between LAX and downtown would be modest. Thus, the ridership forecast prepared for the proposed Maglev service is illustrative of what could be achieved by a conventional rail service using the Harbor Subdivision as well as the UP and track belonging to the Southern California Regional Rail Authority, the sponsor of the Metrolink service.

<sup>&</sup>lt;sup>4</sup> Table 6-8 – Station to Station Daily Passenger Boardings for MAGLEV Alternative 2mhc, page 6-28 of Preliminary Ridership and Revenue Forecasts, June 2000.

<sup>&</sup>lt;sup>5</sup> Per correspondence with HSRA consultants retained to study a high speed rail route to LAX.

Of the six current Metrolink regional commuter lines, only one carries more than the estimated 7,772 riders forecast for the Maglev line. The average ridership on each Metrolink route is 5,666 (34,000 average daily trips divided by 6 routes). On a comparative basis, it appears that a conventional commuter rail link between LAUS downtown and LAX using a portion of the Harbor Subdivision merits study. Enabling this option is the projected decline in freight traffic on the subdivision.

Like the high speed rail alternatives, a commuter rail service could also eventually be fully grade-separated. However, it could also operate initially over upgraded conventional railroad tracks and become grade-separated through incremental construction over time. Metrolink provides a good example of what a typical commuter train looks like: double-decker cars pulled/pushed by a locomotive.

From west to east, the route could begin at a connection with the LAX People Mover and employ new track to reach the Harbor Subdivision right of way. Thence the route would be through Inglewood and parallel to Slauson Avenue. It would then diverge from the Harbor Subdivision and connect to the UP Wilmington Branch at Long Beach Avenue. At this location the Metro Blue Line is on an overhead structure, and it appeared from the consultant team's site visit that there is sufficient room between the support columns of this structure to construct a moderate speed connection between the Harbor Subdivision and UP tracks. It also appeared that an older light industrial structure would have to be acquired to make this track connection possible.

Once on the UP right of way, the route would include Vernon Avenue Station and a connection with the Blue Line. The commuter route would follow the UP alignment as it approaches the new Alameda Corridor alignment. It would swing to the north of the Alameda Corridor and connect with existing Metrolink track on the west bank of the Los Angeles River adjacent to the Amtrak Locomotive Servicing facility at Redondo Junction. From there, it would proceed into Union Station. A possible operator would be LACMTA. Alternatively, the Southern California Regional Rail Authority (Metrolink) could run the service. Metrolink already offers a comparatively short intra-county downtown-to-airport service, i.e., its Burbank Airport round trip.

The challenges to implementing such a system include:

- Upgrading the route with new track, signals, and grade crossing protection sufficient to handle a commuter rail operation.
- Grade separation at La Cienega, at its crossing of the Harbor Subdivision on the west side of the I-405 freeway, to prevent delays to vehicular traffic.
- Rights from UP to use the Wilmington Branch. UP may be amenable, as freight volume on the line will decline consequent to the opening of the Alameda Corridor.
- Competition with other regional projects for scarce public transit investment dollars.

Benefits for South Bay residents from such a commuter rail route would be the same as those provided by a high speed rail route: speedy access to downtown LA and to regional and state transportation systems centered there. For example, a South Bay resident could board a train departing the airport station and interchange at LAUS to Metrolink for Lancaster, San

Bernardino, or Riverside, or could interchange to various Amtrak trains. If Metrolink were the operator, a through service between LAX and current Metrolink destinations could be established. This alternative will have benefits for the region in terms of providing direct transit access to LAX.

### 3.5.4 New Light Rail or Bus Rapid Transit to LAX

LACMTA is currently studying a proposed Crenshaw Corridor Project<sup>6</sup>. One concept would establish a light rail or bus rapid transit (BRT) fixed guideway system from Wilshire Boulevard on Crenshaw Boulevard to the Harbor Subdivision. The route would use the subdivision's right of way to the vicinity of the airport and new track to access the airport itself (People Mover connection), where there would be a connection with the northerly extension of the Green Line. However, no definitive routing concept has been selected. A report on the corridor is due in February 2002.

This corridor study is in its preliminary stages and many questions need to be answered. Among these is whether the service would utilize light rail technology or employ a BRT concept. Conceivably, a light rail service could utilize the existing track on the subdivision west of Crenshaw at M.P. 8. This should pose no particular problem, since BNSF anticipates only occasional use of the line between M.P. 9 and the airport, and, as a practical matter, very few trains will operate beyond Malabar Yard at M.P. 1.5. Indeed, freight trains and light rail vehicles use the same tracks south of San Diego to Tijuana, although the services are time-separated, with freight trains running only between late night and pre-dawn hours. Because of safety concerns, FRA regulations prohibit the shared use of track by light rail vehicles and freight or conventional passenger trains, except by time separation.

A BRT concept would require a fixed guideway separate from the existing trackage in the subdivision. However, a separate fixed guideway appears to pose a challenge, because most of the right of way west of Crenshaw to the airport is less than 60 feet. Such widths would be too narrow to accommodate both tracks and a BRT fixed guideway.

The Crenshaw Corridor concept could be linked with the Exposition Corridor Project<sup>7</sup>, which is proposed as either a light rail or BRT (or a hybrid of both), providing transit service between downtown LA and Santa Monica. Assuming both the Exposition and Crenshaw Corridor Projects will be light rail, a new light rail link between West Los Angeles and LAX, as well as between downtown and LAX, may come into being.

Benefits for South Bay residents from this alternative would result from a connection at LAX between Crenshaw Corridor light rail trains and the Green Line extended north from the Aviation/I-105 Station. Given this infrastructure, South Bay residents could board a Green Line train at any of five stations south of LAX, and, with a connection to the new light rail service at the airport, travel on to Wilshire Boulevard, Santa Monica, or even downtown Los Angeles.

<sup>&</sup>lt;sup>6</sup> The RTP shows this project as between Wilshire Boulevard/Rossmore Avenue and Crenshaw Boulevard and the Green Line. It is described as a fixed guideway/busway, with a completion schedule ending in 2025.

<sup>&</sup>lt;sup>7</sup> The RTP cites the Exposition Corridor as a Baseline Transit Corridor project between downtown LA and Santa Monica. It is described as a light rail/busway hybrid, with completion in 2010. Separately, SCAG related that the Exposition Corridor project would more than likely be a light rail project.

### 3.5.5 Rail Shuttle Service from South Bay Points

The concepts outlined above address the use of the Harbor Subdivision from LAX to either downtown Los Angeles or West Los Angeles destinations. However, this study's charge was also to consider transit service on other parts of the Harbor Subdivision. The subdivision extends 14.5 miles south of LAX, and local freight service will remain on the majority of this segment.

At least as early as 1992, the former LACTC envisioned commuter service to and from downtown on the subdivision. For this reason, provision for two passenger trains daily in each direction was included in its agreement with the former ATSF. However, through commuter rail service to downtown Los Angeles from Carson on the Harbor Subdivision is too round about. While a rail connection from the South Bay to downtown Los Angeles may remain desirable, the Harbor Subdivision does not appear to provide an acceptable alignment. Another railroad alignment, the Torrance Branch, controlled by the UP, offers superior opportunity for commuter service between Torrance and downtown, because it is more direct.

An alternative to the type of service once envisioned for the line is a "South Bay Shuttle", operating between LAX's People Mover connection and Torrance. This concept would be worth considering, especially if the Metro Green Line were not extended northward to LAX. The chief purpose of the shuttle would be serving to LAX itself. However, it also would link several work, shopping, and recreational areas in the South Bay area. Coincidentally, if an LAUS-oriented commuter service were established at the airport, the shuttle would provide South Bay residents with access to many points within Southern California by rail.

A model for this type of service is developing to the south in Oceanside. The North San Diego County Transit District (NCTD) is planning a shuttle service on its line between Escondido and Oceanside, where passengers could connect with The Coaster commuter rail service to San Diego, as well as with Metrolink trains. (Oceanside is the southern most terminus for Metrolink.) NCTD related that this Escondido line would utilize Diesel Multiple Unit (DMU) train sets. These are a self-propelled technology currently deployed in Europe and in Ottawa, Ontario, Canada.

A DMU is either a two or three-car train set. It is less expensive to operate in comparatively less dense, shorter distance corridors than is a conventional locomotive-hauled commuter train set, such as both The Coaster and Metrolink use. To date, DMUs have not been built to comply with FRA manufacturing safety standards permitting their use on track shared concurrently with freight trains. Indeed, existing DMU models have been termed "FRA non-compliant", and as such cannot be operated on track shared concurrently with freight trains. Indeed, NCTD's DMUs will operate on a time-separated basis. The agency will allow freight trains onto the Escondido line only at night, when the DMUs have ceased their operations.

Given the Harbor Subdivision's daily local freight train volumes, a time-separated operation may not be possible. If not, "FRA compliant" DMUs would be an answer. A prototype of an FRA compliant vehicle is under construction in Colorado at Colorado Rail Car. ADtranz, a division of Canadian carbuilder Bombardier, has designed a compliant DMU, but has not completed production models. The prototype is seen below.



FRA compliant DMU designed by Bombardier for Long Island Railroad and Oregon Department of Transportation

FRA compliant DMUs could operate between airport and points south of the airport on existing track and without time separation. That is, no time separation with freight services would be required, since the rolling stock's construction would be robust enough to satisfy FRA safety concerns. The shuttle would need passing sidings in addition to those that exist. Sufficient width to accommodate new sidings appears to exist along most of the right of way.

From north to south, stations that a DMU-based South Bay Shuttle service might include are:

- LAX, with connection with a People Mover for furtherance to individual terminals, and potentially to either the Crenshaw Corridor light rail, high speed rail, or commuter rail.
- Marine Avenue and a connection with the Green Line.
- Artesia Boulevard, providing access to the South Bay Galleria Shopping Center.
- Hawthorne Boulevard, serving the Torrance Promenade Shopping Center.
- Torrance Boulevard or Carson Street; the latter would provide access to Torrance High School and nearby Charles M. Wilson Park.
- Normandie Avenue, providing access for Lomita.

The actual selection of station locations will be up to the cities served. This selection process will depend on various factors including the existence of available land for stations and parking, the potential for transit integration, and the housing and commercial densities that could generate desired ridership levels.

The shuttle service could operate at different frequencies, depending on the time of day. Typically, commuter services have frequencies that are multiples of 30 minutes, in order to facilitate transfers to connecting buses that traditionally operate on "30-minute pulses". Trains are more frequent during the peak commute hours. A useful paradigm might be 30-minute frequencies during the peak periods, slipping to hourly frequencies for off-peak periods.

The shuttle service would require a maintenance facility, where the trains could be inspected in accordance with federal regulations, cleaned, fueled, and repaired. A maintenance facility would require several acres. Potential sites include Alcoa Yard, Ironsides, and to the east of Figueroa where adjacent land uses are zoned heavy industrial.

### 3.5.6 Extension of Metro Green Line to Torrance

Alternatively, the possibility exists of a Green Line extension to Torrance. This could be done in one of two ways. One would be to follow the route envisioned for the line in 1990. The other would be to utilize the Harbor Subdivision.

#### **Revisiting an Earlier Concept**

In 1990, a route refinement study suggested the extension of the Green Line beyond its current terminus at Marine Avenue to Hawthorne Boulevard in Lawndale, and then south on Hawthorne to the Torrance Promenade Shopping Center, Del Amo Fashion Mall, and Lomita Boulevard. The route terminated at the Torrance Memorial Hospital. However, the extension, which would have been elevated from Marine to the medical center, never occurred due to a lack of support from South Bay communities, according the LACMTA.

Eleven years have passed, and it may be worthwhile revisiting a southward extension of the Green Line. During the intervening period, both the Metro Green and Blue Lines have begun operations and gained ridership. Light rail has proved itself a viable transit alternative in Southern California since its inception. (The Blue Line opened in 1990, and the Green Line opened in 1995.) It may well be that light rail's success elsewhere will enable its ultimate acceptance in the South Bay. That being said, the challenges are that land use changes during the intervening period would preclude the original plan for terminating on Lomita Boulevard, the LACMTA noted. Further, LACMTA reported that it has no intention at the present time of studying a southward extension. Lastly, this alternative would face severe competition for scarce public funds for transit projects.

If the aforesaid route refinement were implemented, it would use the Harbor Subdivision from Marine Avenue at least as far as Manhattan Beach Boulevard on its way to Hawthorne Boulevard. The benefits for South Bay residents of such an extension would be a new transit alternative linking work and shopping centers in the South Bay, and a new transit access route to LAX, assuming a simultaneous expansion of the Green Line northward to the airport.

#### **Continuing South on the Harbor Subdivision**

Another concept for the Green Line would be to follow the Harbor Subdivision right of way to Torrance. Assuming a simultaneous expansion of the line to LAX, this alternative would serve the same markets as the previously described South Bay Shuttle. In some respects, it would be superior.

For example, no new vehicle type or maintenance facility would be required. It would use existing Green Line rolling stock, maintained at the existing maintenance facilities. It would operate on shorter frequencies (every 7.5 to 12 minutes) than a DMU shuttle, offering riders greater convenience. It also would provide for a seamless transit alternative linking directly to existing Green Line destinations; with a shuttle, a transfer at Marine Avenue would be required.

With an eastern connection of the Green Line to Metrolink at Norwalk, South Bay residents would gain access to many points in Southern California by commuter rail.

The Green Line extension south of Marine would have to be grade separated or elevated, due to service's frequent headways (how quickly trains come). Both the frequencies and the FRA noncompliant nature of the light rail rolling stock would preclude use of existing track, which will continue to have freight service during Green Line service hours. Through sections of the right of way where there are no crossings, the Green Line could run along side the freight tracks. However, BNSF's main line would have to be shifted to one side in order to make room for a Green Line double track. This would be a more cost-effective solution than elevation.

# 3.5.7 Service to Long Beach

A shuttle service might be extended from Normandie Avenue to Long Beach. The challenges here are very significant. Below are some of the requirements for using a rail right of way to Long Beach for the shuttle service. First, operating agreements would need to be negotiated with:

- BNSF for the use of its track between Watson Yard and West Thenard.
- Ports of Los Angeles and Long Beach which own the tracks between West Thenard to the Los Angeles River.
- Pacific Harbor Line, the port freight railroad, which operates trains on these tracks.

Second, a new crossing over the Los Angeles River would need construction. Third, a route and a terminus in Long Beach must be identified. An obvious and desirable terminus would be a connection with the Metro Blue Line. Choosing a non-rail right of way is also problematic as there is no obvious right of way.

# 3.5.8 Summary of Alternative Rail Uses of the Right of Way

The Harbor Subdivision will be retained for future freight rail use through the study area, as well as to downtown Los Angeles. Freight service will be heavier between El Segundo and Watson Yard. Yet, as BNSF indicated, the track will have to be maintained north and east of El Segundo, in order to allow for occasional freight trains.

That the track, and therefore its underlying right of way, will remain in place bodes well for future alternative rail uses. These include various options having a terminus at LAX: high speed rail, commuter rail, new light rail represented by the proposed Crenshaw Corridor fixed guideway concept, extensions of the Green Line north from Aviation, and a DMU shuttle service through South Bay area. In conjunction with the Green Line extension northward from Aviation, the Green Line might also be extended southward along the right of way.

At least some of these options may have gained currency in the aftermath of the September 11 terrorist attacks in New York and Washington, D.C. Since that time, vehicular access to LAX terminals has been restricted due to security concerns. Should current conditions continue, expanded transit to LAX would offer residents of the South Bay and the region in general new and improved ways to access the airport for both work and travel purposes. Also, traffic

congestion in the South Bay is increasing, and more transit resources for travel through the region are worth considering.

Some of the alternatives cited above are already under study, i.e., the Crenshaw Corridor and Maglev. All of the other alternatives appear *feasible*, albeit with varying degrees of difficulty. Among the alternatives, there are trade-offs. For example, extension of the Green Line along the Harbor Subdivision north to the airport and south to Torrance would be more convenient for riders than the South Bay Shuttle. However, it would be more expensive in terms of operating costs due to more trains, and capital costs due to the elevated structures, electrification, and the greater number of train sets required to support more frequent headways.

In order to evaluate which of the alternatives should be pursued, the LACMTA, the cities along the right of way, and other interested stakeholders (e.g., Caltrans, SCAG, and the Los Angeles County Department of Public Works) might form a task force. An approach which the task force might use in its analysis is a matrix in which the various alternatives might be scored against specific criteria. These criteria could include such items as potential ridership, noise and air quality impacts, land use impacts, capital and operating costs, and traffic impacts.

### 3.6 OTHER ALTERNATIVE USES OF THE RIGHT OF WAY

Portions of the Harbor Subdivision right of way could be developed for still other alternative uses, either in conjunction with continued rail operations or in the event of abandonment of rail service along the right of way. Some of these alternatives are discussed below.

### 3.6.1 Widen Adjacent Streets

Where the rail line parallels local streets, the right of way could provide a resource for street widening in selected locations. The widening could involve provision of exclusive turn lanes at intersections, or might include widening the complete length of the street using a strip of the adjoining right of way. Street widening where rail service remains would be less viable than if rail service were abandoned, because the clearance requirements for train service would not leave as much usable area as would complete abandonment of service. Several streets where this alternative may have application include Florence Avenue through Inglewood, and Aviation Boulevard near LAX.

Regarding the latter, the Los Angeles County Department of Public Works (LACDPW) is investigating the potential of acquiring from the LACMTA a 12-foot-wide segment of the Harbor Subdivision right of way east of the track and west Aviation Boulevard between 118<sup>th</sup> Street and 124<sup>th</sup> Street. The acquisition would be for the widening of Aviation within two or three years. LACDPW envisions widening Aviation between Rosecrans Avenue on the south and Imperial Highway on the north. The agency related that BNSF indicated that the purchase would not negatively affect its operations on the line, and appeared amenable to proposed acquisition.

### 3.6.2 Linear Parkway or Trail

Abandoned or lightly used rights of way have been developed for parkway or trail use in many communities. Where freight service remains, there are issues of safety to be resolved in placing a parkway or trail adjacent to the tracks, but often these can be resolved with suitable fencing or screening. Where rail service is completely discontinued, a 50 to 100-foot-wide right of way affords ample room for a walkway, bike or hiking path, and landscaping. Such uses are particularly effective when the right of way provides a direct pathway through a street pattern that has few through streets, or where the parkway connects with schools and major recreational facilities. The benefits of potential parkway or trail use can be very localized, sometimes measurable in terms of a few blocks rather than a long segment of the right of way.

At least two portions of the Harbor Subdivision appear to offer the potential for a pedestrian or bicycle path on the right of way. Both are south of LAX. These are Manhattan Beach Boulevard (Milepost 16.9) in Lawndale to Hawthorne Boulevard near 190<sup>th</sup> Street (Milepost 19) in Redondo Beach, and Carson Street (Milepost 21.6) to Arlington Avenue (Milepost 22.2) in Torrance. Both potentials are discussed below.

- <u>Manhattan Beach Boulevard to Hawthorne Boulevard</u> Through the length of this 3mile segment there are six at-grade crossings; four are within a quarter mile of Manhattan Beach Boulevard. The multiple crossings are a safety concern. On the other hand, a pedestrian or bike trail along this segment could provide linkages to major pedestrian and bicycle traffic generators. These include nearby Ross Elementary School and Green Elementary School in Lawndale; South Bay Galleria Shopping Mall, Adams Middle School, Washington and Franklin Elementary Schools, Pacific Crest Cemetery, and El Nido Park in Redondo Beach; and Columbia Park, a quarter mile east of the right of way in Torrance.
- <u>Carson Street to Arlington Avenue</u> This segment has only one at-grade crossing at Washington Avenue. A pedestrian or bike trail along this segment could provide linkages to and among: Torrance High School, Charles H. Wilson Park, and adjacent Shery High School and Torrance Elementary School, and Torrance Park.

There are other opportunities, but these are not as obvious as the two described above. One potential might be a pedestrian/bicycle path extension south of Arlington Avenue to Western Avenue. However, this would require multiple grade crossings, which would raise safety concerns. The crossings are at Arlington Avenue, Cabrillo Avenue, Border Avenue, and Sepulveda Boulevard. A trail might also run between Western and Vermont Avenues. This is a medium density residential area, with houses adjacent to the right of way. As there are no atgrade crossings to contend with, a trail here would provide for neighborhood or local recreational use such as jogging or hiking.

To mitigate safety concerns due to multiple at-grade street crossings, such linear parkway uses as bicycle and pedestrian trails will require stripping and signage at crossings where these safety protections do not exist.

There appear to be no conflicts with current planning for establishing pedestrian or bike paths in the Harbor Subdivision, given its status now as a transportation corridor. Right of way widths between Manhattan Beach Boulevard and Hawthorne Boulevard and between Carson Street and Arlington Avenue are greater than 50 feet – a minimum distance allowing space for pedestrian and bike trails.

### 3.6.3 Expand Adjoining Uses

Former rail rights of way often have little potential for redevelopment as new "stand alone" uses because of their limited width, but can offer opportunities to adjacent uses to expand. When no longer needed for rail or transit functions, rights of way can be sold to adjoining uses to expand buildings, enlarge parking facilities, or even to allow landscape buffering from parallel streets with high traffic volumes.

Potential for expanding adjoining uses, however, is limited, as the right of way will be preserved for freight rail operations. Still, adjoining uses can expand into portions of the right of way not required for rail operations. Areas with the most potential are along portions of the subdivision where the right of way is widest. South of Normandie Avenue, the right of way is or exceeds 100 feet. From Normandie to Vermont Avenue, land use is residential, and provides no real opportunities for expanded adjoining uses. However, from Vermont to Main Street, land use is heavy industrial, and poses a better opportunity for expanding adjoining uses. There are no active sidings or storage track in this vicinity, which could preclude such uses.

There appears to be no conflicts with current planning in Carson for the expanding adjoining uses where practicable between Vermont Avenue and Main Street, as this area is currently zoned heavy industrial.

### 3.6.4 Utility Corridors

Railroad rights of way, with or without freight service, have potential to provide space for utility services, such as pipelines, communication lines, public utilities, and similar resources. As noted elsewhere in this study, the Harbor Subdivision already hosts numerous utility easements.

The potential to use the Harbor Subdivision for future utility corridor purposes is good, as the entire length of the subdivision will be retained for freight use. However, communities along the line may have little need for new utility corridors, as the basic electricity, water, and communication infrastructure already exists in the well established communities along the line. The communities should review their long-term replacement requirements to determine if the right of way offers real opportunities for reconstruction, replacement or expansion of utility facilities now located elsewhere.

There appear to be no conflicts with current planning for additional utility easements in the right of way, as it hosts several easements now. This page intentionally left blank

# Chapter 4 FINDINGS AND RECOMMENDATIONS

# 4.1 FINDINGS

### 4.1.1 Corridor Demographics

The study concludes that changes in land use, population, and employment along the Harbor Subdivision in the 18.5-mile study area will be relatively minor.

- <u>Land use</u> There may be modest increases in residential densities, and shifts in occupancy of commercial structures among office, retail, and service commercial uses. However there should be no major changes from existing patterns.
- <u>Population</u> According to SCAG projections, the total population of the South Bay cities area should increase by 1 percent or less per year to year 2025.
- <u>Employment</u> Employment will have a similar growth rate, i.e., less than 1 percent per year during the same period.

All three demographic elements are factors affecting the potential for delays at crossings. For example, major changes in land use that would spur population and employment will cause more people to cross railroad tracks; and without commensurate crossing improvements, greater delays to vehicular traffic would result. However, such an eventuality is remote, since future land use, population, and employment will not be markedly different from today.

### 4.1.2 Future Rail Operations

Conversations with the BNSF revealed the following:

- The line will remain an active rail corridor Freight rail operations will continue on the Harbor Subdivision, though the train volume will decline. Operations will be limited to local service, since through train movements of port-related traffic will shift to the Alameda Corridor. Future train volume will be less than one third of today through most of the study area. Also, average train length will be shorter, since long port-related intermodal trains will shift to the Alameda Corridor. Although no regular train traffic may occur between mileposts 9 and 12, it is expected that this segment may be used sporadically for occasional trains.
- <u>Local traffic will grow</u> Local traffic will have a modest growth of 1 to 2 percent per year. Switching activity related to the local traffic certainly will not decrease.
- <u>No more through traffic expected</u> It is highly unlikely that through traffic will return to the subdivision. BNSF indicated to the consultant team that it has no intention of using the line for through traffic. Also, the railroad has agreed with the Alameda Corridor Transportation Authority that the line will not be available for any detour movements.
- <u>Current maintenance practices will continue</u> Rail operations in the study area will be concentrated between El Segundo and Watson Yard. However, BNSF may run occasional trains between downtown Los Angeles and milepost 12, near LAX and north

of El Segundo. As a result, the entire length of the subdivision, from Redondo Junction to a connection with the port terminal railroad south of Watson Yard at West Thenard, will be maintained. BNSF anticipates no changes in maintenance practices on the subdivision. Accordingly, the railroad can be expected to maintain the line to FRA Class 2 standards, which will permit the same train speeds as today.

### 4.1.3 Vehicular Operations

- <u>Delays will be greatly diminished</u> Because of the diversions of port-related train traffic away from the study area, overall delay conditions for vehicular traffic at grade crossings will improve. Switching activity, which is related to local train traffic, will remain, as will the consequent impacts at nearby grade crossings. The modest growth of local traffic in the study area will have a negligible impact on switching activity, since no new trains will be required to handle the increase. As a result, vehicular delays due to switching activity will not increase to any noticeable extent after the initial major decline in rail traffic.
- <u>Two grade separations planned</u> El Segundo and Torrance each have a grade separation
  project planned at Douglas Street and Del Amo Boulevard, respectively. Both projects
  will link streets that do not now cross the Harbor Subdivision. The Torrance project may
  slightly reduce delays to traffic on Torrance Boulevard by providing an alternative gradeseparated crossing. The cities indicated that they intend to pursue the separation projects,
  independent of the decline in rail volume.

### 4.1.4 Safety

- <u>Highest levels of protection at crossings</u> Virtually all of the at-grade crossings are equipped with a signal assembly that includes flashing lights and automatic gates. This is the highest level of protection available for an at-grade crossing.
- <u>Relatively low accident rate at crossings</u> The calculated accident rate of 0.03 accidents per public at-grade crossings per year is relatively low and similar to the State's average (approximately 0.02). The rate can be expected to drop with the decline in rail volume.
- <u>Crossing protection can be improved</u> The study team identified improvements specific to nine crossings. The cost of these improvements is comparatively minor.

### 4.1.5 Alternative Uses

- <u>Alternative uses envisioned for the right of way</u> LACMTA is investigating the potential
  use of the Harbor Subdivision for the Crenshaw Corridor transit project. SCAG and the
  California High Speed Rail Authority are looking at the line for possible Maglev or other
  high speed rail operations between downtown Los Angeles and LAX. Planning for the
  extension of the Metro Green Line northward to LAX along the subdivision may soon
  resume.
- <u>Alternative use must incorporate freight rail operations</u> Since freight rail operations will continue through the length of the Harbor Subdivision, freight operations will influence alternative uses. For example, a South Bay Shuttle using DMU rolling stock

will either have to deploy FRA compatible equipment, or operate on a time separated basis vis a vis freight operations.

### 4.2 RECOMMENDATIONS

### 4.2.1 Maintain Existing Protection at Crossings

Clearly, the high level of protection afforded the grade crossings along the Harbor Subdivision is a key factor contributing to the comparatively low accident rate of 0.03 accidents per public grade crossing per year. Because all segments of the line will continue to handle either daily or occasional rail traffic, CPUC has specified that the existing crossing protections not be removed unless the railroad is declared abandoned.

### 4.2.2 Traffic Improvements Should Be Implemented

This study has identified additional protections that could be implemented at nine crossings. For the most part, these improvements would be relatively easy and inexpensive to implement. As these improvements would enhance safety at the crossings at no great cost to the cities, the study recommends that they be put in place, after discussion and approval by the local traffic engineers and railroad operators.

### 4.2.3 Alternative Uses Should Be Explored

This study has identified numerous alternative uses. These include:

- Green Line extension to LAX
- High speed rail to LAX
- Conventional rail to LAX
- New light rail or Bus Rapid Transit to LAX
- DMU shuttle service from LAX to South Bay points and even Long Beach
- Extension of the Green Line to Torrance
- Pedestrian or bicycle paths

All of these options should be explored where appropriate, given that freight operations will continue. For example, an FRA compliant DMU operating as a South Bay Shuttle, or a conventional commuter rail option between downtown and LAX, would be relatively easy to accomplish. Northward extension of the Metro Green Line has been considered important since the inception of the line, and pedestrian/bike trails in at least two segments of the right of way are possible where widths are sufficient.

The study recommends that South Bay cities, along with other stakeholders, consider the list of alternative uses that make sense, given that freight rail operations will continue on the line.

### 4.3 NEXT STEPS

The next step for the project is distribution of the Final Report to stakeholders – adjacent cities, the Southern California Association of Governments, the Los Angeles County Metropolitan Transportation Authority, and the Burlington Northern Santa Fe Railway, among others – who will have an interest in the alternative uses of the Harbor Subdivision. It is hoped that this document might provide the impetus for a discussion of possible alternatives. Ultimately, it will be up to the South Bay cities themselves to decide on alternative uses that work for them, all the while incorporating the freight operations that will continue.

# APPENDICES

This page intentionally left blank

# Appendix A TECHNICAL ADVISORY COMMITTEE ATTENDEES

Technical Advisory Committee members and other attendees (excluding consulting team members) at the June, September, and December study sessions were:

- · Jacki Bacharach, South Bay Cities Council of Governments
- · William Barnett, City of Inglewood
- · James Chon, Los Angeles County Department of Public Works
- · Ed Chow, Los Angeles City Department of Transportation
- Susan Collette, Los Angeles World Airports
- · Bellur Devaraj, City of El Segundo
- · LaDonna DiCamillo, Burlington Northern Santa Fe Railway
- · Andrew Fox, Pacific Harbor Line, the San Pedro Bay port railroad
- · Tim Hampton, City of Lawndale
- Alan Havens, Southern California Association of Governments
- · Charles Herbertson, City of Hawthorne
- · Gordon Kam, Los Angeles City Department of Transportation
- · Brad Lindahl, City of Redondo Beach
- · John Mate, City of Redondo Beach
- Carl Morgan, Los Angeles World Airports
- · Woody Natsuhara, City of Gardena
- Jeff Pool, City of Los Angeles
- · Dick Perkins, City of Torrance
- · Andres Santamaria, City of El Segundo
- Taimour Tanavoli, Los Angeles City Department of Transportation
- · Pat Tomcheck, Los Angeles World Airports
- · Christian Valtierra, Los Angeles County Metropolitan Transportation Authority

This page intentionally left blank

Appearing in this appendix are six key excerpts from two separate agreements. The first excerpt is the freight service easement, appearing on page 17 in the 1992 agreement between the former Los Angeles County Transportation Commission (now LACMTA) and the former Atchison, Topeka and Santa Fe Railway (now BNSF).

Second is a provision for the operation of passenger trains by the agency, on page 29.

Third is the provision specifying maintenance responsibilities, on page 38.

Fourth is the Fiber Optics easement provision, on page 78.

Fifth is the "Put Option," on page 85. This provision specifies that the railroad may have to buy back the Harbor Subdivision, if the railroad's port-related traffic is not diverted to the Alameda Corridor.

The sixth key excerpt specifies that the Harbor Subdivision will not be available for through traffic from the end of June 2003. It is from the Alameda Corridor Joint Use Operating Agreement, signed by BNSF, the Alameda Corridor Transportation Authority and the Cities of Los Angeles and Long Beach. Please see page 16.

Marked to Show ^ Changes from ^ Draft dated ^ October 20, 1992

#### SHARED USE AGREEMENT (Harbor Subdivision and Mission Tower Segment)

Dated as of ^ October 30, 1992

between

The Atchison, Topeka and Santa Fe Railway Company

as "Santa Fe"

and

Los Angeles County Transportation Commission

as the "Agency"

1.68 <u>Tracks</u>. "Tracks" shall mean all tracks, (including, without limitation, passing tracks and sidings), turnouts, crossovers, interlocking devices and plants, and track improvements and support structures that are located now or in the future on the Property.

1.69 <u>Train</u>. "Train" shall mean one or more locomotive units and cars, if any, attached thereto.

1.70 <u>Train-Mile</u>. "Train-Mile" shall mean the movement of a Train, whether or not revenue generating, over a one mile distance on the Tracks.

ARTICLE 2: SANTA FE'S RESERVED RAIL FREIGHT SERVICE EASEMENT 2.1 Scope of Rail Freight Service Easement.

(a) Santa Fe and any other Santa Fe Party shall have the right to operate Rail Freight Service (but no other service or use) in the exercise of the rights reserved by Santa Fe in the Reserved Rail Freight Service Easement.

(b) Employees of any Santa Fe Party shall have such access to the Property in connection with Rail Freight Service, and freight shippers and freight receivers of any Santa Fe Party shall have such access to the Property as is reasonably necessary in connection with the loading, unloading and inspection of such shippers' or receivers' goods in accordance with the Reserved Rail Freight Service Easement and this Agreement; provided however, except to the extent expressly provided in this Agreement, this right of access shall not be

> DBLA-29162L.7 October 31, 1992

(c) If the Agency discovers that any storage of freight cars creates a hazard affecting Agency Rail Service, Santa Fe and the Agency agree to work together to reduce or eliminate such hazard in a manner acceptable to both parties.

3.10 Operation of Trains by the Agency. The Agency may operate no more than two Trains on the Harbor Subdivision in each direction daily until the Agency constructs the capital improvements to the Harbor Subdivision that would be required to continue to permit Santa Fe to operate Rail Freight Service at the same level of operation which exists as of July 1, 1992. The determination as to when sufficient capital improvements have been made to permit such continued level of operation shall be made by mutual agreement of Santa Fe and the Agency prior to the time the Agency commences any additional Agency Rail Service. If the parties are unable to agree on whether such improvements have been constructed, such issue shall be submitted to arbitration pursuant to Article 12 hereof.

#### ARTICLE 4: DISPATCHING AND SCHEDULING

#### 4.1 Dispatching Responsibilities.

(a) From and after Closing, Santa Fe shall continue to provide dispatching service for all Train movements over the Harbor Subdivision until the Harbor Shift Date and until Agency Rail Service commences on the Harbor Subdivision. The Agency shall indemnify Santa Fe against any liability resulting from Santa Fe's interim dispatching with respect to Agency Trains

I some diamond in the

(b) Bills for such dispatching costs may be submitted no more than once a month for payment as provided in Article 7, and shall contain a statement as to the calculation of such bill (including the number of Train-Miles dispatched) in such detail as the party receiving such bill may request.

#### ARTICLE 5: MAINTENANCE AND REPAIR

#### 5.1 <u>Maintenance Responsibilities</u>.

(a) Until the Harbor Shift Date, Santa Fe shall have exclusive control over the maintenance and repair of, and shall continue to maintain and repair, the Harbor Subdivision and the Tracks and other improvements thereon.

(b) The Agency (and the Operator) shall have exclusive control over the maintenance and repair of, and shall maintain and repair, the Mission Tower Segment after the Closing of the sale of the Mission Tower Segment, and the Harbor Subdivision after the Harbor Shift Date and the Tracks (including Freight Tracks), Freight Rail Facilities and other improvements thereon.

5.2 <u>Maintenance Standards</u>. The Tracks shall be maintained ^ to a safe condition consistent with industry practice and in such condition as to allow (i) continued rail operations at the train speeds shown in the Timetable other than during periods of shut down for maintenance and repairs and (ii), if and to the extent that Tracks are hereafter improved as agreed upon by Santa Fe and the Agency, continued operation of the types

> DBLA-29162L.7 October 31, 1992

DECIDED BY NEUTRAL ARBITRATION AS PROVIDED BY CALIFORNIA LAW AND YOU ARE GIVING UP ANY RIGHTS YOU MIGHT POSSESS TO HAVE THE DISPUTE LITIGATED IN A COURT OR JURY TRIAL. BY INITIALING IN THE SPACE BELOW, YOU ARE GIVING UP YOUR JUDICIAL RIGHTS TO DISCOVERY AND APPEAL, UNLESS THOSE RIGHTS ARE SPECIFICALLY INCLUDED IN THE "ARBITRATION OF DISPUTES" PROVISION. IF YOU REFUSE TO SUBMIT TO ARBITRATION AFTER AGREEING TO THIS PROVISION, YOU MAY BE COMPELLED TO ARBITRATE UNDER THE AUTHORITY OF THE CALIFORNIA CODE OF CIVIL PROCEDURE. YOUR AGREEMENT TO THIS ARBITRATION PROVISION IS VOLUNTARY.

WE HAVE READ AND UNDERSTAND THE FOREGOING AND AGREE TO SUBMIT DISPUTES ARISING OUT OF THE MATTERS INCLUDED IN THE 'ARBITRATION OF DISPUTES' PROVISION TO NEUTRAL ARBITRATION.

#### Santa Fe

#### Agency

#### ARTICLE 13: FIBER OPTICS PROVISIONS

The Grant Deed reserves unto Santa Fe and its permitted successors and assignees, a permanent easement relating to Santa Fe's rights and obligations under certain fiber optics agreements, upon the terms and conditions set forth in the Grant Deed.

> DBLA-29162L.7 October 31, 1992

approval of their respective board of directors, board of commissioners or other appropriate executive body, and this Agreement has been executed by such persons subject to obtaining such approvals.

#### ARTICLE 18: PUT OPTION

18.1 <u>Put Option</u>. If, on or prior to the Put Expiration Date, the Harbor Shift Date has not occurred, the Agency shall have the option to demand in writing that Santa Fe purchase the Harbor Subdivision from the Agency in consideration for payment to the Agency of the Put Price, and Santa Fe shall have the obligation to purchase the Harbor Subdivision, subject to the following conditions:

(a) The Agency shall make such demand through written notice to Santa Fe not earlier than six months prior to the Put Expiration Date, and not later than the Put Expiration Date. Such demand must be conditioned upon the Harbor Shift Date not having occurred on or before the Put Expiration Date. If the Agency makes such demand, Santa Fe, within six months following the date of such demand, shall pay the Put Price in cash to the Agency, and the Agency at that time shall convey to Santa Fe the Harbor Subdivision, together with all improvements thereon, but except any Retained Property.

(b) The Agency may designate and withhold from sale as Retained Property any portion of the Harbor Subdivision, subject to the conditions provided in Section 1.53.

> DBLA-29162L.7 October 31, 1992

### ALAMEDA CORRIDOR

### USE AND OPERATING AGREEMENT

by and among

THE CITY OF LONG BEACH, acting by and through its Board of Harbor Commissioners,

THE CITY OF LOS ANGELES, acting by and through its Board of Harbor Commissioners,

THE ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY, a California joint powers authority,

THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY, a Delaware corporation.

and

UNION PACIFIC RAILROAD COMPANY, a Delaware corporation

dated as of

October 12, 1998

8

LA3:788722.16

the Railroads) shall have any obligation whatsoever to construct all or any portion of the Project, or any liability for the failure to construct all or any portion of the Project. Notwithstanding the foregoing, Owner and ACTA hereby agree that, if the Project is constructed, the Project will be constructed at the cost of entities other than the Railroads (except as may otherwise be provided in this Agreement or any other agreement to which one or more of the Railroads is a party) and in accordance with the UP C&M Agreement and, with respect to any portion of the Project constructed on property owned by BNSF, in accordance with the BNSF C&M Agreement. ACTA shall deliver to Owner and the Railroads, as soon as practicable under the circumstances (but no later than 150 days prior to the date on which ACTA estimates that Substantial Completion shall occur), written notice ("Notice of Estimated Completion") setting forth the date on which ACTA estimates that Substantial Completion shall occur ("Estimated Completion Date").

#### 2.2 Agreement to Use.

(a) UP and BNSF agree that, upon Substantial Completion, and provided that the STB (and any other federal agency with jurisdiction) has given any necessary approvals or consents, each Railroad shall use and, subject to the provisions of this Agreement, shall have the right to use, the Rail Corridor for all Through Train movements. No Railroad may use the Rail Corridor between 25th Street and West Thenard for train movements prior to Substantial Completion. UP and BNSF, with reasonable cooperation from Owner, each shall be responsible for filing, within 30 days after the date of this Agreement, an application or request for any approvals or consents from the STB (and any other federal agency with jurisdiction) that may be necessary for such Railroad to operate over the entire length of the Rail Corridor, and shall cooperate diligently and reasonably with each other in connection with obtaining such approvals or consents. In addition, UP and BNSF each shall cooperate reasonably with Owner and ACTA in obtaining any other approvals or consents that may be necessary for the Project.

(b) Subject to the payment of fees pursuant to Article VII, the Railroads shall have the right to use the Rail Corridor for the movement of Local Trains, provided, however, (i) such Local Trains shall have the priority set forth in Section 3.2 and shall otherwise comply with the provisions of this Agreement, (ii) although Local Trains may operate on the Rail Corridor, there shall be no switching of rail cars on the Rail Corridor, nor shall there be any freight rail service to any local industry customers directly from the Rail Corridor, except as expressly permitted in Section 3.1(a)(iii) of the UP C&M Agreement and except for switching activities at the Permitted Switching Locations (subject to the terms and conditions set forth below), and (iii) in no event shall more than 20% of the cargo transported by all Railroads on the Rail Corridor in any year move to or from facilities which are not included within the meaning of "port facilities" under Section 142(a)(2) of the Internal Revenue Code of 1986, as amended (with such percentage to be determined on the basis of gross ton miles transported on the Rail Corridor). Each Railroad shall submit to ACTA (with a copy to the Operating Committee), within 30 days after the end of each month (commencing with the second full calendar month after joint rail operations commence on the Rail Corridor) a written statement setting forth the number of gross ton miles transported on the Rail Corridor that did not move to or from "port facilities" during such month. If ACTA or the Operating Committee (or any agency of the federal government) determines that the 20% limitation set forth in the immediately preceding sentence has been or may be reached in any year, ACTA or the

Operating Committee may direct that some or all of the railcars or containers carrying cargo to a location that is not a "port facility" (as such term is used in the preceding sentence) may be rerouted over other rail lines selected by and available to the Railroad operating such railcars (e.g., in the case of UP, over the Drill Track). Notwithstanding the prohibition on switching of rail cars on the Rail Corridor set forth above, the Railroads may conduct switching activities at the Permitted Switching Locations on the following terms and conditions: (1) the switching of rail cars may be conducted from only one mainline track of the Rail Corridor at any one time and switching activities shall be conducted at the Permitted Switching Locations only during non-peak hours of Rail Corridor operations, (2) Through Train movements on the Rail Corridor shall be given dispatch priority over switching movements, and (3) except for repaying the Railroads the cost of any Additional Capital Improvements (as set forth in Section 8.6), funds in the Reserve Account may not be used for the purpose of causing such switching activities no longer to occur on the Rail Corridor until such time as Owner has received all payments to which Owner is entitled under Paragraphs (5), (6) and (7) of Section 7.3(b).

(c) Neither POLA, POLB nor ACTA will require the Railroads to operate Through Trains powered by electric locomotives on the Rail Corridor unless the Railroads voluntarily agree thereto, provided, however, if electrification of the Rail Corridor is otherwise required, such requirement shall not be a basis on which any party may terminate this Agreement, but if legally permissible, a Railroad may satisfy the requirement to use electric powered locomotives by using locomotives powered by an alternative energy source acceptable to the appropriate government entities.

(d) To the extent that some or all of the projects listed on Exhibit A-1 have not been completed by Substantial Completion ACTA shall use its best efforts to complete all such projects no later than six months after Substantial Completion. If it appears that any such projects may remain uncompleted at such six-month date, then the Operating Committee may take such action as it deems appropriate to expedite completion of such projects (and the parties agree that any actions taken to expedite the completion of the projects described as items 1.B through 1.D of Section A-1 shall be included as Net Project Costs). ACTA shall provide regular status reports to the Operating Committee on any such projects that it appears may not be completed by Substantial Completion.

2.3 <u>Drill Track</u>. The Drill Track may be used only by UP, for the purpose of operating Local Trains (except as otherwise provided in this Agreement). UP's use of the Drill Track shall be exclusive (subject to <u>Section 2.4</u>) and shall be governed by the Drill Track Operating Agreement.

#### 2.4 Detours.

(a) In the event of a complete blockage of the mainline Tracks on the Rail Corridor which will cause a Significant Delay, each Railroad shall provide to the other Railroads detour routes over any of its available rail routes (including over the Drill Track and the UP San Pedro Branch), adequate and sufficient to provide access to and from the Ports, on the terms of any detour agreement between or among the Railroads which then may be in effect with respect to such detour route or, if no such agreement is in effect, then on the terms of the Standard Form for Detour Agreement adopted by the Association of American Railroads ("Standard Detour

LA3:788722.16

Agreement") (provided that, with respect to such detours over the UP San Pedro Branch, access shall be provided to each of the Railroads on an equal and nondiscriminatory basis). The parties hereto acknowledge that BNSF's Harbor Subdivision route is available as a detour route only through June 29, 2003.

(b) The provisions of <u>Section 2.4(a)</u> shall not be applicable to delays or blockages occurring as a result of planned construction or maintenance of the Rail Corridor, except that:

On the conditions that: (x) the Joint Use Construction Projects have been (i) completed and any connections thereto which are required by this Agreement or the UP C&M Agreement have been constructed, (y) Owner or ACTA has double tracked UP's Wilmington Branch between Slauson Avenue and 60th Street, and (z) the connection Track described in clause (d) of the definition of "Rail Corridor" has been completed (the foregoing conditions, however, shall apply only if the detour is over UP's Wilmington Branch), if, during construction of the trenched portion of the Rail Corridor, BNSF's crossing of its Harbor Subdivision and the Rail Corridor in the vicinity of Slauson Avenue must be disconnected, and the construction of a shoo-fly or other alternative temporary facilities is not feasible or is impractical, either on the Rail Corridor or on adjacent property, then, upon at least 30 days' prior written notice from Owner or ACTA, UP shall provide to BNSF, and BNSF shall use, subject to Owner's or ACTA's reimbursement of BNSF's increased operating costs and service penalties payable by BNSF as a result of such detour, rail freight service operating rights over either the UP San Pedro Branch or UP's Wilmington Branch on the terms of a detour agreement then in effect between BNSF and UP with respect to such branch or, if no such agreement is in effect, then on the terms of the Standard Detour Agreement, until such time as such crossing of the Harbor Subdivision may be reconnected, which Owner and ACTA commit shall not be longer than 90 days, provided that UP shall not be obligated to construct any connections that may be necessary to allow for such detour.

On the conditions that: (x) the Joint Use Construction Projects have been (ii) completed and (y) any connections thereto which are required by this Agreement or the UP C&M Agreement have been constructed, and subject to the payment to UP of the applicable amounts set forth on Exhibit F hereto as the sole charge for such use (responsibility for the payment of such amounts, as between Owner and ACTA, on the one hand, and BNSF, on the other, shall be governed by the ATSF Purchase Agreement), if construction of the trenched portion of the Rail Corridor has been commenced but such construction will not have reached Substantial Completion on or before the "Put Expiration Date" (currently June 30, 2003, and as the same may be extended) under the Shared Use Agreement (Harbor Subdivision and Mission Tower Segment) between ATSF and The Los Angeles County Metropolitan Transportation Authority, then UP agrees that if Owner or ACTA so request, effective on the day before the Put Expiration Date, and upon at least 30 days' prior written notice from Owner or ACTA, UP shall provide to BNSF rail freight service operating rights over UP's Wilmington Branch, on the terms of a detour agreement then in effect between BNSF and UP with respect to

LA3:788722.16

This page intentionally left blank

The first step in addressing the safety and operational problems that may occur at highway-rail crossings on abandoned rail lines is to obtain information from the Surface Transportation Board (STB), the federal agency charged with oversight of railroads outside of safety matters, and the California Public Utilities Commission (CPUC), the agency charged with grade crossing safety. Under the ICC Termination Act of 1995 (which created the STB), a railroad may abandon a line only with STB's permission. In addition, the railroad needs to notify the CPUC of its intentions to abandon the line.

Once a rail line has been identified as abandoned or as a planned abandonment, the crossings on that line should be identified. This can be determined from the CPUC inventory of crossings or obtained directly from the National Rail-Highway Crossing Inventory maintained by the Federal Railroad Administration (FRA), the federal agency charged with oversight of safety on railroads. A field inspection of these crossings should be made to determine if all crossings on that line, both public and private, are listed in the inventory, and to verify the type of traffic control devices located at each crossing.

If rail service has been discontinued, pending resolution of the abandonment application and thus formal abandonment, immediate measures should be taken to inform the public. For example, "Exempt" signs can be placed at the crossings to notify drivers of special vehicles that a stop at the crossing is not necessary. Gate arms should be removed and flashing signal heads should be hooded, turned or removed. However, if these actions are taken, the traffic control devices must be restored to their original condition prior to operating any trains over the crossing. The railroad might flag the train over the crossing until such action can be taken.

If it appears that rail service has been permanently discontinued and resolution of official abandonment appears certain, the track might be paved over and all traffic control devices removed. This action should be taken immediately following official abandonment, if no possibility exists for resumption of rail service.

This page intentionally left blank

# Appendix D RAILROAD CROSSING INVENTORY

This appendix summarizes the railroad crossing inventory data for the Harbor Subdivision line gathered by the consultant team as part of the South Bay Cities Railroad Study. Table 1 summarizes the information gathered for all of the 180 crossing in the entire line, including above, below and at-grade crossings, both existing and eliminated. Table 2 summarizes similar information for the 50 existing at-grade crossings within the study area (Milepost 8 to milepost 26.5) and includes both public and private crossings.

A one-page detailed inventory for each of the 47 public at-grade crossings within the study area is included at the end of this Appendix. The data reflect the most recent (December 2001) information currently available at the U.S. Department of Transportation.

WILBUR SMITH ASSOCIATES

#### TABLE 1 HARBOR SUBDIVISION LINE Railroad Crossing Inventory Summary

mber	MainlineM Se Post	Xing	CPUC Xing No.	FRA Xing No.	Туре	County	City	Street (CPUC)	Street (FRA)	Street (BNSF)	Jurisdiction	Avg. Dai Vehicle (FRA)
1	0.09		002H = 0.10-8	627900U	Underpass	LOS ANGELES	LOS ANGELES	WASHINGTON \$T		WASHINGTON BLVD 24TH ST	Cey	
4	0.17	_	NA	NA				25TH ST	Alter all		NA	125
2	0.25		002H + 0.25	0279050 027906K		LOS ANGELES	LOS ANGELES VERNON	26TH ST	25TH ST	25TH ST	Cey	550
-	0.33		002H - 0.30 002H - 0.35-C	027902H		LOS ANGELES	LOS ANCELES	HARRETST	267H ST HARRIETT ST	26TH S1	City	7.600
2	0.43		002H - 0.40				VERNON	27TH ST		27TH ST	City	
<u>.</u>	0.50		002H - 0.50	0279075 027908Y		LOS ANGELES	VERNON	271H ST 28TH ST	277H STREET 287H ST	281H ST	City	2,400
-	4.34		002H - 0.53-C	780		LOS ANGELES	LOS ANGELES	MINERVA ST & 26TH ST	ENA ST	101M-01	Cey	2.900 #NA
-			002H - 0.54-C	027904W		LOS ANGELES	LOS ANGELES	MINERVA & 24TH ST	24TH ST		City	500
10			002H - 0.68-C	TBO		LOS ANGELES	LOS ANGELES	MINERVA ST NEAR 23RD ST	ena.		Oty	200
11	0.70		002H - 0.70	0279140		LOS ANGELES	VERNON	STTH ST	3TTH ST	37TH ST		8.20
2	0.71		002H - 0.71	0279154		LOS ANGELES	VERNON	36TH \$1	36TH ST.	3/1H \$1 380x \$1	City	6.20
14	0.77		002H - 0 77-C	0279110		LOS ANGELES	VERNON	301H ST	INA INA	3018.51	Oty .	0.23 EN3
4			002H - 077-C	0279196		LOS ANGELES	VERNON	301H ST	SOTH STREET		Cey	700
15	0.97		002H - 0.90	0279185		LOS ANGELES	VERNON	VERNON AV	VERNON AVE	VERNON AVE	Ony	6.763
16	0.07		002H - 0.90-C	027912N		LOS ANGELES	VERNON	SANTA FE	SANTA PE AVE	YERRUN AVE.	City	28.90
17	1.04		002H - 1.00	6279194		LOS ANGELES	VERNON	PACIFIC BLVD	PACIFIC BLVD	PACIFIC BLVD	City	
18	1.04						VERNON		CHAMBERS ST.	PACIFIC BLVD	City	16.20
5	1.38		002H - 1.25-C 002H - 1.30	027926W 027503/0		LOS ANGELES	VERNON	CHAMBERS ST ASTH ST	49TH STREET	49TH ST	Chy	
	1.00					LOS ANGELES				491831	Cey	1.50
20				0279205		LOS ANGELES	VERNON	PACIFIC BLVD	PACIFIC BLVD		Oty	18.00
11				027921M		LOS ANGELES	VERNON	4ETH ST	46TH ST		Ony	609
12				0279270		LOS ANGELES	VERNON	497H ST	49TH ST		Cey	1.90
			002H - 1.48-C	027924H		LOS ANGELES	VERNON	LEONA S BL	LEONIS BLVD		City	11.73
24	1.57		002H - 1,45-C 002H - 1,55	027\$30L		LOS ANGELES	VERNON	SANTA FE AV	SANTA FE AVE	A The series of a series of the	City	25.15
	1,97			0279371		LOS ANGELES		FRUITLAND RO	FRUITLAND AVE	FRUITLAND AVE	City	5.50
26			002H - 1.57-C	027934N		LOS ANGELES	VERNON	SANTA FE AV	SANTA FE AVE	1010.00	City	19.90
27	1.61	_	002H - 1.60	027538R		LOS ANGELES	VERNON	52ND 57	S2ND STREET	52ND S7	City	400
28	1.65		002H - 145	027939X		LOS ANGELES	HUNTINGTON PARK	S3RD ST	S3RD SANTA FE AV	S3RD ST	County	1.22
29	1.70		002H - 1.70	0279405		LOS ANGELES	HUNTINGTON PARK		54TH ST SANTA FE	100.000	County	550
90	1.80		002H - 1.80	0275414		LOS ANGELES	HUNTINGTON PARK	SSTH ST	SSTH ST SANTA FE	557H S1	County	3.37
13	1.85		002H - 1.85	0279429		LOS ANGELES	HUNTINGTON PARK	SETH ST	SOTH ST SANTA FE	567H 57	County	850
12	1.54		002H - 1.90	027643M		LOS ANGELES	HUNTINGTON PARK	STTH ST	STTH ST SANTA FE	\$7TH \$T	County	900
33	1.99		002H - 1.99-D	027944U		LOS ANGELES	HUNTINGTON PARK	ALLEY BET 57TH & S8TH ST	ALLEY	1141197	County	50
94	2.02	_	002H - 2.00	0279458		LOS ANGELES	HUNTINGTON PARK		SETH ST SANTA FE	581H S7	County	840
55	2.05		002H - 2.10	027946H		LOS ANGELES	HUNTINGTON PARK		SANTA FE SLAUSON	SANTA FE AVE	County	17.00
м	2.30		002H + 2:30	027947P		LOS ANGELES	HUNTINGTON PARK		2ND STREET	2ND ST	City	1,500
37			002H + 2.39-C	C27948W		LOS ANGELES	HUNTINGTON PARK		RECENT & SLAUSON		City	25.00
38	2.48		002H + 2.50	027950X		LOS ANGELES	HUNTINGTON PARK		ALAMEDA STREET	ALAMEDA ST	City	22.60
29	2.68		002H - 270	027951E		LOS ANGELES	LOS ANGELES	HOLMES AV	HOLMES AV ALAMEDA	HOLMES AVE	County	7.200
4Ģ	2.63		002H - 2.83	0279521		LOS ANGELES	LOS ANGELES	LONG BEACH AV - WEST	LONG BEACH W	LONG BEACH AVE	County	1.50
41			002H - 2.95-C	027963T		LOS ANGELES	LOS ANGELES	SLAUSON AV	SLAUSON LNG BEACH		County	23.70
12	3.06		002H - 3.10	027954A		LOS ANGELES	LOS ANGELES	COMPTON AV	COMPTON SLAUSON	COMPTON AVE	County	13,00
43	3.51		002H - 3.30	027955G		LOS ANGELES	LOS ANGELES	HOOPER AV	HOOPER SLAUSON	HOOPEH ST	County	10.00
44			002H - 3.37-C	027956N		LOS ANGELES	LOS ANGELES	NAOM: AV	NAOMI AVENUE		City	50
15	3.56	_	002H + 3.50	027957V	Contraction of the last	LOS ANGELES	LOS ANGELES	CENTRAL AV	CENTRAL AVENUE	CENTRAL AVE	City	16.50
46	3.64		NA	NA	Private Crossing	LOS ANGELES	LOS ANGELES	N.A PRIVATE CROSSING		Private crossing	Private	
17			002H - 3.71-C	027958C		LOS ANGELES	LOS ANGELES	SLAUSON AV	SLAUSON AVENUE	CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNE OWNER OWNER OWNER	City	25.00
LB	3.85		002H - 3.80	027960D		LOS ANGELES	LOS ANGELES	MCKINLEY AV	MCKINLEY AVENUE	MONNLEY AVE	City	4,10
15	3.90	-	002H - 3.90	027961K		LOS ANGELES	LOS ANGELES	PALOMA AV	PALOMA AVE	PALOMA BLVD	City	600
0	4.06		002H - 4,10	027963Y		LOS ANGELES	LOS ANGELES	AVALON BL	AVALON BLVD	AVALON BLVD	City	15.00
51	4,18		002H - 4.20	027964F		LOS ANGELES	LOS ANGELES	TOWNE AV	TOWNE AVENUE	TOWNE AVE	City	1,60
52	4.31	_	002H - 4.30	027965M		LOS ANGELES	LOS ANGELES	SAN PEDRO	SAN PEDRO STREET	SAN PEORO ST	City	14.00
13			002H + 4.40-C	027966U		LOS ANGELES	LOS ANGELES	SLAUSON AV	RN/A	122200221	City	#N/A
4	4.56		002H - 4.60	027968H		LOS ANGELES	LOS ANGELES	SO MAIN ST	MAIN STREET	MAIN ST	City	13.00
16	4.81	_	00294 - 4,80	02796949		LOS ANGELES	LOS ANGELES	SO BROADWAY	BROADWAY	BROADWAY	City	21.00
6	4.89		002H - 4.90-A	027971R	Overpass	LOS ANGELES	LOS ANGELES	HARBOR FWY (I-110)		HARBOR FWY (I-110)	State	2014
7	5.06		002H - 5.10	027972X		LOS ANGELES	LOS ANGELES	FIGUEROA ST	FIGUEROA STREET	FIGUEROA AVE	City	24.00
4	6.32		002H + 5.50	027973E		LOS ANGELES	LOS ANGELES	HOOVER ST	HOOVER STREET	HOOVER AVE	City	13,00
19	5.57		002H - 5.60	027974L		LOS ANGELES	LOS ANGELES	VERMONT AV	VERMONT AVENUE	VERMONT AVE	City	18,00
50	5.82		002H - 5.80	0279757		LOS ANGELES	LOS ANGELES	BUDLONG AV	BUOLONG AVENUE	BUDLONG AVE	City	4,000
1	6.07		002H - 6.10	0279776		LOS ANGELES	LOS ANGELES	NORMANDIE AV	NORMANDIE AVE.	NORMANDIE AVE	City	19.00
12	6.31		002H + 6.30	027978N		LOS ANGELES	LOS ANGELES	DENKER AV	DENKER AVENUE	DANKER AVE	City	6.00
13	6.42		002H - 6.40	0279794		LOS ANGELES	LOS ANGELES	SLAUSON AV	SLAUSON AVENUE	SLAUSON AVE	Oty	24.00
14	6.66		002H - 6.60	027981W		LOS ANGELES	LOS ANGELES	WESTERN AV	WESTERN AVENUE	WESTERN AVE	City	22.00
			002H - 6.83-C	0279820		LOS ANGELES	LOS ANGELES	BOTH ST	60TH STREET		City	1,30
			002H - 6.88-C	027985Y		LOS ANGELES	LOS ANGELES	60TH ST	GOTH STREET		City	1.30
18 16									62ND STREET			300
			002H - 656-C 002H - 7.01-C	0279645		LOS ANGELES	LOS ANGELES	62ND 57 62ND 57	62ND STREET		Oity City	300

SOUTHE CPUC FRA BNSF

Page 1

WLEUR SMITH ASSOCIATES

Number	MainlineM Re Post	Study Xing	CPUC Xing No.	FRA Xing No.	Туре	County	City	Street (CPUC)	Street (FRA)	Street (BNSP)	Junidiction	Avg. Dally Vehicles (FRA)
65	7.11	7	862H - 7.10	027987M		LOS ANGELES	LOS ANCELES	VAN NESS AV	VAN NESS AVENUE	VAN NESS AVE	City	10.800
70	7.42		002H - 7.40	027988U		LOS ANCELES	LOS ANGELES	4TH AV	4TH AVENUE	4TH AVE	City	2.400
21	7.75		0024 - 7.70	0279896		LCS ANGELES	LOS ANGELES	BTH AV	8TH AVENUE	61HAVE	City	17.000
72	7.94		002H - 7.90	0279940V		LOS ANGELES	LOS ANCELES	11TH AV	TTTH AVENUE	117H AVE	City	1,208
73	7.97		00214 7.95	027991C		LOS ANCELES	LOS ANGELES	ETTH ST	ATTH STREET	671H 57	City	2,700
74	8.03	YES.	002H - 8.00	0279823		LOS ANGELES	LOS ANGELES	CRENSHAW BL	CRENSHAW BLVD.	CRENSHAW BLVD	City	23,500
25	8.14	YES	002H < 8.10	027963R		LOS ANGELES	LOS ANGELES	VICTORIA AV	VICTORIA AVENUE	VICTORIA AVE	City	750
78	#.23	YES	002H - 8.20	027964X		LOS ANCELES	LOS ANGELES	BRYNHURST AV	BRYNH, SEST AVE	BRYNHURST AVE	City	700
77	8.32	12.5	E02H - 8.30	027996E		LOS ANCELES	LOS ANGELES	WEST BL	WEST BLVD.	WEST BLVD	City	5.300
78	8.60	YES	0024 - 8.90	0279964		LOS ANGELES	INGLEWOOD	REDONDO BL	REDONIDO BLVD	REDONDO BLVD	City	500
78	8.70		00214 - 8.70-0	0279971	ELIMINATED	LOS ANGELES	INGLEWOOD	REDONDO BL	any A		Oty	
80	8.80		002H - 8 80-D	027998A	ELIMINATED	LOS ANCELES	INGLEWOOD	REDONDO BL	INCA		City	
81	- 8.89	Constant of the	NA	NA	ELIMINATED	LOS ANCELES	INCLEWOOD	1231-24-1450/D	All	Ped xing (Centralia Park)	NA	
82	8.13	YES	002H - 9.10	1128001N		LOS ANGELES	INGLEW000	CENTINELA AV	CENTINALA AVENUE	CENTINELIA AVE	City	29,000
83	9.50	785	002H - 8.80	028002V		LOS ANGELES	INGLEWOOD	LA BREA ST	LA BREA AVENUE	LA BREA AVE	City	36.000
34 85	1.82	YES	D02H - 9.90	029003C		LOS ANGELES	INGLEWOOD	IVY AV	NY AVENUE	IVY AVE	City	2.500
M	9.94	YES	00214 - 10.00	0200643	ELIMINATED	LOS ANGELES	INGLEWOOD INGLEWOOD	EUCALYPTUS AV	EUCALYPTUS AVE	EUCALYPTUS AVE	Cty	12.000
87			NA	N.A.	ELIMINATED.			NORTH CEDAR AV	and the second	Private crossing	Private	
	10.21	Y65	802H - 10.20	028067E		LOS ANGELES	INGLEWOOD		CEDAR AVENUE	CEDAR AVE	City	800
88	10.36	YE5	002H - 10.00 (002H - 10.50	028142X		LOS ANGELES	INGLEW000 INGLEW000	OAK ST	DAK ST HYDE PARK BLVD	DAK ST	City	3,200
90	10.62	YES		028008L	California (California)	LOS ANGELES		HYDE PARK BL	HTDE PARK BLYD	HYDE PARK BLVD	City	4,000
91	10.63	-		028009T 029010M	Underguase	LOS ANGELES	INGLEWOOD INGLEWOOD	SAN DIEGO PWY (1-405)	A CHARTER MAN	SAN DIEGO PWY (1405)	State	34.900
82		715				LOS ANGELES LOS ANGELES	INGLEWOOD	LA CIENEGA BL HINDRY	LA CIENEGA BLVD	LA CIENEGA BLVD	City	
93	10.82	YES VES	002H - 18.90 002H - 11.10	028011U 0280128		LOS ANGELES	INGLEWOOD	MANCHESTER AV IL-105 EXITI	HINDRY AVENUE	HINDRY AVE MANCHESTER AVE	City State	4.500
54	11.63	YES	00294 - 11.60	0290128		LOS ANGELES	INGLEWOOD	APBOR VITAL ST	ARBOR VITAL STREET	ARBOR VITAE ST	City	22,700
96	12.24	1975	002H - 1210-B	0280195	Underguase	LOS ANGELES	LOS ANGELES	CENTURY BL	ARBUR VITAL STREET	CENTURY BLVD		22.700
16	12.36	YES	002H - 12.36	0280201	Uncerpairs	LOS ANGELES	LOS ANGELES	TOATH ST	TOUTH STREET	104TH ST	City	5.500
97	14.00	194	002H - 12.70-C	TBO		LOS ANGELES	LOS ANCELES	AVIATION BL	INCA	10411121	City	IN/A
108	12.02	YES	80244 - 12.80	0280250		LOS ANGELES	LOS ANGELES	111TH ST	27.0	STITH ST	City	EN/A
09	10.00	154	902H - 12.90-C	028021A		LOS ANGELES	LOS ANGELES	104TH ST	ancia.	1111Fig1	City	anula.
100			002H + 13.00-C	028023N		LOS ANGELES	LOS ANGELES	102ND 51	HN/A		City	stri/A
101	12.13	YES-	0024 - 13.10	0280278		LOS ANGELES	LOS ANGELES	IMPERIAL HWY	IMPERIAL HOVY	IMPERIAL HWY	City	37,000
102	10.10	10.0	002H - 1212-AC	TEO	Overtaxe	LOS ANGELES	LOS ANCELES	ARPORT VIADUCT	and Store Little	and a state of the	State	41 1000
103			002H-13.12-ACT	NA.	Overpass	LOS ANGELES	EL SECUNDO	MTA GREEN LINE			State	
104	12.12		002H - 13.16-AT	NA.	Overpass	LOS ANGELES	EL SEGUNDO	MTA GREEN LINE			State	
105	13.13		002H - 13.19-AT	NA	Overpass	LOS ANGELES	EL SECUNDO	MTA GREEN LINE			State	
706			002H + 13.20-C	029028X		LOS ANDELES	EL SEGUNDO	LAPHAM ST	LAPHAM STREET		City	500
107			002H - 13 33-ACT	TED	Overpass	LOS ANGELES	EL SECUNDO	MTA GREEN LINE			City	
108	13.37	YES	002H - 13.40	028047C		LOG ANGELES	EL SEGUNDO	118 TH 5T	118TH STREET	118 114 51	City	800
109			002H > 13.40-C	028030Y		LOS ANGELES	EL SEGUNDO	DOUGLAS ST	etsica.		City	#N/A
110			002N - 13.51-ACT	TBO	Overpass	LOS ANGELES	EL SEGUNDO	MTA GREEN LINE			City	
111	13.82	YES	002H - 13.60	0200483		LOS ANGELES	EL SEGUNDO	120TH ST	120TH STREET	120TH 5T	City	1,800
112			00214 - 13.70-C	028036P		LOS ANGELES	EL SEGUNDO	NASH ST	IIN/A		City	inv/A
113			002H - 13.82-C	028037W		LOS ANGELES	EL SEGUNDO	MAPLE AV	INA.		City	#N/A
114	13.89	YES.	00214 - 13.90	026049R	Private Crossing	LOS ANGELES	EL SEGUNDO	124TH ST	INCA.	Private crossing (124th St)	Private	
115			002H = 13.98-C	028039K		LOS ANGELES	EL SEGUNDO	MAPLE AV	#N/A		City	IIN/A
116			002H - 14.08-C	0250405		LOS ANGELES	EL SEGUNDO	MAPLE AV	#%/A	en Ment e Mili Marte Ser	City	mhi/A
117	14.13		002H - 14 10-B	0280515	Underpasa	LOS ANGELES	EL SEGUNDO	EL SEGUNDO BL		EL SEGUNDO BL	City	
118			002H - 14.10-C	0280411		LOS ANGELES	EL SEGUNDO	MAPLE AV	#N/A		City	INA.
110		-	002H - 14.21-C	0260421		LOS ANGELES	EL SEGUNDO	WALNUT AV	#N/A		City	#N/A
120	14.52	-	N.A.	NA.	UPRR Crossing		EL SECUNDO				R.R.	
121	14.08	YES.	00211 - 14.70	028052V	and the second second	LOS ANGELES	EL SEGUNDO	DOUGLAS ST	DOUGLAS ST	DOUGLAS ST	City	15,700
122	14.79	YES	NA	NA	Private Crossing	LOS ANGELES	EL SEGUNDO	CHAPMAN WY		Private sing (Chapman Way)	Private .	
123	15.08	VES	N.A.	N.A.	Pedestrian sing	LOS ANGELES	EL SEGUNDO	DOUGLAS ROSECRANS STA		Pedestnan king	Private	
124	15.41		00204 - 15.50-8	026054M	Underpass	LOS ANGELES	HAWTHORNE	AVIATION ROSECRANS BL		ROSECRANS BLVD	County	
125	1010		002H - 18.05-AC	028055U	Overpass	LOS ANGELES	HAWTHORNE	LAWNDALE (1-405)			State	
126	18.10	YES	002H - 16.10	0280608		LOS ANGELES	HAWTHORNE	MARINE AV	COMPTON MARINE AV	COMPTON BLVD	City	30.000
127	36.74	YES.	002H - 16.70	028062E		LOS ANGELES	REDONDO BEACH	INGLEWOOD AV	INGLEWOOD AVE	INGLEWOOD AVE	City	25.000
128	16.87	YES	002H - 16.80	028064T		LOS ANGELES	LAWNDALE	MANHATTAN BEACH BL	MANHATAN BEACH BL	MANHATTAN BEACH BLVD	Dity	19.000
129	16.94	YES	002H - 16.90	028065A		LOS ANGELES	LAWNDALE	150TH ST	199TH STREET	159TH ST	City	600
130	17.01	YES	00294 - 17.00	028066G		LOS ANGELES	LAWNDALE	160TH ST	160TH STREET	160TH ST	City	606
	17.08	YES	002H - 17.05	028067N		LOS ANGELES	LAWNDALE	1615T ST	16157 STREET	16151 57	City	700
131		YES	00294 - 17.10	028068V		LOS ANCELES	LAWNDALE	162NO 51	162NO STREET	162ND ST	City	2,100
132			statistical in the second	and the second second second								
132 133	17.62	YES	00294 - 17.60	029069C	and the second s	LOS ANGELES	LAWNDALE	17UTH ST	170TH STREET	1701H 51	County	2.505
132			002H - 17.60 002H - 17.90-8 002H - 18.10-8	028069C 028070W 0280710	Underpass Underpass	LOS ANGELES LOS ANGELES LOS ANGELES	LAWNDALE REDONDO BEACH	ARTESIA BL (SR 91) GRANT AV	170TH STREET	ARTESIA BLVD (SR 91) GRANT AVE	County State Otv	2.505

Sources: CPUC, FRA, BNSF

TABLE 1 HARBOR SUBDIVISION LINE Railroad Crossing Inventory Summary

Page 2

WILBUR SMITH ASSOCIATES

# TABLE 1 HARBOR SUBDIVISION LINE Railroad Crossing Inventory Summary

lumber	MainlineM Re Post	Study Xing	CPUC Xing No.	FRA Xing No.	Туре	County	City	Street (CPUC)	Street (FRA)	Street (BNSF)	Artiveliction	Avg. Dal Vehicle (FRA)
137	18.58		00294 - 19.00-8	0280735	Underpass	LOS ANGELES	TORRANCE	HAWTHORNE (I-107)		HAWTHORNE BLVD (5-157)	State	
138	19.03		002H - 19.10-8	028143E	Underpass	LOS ANCELES	TORRANCE	190TH ST.		190TH 5T	County	
138	12.61		002H - 19.50-A	TEO	Overcame	LOS ANCELES	TOFIRANCE	PRAIRE-MADRONA AV		PRAIRE AVE	City	
140			002H v 20.76-C	112N064E		LOS ANCELES	TORRANCE	CRENSHAW BL	CRENSHAW BLVD		City	42,600
141			002H - 20.85-C	026088G		LOS ANGELES	TORRANCE	ALASKA AV	ALASHA AVENUE		City	1.000
142	20.94		002H - 20.9G-B	1290955	Underpass	LOS ANOELES	TORRANCE	CRENSHAW BL	INCA	CRENSHAW BLVD	City	
543			002H - 21.00-C	0290894		LOS ANGELES	TORRANCE	ALASKA AV	ALASKA AVENUE		City	1,000
144	21.24	YES	002H - 2120	62800ev		LOS ANGELES	TORRANCE	TORRANCE III.	TORRANCE BLVD	TORRANCE BLVD	City	33.800
145			002H - 21.25-C	0280904		LOS ANCELES	TORFIANCE	HAWAII AV	HAMAILAVENUE		Ch	400
146			002H - 2130-C	1210854		LOS ANGELES	TORRANCE	VAN NESS AV	VAN NESS AVE		City	17.400
147			002H / 21.32-C	028001#		LOS ANGELES	TORRANCE	MAPLE AV	stub.		City	#%2A
148	21.06	YES	002H - 21.40-0	0280975	Pedestrian sing	LOS ANCELES	TORRANCE	EL DORADO ST	TNA .	EL DORADO	Co.	
148	21.48	VES.	8024 - 21.50	ACCOUNTS A		LOS ANGELES	TORHANCE	SONOMA ST	SONOMA STREET	SONOMA ST	City	1,200
150	21.60	YES	00214 - 21.60	0290990		LOS ANGELES	TORRANCE	CARSON ST	CARSON STREET	CARSON ST	City	37.600
151			002H + 21.70-C	0280ed1		LOS ANDELES	TORRANCE	WESTERN AV	WESTERN AVENUE	A CONTRACT OF A	City	32 808
152	22,10	YES	002H - 22.10	1101950		LOS ANORES	TORRANCE	WASHINGTON AV	WASHINGTON ST	WASHINGTON BLVD	Cer	3 800
153	27.24	YES	002H - 22.20	0281030		LOS ANCELES	TONRANCE	ARLINGTON AV	ARE INCTON AVE	ARLINGTON AVE	City	54.600
154	22.48	YES	002H - 22.50	028104N		LOS ANGELES	TONRANCE	CABRILLO AV	CABRILLO AVENUE	CABRILLO AVE	City	7.500
155	22.67	YES	602H - 2240	IDB F05V		LOS ANGELES	TORRANCE	BORDEH AV	BORDER AVENUE	BORDER AVE	City	500
154	22.78	YES	80214 - 22.80	028108C		LOS ANCELES	TORRANCE	SEPLEVEDA III.	SEPUR VECIA BLVD	SEPLEVEDA BLVD	City	53.70
157.		197	002H - 22 M-C	TBD		LOS ANGELES	TORRANCE	TOLEDO ST	MCA.	100.000.000.000.00	City	anu a
15.8	23.03	VET	002H - 23.00	0281072		LOS ANCELES	TORRANCE	WESTERN AV	WESTERN AVENUE	WESTERN AVE	City	23.60
150	23.60		002H - 2160-AD	TBD.	Overtass	LOS ANCELES	LOS ANGELES	BATEYAV	The second second second		Chy	
160	23.88		002H - 23.90-8	0281088	Undertums	LOS ANGELES	LOMITA	NORMANDIE AU		NORMANDIE AVE	County	
161	24.42		002H - 24 40-A	028105X	Overgass	LOS ANCELES	LONGTA	VERMONT AV		VERMONT AVE	County	
162	24.52		002H - 24.50-A	0291105	Overpass	LOS ANCELES	LONITA	HARBOR FWY 6-1105		HARBOR FWY (H110)	State	
16.2	24.70	YES.	1002H 24.80	028113M	Contraste.	LOS ANCELES	CARSON	S FICUERDA ST	FIGLEROA STREET	FIGHERDA ST	City	11.00
164	24.92	YES	NA	NA	Prvate Crossing		CARSON	a result reserves	THURSDAY & THE ET	Private cititano	Pruste	11.000
185	24.67	100	NA	NA	ELIMINATED	LOS ANGELES	CARSON			Private crossing	Pruste	
164	25.27		002H - 25 35-8	028116H	Undertains	LOS ANCELES	CARSON	MAIN ST		MAN ST	County	
167	25.94	YES	00294 - 25.90	028118W	de condense	LOS ANGELES	CARSON	AVALON BL	AVALON BLVD	AVALON BLVD	Chy	18.00
16.0	26.04	YES	60294 + 2% D0	028119D		LOS ANGELES	LOS ANGELES	BROAD AV	BROAD STREET	EROAD ST	City	1,100
165	26.11	YES	00294 - 26.10	028124A		LOS ANGELES	LOS ANGELES	LAKME ST	LAKME STREET	LAKME ET	Ctr	1 100
170	20.36	YES	00294 - 26.30	0281256		LOS ANCELES	CARSON	WILMINGTON AV	WILMINGTON AVE	WEMINGTON AVE	City	18.008
171	1.00.00	18.0	D02H - 26.50-C	TBO		LOS ANGELES	CARSON	SEPLEVEDA BL	#N/A	TRANSPORT OF AVE	City	EN/A
172	26.60		00294 - 26.60	028126N		LOS ANGELES	CARSON	LOMITA BL	LOMITA BLVD		Cty	1.000
173	25.50		002H - 26.80-C	028131K		LOS ANGELES	CARSON	LOM TA BL	LOMITA HEVD		Day	1,300
174	27.18		NA	NA	Private Crossing	COD PROPAGE		ECONTROL PRODUCT	a control for the or to	Frivale crossing	Private	
175	27.20		002H - 27 20-A	028127V	Overbase	LOS ANGELES	LOS ANCELES	PACIFIC COAST HWY (SR 1)	PNA	Private crocking	State	EN/A
176	27.40		00214 - 27.40	0281280	Greepars	LOS ANGELES	LOS ANGELES	L ST	LSTREET		City	3,600
178						LOS ANGELES	LOS ANGELES	DENNI ST	DENNI STREET			
178	27.60		002H - 27.50 002H - 27.60	028129J		LOS ANGELES	LOS ANGELES	CRANT 51	GRANT STREET		City	530
178.	#1.80		002H - 27.63-8C	028130D 028134F	Notice in the	LOS ANGELES	LOS ANGELES	ALAMEDA ST	UNANI DIRET		City	900
					Underpass				PACIFIC COAST HWY		State	20.00
180	I		002H - 27.80-C	026135M		LOS ANGELES	LOS ANGELES	PAC COAST HWY (SR 1)	PAGENG GUADT HWY		20100	20,000

Page 3

WILBUR SMITH ASSOCIATES

#### TABLE 1 HARBOR SUBDIVISION LINE

						No,	of Tra	acks (CPUC)	No. of Tracks	Max. Train					Accident Count (FRA)	
umber	MainlineM Se Post	Study Xing	CPUC Xing No.	Daily Trains (FRA)	Main Line	Main	Br.	Other Tot		Max. Train Speed Mainline	Warning Device (CPUC)	Warning Device (FRA)	FRA Inventory Updated	Warning Device (BNSF)	Total: 107	Notes
4	0.09	r	002H = 0.10-8		Yes	0	. 1	1. 2		12 mpn				1200		Not an at grade xing
2	0,17		NA	and the second s	Yes	0		1 2		12 mph	-		101000	Gates		Xing from BNSF list; not in CPUC li
3	0.25		002H - 0.25		Yes	0		2 3	3	12 mph	2(9)	Gates	00-11-07 99-07-16	Cates Gates		
÷	0.33		002H + 0.30	1	Yes	0		1 1	1 1	12 mph	1(9) 1(9A) 2(9)	Flashing lights Gates	99-09-27	Gastes		
2	0.43		002H - 0.35-C	19	No Yes	0	- 2-	2 3	1	12 mph	2(18)	Cross bucks	00-11-07	Gates		
÷	0.50		002H - 0.40 002H - 0.50		Ves	1.2	-1-	1 2	1 1	12 mph	2(9)	Cates	00-11-07	Cales		
<u>.</u>	0.50	-	002H - 0.53-C	INA	No	1.0	-		INCA.	14 1991	4(4)	#N/A	EN/A	Canal		
			002H - 0.64-C	0	No	1 é	0	2 2	2	-	1(1/1A)	Stop signs	99-09-27			
10			002H - 0.68-C	INA	No	1 6	8	1 1	INGA.	-	1(1/1A)	#N/A	EN/A			1
11	0.70		002H + 0.70		Yes	1.0		2 3	2	12 mph	2(9)	Gates	00-11-07	Gates		
12	0.71	-	00294 + 0.71		Yes	1.0		0 1	2	12 mph	2(9)	Gates.	00-11-07	Gates		
13	1		002H - 0.77-C	INA	No.	1.0	0	1 1	an/A	-	2(1/1A)	8%A	#N/A			
14		-	002H - 0.79-C	0	No	0	0	1 1	1		and the second s	Cross bucks	99-09-27			
15	0.97		002H - 0.90		Yes	0	1	0 1	1	12 mph	2(9)	Gates	00-11-07	Gates.		
16			002H - 0.90-C	7	No	0	0	5 5	1		2(19)	Cross bucks	99-09-27			
17	1.04	-	002H - 1.00		Yes.	0		0.1	1.1	12 mph	4(9)	Gates	00-11-07	Cales		
18			002H + 1.26-C	2	No	0	0	1 1	1.1		1(1/1A)	Cross bucks	99-09-27			
15	1.38		002H - 3.30	. 9	Yes	0	1	8 5	10	t2 mph	2(1/1A) 1(3)	HWTS WW Bets		F lights (poss. gate)		
20		_	002H - 1.35-C	3	NO	0	0	1 1	1		2(8A)	Flashing lights	99-09-27			
27			002H - 1.40-C	3	No	0	0	8 5	1		1(1/1A)	Cross bucks	99-09-27			
22			902H - 1.41-C	2	No	0	0	2 2	2		2(1/1A)	Cross bucks	99-09-27			
23			002H - 1.48-C	3	No	0		1 1	1		2(1/1A)	Cross bucks	99-09-27			
24			002H - 1.49-C	4	NO	0	Q.	1 1	1		2(1/1A)	Cross bucks	99-09-27			
25	1.57		002H - 1.50	2	Yes	0	- 1	5 2	2	12 mph	2(9)	Gates	99-09-27	Gates		
26			002H - 1.57-C	3	No	0	0.	1 1	1		2(1/1A)	Cross Sucks	95-09-27			
27	1.61		002H - 160		Yes	0	1	1 2	2	12 mph	2(9)	Flashing lights	00-11-07	Cates		
28 29	1.65		002H + 1.65	1	Yes	1.0	- 1	1 2	2	15 mph	2(9)	Gates	00-11-07	Cates	-	
29	1.70		002H + 1.70	9	Yes	0	1	1 2	2	15 mph	2(9)	Gates	00-11-07			
30 31	1.80		002H + 1.80		Ves	1.0	- 1	1 2	1	15 mpn	2(9)	Gates	00-11-07	Gates	-	
21	1.85		002H - 1.85		Yet	1.8		6 3		15 mph	2(9)	Cates	00-11-07			
×	1.54		002H - 1.90		Vas	1.8-		2 3		15 mph	2(8)		00-11-07	Gales		
12 30 34 35	1.99		0024 - 1.99-0	1	Yes	1.2		0 1	-	15 mph 15 mph	1(1/1A) 1(8) 2(9)	Flashing lights Cates	00-11-07	Gates		
2-	2.02	-	002H - 2.00 002H - 2.10	1	Yes. Yes	1.5				15 mph	2(9)	Gates	00-11-07	Gates		
2-	2.30		002H + 2.30	1	Yes	1 .		0 1	1 1	15 mph	2(8)	Flastving lights	00-11-07	Flashing lights		
36 37	1.00		002H - 235-C	1 1	No	1.0		1 1	1 1	1.000	1(1/1A)	Cross bucks	95-09-27	Care of the		
36	2.48		002H - 2.50		Vasi	1 8		6 1		10 mpn	1(8) 4(9)	Gates	00-11-07	Gates		Xing over Alameda RR Combor
39	2.68		002H + 2.70	1 9	Ves	1 0	- 1	1 2		20 mph	4(9)	Gates	05-11-07	Gates	2	
40	2.83		002H - 2.83		Yes	0	- 1	0 1	1 1	20 mph	1(8) 1(9)	Gates	00-11-07	Gates	1	
41			002H + 2.95-C	0	No	0	0	1 1	1 2		1(1/1A)	Cross bucks	99-09-27			
42	3.06		002H + 3.10	9	Ves	0	1	0 1	1	20 mph	2(9)	Gates	00-11-07	Gates	1	
43	3.51		002H - 3.30	9	Ves	0	- ÷	1 2	1	20 mph	2(9)	Cates	00-11-07	Gates	4	
44			002H + 3.37-C	0	No	0	0	1 1	1.	- CONTROL	T(7/1A)	Cross bucks	99-09-27			
45	3.56		002H + 3.50	5	Yes	0	1	0 1	1	20 mph	2(5)	Flashing lights	00-11-07	Cates	3	· · · · · · · · · · · · · · · · · · ·
46	3.64		NA		Ves	0	1	0 1		20 mph		and a finite		F. lights (poss. gate)	A DECEMBER OF	King from BNSF list: not in CPUC I
47			002H + 3.71-C	3	No	0	0	1 1	1		2(6A)	Flashing lights	89-09-27		2	
48	3.81		002H - 3.80	9	Yes	0	1	1 2	1	20 mph	2(9)	Flashing lights	00-11-07	Cates	1	
45	3.90		002H + 3.90	9	Yes	0	1	2 4	1	20 mph	2(9)	Cates	00-11-07	Gates		
50	4.06		002H - 4.10	9	Yes	0	1	0 1	1	20 mph	2(9)	Gates	00-11-07	Gates	4	
51	4.16		002H + 4.20	9	Yes	0	- 1	1 2	1	20 mph	2(9)	Gates	00-11-07	Cates		
52	4.35		002H + 4.30	9	Yes	0	1	1 2	1	20.mph	2(9)	Gates	00-11-07	Gates	2	
\$3			002H - 4.40-C	IN/A	No	0	0	1 1	SN/A		1(1/1A) 1(3)	#N/A	ENUA	(a111)		
54	4.56		002H - 4.60	9	Yes	0	1	0 1	1	20.mph	2(9)	Flashing lights	00-11-07	Gates	3	
55	4.81		002H - 4.80		Yes	0	1	0 1	1	20 mph	2(9)	Gates	00-11-07	Gates		Name and and the other
56	4.89	-	002H - 4.90-A	-	Yet	0	1	0 1		20 mph				10000		Not an at grade king
57	5.06		002H + 5.10		Yes	1 0	- 1	0 1	+ 1-	20 mph	2(9)	Gates	00-11-07	Gates	-	
58	6.32	-	002H - 5.30		Yes	10	1	0 1	1	20 mpn	2(9)	Gates	00-11-07	Gates		
59	5.57		002H - 5.60	9	Ves	0	1	0 1	1 1	20 mph	2(9)	Gates	00-11-07	Cates	2	-
60	5.82	-	002H - 5.80		Yes	1 3	- 1	1 2		20 mph	2(9)	Gates	00-11-07	Gates		
63	6.07	-	002H - 6.10	9	Yes	1 9	- 1	1 1	1	20 mph	2(9)	Gates	00-11-07	Gates	1	
12	6.31		002H - 6.30		Yes	0	- 1	1 2	1	20 mph	2(9)	Flashing lights	00-11-07	Cates		
63	6.42		00214 - 6.40		Yes	0	-1	0 1	1	20 mph	1(8) 2(9)	Flashing lights	00-11-07	Cates Gates		
64	6.66		002H - 6.60		Ves	1 2	-2		11	20 mph	2(9) 1(1/1A)	Gates Cross bucks	95-05-27	Culture		
65 66		-	002H - 6.83-C	0	NO	1.8	-8		11	1	2(1/1A)	Cross Sucks Cross Sucks	99-09-27			
67	-	-	002H - E.88-C		No	1 3			1 .	-	3(1/1A)	Cross bucks	99-09-27			
			002H - 6.96-C	9	No	1.9				-	2(1/14)	Cross bucks	99-05-27		-	

Sources: CPUC, FRA, BNSF

Page 4

Accident Count (FRA) No. of Tracks (FRA) No. of Tracks (CPUC) Max. Train Speed Mainline MainlineM Study its Post Xing Daily Trains (FRA) Br. Other Total Warning Device (CPUC) Warning Device (FRA) FRA Inventory Updated Main Total: 107 CPUC Xing No. Main Line Warning Device (BNSF Number 0024 -0024 -0024 -0024 -0024 -0024 -0024 -0024 -0024 -0024 -0024 - 
 4
 7.10

 4
 7.40

 4
 7.70

 4
 7.90

 4
 7.90

 H
 8.00

 H
 8.10

 H
 8.60

 H
 8.60

 H
 8.60

 H
 8.60

 H
 10.00
 Gates Cates 00-11-07 Gates 1 90-11-07 06-11-07 00-11-07 00-11-07 00-11-07 90-11-07 00-11-07 00-11-07 Gates Gates Gates Gates Gates Gates Gates Gates Flashing lights Gates ÷ Gates Flashing lights Gates Gates Flashing lights Flashing lights YES YES YES YES 1 
 NA
 0102+
 8.10

 0024
 8.60
 0024
 5.60

 0024
 5.80
 0024
 10.00

 NA
 0024+
 10.20
 0024

 0024
 10.30
 NA
 0024+
 10.20

 0024+
 10.50
 0024+
 10.50
 0024+
 10.50

 0024+
 10.55
 0024+
 10.80
 0024+
 11.50
 0024+
 11.50

 0024+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 00224+
 11.80
 Cates Flasheg ligtes Cates Gates ing tram BNSF last not in CPUC last 12.5 4(9) 4(9) 2(9) 2(9) 96-11-07 06-11-07 06-11-07 06-11-07 Cates Gates Gates Gates -3 ing tom BNSF set, not in CPUC list 2(8) 2(8A) 2(8) 96-11-07 96-11-07 96-11-07 Gates Gates Gates YES YES Gates Gates Factory lights 2 Not an at grade king 06-11-07 06-11-07 06-11-07 06-11-07 4(8) 4(8) 4(8) 2(8) 783 785 785 Cates Gates Gates Gates Gates Gates 7 1 2 Fasting light kot an at grade sing 
 002+
 12.5498

 002+
 12.5498

 002+
 12.5498

 002+
 12.260

 002+
 12.260

 002+
 12.360

 002+
 12.300

 002+
 13.100.41

 002+
 13.100.41

 002+
 13.100.41

 002+
 13.350.421

 002+
 13.350.421

 002+
 13.350.421

 002+
 13.360.41

 002+
 13.370.42

 002+
 13.350.421

 002+
 13.360.41

 002+
 13.360.41

 002+
 13.360.41

 002+
 13.350.421

 002+
 13.360.41

 002+
 13.50.42

 002+
 13.50.42

 002+
 14.06.5

 002+
 14.06.5

 002+
 14.06.5

 002+
 14.06.5

 002+
 14.06.5

 002+
 14.06.5

 002+
 14.06.5

 002+
 12.24 2(9) 2(5A) 2(9) 2(11A) 2(11A) 2(11A) 1(9) 3(5A) 00-11-07 INVA INVA INVA INVA INVA 00-11-07 Y53 Failing type PICA PICA PICA PICA PICA Gales PUA PUA PUA PUA PUA PUA 20 mph 12.82 165 Gates 20 mph 20 mph 12.12 7 YES Gates Not an at grade sing 13,13 2(1/5A) Cross bucks 99-09-27 Not an at grade sing 13.37 YES 00-11-07 #N/A 20 mpt 2(9) 2/8A Gates #N/A Gates 2 INA HTCA. 3 Not an at grade wind 00.11.07 874/A 874/A 874/A 874/A 874/A 2(9) 2(1R) 2(1R) 2(1R) 2(1R) 2(1R) Gates INUA INUA INUA INUA 13.62 VES 20 mpi Gates 1 SNA INA STEA SNA Gates 13.85 YES 20 mph 0 HNAA HNAA #N/A #N/A 14.15 20 mph 3 Not an at grade sing ITNUA ITNUA 2(1R) 2(1R) SNUA BNUA RNUA RNUA #N/A #N/A 14.52 14.65 14.79 15.08 15.41 10 mph 20 mph 20 mph 20 mph 20 mph JPRE RR sing not in CPUC int Clases Cross bucks Fashing lights 8 2181 219 lasting lights 00-11-07 YEI Private king according to BACE king from BACE list, not in CPUC list. Not an at grade king Shared by Hawithome and Redondo Shared by Hawithome and Redondo Shared by Hawithome and Redondo YES 1 2(9) 2(9A) 2(9A) 4(5) 2(9) 2(9) 2(9) 2(9) 2(9) 2(9) Gates Flashing lights Gates Flashing lights Flashing lights Flashing lights Gates 06-11-07 06-11-07 06-11-07 06-11-07 99-09-27 06-11-07 06-11-07 18,10 16,74 16,87 19,54 17,04 17,04 17,14 17,62 17,88 18,58 18,58 1212222222 Gates Gates Gates Gates Gates Gates Gates 1 Flashing lights Not an at grade sing Not an at grade sing Shared by Tomance 134 135 002H - 18,10-8 002H - 18,40 20 mpt YES 10 2(9) 05-11-07 Gates Gales

TABLE 1 HARBOR SUBDIVISION LINE Railroad Crossing Inventory Summary

Sources CPUC FRA BASE

Page 5

12/12/2001

#### WILBUR SMITH ASSOCIATES

WILBUR SMITH ASSOCIATES

#### TABLE 1 HARBOR SUBDIVISION LINE Railroad Crossing Inventory Summ

.....

			en herrie bien der			No.	of Tra	cks (CPI	ic)	No. of						Accident Count (FRA)	
umber	MainlineM ile Post	Study Xing	CPUC Xing No.	Daily Trains (FRA)	Main Line	Main	Br.	Other	Total	Tracks (FRA)	Max. Train Speed Mainline	Warning Device (CPUC)	Warning Device (FRA)	FRA Inventory Updated	Warning Device (BNSF)	Total: 107	Notes
137	18.98		002H - 19.00-B		Yes	0	- 1	0	3	-	20 mph		Contraction of the last				Not an at grade sing
138	10.03		002H - 19.10-8		Yes	0	. 1	0	1		20 mph						Not an at grade king
130	10.01		002H - 19.50-A		Yes	0	1	0	1		20 mph						Not an at grade xing
140			002H - 20 70-C	2	No	0	0	1	8	1		4(8)	Flashing lights	99-09-27		3	
141			002H - 20.80-C	2	No	0	0	1	1	2			Cross bucks	99-09-27			
142	20.94		002H - 20.90-B		Yes	0	1	0	. 1		20 mph				Gates	1	Not an at grade xing
143			002H - 21.00-C	2	No	0	0	1	1	2			Cross bucks	99-09-27		2	
144	21.24	YES	00214 - 21.20	10	Yes	0	1	0	. 1	1	20 mph	T(8) 1(9) 2(6A)	Flashing lights	00-11-07	Gates		
145			002H - 21.20-C	2	1411	0	0	1	3	1			Gruss bucks	99-09-27			
148			B62H - 21.30-C	2	No	0	0	+		1		2181	Flashing lights	99-09-27		1	
147			002H - 21.32-C	anu'a	No	0	0	1	1	<b>SNIA</b>		1083 (209)	INA	MAL .			
148	21.36	YES	002H - 21.40-0	the second s	Yes.	0		0	1		20 mph.	2(2)		INA	Cross bucks	and the second s	Pedestran crossing only
1412	21.48	YES	002H - 21.50	10	Yes.	6				1	20 mph	2(9)	Gates	00-11-07	Gates		
150	21.60	VES	00214 - 21.60	10	Yes	0	- 67	6	. 1	1	212 mph	2(8) 2(9)	Gates	00-11-07	Cates	1	
151			002H - 21.70-C	2	No	0			. 1	-		4(9)	Flashing lights	09-09-27			
152	22.10	YES	00214 - 22.16	10	Vat	1 6	1	- 2	3	1	20 mph	2(8)	Cates	00-11-07	Cates		
153	22.24	YES	00294 - 22.20	10	Vet	0		1	2	1	20 mph	2(8) 2(9)	Flashing lights	00-11-07	Cales	1	
154	22.49	YES	00214 - 22.50	10	Yes	1 0		0		1	26 mph	2193	Flashing lights	06-11-07	Cates		
155	22.57	YES	00294 - 22.60	10	Ven			8		1	20 mph.	2150	Gates.	00-11-07	Gateri		
156	22.78	YES	00254 - 22.80	10	Vet						20 mph	1(8) 4(8)	Cates	00-11-07	Gates		
157			002H - 22 96-C	ITUA.	No	1-2-			-	MUA.	an repri	1200.004	#NUA	enca.			
158	23.03	YES	00294 - 23.00	10	Ves					2	20 mph	4/81	Cate	06-11-07	Games	2	
150	23.60		902H - 23.60-AD		Yes	-	1.0	-			20 mph						Not an at grade sing
160	21.85		602H - 23.90-8	-	Ves	1 2				-	20 mph						Not an at grade king
161	24.42		01214 - 24.45-8		Yas	1	- 22		+		20 mph						Not an at grace king
342	24.52		002H - 24.50.A		Yes	1 2		~	4		20 mph						Not an at grade king
163	24.79	YES	002H - 24.80	10	Ves	1	-	-		1	20 mph	4(0)	Cases	06-11-07	Gales		the second second
	24.92	YES	NA		Yes	1		-	-		20 mph		- and the second		Flashing lights		King from BNSF list not in CPUC in
764.785	24.57	125	NA	-	Vat	1.2		~	-	the state	20 mph				Flashing lights		Dung from BNSF bat, not in CPUC is
166	25.27		002H - 25 30-8		Van	0		-			20 mph				Canad alan		Not an at grade king
167	25.04	YES	002H - 25.90	-		1		-	-		20 mph	4(9)	Gates	00.11.07	Gates		and a grant and
168	26.04	YES	00214 - 25.00	10	Vet	12			-		20 mph	2(9)	Flashing lights	05-11-07	Gates		
160	26.04	YES	00214 - 26.10	30	Ves	12			2		20 mph	2(9)	Flashing lights	06-11-07	Gates		
170	26.36	YES	002H - 26.30	10	Ves	1.2			-		20 mph	2(9)	Gales	00.11-07	Gates		
170	- m.20	16.0	002H - 26 50-C	INA	No	12-				INA		2(14)	INA	INA			
	28.60			any a		1.2			-	ansin.	-	2(9)	Gates	00-11-07			
172	20.00		002H - 26.60		Yes No.	1.2		-	-		20 mph	1(8) 2(9)	Gales	99-09-27			
	100.00		002H - 26.80-C	24		-		-	-	-	March	141 2021	Colles	10-129-21	Cross burks		King from BNSF list; not in CPUC In
174	27.38		NA		Yes	0	-	2		-	20 mph				Lindes bucks		Not an at grade king
175	27,20		002H - 27.25A	#N/A	Ves	0		13	14		20 mph	2.01	Proban	00-11-07			Not an at grade king
176	27.40		002H - 27.40	6	Yes	1.8	- 5			1	20 mph	2(9)	Gales	00-11-07		-	
177	27.50		002H - 27.50	5	Yes		- 1	0			20 mph	2(9)	Cated				
178	27.60		002H - 27.60	5	Ves	0	-	-0	_	1	20 mg/m	2(9)	Gates	00-11-07			and the street with
179			002H + 27.63-BC		No	0	0	-		100			A REAL PROPERTY AND A REAL	No. or or			Not an at grade xing
180	1		002H - 27.90-C	1	No	0	0	.0	0	1	1	1(0) 2(9A)	Flashing lights	00-08-09		2	

Page 6

Sources: CPUC, FRA, BNSF

t eged

15/15/2001

aston cittant	Avg. Daily Vehicles	Vehicles Vehicles (ASW)	Vehicles Vehicles (FRA)	noitoibeinul	Street (BNSF)	Street (CPUC)	AID.	Type	ON BUIX ASH	CPUC Xing No.	Mainline Jzog sliM	Jadmu
			53'200	CVA	CRENSHAW BLVD	CRENSHAW BL	SETEON VICELES		r266220	005H - 8'00	8.03	1
			052	CIA	BVA AIROTOIV	VA AIROTDIV	SETEONY SOT		9259938	018 - H200	718	z
			002	AID .	BRYNHURST AVE	VA T290HNY98	SETEON Y SOT		X166220	003H - 8'50	833	2
		Service	002'9	(V)	MEST BLVD	MEST BL	SETEONY SOT		3966420	05'8 - H200	8.32	1
	וחקומאמסט אומחחחק	005'2	008	CIA	REDONDO BLVD	REDONDO BL	INCLEWOOD		7966220	005H - 8760	09'8	S
	נומופאססק בושטטוש	31'000	53'000	CIFY	CENTINELIA AVE	CENTINELA AV	INCLEWOOD		NLOOSZO	01.6 - H200	613	9
	inglewood Planning	35'000	36,000	AID CIA	BVA ABRE AJ	TS A398 AJ	INCLEWOOD		A200820	09'6 - HZ00	65'6	ž
	and the second s	0.000000-0	5,500	AID .	IVY AVE	VA YV	INGLEWOOD		058003C	005H - 8'80	28'6	8
	prinners booweligni	15'200	12,000	A/O	EUCALYPTUS AVE	EUCALYPTUS AV	INCLEWOOD		0280040	00.01 - HS00	266	6
		-	008	AID .	CEDAR AVE	VA RAGED HTRON	INCREMOOD		32008Z0	02'01 - H200	12:01	10
			3'500	40	1S XVO	T2 XAO	INCLEWOOD		058142X	0E.01 - H200	10.36	61
		212010	000'7	CIA C	HADE PARK BLVD	HADE PARK BL	INGLEWOOD		7800820	05'01 * HZ00	25'01	15
	prinned boowelgni	35,000	34,000	CIA	LA CIENEGA BLVD	LA CIENEGA BL	INCLEWOOD		W010820	29'01 - H200	10.63	13
			005'7	CIA	<b>BVA YAGNIH</b>	HINDEA	INGLEWOOD		0110920	06'01 * HZ00	10.82	71
	prinner boowsign!	33'000	000'16	State		WANCHESTER AV (1-105 EXIT)	INCREMOOD		0580158	0111 - H200	1111	SL
	prinners boowsigni	18,000	55'100	APO .	TS BATIV ROBRA	TS BATIV ROBRA	INCLEWOOD		S810820	09'11 - HZ00	11.63	91
			005'5	AID .	15 H1#0L	1S H1101	SETEONY SOT		1020800	005H * 1536	15'36	41
			V/N#	Alo .	TS HTTT	15 HLLLI	SETEONY SOT		0580520	06'Z1 - H200	26'21	81
			31,000	CIA	IMPERIAL HWY	WPERIAL HWY	<b>SETES</b>		8420820	01'EL * HZ00	1313	61
			800	40	12 H1 811	15 H1 811	EL SEGUNDO		0580#LC	07'EL - HZ00	1332	50
			1,800	APD .	15 H102L	15 H1021	ET SECONDO		C8:0820	005H - 13'60	29.61	54
	- Thirds Section and the Sec		V/N#	Private	Private crossing (124th St)	1541H ST	EL SEGUNDO	BUISSOUCH BIRAUM	2670820	06'EL - H200	68'21	22
	El Segundo P.W.	002'6	001'51	AVD .	15 5779000	DOUGLAS ST	OGNODES 15		AZ\$0920	02'71 * HZ00	69.71	53
			V/N#	Private	Private xing (Chapman Way)	CHAPMAN WY	EL SEGUNDO	Physic Crossing	YN	YN	62'71	50
			V/N#	Private	Pedestinan xing	DOUGLAS/ROSECRANS STA.	EL SEGUNDO	Pedestnan xing	A.N	YN	80'51	SZ
	emonitwith	54'120	30,000	AID .	COMPTON BLVD	VA BUISAM	<b><i>HAWTHORNE</i></b>		05806016	005H * 16,10	16,10	50
8 ro8 nationed O/V of	A Co. P.W. (Lawrda	\$81.72	52'000	AID .	INGLEWOOD AVE	4 INGLEWOOD AV	REDONDO BEACH		028062E	04'91 - HZ00	7/91	12
	A Co. P.W. (Lawrida	S6'306	000'61	CIA	<b>MANHATTAN BEACH BLVD</b>	WANHATTAN BEACH BL	<b>BIAGNWAJ</b>		1790820	005H - 16.80	48'91	58
			009	AID .	1S H1651	1S H1651	LAWNDALE		A280650	005H - 16.90	26.91	62
			009	CIA	12 HT081	1S H1091	<b>ELAWNDALE</b>		058066G	00'24 - HZ00	10'21	30
			002	CIA	15 15191	18 18191	LAWNDALE		N290820	90'11 - HZ00	80.71	31
			2'100	CIA	18 ON291	162ND ST	LAWNDALE		058068V	01'11 - H200	71'21	35
			5.500	County	T2 HT011	12 HT011	<b>ELAWNDALE</b>		058069C	002H - 17.60	12.62	33
Traffic Flow Map - 1995	sonenoT	089'01	004'11	AVD .	182ND 81	182ND 21	TORRANCE		X210820	005H - 18'40	18.38	72
Traffic Flow Map - 1995	Torrance	21,790	33'800	CIV.	TORRANCE BLVD	TORRANCE BL	TORRANCE		A960820	005H - 2120	5150	32
Sonshon/Tonahoe	Torrance		∀/N#	CIA	EF DOGVDO	EL DORADO ST	TORRANCE	Pedestnan xng	3260820	005H - 51'40-D	5139	36
(onenoTinoineO	formene		1,200	C4A	TS AMONOS	TS AMONOS	TORRANCE		W860820	005H - 21'20	87'12	120
Traffic Flow Map - 1995	Torrance	35,030	009'28	CYA	TS NOSRAD	TR NORRAD	TORRANCE		0580330	005H + 51 60	51'00	38
nomeOlebeviuge2	sonemoT		3,800	CUA	WASHINGTON BLVD	VA NOTONIHZAW	TORRANCE		1101820	005H - 5510	55'10	33
Traffic Flow Map - 1995	aonemoT	011.8	009'71	CUA	BVA NOTONLIPA	VA NOTONIJRA	TORRANCE		058103C	005H + 22.20	35.34	07
Traffic Flow Map - 1995	sonenol	002'01	009'1	CTA C	CABRILLO AVE	CABRILLO AV	TORRANCE		N#018Z0	005H * 55 20	55'48	17
CabriloWestem	ecnanol		006	CIA	BORDER AVE	NA ABCRO8	TORRANCE		A\$01820	005H + 32'60	1572	27
1091 - Gel wold bitten T	Sonano T	25,770	002'85	CIA	SEPULVEDA BLVD	SEPULVEDA BL	TORRANCE		038109C	005H - 35 80	35.78	13
Traffic Flow Map - 1999	Torrance	30'380	\$3'900	CIA	WESTERN AVE	WESTERN AV	TORRANCE		F201820	00'SZ + H200	53 03	27
			000'11	CVA	TS AOREUDIA	S FIGUERON ST	CVRSON		WELL820	005H - 54'80	54.79	57
			∀/N#	Private	Private crossing	¥N.	CARSON	EUNSIG CLOSSING	'Y'N	YN	25 72	97
			000.81	CUA	GVJB NOJAVA	JE NOTAVA	CARSON		058118M	005H - 22 80	52.90	1 27
			001'1	CIA	TS GAORB	VA GAORB	<b>SETES</b>		A451820	005H - 56'10 005H - 56'00	56.04 26.04	67
						LEXXME ST	LOS ANGELES					

TABLE 2 HARBOR SUBDIVISION LINE Railcoad Crossing Inventory Summary for the Study Area (Milepost 8.00 to 26.5)

-

WILBUR SMITH ASSOCIATES

WILBUR SMITH ASSOCIATES

TABLE 2 HARBOR SUBDIVISION LINE Railroad Crossing Inventory Summary for the Study Area (Milepost 8.00 to 26.5)

	1					No.	of Tra	cks (CP	UC)	No. of				Accident Count (FRA)	
Number	Mainline Mile Post	CPUC Xing No.	FRA Xing No.	Туре	Daily Trains (FRA)	Main	Br.	Other	Total	Tracks (FRA)	Max. Train Speed Mainline	Warning Device (CPUC)	Warning Device (BNSF)	Total: 39	Notes
1	8.03	002H - 8.00	027992.1		9		1	1	2	2	20 mph	4(9)	Gates	1	
2	8.14	002H - 8.10	027993R		9		1		1	1	20 mph	1(8) 2(9)	Gates	0	
3	8.23	002H - 8.20	027994X		9		1		1	1	20 mph	2(9)	Gates	0	
- 4	8.32	002H - 8.30	027995E		9		1		1	1	20 mph	3(9)	Gates	0	
5	8.60	002H - 8.60	027996L		9		1		1	1	20 mph	2(9)	Gates	0	
6	9.13	002H + 9.10	028001N		9		3		1	1	20 mph	4(9)	Gates	1	
7	9.59	002H - 9.60	028002V		9		1		1	1	20 mph	4(9)	Gates	5	
8	9.82	002H - 9.90	028003C		9		1		1	1	20 mph	2(9)	Gates	0	
9	9.94	002H - 10.00	028004J		9		1	1	2	1	20 mph	2(9)	Gates	3	
10	10.21	002H - 10.20	028007E		9		1	1	2	2	20 mph	2(9)	Gates	0	
11	10.36	002H - 10.30	028142X		9		1		1	1	20 mph	2(9A)	Gates	0	
12	10.52	002H - 10.50	028008L	-	9		1	1	2	1	20 mph	2(9)	Gates	2	
13	10.63	002H - 10.62	028010M		9		1	1	2	.1	20 mph	4(9)	Gates	2	
14	10.82	002H - 10.90	028011U		9		1		1	1	20 mph	2(9)	Gates	0	
15	11.11	002H - 11.10	0280128		9		1	1	2	1	20 mph	4(9)	Gates	1	
16	11.63	002H - 11.60	028018S		9		1		1	1	20 mph	2(9)	Gates	2	
17	12.36	002H - 12.35	028020T		9		1		1	1	20 mph	2(9)	Gates	0	
18	12.92	002H - 12.90	028025C		#N/A		1	1	2	#N/A	20 mph	2(9)	Gates	0	
19	13.13	002H - 13.10	028027R		9		. 1	2	3	3	20 mph	1(9) 3(9A)	Gates	7	
20	13.37	002H - 13.40	028047C		9		1	1	2	2	20 mph	2(9)	Gates	0	
21	13.62	002H - 13.60	028048J		9		1	2	3	3	20 mph	2(9)	Gates	0	
22	13.89	002H - 13.90	028049R	Private Crossing	#N/A		1		1	- Turn	20 mph	2(9)	Gates	1	
23	14.69	002H - 14.70	028052Y		9		1		1	1	20 mph	2(8) 2(9)	Gates	1	
24	14.79	N.A.	N.A.	Private Crossing	#N/A		1		1	and the second	20 mph	NA	Cross bucks	D	Private xing according to BNSF
25	15.08	N.A.	N.A.	Pedestrian xing	#N/A		1		1		20 mph	NA	Flashing lights	0	Xing from BNSF list; not in CPUC in
26	16.10	002H - 16.10	028060R		10		1	1	2	2	20 mph	2(9) 2(9A)	Gates	1	Shared by Hawthome and Redondo
27	16.74	002H - 16.70	028062E		10		1		1	1	20 mph	2(9A)	Gates	0	Shared by Redondo & Lawndale
28	16.87	002H - 16.80	028064T		10		1		1	1	20 mph	4(9)	Gates	1	
29	16.94	002H - 16.90	028065A		10		1		1	1	20 mph	2(9)	Gates	0	
30	17.01	002H - 17.00	028066G		10		1		1	1	20 mph	2(9)	Gates	0	
31	17.08	002H - 17.05	028067N		10		- 1			1	20 mph	2(9)	Gates	0	
32	17.14	002H - 17.10	028068V		10		1		1	1	20 mph	2(9)	Gates	0	
33	17.62	002H - 17.60	028069C		10		1		1	1	20 mph	2(9)	Gates	ő	-
34	18.38	002H - 18.40	028072K		10		1		1	1	20 mph	2(9)	Gates	2	Shared by Torrance and Redondo
35	21.24	002H - 21.20	028096Y		10		1		1	1	20 mph	1(8) 1(9) 2(9A)	Gates	õ	ona os oy romanos ana resoluto
36	21.36	002H - 21,40-D	028097F	Pedesthan xing	#N/A		1		1		20 mph	2(2)	Cross bucks	0	Pedestnan crossing only
37	21.48	002H - 21.50	028098M		10		1		1	1	20 mph	2(9)	Gates	0	Contraction of Contraction of Contraction
38	21.60	002H - 21.60	028099U		10		1		1	1	20 mph	2(8) 2(9)	Gates	1	
39	22.10	002H - 22.10	028101T		10		1	2	3	1	20 mph	2(9)	Gates	0	
40	22.24	002H - 22.20	028103G		10		1	1	2	1	20 mph	2(8) 2(9)	Gates	i i	
41	22.49	002H - 22.50	028104N		10		1		1	1	20 mph	2(9)	Gates	0	
42	22.57	002H - 22.60	028105V		10		1		1	1	20 mph	2(9)	Gates	Ő	
43	22.78	002H - 22.80	028106C		10		1		1	1	20 mph	1(8) 4(9)	Gates	0	
44	23.03	002H - 23.00	028107J		10		1		1	2	20 mph	4(9)	Gates	2	
45	24.79	002H - 24.80	028113M		10		1	_	1	1	20 mph	4(9)	Gates	1	
46	24.92	NA	N.A.	Private Crossing	#N/A		1		1		20 mph	N.A.	Flashing lights	0	Xing from BNSF list not in CPUC In
47	25.94	002H - 25.90	028118W		10		1		1	1	20 mph	4(9)	Gates	0	The second
48	26.04	002H - 26.00	028119D		10		4		1	1	20 mph	2(9)	Gates	Ď	
49	26.11	002H - 26.10	028124A		10		+	1	2	2	20 mph	2(9)	Gates	1	
50	26.36	002H - 26.30	028125G		10				2	2	20 mph	2(9)	Gates	3	

Sources: CPUC, FRA, BNSF

Page 2

Crossing #:	027992J	Status:	Changed Crossing	
Railroad:	Burlington N	lorthern Sa	nta Fe Corporation	
Initiating Agency	Railroad			

Effective Begin-Date of Record: 11/07/00 Current Record

### Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR	
State:	CA	Nearest City:	LOS ANGELES	
County:	LOS ANGELES	County Map Ref. No.:	13-V-32	
Highway Type & No.:		FRA RR Network Lic:	NINWX	
Street or Road Name:	CRENSHAW BLVD.	RailRoad I.D. No.:	7604	
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0008.03	
Nearest RR Timetable Stn:	HYDE PARK			
Crossing Type and Protection:	Public At Grade			

### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	N	light 1	Thru
Speed of Train at Crossing: Maximum Time Table Speed	15			Typical Speed Ra	inge Ov	er Crossing From	1	to	15	mph
Type and Number of Tracks	1	Main	1	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									

#### Type of Warning Device(s) at Crossing Signs:

Does Crossing Signal Provide Speed Selection for Trains?

Method of Signalling for Train Operation: Is Track Equipped With Signals?

0	Reflectorized Crossbucks	0	Non-Reflectorized Crossbucks	0	Standard Highway Stop Sign(s)
0	Other Stop Sign(s)	0	Other Signs:	0	Other Signs:
Train A	ctivated Devices:				
4	<b>R/W Reflectorized Gates</b>	0	Other Colored Gates	4	Mast Mounted FL
0	Cantilevered FL (Over)	0	Cantilevered FL (Not over)	0	Other Flashing Lights
0	Highway Traffic Signals	0	Wigwags	2	Bells
Special	Warning Device Not Train Acti	vated:	- None -		
Is Comm	ercial Power Available?		Yes		

No

No

### Part III: Physical Data

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	023500
Estimated Percent Trucks:	22

Crossing #:	027993R	Status:	Changed Crossing	Effective Begin-Date
Railroad:	Burlington N	lorthern Sa	Current Record	
Initiating Agency	Railroad			

0 Other Signs:

0 Wigwags

0 Other Colored Gates

0 Cantilevered FL (Not over)

- None -

Yes

No

No

### Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LOS ANGELES
County;	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	VICTORIA AVENUE	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0008.14
Nearest RR Timetable Stn:	HYDE PARK		
Crossing Type and Protection:	Public At Grade		

### Part II Detailed Information

0 Other Stop Sign(s)

1 R/W Reflectorized Gates

0 Cantilevered FL (Over)

0 Highway Traffic Signals

Special Warning Device Not Train Activated:

Does Crossing Signal Provide Speed Selection for Trains?

Train Activated Devices:

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	N	light 1	Thru
Speed of Train at Crossing: Maximum Time Table Speed	15			Typical Speed Ra	inge Ov	er Crossing From	1	to	15	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									
Type of Warning Device(s) at Cros	sing									
0 Reflectorized Crossbucks 0 Not	n-Refle	ectorized C	rossbu	cks	0	Standard High	way	Stop	) Sig	n(s)

0	Other	Signs:

2	Mast	Mounted FI	L
---	------	------------	---

0 Other Flashing Lights

of Record: 11/07/00

2 Bells

#### Method of Signalling for Train Operation: Is Track Equipped With Signals? Part III: Physical Data

Is Commercial Power Available?

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	000750
Estimated Percent Trucks:	35

Crossing #:	027994X	Status:	Changed Crossing
Railroad:	Burlington N	lorthern Sa	nta Fe Corporation
Initiating Agency	Railroad		

Effective Begin-Date of Record: 11/07/00 Current Record

### Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR	
State:	CA	Nearest City:	LOS ANGELES	
County:	LOS ANGELES	County Map Ref. No.:	13-V-32	
Highway Type & No.:		FRA RR Network Lic:	NINWX	
Street or Road Name:	BRYNHURST AVE.	RailRoad I.D. No.:	7604	
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost	0008.23	
Nearest RR Timetable Stn:	HYDE PARK			
Crossing Type and Protection:	Public At Grade			

### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	N	light 1	Thru
Speed of Train at Crossing: Maximum Time Table Speed	15			Typical Speed Ra	inge Ov	er Crossing From	1	to	15	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									

# Type of Warning Device(s) at Crossing

Does Crossing Signal Provide Speed Selection for Trains?

Method of Signalling for Train Operation: Is Track Equipped With Signals?

0	Reflectorized Crossbucks	0	Non-Reflectorized Crossbucks	0	Standard Highway Stop Sign(s)
0	Other Stop Sign(s)	0	Other Signs:	0	Other Signs:
Train A	ctivated Devices:				
1	R/W Reflectorized Gates	0	Other Colored Gates	2	Mast Mounted FL
0	Cantilevered FL (Over)	0	Cantilevered FL (Not over)	0	Other Flashing Lights
0	Highway Traffic Signals	0	Wigwags	2	Bells
Special	Warning Device Not Train Acti	vated:	- None -		
Is Comm	ercial Power Available?		Yes		

No

No

### Part III: Physical Data

۱

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	000700
Estimated Percent Trucks:	40

Crossing #:	027995E Status: Changed Crossing					
Railroad:	Burlington N	lorthern Sa	nta Fe Corporation			
Initiating Agency	Railroad					

Effective Begin-Date of Record: 11/07/00 Current Record

### Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LOS ANGELES
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	WEST BLVD.	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0008.32
Nearest RR Timetable Stn:	HYDE PARK		
Crossing Type and Protection:	Public At Grade		

### Part II Detailed Information

Typical N	lumber of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	4	N	light 1	Thru
Speed of	Train at Crossing: Maximum Time Table	Spe	ed 15			Typical Speed Ra	nge Ove	r Crossing From	1	to	15	mph
Type and	Number of Tracks		1	Main	0	Other						
Does And	other RR Operate a Separate Track at Cro	ossir	g? No									
Does And	other RR Operate Over Your Track at Cros	ssin	? No									
Type Signs:	of Warning Device(s) at	C	rossing									
0	Reflectorized Crossbucks	0	Non-Refle	ectorized C	rossbu	cks	0	Standard Highv	way S	Stop	o Sig	n(s)
0	Other Stop Sign(s)	0	Other Sig	ns:			0	Other Signs:				
Train A	ctivated Devices:											
0	R/W Reflectorized Gates	0	Other Col	ored Gates			3	Mast Mounted	FL			
0	Cantilevered FL (Over)	0	Cantileve	red FL (No	over)		0	Other Flashing	Light	ts		
0	Highway Traffic Signals	0	Wigwags				3	Bells				
Special	Warning Device Not Train Activat	ed:	-	None -								
Is Comm	ercial Power Available?		Ye	es								

No

No

### Part III: Physical Data

Does Crossing Signal Provide Speed Selection for Trains?

Method of Signalling for Train Operation: Is Track Equipped With Signals?

Type of Development:	Industrial				
Smallest Crossing Angle:	60 to 90 Degrees				
Number of Traffic Lanes Crossing Railroad	2				
Are Truck Pullout Lanes Present?	No				
Is Highway Paved?	Yes				
Pavement Markings	Stop Lines and RR Xing Symbols				
Are RR Advance Warning Signs Present?	Yes				
Crossing Surface:	Asphalt				
Does Track Run Down a Street?	No				
Nearby Intersecting Highway?	Less than 75 feet				

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Minor Arterial
Estimated AADT:	005300
Estimated Percent Trucks:	28

Crossing #:	027996L	Status:	Changed Crossing
Railroad:	Burlington M	Northern Sa	nta Fe Corporation
Initiating Agency	Railroad		

Effective Begin-Date of Record: 11/07/00 Current Record

### Part I Location and Classification of Crossing

Division	LOS ANGELES TE	Subdivision:	HARBOR	
State:	CA	Nearest City:	INGLEWOOD	
County:	LOS ANGELES	County Map Ref. No.:	13-V-32	
Highway Type & No.:		FRA RR Network Lic:	NINWX	
Street or Road Name:	REDONDO BLVD	RailRoad I.D. No.:	7604	
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost	0008.60	
Nearest RR Timetable Stn:	HYDE PARK			
Crossing Type and Protection:	Public At Grade			

### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	N	light "	Thru
Speed of Train at Crossing: Maximum Time Table Speed	15			Typical Speed Ra	inge Ov	er Crossing From	1	to	15	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									
The state in Desire ( ) as o										

# Type of Warning Device(s) at Crossing

Method of Signalling for Train Operation: Is Track Equipped With Signals?

0	Reflectorized Crossbucks	1	Non-Reflectorized Crossbucks	0	Standard Highway Stop Sign(s)
0	Other Stop Sign(s)	0	Other Signs:	0	Other Signs:
Train A	ctivated Devices:				
0	R/W Reflectorized Gates	0	Other Colored Gates	2	Mast Mounted FL
0	Cantilevered FL (Over)	0	Cantilevered FL (Not over)	0	Other Flashing Lights
0	Highway Traffic Signals	0	Wigwags	2	Bells
Specia	Warning Device Not Train Acti	vated:	- None -		
Is Comm	ercial Power Available?		Yes		
Does Cr	ossing Signal Provide Speed Selection	for Tra	ins? No		

No

#### Part III: Physical Data

Institutional					
0 to 29 Degrees					
4					
No					
Yes					
Stop Lines and RR Xing Symbols					
Yes					
Sectional Treated Timber					
No					
Less than 75 feet					

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	000800
Estimated Percent Trucks:	25

Crossing #:	028001N	Status:	Changed Crossing	
Railroad:	Burlington N	lorthern Sai	nta Fe Corporation	
Initiating Agency	Railroad			

Effective Begin-Date of Record: 11/07/00 Current Record

1

### Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	INGLEWOOD
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	CENTINALA AVENUE	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0009.13
Nearest RR Timetable Stn:	INGLEWOOD		
Crossing Type and Protection:	Public At Grade		

### Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0		Day Switching	0	Night Switching	4	N	light '	Thru
Speed of Train at Crossing: Maximum Time T	able Speed	15				Typical Speed Rar	ige Ov	er Crossing From	1	to	15	mph
Type and Number of Tracks		1	Main	3	0	Other						
Does Another RR Operate a Separate Track a	at Crossing?	No										
Does Another RR Operate Over Your Track a	t Crossing?	No										
Type of Warning Device(s)	at Cros	sing										
0 Reflectorized Crossbucks	0 No	n-Refle	ectorized C	rosst	ouc	ks	0	Standard Highv	way S	Stop	) Sig	n(s)
0 Other Stop Sign(s)	0 Ot	ner Sig	ns:				0	Other Signs:				
Train Activated Devices:												
4 R/W Reflectorized Gates	0 Ot	ner Col	ored Gates	5			4	Mast Mounted	FL			
0 Cantilevered FL (Over)	0 Ca	ntileve	red FL (No	t ove	r)		0	Other Flashing	Light	ts		
0 Highway Traffic Signals	0 Wi	gwags					2	Bells				
Special Warning Device Not Train Ac	tivated:	-	None -									
Is Commercial Power Available?		Ye	s									
Does Crossing Signal Provide Speed Selection	n for Trains?	No										

### Part III: Physical Data

Method of Signalling for Train Operation: Is Track Equipped With Signals?

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Rubber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

No

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	029000
Estimated Percent Trucks:	20

Crossing #:	028002V	Status:	Changed Crossing	
Railroad:	Burlington N	lorthern Sa	nta Fe Corporation	
Initiating Agency	Railroad			

Effective Begin-Date of Record: 11/07/00 Current Record

### Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	INGLEWOOD
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	LA BREA AVENUE	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0009.59
Nearest RR Timetable Stn:	INGLEWOOD		
Crossing Type and Protection:	Public At Grade		

### Part II Detailed Information

3

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	N	ight 1	Thru
Speed of Train at Crossing: Maximum Time Table Speed	15			Typical Speed Ra	nge Ov	er Crossing From	1	to	15	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									

#### Type of Warning Device(s) at Crossing Signs:

Does Crossing Signal Provide Speed Selection for Trains?

Method of Signalling for Train Operation: Is Track Equipped With Signals?

	0	Reflectorized Crossbucks	0	Non-Reflectorized Crossbucks	0	Standard Highway Stop Sign(s)
	0	Other Stop Sign(s)	0	Other Signs:	0	Other Signs:
	Train A	ctivated Devices:				
	0	R/W Reflectorized Gates	0	Other Colored Gates	4	Mast Mounted FL
	0	Cantilevered FL (Over)	0	Cantilevered FL (Not over)	0	Other Flashing Lights
	0	Highway Traffic Signals	0	Wigwags	2	Bells
	Special	Warning Device Not Train Acti	vated:	- None -		
1	s Comm	ercial Power Available?		Yes		

No

No

#### Part III: Physical Data

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	6
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	036000
Estimated Percent Trucks:	22

Crossing #:	028003C	Status:	Changed Crossing	Effective Begin-Date of Record:
Railroad:	Burlington N	lorthern Sa	nta Fe Corporation	Current Record
Initiating Agency	Railroad			

#### Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	INGLEWOOD
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	IVY AVENUE	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0009.82
Nearest RR Timetable Stn:	INGLEWOOD		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	N	ight T	Thru
Speed of Train at Crossing: Maximum Time Table Speed	15			Typical Speed Ra	nge Ov	er Crossing From	1	to	15	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									
Type of Warning Device(s) at Cro Signs: 0 Reflectorized Crossbucks 0 N	-	ectorized C	rosshu	cke	0	Standard High	Nav	Stor	Sig	n(s)
	ther Sig		103300	GNG	0		nuy .	010	oig	(3)
Train Activated Devices:										
2 R/W Reflectorized Gates 0 O	ther Col	ored Gates	s		4	Mast Mounted	FL			
0 Cantilevered FL (Over) 0 C	antileve	red FL (No	t over)		0	Other Flashing	Ligh	ts		

2 Bells

11/07/00

1.

-

i

#### Method of Signalling for Train Operation: Is Track Equipped With Signals? Part III: Physical Data

Is Commercial Power Available?

0 Highway Traffic Signals

Special Warning Device Not Train Activated:

Does Crossing Signal Provide Speed Selection for Trains?

Type of Development:	Industrial
Smallest Crossing Angle:	0 to 29 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

0 Wigwags

- None -

Yes

No

No

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	002500
Estimated Percent Trucks:	28

Crossing #:	028004J	Status:	Changed Crossing
Railroad:	Burlington N	lorthern Sa	nta Fe Corporation
Initiating Agency	Railroad		

Effective Begin-Date of Record: 11/07/00 Current Record

0 Other Flashing Lights

2 Bells

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR	
State:	CA	Nearest City:	INGLEWOOD	
County:	LOS ANGELES	County Map Ref. No.:	13-V-32	
Highway Type & No.:		FRA RR Network Lic:	NINWX	
Street or Road Name:	EUCALYPTUS AVE.	RailRoad I.D. No.:	7604	
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost	0009.94	
Nearest RR Timetable Stn:	INGLEWOOD			
Crossing Type and Protection:	Public At Grade			

## Part II Detailed Information

.

ľ

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	N	light 7	Thru
Speed of Train at Crossing: Maximum Time Table Speed	15			Typical Speed Ra	inge Ov	ver Crossing From	1	to	15	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									
Type of Warning Device(s) at Cros	sing									

Signs.		
0 Reflectorized Crossbucks	0 Non-Reflectorized Crossbucks	0 Standard Highway Stop Sign(s)
0 Other Stop Sign(s)	0 Other Signs:	0 Other Signs:
Train Activated Devices:		
2 R/W Reflectorized Gates	0 Other Colored Gates	2 Mast Mounted FL

0	Cantilevered FL (Over)	0	Cantilevered FL (Not over)
0	Highway Traffic Signals	0	Wigwags
Special	Warning Device Not Train Act	tivated:	- None -
Is Comm	ercial Power Available?		Yes
Does Cro	ossing Signal Provide Speed Selectio	n for Trai	ns? No

Method of Signalling for Train Operation: Is Track Equipped	No
With Signals?	

### Part III: Physical Data

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	3
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Full Wood Plank
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Collector
Estimated AADT:	012000
Estimated Percent Trucks:	20

Crossing #:	028008L	Status:	Changed Crossing	
Railroad:	Burlington M	Northern Sa	nta Fe Corporation	
Initiating Agency	Railroad			

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	INGLEWOOD
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	HYDE PARK BLVD	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0010.52
Nearest RR Timetable Stn:	INGLEWOOD		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	8 9	Night	Thru
Speed of Train at Crossing: Maximum Time Table Speed	20			Typical Speed Rang	ge Ov	er Crossing From	1	to	20	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing'	? No									
Does Another RR Operate Over Your Track at Crossing?	No									
Type of Warning Device(s) at Cro Signs:	ossing	l'								
0 Reflectorized Crossbucks 0 N	Ion-Refle	ectorized C	rossbu	icks	1	Standard High	way	Sto	p Sig	ın(s)
0 Other Stop Sign(s) 0 C	Other Sig	ns:			0	Other Signs:				
Train Activated Devices:										
0 R/W Reflectorized Gates 0 C	Other Col	lored Gates	5		2	Mast Mounted	FL			
0 Cantilevered FL (Over) 0 C	antileve	red FL (No	t over)		0	Other Flashing	Ligi	nts		
0 Highway Traffic Signals 0 V	Vigwags				0	Bells				
Special Warning Device Not Train Activated:	-	None -								
Is Commercial Power Available?	Ye	es								
Does Crossing Signal Provide Speed Selection for Trains	? No	0								
Method of Signalling for Train Operation: Is Track Equipp With Signals?	ed No	0								
Part III: Physical Data										
Type of Development:	In	dustrial								
Smallest Crossing Angle:	60	to 90 Deg	rees							
Number of Traffic Lanes Crossing Railroad	2									
Are Truck Pullout Lanes Present?	Ne	0								
Is Highway Paved?	Ye	es								
Pavement Markings	R	R Xing Syn	nbols							
Are RR Advance Warning Signs Present?	Ye	es								
Crossing Surface:	A	sphalt								
Does Track Run Down a Street?	No	0								

Less than 75 feet

#### Part IV: Highway Department

Nearby Intersecting Highway?

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	004000
Estimated Percent Trucks:	30

Crossing #:	028010M	Status:	Changed Crossing
Railroad:	Burlington N	lorthern Sa	nta Fe Corporation
Initiating Agency	Railroad		

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision	HARBOR	
State:	CA	Nearest City:	INGLEWOOD	
County:	LOS ANGELES	County Map Ref. No.:	13-V-32	
Highway Type & No.:		FRA RR Network Lic:	NINWX	
Street or Road Name:	LA CIENEGA BLVD	RailRoad I.D. No.:	7604	
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0010.63	
Nearest RR Timetable Stn:	INGLEWOOD			
Crossing Type and Protection:	Public At Grade			

#### Part II Detailed Information

١

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	Ni	ght T	hru
Speed of Train at Crossing: Maximum Time Table Speed	20			Typical Speed Ra	ange Ov	er Crossing From	1	to	20	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									

#### Type of Warning Device(s) at Crossing Signs:

Method of Signalling for Train Operation: Is Track Equipped With Signals?

0	Reflectorized Crossbucks	0	Non-Reflectorized Crossbucks	0	Standard Highway Stop Sign(s)
0	Other Stop Sign(s)	0	Other Signs:	0	Other Signs:
Train A	ctivated Devices:				
4	R/W Reflectorized Gates	0	Other Colored Gates	4	Mast Mounted FL
0	Cantilevered FL (Over)	0	Cantilevered FL (Not over)	0	Other Flashing Lights
0	Highway Traffic Signals	0	Wigwags	3	Bells
Specia	Warning Device Not Train Act	vated:	- None -		
Is Comn	nercial Power Available?		Yes		
Does Cr	ossing Signal Provide Speed Selection	for Tra	ins? No		

No

#### Part III: Physical Data

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	6
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Rubber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	034000
Estimated Percent Trucks:	20

Crossing #:	028011U	Status:	Changed Crossing	Effective Begin-Date of Record:	11/07/00			
Railroad:	Burlington Northern Santa Fe Corporation		nta Fe Corporation	Current Record				
Initiating Agency	Railroad							

#### Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City;	INGLEWOOD
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	HINDRY AVENUE	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost	0010.82
Nearest RR Timetable Stn:	INGLEWOOD		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

5	Day Thru	0	Day Switching	0	Night Switching	4	N	ight T	hru
20			Typical Speed Ra	nge Ov	er Crossing From	1	to	20	mph
1	Main	0	Other						
No									
No									
		rosshu	eke		Standard High		Stor	Cia	
		rossbu	CKS		Courts State	way a	stop	Sigi	n(s)
her Sig	ns:			0	Other Signs:				
her Col	ored Gates	3		2	Mast Mounted	FL			
Intileve	red FL (No	t over)		0	Other Flashing	Ligh	ts		
	20 1 No No ssing on-Refle her Sig	20 1 Main No No ssing on-Reflectorized C her Signs: her Colored Gates	20 1 Main 0 No No ssing	20 Typical Speed Ra 1 Main 0 Other No No ssing on-Reflectorized Crossbucks her Signs: her Colored Gates	20 Typical Speed Range Ov 1 Main 0 Other No No ssing on-Reflectorized Crossbucks 0 her Signs: 0 her Colored Gates 2	20       Typical Speed Range Over Crossing From         1       Main       0         No       No         No       Ssing         on-Reflectorized Crossbucks       0       Standard Highther Signs:         her Colored Gates       2       Mast Mounted	20       Typical Speed Range Over Crossing From       1         1       Main       0       Other         No       No       No         Ssing       0       Standard Highway S         on-Reflectorized Crossbucks       0       Standard Highway S         her Signs:       0       Other Signs:         her Colored Gates       2       Mast Mounted FL	20       Typical Speed Range Over Crossing From 1 to         1       Main       0         1       Main       0         No       No         No       Ssing         on-Reflectorized Crossbucks       0         Standard Highway Stop         her Signs:       0         Other Signs:       2         Mast Mounted FL	20       Typical Speed Range Over Crossing From       1       to       20         1       Main       0       Other       0       0       0         No       No       No       0       Ssing       0       Standard Highway Stop Sig         on-Reflectorized Crossbucks       0       Standard Highway Stop Sig       0       Other Signs:         her Signs:       0       Other Signs:       2       Mast Mounted FL

2 Bells

- 0
   Highway Traffic Signals
   0
   Wigwags
- Special Warning Device Not Train Activated:
   None 

   Is Commercial Power Available?
   Yes

   Does Crossing Signal Provide Speed Selection for Trains?
   No

   Method of Signalling for Train Operation: Is Track Equipped With Signals?
   No
- Part III: Physical Data

Type of Development:	Industrial
Smallest Crossing Angle:	30 to 59 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	No
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Collector
Estimated AADT:	004500
Estimated Percent Trucks:	30

Crossing #:	028012B	Status:	Changed Crossing	
Railroad:	Burlington N	lorthern Sa	nta Fe Corporation	
Initiating Agency	Railroad			

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	INGLEWOOD
County;	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:	S.R.42	FRA RR Network Lic:	NINWX
Street or Road Name:	MANCHESTER AVENUE	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0011.11
Nearest RR Timetable Stn:	INGLEWOOD		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	N	ight 1	Thru
Speed of Train at Crossing: Maximum Time Table Speed	20			Typical Speed Ra	inge Ov	er Crossing From	1	to	20	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									

#### Type of Warning Device(s) at Crossing Signs:

Does Crossing Signal Provide Speed Selection for Trains?

Method of Signalling for Train Operation: Is Track Equipped With Signals?

0	Reflectorized Crossbucks	0	Non-Reflectorized Crossbucks	0	Standard Highway Stop Sign(s)
0	Other Stop Sign(s)	0	Other Signs:	0	Other Signs:
Train A	ctivated Devices:				
4	R/W Reflectorized Gates	0	Other Colored Gates	4	Mast Mounted FL
0	Cantilevered FL (Over)	0	Cantilevered FL (Not over)	0	Other Flashing Lights
0	Highway Traffic Signals	0	Wigwags	2	Bells
Specia	Warning Device Not Train Acti	vated:	- None -		
Is Comm	nercial Power Available?		Yes		

No

No

#### Part III: Physical Data

Type of Development:	Industrial			
Smallest Crossing Angle:	60 to 90 Degrees			
Number of Traffic Lanes Crossing Railroad	7			
Are Truck Pullout Lanes Present?	No			
Is Highway Paved?	Yes			
Pavement Markings	Stop Lines and RR Xing Symbols			
Are RR Advance Warning Signs Present?	Yes			
Crossing Surface:	Sectional Treated Timber			
Does Track Run Down a Street?	No			
Nearby Intersecting Highway?	Less than 75 feet			

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	Yes
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	037000
Estimated Percent Trucks:	22

Crossing #:	028018S	Status:	Changed Crossing	Effective Begin-Date of Record:	11/07/00
Railroad:	Burlington N	orthern Sa	nta Fe Corporation	Current Record	
Initiating Agency	Railroad				

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	INGLEWOOD
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	ARBORVITAE STREET	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0011.63
Nearest RR Timetable Stn:	INGLEWOOD		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	N	light 7	Thru
Speed of Train at Crossing: Maximum Time Table Speed	20			Typical Speed Ra	nge Ov	er Crossing From	1	to	20	mph
Type and Number of Tracks	1	Main	0	Other						
Does Another RR Operate a Separate Track at Crossing?	No									
Does Another RR Operate Over Your Track at Crossing?	No									
Type of Warning Device(s) at Crossing										

0	Reflectorized Crossbucks	0	Non-Reflectorized Crossbucks	0	Standard Highway Stop Sign(s)
0	Other Stop Sign(s)	0	Other Signs:	0	Other Signs:
Train A	ctivated Devices:				
0	R/W Reflectorized Gates	0	Other Colored Gates	2	Mast Mounted FL
0	Cantilevered FL (Over)	0	Cantilevered FL (Not over)	0	Other Flashing Lights
0	Highway Traffic Signals	0	Wigwags	2	Bells
Specia	Warning Device Not Train Acti	vated:	- None -		
Is Comm	nercial Power Available?		Yes		
Does Cr	ossing Signal Provide Speed Selection	for Tra	ins? No		

- -

No

#### Part III: Physical Data

Method of Signalling for Train Operation: Is Track Equipped With Signals?

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Other National Highway System
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Minor Arterial
Estimated AADT:	022700
Estimated Percent Trucks:	21

Crossing #:	028020T	Status:	Changed Crossing						
Railroad:	Burlington Northern Santa Fe Corporation								
Initiating Agency	Railroad								

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LOS ANGELES
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	104TH STREET	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0012.36
Nearest RR Timetable Stn:	LAIRPORT		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	4	Nig	ht Thr	ru	
Speed of Train at Crossing: Maximum Time Table Speed	20			Typical Speed Ra	ange Ove	er Crossing From	1	to	20 m	nph	
Type and Number of Tracks	1	Main	0	Other							
Does Another RR Operate a Separate Track at Crossing?	No										
Does Another RR Operate Over Your Track at Crossing?	No										
Type of Warning Device(s) at Cro	Type of Warning Device(s) at Crossing										
0 Reflectorized Crossbucks 0 N	on-Refle	ectorized C	rossbu	cks	0	Standard High	way \$	Stop	Sign(	(s)	
0 Other Stop Sign(s) 0 O	ther Sig	ns:			0	Other Signs:					
Train Activated Devices:											

# 0 R/W Reflectorized Gates 0 Other Colored Gates 2 Mast Mounted FL 0 Cantilevered FL (Over) 0 Cantilevered FL (Not over) 0 Other Flashing Lights 0 Highway Traffic Signals 0 Wigwags 2 Bells Special Warning Device Not Train Activated: - None Yes Yes

No

No

#### Method of Signalling for Train Operation: Is Track Equipped With Signals? Part III: Physical Data

Does Crossing Signal Provide Speed Selection for Trains?

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	No Markings
Are RR Advance Warning Signs Present?	No
Crossing Surface:	Asphalt
Does Track Run Down a Street?	Νο
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Non-Federal-aid				
Is Crossing on State Highway System?	No				
Functional Classification of Road Over Crossing:	Urban Collector				
Estimated AADT:	005500				
Estimated Percent Trucks:	26				

Crossing #:	028025C	Status:	Changed Crossing					
Railroad:	Burlington Northern Santa Fe Corporation							
Initiating Agency	Railroad							

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR					
State:	CA	Nearest City:	LOS ANGELES					
County:	LOS ANGELES	County Map Ref. No.:	13-V-32					
Highway Type & No.:		FRA RR Network Lic:	NINWX					
Street or Road Name:	111TH STREET	RailRoad I.D. No .:	7604					
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0012.92					
Nearest RR Timetable Stn:	LAIRPORT							
Crossing Type and Protection:	Private At Grade,Industrial,Signals,2 FL.LTS.GATES							

Part II Detailed Information

Estimated Percent Trucks:

-

. .

	Typical Nu	Imber of Daily Train Movements:		0	Day Thru	0	Day Switching	0	Night Switching	0		Night	Thru
	Speed of	Frain at Crossing: Maximum Time Table S	pee	ed <b>O</b>			Typical Speed Range	ove	r Crossing From	0	to	0	mph
	Type and	Number of Tracks		0	Main	0	Other						
	Does Ano	ther RR Operate a Separate Track at Cros	sing	g? <b>No</b>									
	Does And	ther RR Operate Over Your Track at Cross	sing	? <b>No</b>									
	Type of Signs:	of Warning Device(s) at	Cr	ossing									
	0	Reflectorized Crossbucks	0	Non-Refle	ctorized Cro	ossbu	cks	0	Standard Highwa	ay	Sto	p Sig	gn(s)
	0	Other Stop Sign(s)	0	Other Sigr	ns:			0	Other Signs:				
	Train Ac	tivated Devices:											
	0	R/W Reflectorized Gates	0	Other Cold	ored Gates			0	Mast Mounted Fl	L			
	0	Cantilevered FL (Over)	0	Cantilever	ed FL (Not	over)		0	Other Flashing L	igh	nts		
	0	Highway Traffic Signals	0	Wigwags				0	Bells				
	Special	Warning Device Not Train Activate	d:	- /	Vone -								
	Is Comme	rcial Power Available?											
	Does Cros	ssing Signal Provide Speed Selection for T	rair	ns?									
	Method of With Signa	Signalling for Train Operation: Is Track Ed	quip	oped No	)								
Pa	art III:	Physical Data											
	Type of	Development:											
	Smalles	Crossing Angle:											
	Number	of Traffic Lanes Crossing Railroad	l.										
	Are Truc	k Pullout Lanes Present?		No	,								
	Is Highw	ay Paved?		Na	,								
	Paveme	nt Markings											
	Are RR	Advance Warning Signs Present?		No	i i								
	Crossing	g Surface:											
	Does Tr	ack Run Down a Street?		Na	,								
	Nearby	ntersecting Highway?		Un	known								
Pa	art IV:	Highway Department											
	Highway	System:											
	Is Cross	ing on State Highway System?		No									
	Function	al Classification of Road Over Cro	ssi	ng:									
	Estimate	d AADT:											

Crossing #:	028027R	Status:	Changed Crossing			
Railroad:	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad					

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LOS ANGELES
County:	LOS ANGELES	County Map Ref. No .:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	IMPERIAL HWY.	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0013.13
Nearest RR Timetable Stn:	LAIRPORT		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	4	Ν	ight <sup>-</sup>	Thru
Speed of Train at Crossing: Maximum Time Table S	Speed	20			Typical Speed Ra	nge Ove	er Crossing From	1	to	20	mph
Type and Number of Tracks		1	Main	2	Other						
Does Another RR Operate a Separate Track at Cro	ossing	? <b>No</b>									
Does Another RR Operate Over Your Track at Cros	ssing?	No									
Type of Warning Device(s) at Signs:	Cro	ossing									
0 Reflectorized Crossbucks	4 1	Non-Refle	ctorized C	rossbu	ucks	0	Standard High	way S	Stop	) Sig	n(s)
0 Other Stop Sign(s)	0 (	Other Sign	IS:			0	Other Signs:				
Train Activated Devices:											
1 R/W Reflectorized Gates	0 (	Other Cold	ored Gate	s		4	Mast Mounted	FL			
3 Cantilevered FL (Over)	3 (	Cantilever	ed FL (No	ot over)	•	2	Other Flashing	Ligh	ts		
1 Highway Traffic Signals	0 \	Nigwags				2	Bells				
Special Warning Device Not Train Activate	ed:	- ^	lone -								
Is Commercial Power Available?		Ye	s								

No

No

#### Method of Signalling for Train Operation: Is Track Equipped With Signals? Part III: Physical Data

Does Crossing Signal Provide Speed Selection for Trains?

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	7
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	Νο
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	037000
Estimated Percent Trucks:	18

Crossing #:	028047C	Status:	Changed Crossing			
Railroad:	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad					

Effective Begin-Date of Record: 11/07/00 Current Record

# Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	EL SEGUNDO
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	118TH STREET	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0013.37
Nearest RR Timetable Stn:	LAIRPORT		
Crossing Type and Protection:	Public At Grade		
Branch or Line Name: Nearest RR Timetable Stn:	REDO J-L BEACH LAIRPORT		

## Part II Detailed Information

.

Typical Number of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	4	Ν	ight '	Thru
Speed of Train at Crossing: Maximum Time Table S	Speed	20			Typical Speed Range	e Ove	er Crossing From	1	to	20	mph
Type and Number of Tracks		1	Main	1	Other						
Does Another RR Operate a Separate Track at Cro	ssing?	No									
Does Another RR Operate Over Your Track at Cros	ssing?	No									
Type of Warning Device(s) at	Cro	ssing									
0 Reflectorized Crossbucks	0 N	Ion-Refle	ctorized Cr	rossb	ucks	0	Standard Highwa	ay S	top	Sig	ın(s)
0 Other Stop Sign(s)	0 C	ther Sigr	ns:			0	Other Signs:				
Train Activated Devices:											
2 R/W Reflectorized Gates	0 C	ther Cold	ored Gates			2	Mast Mounted Fl	L			
0 Cantilevered FL (Over)	0 C	antilever	ed FL (Not	over	)	1	Other Flashing L	ight	s		
0 Highway Traffic Signals	0 V	Vigwags				2	Bells				
Special Warning Device Not Train Activate	ed:	- 1	Vone -								
Is Commercial Power Available?		Ye	S								
Does Crossing Signal Provide Speed Selection for	Trains	? <b>No</b>	r.								
Method of Signalling for Train Operation: Is Track E With Signals?	quipp	ed <b>No</b>									

#### Part III: Physical Data

Type of Development:	Industrial
Smallest Crossing Angle:	0 to 29 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	000800
Estimated Percent Trucks:	30

Crossing #:	028048J	Status:	Changed Crossing				
Railroad:	Burlington Northern Santa Fe Corporation						
Initiating Agency	Railroad						

Effective Begin-Date of Record: 11/07/00 Current Record

# Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	EL SEGUNDO
County:	LOS ANGELES	County Map Ref. No.:	13-V-32
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	120TH STREET	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0013.62
Nearest RR Timetable Stn:	LAIRPORT		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	4	N	light	Thru
Speed of Train at Crossing: Maximum Time Table S	peed	20			Typical Speed Range	e Ove	er Crossing From	1	to	20	mph
Type and Number of Tracks		1	Main	2	Other						
Does Another RR Operate a Separate Track at Cros	ssing?	No									
Does Another RR Operate Over Your Track at Cros	sing?	No									
Type of Warning Device(s) at Signs:	Cross	sing									
	0 Non	-Refle	ctorized Cr	rossbu	cks	0	Standard Highwa	ay S	Stop	o Sig	n(s)
0 Other Stop Sign(s)	2 Othe	er Sigr	ns: STP SV	NING		0	Other Signs:				
Train Activated Devices:											
2 R/W Reflectorized Gates	0 Othe	er Colo	ored Gates			2	Mast Mounted F	L			
0 Cantilevered FL (Over)	0 Can	tilever	ed FL (Not	over)		0	Other Flashing L	ight	ts		
0 Highway Traffic Signals	0 Wig	wags				2	Bells				
Special Warning Device Not Train Activate	ed:	- 1	Vone -								
Is Commercial Power Available?		Ye	s								
Does Crossing Signal Provide Speed Selection for 1	Frains?	No									
Method of Signalling for Train Operation: Is Track Ed With Signals?	quipped	No	)								

#### Part III: Physical Data

Type of Development:	Institutional
Smallest Crossing Angle:	0 to 29 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Other National Highway System
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Minor Arterial
Estimated AADT:	001800
Estimated Percent Trucks:	28

Crossing #:	028049R	Status:	Changed Crossing	Effective Begin-Date of Record:	05/02/78
Railroad:	Atchison, To	peka & Sar	ita Fe Railway Company	End-Date of Record:	10/02/91
Initiating Agency	Railroad				

# Part I Location and Classification of Crossing

Division:	LA TERMINAL	Subdivision:	HARBORDISTRICT			
State:	CA	Nearest City:	EL SEGUNDO			
County:	LOS ANGELES	County Map Ref. No.:	13-V-32			
Highway Type & No.:		FRA RR Network Lic:	NINWX			
Street or Road Name:	124TH ST USOFA	RailRoad I.D. No .:	C-121720			
Branch or Line Name:	HARBOR BRANCH	Railroad Milepost:	0013.89			
Nearest RR Timetable Stn:	LAIRPORT					
Crossing Type and Protection:	Private At Grade, Industrial, Signs, PRIVATE					

#### Part II Detailed Information

Typical Number of Daily Train Movements:		3	Day Thru	8		Day Switching	3	Night Switching	3	N	light	Thru
Speed of Train at Crossing: Maximum Time Table	Speed	15				Typical Speed Range	Ove	er Crossing From	5	to	15	mph
Type and Number of Tracks		1	Main	à	0	Other						
Does Another RR Operate a Separate Track at Cro	ossing?	No										
Does Another RR Operate Over Your Track at Cro	ssing?	No										
Type of Warning Device(s) at Crossing <sub>Signs:</sub>												
0 Reflectorized Crossbucks	0 No	n-Refle	ctorized	Crosst	oud	cks	0	Standard Highwa	ay S	itop	o Sig	gn(s)
0 Other Stop Sign(s)	0 Ot	her Sigr	ns:				0	Other Signs:				
Train Activated Devices:												
0 R/W Reflectorized Gates	0 Ot	her Cole	ored Gate	es			2	Mast Mounted F	L			
0 Cantilevered FL (Over)	0 Ca	ntilever	ed FL (N	ot ove	r)		0	Other Flashing L	ight	S		
0 Highway Traffic Signals	0 Wi	gwags					2	Bells				
Special Warning Device Not Train Activat	ed:	- 1	None -									
Is Commercial Power Available?		Ye	s									
Does Crossing Signal Provide Speed Selection for	No	)										
Method of Signalling for Train Operation: Is Track I With Signals?	Equipped	Nc	•									

## Part III: Physical Data

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	002500
Estimated Percent Trucks:	29

Crossing #:	028030Y	Status:	Changed Crossing	Effective Begin-Date of Record:	11/12/82
Railroad:	Atchison, To	peka & Sar	ta Fe Railway Company	End-Date of Record:	10/02/91
Initiating Agency	State				

# Part I Location and Classification of Crossing

## Part II Detailed Information

.

- -

	Typical N	lumber of Daily Train Movements:		0	Day Thru	0	Day Switching	0	Night Switching	0	N	light	Thru
	Speed of	Train at Crossing: Maximum Time Table S	Spee	ed <b>7</b>			Typical Speed Range	Ove	r Crossing From	3	to	7	mph
	Type and	Number of Tracks		0	Main	2	Other						
	Does And	other RR Operate a Separate Track at Cros	ssin	g? <b>No</b>									
	Does And	other RR Operate Over Your Track at Cros	sing	? <b>No</b>									
	Type of Warning Device(s) at Crossing												
	0	Reflectorized Crossbucks	0	Non-Refle	ctorized Cro	ossbu	cks	0	Standard Highwa	iy S	stop	o Sig	gn(s)
	0	Other Stop Sign(s)	0	Other Sigr	ns:			0	Other Signs:				
	Train A	ctivated Devices:											
	0	R/W Reflectorized Gates	0	Other Cold	ored Gates			2	Mast Mounted FI	-			
	2	Cantilevered FL (Over)	0	Cantilever	ed FL (Not	over)		0	Other Flashing L	ight	S		
	0	Highway Traffic Signals	0	Wigwags				2	Bells				
	Special	Warning Device Not Train Activate	ed:	- ^	lone -								
	Is Comm	ercial Power Available?		Ye	s								
	Does Crossing Signal Provide Speed Selection for Trains?												
	Method of With Sign	f Signalling for Train Operation: Is Track E nals?	quip	oped No									
Pa	art III:	Physical Data											
	Type of	Development:		Inc	lustrial								

# P

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Minor Arterial
Estimated AADT:	006000
Estimated Percent Trucks:	25

Crossing #:	028060R	Status:	Changed Crossing			
Railroad:	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad					

Effective Begin-Date of Record: 11/07/00 Current Record

....

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	REDONDO BEACH
County:	LOS ANGELES	County Map Ref. No .:	13-V-42
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	COMPTON-MARINE AV	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0016.14
Nearest RR Timetable Stn:	LAWNDALE		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:	5 Day Thru	0	Day Switching 0	Night Switching	5	Night Thru
Speed of Train at Crossing: Maximum Time Table Spee	d <b>20</b>		Typical Speed Range Ov	ver Crossing From	1	to 20 mph
Type and Number of Tracks	1 Main	1	Other			
Does Another RR Operate a Separate Track at Crossing	? Yes: LACT					
Does Another RR Operate Over Your Track at Crossing	? <b>No</b>					

# Type of Warning Device(s) at Crossing Signs:

Does Crossing Signal Provide Speed Selection for Trains?

Method of Signalling for Train Operation: Is Track Equipped With Signals?

	3 Reflectorized Crossbucks	0	Non-Reflectorized Crossbucks	0	Standard Highway Stop Sign(s)
	0 Other Stop Sign(s)	3	Other Signs: 2 TRACK	0	Other Signs:
	Train Activated Devices:				
	4 R/W Reflectorized Gates	0	Other Colored Gates	2	Mast Mounted FL
	2 Cantilevered FL (Over)	0	Cantilevered FL (Not over)	0	Other Flashing Lights
	0 Highway Traffic Signals	0	Wigwags	2	Bells
	Special Warning Device Not Train Activ	ated:	- None -		
1	s Commercial Power Available?		Yes		

Yes

No

## Part III: Physical Data

Type of Development:	Industrial
Smallest Crossing Angle:	0 to 29 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Minor Arterial
Estimated AADT:	030000
Estimated Percent Trucks:	24

Crossing #:	028062E	Status:	Changed Crossing				
Railroad:	Burlington Northern Santa Fe Corporation						
Initiating Agency	Railroad						

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LAWNDALE
County:	LOS ANGELES	County Map Ref. No.:	13-V-42
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	INGLEWOOD AVE	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0016.74
Nearest RR Timetable Stn:	LAWNDALE		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Туріс	al N	umber of Daily Train Movements:		5	i	Day Thru	0		Day Switching	0	Night Switching	5		Nigh	t Th	nru
Speed	d of	Train at Crossing: Maximum Time Table	Spe	ed 2	0				Typical Speed Range	Ove	er Crossing From	1	te	20		mph
Туре	and	Number of Tracks			1	Main	(	0	Other							
Does	And	ther RR Operate a Separate Track at Cr	rossi	ng? No	)											
Does	And	ther RR Operate Over Your Track at Cro	ossin	ig? No	)											
<b>Typ</b> Signs		of Warning Device(s) at	t C	rossir	g											
	0	Reflectorized Crossbucks	0	Non-Re	fle	ctorized C	rossb	buo	cks	0	Standard Highv	vay	Sto	op S	ign	(s)
	0	Other Stop Sign(s)	0	Other S	Sigr	ns:				0	Other Signs:					
Trair	n Ao	ctivated Devices:														
	0	R/W Reflectorized Gates	0	Other C	Col	ored Gates	6			2	Mast Mounted	FL				
	0	Cantilevered FL (Over)	0	Cantile	ver	ed FL (No	t over	r)		0	Other Flashing	Ligh	nts			
	0	Highway Traffic Signals	0	Wigwag	gs					2	Bells					
Spec	cial	Warning Device Not Train Activa	ted:		-1	None -										
Is Co	mme	ercial Power Available?			Ye	S										
Does	Cro	ssing Signal Provide Speed Selection fo	r Tra	ins?	No											
Metho With S		f Signalling for Train Operation: Is Track als?	Equi	ipped	No	)										
Part I	H:	Physical Data														

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	5
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	025000
Estimated Percent Trucks:	22

Crossing #:	028064T	Status:	Changed Crossing				
Railroad:	Burlington No	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad						

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LAWNDALE
County:	LOS ANGELES	County Map Ref. No.:	13-V-42
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	MANHATAN BEACH BL	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0016.87
Nearest RR Timetable Stn:	LAWNDALE		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0		Day Switching	0	Night Switching	5		Night	Thru	
Speed of Train at Crossing: Maximum Time Table	Speed	20				Typical Speed Ra	nge Ove	er Crossing From	1	to	20	mph	
Type and Number of Tracks		1	Main		0	Other							
Does Another RR Operate a Separate Track at Cro	ossing?	No											
Does Another RR Operate Over Your Track at Cro	ssing?	No											
Type of Warning Device(s) at	Cro	ssing											
0 Reflectorized Crossbucks	0 N	on-Refle	ctorized	Cross	bu	cks	0	Standard Highw	ay :	Sto	p Si	gn(s)	
0 Other Stop Sign(s)	00	ther Sigr	ns:				0	Other Signs:					
Train Activated Devices:													
4 R/W Reflectorized Gates	00	ther Cold	ored Gate	es			4	Mast Mounted F	۶L				
0 Cantilevered FL (Over)	0 C	antilever	ed FL (N	lot ove	er)		0	Other Flashing	Ligh	ts			
0 Highway Traffic Signals	0 W	/igwags					2	Bells					
Special Warning Device Not Train Activat	ed:	- 1	None -										
Is Commercial Power Available?		Ye	S										
Does Crossing Signal Provide Speed Selection for	Trains	? <b>No</b>	,										

No

#### Part III: Physical Data

Method of Signalling for Train Operation: Is Track Equipped With Signals?

Type of Development:	Industrial
Smallest Crossing Angle:	30 to 59 Degrees
Number of Traffic Lanes Crossing Railroad	5
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	019000
Estimated Percent Trucks:	22

Crossing #:	028065A	Status:	Changed Crossing					
Railroad:	Burlington Northern Santa Fe Corporation							
Initiating Agency	Railroad							

Effective Begin-Date of Record: 11/07/00 **Current Record** 

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LAWNDALE
County:	LOS ANGELES	County Map Ref. No.:	13-V-42
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	159TH STREET	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0016.94
Nearest RR Timetable Stn:	LAWNDALE		
Crossing Type and Protection:	Public At Grade		

## Part II Detailed Information

1

1

ĩ

Typical Number of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	5	Nig	ght Th	nru
Speed of Train at Crossing: Maximum Time Table S	Speed	1 <b>20</b>			Typical Speed Ran	ge Ove	er Crossing From	1	to	20	mph
Type and Number of Tracks		1	Main	0	Other						
Does Another RR Operate a Separate Track at Cro	ossing	? <b>No</b>									
Does Another RR Operate Over Your Track at Cros	ssing?	? No									
Type of Warning Device(s) at	Cro	ossing									
0 Reflectorized Crossbucks	0 1	Non-Refle	ctorized C	Crossbu	cks	0	Standard Highw	ay S	stop	Sign	(s)
0 Other Stop Sign(s)	0 (	Other Sign	is:			0	Other Signs:				
Train Activated Devices:											
0 R/W Reflectorized Gates	0 (	Other Cold	ored Gate	S		2	Mast Mounted F	L			
0 Cantilevered FL (Over)	0 (	Cantilever	ed FL (No	ot over)		0	Other Flashing L	.ight	S		
0 Highway Traffic Signals	0 \	Nigwags				2	Bells				
Special Warning Device Not Train Activate	ed:	- ٨	lone -								
Is Commercial Power Available?		Ye	s								
Does Crossing Signal Provide Speed Selection for	Trains	s? <b>No</b>									
Method of Signalling for Train Operation: Is Track E With Signals?	Equipp	oed <b>No</b>									
Does Crossing Signal Provide Speed Selection for Method of Signalling for Train Operation: Is Track E		s? No									

## Part III: Physical Data

Industrial
60 to 90 Degrees
2
No
Yes
No Markings
No
Asphalt
No
75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	000600
Estimated Percent Trucks:	40

Crossing #:	028066G	Status:	Changed Crossing			
Railroad:	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad					

Effective Begin-Date of Record: 11/07/00 Current Record

t

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LAWNDALE
County:	LOS ANGELES	County Map Ref. No.:	13-V-42
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	160TH STREET	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0017.01
Nearest RR Timetable Stn:	LAWNDALE		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

. ..

\_

Typical Number of Daily Train Movements:		5	Day Thru	0		Day Switching	0	Night Switching	5		Nigh	t Th	nru
Speed of Train at Crossing: Maximum Time Table Speed	peed	20				Typical Speed Ran	ge Ov	er Crossing From	1	to	2	<b>)</b> '	nph
Type and Number of Tracks		1	Main		0	Other							
Does Another RR Operate a Separate Track at Cros	sing	? <b>No</b>											
Does Another RR Operate Over Your Track at Cross	sing?	No											
Type of Warning Device(s) at Crossing													
	0 1	on-Refle	ctorized (	Crossb	ouo	cks	0	Standard High	way S	Sto	рS	ign	(s)
0 Other Stop Sign(s)	0 0	Other Sigr	ns:				0	Other Signs:					
Train Activated Devices:													
0 R/W Reflectorized Gates	0 0	Other Cold	ored Gate	s			2	Mast Mounted	FL				
0 Cantilevered FL (Over)	0 0	Cantilever	ed FL (N	ot over	r)		0	Other Flashing	Ligh	ts			
0 Highway Traffic Signals	0 \	Vigwags					2	Bells					
Special Warning Device Not Train Activated: - None -													
Is Commercial Power Available?		Ye	S										
Does Crossing Signal Provide Speed Selection for T	Frains	s? <b>No</b>											

No

#### Method of Signalling for Train Operation: Is Track Equipped With Signals? Part III: Physical Data

NAME LESS MANUAL AN CONTRACTOR AND CONTRACTOR	
Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	No Markings
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	000600
Estimated Percent Trucks:	40

Crossing #:	028067N	Status:	New Crossing	Effective Begin-Date of Record:	01/01/70
Railroad:	Atchison, Top	oeka & Sar	nta Fe Railway Company	End-Date of Record:	10/02/91
Initiating Agency	Original				

## Part I Location and Classification of Crossing

Division:	LA TERMINAL	Subdivision:	HARBORDISTRICT
State:	CA	Nearest City:	LAWNDALE
County:	LOS ANGELES	County Map Ref. No .:	13-V-42
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	161ST STREET	RailRoad I.D. No.:	2H-17.05
Branch or Line Name:	HARBOR BRANCH	Railroad Milepost:	0017.08
Nearest RR Timetable Stn:	LAWNDALE		
Crossing Type and Protection:	Public At Grade		

## Part II Detailed Information

Typical Number of Daily Train Movements:	3	Day Thru	8	Day Switching	3	Night Switching	3	N	light T	Thru
Speed of Train at Crossing: Maximum Time Table	Speed 15			Typical Speed Range	Ove	er Crossing From	5	to	15	mph
Type and Number of Tracks	0	Main	1	Other						
Does Another RR Operate a Separate Track at Cro	ssing? No									
Does Another RR Operate Over Your Track at Cro	ssing? No									
Type of Warning Device(s) at Signs:	-									
0 Reflectorized Crossbucks	0 Non-Refle	ectorized Ci	rossbu	cks	0	Standard Highw	ay S	Stop	o Sig	n(s)
0 Other Stop Sign(s)	0 Other Sig	ins:			0	Other Signs:				
Train Activated Devices:										
0 R/W Reflectorized Gates	2 Other Co	lored Gates			2	Mast Mounted F	Ľ			
0 Cantilevered FL (Over)	0 Cantileve	red FL (Not	over)		0	Other Flashing I	igh	ts		
0 Highway Traffic Signals	0 Wigwags				2	Bells				
Special Warning Device Not Train Activat	ed: -	None -								
Is Commercial Power Available?	Y	es								
Does Crossing Signal Provide Speed Selection for	Trains? N	o								
Method of Signalling for Train Operation: Is Track I With Signals?	Equipped <b>N</b>	0								
Part III: Physical Data										

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	No Markings
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	000700
Estimated Percent Trucks:	40

Crossing #:	028068V	Status:	Changed Crossing					
Railroad:	Burlington Northern Santa Fe Corporation							
Initiating Agency	Railroad							

Effective Begin-Date of Record: 11/07/00 **Current Record** 

## Part I Location and Classification of Crossing

#### Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0		Day Switching	0	Night Switching	5		Nigh	t Th	nru
Speed of Train at Crossing: Maximum Time Table	Spee	d <b>20</b>				Typical Speed Ran	ige Ove	er Crossing From	1	to	2	<b>)</b> r	nph
Type and Number of Tracks		1	Main	(	0	Other							
Does Another RR Operate a Separate Track at Cro	ossing	? <b>No</b>											
Does Another RR Operate Over Your Track at Cro	ssing	? <b>No</b>											
Type of Warning Device(s) at	Cr	ossing											
0 Reflectorized Crossbucks	0	Non-Refle	ctorized	Crossb	ouc	cks	0	Standard Highv	way s	Sto	рS	ign	(s)
0 Other Stop Sign(s)	0	Other Sig	ns:				0	Other Signs:					
Train Activated Devices:													
1 R/W Reflectorized Gates	0	Other Col	ored Gate	es			0	Mast Mounted	FL				
0 Cantilevered FL (Over)	0	Cantilever	red FL (N	ot over	r)		0	Other Flashing	Ligh	ts			
0 Highway Traffic Signals	0	Wigwags					0	Bells					
Special Warning Device Not Train Activat	ted:	- 1	None -										
Is Commercial Power Available?		Ye	s										
Does Crossing Signal Provide Speed Selection for	Trair	ns? No	)										
Method of Signalling for Train Operation: Is Track I With Signals?	Equip	ped <b>No</b>	þ										

#### Part III: Physical Data

Type of Development:	Commercial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	No Markings
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Collector
Estimated AADT:	002100
Estimated Percent Trucks:	30

Crossing #:	028069C	Status:	Changed Crossing			
Railroad:	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad					

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LAWNDALE
County:	LOS ANGELES	County Map Ref. No .:	
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	170TH STREET	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0017.62
Nearest RR Timetable Stn:	LAWNDALE		
Crossing Type and Protection:	Public At Grade		

## Part II Detailed Information

	Typical N	umber of Daily Train Movements:		5	Day Thru	0	D	ay Switching	0	Night Switching	5	١	light	Thru
	Speed of	Train at Crossing: Maximum Time Table	Spe	ed <b>20</b>			т	ypical Speed Rang	e Ove	er Crossing From	1	to	20	mph
	Type and	Number of Tracks			1 Main	0	<b>)</b> (	Other						
	Does And	other RR Operate a Separate Track at C	rossir	ng? No										
	Does And	other RR Operate Over Your Track at Cr	ossin	g? No										
	Type Signs:	of Warning Device(s) a	t Ci	rossin	g									
	0	Reflectorized Crossbucks	0	Non-Ref	lectorized	Crossb	uck	S	0	Standard High	way	Sto	p Sig	jn(s)
	0	Other Stop Sign(s)	0	Other Si	gns:				0	Other Signs:				
	Train A	ctivated Devices:												
	0	R/W Reflectorized Gates	0	Other Co	olored Gat	es			2	Mast Mounted	FL			
	0	Cantilevered FL (Over)	0	Cantilev	ered FL (N	lot over	)		0	Other Flashing	Ligh	ts		
	0	Highway Traffic Signals	0	Wigwag	5				2	Bells				
	Special	Warning Device Not Train Activa	ted:		None -									
	Is Comme	ercial Power Available?		۱ ۱	/es									
	Does Cro	ssing Signal Provide Speed Selection fo	r Trai	ns?	lo									
	Method o With Sign	f Signalling for Train Operation: Is Track aals?	Equi	pped N	lo									
Ρ	art III:	Physical Data												

Type of Development:	Commercial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Minor Arterial
Estimated AADT:	002500
Estimated Percent Trucks:	31

Crossing #:	028072K	Status:	Changed Crossing	
Railroad:	Burlington Northern Santa Fe Corporation			
Initiating Agency	Railroad			

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	REDONDO BEACH
County:	LOS ANGELES	County Map Ref. No.:	13-V-42
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	182ND STREET	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0018.38
Nearest RR Timetable Stn:	ALCOA		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

. .

.

Typical Number of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	5	Nig	ght T	ĥru
Speed of Train at Crossing: Maximum Time Table S	Speed	20			Typical Speed Rang	e Ove	er Crossing From	1	to	20	mph
Type and Number of Tracks		1	Main	0	Other						
Does Another RR Operate a Separate Track at Cro	ssing?	No									
Does Another RR Operate Over Your Track at Cros	ssing?	No									
Type of Warning Device(s) at	Cros	sing									
0 Reflectorized Crossbucks	0 No	n-Refle	ectorized Cr	ossbu	icks	0	Standard Highwa	ay S	stop	Sigr	n(s)
0 Other Stop Sign(s)	0 Ot	her Sigi	ns:			0	Other Signs:				
Train Activated Devices:											
2 R/W Reflectorized Gates	0 Ot	her Col	ored Gates			2	Mast Mounted Fl	L			
0 Cantilevered FL (Over)	0 Ca	ntilever	red FL (Not	over)		0	Other Flashing L	ight	s		
0 Highway Traffic Signals	<b>0</b> Wi	gwags				2	Bells				
Special Warning Device Not Train Activate	ed:	- 1	None -								
Is Commercial Power Available?		Ye	s								
Does Crossing Signal Provide Speed Selection for	Trains?	No	)								
Method of Signalling for Train Operation: Is Track E With Signals?	Equipped	No.	)								

#### Part III: Physical Data

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Minor Arterial
Estimated AADT:	011700
Estimated Percent Trucks:	01

Crossing #:	028096Y	Status:	Changed Crossing			
Railroad:	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad					

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No.:	13-V-42
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	TORRANCE BLVD.	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0021.24
Nearest RR Timetable Stn:	ALCOA		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	5	Night	Thru
Speed of Train at Crossing: Maximum Time Table S	speed	20			Typical Speed Ra	ange Ove	er Crossing From	1	to 20	mph
Type and Number of Tracks		1	Main	0	Other					
Does Another RR Operate a Separate Track at Cros	ssing	? <b>No</b>								
Does Another RR Operate Over Your Track at Cross	sing?	No								
Type of Warning Device(s) at Signs:	Cro	ossing								
0 Reflectorized Crossbucks	0	Non-Refle	ctorized	Crossbu	cks	0	Standard High	way	Stop Si	gn(s)
0 Other Stop Sign(s)	0 (	Other Sigr	ns:			0	Other Signs:			
Train Activated Devices:										
0 R/W Reflectorized Gates	0 (	Other Cold	ored Gat	es		2	Mast Mounted	FL		
2 Cantilevered FL (Over)	0 (	Cantilever	ed FL (N	Not over)		0	Other Flashing	Ligh	ts	
0 Highway Traffic Signals	0 \	Vigwags				2	Bells			
Special Warning Device Not Train Activate	ed:	- 1	Vone -							

Yes

No

No

#### Method of Signalling for Train Operation: Is Track Equipped With Signals? Part III: Physical Data

Does Crossing Signal Provide Speed Selection for Trains?

Is Commercial Power Available?

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	033800
Estimated Percent Trucks:	24

Crossing #:	028097F	Status:	New Crossing	Effective Begin-Date of Record:	01/01/70
Railroad:	Atchison, Tope	ka & San	ta Fe Railway Company	End-Date of Record:	10/02/91
Initiating Agency	Original				

## Part I Location and Classification of Crossing

Division:	LA TERMINAL	Subdivision:	HARBOR DIST
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No.:	13-V-42
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	ELDORADO STREET	RailRoad I.D. No .:	2H-21.4-D
Branch or Line Name:	HARBOR BRANCH	Railroad Milepost:	0021.13
Nearest RR Timetable Stn:	TORRANCE		
Crossing Type and Protection:	Pedestrian At Grade		

#### Part II Detailed Information

	Typical N	umber of Daily Train Movements:			0	Day Thru	0		Day Switching	0	Night Switching	0		Night	t Thru
	Speed of	Train at Crossing: Maximum Time Table	Spe	ed	0				Typical Speed Ran	ge Ov	er Crossing From	0	to	• •	mph
	Type and	Number of Tracks			0	Main		0	Other						
	Does And	other RR Operate a Separate Track at C	rossi	ng?	No										
	Does And	other RR Operate Over Your Track at Cr	ossin	g?	No										
	Type Signs:	of Warning Device(s) a	t C	ros	sing										
		Reflectorized Crossbucks	0	Nor	-Refle	ectorized C	rosst	buo	cks	0	Standard High	way	Sto	op Si	ign(s)
	0	Other Stop Sign(s)	0	Oth	er Sig	ns:				0	Other Signs:				
	Train A	ctivated Devices:													
	0	R/W Reflectorized Gates	0	Oth	er Col	ored Gates	5			0	Mast Mounted	FL			
	0	Cantilevered FL (Over)	0	Car	tileve	red FL (No	t over	r)		0	Other Flashing	Ligh	its		
	0	Highway Traffic Signals	0	Wig	wags					0	Bells				
	Special	Warning Device Not Train Activa	ted:		-	None -									
	Is Comm	ercial Power Available?													
	Does Cro	ssing Signal Provide Speed Selection fo	r Tra	ins?											
	Method o With Sigr	f Signalling for Train Operation: Is Track als?	Equi	pped	No	<b>)</b>									
Ρ	art III:	Physical Data													
	Type of	Development:													
	Smalles	t Crossing Angle:													
	Number	of Traffic Lanes Crossing Railro	ad												
	Are Tru	ck Pullout Lanes Present?			No	<b>b</b>									
	ls Highv	way Paved?			No	<b>,</b>									
	Paveme	ent Markings													
	Are RR	Advance Warning Signs Present	?		No	0									
	Crossin	g Surface:													
	Does Tr	rack Run Down a Street?			No	<b>,</b>									
	Nearby	Intersecting Highway?			Ur	nknown									
P	art IV:	Highway Departmen	t												
	Highwa	y System:													
	Is Cross	sing on State Highway System?			No	<b>)</b>									
	Function	nal Classification of Road Over C	ross	sing:											
	Estimat	ed AADT:													

Estimated Percent Trucks:

Crossing #:	028098M	Status:	Changed Crossing				
Railroad:	Burlington Northern Santa Fe Corporation						
Initiating Agency	Railroad						

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No.:	13-V-52
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	SONOMA STREET	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0021.48
Nearest RR Timetable Stn:	TORRANCE		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

	Typical	N	umber of Daily Train Movements:		5		Day Thru	0		Day Switching	0	Night Switching	5		Night	Th	ru
	Speed	of	Train at Crossing: Maximum Time Table	Spee	ed <b>2</b>	0				Typical Speed Range	Ove	er Crossing From	1	to	20	) m	nph
	Туре а	nd	Number of Tracks			1	Main	6	)	Other							
	Does A	no	ther RR Operate a Separate Track at Cro	ossin	g? No	,											
	Does A	no	ther RR Operate Over Your Track at Cro	ssing	? <b>No</b>	)											
	Type Signs:	e	of Warning Device(s) at	Cı	rossin	g											
	-	0	Reflectorized Crossbucks	0	Non-Re	fle	ctorized Cr	ossb	uc	cks	2	Standard Highw	ay	Sto	p Si	gn(	(s)
		0	Other Stop Sign(s)	0	Other S	igr	ns:				0	Other Signs:					
	Train	Ac	tivated Devices:														
		2	R/W Reflectorized Gates	0	Other C	olo	ored Gates				2	Mast Mounted F	Ľ				
		0	Cantilevered FL (Over)	0	Cantile	/er	ed FL (Not	over	)		0	Other Flashing	_igh	nts			
		0	Highway Traffic Signals	0	Wigwag	js					2	Bells					
	Speci	al	Warning Device Not Train Activat	ed:		- 1	Vone -										
	Is Com	me	ercial Power Available?			Ye	s										
	Does C	Cros	ssing Signal Provide Speed Selection for	Trai	ns?	No	1										
	Methoo With Si		Signalling for Train Operation: Is Track I als?	Equi	oped	No											
Pa	art III	<b>I</b> :	Physical Data														
	Туре	of	Development:			Ins	stitutional										
	Small	es	t Crossing Angle:			0 t	o 29 Degre	es									

Smallest Crossing Angle:	0 to 29 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Asphalt
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	001200
Estimated Percent Trucks:	30

Crossing #:	028099U	Status:	Changed Crossing				
Railroad:	Burlington Northern Santa Fe Corporation						
Initiating Agency	Railroad						

Effective Begin-Date of Record: 11/07/00 **Current Record** 

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No.:	13-V-52
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	CARSON STREET	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0021.60
Nearest RR Timetable Stn:	TORRANCE		
Crossing Type and Protection:	Public At Grade		

## Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0		Day Switching	0	Night Switching	5	Ni	ght 1	Thru
Speed of Train at Crossing: Maximum Time Table Sp	peed	20			,	Typical Speed Rar	nge Ov	er Crossing From	1	to	20	mph
Type and Number of Tracks		1	Main	0	)	Other						
Does Another RR Operate a Separate Track at Cross	sing	? <b>No</b>										
Does Another RR Operate Over Your Track at Cross	sing?	No										
Type of Warning Device(s) at Crossing												
0 Reflectorized Crossbucks	0 1	von-Refle	ctorized (	Crossbu	uc	ks	0	Standard High	way \$	Stop	Sig	n(s)
0 Other Stop Sign(s)	0 0	Other Sigr	ns:				0	Other Signs:				
Train Activated Devices:												
1 R/W Reflectorized Gates	0 0	Other Cole	ored Gate	S			4	Mast Mounted	FL			
0 Cantilevered FL (Over)	0 0	Cantilever	ed FL (No	ot over)	)		0	Other Flashing	Ligh	ts		
0 Highway Traffic Signals	0 \	Vigwags					2	Bells				
Special Warning Device Not Train Activated	d:	- 1	Vone -									

Method of Signalling for Train Operation: Is Track Equipped With Signals? Part III: Physical Data

Does Crossing Signal Provide Speed Selection for Trains?

Is Commercial Power Available?

art m. r nysicai Data	
Type of Development:	Residential
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	5
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Yes

No

No

## Part IV: Highway Department

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	037600
Estimated Percent Trucks:	28

Crossing #:	028101T	Status:	Changed Crossing				
Railroad:	Burlington No	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad						

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No.:	13-V-52
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	WASHINGTON ST	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0022.10
Nearest RR Timetable Stn:	TORRANCE		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

	Typical N	lumber of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	5		Night	t Thru
	Speed of	Train at Crossing: Maximum Time Table	Spe	ed <b>20</b>			Typical Speed Rang	je Ov	er Crossing From	1	to	> 20	) mph
	Type and	Number of Tracks		1	Main	0	Other						
	Does An	other RR Operate a Separate Track at Cr	ossir	ng? No									
	Does An	other RR Operate Over Your Track at Cro	ossing	g? <b>No</b>									
	Type Signs:	of Warning Device(s) at	t Cı	rossing	l								
	0	Reflectorized Crossbucks	0	Non-Refle	ectorized C	rossbu	cks	2	Standard Highv	way a	Sto	op Si	gn(s)
	0	Other Stop Sign(s)	0	Other Sig	ins:			0	Other Signs:				
	Train A	ctivated Devices:											
	2	R/W Reflectorized Gates	0	Other Co	lored Gates	S		2	Mast Mounted	FL			
	0	Cantilevered FL (Over)	0	Cantileve	ered FL (No	t over)		0	Other Flashing	Ligh	nts		
	0	Highway Traffic Signals	0	Wigwags				2	Bells				
	Special	Warning Device Not Train Activa	ted:	-	None -								
	Is Comm	ercial Power Available?		Y	es								
	Does Cro	ossing Signal Provide Speed Selection for	r Trai	ins? N	o								
	Method o With Sigr	of Signalling for Train Operation: Is Track nals?	Equi	pped N	o								
Pa	art III:	Physical Data											
	Type of	f Development:		In	stitutional								
	Smalles	st Crossing Angle:		0	to 29 Degr	ees							
	Numbe	r of Traffic Lanes Crossing Railroa	ad	2									
	Are Tru	ick Pullout Lanes Present?		N	o								
	Is High	way Paved?		Y	es								

Stop Lines and RR Xing Symbols

Nearby Intersecting Highway? Part IV: Highway Department Highway System:

Are RR Advance Warning Signs Present?

Does Track Run Down a Street?

**Pavement Markings** 

Crossing Surface:

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Minor Arterial
Estimated AADT:	003800
Estimated Percent Trucks:	35

Yes

No

Asphalt

75 to 150 feet

Crossing #:	028103G Status	Changed Crossing	Effective Begin-Date of Record:	11/07/00			
Railroad:	<b>Burlington Northern S</b>	anta Fe Corporation	Current Record				
Initiating Agency	Railroad						

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No.:	13-V-52
Highway Type & No.:		FRA RR Network Lic:	SP1 57
Street or Road Name:	ARLINGTON AVE	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0022.24
Nearest RR Timetable Stn:	TORRANCE		
Crossing Type and Protection:	Public At Grade		

### Part II Detailed Information

5 Day	Thru 🧿 Day Swite	ching O	Night Switching	5	Night Thru			
20	Typical S	peed Range Ove	er Crossing From	1	to 20 mph			
1 Main	Ø Other							
No								
No								
Type of Warning Device(s) at Crossing								
n-Reflectoriz	zed Crossbucks	0	Standard Hig	hway S	Stop Sign(s)			
her Signs:		0	Other Signs:					
	20 1 Main No No Ssing	20 Typical S 1 Main 0 Other No No Ssing on-Reflectorized Crossbucks	20 Typical Speed Range Over 1 Main 0 Other No No Ssing on-Reflectorized Crossbucks 0	20 Typical Speed Range Over Crossing From 1 Main 0 Other No No Ssing on-Reflectorized Crossbucks 0 Standard Hig	20     Typical Speed Range Over Crossing From 1       1     Main     0       No     No       Ssing       on-Reflectorized Crossbucks     0       Standard Highway S	20       Typical Speed Range Over Crossing From 1 to 20 mph         1 Main       0 Other         No       No         Ssing       0 Standard Highway Stop Sign(s)		

0	<b>R/W Reflectorized Gates</b>	0	Other Colored Gates	4	Mast Mounted FL	
0	Cantilevered FL (Over)	0	Cantilevered FL (Not over)	0	Other Flashing Lights	
0	Highway Traffic Signals	0	Wigwags	2	Bells	
Special	Warning Device Not Train Activat	ed:	- None -			
Is Comm	ercial Power Available?		Yes			
Does Cro	essing Signal Provide Speed Selection for	Trai	ins? No			

No

#### Part III: Physical Data

Method of Signalling for Train Operation: is Track Equipped With Signals?

Train Activated Devices:

Type of Development:	Institutional
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

#### Part IV: Highway Department

Highway System:	0
is Crossing on State Highway System?	A
Functional Classification of Road Over Crossing:	L
Estimated AADT:	0
Estimated Percent Trucks:	2

Other FA Highway - Not NHS No Urban Minor Arterial 014600 28

# U.S. DOT - AAR CROSSING INVENTORY INFORMATION AS OF 12/11/01 028104N Status: Changed Crossing

Crossing #:	028104N	Status:	Changed Crossing				
Railroad:	Burlington Northern Santa Fe Corporation						
Initiating Agency	Railroad						

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No .:	13-V-52
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	CABRILLO AVENUE	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0022.49
Nearest RR Timetable Stn:	TORRANCE		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

	Typical N	lumber of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	5	1	Night	Thru
	Speed of	Train at Crossing: Maximum Time Table	e Speed	20			Typical Speed Rang	e Ov	er Crossing From	1	to	20	mph
	Type and	Number of Tracks		1	Main	0	Other						
	Does And	other RR Operate a Separate Track at C	rossing	No									
	Does And	other RR Operate Over Your Track at Cr	ossing?	No									
	Type Signs:	of Warning Device(s) a	t Cro	ossing									
	0	Reflectorized Crossbucks	0 N	Ion-Refle	ectorized C	rossbu	icks	0	Standard Highv	vay	Sto	p Sig	gn(s)
	0	Other Stop Sign(s)	0 0	ther Sig	ns:			0	Other Signs:				
	Train A	ctivated Devices:											
	0	R/W Reflectorized Gates	0 0	Other Col	ored Gates	S		2	Mast Mounted	FL			
	0	Cantilevered FL (Over)	0 0	antilever	red FL (No	t over)		0	Other Flashing	Ligh	nts		
	0	Highway Traffic Signals	0 V	Vigwags				2	Bells				
	Special	Warning Device Not Train Activa	ated:	- 1	None -								
	Is Comm	ercial Power Available?		Ye	s								
	Does Cro	ossing Signal Provide Speed Selection for	or Trains	? <b>N</b> c	>								
	Method o With Sigr	of Signalling for Train Operation: Is Track nals?	Equipp	ed No	<b>)</b>								
Ρ	Part III: Physical Data												

Commercial
60 to 90 Degrees
2
No
Yes
Stop Lines and RR Xing Symbols
Yes
Asphalt
No
75 to 150 feet

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Minor Arterial
Estimated AADT:	007500
Estimated Percent Trucks:	24

Crossing #:	028105V	Status:	Changed Crossing			
Railroad:	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad					

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No .:	13V52
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	BORDER AVENUE	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0022.57
Nearest RR Timetable Stn:	TORRANCE		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	5	Night TI	hru
Speed of Train at Crossing: Maximum Time Table 3	Speed	20			Typical Speed Ra	ange Ove	er Crossing From	1	to 20	mph
Type and Number of Tracks		1	Main	0	Other					
Does Another RR Operate a Separate Track at Cro	ossing?	No								
Does Another RR Operate Over Your Track at Cros	ssing?	No								
Type of Warning Device(s) at	Cros	sing								
0 Reflectorized Crossbucks	0 No	n-Refle	ectorized C	rossbu	icks	0	Standard High	way S	Stop Sigr	n(s)
0 Other Stop Sign(s)	0 Ot	her Sigi	ns:			0	Other Signs:			
Train Activated Devices:										
2 R/W Reflectorized Gates	0 Ot	her Col	ored Gates	1		2	Mast Mounted	FL		
0 Cantilevered FL (Over)	0 Ca	ntileve	red FL (Not	over)		0	Other Flashing	Ligh	ts	
0 Highway Traffic Signals	0 Wi	gwags				2	Bells			
Special Warning Device Not Train Activate	ed:	-	None -							
Is Commercial Power Available?		Ye	IS							
Does Crossing Signal Provide Speed Selection for	Trains?	No	<b>,</b>							

No

#### Part III: Physical Data

Method of Signalling for Train Operation: Is Track Equipped With Signals?

Type of Development:	Industrial						
Smallest Crossing Angle:	60 to 90 Degrees						
Number of Traffic Lanes Crossing Railroad	2						
Are Truck Pullout Lanes Present?	No						
Is Highway Paved?	Yes						
Pavement Markings	Stop Lines and RR Xing Symbols						
Are RR Advance Warning Signs Present?	Yes						
Crossing Surface:	Sectional Treated Timber						
Does Track Run Down a Street?	No						
Nearby Intersecting Highway?	75 to 150 feet						

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	000900
Estimated Percent Trucks:	35

Crossing #:	028106C	Status:	Changed Crossing					
Railroad:	Burlington N	Burlington Northern Santa Fe Corporation						
Initiating Agency	Railroad							

Effective Begin-Date of Record: 11/07/00 Current Record

5

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No .:	13-V-52
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	SEPULVEDA BLVD.	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0022.78
Nearest RR Timetable Stn:	TORRANCE		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical	Number of Daily	Train Movements:			5	Day Thru	0	Day Switching	0	Night Switching	5	1	Night	Thru
Speed	of Train at Crossir	ng: Maximum Time Table	Spe	ed 2	20			Typical Speed Ran	nge Ove	er Crossing From	1	to	20	mph
Туре а	nd Number of Trac	cks			1	Main	0	Other						
Does A	nother RR Operat	te a Separate Track at Cro	ossir	ng? N	o									
Does A	nother RR Operat	te Over Your Track at Cros	ssin	g? <b>N</b>	0									
Type Signs:	e of Warnii	ng Device(s) at	C	rossir	ng									
	0 Reflectorize	ed Crossbucks	0	Non-R	efle	ctorized Cr	ossbu	cks	0	Standard High	way S	Sto	p Sig	gn(s)
)	0 Other Stop	Sign(s)	0	Other \$	Sigr	ns:			0	Other Signs:				
Train	Activated Devi	ces:												
	2 R/W Reflect	torized Gates	0	Other (	Colo	ored Gates			5	Mast Mounted	FL			
	0 Cantilevered	d FL (Over)	0	Cantile	ver	ed FL (Not	over)		0	Other Flashing	Light	ts		
	0 Highway Tra	affic Signals	0	Wigwa	gs				3	Bells				
Speci	al Warning Dev	vice Not Train Activat	ed:		- 1	Vone -								
Is Com	mercial Power Av	ailable?			Ye	s								
Does C	Crossing Signal Pro	ovide Speed Selection for	Trai	ns?	No									
Methoo With Si		Train Operation: Is Track E	Equi	pped	No	i								
Part II	l: Physica	I Data												
Туре	of Developmer	nt:			Co	mmercial								
Small	est Crossing A	ngle:			0 t	o 29 Degre	es							
Numb	er of Traffic La	ines Crossing Railroa	d		7									
Are T	ruck Pullout La	nes Present?			No									
Is Hig	hway Paved?				Ye	s								
Paver	nent Markings				Sto	op Lines al	nd RR	Xing Symbols						
Are R	R Advance Wa	arning Signs Present?	<b>,</b>		Ye	s								
Cross	ing Surface:				Se	ctional Tre	ated 1	ïmber						

# Part IV: Highway Department

Does Track Run Down a Street?

Nearby Intersecting Highway?

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	053700
Estimated Percent Trucks:	21

No

Less than 75 feet

Crossing #:	028107J	Status:	Changed Crossing		
Railroad:	Burlington Northern Santa Fe Corporation				
Initiating Agency	Railroad				

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	TORRANCE
County:	LOS ANGELES	County Map Ref. No .:	13-V-52
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	WESTERN AVENUE	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0023.03
Nearest RR Timetable Stn:	IRONSIDES		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	5	Night	Thru
Speed of Train at Crossing: Maximum Time Table Spe	ed <b>20</b>			Typical Speed Ra	inge Ove	er Crossing From	1	to <b>20</b>	mph
Type and Number of Tracks	1	Main	1	Other					
Does Another RR Operate a Separate Track at Crossi	ng? <b>No</b>								
Does Another RR Operate Over Your Track at Crossin	g? <b>No</b>								
Type of Warning Device(s) at C	rossing								
0 Reflectorized Crossbucks 0	Non-Refle	ectorized C	rossbu	cks	0	Standard High	way s	Stop Sig	n(s)
0 Other Stop Sign(s) 0	Other Sig	ns:			0	Other Signs:			
Train Activated Devices:									
4 R/W Reflectorized Gates 0	Other Col	ored Gates			4	Mast Mounted	FL		
0 Cantilevered FL (Over) 0	Cantileve	red FL (No	t over)		0	Other Flashing	J Ligh	ts	
0 Highway Traffic Signals 0	Wigwags				4	Bells			
Special Warning Device Not Train Activated		None -							
Is Commercial Power Available?	Ye	es							

No

No

#### Method of Signalling for Train Operation: Is Track Equipped With Signals? Part III: Physical Data

Does Crossing Signal Provide Speed Selection for Trains?

Type of Development:	Residential
Smallest Crossing Angle:	30 to 59 Degrees
Number of Traffic Lanes Crossing Railroad	4
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	023600
Estimated Percent Trucks:	21

## U.S. DOT - AAR CROSSING INVENTORY INFORMATION AS OF 12/11/01 Crossing #: 028113M Status: Changed Crossing

Crossing #:	0281 <b>13M</b>	Status:	Changed Crossing			
Railroad:	Burlington Northern Santa Fe Corporation					
Initiating Agency	Railroad					

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	CARSON
County:	LOS ANGELES	County Map Ref. No.:	13-V-53
Highway Type & No.:		FRA RR Network Lic:	NINWX
Street or Road Name:	FIGUEROA STREET	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0024.79
Nearest RR Timetable Stn:	IRONSIDES		
Crossing Type and Protection:	Public At Grade		

## Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	5	1	light	Thru
Speed of Train at Crossing: Maximum Time Table Sp	eed	20			Typical Speed Rang	e Ove	er Crossing From	1	to	20	mph
Type and Number of Tracks		1	Main	0	Other						
Does Another RR Operate a Separate Track at Cross	sing?	No									
Does Another RR Operate Over Your Track at Cross	ing?	No									
Type of Warning Device(s) at C	Cross	sing									
0 Reflectorized Crossbucks 0	Non-	-Refle	ctorized Cr	ossbu	cks	0	Standard Highwa	ay S	Sto	o Sig	gn(s)
0 Other Stop Sign(s) 0	0 Othe	er Sigi	ns:			0	Other Signs:				
Train Activated Devices:											
4 R/W Reflectorized Gates 0	0 Othe	er Col	ored Gates			4	Mast Mounted F	L			
0 Cantilevered FL (Over) 0	Cant	tilever	ed FL (Not	over)		0	Other Flashing L	igh	ts		
0 Highway Traffic Signals 0	) Wigv	wags				2	Bells				
Special Warning Device Not Train Activated	:	- 1	Vone -								
Is Commercial Power Available?		Ye	s								
Does Crossing Signal Provide Speed Selection for Tr	rains?	No	2								
Method of Signalling for Train Operation: Is Track Eq With Signals?	uipped	No									
Part III: Physical Data											

#### Part III: Physical Data

Industrial
60 to 90 Degrees
4
Yes
Yes
Stop Lines and RR Xing Symbols
Yes
Sectional Treated Timber
No
75 to 150 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	011000
Estimated Percent Trucks:	10

Crossing #:	028118W Status: Changed Crossing	Effective Begin-Date of Record: 11/07/00
Railroad:	Burlington Northern Santa Fe Corporation	Current Record
Initiating Agency	Railroad	

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	CARSON
County:	LOS ANGELES	County Map Ref. No .:	13-V-53
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	AVALON BLVD	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0025.94
Nearest RR Timetable Stn:	WATSON		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Number of Daily Train Movements:	5	Day Thru	0	Day Switching	0	Night Switching	5	Night Thru
Speed of Train at Crossing: Maximum Time Table Spe	d <b>20</b>			Typical Speed Rar	nge Ove	r Crossing From	1	to <b>20</b> mph
Type and Number of Tracks	1	Main	0	Other				
Does Another RR Operate a Separate Track at Crossir	? <b>No</b>							
Does Another RR Operate Over Your Track at Crossing	? <b>No</b>							
Type of Warning Device(s) at C Signs: 0 Reflectorized Crossbucks 0		<b>)</b> ectorized (	rosshi	icke	0	Standard High	way	Stop Sign(s)
		ans: <b>YELL</b>			0	Other Signs:	nay	Stop Olgri(3)
Train Activated Devices:						5		
4 R/W Reflectorized Gates 0	Other Co	lored Gate	s		4	Mast Mounted	FL	
0 Cantilevered FL (Over) 0	Cantileve	ered FL (No	t over)		0	Other Flashing	Ligh	ts
0 Highway Traffic Signals 0	Wigwags	5			2	Bells		
Special Warning Device Not Train Activated:	-	None -						

Special Warning Device Not Train Activated:- NoIs Commercial Power Available?YesDoes Crossing Signal Provide Speed Selection for Trains?NoMethod of Signalling for Train Operation: Is Track Equipped<br/>With Signals?No

#### Part III: Physical Data

Type of Development:	Commercial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	5
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	Less than 75 feet

Highway System:	Other FA Highway - Not NHS
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	018000
Estimated Percent Trucks:	07

Crossing #:	028119D	Status:	Changed Crossing				
Railroad:	Burlington Northern Santa Fe Corporation						
Initiating Agency	Railroad						

Effective Begin-Date of Record: 11/07/00 Current Record

## Part | Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LOS ANGELES
County:	LOS ANGELES	County Map Ref. No .:	13-V-53
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	BROAD STREET	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0026.04
Nearest RR Timetable Stn:	WATSON		
Crossing Type and Protection:	Public At Grade		

#### Part II Detailed Information

Typical Numb	per of Daily Train Movements:		5		Day Thru	0	Day Switching	0	Night Switching	5		Night	Thr	u
Speed of Trai	in at Crossing: Maximum Time Table S	Spee	ed <b>20</b>	ų.			Typical Speed Range	Ove	er Crossing From	1	to	20	m	iph
Type and Nur	mber of Tracks			1	Main	0	Other							
Does Another	r RR Operate a Separate Track at Cro	ssin	g? No											
Does Another	r RR Operate Over Your Track at Cros	sing	? <b>No</b>											
Type of Signs:	Warning Device(s) at	Cr	ossin	g										
-	eflectorized Crossbucks	0	Non-Ref	lec	torized Cro	ossbu	icks	0	Standard Highw	ay S	Sto	op Si	gn(	s)
0 Ot	ther Stop Sign(s)	0	Other Si	gn	s:			0	Other Signs:					
Train Activa	ated Devices:													
0 R/	W Reflectorized Gates	0	Other Co	olo	red Gates			2	Mast Mounted F	L				
<b>0</b> Ca	antilevered FL (Over)	0	Cantilev	ere	ed FL (Not	over)		0	Other Flashing L	igh	ts			
<b>0</b> Hig	ghway Traffic Signals	0	Wigwag	s				2	Bells					
Special Wa	arning Device Not Train Activate	ed:		- N	one -									
Is Commercia	al Power Available?		3	/es										
Does Crossin	ng Signal Provide Speed Selection for	Trair	ns? 🖊	lo										
Method of Sig With Signals?	gnalling for Train Operation: Is Track E	quip	oped /	lo										
Part III: Pl	hysical Data													
Type of De	velopment:		,	200	idential									

Type of Development:	Residential
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

-	
Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	001100
Estimated Percent Trucks:	30

## U.S. DOT - AAR CROSSING INVENTORY INFORMATION AS OF 12/11/01

Crossing #:	028124A	Status:	Changed Crossing						
Railroad:	Burlington Northern Santa Fe Corporation								
Initiating Agency	Railroad								

Effective Begin-Date of Record: 11/07/00 Current Record

### Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	LOS ANGELES
County:	LOS ANGELES	County Map Ref. No .:	13-V-53
Highway Type & No .:		FRA RR Network Lic:	SP157
Street or Road Name:	LAKME STREET	RailRoad I.D. No.:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0026.11
Nearest RR Timetable Stn:	WATSON		
Crossing Type and Protection:	Public At Grade		

### Part II Detailed Information

- - -

Typical Number of Daily Train Movements:	5 D	ay Thru 0	Day	y Switching	0	Night Switching	5	Night	Thru
Speed of Train at Crossing: Maximum Time Table Spe	ed <b>20</b>		Тур	oical Speed R	ange Ove	er Crossing From	1	to 20	mph
Type and Number of Tracks	1 N	lain	1 Oth	ier					
Does Another RR Operate a Separate Track at Crossir	g? No								
Does Another RR Operate Over Your Track at Crossing	? <b>No</b>								
Type of Warning Device(s) at Constant Signs:	ossing								
0 Reflectorized Crossbucks 0	Non-Reflect	orized Cross	bucks		0	Standard Hig	ghway S	Stop Si	gn(s)
0 Other Stop Sign(s) 0	Other Signs	:			0	Other Signs:			
Train Activated Devices:									
0 R/W Reflectorized Gates 0	Other Colore	ed Gates			2	Mast Mounte	ed FL		
0 Cantilevered FL (Over) 0	Cantilevered	FL (Not ove	er)		0	Other Flashi	ng Ligh	ts	
0 Highway Traffic Signals 0	Wigwags				2	Bells			
Special Warning Device Not Train Activated:	- No	ne -							
Is Commercial Power Available?	Yes								
Does Crossing Signal Provide Speed Selection for Training	ns? <b>No</b>								

No

#### Method of Signalling for Train Operation: Is Track Equipped With Signals? Part III: Physical Data

-	
Type of Development:	Residential
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	Stop Lines and RR Xing Symbols
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

### Part IV: Highway Department

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Local
Estimated AADT:	001500
Estimated Percent Trucks:	30

## U.S. DOT - AAR CROSSING INVENTORY INFORMATION AS OF 12/11/01

Crossing #:	028125G	Status:	Changed Crossing
Railroad:	Burlington Nor	thern Sai	nta Fe Corporation
Initiating Agency	Railroad		

Effective Begin-Date of Record: 11/07/00 Current Record

## Part I Location and Classification of Crossing

Division:	LOS ANGELES TE	Subdivision:	HARBOR
State:	CA	Nearest City:	CARSON
County:	LOS ANGELES	County Map Ref. No.:	13-V-53
Highway Type & No.:		FRA RR Network Lic:	SP157
Street or Road Name:	WILMINGTON AVE	RailRoad I.D. No .:	7604
Branch or Line Name:	REDO J-L BEACH	Railroad Milepost:	0026.36
Nearest RR Timetable Stn:	WATSON		
Crossing Type and Protection:	Public At Grade		

### Part II Detailed Information

Typical Number of Daily Train Movements:		5	Day Thru	0	Day Switching	0	Night Switching	5	١	light	Thru
Speed of Train at Crossing: Maximum Time Table S	peed	20			Typical Speed F	Range Ove	er Crossing From	1	to	20	mph
Type and Number of Tracks		1	Main	1	Other						
Does Another RR Operate a Separate Track at Cros	ssing?	No									
Does Another RR Operate Over Your Track at Cross	sing?	No									
Type of Warning Device(s) at Signs:	Cros	sing									
	0 No	n-Refle	ctorized C	rossb	ucks	0	Standard High	way S	Stop	o Sig	gn(s)
0 Other Stop Sign(s)	0 Ot	her Sigi	ns:			0	Other Signs:				
Train Activated Devices:											
1 R/W Reflectorized Gates	0 Oth	ner Col	ored Gates			2	Mast Mounted	FL			
0 Cantilevered FL (Over)	0 Ca	ntilever	ed FL (No	over	)	0	Other Flashing	Ligh	ts		
0 Highway Traffic Signals	0 Wi	gwags				2	Bells				
Special Warning Device Not Train Activate	d:	-1	None -								
Is Commercial Power Available?		Ye	s								
Does Crossing Signal Provide Speed Selection for T	Frains?	No	,								

No

### Part III: Physical Data

Method of Signalling for Train Operation: Is Track Equipped With Signals?

Type of Development:	Industrial
Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad	2
Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes
Pavement Markings	No Markings
Are RR Advance Warning Signs Present?	Yes
Crossing Surface:	Sectional Treated Timber
Does Track Run Down a Street?	No
Nearby Intersecting Highway?	75 to 150 feet

### Part IV: Highway Department

Highway System:	Non-Federal-aid
Is Crossing on State Highway System?	No
Functional Classification of Road Over Crossing:	Urban Other Principal Arterial
Estimated AADT:	018000
Estimated Percent Trucks:	10

# Appendix E CALIFORNIA P.U.C. GENERAL ORDER NO. 135

The following is a General Order from the California Public Utilities Commission (CPUC) specifying that a train cannot block a public grade crossing for more than 10 minutes. This is commonly referred to as the "ten-minute rule."

#### GENERAL ORDER NO. 135

# Public Utilities Commission of the State of California

#### REGULATIONS COVERNING THE OCCUPANCY OF PUBLIC GRADE CROSSINGS BY RAILBOADS

#### Adopted September 11, 1974. Effective Nevember 1, 1974. Datision No. 83446 in Case No. 8949.

IT IS ORDERED by the Public Utilities Commission of the State of California that each railroad corporation operating in the state of California shall observe the following regulations in conducting operations on and across public grade crossings:

- 1. TRAIN MOVEMENTS—Except as provided in Paragraph 5, a public grade crossing which is blocked by a stopped train, other than a passenger train, must be opened within 10 minutes, unless no vehicle or pedestrian is waiting at the crossing. Such a cleared crossing must be left open until it is known that the train is ready to depart. When recoupling such a train at the crossing, movement must be made promptly, consistent with safety.
- 2. SWITCHING MOVEMENTS—Switching over public grade crossings should be avoided whenever reasonably possible. If not reasonably possible, such crossings must be cleared frequently to allow a vehicle or pedestrian to pass and must not be occupied continuously for longer than 10 minutes unless no vehicle or pedestrian is waiting at the crossing.
- 3. GRADE CROSSING PROTECTION CIRCUITS—Cars or locomotives must not be left standing nor switches left open within the controlling circuits of automatic gate protection devices unless time-out features are provided to allow the gate arms to rise.
- 4. There are no time restrictions for crossing occupancy for a moving train continuing in the same direction.
- 5. These time limit provisions shall not apply to any blocking resulting from compliance with State and Federal laws and regulations, terrain and physical conditions, adverse weather conditions, conditions rendering the roadbed or track structure unsafe, mechanical failures, train accidents, or other occurrences over which the railroad has no control, except that such crossing shall be cleared with reasonable dispatch.
- 6. In the event of any uncontrolled blockage involving more than one grade crossing and a peace officer is on the scene, primary consideration shall be given to the clearing of that crossing which, in the peace officer's judgment, will result in the minimum delay to vehicular traffic.
- 7. A crew member of a train blocking a public crossing shall immediately take all reasonable steps, consistent with the safe

operation of such train, to clear the crossing upon receiving information from a peace officer, member of any fire department, as defined in Section 2801 of the Vehicle Code, or operator of an emergency vehicle, as defined in Section 165 of the Vehicle Code, that emergency circumstances require the clearing of the crossing.

- 8. Any agreement between a railroad and a public agency in effect on the effective date hereof or, in accordance with Attachment A, subsequently approved by this Commission permitting certain crossings to be blocked for a time period other than specified herein shall prevail.
- 9. Any railroad or public agency ' may, by formal application to this Commission, request a variance from the regulations prescribed herein or have different regulations provided in connection with operations over a specific crossing where local conditions so require. The contents of the application shall be in accord with Rule 15 of the Commission's Rules of Practice and Procedure. The application shall detail any previous steps that may have been taken in an attempt to reach an agreement on the proposed variance and shall list any public agencies within the geographic area or any railroads that might be affected by the variance. A copy of the application shall be mailed to all such public agencies and railroads and a certificate of service regarding such mailings shall accompany the application filed with the Commission.
- 10. The district attorney of the proper county or the city attorney designated to prosecute misdemeanors in his stead shall prosecute noncompliance with this General Order by means of a misdemeanor complaint issued against the railroad corporation in accordance with Chapter 11, Part 1, Division 1 of the Public Utilities Code.

This order shall become effective November 1, 1974.

Approved and dated at San Francisco, California, this 11th day of September, 1974.

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

By WILLIAM R. JOHNSON Secretary

G.O. 135

<sup>&</sup>lt;sup>1</sup> Public Agency—The term "public agency" as used herein shall include the State, a county, an incorporated city or town, or any authorized agencies thereof.

#### Attachment A

#### (Agreement re Variance)

The following procedures shall be followed when Commission approval is sought for an agreement between a railroad and a public agency regarding any proposed variance from this General Order that is reached subsequent to the effective date of the general order.

A letter jointly signed by the parties to the agreement shall be filed with the Commission. Said letter shall state all information pertinent to the proposed variance agreed upon by the parties, including a traffic count for the crossing for which the variance is sought. In addition to the signing parties, the letter shall specify any other railroads or any other public agencies within the geographic area that might be affected by the variance, including the California Highway Patrol, the sheriff, and police and fire departments. A copy of the letter shall be mailed to all such public agencies and railroads and a certificate of service regarding such mailings shall accompany the letter filed with the Commission. Any affected public agency or railroad may file with the Commission an objection to the proposed variance no later than 20 days after the date on which the variancerequest letter was mailed to the Commission.

Any variance granted shall be by a resolution adopted by the Commission after the Commission has determined that such variance would be in the public interest. The Commission will notify all parties and specified public agencies and railroads of whatever action it may take regarding the proposed variance, and will forward a copy of the resolution, if granted, to the parties. If not granted the parties may file a formal application seeking to obtain such variance.

87 76256

G.O. 135

# Appendix F VEHICULAR DELAY AND L.O.S. ANALYSIS

Appearing in this appendix is a table in two parts displaying vehicular delays and a Level of Service (LOS) analysis for the years 2000, 2005, and 2015. The table lists all the crossings in the study area with vehicular information such as number of lanes, average daily traffic volumes, the number of trains that go through the crossing, the length of time of crossing closures and the resulting vehicle delays and LOS at each crossing.

Also appearing is summary of the assumptions and methodologies employed in the analysis of vehicular delays and the LOS analysis.

WILBUR SMITH ASSOCIATES

		Mile Post		No. of	Avera	uge daily	e daily traffic Max. Estimated average number of trains (						ge gate down robability of delays p			s per day			
Xing No.		Number	Cross Street Name	Traffic Lanes	2000	2005	2015	Speed	2	000	2	005	2	015		nin.)	2000	2005	2015
		-		Lanes	000000		-0.00	(mph)	Local	Through	Local	Through	Local	Through		Through	23000030	0.9581819	
1	027992J	8.03	CRENSHAW BLVD	4	23,500	24,700	27,300	20	2	14	2	0	2	0	2.1	13.7	13.6%	0.3%	0.3%
2	027993R	8.14	VICTORIA AVE	2	750	800	900	20	2	14	2	0	2	0	2.1	13.7	13.6%	0.3%	0.3%
3	027994X	8.23	BRYNHURST AVE	2	700	700	800	20	2	14	2	0	2	D	2.1	13.7	13.6%	0.3%	0.3%
4	027995E	8.32	WEST BLVD	2	5,300	5,600	6,200	20	2	14	2	0	2	0	2.1	13.7	13.6%	0.3%	0.3%
5	027996L	8.60	REDONDO BLVD	4	7,500	7,900	8,700	20	2	14	2	0	2	0	2.1	13.7	13.6%	0.3%	0.3%
6	028001N	9.13	CENTINELIA AVE	6	31,000	32,600	36,000	20	0	14	0	0	0	0	2.1	13.7	13.4%	0.0%	0.0%
7	028002V	9.59	LA BREA AVE	6	32,000	33,600	37,100	20	0	14	0	0	0	0	2.1	13.7	13.4%	0.0%	0.0%
8	028003C	9.82	IVY AVE	2	2,500	2,600	2,900	20	0	14	0	0	0	0	2.1	13.7	13.3%	0.0%	0.0%
9	028004J	9.94	EUCALYPTUS AVE	3	12,500	13,100	14,500	20	0	14	0	0	0	0	2.1	13.7	13.3%	0.0%	0.0%
10	028007E	10.21	CEDAR AVE	2	800	800	900	20	0	14	0	0	0	0	2.1	13.7	13.3%	0.0%	0.0%
11	028142X	10.36	OAK ST	2	3,200	3,400	3,800	20	0	14	Ö	0	0	0	2.1	13.7	13.3%	0.0%	0.0%
12	028008L	10.52	HYDE PARK BLVD	2	4,000	4,200	4,600	20	0	14	0	0	0	0	2.1	13.7	13.3%	0.0%	0.0%
13	028010M	10.63	LA CIENEGA BLVD	6	32,000	33,600	37,100	20	0	14	0	0	Ö	0	2.1	13.7	13.4%	0.0%	0.0%
14	028011U	10.82	HINDRY AVE	2	4,500	4,700	5,200	20	0	14	0	0	0	0	2.1	13.7	13.3%	0.0%	0.0%
15	028012B	11.11	MANCHESTER AVE	7	32,000	33,600	37,100	20	0	14	0	Ö	0	0	2.2	13.8	13.4%	0.0%	0.0%
16	028018S	11.63	ARBOR VITAE ST	4	18,000	18,900	20,900	20	0	14	0	0	0	0	2.1	13.7	13.3%	0.0%	0.0%
17	028020T	12.36	104TH ST	2	5,500	5,800	6,400	20	6	14	6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
18	028025C	12.92	111TH ST	2	6,300	6,600	7,300	20	6	14	6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
19	028027R	13.13	IMPERIAL HWY	7	37.000	38,900	43,000	20	6	14	6	Ō	6	D	2.2	13.8	14.3%	0.9%	0.9%
20	028047C	13.37	118 TH ST	4	800	800	900	20	6	14	6	ō	6	0	2.1	13.7	14.2%	0.9%	0.9%
21	028048J	13.62	120TH ST	4	1.800	1.900	2,100	20	6	14	6	Ö	6	0	2.1	13.7	14.2%	0.9%	0.9%
22	028049R	13.89	Private crossing (124th St)	4	NA	NA	NA	20	6	14	6	0	6	0	2.1	13.7	NA	NA	NA
23	028030Y	14.69	DOUGLAS ST	1	9,200	9,700	10,700	1 10	6	14	6	0	6		3.4	26.6	27.2%	1.4%	1.4%
24	NA	14.79	Private Crossing (Chapman Wy)	NA	NA	NA	NA	20	6	14	6	0	6	ŏ	NA	NA	NA	NA	NA
25	NA	15.08	Private crossing (Green line sta.)	NA	NA	NA	NA	20	6	14	6	ō	6	0	NA	NA	NA	NA	NA
26	028060R	16.14	COMPTON/MARINE	4	24,800	26,100	28,800	20	6	14	6	0	6	0	2.1	13.7	14.2%	0.9%	0.9%
27	028062E	16.74	INGLEWOOD AVE	1 5	47,800	50,200	55,500	20	6	14	6	0	6	ő	2.1	13.7	14.2%	0.9%	0.9%
28	028064T	16.87	MANHATTAN BEACH BLVD	5	25,300	26,600	29,400	20	6	14	6	ŏ	6	ñ	2.1	13.7	14.2%	0.9%	0.9%
29	028065A	16.94	159TH ST	2	600	600	700	20	6	14	6	ŏ	6	0	2.1	13.7	14.1%	0.9%	0.9%
30	028066G	17.01	160TH ST	2	600	600	700	20	6	14	6	ŏ	6	0	2.1	13.7	14.1%	0.9%	0.9%
31	028067N	17.08	161ST ST	2	700	700	800	20	6	14	6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
32	028068V	17.14	162ND ST		2,100	2,200	2,400	20	6	14	6	0	6		2.1	13.7	14.1%	0.9%	0.9%
33	0280690	17.62	170TH ST	2	2,500	2,200	2,400	20	6	14	6	ŏ	6	0	2.1	13.7	14.1%	0.9%	0.9%
34	028072K	18.38	182ND ST	2			12,400	20	6	14	6		6	ů.					
34	028096Y	21.24	TORRANCE BLVD	4 -	10,700 27,800	11,200 29,200		20	6	14	6	0	6	v.	2.1	13.7 13.7	14.1%	0.9%	0.9%
36	0280901 028097F	21.24		NA	27,800 NA	29,200 NA	32,300		6	14		ő		0					
30	028097F		Pedestrian Crossing (El Dorado)	2			NA	20			6		6		NA	NA	NA	NA	NA
37	028098M	21.48	SONOMA ST	5	1,200	1,300	1,400	20	6		6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
38	0280990 028101T	21.60	CARSON ST		35,000	36,800	40,700				6	0	6	0	2.1	13.7	14.2%	0.9%	0.9%
		22.10	WASHINGTON BLVD	2	3,800	4,000	4,400	20	6	14	6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
40	028103G	22.24	ARLINGTON AVE	2	8,100	8,500	9,400			14	6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
41	028104N	22.49	CABRILLO AVE	2	10,700	11,200	12,400	20	6	14	6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
42	028105V	22.57	BORDER AVE	2	900	900	1,000	20	6	14	6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
43	028106C	22.78	SEPULVEDA BLVD	1 1	52,800	55,500	61,300	20	6	14	6	0	6	0	2.2	13.8	14.3%	0.9%	0.9%
44	028107J	23.03	WESTERN AVE	4	30,400	32,000	35,300	20	6	14	6	0	6	0	2.1	13.7	14.2%	0.9%	0.9%
45	028113M	24.79	FIGUEROA ST	4	11,000	11,600	12,800	20	6	14	6	0	6	0	2.1	13.7	14.2%	0.9%	0.9%
46	NA	24.92	Private crossing	NA	NA	NA	NA	20	6	14	6	0	6	0	NA	NA	NA	NA	NA
47	028118W	25.94	AVALON BLVD	5	18,000	18,900	20,900	20	6	14	6	0	6	0	2.1	13.7	14.2%	0.9%	0.9%
48	028119D	26.04	BROAD ST	2	1,100	1,200	1,300	20	6	14	6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
49	028124A	26.11	LAKME ST	2	1,500	1,600	1,800	20	6	14	6	0	6	0	2.1	13.7	14.1%	0.9%	0.9%
50	028125G	26.36	WILMINGTON AVE	4	18,000	18,900	20,900	20	6	14	6	0	6	0	2.1	13.7	14.2%	0.9%	0.9%

HARBOR SUBDIVISION LINE At-grade railroad crossings in the study area Vehicular traffic, Delays, Queuing and LOS Xing No. Mile Post Cross Street Name

Sources:	CPUC,	FRA,	BNSF

.

Page 1

3/7/02

WILBUR SMITH ASSOCIATES

HARBOR SUBDIVISION LINE At-grade railroad crossings in the study area Vehicular traffic, Delays, Queuing and LOS

x	ing No.	Mile Post Number	Cross Street Name		e no. of v ayed per			ge delay p veh-hour			ge delay i delayed (i			delay per (sec./veh.)			mated Leve at the C		hour	ge vehic per lane nary direc	in the		ueue len lane (feet	
		1011001		2000	2005	2015	2000	2005	2015	2000	2005	2015	2000	2005	2015	2000	2005	2015	2000	2005	2015	2000	2005	2015
1	027992J	8.03	CRENSHAW BLVD	3,200	70	80	270	0.1	0.2	5.1	0.1	0.1	41.4	0.0	0.0	E	A	A	1,040	1,090	1,200	420	0	0
2	027993R	8.14	VICTORIA AVE	100	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	A	A	60	70	80	0	0	0
3	027994X	8.23	BRYNHURST AVE	90	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	A	A	60	60	70	0	0	0
4	027995E	8.32	WEST BLVD	720	20	20	60	0.0	0.0	5.0	0.1	0.1	40.8	0.0	0.0	E	A	Α	450	470	520	180	0	0
5	027996L	8.60	REDONDO BLVD	1,020	20	30	50	0.0	0.0	2.9	0.1	0.1	24.0	0.0	0.0	C	A	A	330	350	380	75	0	0
6	028001N	9.13	CENTINELIA AVE	4,140	0	0	240	0.0	0.0	3.5	0.0	0.0	27.9	0.0	0.0	D	A	A	960	1,000	1,110	260	0	0
7	028002V	9.59	LA BREA AVE	4,280	0	0	260	0.0	0.0	3.6	0.0	0.0	29.3	0.0	0.0	D	A	A	990	1,040	1,140	280	0	0
8	028003C	9.82	IVY AVE	330	0	0	20	0.0	0.0	3.6	0.0	0.0	28.8	0.0	0.0	D	<u>A</u>	<u>A</u>	210	220	240	60	0	0
9	028004J	9.94	EUCALYPTUS AVE	1,660	0	0	130	0.0	0.0	4.7	0.0	0.0	37.4	0.0	0.0	D	A		700	730	810	255	0	0
10	028007E	10.21	CEDAR AVE	110	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	A	A	A	70	70	80	0	0	0
11	028142X	10.36	OAK ST	420	0	0	20	0.0	0.0	2.9	0.0	0.0	22.5	0.0	0.0	C	<u>A</u>		270	290	320	60	0	
12	028008L 028010M	10.52	HYDE PARK BLVD	530	0	0	260	0.0	0.0	3.4	0.0	0.0	27.0	0.0	0.0	D	A	<u>A</u>	340	350	390	90	0	0
13	028010M	10.63			0					3.6	0.0	0.0	29.3	0.0		D	A	A		1,330	1,470	360		0
	0280110 028012B	10.82		600	0	0	40 220	0.0	0.0	4.0	0.0	0.0	32.0	0.0	0.0	Ċ	<u>A</u>	<u>A</u>	380	390 890	440 980	120	0	0
15 16	0280128	11.63	MANCHESTER AVE ARBOR VITAE ST		0	0		0.0			0.0	0.0	32.0		0.0	D	<u>A</u>	A	850			205	0	0
17	0280185 028020T	12.36	104TH ST	2,400	50	60	160 60	0.0	0.0	4.0	0.0	0.0	32.0	0.0	0.0	D	A	A	460	830 490	920 540	245	0	0
18	0280201	12.90	111TH ST	890	60	60	80	0.3	0.4	5.4	0.3	0.4	45.7	0.2	0.2	E	A	A	530	490 550	610	235	0	0
19	028025C	13.13	IMPERIAL HWY	5,280	350	390	310	1.3	1.6	3.5	0.4	0.4	30.2	0.2	0.2	D	Ä	Â	980	1,030	1,140	235	0	0
20	028047C	13.37	118 TH ST	110	10	10	0	0.0	0.0	0.0	0.2	0.2	0.0	0.1	0.1	Ā	Â	Â	40	40	40	290	0	0
21	028048J	13.62	120TH ST	260	20	20	10	0.0	0.0	2.3	0.1	0.1	20.0	0.1	0.1	- ĉ	Ä		80	80	90	15	0	
22	028049R	13.89	Private crossing (124th St)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
23	028030Y	14.69	DOUGLAS ST	2,510	140	150	250	0.7	0.8	6.0	0.3	0.3	97.8	0.3	0.3	F	A	A	410	430	470	390	0	0
24	NA	14.79	Private Crossing (Chapman Wy)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
25	NA	15.08	Private crossing (Green line sta.)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
26	028060R	16.14	COMPTON/MARINE	3,520	230	250	320	1.3	1.5	5.5	0.3	0.4	46.5	0.2	0.2	E	A	A	1,090	1,150	1,270	490	0	0
27	028062E	16.74	INGLEWOOD AVE	6.800	450	490	710	3.1	3.6	6.3	0.4	0.4	53.5	0.2	0.2	F	A	A	1,690	1,770	1,960	880	5	5
28	028064T	16.87	MANHATTAN BEACH BLVD	3.600	240	260	250	1.1	1.2	4.2	0.3	0.3	35.6	0.1	0.1	D	A	A	890	940	1.040	310	0	0
29	028065A	16.94	159TH ST	80	10	10	0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	A	A	A	50	50	60	0	0	0
30	028066G	17.01	160TH ST	80	10	10	Ō	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	A	A	A	50	50	60	0	ō	0
31	028067N	17.08	161ST ST	100	10	10	0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	A	A	A	60	60	70	0	0	0
32	028068V	17.14	162ND ST	300	20	20	10	0.1	0.1	2.0	0.2	0.2	17.1	0.1	0.1	C	A	A	180	180	200	30	0	0
33	028069C	17.62	170TH ST	350	20	20	20	0.1	0.1	3.4	0.2	0.2	28.8	0.1	0.1	D	A	A	210	220	240	60	Ö	0
34	028072K	18.38	182ND ST	1,510	100	110	200	0.9	1.0	7.9	0.5	0.6	67.3	0.3	0.3	F	A	A	900	940	1,040	590	0	5
35	028096Y	21.24	TORRANCE BLVD	3,950	260	280	380	1.6	1.9	5.8	0.4	0.4	49.2	0.2	0.2	E	A	A	1,230	1,290	1,420	590	5	5
36	028097F	21.36	Pedestrian Crossing (El Dorado)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
37	028098M	21.48	SONOMA ST	170	10	10	10	0.0	0.0	3.5	0.1	0.1	30.0	0.1	0.1	D	A	A	100	110	120	30	0	0
38	028099U	21.60	CARSON ST	4,980	330	360	420	1.8	2.1	5.1	0.3	0.3	43.2	0.2	0.2	ε	A	A	1,230	1,300	1,440	515	0	5
39	028101T	22.10	WASHINGTON BLVD	540	30	40	40	0.1	0.2	4.4	0.2	0.3	37.9	0.1	D.1	D	Α	A	320	340	370	115	0	0
40	028103G	22.24	ARLINGTON AVE	1,150	70	80	120	0.5	0.6	6.3	0.4	0.4	53.3	0.2	0.2	E	Α	A	680	710	790	350	0	0
41	028104N	22.49	CABRILLO AVE	1,510	100	110	200	0.9	1.0	7.9	0.5	0.6	67.3	0.3	0.3	F	A	A	900	940	1,040	590	0	5
42	028105V	22.57	BORDER AVE	130	10	10	0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	A	A	Α	80	80	80	0	0	0
43	028106C	22.78	SEPULVEDA BLVD	7,540	500	550	540	2.3	2.7	4.3	0.3	0.3	36.8	0.2	0.2	D	A	A	1,400	1,470	1,620	500	0	5
44	028107J	23.03	WESTERN AVE	4,320	280	310	450	1.9	2.2	6.3	0.4	0.4	53.3	0.2	0.2	E	A	A	1,340	1,410	1,560	695	5	5
45	028113M	24.79	FIGUEROA ST	1,560	100	110	90	0.4	0.4	3.5	0.2	0.2	29.5	0.1	0.1	D	A	A	490	510	560	140	0	0
46	NA	24.92	Private crossing	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47	028118W	25.94	AVALON BLVD	2,560	170	190	150	0.6	0.7	3.5	0.2	0.2	30.0	0.1	0.1	D	Α	A	640	670	740	185	0	0
48	028119D	26.04	BROAD ST	160	10	10	10	0.0	0.0	3.8	0.1	0.1	32.7	0.1	0.1	D	<u>A</u>	<u>A</u>	90	100	110	30	0	0
49	028124A	26.11	LAKME ST	210	10	20	10	0.0	0.1	2.9	0.1	0.2	24.0	0.1	0.1	C	A	A	130	130	150	30	0	0
50	028125G	26.36	WILMINGTON AVE	2,560	170	180	190	0.8	0.9	4.5	0.3	0.3	38.0	0.2	0.2	D	Α	A	790	830	920	290	0	0

Page 2

#### ASSUMPTIONS

**ADT Growth Projections** Average annual growth rate from 2000: 1.0% per year

#### Estimated train length

Local: 700 feet 7,500 feet Through:

Gate down time (per train) t= [50 + [(3600 \* (L+12\*n)) / (5280\* Smax/3)]/60

- t = amount of time per train the crossing is closed (min.)
- L = .
- train length (feet) number of highway lanes n =
- Smax = maximum train speed at the crossing (mph)

Probability of delay per day

P = T/m

where:

- probabiliy of delay per day where: P =
  - т = total amount of time the crossing is closed during the day (min.)
  - m = 1,440 minutes in a day

#### Vehicles delayed per day

N = P \* V

- number of vehicles delayed per day where: N =
  - P= probability of delay per day
  - V = ADT

#### Duration of daily delay

D = [(T/2 + 0.167) \* N + (N/n)^2] /3600

- D = total delay per day (vehicle-hours) N = number of vehicles delayed per day where:
  - - n = number of highway lanes
  - (N/n)<sup>2</sup> = total delay from queue dissipation
  - T≖ total amount of time the crossing is closed during the day (min.)
    - (T/2 is the average delay per vehicle delayed by the train operation)
  - 0.167 delay (in minute, eq. 10 seconds) attributable to deceleration and acceleration and delay experienced while waiting for traffic to flow freely aftre the train has passed

## Average delay for each vehicle delayed A = 60 \* D / N

where:

- A = average daily delay for each vehicle delayed (min./veh.)
- total delay per day (vehicle-hours) D =
- N = number of vehicles delayed per day

#### Average delay for all vehicles

a = 3600 \* D / V

- average daily delay per vehicle (sec./veh.) where: a =
  - D = total delay per day (vehicle-hours)
  - ADT V =

#### Level of service

Stopped delay per vehicle (sec)	Level of service
0.0	Α
5.0	в
15.0	С
25.0	D
40.0	E
60.0	F

## Average queue length per lane Lq = (C \* P \* A \* Vh) / 60

where: la = length of queue (feet)

- average car length: 35 feet C =
- probabiliy of delay per day P =
- average daily delay for each vehicle delayed (min./veh.) A =
- Vh = number of vehicles per hour per lane in the primary direction

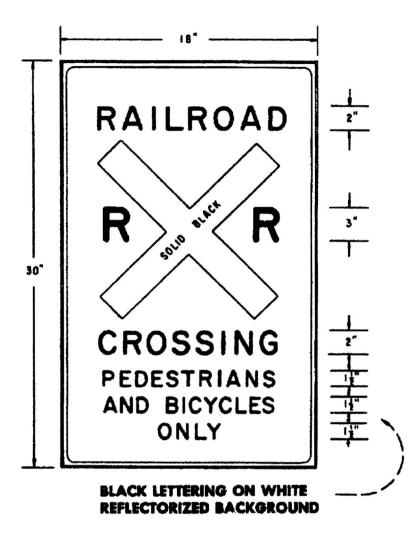
Vh = (0.12 \* V \* 0.7) / n \* f where:

- 0.12 peak hour factor (12%)
- V = ADT
- 0.7 directional split for primary direction (70%/30%)
- n = number of highway lanes for the primary direction

f =	lane use adjustment factor	No. of lanes in lane group	Traffic in most heavily traveled lane	Lane utilization adjustment factor (f)
Source:	HCM 2000, Table 10-23, p. 10-26	1	100.0%	1.000
		2	52.5%	0.952
		3	36.7%	0.908
		4	30.0%	0.833

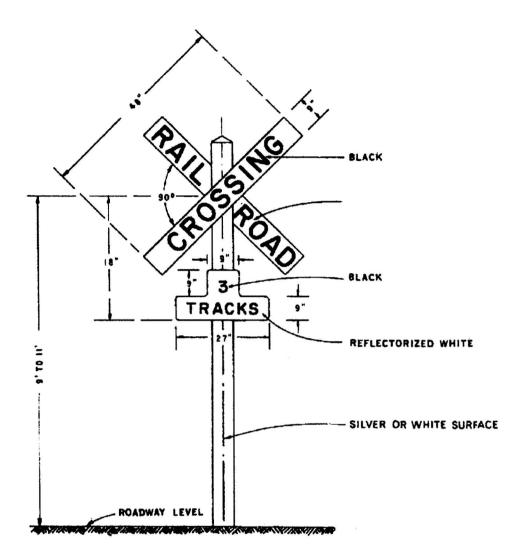
# Appendix G CALIFORNIA P.U.C. STANDARD AT-GRADE RAILROAD CROSSING WARNING SIGNS AND SIGNALS

Appendix F presents the standard railroad protection devices required by the California Public Utility Commission (CPUC) for the protection of crossings at grade roads, highways and streets with railroads in California.



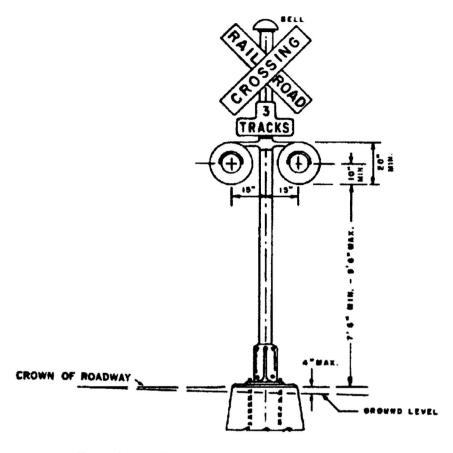
## STANDARD NO. 1-D PEDESTRIAN AND BICYCLE RAILROAD GRADE CROSSING SIGN

The word "and bicycles" is optional and may be omitted where appropriate



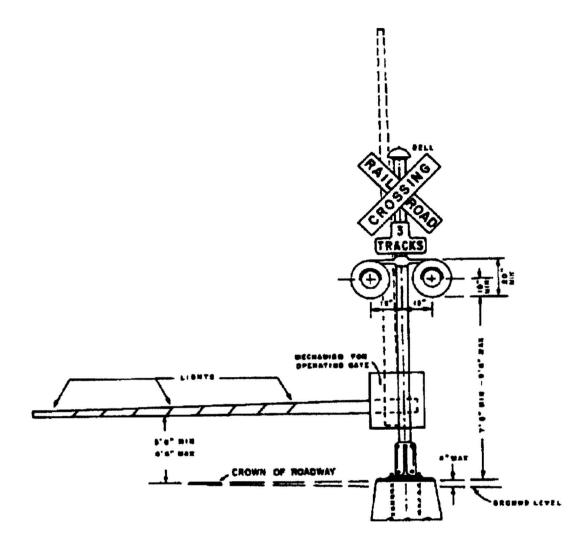
### **STANDARD NO. 1-R**

The crossing sign shall be reflectorized white background with the words "RAILROAD CROSSING" in black letters. If there are two or more tracks, including sidings, the number of tracks shall be indicated on an auxiliary sign as shown above.

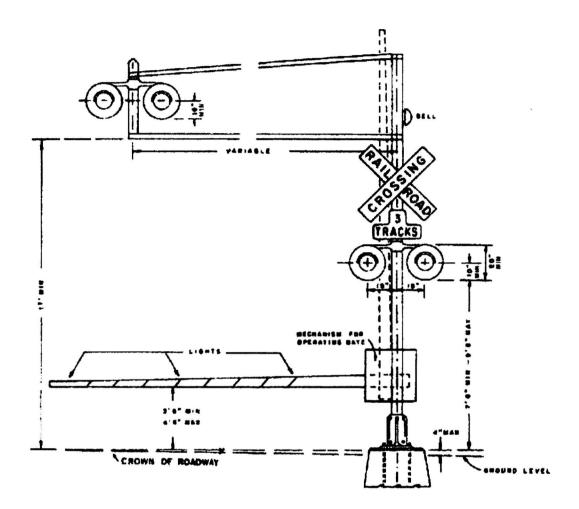


Top of foundation to be at the same elevation as the surface of the traveled way and no more than 4 inches above the surface of the ground.

## STANDARD NO. 8 HIGHWAY CROSSING SIGNAL ASSEMBLY FLASHING LIGHT TYPE



## STANDARD NO. 9 HIGHWAY CROSSING SIGNAL ASSEMBLY AUTOMATIC GATE TYPE



## STANDARD NO. 9-A HIGHWAY CROSSING SIGNAL ASSEMBLY AUTOMATIC GATE TYPE WITH CANTILEVER ARM

Appearing in this appendix is a summary accident/incident report issued by the FRA for each one of the 39 vehicle-train accidents/incidents that have occurred within the study area of the Harbor Subdivision line between January 1975 and July 2001, as reported annually by the railroads to the FRA.

In addition, Table 1 at the end of the Appendix summarizes the train accident/incident data for the same period and location. As indicated in Section 2.5.1, the train accidents summarized in this section are subject to threshold reporting requirements set by the FRA. The reports themselves are not always comprehensive due to inconsistencies in the quality of information provided by the reporting party. For example, exact locations of accidents may not be known because the milepost number was not included in the accident report. Data not reported to the FRA is labeled in the table as "NR." All entries in Table 1 are on the Harbor Subdivision line but not necessarily in the study area. Any accidents that did not occur in the study area were included only because they could not be eliminated with confidence. The study's preference was to err on the side of caution.

1

ł

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

OMB Approval No. 2130-0500
Alphabetic Code RR Accident/Incident No.

т

Name Of							0000		Alphab	etic Coa	e nn	Accident	Inclu	ent NO.
1. Reporting Railroad									1a. BN	SF	1b.	SC0298	8200	
2. Other Railroad Involved in Train Ad	ccident/Inc	ident							2a.		2b.	SC029	8200	
3. Railroad Responsible for Track Ma	intenance					- 44.4			3a. BN	NSF	3b.	SC0298	8200	
4. U.S. DOT-AAR Grade Crossing ID	No.	027	′992J	5. Dat	e of Accident/Inciden	nt (	02/08/98	3	6. Time	of Accide	ent/Incide	nt 10	:40 P	M
7. Nearest Railroad Station HYDE PARK			80% AC84	vision UTHEI	RN CALIFORNIA	4	9. Cour LOS		ELES		10. S	State Abbr.	CA	Code 06
11. City (if in a city)				1.00 2.2			AW BI					Public	_	Private
Highwa	ay User Inv	volved							ment Involv	red				
13. Type C. Truck-trailer F. Bus		J. Other Mo	tor Vehicle	Code	17. Equipment		3. Tra	in (st	anding) 6.	Light loc	co(s) (m	oving)		Code
A. Auto D. Pick-up truck G. Sch		K. Pedestria M. Other (	an	A	1. Train <i>(units pu</i> 2. Train <i>(units pu</i>		) 4. Ca	r(s) (m	oving) 7.	Light loc		anding)	Ĩ	1
ACTION DE L'ANNE ACTIONNE DE LA CONTRACTÓRIA DE LA CARTA DE LA CAR	rection orth 2. So	<i>(geograp)</i> outh 3. East		Code	18. Position of Car	Unit i	n Train			1				
16. Position 1. Stalled on crossing		ving over cro	ossing	Code	19. Circumstance		C		• • • • • • • • • • • • • • • • • • •	Contraction of the second second				Code
2. Stopped on Crossin 20a. Was the highway user and/or ra				2	20b. Was there a h	_			uck by high	nway use	er			1
in the impact transporting haza				Code	ZOD. Was there a h	azaru	ious mat		clease by				ĩ	Code 4
1. Highway User 2. Rail Equ			4. Neither	4	1. Highway	y Use	er 2. F	ail Equ	ipment	3. Both	4. Neit	ner		
20c. State the name and quantity of t	the hazard	ous material	is released, if	any										
21. Temperature       22. Visibility (single entry)       Code       23. Weather (single entry)         (specify if minus)       52 °F       1. Dawn       2. Day       3. Dusk       4. Dark       4       1. Clear       2. Cloudy       3. Rain       4. Fog       5. Sleet       6. Snow												Code		
(specify if minus) 52 °F 1. [	Dawn 2.	Day 3. Du	sk 4. Dark	4. Dark 4 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow						w			3	
24. Type of Equipment	4 M/a-1-1			Code	25. Track Type Us					Code	26. Track	k Numbe	r or N	ame
Consist 1. Freight train (single entry) 2. Passenger train			•	Switching Equipment Involved										
3. Commuter train	-								MAIN	Ň				
27. FRA 28. Number o		29. Number			ed (Recorded if ava	ailable	e) Cod	le 31	. Time Tab	le Directi	tion			Code
Track Class Locomotiv (1-6,X) 2 Units	ve 4	Cars 8		R. Recorded           E. Estimated         11         mph         E         1. North         2. South         3.						3 Fast	4 West	Ĩ	4	
	Wig wags				lagged by crew				Crossing		34. Whist			Code
Crossing 2. Cantilever FLS 5.		-	B. Stop signs 11. Other (specify) Warning D. Watchman 12. None							1. Yes 2. No				
	Audible	• •	9. Watchman	20 sec warn min						2. No 3. Un	known	Ĩ	2	
35. Location of Warning	l	c								ated by S			Code	
1. Both Sides 2. Side of Vehicle Approach		1			2. No 3. Unknown		3		-		3. Unkn	own	Ĩ	3
3. Opposite Side of Vehicle Appr 38. Driver's 39. Driver's Code	terms out of	Drove Behir	nd or in Front			. Drive	 er							Code
Age Gender			Struck by Se					und or	thru the ga	te 4. S	Stopped o	n crossir	ng	0000
1. Male 2. Female		1. Yes 2. N	o 3. Unkno	wn	2		Stopped a		n proceede	ed 5.0	Other (	specify)		4
42. Driver Passed Standing	Code	1	Track Obscu		(primary obstru				7 0	. /	aif d			Code
Highway Vehicle 1. Yes 2. No 3. Unknown	3		anent Structi ding railroad		3. Passing Train nt 4. Topography		egetation		7. Other s 8. Not C	r (spec Obstructe				8
Casualties to:	Killed	Injured	44. Driver			C	ode	45	5. Was Driv		Vehicle?			Code
Gasudines i		injureu			ured 3. Uninjured	3	3		1. Yes					2
46. Highway-Rail Crossing Users	0	0	-	ay Vehicl ollar dam	e Property Damage age)	9	500	48	3. Total Nur (include d		Highway-F	Rail Cros	ising L 1	Jsers
49. Railroad Employees			f People on Train			51	I. Is a Rail I					Code		
52. Passengers on Train	(includ	e passer	ngers and crew)	3	;		Incident F 1. Yes		eing Filed		I	2		
53a. Special Study Block			53b. Special Study	Bloc	k									
54. Narrative Description														
55 Typed Name and Title	1	56 Cianat					22.0		· · · · · ·			7 Data		
55. Typed Name and Title		56. Signatur	e								5/	7. Date		
FORM FRA F 6180.57	* NOTE			MUST	BE REPORTED ON	FOR		6180 9	54					

### DEPARTMENT OF TRANSPORTATION

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

OMB Approval No. 2130-0500

1

1

1

FEDERAL RAILROAD ADMINISTRATION						ONB Apploval No. 2	100-0000
Name Of					Alphabetic Cod	e RR Accident/Incid	dent No.
1. Reporting Railroad					<sup>1a.</sup> ATSF	1b. 311086202	
2. Other Railroad Involved in Train Acciden	/Incident				2a.	2b.	
3. Railroad Responsible for Track Mainten	nce				<sup>3a.</sup> ATSF	3b. 311086202	
4. U.S. DOT-AAR Grade Crossing ID No.	02800	1N 5. Da	te of Accident/Incident	10/07/86	6. Time of Accide	ent/Incident 7:30 A	M
7. Nearest Railroad Station INGLEWOOD		8. Division		9. County LOS ANC	GELES	10. State Abbr. CA	Code
11. City (if in a city) INGLEWOO	•	12. Highway I	Name or No. CENTEN	IELLA	111100	Public	Private
Highway Us	r Involved			Rail Equip	ment Involved		
13. Type C. Truck-trailer F. Bus	J. Other Motor V	/ehicle Code	17. Equipment	3. Train (s	tanding) 6. Light loo	co(s) (moving)	Code
A. Auto D. Pick-up truck G. School B		A	1. Train (units pulling			.,	1
B. Truck E. Van H. Motorcyc 14. Vehicle Speed 15. Directio		city)	2. Train (units pushin 18. Position of Car Unit		tanding) 8. Other	(specify)	L
	South 3. East 4		16. Position of Car Unit	in Train	1		
	Moving over crossir Trapped	ng Code		1000 NO. 100 NO. 100	truck highway user ruck by highway use	ar	Code
20a. Was the highway user and/or rail equ		Code					1 Code
in the impact transporting hazardous			4 18 1 11	0.0.15		4 . 61 . 10	1
1. Highway User     2. Rail Equipme     20c. State the name and quantity of the ha			1. Highway Use	er 2. Rail Eq	uipment 3. Both	4. Neither	L
200. State the name and quantity of the ha	ardous materials rel	leaseu, il any					
21. Temperature 22. Visibili	(single entry)	Code	and a first of	Code			
(specify if minus) 70 °F 1. Dawn	2. Day 3. Dusk 4	. Dark 2	w	1			
24. Type of Equipment		Code	25. Track Type Used b	y Rail	Code	26. Track Number or N	Name
Consist 1. Freight train 4. V (single entry) 2. Passenger train 5. S	ork train 7. Yard/Sw		Equipment Involve	d			
(single entry) 2. Passenger train 5. 3 3. Commuter train 6. 0		and the second	MAIN				
27. FRA 28. Number of	29. Number of	30. Consist Sp	eed (Recorded if availabl	e) Code 3	1. Time Table Direct	ion	Code
Track Class Locomotive (1-6,X) 2 Units	Cars	R. Record		h E			
(1-6,X) 2 Units 32. Type of 1. Gates 4. Wig		E. Estimat		1. North 2. South Crossing		4 Code	
Crossing 2. Cantilever FLS 5. Hwy			Dther (specify)		34. Whistle Ban 1. Yes	Code	
Warning 3. Standard FLS 6. Audi	le 9. W	atchman 12.1	None	Warning 20 sec war		2. No	r i
Code(s) 01 03	05 07		3. Unknown				
35. Location of Warning 1. Both Sides	Code		Warning Interconnected hway Signals	Code	<ol> <li>Crossing Illumin Lights or Specia</li> </ol>		Code
2. Side of Vehicle Approach	1	_		1			1
3. Opposite Side of Vehicle Approach	-	1. Yes	2. No 3. Unknown		1. Yes 2. No	3. Unknown	•
22 040 25	iver Drove Behind or		27 AC21 10 102			<b>N</b>	Code
Age Gender 1. Male	nd Struck or was Str 1. Yes 2. No		2 9	Drove around or Stopped and the		Stopped on crossing Other (specify)	
2. Female			1 2	Did not stop	•		1
	de 43. View of Tra 1. Permane	ck Obscured by	(primary obstruction 3. Passing Train 5. V		7. Other (spec	oif d	Code
Highway Vehicle 1. Yes 2. No 3. Unknown 2		railroad equipme		Highway Vehicle			8
		4. Driver was	С	ode 4	5. Was Driver in the	Vehicle?	Code
Casualties to: Kill	d Injured	1. Killed 2. Ir	njured 3. Uninjured	3	1. Yes 2. No		2
46. Highway-Rail Crossing Users 0	0 47	7. Highway Vehic (est. dollar dar	cle Property Damage		8. Total Number of I (include driver)	Highway-Rail Crossing	Users
49. Railroad Employees 0	0 50		of People on Train		1. Is a Rail Equipme		Code
52. Passengers on Train 0	0	(include passe	ingers and crew)		Incident Report B 1. Yes 2. No	eing Filed	2
53a. Special Study Block	L		53b. Special Study Bloc				I
54. Narrative Description			1				
······							
55. Typed Name and Title	56. Signature					57. Date	
FORM FRA F 6180.57 * N		LIAL TIES MUST	BE REPORTED ON FOR		554		

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

FEDERAL RAILROAD ADMINISTRAT		/						CIVID Apploval No. 2	
Name Of					•		Alphabetic Code		
1. Reporting Railroad 2. Other Railroad Involved in Train A	1b. LA120020								
3. Railroad Responsible for Track Ma							2a.	<sup>2b.</sup> LA120020	
4. U.S. DOT-AAR Grade Crossing ID			00001/	5 Dat	e of Accident/Incident	12/17/00	3a. BNSF 6. Time of Accider	3b. LA1200200	
7. Nearest Railroad Station		020	8. Divi			9. County		10. State	Code
LOS ANGELES			LOS	ANG	ELES TERM	LOS A	NGELES	Abbr. CA	1
11. City (if in a city) INGLEW	VOOD		12. Hig	hway N	ame or No. LA BRI	EA AVENU	E	Public	Private
Highwa	ay User In	volved				Rail Eq	uipment Involved		
13. Type C. Truck-trailer F. Bus		J. Other Mo		Code	17. Equipment		(standing) 6. Light loco		Code
A. Auto D. Pick-up truck G. Sch B. Truck E. Van H. Mot	ool Bus	K. Pedestria M. Other (		A	· · ·		(moving) 7. Light loco (standing) 8. Other	o(s) (standing) (specify)	1
	rection	(geograp)		Code	18. Position of Car Uni		(chances) of our of	(4,200.))	<b>L</b>
		outh 3. East		4			1		
16. Position 1. Stalled on crossing 2. Stopped on Crossin		ving over cro	ossing	Code	19. Circumstance 1. I		it struck highway user t struck by highway user		Code
20a. Was the highway user and/or ra	il equipme	ent involved		Code	20b. Was there a haza				Code
in the impact transporting haza 1. Highway User 2. Rail Eq			4. Neither	4	1. Highway U	ser 2 Rail	Equipment 3. Both	4. Neither	4
20c. State the name and quantity of									I
NCT 26 10	/isibility	(single entry)	)	Code 23. Weather (single entry)					
(specify if minus) 80 °F 1. [	Dawn 2.	Day 3. Du	sk 4. Dark	A. Dark         2         1. Clear         2. Cloudy         3. Rain         4. Fog         5. Sleet         6. Snow					
24. Type of Equipment Consist 1. Freight train	4. Work	train 7. Yar	d/Switching	Code	25. Track Type Used Equipment Involv	•	Code 2	26. Track Number or	Name
(single entry) 2. Passenger train 3. Commuter train	-	-							
27, FRA 28, Number o		29. Number		30. Consist Speed (Recorded if available) Code 31. Time Table Direction					
Track Class Locomoti	ve	Cars	R.R	ecorde		Code			
(1-6,X) 1 Units	3		275 BB	stimate		ph E	1. North 2. South 3.		4
Crossing 2. Cantilever FLS 5.		ic signals	8. Stop signs		agged by crew ther <i>(specify)</i>	33. Signal Warn		4. Whistle Ban 1. Yes	Code
Warning         3. Standard FLS         6.           Code(s)         03         06	Audible		9. Watchman	2. No 3. Unknown	2				
35. Location of Warning 1. Both Sides		c		36. Crossing Warning Interconnected Code 37. Crossing Illuminated with Highway Signals Lights or Special Lights					Code
2. Side of Vehicle Approach		1			2. No 3. Unknown	1	1. Yes 2. No	-	1
3. Opposite Side of Vehicle Appr 38. Driver's 39. Driver's Code	avoint terms as	Drova Bohi	nd or in Front of		Code 41. Dr	ivor.	1. 163 2. 140		Code
Age Gender			s Struck by See		2 * 102 (0 H 10 H		for thru the gate 4. St	opped on crossing	Code
85 1. Male 2		1. Yes 2. N	lo 3. Unknow	'n	2	service and and services	then proceeded 5. O	ther (specify)	4
42. Driver Passed Standing	Code	43. View of	f Track Obscur	ed by	(primary obstruction	Did not stop			Code
Highway Vehicle		1. Perm	nanent Structur	e	3. Passing Train 5.	Vegetation	7. Other (speci		1
1. Yes 2. No 3. Unknown	2	2. Stan	ding railroad e	quipme	nt 4. Topography 6.	Highway Veh	icles 8. Not Obstructed	1	8
Casualties to:	Killed	Injured	44. Driver w 1. Killed		ured 3. Uninjured	Code	45. Was Driver in the V 1. Yes 2. No	/ehicle?	Code
			10 m 10 m		e Property Damage	3	48. Total Number of H	ghway-Rail Crossing	1 Users
46. Highway-Rail Crossing Users	0	0	(est. dol			\$1,000	(include driver)	1	
49. Railroad Employees	0	0			f People on Train		51. Is a Rail Equipmen Incident Report Be		Code
52. Passengers on Train	0	0	(include passengers and crew) 3 Incident Report Being Filed 1. Yes 2. No						2
53a. Special Study Block					53b. Special Study Blo	ock			
54. Narrative Description									
55. Typed Name and Title 56. Signature								57. Date	
							and an an and a second s		

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

OMB Approval No. 2130-0500

Name Of					Alphab	etic Code	e RR Accident/Inci	dent No.
1. Reporting Railroad					1a. A'	rsf	1b. 36035400	
2. Other Railroad Involved in Train Accident/Incid	dent				2a.	~~	2b.	
3. Railroad Responsible for Track Maintenance					За.		3b.	
4. U.S. DOT-AAR Grade Crossing ID No.	028002V	5. Date	of Accident/Incident	03/01/75	6. Time	of Accide	ent/Incident 6:41 P	M
7. Nearest Railroad Station INGLEWOOD	8	3. Division		9. County LOS AN	GELES		10. State Abbr. CA	Code
11. City (if in a city) INGLEWOOD	12	2. Highway Na	ame or No.				Public	Private
Highway User Invo	blved			Rail Equ	pment Involv	/ed		· · · · ·
13. Type C. Truck-trailer F. Bus	J. Other Motor Vehicl	le Code	17. Equipment	3. Train	standing) 6.	Light loc	o(s) (moving)	Code
Provide Law Section 2012 Provide Contract Contra	K. Pedestrian	ĸ	1. Train (units pulling				o(s) (standing)	1
	M. Other (specify)		2. Train (units pushin		standing) 8.	Other	(specify)	1
14. Vehicle Speed15. Direction(est. mph at impact)1. North 2. Sou	(geographical) ith 3. East 4. Wes	Code st	18. Position of Car Unit	in Train		1		
	ing over crossing	Code	19. Circumstance 1. R	ail equipment	struck highw			Code
2. Stopped on Crossing 4. Trap	· · · · · · · · · · · · · · · · · · ·	3	2. R	ail equipment	struck by hig		er	1
20a. Was the highway user and/or rail equipmen in the impact transporting hazardous mater		Code	20b. Was there a hazar	dous materials	release by			Code
and an	3. Both 4. Neither	r 4	1. Highway Us	er 2. Rail E	quipment	3. Both	4. Neither	
20c. State the name and quantity of the hazardo	ous materials release	ed, if any						·
						;		
21. Temperature 22. Visibility (\$ (specify if minus) 50 °F 1 Dawn 2 D		Code	23. Weather (single e	••				Code
	ay 3. Dusk 4. Dar	rk 4	1. Clear 2. Cloudy	3. Rain 4. F	og 5. Sleet	6. Snov	w	
24. Type of Equipment Consist 1. Freight train 4. Work tr	ain 7. Yard/Switchir	Code	25. Track Type Used b			Code	26. Track Number or I	Name
(single entry) 2. Passenger train 5. Single of		-	Equipment Involve	a		.		
3. Commuter train 6. Cut of c	cars 9. Other (speci	cify) 1	1. Main 2. Yard	3. Siding	Industry	1	HARBOR DIST	
			ed (Recorded if availab	le) Code	31. Time Tat	ole Directi	ion	Code
Track Class Locomotive (1-6,X) 2 Units 4	Cars 75	R. Recorded E. Estimated 15 mph E 1. North 2. South 3. East 4. W					3. East 4. West	3
32. Type of 1. Gates 4. Wig wags	7. Crossb	oucks 10. Fla	agged by crew	33. Signale	d Crossing	1:	34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5. Hwy. traffic		-	ther (specify)	Warnin	g		1. Yes	
Warning 3. Standard FLS 6. Audible Code(s) 01	9. Watchn	man 12. No	one	20 sec wa	rn min		2. No 3. Unknown	Í Í
35. Location of Warning	Code 34	6. Crossing V	Varning Interconnected	Code	37. Crossir	na Illumini	ated by Street	Code
1. Both Sides			way Signals			or Specia		
2. Side of Vehicle Approach	1	1. Yes 2	. No 3. Unknown	3	1. Yes	2. No	3. Unknown	3
3. Opposite Side of Vehicle Approach 38. Driver's 39. Driver's Code 40. Driver [	Drove Behind or in F	ront of Train	Code 41. Driv	ver				Code
	truck or was Struck b		Contraction of the second	Drove around	or thru the ga	ate 4.S	Stopped on crossing	0000
100 VIG-00000022	. Yes 2. No 3. Un	nknown	1 2	Stopped and t	nen proceede	ed 5. C	Other (specify)	4
2. Female 42. Driver Passed Standing Code	43. View of Track Ol	bscured by	(primary obstruction	Did not stop n)		8		Code
Highway Vehicle	1. Permanent Str		3. Passing Train 5.			er (spec		1
1. Yes 2. No 3. Unknown 3	2. Standing railro	oad equipmer	nt 4. Topography 6. I	Highway Vehio	les 8. Not	Obstructe	ed	8
Casualties to: Killed	Injured	iver was	24 100 1000 100 100 100 100 100 100	Code	45. Was Driv		Vehicle?	Code
		•		2	1. Yes			
46. Highway-Rail Crossing Users 0	0	ghway Vehicle st. dollar dam	e Property Damage age)	\$0	48. Total Nu (include		lighway-Rail Crossing	Users
49. Railroad Employees 0	0 50. Tot	tal Number of	f People on Train				nt Accident /	Code
52. Passengers on Train 0	1 (inc	(include passengers and crew) Incident Report Being Filed 1. Yes 2. No					eing Filed	2
53a. Special Study Block			53b. Special Study Blo	ck				
54. Narrative Description								
55. Typed Name and Title 5	56. Signature						57. Date	
FORM FRA F 6180.57 * NOTE *		TIES MUST	BE REPORTED ON FOR		0.554			

ŧ

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

Name Of		,					L		le RR Accident/Inci	dent No.
Name Of 1. Reporting Railroad								petic Cod		dent No.
2. Other Railroad Involved in Train A	ccident/In	rident					1a. A.	ISF	1b. 33018203 2b.	·
3. Railroad Responsible for Track Ma										
			0.01/	E Det		A4 /4 A /7 A	3a. A'		3b. 33018203	
4. U.S. DOT-AAR Grade Crossing ID	NO.	0280		100000000000000000000000000000000000000	e of Accident/Incident	01/10/78	o. Time	of Accid	ent/Incident 9:10 A	
7. Nearest Railroad Station INGLEWOOD		1 (1) <b>1) 11 1 1</b> 1	8. Div	ision		9. County LOS A	NGELES		10. State Abbr. CA	Code 06
11. City (if in a city) INGLEV	VOOD		12. Hig	hway N	ame or No. LA BRE	A AVENU	E		Public	Private
Highwa	ay User In	volved				Rail E	uipment Involv	/ed		
13. Type C. Truck-trailer F. Bus		J. Other Moto	r Vehicle	Code	17. Equipment	3. Train	(standing) 6	Light lo	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch	ool Bus	K. Pedestrian		в	1. Train (units pulling				co(s) (standing)	1 1
	orcycle	M. Other (sp			2. Train (units pushin		) (standing) 8	Other	(specify)	1
[5] 5.1 (PERSON REPORT OF A DESCRIPTION AND A DESCRIPTION ADDRESS AND A DESCRIPTION ADDRESS ADDRESS ADDRESS ADDRESS ADD ADDRESS ADDRESS ADD	rection	(geographic outh 3. East		Code	18. Position of Car Unit	in Train		3		
16. Position 1. Stalled on crossing		ving over cross		2 Code	19. Circumstance 1. R	ail equipme	at struck highw			Code
2. Stopped on Crossin		•	, in ig	3	The second		nt struck by hig		er	2
20a. Was the highway user and/or ra				Code	20b. Was there a hazar	dous materi	als release by			Code
in the impact transporting haza				4	1. Highway Use	or 2 Poi	Equipment	3. Both	4. Neither	
1. Highway User 2. Rail Eq 20c. State the name and quantity of			Neither		T. Highway Os	2. 1. di	Lquipment	3. BUII	4. Neimer	0.01
200. Otate the hame and quantity of			6168360, 11	any						
21. Temperature 22. V	/isibility	(single entry)		Code	23. Weather (single e	entry)			· ••••••••••	Code
(specify if minus) 60 °F 1.1	Dawn 2.	Day 3. Dusk	4. Dark	2	1. Clear 2. Cloudy	3. Rain 4.	Fog 5. Sleet	6. Sno	w	2
24. Type of Equipment				Code	25. Track Type Used b	v Rail		Code	26. Track Number or I	Name
Consist 1. Freight train	4. Work	train 7. Yard/S	Switching	Couc	Equipment Involve	-		Coue	20. Hack Number of	vanie
(single entry) 2. Passenger train				1.				.		
3. Commuter train		And the second second								
27. FRA 28. Number of Track Class Locomoti		29. Number of Cars		Consist Speed (Recorded if available) Code 31. Time Table Direction R. Recorded						Code
(1-6,X) 2 Units	2	30		stimate		h E	1. North 2	. South	3. East 4. West	3
32. Type of 1. Gates 4.	Wig wags	7.	Crossbucks	10. F	agged by crew	33. Signa	led Crossing	1	34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5.		-			ther (specify)	Warr	ing	ſ	1. Yes	
	Audible	9.	Watchman	12. N	one	20 sec -	warn min		2. No	í I
Code(s) 01 35. Location of Warning	_	Cod	10 26 00		Marning Interconnected	Code	r		3. Unknown	Cada
1. Both Sides		COC	CHG2 ( CHISANNA DAMASA	-	Warning Interconnected way Signals	Code	100%-C 19 10000-042421415011	or Specia	nated by Street al Lights	Code
2. Side of Vehicle Approach		1		-		2			-	2
3. Opposite Side of Vehicle App	DOM N. WHEN M.				2. No 3. Unknown		1. Yes	2. No	3. Unknown	L
38. Driver's 39. Driver's Code Age Gender		Drove Behind Struck or was S			Code 41. Driv		d or thru the ga			Code
Age Gender 1. Male I	7476335706 (3	1. Yes 2. No			29		then proceed		Stopped on crossing Other <i>(specify</i> )	r l
2. Female					2 3.1	Did not stop				4
42. Driver Passed Standing	Code	43. View of T		~	(primary obstruction					Code
Highway Vehicle 1. Yes 2. No 3. Unknown	2		nent Structu Ig railroad e		3. Passing Train 5. \ nt 4. Topography 6. I		7. Othe nicles 8. Not (			8
1. Tes 2. No 5. Offkilowit	~	I								
Casualties to:	Killed	Injured	44. Driver w 1 Killer			ode	45. Was Driv 1. Yes		venicie?	Code
						3				1
46. Highway-Rail Crossing Users	0	0			e Property Damage	c200	48. Total Nu (include)		Highway-Rail Crossing	
			(est. doi			\$300			1	Code
49. Railroad Employees	0	0			f People on Train gers and crew)				ent Accident / leing Filed	Code
52. Passengers on Train	0	0	(แกะเขนษ	passer	gors and orew)		1. Yes		Al-	2
53a. Special Study Block	•				53b. Special Study Bloc	ck				
54. Narrative Description					•		y			
2										
55. Typed Name and Title		56. Signature							57. Date	
				_						
FORM FRA F 6180.57	* NOTE	THAT ALL CA	SI IAI TIES	MUST	BE REPORTED ON FOR	MEDAEE	80 554			

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

OMB Approval No. 2130-0500

1

...

.

Name Of					-				Alphah	atia Car	le RR Accident/	Incident No
Name Of 1. Reporting Railroad										etic Coo		
	11. T. I. A.		·						1a. BN	NSF	1b. SC0297	
2. Other Railroad Involve					4.41 Alter				2a.		2b. SC0297	
3. Railroad Responsible									3a. Br		3b. SC0297	10 A 100 A
4. U.S. DOT-AAR Grade		No.	028	002V		e of Accident/Incident		/14/97	6. Time	of Accid		0 PM
7. Nearest Railroad Stati INGLEWOOD	ion			8. Div SOU		ALIFORNIA	9	e. County LOS A	NGELES		10. State Abbr.	Code CA 06
11. City (if in a city)				12. Hig	hway N	ame or No. LA BRI	EA	AVENU	E		Public	Private
	Highwa	y User Inv	volved					Rail Eq	uipment Involv	ved		
13. Type C. Truck-trai	iler F Bus	• • •	J. Other Mo	tor Vehicle	Code	17. Equipment		3 Train	(standing) 6	Light In	co(s) (moving)	Code
	ruck G. Sch		K. Pedestria		1.	1. Train (units pullin	ng)			•	co(s) (standing)	1 -
B. Truck E. Van	H. Moto	orcycle	M. Other (		A	2. Train (units push	ing)	5. Car(s)	(standing) 8.	Other	(specify)	1
14. Vehicle Speed	15. Dir		(geograph		Code	18. Position of Car Uni	it in 1	Train		1		
(est. mph at impact)			outh 3. East		3 Code	10 Circumstance 1	Dail		t struck bisbur	1		Code
16. Position 1. Stalled 2. Stopper	on crossing d on Crossing		ving over cro pped	ossing	3	19. Circumstance 1. I 2. F			t struck highwat t struck by high		er	1
20a. Was the highway us					Code	20b. Was there a haza						Code
in the impact transp						4 15-1		0.0.1				1
1. Highway User	2. Rail Equ	in a second		4. Neither	4	1. Highway U	ser	2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and	a quantity of t	ne nazard	ous materia	is released, it	any						0	
21. Temperature 22. Visibility (single entry) Code 23. Weather (single entry) Code											Code	
(specify if minus) 65 °	°F 1.0	awn 2.	Day 3. Du	sk 4. Dark	14	1. Clear 2. Cloudy			Fog 5. Sleet	6. Sno	w	2
24. Type of Equipment					Code					Code	26. Track Number	
	eight train	4. Work	train 7. Yan	d/Switching	Code	25. Track Type Used Equipment Involv	-	Rall		Code	26. Track Number	or Name
	ssenger train			100 C 100 C								
	mmuter train				1	1. Main 2. Yard			4. Industry	1	MAIN	
27. FRA 2 Track Class	<ol> <li>Number of Locomotiv</li> </ol>		29. Number Cars		0. Consist Speed (Recorded if available) Code 31. Time Table Direction R. Recorded					tion	Code	
(1-6,X)	Units	4			Estimate		nph	E	1. North 2.	. South	3. East 4. West	4
32. Type of 1. Gates	4.	Wig wags		7. Crossbucks	10. F	lagged by crew		33. Signal	ed Crossing		34. Whistle Ban	Code
2 2 2 2 2 <sup></sup>	ever FLS 5.	-				ther (specify)		Warn	ing		1. Yes	
		Audible	- 1 - 1	9. Watchman	12. N	lone	_	20 sec v	varn min		2. No	3
Code(s) 01 35. Location of Warning	02	1		ode 36. Cr	ossing \	Warning Interconnected		Code		ng Illumir	3. Unknown nated by Street	Code
1. Both Sides				w	ith High	way Signals			Lights o	or Specia	al Lights	
<ol> <li>Side of Vehicle Ap 3. Opposite Side of 1</li> </ol>	CONTRACTOR DE CARRES	oach	1	1	Yes	2. No 3. Unknown		3	1. Yes	2. No	3. Unknown	3
38. Driver's 39. Driver'	's Code	40. Driver	Drove Behi	nd or in Front	of Train	Code 41. Dr	river					Code
Age Gende	er			s Struck by Se					l or thru the ga		Stopped on crossing	g
1. Male 2. Femal			1. Yes 2. N	lo 3. Unkno	wn	2		pped and not stop	then proceede	ed 5.	Other (specify)	3
42. Driver Passed Stand	200 B.C. 1	Code	43. View o	Track Obscu	red by	(primary obstruction		not stop			<u> </u>	Code
Highway Vehicle				anent Structu		3. Passing Train 5.				r (spe		1
1. Yes 2. No 3. Unk	nown	2	2. Stan	ding railroad e	equipme	nt 4. Topography 6.	. Hig	jhway Ven	icles 8. Not 0	Obstruct	ed	8
Casualties to		Killed	Injured	44. Driver v			Cod	le	45. Was Driv		e Vehicle?	Code
		- thou	njureu	1. Kille	d 2. Inj	jured 3. Uninjured	3		1. Yes	2. No		2
46. Highway-Rail Crossi	ing Users	0	0		y Vehic	le Property Damage	<b>C</b> 1	,000	48. Total Nu (include o		Highway-Rail Cross	0
49. Railroad Employees	;	0	0	• • • • • • • • • • • • • • • • • • • •	CARDINE CONTRACTOR	of People on Train	21	,000	·		ent Accident /	2 Code
52. Passengers on Train		0			ngers and crew)	3				Being Filed	2	
		0	L .			Eth Constal Otista Di			1. Yes	2. NO		
53a. Special Study Bloc						53b. Special Study Blo	UCK					
54. Narrative Description	n											
55. Typed Name and Title 56. Signature 57. Date												
							_					
FORM FRA F 6180.57	DRM FRA F 6180.57 * NOTE THAT ALL CASUALTIES MUST BE REPORTED ON FORM FRA F 6180.55A											

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

FEDERAL RAILROAD ADMINISTRAT									OND Approvaria.	
Name Of							Alphat	petic Cod	e RR Accident/In	cident No.
1. Reporting Railroad							1a. B	NSF	1b. SC039820	
2. Other Railroad Involved in Train Ad							2a.		<sup>2b.</sup> SC03982	
3. Railroad Responsible for Track Ma	intenance	•			0.0.00		3a. BI		<sup>3b.</sup> SC039820	)0
4. U.S. DOT-AAR Grade Crossing ID	No.	028	002V	5. Dat	e of Accident/Incident	03/06/98	6. Time	of Accide	ent/Incident 1:10	РМ
7. Nearest Railroad Station INGLEWOOD			8. Div		RN CALIFORNIA	9. County LOS A	NGELES		10. State Abbr. C	Code A 06
11. City (if in a city)						A STREET			Public	Private
Highwa	ay User In	volved	!				uipment Involv	ved		<u> </u>
13. Type C. Truck-trailer F. Bus	an in an Ale	J. Other Mot	or Vehicle	Code	17. Equipment	3. Train	(standing) 6	Light loc	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch		K. Pedestria		A	1. Train (units pulling			-	co(s) (standing)	1
B. Truck E. Van H. Mot 14. Vehicle Speed 15. Di	orcycle rection	M. Other (s		Code	2. Train <i>(units pushin</i> 18. Position of Car Unit		(standing) 8	. Other	(specify)	
N NG VENERAL CONTRACTORS VIEW AND		outh 3. East		2	To. Position of Car Onic			1		
16. Position 1. Stalled on crossing	3. Mo	ving over cro		Code	19. Circumstance 1. R	ail equipmen	t struck highw	ay user		Code
2. Stopped on Crossin 20a. Was the highway user and/or ra	Z			2	2. Ra 20b. Was there a hazard		t struck by hig	hway use	er	11
in the impact transporting haza				Code	200. Was there a hazard	Jous materia	is release by			Code
1. Highway User 2. Rail Equ	uipment	3. Both 4	Neither	4	1. Highway Use	er 2. Rail	Equipment	3. Both	4. Neither	4
20c. State the name and quantity of t	he hazaro	lous materials	released, if	any						
21. Temperature 22. V	/isibility	(single entry)	4.14	Code	23 Weather (single e	entry)				Code
50.01	-	Day 3. Dus	k 4. Dark	Code 23. Weather (single entry) Park 2 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow						2
24. Type of Equipment	C (4995)			Code	25. Track Type Used b			Code	26. Track Number o	r Name
Consist 1. Freight train		train 7. Yard	-		Equipment Involve					
(single entry) 2. Passenger train 3. Commuter train	•								MAIN	
27. FRA 28. Number o	f	29. Number of	of 30. Con	sist Spe	eed (Recorded if availabl	e) Code	31. Time Tab	ble Direct	ion	Code
Track Class Locomotiv		Cars	-	R. Recorded						1.
(1-6,X) 2 Units 32. Type of 1. Gates 4.	2 Wig wags	2		E. Estimated 5 mph E 1. North 2. South 3. East 4						4 Code
Crossing 2. Cantilever FLS 5.				bucks 10. Flagged by crew 33. Signaled Crossing 34. Whis igns 11. Other (specify) Warning 1. Ye						Code
	Audible	-	Watchman	nman 12. None 2. No						
Code(s) 01 03					I				3. Unknown	3
35. Location of Warning 1. Both Sides		Co	Desteror in the second second		Warning Interconnected way Signals	Code		ng Illumin or Specia	ated by Street I Lights	Code
2. Side of Vehicle Approach		1		-	2. No 3. Unknown	3			3. Unknown	3
3. Opposite Side of Vehicle Appr	and the second second	Deres Dabie		and an and a second sec			1. 165	2. NO	3. UTKHOWH	
38. Driver's 39. Driver's Code Age Gender		Drove Behin Struck or was			5 AM 10 AM 10		l or thru the ga	ate 4.5	Stopped on crossing	Code
1. Male 2		1. Yes 2. No	3. Unknow	vn	2 2.8	Stopped and	then proceed		Other (specify)	4
2. Female 42. Driver Passed Standing	Code	43 View of	Track Obscu	red by	(primary obstruction	Did not stop				Code
Highway Vehicle		1. Perma	anent Structu	re	3. Passing Train 5. \	/egetation	7. Othe			1
1. Yes 2. No 3. Unknown	2	2. Stand	ing railroad e	quipme	nt 4. Topography 6. I	lighway Veh	icles 8. Not	Obstructe	ed	8
Casualties to:	Killed	Injured	44. Driver w		· · · · · · · · · · · · · · · · ·	ode	45. Was Driv		Vehicle?	Code
		Injured				3	1. Yes			1
46. Highway-Rail Crossing Users	0	0	47. Highwa (est. do		e Property Damage	£1 000	48. Total Nu (include)		Highway-Rail Crossir	5
49. Railroad Employees	0	0				\$1,000		~ ~	ent Accident /	1 Code
52. Passengers on Train	0	0	(include passengers and crew) Incident Report Being Filed					eing Filed	2	
53a. Special Study Block		-			53b. Special Study Blog		1. Yes	2. 110		
54. Narrative Description	-				1 500. Openar Study Blot					
54. Narrauve Description										
5. Typed Name and Title 56. Signature 57. Date										
FORM FRA F 6180.57	* NOTE	THAT ALL C	ASUALTIES	MUST	BE REPORTED ON FOR	M FRA F 61	80.55A			

Highway Vehicle

49. Railroad Employees

52. Passengers on Train

53a. Special Study Block

54. Narrative Description

1. Yes 2. No 3. Unknown

Casualties to:

46. Highway-Rail Crossing Users

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

Name Of 1. Reporting Railroad 2. Other Railroad Involved in Train Accident/Incident 3. Railroad Responsible for Track Maintenance 4. U.S. DOT-AAR Grade Crossing ID No. 5. Date of Accident/Incident 028004J 11/06/75 7. Nearest Railroad Station 8. Division 9. County INGLEWOOD LOS ANGELES 11. City (if in a city) 12. Highway Name or No. INGLEWOOD EUCALYPTUS AVENUE Highway User Involved Rail Equipment Involved 13. Typ A. Au B. Tru

		•	•										
13. Type C	Truck-trailer	F. Bus		J. Other M	Aotor Vel	hicle	Code 17	. Equipment		3. Train	(standing) 6. Light	loco(s) (moving)	C
A. Auto D	. Pick-up trucl	G. Sch	ool Bus	K. Pedest	trian	1		1. Train (uni	its pulling)		(moving) 7. Light	• • •	
B. Truck E	. Van	H. Mote	orcycle	M. Other	(specify	0	Α	2. Train (uni	its pushing	) 5. Car(s)	(standing) 8. Othe	r (specify)	
14. Vehicle Sp	beed	15. Di	rection	(geogra	phical)		Code 18	Position of	Car Unit ir	Train			
(est. mph at in	npact)	1. No	orth 2. S	outh 3. Ea	nst 4.V	Vest	1				1	l	
16. Position	1. Stalled on	crossing	3. M	oving over	crossing			. Circumstan	ce 1. Ra	il equipmer	nt struck highway us	er	Ĉ
	2. Stopped o	n Crossin	g 4.Tr	apped			2		2. Ra	l equipmen	t struck by highway	user	1
20a. Was the	• •				d		Code 20	b. Was there	a hazard	ous materia	als release by		С
	pact transpor	•				1							1
<u>~</u>		. Rail Equ	· · · · ·	3. Both	4. Neiti		4	1. Higi	hway Usei	2. Rail	Equipment 3. Bo	oth 4. Neither	
20c. State the	name and qu	antity of	he hazar	dous mater	rials relea	ased, if ar	у						
21. Temperati	lite	22. \	/isibility	(single ent	ry)		Code 2	3. Weather	(single er	ntry)			С
(specify if min	us) 70 °F	1. [	Dawn 2	Day 3. D	Dusk 4. [	Dark	2	1. Clear 2	. Cloudy	3. Rain 4.	Fog 5. Sleet 6. S	Snow	
24. Type of Ed	quipment						Code 2	5. Track Typ	e Used by	Rail	Code	e 26. Track Number or	Name
Consist	1. Freigh			train 7. Y		•		Equipmer	nt Involved				
(single entry)		•		e car 8. Li	<b>.</b>	`' I					1		
	3. Comm	uter train	6. Cut c	f cars 9. O	ther (sp	ecify)	8	1. Main	2. Yard	3. Siding	4. Industry 1	HARBOR DIST	
27. FRA	28.	lumber o	f	29. Numb	erof	30. Consi	st Speed	(Recorded)	if available	) Code	31. Time Table Dir	ection	С
Track Clas	s	Locomoti	ve	Cars		R. Re	corded						ł.
(1-6,X)	2	Units	1		0	E. Es	timated		2 mph	E	1. North 2. Sout	th 3. East 4. West	
32. Type of	1. Gates	4.	Wig wag	s	7. Cros	ssbucks	10. Flagg	ed by crew		33. Signal	led Crossing	34. Whistle Ban	С
Crossing	2. Cantileve	rFLS 5.	Hwy. tra	ffic signals	8. Stop	o sig <b>ns</b>	11. Othe	(specify)		Warn	ing	1. Yes	
Warning	3. Standard	FLS 6.	Audible		9. Wate	chman	12. None	•				2. No	1
Code(s)	01	03								20 sec v	warn min	3. Unknown	
35. Location of	of Warning		•		Code	36. Cros	ssing War	ning Intercor	nected	Code	37. Crossing Illu	minated by Street	C
1. Both Si	des					with	n Highway	Signals			Lights or Spe	ecial Lights	
2. Side of	Vehicle Appr	oach			1					3			1
3. Opposi	te Side of Vel	nicle Appr	oach		1	1. Y	/es 2.N	o 3. Unkno	own	5	1. Yes 2. N	lo 3. Unknown	
38. Driver's	39. Driver's	Code	40. Drive	r Drove Be	hind or in	n Front of	Train	Code	41. Drive	er			С
Age	Gender		and	Struck or w	vas Struc	k by Sec	ond Train		1. D	rove around	d or thru the gate	4. Stopped on crossing	
	1. Male			1. Yes 2	. No 3.	Unknowr	ı		2. S	topped and	then proceeded	5. Other (specify)	1
	2. Female							2	3. D	id not stop			
42. Driver Pa	ssed Standing	,	Code	43. View	of Track	Obscure	d by	(primary o	bstruction)				C

55. Typed Name and Title

Injured

0

0

0

1. Permanent Structure

44. Driver was

3

Killed

0

0

0

2. Standing railroad equipment 4. Topography

(est. dollar damage)

1. Killed 2. Injured 3. Uninjured

47. Highway Vehicle Property Damage

50. Total Number of People on Train

(include passengers and crew)

OMB Approval No. 2130-0500

1b. 42115403

3b. 42115403

2b.

10. State

Abbr.

Public

RR Accident/Incident No.

2:55 PM

CA

Code

Private

06

Code

6

Code 1

Code

Code 1

Code

3

Code

Code

3

Code

1

Code

8

Code

1

Code

2

2

Alphabetic Code

6. Time of Accident/Incident

<sup>1a.</sup> ATSF

<sup>3a.</sup> ATSF

2a

5. Vegetation7. Other(specify)6. Highway Vehicles8. Not Obstructed

45. Was Driver in the Vehicle?

51. Is a Rail Equipment Accident /

Incident Report Being Filed

48. Total Number of Highway-Rail Crossing Users

1. Yes 2. No

(include driver)

1. Yes 2. No

3. Passing Train 5. Vegetation

53b. Special Study Block

Code

3

\$0

2

.

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

FEDERAL RAILROAD ADMINISTRAT		)							ONB Approval No. 2	100-0000
Name Of							Alphat	petic Cod	e RR Accident/Inci	dent No.
1. Reporting Railroad							1a. A	<b>FSF</b>	1b. 311287204	
2. Other Railroad Involved in Train A							2a.		<sup>2b.</sup> 311287204	
3. Railroad Responsible for Track Ma				<del></del>			<sup>3a.</sup> A'	TSF	3b. 311287204	
4. U.S. DOT-AAR Grade Crossing ID	No.	0280	04J	5. Dat	e of Accident/Incident	12/30/87	6. Time	of Accide	ent/Incident 1:17 A	M
7. Nearest Railroad Station INGLEWOOD			8. Div	ision		9. County LOS A	NGELES		10. State Abbr. CA	Code 06
11. City (if in a city) INGLEW	OOD		12. Hig	hway N	ame or No. EUCALY	YPTUS ST			Public	Private
Highwa	ay User Inv	volved				Rail Equ	ipment Involv	ved		
13. Type C. Truck-trailer F. Bus		J. Other Motor	Vehicle	Code	17. Equipment	3. Train	(standing) 6.	Light loc	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch		K. Pedestrian	Amerika (1971)	A	1. Train (units pulling			-		1
	orcycle	M. Other (sp			2. Train <i>(units pushin</i> 18. Position of Car Unit	0, ()	(standing) 8.	Other	(specify)	L
1 DB PRODUCTION CONTRACTOR STORE	rection orth 2. Sc	(geographic outh 3. East		Code	18. Position of Car Unit	in Train		1		
16. Position 1. Stalled on crossing		ving over cross	ing	Code	19. Circumstance 1. R			AND A LONG STREET		Code
2. Stopped on Crossin 20a. Was the highway user and/or ra		and the second se		3	2. Ra 20b. Was there a hazard		struck by hig	hway use	er	1
in the impact transporting haza				Code I	200. Was there a hazart	uous materia	s release by			Code
1. Highway User 2. Rail Eq	uipment	3. Both 4. I	leither	4	1. Highway Use	er 2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of	the hazard	lous materials r	eleased, if	any						12-5
21. Temperature 22. V	/icibilib/	single entry)		Cade 23 Waathar (circle apter)						Code
45.017		Day 3. Dusk	4. Dark	Code 23. Weather (single entry) Dark   4   1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow						1
24. Type of Equipment				Code		10 10 10 Sever		Code	26. Track Number or I	l Name
Consist 1. Freight train		train 7. Yard/S		ching Equipment Involved						ame
(single entry) 2. Passenger train 3. Commuter train	-									
27. FRA 28. Number o		29. Number of			ed (Recorded if availabl		31. Time Tab			Code
Track Class Locomoti	ve	Cars	10.00 0.00	Recorde	d	<u> </u>				T
(1-6,X) <b>1</b> Units	4	55		stimate					3. East 4. West	3
32. Type of 1. Gates 4. Crossing 2. Cantilever FLS 5.	Wig wags		Crossbucks Stop signs	bucks         10. Flagged by crew         33. Signaled Crossing         34. Whistle           signs         11. Other         (specify)         Warning         1. Yes						Code
	Audible	-	Vatchman	hman 12. None 2. No						
Code(s) 01 03	06	07				20 sec w	arn min		3. Unknown	
35. Location of Warning		Cod	e. (		Warning Interconnected	Code			ated by Street	Code
1. Both Sides 2. Side of Vehicle Approach		2		itn <del>n</del> ign	way Signals	3	Lights	or Specia	i Lights	
3. Opposite Side of Vehicle Appr	oach	2	1.	Yes 2	2. No 3. Unknown	3	1. Yes	2. No	3. Unknown	3
		Drove Behind			11 11 11 11 11 11 11 11 11 11 11 11 11		aa filaa dha aa		Manual an annai-	Code
Age Gender 1. Male I		Struck or was S 1. Yes 2. No			29		or thru the gather proceeded		Stopped on crossing Other (specify)	
2. Female			1111 LANSCOTTAND		2	Did not stop				1
42. Driver Passed Standing	Code	43. View of Tr	ack Obscur ent Structu		(primary obstruction 3. Passing Train 5. V		7. Othe	r (spec		Code
Highway Vehicle 1. Yes 2. No 3. Unknown	2		g railroad e				cles 8. Not (			8
			14. Driver w	as	C	ode	45. Was Driv	ver in the	Vehicle?	Code
Casualties to:	Killed	Injured	1. Kille	d 2. Inj	ured 3. Uninjured	2	1. Yes	2. No		1
46. Highway-Rail Crossing Users	0		17. Highwa	y Vehicl	e Property Damage				lighway-Rail Crossing	Users
		1	(est. do			\$1,200	(include )		nt Accident /	Code
49. Railroad Employees	0	· · · · · ·			f People on Train gers and crew)				eing Filed	
52. Passengers on Train	0	0		,	<b>.</b> ,		1. Yes	2. No		2
53a. Special Study Block		·			53b. Special Study Bloc	ck				
54. Narrative Description										
5. Typed Name and Title 56. Signature 57. Date										
so. Typou nume and the		ee. orginature							or. Duto	
FORM FRA F 6180.57	* NOTE	THAT ALL CA	SUALTIES	BE REPORTED ON FOR	M FRA F 618	0.55A				

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

FEDERAL RAILROAD ADMINISTRAT										
Name Of					1		Alphat	etic Code	e RR Accident/Inc	ident No.
1. Reporting Railroad							1a. A	ſSF	1b. 031292202	2
2. Other Railroad Involved in Train Ac	cident/Inc	ident					2a.		<sup>2b.</sup> 031292202	2
3. Railroad Responsible for Track Ma	intenance						3a. A'	ГSF	3b. 031292202	2
4. U.S. DOT-AAR Grade Crossing ID	No.	02800	)4J	5. Date	e of Accident/Incident	12/17/92	6. Time	of Accide	ent/Incident 8:30	РМ
7. Nearest Railroad Station INGLEWOOD			8. Divi:	sion		9. County LOS A	NGELES		10. State Abbr. C.	Code A 06
11. City (if in a city) INGLEW	'OOD		12. High	way Na	ame or No. EUCALY	PTUS AV	Æ		Public	Private
Highwa	y User Inv	volved			1. AL	Rail Ec	uipment Involv	/ed		
13. Type C. Truck-trailer F. Bus		J. Other Motor V	ehicle	Code	17. Equipment	3 Train	(standing) 6	Light loc	o(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch		K. Pedestrian	l		1. Train (units pulling			-	co(s) (standing)	1
B. Truck E. Van H. Mote	orcycle	M. Other (spec	ify)	A	2. Train (units pushin	ng) 5. Car(s)	(standing) 8.	Other	(specify)	1
	rection	(geographical)	100-0	Code	18. Position of Car Unit	in Train		1		
(est. mph at impact)       0       1. North       2. South       3. East       4. West       1       1         16. Position       1. Stalled on crossing       3. Moving over crossing       Code       19. Circumstance       1. Rail equipment struck highway user									Code	
2. Stopped on Crossing			ig I	1		100 C	t struck highw	2	er	
20a. Was the highway user and/or ra				Code	20b. Was there a hazard				1	Code
in the impact transporting hazar				d Historia Har	0 D	Faulantant	2 Dath	4 Maltheau	and the ballet	
1. Highway User 2. Rail Equ	3. Both 4. Ne		4	1. Highway Use	er 2. Rall	Equipment	3. Both	4. Neither		
20c. State the name and quantity of t	ne nazaru	ous materiais rei	easeu, ii a	uny						
21. Temperature 22. V	isibility (	single entry)		Code	23. Weather (single e	entry)				Code
50.0E	Day 3. Dusk 4	Dark	4	1. Clear 2. Cloudy	3. Rain 4.	Fog 5. Sleet	6. Sno	w	1	
24. Type of Equipment				Code	25. Track Type Used b			1	26. Track Number or	Name
Consist 1. Freight train	4. Work t	train 7. Yard/Sw	vitching	Code	Equipment Involve	-		Code	20. Track Number of	Name
(single entry) 2. Passenger train 3. Commuter train	-			1	1. Main 2. Yard	3 Siding	4. Industry	1	MAIN LINE	
27. FRA 28. Number o		29. Number of			ed (Recorded if availabl		31. Time Tat	L		Code
Track Class Locomotiv		Cars	1	ecorde			ST. HILLE LAL			Code
(1-6,X) 2 Units	3	24		stimate		h E	1. North 2	South 3	3. East 4. West	4
32. Type of 1. Gates 4. Wig wags 7. Crossbucks 10. Flagged by crew 33. Signaled Crossing 34. Whistle Ban								Code		
Crossing 2. Cantilever FLS 5. Warning 3. Standard FLS 6.		Contractive Procession Contraction	op signs		ther (specify)	Warn	ing		1. Yes	
Warning 3. Standard FLS 6. Code(s) 01	Audible	9. 00	atchman	12. N	one	20 sec v	warn min		2. No 3. Unknown	T I
35. Location of Warning		Code	36 Crr	ussing V	Warning Interconnected	L Code	37 Crossir	na Illumin	ated by Street	Code
1. Both Sides		0000			way Signals	0000		or Specia	and the second se	0000
2. Side of Vehicle Approach		1		Voc 1	2. No 3. Unknown	3	1 1 1	2 No	3. Unknown	3
3. Opposite Side of Vehicle Appr							1. 103	2.110	S. ORKIOWIT	
38. Driver's 39. Driver's Code Age Gender		Drove Behind or Struck or was Str			Code 41. Driv		d or thru the ga	ate 4.5	Stopped on crossing	Code
1. Male		1. Yes 2. No	a a a 😚				then proceed		Other (specify)	4
2. Female						Did not stop				
42. Driver Passed Standing Highway Vehicle	Code	43. View of Tra 1. Permane			(primary obstruction 3. Passing Train 5. V		7. Othe	r (spec	rify)	Code
1. Yes 2. No 3. Unknown	2	2. Standing					nicles 8. Not			8
		44	. Driver w	as	C	Code	45. Was Driv	ver in the	Vehicle?	Code
Casualties to:	Killed	Injured				3	1. Yes			2
		47	/ Highway	Vehicl	e Property Damage	3	48 Total Nu	mber of h	lighway-Rail Crossing	
46. Highway-Rail Crossing Users	0	0	(est. dol			\$15,000	(include			0
49. Railroad Employees	0	0 50			f People on Train	\$10,000			ent Accident /	Code
52. Passengers on Train	0	0	(include	passer	ngers and crew)		1. Yes		eing Filed	2
53a. Special Study Block 53b. Special Study Block										
54. Narrative Description										
55. Typed Name and Title	T	56. Signature					www.doi.e.to		57. Date	
oo. Typou name anu hue		oo. oignature							Jr. Date	
FORM FRA F 6180.57	* NOTE	THAT ALL CAS	UALTIES	MUST	BE REPORTED ON FOR	M FRA F 61	80.55A			]

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

OMB Approval No. 2130-0500

TEDERAL RAILROAD ADMINISTRATION									
Name Of						Alphabetic Cod	e RR Accident/Incid	dent No.	
1. Reporting Railroad					10.11.	<sup>1a.</sup> ATSF	1b. 360190201		
2. Other Railroad Involved in Train Accid	ent/Incident					2a.	<sup>2b.</sup> 360190201		
3. Railroad Responsible for Track Mainte	nance					<sup>3a.</sup> ATSF	3b. 360190201		
4. U.S. DOT-AAR Grade Crossing ID No	028	008L	5. Dat	e of Accident/Incident	01/04/90	6. Time of Accide	ent/Incident 2:50 A	M	
7. Nearest Railroad Station HYDE PARK		8. Divi	sion		9. County LOS AN	GELES	10. State Abbr. CA	Code	
11. City (if in a city) INGLEWO	)D	12. Hig	hway N	ame or No. HYDE P.	ARK BLVD	)	Public	Private	
Highway U	ser Involved				Rail Equ	ipment Involved			
13. Type C. Truck-trailer F. Bus	J. Other Moto	or Vehicle	Code	17. Equipment	3. Train	(standing) 6. Light loc	co(s) (moving)	Code	
A. Auto D. Pick-up truck G. School			1. Train (units pulling) 4. Car(s) (moving) 7. Light loco(s)					1	
B. Truck E. Van H. Motorcy 14. Vehicle Speed 15. Direct			Code	2. Train <i>(units pushin</i> 18. Position of Car Unit	1885), VEL 6	(standing) 8. Other	(specify)	•	
The second	2. South 3. East		1	To: Position of Car Onit	111 11211	1			
16. Position 1. Stalled on crossing 2. Stopped on Crossing	<ol> <li>Moving over crost</li> <li>Trapped</li> </ol>	ssing	Code	19. Circumstance 1. R		struck highway user struck by highway use	ar	Code	
20a. Was the highway user and/or rail equipment involved Code 20b. Was there a hazardous materials release by								1 Code	
in the impact transporting hazardous materials?									
1. Highway User 2. Rail Equipment 3. Both 4. Neither 4 1. Highway User 2. Rail Equipment 3. Both 4. Neither							4. Neither	L	
20c. State the name and quantity of the	azardous materiais	released, it a	any						
21. Temperature 22. Visibility (single entry) Code 23. Weather (single entry) Code									
(specify if minus) 55 °F 1. Daw	n 2. Day 3. Dusl	4. Dark	4	1. Clear 2. Cloudy	3. Rain 4. F	og 5. Sleet 6. Sno	w	1	
24. Type of Equipment			Code	25. Track Type Used b	y Rail	Code	26. Track Number or N	Name	
Consist 1. Freight train 4. Work train 7. Yard/Switching Equipment Involved (single entry) 2. Passenger train 5. Single car 8. Light loco(s)									
3. Commuter train 6. Cut of cars 9. Other (specify) 1 1. Main 2. Yard 3. Siding 4. Industry 1 MAIN									
27. FRA 28. Number of 29. Number of 30. Consist Speed (Recorded if available) Code 31. Time Table Direction Co									
Track Class Locomotive (1-6,X) 2 Units	5 Cars	1000000000	lecorde stimate		bh I E	1. North 2. South	3. East 4. West	3	
				agged by crew	33. Signale		34. Whistle Ban	Code	
Crossing 2. Cantilever FLS 5. Hw	y. traffic signals 8.	Stop signs	11. 0	ther (specify)	Warnin	g	1. Yes		
Warning 3. Standard FLS 6. Au		Watchman	12. N	one	20 sec w	arn min	2. No 3. Unknown	1	
Code(s)     01     03       35. Location of Warning	06 07	de 36. Cro		Warning Interconnected	Code	37. Crossing Illumin		Code	
1. Both Sides	00	Contraction and a second se		way Signals	Code	Lights or Specia		Code	
2. Side of Vehicle Approach	2	1	Voc	2. No 3. Unknown	2	1. Yes 2. No	3 Unknown	3	
3. Opposite Side of Vehicle Approac 38. Driver's 39. Driver's Code 40.	h Driver Drove Behind		10			1. 163 2. 10		Cada	
38. Driver's 39. Driver's Code 40. Age Gender	and Struck or was					or thru the gate 4.5	Stopped on crossing	Code	
1. Male	1. Yes 2. No	3. Unknow	'n	12		nen proceeded 5. 0	Other (specify)	1	
2. Female 42. Driver Passed Standing	Code 43. View of	Track Obscur	od by	(primary obstruction	Did not stop	·		Code	
Highway Vehicle		anent Structur		3. Passing Train 5. \		7. Other (spec	cify)	, Code	
	2 2. Stand	ing railroad e	quipme	nt 4. Topography 6. H	Highway Vehic			8	
		44. Driver w	as	C	ode	45. Was Driver in the	Vehicle?	Code	
Casualties to: K	lled Injured	1. Killed	d 2. Inj	ured 3. Uninjured	3	1. Yes 2. No		2	
46. Highway-Rail Crossing Users 0	0	47. Highway (est. dol		e Property Damage age)	\$0	48. Total Number of I (include driver)	Highway-Rail Crossing		
49. Railroad Employees 0	0	50. Total Nu	imber o	f People on Train		51. Is a Rail Equipme	ent Accident /	Code	
52. Passengers on Train       0       0       (include passengers and crew)       Incident Report Being Filed         1. Yes       2. No							2		
53a. Special Study Block	53a. Special Study Block 53b. Special Study Block								
54. Narrative Description				×		.i 1.00			
55 Tupod Name and Title	ER Di				•	- Maintain - Constanting	E7 Data		
55. Typed Name and Title	56. Signature						57. Date		
	<u> </u>								

.

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

#### OMB Approval No. 2130-0500

~

Name Of	, ,						Alabat	otic Ca	le RR Accident/Inci	dent No
1. Reporting Railroad								etic Cod	721	Gent NO.
			2 1 202				1a. A7	<b>FSF</b>	1b. 150295201	
2. Other Railroad Involved in Train Ac		ident	···				2a.		<sup>2b.</sup> 150295201	
3. Railroad Responsible for Track Mai				r			3a. A'		<sup>3b.</sup> 150295201	
4. U.S. DOT-AAR Grade Crossing ID	No.	0280	-		e of Accident/Incident	02/12/95	6. Time	of Accid	ent/Incident 11:0 A	
7. Nearest Railroad Station INGLEWOOD			8. Div	ision		9. County LOS A	NGELES		10. State Abbr. CA	Code 06
11. City (if in a city) INGLEW	OOD		12. Hig	hway N	ame or No. HYDE P	ARK BLV			Public	Private
	y User Inv	volved					uipment Involv	ved		
13. Type C. Truck-trailer F. Bus		J. Other Moto	r Vehicle	nicle Code 17. Equipment 3. Train (standing) 6. Light loco(s) (moving						
A. Auto D. Pick-up truck G. Scho		K. Pedestrian		I 1. Train (units pulling) 4. Car(s) (moving) 7. Light loco(s) (m						
B. Truck E. Van H. Moto	orcycle	M. Other (sp		A 2. Train (units pushing) 5. Car(s) (standing) 8. Other (specify)						1
14. Vehicle Speed 15. Dir		(geographi		Code	18. Position of Car Unit	in Train	5477C (			
		uth 3. East	Total School Price	2				1		
16. Position 1. Stalled on crossing 2. Stopped on Crossing	, 4. Tra		sing	Code	19. Circumstance 1. R 2. R		t struck highw t struck by hig		er	Code
20a. Was the highway user and/or rai				Code	20b. Was there a hazar	dous materia	Is release by			Code
in the impact transporting hazar 1. Highway User 2. Rail Equ			Neither	2	1. Highway Us	er 2 Poil	Equipment	3. Both	4. Neither	
1. Highway User 2. Rail Equ 20c. State the name and quantity of the					I. Highway US	J. A. INGII	equipment	J. DOUT		I
200. State the name and quantity of th	ne nazaro	ous materials	released, IT a	any						
21. Temperature 22. V	isibility (	single entry)		Code	23. Weather (single e	entry)				Code
(2.05		Day 3. Dusk	4. Dark	2	1. Clear 2. Cloudy	•••	Fog 5. Sleet	6. Sno	w	2
24. Type of Equipment				-			-9 - 0.001			
Consist 1. Freight train	4. Work t	train 7. Yard/	Switching	Code	25. Track Type Used the Equipment Involve			Code	26. Track Number or	Name
(single entry) 2. Passenger train	5. Single	car 8. Light	loco(s)	1						
3. Commuter train				1	1. Main 2. Yard		4. Industry			
1700 0.10000 1000 1000 1000 0000 0000 00									tion	Code
Track Class         Locomotive         Cars         R. Recorded           (1-6,X)         2         Units         4         80         E. Estimated         15         mph         E         1. North 2. South 3. East 4. West								3. East 4. West	3	
( -1 )	Wig wags	7.			agged by crew		ed Crossing		34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5.	Hwy. traff	ic signals 8.	Stop signs		ther (specify)	Warn	•		1. Yes	
	Audible	9.	Watchman	12. N	one	20 500 1	varn min		2. No	
Code(s) 01		an an the second		l					3. Unknown	
35. Location of Warning 1. Both Sides		Co			Warning Interconnected way Signals	Code	Month and Treaters play reads	ng Illumir or Specia	nated by Street	Code
2. Side of Vehicle Approach		l -		arnıyrı	nay olginala		LIGHTS	opecie	ar eighto	
3. Opposite Side of Vehicle Appro	bach	1	1.	Yes 2	2. No 3. Unknown	2	1. Yes	2. No	3. Unknown	3
38. Driver's 39. Driver's Code		Drove Behind			18 (18) SN 81 11 10 303 (19) 201	ver				Code
Age Gender		Struck or was			1990 AND 199		l or thru the ga		Stopped on crossing	
1. Male 2. Female		1. Yes 2. No	3. Unknov	vn	2	Stopped and Did not stop	then proceede	ed 5.	Other (specify)	1
42. Driver Passed Standing	Code	43. View of	rack Obscu	red by	(primary obstruction				1. I	Code
Highway Vehicle		1. Perma	nent Structu	re	3. Passing Train 5.	Vegetation	7. Othe			
1. Yes 2. No 3. Unknown	2	2. Standi	ng railroad e	quipme	nt 4. Topography 6.	Highway Veh	icles 8. Not (	Obstruct	ed	8
0	Killer		44. Driver w	vas	C	Code	45. Was Driv	ver in the	Vehicle?	Code
Casualties to:	Killed	Injured	1. Kille	d 2. Inj	ured 3. Uninjured	3	1. Yes	2. No		1
40 Ulahara D. 10			47. Highwa	y Vehicl	e Property Damage		48. Total Nu	mber of	Highway-Rail Crossing	
46. Highway-Rail Crossing Users	0	0	(est. do	llar dam	age)	\$5,000	(include	driver)	1	
49. Railroad Employees	0	0			f People on Train				ent Accident / Being Filed	Code
52. Passengers on Train	0	0	(include	passer	ngers and crew)		1. Yes	and a state of the second		2
53a. Special Study Block		I			53b. Special Study Blo	ck				
54. Narrative Description					• · · · · · · · · · · · · · · · · · · ·			•		
55. Typed Name and Title	- 1	56. Signature		·			<u>а доржата, с</u>		57. Date	
and a first statement of the statement o										
FORM FRA F 6180.57	* NOTE			MUST	BE REPORTED ON FOR		80 554		··	

\_

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

Name Of						Alphat	oetic Coo	te RR Accident/Inci	dent No.
1. Reporting Railroad						1a. BI	NSF	1b. LA0101200	)
2. Other Railroad Involved in Train Accider	t/Incident					2a.		<sup>2b.</sup> LA010120	)
3. Railroad Responsible for Track Mainten	ince					3a. B	NSF	3b. LA010120	)
4. U.S. DOT-AAR Grade Crossing ID No.	02801	OM <sup>s</sup>	5. Date	e of Accident/Incident	01/08/01	6. Time	of Accid	lent/Incident 4:0 PI	И
7. Nearest Railroad Station INGLEWOOD		8. Divisi LOS A		ELES TERM	9. County LOS A	NGELES		10. State Abbr. CA	Code
11. City (if in a city) INGLEWOO	)	Trans Straw or			NAGA STR			Public	Private
Highway Use	r Involved			HALF TO STOLEN	Rail Eq	uipment Involv	ved		
13. Type C. Truck-trailer F. Bus	J. Other Motor V	/ehicle C	ehicle Code 17. Equipment 3. Train (standing) 6. Light loco(s) (mot						
A. Auto D. Pick-up truck G. School Br		1		1. Train (units pulling			-	co(s) (standing)	1 1
B. Truck E. Van H. Motorcycl			A	2. Train (units pushin		(standing) 8	. Other	(specify)	1
14. Vehicle Speed     15. Direction       (est. mph at impact)     0       1. North	n <i>(geographical</i> ) 2. South 3. East 4		Code 4	18. Position of Car Unit	in Train		1		
	Moving over crossin		Code	19. Circumstance 1. R	ail equipmer	t struck highw	ay user		Code
	Trapped	l.	2			t struck by hig	hway us	er	11
20a. Was the highway user and/or rail equ in the impact transporting hazardous	N. 10. 20. 202		Code	20b. Was there a hazan	dous materia	ils release by			Code
1. Highway User 2. Rail Equipme	either	4	1. Highway Use	er 2. Rail	Equipment	3. Both	4. Neither	4	
20c. State the name and quantity of the ha	zardous materials rel	eased, if an	iy						
21. Temperature 22. Visibili	y (single entry)	(	Code	23. Weather (single e	entry)				Code
70.01	2. Day 3. Dusk 4		2	1. Clear 2. Cloudy	••	Fog 5. Sleet	6. Sno	w	3
24. Type of Equipment		(	Code	25. Track Type Used b	-		Code	26. Track Number or	Name
	ork train 7. Yard/Sw	vitching		Equipment Involve					- Canto
(single entry) 2. Passenger train 5. S 3. Commuter train 6. C	•		1	1. Main 2. Yard	3. Sidina	4. Industry	1	MAIN LINE	
27. FRA 28. Number of	29. Number of		st Spe	ed (Recorded if availabl		31. Time Tab	le Direc	the state of the second second	Code
Track Class Locomotive	Locomotive Cars R. Recorded								1
(1-6,X)         2         Units         2         65         E. Estimated         15         mph         E         1. North         2. South           32. Type of         1. Gates         4. Wig wags         7. Crossbucks         10. Flagged by crew         33. Signaled Crossing         10.								4	
32. Type of 1. Gates 4. Wig v Crossing 2. Cantilever FLS 5. Hwy.				agged by crew ther (specify)	33. Signal Warn	-		34. Whistle Ban 1. Yes	Code
Warning 3. Standard FLS 6. Audit			12. No		0, 37431541	0		2. No	
Code(s) 01 03					20 sec v	varn min		3. Unknown	2
35. Location of Warning 1. Both Sides	Code	10000000 DALANCE-SKS	-	Varning Interconnected way Signals	Code	energy the statement of postar	ng Illumir or Specia	nated by Street	Code
2. Side of Vehicle Approach	1				3				1
3. Opposite Side of Vehicle Approach	1	1. Y	'es 2	. No 3. Unknown		1. Yes	2. No	3. Unknown	1
	iver Drove Behind or			Code 41. Driv					Code
Age Gender a 1. Male	nd Struck or was Stri 1. Yes 2. No			2 9		l or thru the ga then proceede		Stopped on crossing Other (specify)	
2. Female				2 3. [	Did not stop	•••••••••••••••••••••••••••••••••••••••			4
42. Driver Passed Standing Co Highway Vehicle	de 43. View of Tra 1. Permane			(primary obstruction 3. Passing Train 5. \	·	7. Othe	r (spe	cify)	Code
1. Yes 2. No 3. Unknown 2						icles 8. Not			8
		. Driver was	s	C	ode	45. Was Driv	ver in the	Vehicle?	Code
Casualties to: Kille	d Injured	1. Killed	2. Inji	ared 3. Uninjured	3	1. Yes	2. No		2
46. Highway-Rail Crossing Users		7. Highway V	Vehicle	e Property Damage		1		Highway-Rail Crossing	Users
	0	(est. dollar	r dam	age)	\$1,000	(include )		1	
49. Railroad Employees 0	0 50			People on Train gers and crew)				ent Accident / Being Filed	Code
52. Passengers on Train 0	0	(module pa	assen	yers and crew)	3	1. Yes	GC1 (1		2
53a. Special Study Block				53b. Special Study Bloc	ck				
54. Narrative Description									
AGE/GENDER OF DRIVER UNK	IOWN.								
55. Typed Name and Title	56. Signature							57. Date	
oo, typed name and the	ou. Signature							Sr. Date	
FORM FRA F 6180.57 * N	DTE THAT ALL CAS	UALTIES M	USTE	BE REPORTED ON FOR	M FRA F 61	80.55A			

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

OMB Approval No. 2130-0500

\*

PEDERAL RAILROAD ADMINISTRAT		/									
Name Of								Alphab	etic Coc		
1. Reporting Railroad								1a. A7	SF	1b. 33018420	1
2. Other Railroad Involved in Train Ac	cident/Inc	ident	12					2a.		2b.	
3. Railroad Responsible for Track Ma	intenance							3a. A7	ſSF	3b. 33018420	1
4. U.S. DOT-AAR Grade Crossing ID	No.	0280			e of Accident/Incident	-	13/84	6. Time	of Accid		5 PM
7. Nearest Railroad Station HOBART			8. Divi	ision			County LOS A	NGELES		10. State Abbr. C	Code A 06
11. City (if in a city) INGLEW	OOD		12. Hig	hway Na	ame or No. LA CIE	NEC	GA BLV	D D		Public	Private
Highwa	y User Inv	volved	4				Rail Eq	uipment Involv	ed		
13. Type C. Truck-trailer F. Bus		J. Other Motor	Vehicle	e Code 17. Equipment 3. Train (standing) 6. Light loco(s) (moving							Code
A. Auto D. Pick-up truck G. Sch		K. Pedestrian			1. Train (units pulling					co(s) (standing)	
B. Truck E. Van H. Moto		M. Other (spe		A	2. Train (units pushi			(standing) 8.	Other	(specify)	1
14. Vehicle Speed 15. Dir		(geographica		Code	18. Position of Car Unit	t in Ti	rain		-		
(est. mph at impact) 0 1. No 16. Position 1. Stalled on crossing		ving over crossi		3 Code	19. Circumstance 1. F	Doil o	quinmon	t otruck highw	1		Code
2. Stopped on Crossing			ny				6229	t struck by high		er	1
20a. Was the highway user and/or ra		Code	20b. Was there a haza	rdous	s materia	Is release by			Code		
	in the impact transporting hazardous materials? 1. Highway User 2. Rail Equipment 3. Both 4. Neither						2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of t				any	1. Highway Us		Survey Show			2 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1	
A AND A SOUTH AND	'isibility (	single entry)		Code	23. Weather (single	entry	1)				Code
(specify if minus) 61 °F 1. E	awn 2.	Day 3. Dusk	4. Dark	4	1. Clear 2. Cloudy	/ <b>3</b> . F	Rain 4.	Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment				Code	25. Track Type Used	by Ra	ail		Code	26. Track Number o	r Name
Consist 1. Freight train (single entry) 2. Passenger train		train 7. Yard/S			Equipment Involve	ed					
(single entry) 2. Passenger train 3. Commuter train		° °		1	1. Main 2. Yard	3.	Siding	4. Industry	1	MAINLINE	
27. FRA 28. Number of	ber of 29. Number of 30. Consist Speed (Recorded if available) Code 31. Time Table Direction								tion	Code	
Track Class Locomotiv		Cars		Recorde		ો	r _				1
(1-6,X) 1 Units	4	123	1.000	stimate		ph	E		South	3. East 4. West	3
32. Type of 1. Gates 4. Crossing 2. Cantilever FLS 5.	Wig wags				agged by crew ther <i>(specify)</i>	3	3. Signal Warni	ed Crossing		34. Whistle Ban 1. Yes	Code
	Audible		/atchman	12. N			warn	ng		2. No	.
Code(s) 04 07			Τ				20 sec v	arn min		3. Unknown	
35. Location of Warning		Code	36. Cr	ossing V	Varning Interconnected		Code	37. Crossin	g Illumir	nated by Street	Code
1. Both Sides		1	wi	ith High	way Signals	1		Lights o	or Specia	al Lights	
<ol> <li>Side of Vehicle Approach</li> <li>Opposite Side of Vehicle Appr</li> </ol>	oach	1	1.	Yes 2	2. No 3. Unknown		1	1. Yes	2. No	3. Unknown	3
38. Driver's 39. Driver's Code		Drove Behind	or in Front	of Train	Code 41. Dri	iver					Code
Age Gender	and S	Struck or was St	ruck by Se	cond Tr	ain 1.	Drov	e around	l or thru the ga		Stopped on crossing	
1. Male 2. Female		1. Yes 2. No	3. Unknov	vn	2			then proceede	ed 5.	Other (specify)	4
42. Driver Passed Standing	Code	43. View of Tr	ack Obscur	red by	(primary obstructio	2.22	not stop				Code
Highway Vehicle		1. Perman	ent Structu	re	3. Passing Train 5.	Vege		7. Othe			
1. Yes 2. No 3. Unknown	2	2. Standing	railroad e	quipme	nt 4. Topography 6.	High	iway Veh	icles 8. Not 0	Obstruct	ed	8
Convetting to:	Killed		4. Driver w	as	(	Code	•	45. Was Driv	er in the	Vehicle?	Code
Casualties to:	Killeu	Injured	1. Kille	d 2. Inj	ured 3. Uninjured	3		1. Yes	2. No		2
46. Highway-Rail Crossing Users			7. Highwa	y Vehicl	e Property Damage			48. Total Nu	mber of	Highway-Rail Crossin	ig Users
	0	0	(est. doi	llar dam	age)	\$15	60	(include d			0
49. Railroad Employees	0	0 5			f People on Train			enerola visco interio		ent Accident / Being Filed	Code
52. Passengers on Train	0	0	(include	passer	igers and crew)			1. Yes	1.4.5 Tenard	ing i lica	2
53a. Special Study Block					53b. Special Study Blo	ock					
54. Narrative Description											
55. Typed Name and Title		56. Signature								57. Date	
FORM FRA F 6180.57	* NOTE	THAT ALL CA	SUALTIES	MUST	BE REPORTED ON FOR	RM F	RA F 61	80.55A			

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

FEDERAL RAILROAD ADMINISTRAT		/							Olvid Approval No. 2	100 0000
Name Of							Alphat	etic Cod		dent No.
1. Reporting Railroad							1a. A7	rsf	1b. 330181201	
2. Other Railroad Involved in Train A							2a.		2b.	
3. Railroad Responsible for Track Ma							3a. A'		3b. 330181201	
4. U.S. DOT-AAR Grade Crossing ID	No.	0280			e of Accident/Incident	01/06/81	6. Time	of Accide	ent/Incident 10:15	PM
7. Nearest Railroad Station INGLEWOOD			8. Div	ision		9. County LOS AN	GELES		10. State Abbr. CA	Code
11. City (if in a city) INGLEW	OOD		12. Hig	hway N	ame or No. MANCH	ESTER & I	FLORENC		Public	Private
Highwa	ay User In	volved				Rail Equ	ipment Involv	ved		
13. Type C. Truck-trailer F. Bus		J. Other Motor	Vehicle	le Code 17. Equipment 3. Train (standing) 6. Light loco(s) (movin						Code
A. Auto D. Pick-up truck G. Sch		K. Pedestrian		<b>B</b> 1. Train (units pulling) 4. Car(s) (moving) 7. Light loco(s) (standing)						1
	orcycle rection	M. Other (sp (geographic		Code	2. Train <i>(units pushir</i> 18. Position of Car Unit		(standing) 8.	Other	(specify)	L .
. e		outh 3. East	270	4	18. Position of Car Unit	in Irain		1		
16. Position 1. Stalled on crossing		ving over cross	ing	Code	19. Circumstance 1. R					Code
2. Stopped on Crossin 20a. Was the highway user and/or ra				Code	2. Ri 20b. Was there a hazar	ail equipment dous material		nway use	er	1 Code
in the impact transporting haza	rdous mat			1						
1. Highway User 2. Rail Equ	Neither	2	1. Highway Use	er 2. Rail E	quipment	3. Both	4. Neither	L		
20c. State the name and quantity of	the hazard	lous materials r	eleased, if a	any						
21. Temperature 22. Visibility (single entry) Code 23. Weather (single entry) C									Code	
(specify if minus) 45 °F 1.1	Dawn 2.	Day 3. Dusk	4. Dark	4	1. Clear 2. Cloudy	3. Rain 4. F	og 5. Sleet	6. Snor	w	1
24. Type of Equipment				Code	25. Track Type Used b	y Rail		Code	26. Track Number or	Name
Consist 1. Freight train		train 7. Yard/S			Equipment Involve					
(single entry) 2. Passenger train 3. Commuter train	-			1	1. Main 2. Yard	ain 2. Yard 3. Siding 4. Industry 1 HARBOR DISTRICT				RICT
27. FRA 28. Number o	f	29. Number of	30. Con	sist Spe	ed (Recorded if availabl	le) Code	31. Time Tab	le Directi	ion	Code
Track Class Locomotin		Cars	21342.0485	lecorde	10					
(1-6,X) 2 Units 32. Type of 1. Gates 4.	7 Wie wood	71	22 22	stimate					3. East 4. West	4 Code
32. Type of     1. Gates     4. Wig wags     7. Crossbucks     10. Flagged by crew     33. Signaled Crossing     34. Whistle Ban     Co       Crossing     2. Cantilever FLS     5. Hwy. traffic signals     8. Stop signs     11. Other (specify)     Warning     1. Yes								Coue		
Warning 3. Standard FLS 6.	Audible	9. \	Vatchman	12. N	one		-		2. No	
Code(s) 01 03	05					20 sec wa	arn min		3. Unknown	
35. Location of Warning 1. Both Sides		Cod	17	-	Warning Interconnected way Signals	Code		g Illumin or Specia	ated by Street	Code
2. Side of Vehicle Approach		2								1
3. Opposite Side of Vehicle Appr	oach		1.	Yes 2	2. No 3. Unknown	-	1. Yes	2. No	3. Unknown	
		Drove Behind Struck or was S			Code 41. Driv		or the sec	40 4 5	tenned on exercise	Code
Age Gender 1. Male		1. Yes 2. No	a results and a second		2 9	Drove around Stopped and t			Stopped on crossing Other (specify)	
2. Female			1000 ALCONING 100 P			Did not stop				4
42. Driver Passed Standing Highway Vehicle	Code	43. View of Tr	ack Obscur ent Structur		(primary obstruction 3. Passing Train 5. V	e	7. Othe	r (spec		Code
1. Yes 2. No 3. Unknown	2		g railroad e			Highway Vehic		Dbstructe		8
			44. Driver w	as	С	ode	45. Was Driv	er in the	Vehicle?	Code
Casualties to:	Killed	Injured	1. Killed	1 2. Inj	ured 3. Uninjured	3	1. Yes	2. No		1 1
46 History Dail Creasing Lines			47. Highway	Vehicl	e Property Damage		48. Total Nur	mber of H	lighway-Rail Crossing	
46. Highway-Rail Crossing Users	0	0	(est. dol	lar dam	age)	\$25,000	(include d		1	
49. Railroad Employees	0	0			f People on Train gers and crew)		51. Is a Rail Incident I		nt Accident / eing Filed	Code
52. Passengers on Train	0	0	( <i>include</i>	passer	gers and crew)		1. Yes		9	2
53a. Special Study Block					53b. Special Study Bloc	sk 🛛				
54. Narrative Description	54. Narrative Description									
55. Typed Name and Title		56 Signature							57. Date	
oo. Typed name and fille		56. Signature							Jr. Date	
FORM FRA F 6180.57	* NOTE	THAT ALL CA	SUALTIES	MUST	BE REPORTED ON FOR	M FRA E 618	0.55A		I	

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

Name Of Alphabetic Code RR Accident/Incident									Incident No.		
1. Reporting Railroad					· · · · · · · · · · · · · · · · · · ·			1a. A7	ſSF	1b. 3312822	202
2. Other Railroad Involved in Train Ac		ident			1.00000000			2a.		2b.	
3. Railroad Responsible for Track Ma								3a. A'		3b. 3312822	
4. U.S. DOT-AAR Grade Crossing ID	No.	0280	<u>185</u>	5. Date	e of Accident/Incident	12/	/06/82	6. Time	of Accid	ent/Incident 7:5	50 PM
7. Nearest Railroad Station HOBART			8. Div	ision		9.	County	NGELES		10. State Abbr.	Code CA 06
11. City (if in a city) INGLEW	OOD		12. Hig	hway N	ame or No. ARBOR	R VI	TAE			Public	Private
Highwa	y User Inv	olved					Rail Eq	uipment Involv	/ed		
13. Type C. Truck-trailer F. Bus		J. Other Moto	r Vehicle	e Code 17. Equipment 3. Train (standing) 6. Light loco(s) (moving)						co(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch		K. Pedestrian	16.)	A	1. Train (units pullir			1 0/	•	co(s) (standing)	2
B. Truck E. Van H. Moto 14. Vehicle Speed 15. Dir		M. Other (sp (geographic	• ·	Code	2. Train (units push 18. Position of Car Unit			(standing) 8.	Other	(specify)	
		uth 3. East	10	3					1		
16. Position 1. Stalled on crossing		ving over cros	sing	Code	19. Circumstance 1.		a	5 5 5 5 6 5 Feb 10			Code
2. Stopped on Crossing 20a. Was the highway user and/or ra		2 Code	2. I 20b. Was there a haza			t struck by hig	hway us	er	1 Code		
in the impact transporting hazar				1				197 Ja +			
1. Highway User 2. Rail Equ			Neither	4	1. Highway U	ser	2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of t	he hazard	ous materials	released, if a	any							
21. Temperature 22. V	isibility (	single entry)		Code	23. Weather (single	entr	y)				Code
(specify if minus) 60 °F 1. D	awn 2.1	Day 3. Dusk	4. Dark	4	1. Clear 2. Cloud	у З.	Rain 4.	Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment				Code	25. Track Type Used	by R	Rail		Code	26. Track Number	or Name
Consist 1. Freight train		train 7. Yard/	•		Equipment Involv	-					27. 272
(single entry) 2. Passenger train 3. Commuter train				1	1. Main 2. Yard	13.	Siding	4. Industry	1	MAIN LINE	
							31. Time Tab	le Direc	tion	Code	
	Locomotive Cars R. Recorded Units 7 50 E. Estimated 20 mph E 1. North 2. South 3. East 4. Wes										
							3. East 4. West 34. Whistle Ban	3 Code			
Crossing 2. Cantilever FLS 5. Hwy. traffic signals 8. Stop signs 11. Other (specify) Warning 1. Yes							Code				
	Audible	9.	Watchman	12. N	one	_	20 600 1	arn min		2. No	
Code(s) 01 03	06									3. Unknown	0.1
<ol> <li>35. Location of Warning</li> <li>1. Both Sides</li> </ol>		Co	1111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Warning Interconnected way Signals		Code		or Specia	nated by Street al Lights	Code
2. Side of Vehicle Approach		1	1	Yes	2. No 3. Unknown		2	1 Ves	2 No	3. Unknown	1
3. Opposite Side of Vehicle Appr 38. Driver's 39. Driver's Code		Drove Behind			Code 41. D	rivor		1. 103	2.110	o. ontriowit	Code
Age Gender		Struck or was			21		ve around	l or thru the ga	ate 4.	Stopped on crossin	
1. Male		1. Yes 2. No	3. Unknov	vn	2			then proceede	ed 5.	Other (specify)	4
2. Female 42. Driver Passed Standing	Code	43. View of 1	rack Obscu	red by	(primary obstruction		not stop	·		1. 1. 1. 1. (Mar. 1)	Code
Highway Vehicle		1. Perma	nent Structu	re	3. Passing Train 5	. Veg			r (spe		I
1. Yes 2. No 3. Unknown	2	2. Standi	ng railroad e	quipme	nt 4. Topography 6	. High	hway Veh	icles 8. Not	Obstruct	ed	8
Casualties to:	Killed	Injured	44. Driver w			Code	e	45. Was Driv		Vehicle?	Code
		injurou			ured 3. Uninjured	3		1. Yes			2
46. Highway-Rail Crossing Users	0	0	-	y Vehicl Ilar dam	e Property Damage	\$20	00	48. Total Nu (include)		Highway-Rail Cross	sing Users 0
49. Railroad Employees	0	0			f People on Train	<b>\$</b> 2		51. Is a Rail	Equipme	ent Accident /	Code
52. Passengers on Train	0	0			ngers and crew)			Incident 1. Yes		Being Filed	2
53a. Special Study Block 53b. Special Study Block											
54. Narrative Description					L						
	•										
						<u>,</u>					
55. Typed Name and Title		56. Signature								57. Date	
FORM FRA F 6180.57	* NOTE	THAT ALL C	SUALTIES	MUST	BE REPORTED ON FO	RM	FRA F 61	80.55A			

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

TEDERAE RAIEROAD ADMINISTRATION (T	Uy								
Name Of					Alphabetic Code	e RR Accident/Inci	dent No.		
1. Reporting Railroad					<sup>1a.</sup> ATSF	1b. 150794200			
2. Other Railroad Involved in Train Acciden	Incident				2a.	<sup>2b.</sup> 150794200			
3. Railroad Responsible for Track Maintena	nce				<sup>3a.</sup> ATSF	3b. 150794200			
4. U.S. DOT-AAR Grade Crossing ID No.	02801	8S 5. Da	te of Accident/Incident	07/17/94	6. Time of Accide	ent/Incident 9:30 A	M		
7. Nearest Railroad Station INGLEWOOD		8. Division		9. County LOS AN	CELES	10. State Abbr. CA	Code		
		12. Highway N			GELES		Private		
		12. Highway N	ARBOR	VITAE ST			Filvale		
Highway Use	Involved			Rail Equi	pment Involved				
13. Type C. Truck-trailer F. Bus	J. Other Motor \	/ehicle Code	17. Equipment		standing) 6. Light loc		Code		
A. Auto D. Pick-up truck G. School Bu		A	1. Train (units pulling		moving) 7. Light loc		1		
B. Truck E. Van H. Motorcycle 14. Vehicle Speed 15. Direction	M. Other (spec (geographical	(inv)	2. Train <i>(units pushin</i> 18. Position of Car Unit		standing) 8. Other	(specify)	-		
H CA PARTICULAR DOMESTICA	South 3. East 4	in the second se	ro. Position of Car Unit		1				
IN SEC. 2. REPORTS THE PROPERTY AND A DECEMPTOR OF	Moving over crossir		19. Circumstance 1. R	and provide personal and	the longest second second second second		Code		
2. Stopped on Crossing     4. Trapped     3     2. Rail equipment struck by highway user       20a. Was the highway user and/or rail equipment involved     Code     20b. Was there a hazardous materials release by									
20a. Was the highway user and/or rail equipment involved Code 20b. Was there a hazardous materials release by Code in the impact transporting hazardous materials?									
1. Highway User 2. Rail Equipment 3. Both 4. Neither 4 1. Highway User 2. Rail Equipment 3. Both 4. Neither									
20c. State the name and quantity of the hazardous materials released, if any									
21. Temperature 22. Visibility (single entry) Code 23. Weather (single entry) Cod									
(specify if minus) 70 °F 1. Dawn	2. Day 3. Dusk 4	. Dark 2	1. Clear 2. Cloudy	3. Rain 4. Fo	og 5. Sleet 6. Snor	w			
24. Type of Equipment Consist 1. Freight train 4. W	rk train 7. Yard/Sw	Code	25. Track Type Used b	•	Code	26. Track Number or	Name		
Consist 1. Freight train 4. W (single entry) 2. Passenger train 5. Si		U	Equipment Involve	d	.				
3. Commuter train 6. Cut of cars 9. Other (specify) 1 1. Main 2. Yard 3. Siding 4. Industry 1 MAIN LINE									
27. FRA 28. Number of	29. Number of	30. Consist Sp	eed (Recorded if availabl	e) Code 3	31. Time Table Directi	ion	Code		
Track Class Locomotive	Cars	R. Recorde					Ι.		
(1-6,X) 3 Units	5 110	E. Estimate			1. North 2. South 3		4		
32. Type of 1. Gates 4. Wig w Crossing 2. Cantilever FLS 5. Hwy.		ossbucks 10. F	lagged by crew Other (specify)	33. Signaled	•	34. Whistle Ban	Code		
Crossing 2. Cantilever FLS 5. Hwy. Warning 3. Standard FLS 6. Audib	-	atchman 12. N		Warning	9	1. Yes 2. No			
Code(s) 01		1		20 sec wa	rn min	3. Unknown			
35. Location of Warning	Code	36. Crossing	Warning Interconnected	Code	37. Crossing Illumin	ated by Street	Code		
1. Both Sides			way Signals		Lights or Specia	ALC STRUCT IN			
2. Side of Vehicle Approach	1	1 Ves	2. No 3. Unknown	2	1. Yes 2. No	3 Unknown	2		
3. Opposite Side of Vehicle Approach				1	1. 163 2. 10	5. ORKHOWN			
	ver Drove Behind or d Struck or was Str				or thru the gate 4. S	Stopped on crossing	Code		
1. Male	1. Yes 2. No	and the second s	2 5	Stopped and th		Other (specify)	1 .		
2. Female			2 3.1	Did not stop	· · · · · · · · · · · · · · · · · · ·		1		
42. Driver Passed Standing Co		ck Obscured by	(primary obstruction				Code		
Highway Vehicle	1. Permane 2. Standing	nt Structure railroad equipme	3. Passing Train 5. V ent 4. Topography 6. H	/egetation lighway Vehic	7. Other (spec les 8. Not Obstructe		8		
1. Yes 2. No 3. Unknown 2									
Casualties to: Kille		I. Driver was	and Othershined I		45. Was Driver in the	venicie?	Code		
				3	1. Yes 2. No		1		
46. Highway-Rail Crossing Users	0 47	7. Highway Vehic (est. dollar dan	le Property Damage	\$5,000	<ol> <li>Total Number of H (include driver)</li> </ol>	Highway-Rail Crossing			
49. Railroad Employees 0	0 50		of People on Train		51. Is a Rail Equipme		Code		
(include passengers and crew) Incident Report Being Filed							2		
53a. Special Study Block			53b. Special Study Bloc		1. Yes 2. No				
a series a			1 000. Opecial Gludy Bloc	~					
54. Narrative Description									
55 Typed Name and Title	56 Signature				•	57 Data			
55. Typed Name and Title	56. Signature					57. Date			
			BE REPORTED ON FOR						

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

		/									
Name Of								Alphab	etic Coo	de RR Accident/Inci	dent No.
1. Reporting Railroad								1a. A'	rsf	1b. 42116408	
2. Other Railroad Involved in Train Ac	cident/Inc	ident						2a.		2b.	
3. Railroad Responsible for Track Ma	intenance							3a. A.	ſSF	3b. 42116408	
4. U.S. DOT-AAR Grade Crossing ID	No.	0280	27R	5. Dat	e of Accident/Incident	11/	16/76	6. Time	of Accid	lent/Incident 3:50 P	M
7. Nearest Railroad Station LOS ANGELES			8. Div	ision			County	NGELES		10. State Abbr. CA	Code
11. City (if in a city) INGLEW	OOD		12. Hig	hway N	ame or No. IMPERI	AL	HIGH	WAY		Public	Private
Highwa	y User Inv	volved	-				Rail Eq	uipment Involv	ed		
13. Type C. Truck-trailer F. Bus		J. Other Motor	Vehicle	icle Code 17. Equipment 3. Train (standing) 6. Light loco(s) (moving,							Code
A. Auto D. Pick-up truck G. Sch		K. Pedestrian	Venicie	1 Train (units pulling) 4 Car(s) (moving) 7 Light loco(s) (standi						2 P P P P P P P P P P P P P P P P P P P	
B. Truck E. Van H. Moto	orcycle	M. Other (sp	əcify)	F	2. Train (units pushir	ng)	5. Car(s)	(standing) 8.	Other	(specify)	1
14. Vehicle Speed 15. Dir		(geographic		Code	18. Position of Car Unit	in T	rain				
		outh 3. East		3	10.0				1	In success of a	Cada
16. Position 1. Stalled on crossing 2. Stopped on Crossing		ving over cross	ing	Code	19. Circumstance 1. R 2. R			t struck highwith the struck by high		er	Code
20a. Was the highway user and/or ra		Code	20b. Was there a hazar						Code		
in the impact transporting hazar	laithan	4	1. Highway Us	01	2 Dail	Equipment	3. Both	4. Neither			
1. Highway User 2. Rail Equ 20c. State the name and quantity of t	leither		T. nighway Us	e	2. Rai	Equipment	3. BOUN	4. INCIUICI			
200. State the name and quantity of t	ne nazaru		eleased, ir a	any							
21. Temperature 22. V	'isibility (	single entry)		Code	23. Weather (single a	entry	v)				Code
(specify if minus) 78 °F 1. E	awn 2.	Day 3. Dusk	4. Dark	2	1. Clear 2. Cloudy	3.	Rain 4.	Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment		8		Code	25. Track Type Used b	ov Ra	ail		Code	26. Track Number or I	Vame
Consist 1. Freight train		train 7. Yard/S	-		Equipment Involve						
(single entry) 2. Passenger train 3. Commuter train				1	1. Main 2. Yard	3	Sidina	4. Industry	1	MAIN	
27. FRA 28. Number of		29. Number of			ed (Recorded if availab		Code	31. Time Tab			Code
Track Class Locomotiv		Cars		Recorde	•	<i>(</i> , <i>c</i> )	1 0000				, Coue
(1-6,X) 2 Units	3 39 E. Estimated 10 mph E 1. North 2. South 3. East 4. West							3			
							34. Whistle Ban	Code			
Crossing 2. Cantilever FLS 5. Warning 3. Standard FLS 6.	Hwy. traffi Audible	•	Stop signs Vatchman	11. O 12. N	ther (specify)		Warn	ng		1. Yes	
Code(s) 04 05	06	3. 1	Vaterinari	12.1		1:	20 sec v	varn min		2. No 3. Unknown	
35. Location of Warning	00	Cod	e 36. Cr	ossina \	Warning Interconnected	90 <b>.</b> 970	Code	37. Crossin	a Illumir	nated by Street	Code
1. Both Sides			w	ith High	way Signals			Lights o	or Specia	al Lights	
2. Side of Vehicle Approach		2	1	Yes 2	2. No 3. Unknown		1	1 Yes	2 No	3. Unknown	3
3. Opposite Side of Vehicle Appr 38. Driver's 39. Driver's Code		Drove Behind			Code 41. Driv						Code
Age Gender		Struck or was S					ve around	l or thru the ga	ite 4.	Stopped on crossing	COUR
1. Male		1. Yes 2. No	3. Unknow	vn				then proceede		Other (specify)	2
2. Female	Orda	40 \// ave af T			3.		not stop	- 1001			
42. Driver Passed Standing Highway Vehicle	Code	43. View of T	ent Structu		(primary obstruction 3. Passing Train 5.		etation	7. Othe	r <i>(spe</i>	cify)	Code
1. Yes 2. No 3. Unknown	2		g railroad e					icles 8. Not 0			8
			44. Driver w	as	C	Code	e	45. Was Driv	er in the	Vehicle?	Code
Casualties to:	Killed	Injured	1. Kille	d 2. Inj	ured 3. Uninjured	3		1. Yes	2. No		1
	2.00		47. Highwa	y Vehicl	e Property Damage	-		48. Total Nu	mber of	Highway-Rail Crossing	
46. Highway-Rail Crossing Users	0	4	(est. do			<b>\$</b> 0		(include d		0	
49. Railroad Employees	0	0	50. Total Nu	umber o	f People on Train					ent Accident /	Code
52. Passengers on Train	0	0	(include	passer	ngers and crew)			Incident I 1. Yes	Last Million	Being Filed	2
53a. Special Study Block					53b. Special Study Blo	ck		1.100	2. 110		
54. Narrative Description											
55. Typed Name and Title	T	56. Signature		14						57. Date	
SURV.		1212									
FORM FRA F 6180.57	* NOTE	THAT ALL CA	SUALTIES	MUST	BE REPORTED ON FOR	RM F	RA F 61	80.55A			

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

								DD Assidentificati	da ak bia
Name Of 1. Reporting Railroad	tor man				1800 (m <sup>-1</sup> )		abetic Code	RR Accident/Inci	dent No.
2. Other Railroad Involved in Train Accider	Incident			·		1a. A 2a.	TSF	1b. 331283201 2b.	
3. Railroad Responsible for Track Mainten									
			Data	e of Accident/Incident	10/10/00	3a. A	e of Accider	3b. 331283201	
4. U.S. DOT-AAR Grade Crossing ID No.	0280		101001011010	e of Accident/Incident	12/12/83	0. Tim			
7. Nearest Railroad Station HOBART		8. Divisio	on		9. County	NGELES		10. State Abbr. CA	Code
11. City (if in a city) LOS ANGEL	s	12. Highw	vav Na	ame or No. IMPERI	AL HWY	<b>UGELES</b>			Private
Highway Us			Ţ		• • • • • • • • • • • • • • • • • • • •	uipment Invo	lved	<u> </u>	
13. Type C. Truck-trailer F. Bus	J. Other Moto	or Vehicle C	Code 17 Equipment						Code
A. Auto D. Pick-up truck G. School B		n 1	1. Train (units pulling) 4. Car(s) (moving) 7. Light loco(s)						
B. Truck E. Van H. Motorcyc		pecity)	ify) A 2. Train (units pushing) 5. Car(s) (standing) 8. Other					(specify)	2
14. Vehicle Speed     15. Directio       (est. mph at impact)     20       1. North	(geographi		ode	18. Position of Car Unit	in Train		1		
(est. mph at impact) 20 1. North 2. South 3. East 4. West 1 16. Position 1. Stalled on crossing 3. Moving over crossing Code 19. Circumstance 1. Rail equipment struck highway us									Code
	Trapped		3		ail equipmen	-			1
20a. Was the highway user and/or rail equ		С	Code	20b. Was there a hazar	dous materia	Is release by			Code
in the impact transporting hazardous 1. Highway User 2. Rail Equipme		Neither	4	1. Highway Us	er 2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of the ha			y						L
(2.05	(single entry)		Code	23. Weather (single	••				Code
(specity if fillings)	2. Day 3. Dusk	k 4. Dark	4	1. Clear 2. Cloudy	3. Rain 4.	og 5. Sleet	6. Snow		
24. Type of Equipment Consist 1. Freight train 4. W	rk train 7. Yard/		ode	25. Track Type Used to	-		Code 2	6. Track Number or I	Name
(single entry) 2. Passenger train 5. S				Equipment Involve	ea		1		
3. Commuter train 6. Cut of cars 9. Other (specify) 7 1. Main 2. Yard 3. Siding 4. Inc							1	MAIN LINE	
27. FRA     28. Number of     29. Number of     30. Consist Speed (Recorded if available)     Code     31. Time Table Direction       Track Class     Locomotive     Cars     R. Recorded     .     .								n	Code
Track Class Locomotive (1-6,X) 1 Units	2 Cars	R. Rec E. Estir			oh E	1. North	2. South 3.	East 4. West	2
32. Type of 1. Gates 4. Wig	ags 7.	Crossbucks 1				ed Crossing		4. Whistle Ban	Code
Crossing 2. Cantilever FLS 5. Hwy.	-			ther (specify)	Warni	ng		1. Yes	
Warning 3. Standard FLS 6. Audil Code(s) 11	e 9.	Watchman 1	12. No	one	-			2. No 3. Unknown	
Code(s) 11 35. Location of Warning	Co	de 36. Cross	sing V	Varning Interconnected	Code	37 Cross	ing Illumina	ted by Street	Code
1. Both Sides		2014-2011 1 2014-0221 Sebourd (2014)	-	way Signals			or Special	NET OF CHINES A CHINESE CARD	0000
2. Side of Vehicle Approach		1. Ye	es 2	. No 3. Unknown		1. Ye	s 2.No	3. Unknown	
3. Opposite Side of Vehicle Approach 38. Driver's 39. Driver's Code 40. D	ver Drove Behind	2000 W.C.		Code 41. Dri					Code
	d Struck or was				Drove around	or thru the g	ate 4. St	opped on crossing	Code
1. Male	1. Yes 2. No	3. Unknown		2	Stopped and	then proceed	led 5. Of	her (specify)	4
2. Female 42. Driver Passed Standing C	e 43 View of 1	Track Obscured	by	(primary obstruction	Did not stop				Code
Highway Vehicle	1. Perma	anent Structure		3. Passing Train 5.	Vegetation	7. Oth			1
1. Yes 2. No 3. Unknown 3	2. Standi	ing railroad equi	ipmer	nt 4. Topography 6.	Highway Veh	cles 8. Not	Obstructed		8
Casualties to: Kille	Injured	44. Driver was			Code	45. Was Dr		ehicle?	Code
	injureu	1. Killed	2. Inju	ured 3. Uninjured	3	1. Yes			1
46. Highway-Rail Crossing Users 0	0			e Property Damage				ghway-Rail Crossing	Users
		(est. dollar		<u> </u>	\$3,500	(include		1	
49. Railroad Employees 0	0			People on Train gers and crew)		51. Is a Rai Incident	t Report Bei		Code
52. Passengers on Train 0 0							2. No	-	2
53a. Special Study Block				53b. Special Study Blo	ck				
54. Narrative Description									
55. Typed Name and Title	56. Signature							57. Date	
	_1		1.711.711.711.711.711.711.711.711						

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

#### OMB Approval No. 2130-0500

ι

Name Of									Alphab	etic Cod	e RR Accide	nt/Incident No.
1. Reporting Railroad									1a. A7	SF	1b. 33048	5201
2. Other Railroad Involved in Train Acc	cident/Inciden	t							2a.		2b.	
3. Railroad Responsible for Track Main	ntenance								3a. A'	<b>TSF</b>	3b. 33048	5201
4. U.S. DOT-AAR Grade Crossing ID	No.	02802	7R	5. Date	e of Acciden	t/Incident	04/	/11/85	6. Time	of Accid	ent/Incident 7	:40 PM
7. Nearest Railroad Station HOBART			8. Divi	sion			9.	. County LOS A	NGELES		10. State Abbr.	Code CA 06
11. City (if in a city) EL SEGU	NDO		12. High	way Na	ame or No.	IMPE	RIAL	HWY			Public	Private
Highway	User Involve	ed	L					Rail Eq	uipment Involv	ed		
13. Type C. Truck-trailer F. Bus	J. C	ther Motor Ve	ehicle	Code	17. Equipm	ent		3. Train	(standing) 6.	Light loo	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Scho	ol Bus K. F	Pedestrian		Α	1. Train	(units pulli	ing)	4. Car(s)	(moving) 7.	Light loo	co(s) (standing)	1
B. Truck E. Van H. Moto		Other (speci	fy)						(standing) 8.	Other	(specify)	1
14. Vehicle Speed         15. Dire           (est. mph at impact)         10	rth 2. South	eographical) 3. East 4.	West	Code 3	18. Position	1 of Car Ur	nit in T	rain		1		
16. Position 1. Stalled on crossing	3. Moving	over crossing	)	Code	19. Circum	stance 1.	Rail e	equipmen	t struck highwa	ay user		Code
2. Stopped on Crossing				3	00h 14/ 4				t struck by hig	nway use	er	1
20a. Was the highway user and/or rail in the impact transporting hazard			3	Code	200. was t	nere a naz	ardou	is materia	Is release by			Code
1. Highway User 2. Rail Equi		Both 4. Nei	ther	4	1.	Highway l	Jser	2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of th	ne hazardous	materials rele	eased, if a	iny								
21. Temperature 22. Vi	sibility (sing	le entry)		Code	23. Weath	er (single	e entr	v)				Code
CE OT	awn 2. Day		Dark	3					Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment		1		Code	25. Track	Type Used	by R	Rail		Code	26. Track Numb	er or Name
Consist 1. Freight train 4. Work train 7. Yard/Switching Equipment Involved												
(single entry) 2. Passenger train 5. Single car 8. Light loco(s) 3. Commuter train 6. Cut of cars 9. Other (specify) 1 1. Main 2. Yard 3. Siding 4. Industry 1 MAIN												
27. FRA 28. Number of		Number of			ed (Record			Code	31. Time Tab			Code
Track Class Locomotive	•	Cars	R. R	ecordeo	i.		,	1_				1
(1-6,X) 1 Units	2	1		stimated			mph	E	1. North 2.			
32. Type of 1. Gates 4. V Crossing 2. Cantilever FLS 5. F	Nig wags Hwy traffic sid				agged by cro her <i>(speci</i> l		3	33. Signal Warni	ed Crossing	1	34. Whistle Ban 1. Yes	Code
	Audible	-	tchman	12. No		<b>y</b> /			U U		2. No	
Code(s) 02								20 sec w	arn min		3. Unknown	
35. Location of Warning		Code		-	Varning Inte	rconnected	ł	Code		-	ated by Street	Code
1. Both Sides 2. Side of Vehicle Approach		1	- VVI	in nignv	vay Signals		1	1	Lights t	or Specia	a Lignis	1 1
3. Opposite Side of Vehicle Appro	ach	1	1.	Yes 2	. No 3. Ur	known		1	1. Yes	2. No	3. Unknown	3
122 094 14	10. Driver Dro				Cod						Nanad an array	Code
Age Gender 1. Male I		k or was Stru es 2. No 3							l or thru the ga then proceede		Stopped on cross Other (specify)	Ŭ I I
2. Female					2			not stop				3
42. Driver Passed Standing Highway Vehicle	Code 43.	View of Trac 1. Permanen			-	ry obstruct		etation	7 Othe	r (spe	cifu)	Code
1. Yes 2. No 3. Unknown	2	2. Standing r							icles 8. Not 0			8
			Driver w	as			Code	e	45. Was Driv	er in the	Vehicle?	Code
Casualties to:	Killed Ir	njured	1. Killed	l 2. Inju	ured 3. Un	injured	3		1. Yes	2. No		1
46. Highway-Rail Crossing Users	0		Highway	Vehicle	Property D	amage					Highway-Rail Cro	ssing Users
	0 0		(est. doll	ar dama	age)		\$50	0	(include d			2
49. Railroad Employees	0 0	50.			People on gers and cre						ent Accident / eing Filed	Code
52. Passengers on Train	0 0		(#161000	passen	yers and ch				1. Yes	2004 - 17 J. 17		2
53a. Special Study Block					53b. Speci	al Study B	lock					
54. Narrative Description												
55. Typed Name and Title	56.	Signature			- 101						57. Date	
		• · · · · · · · · · · · ·										
FORM FRA F 6180.57	* NOTE THA	AT ALL CASU	ALTIES	MUSTE	BE REPORT	ED ON FO	ORM F	FRA F 61	30.55A			

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

Name Of 1. Reporting Railroad								petic Cod		
2. Other Railroad Involved in Train A	coident/l-	ident			101 (		1a. A' 2a.	TSF	1b. 3104872	
3. Railroad Responsible for Track M									2b. 3104872	
				5.0-	e of Accident/Incident			TSF	3b. 3104872	
4. U.S. DOT-AAR Grade Crossing I	J NO.	0280	)27R			04/01/87	6. Time	of Accid		8 PM
7. Nearest Railroad Station LAIRPORT			8. Div	ision		9. County	NGELES		10. State Abbr.	Code CA 06
11. City (if in a city) LOS AN	CELES		12. Hig	hway N	ame or No. IMPERI	AL HWY	INGELES		Public	Private
	ay User Inv	volved			INI EN		uipment Involv	ved		
13. Type C. Truck-trailer F. Bus			- Vehiele	Code	17. Equipment					Code
A. Auto D. Pick-up truck G. Sci		J. Other Moto K. Pedestriar		1	1. Train (units pulling		(standing) 6 (movina) 7	-	co(s) (moving) co(s) (standing)	
	torcycle	M. Other (s)	pecify)	A	2. Train (units pushir			•	(specify)	1
	irection	(geographi		Code	18. Position of Car Unit	in Train				
(est. mph at impact) 15 1. N 16. Position 1. Stalled on crossing		outh 3. East		4 Code	19. Circumstance 1. R	ail oquinmor	t struck biobw	1		Code
2. Stopped on Crossing			ising	3	1 2047 SE N. HENERALDON PORTU POR M. PLAN LE D		it struck by hig	• • • • • • • • • • • • • • • • • • • •	er	1
20a. Was the highway user and/or ra				Code	20b. Was there a hazar	dous materia	als release by			Code
in the impact transporting haza 1. Highway User 2. Rail Eq			Neither	4	1. Highway Us	er 2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of										
							× ×			
50.05		(single entry)		Code	23. Weather (single e	entry)				Code
(specify if minus) 70 °F 1.	Dawn 2.	Day 3. Dusk	4. Dark	4	1. Clear 2. Cloudy	3. Rain 4.	Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment Consist 1. Freight train	A Work	train 7. Yard/	Switching	Code	25. Track Type Used b	15.)		Code	26. Track Number	or Name
Consist 1. Freight train (single entry) 2. Passenger trai					Equipment Involve	d		,		
3. Commuter train	6. Cut of	cars 9. Other	(specify)	1	1. Main 2. Yard	3. Siding	4. Industry	4	INDUSTRY	
27. FRA 28. Number of		29. Number o		30. Consist Speed (Recorded if available) Code 31. Time Table Direction						Code
Track Class Locomot (1-6,X) 1 Units	ve 2	Cars 0		R. Recorded E. Estimated 4 mph E 1. North 2. South 3. East 4. West						3
1. 1. 1	. Wig wags			ssbucks 10. Flagged by crew 33. Signaled Crossing 34. Whistle Bar						Code
Crossing 2. Cantilever FLS 5			Stop signs	- · · · · · · · · · · · · · · · · · · ·						
	Audible	9.	Watchman	hman 12. None 2. No 20 sec warn min 3. Unkn						1
Code(s) 02 35. Location of Warning		 Co	de 36 Cr	nesing \	Varning Interconnected	Code	37 Crossin	a Illumin	ated by Street	Code
1. Both Sides		00	1021 1996-97-9644		way Signals	Code	CONTRACTOR CONTRACTOR	or Specia	and the second second second	0000
2. Side of Vehicle Approach		1	1	Yes 2	2. No 3. Unknown	1	1 Yes	2 No	3. Unknown	1
3. Opposite Side of Vehicle App 38. Driver's 39. Driver's Code	10.291 DAI 14	Drove Behind			Code 41. Driv	ier				Code
Age Gender		Struck or was			1/2/ NP 2/2		d or thru the ga	ate 4.5	Stopped on crossing	
1. Male		1. Yes 2. No	3. Unknow	vn	2		then proceede	ed 5. (	Other (specify)	4
2. Female 42. Driver Passed Standing	Code	43. View of T	rack Obscur	ed by	(primary obstruction	Did not stop	2000	-		Code
Highway Vehicle	1	1. Perma	nent Structur	re	3. Passing Train 5. V	/egetation	7. Othe			T
1. Yes 2. No 3. Unknown	2	2. Standi	ng railroad e	quipme	nt 4. Topography 6. H	lighway Veh	icles 8. Not (	Obstructe	ed	8
Casualties to:	Killed	Injured	44. Driver w		· · · · · · · · · · · · · · · · · · ·	ode	45. Was Driv		Vehicle?	Code
						3	1. Yes			1
46. Highway-Rail Crossing Users	0	0			e Property Damage				Highway-Rail Crossi	-
10 D. 1			(est. dol			\$2,000	(include o		nt Accident /	1 Code
					50. Total Number of People on Train (include passengers and crew)   51. Is a Rail Equipment Accident / Incident Report Being Filed					
52. Passengers on Train 0 0					gord and order)		1. Yes	Date Some		2
53a. Special Study Block					53b. Special Study Bloc	×k				
54. Narrative Description										
Ξ										
55 Typed Name and Title	····-1	56 Signature					<del>- · ·</del> ·		E7 Data	
55. Typed Name and Title		56. Signature							57. Date	

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

Name Of								Alphab	etic Coo	le RR Accident/Inci	dent No.
1. Reporting Railroad								<sup>1a.</sup> AT	SF	1b. 360689205	
2. Other Railroad Involved in Train Ac	cident/Inc	ident						2a.		<sup>2b.</sup> 360689205	
3. Railroad Responsible for Track Ma	intenance							3a. A)	ſSF	3b. 360689205	
4. U.S. DOT-AAR Grade Crossing ID	No.	0280	)27R	5. Date	e of Accident/Incident	06/	/24/89	6. Time	of Accid	ent/Incident 7:0 PM	И
7. Nearest Railroad Station LAIPORT			8. Divi	ision		9.	LOS A	NGELES		10. State Abbr. CA	Code   06
11. City (if in a city) LOS ANO	TELES		12. Hig	hway N	ame or No. IMPERI	IAL				Public	Private
	y User Inv	volved			INIT EN			uipment Involv	ed		
13. Type C. Truck-trailer F. Bus		J. Other Moto		Code	17. Equipment		2 Train	(standing) 6	Lightle	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch		K. Pedestriar		ĩ	1. Train (units pulling			(standing) 6.		co(s) (standing)	
B. Truck E. Van H. Mote		M. Other (s)		B	2. Train (units pushi				-	(specify)	1
14. Vehicle Speed 15. Dir	rection	(geographi	cal)	Code	18. Position of Car Unit	t in T	Frain				
(est. mph at impact) 1. No	orth 2. So	outh 3. East	4. West	1					1		
16. Position 1. Stalled on crossing 2. Stopped on Crossing		ving over cros	sing	Code	19. Circumstance 1. F			nt struck highwa It struck by high		or	Code
20a. Was the highway user and/or ra			ata - 1 10	Code	20b. Was there a hazar				Way us		2 Code
in the impact transporting hazar				1				100 N No. 200 No. 200 N			
1. Highway User 2. Rail Equ	upment	3. Both 4.	Neither	2	1. Highway Us	ser	2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of t	he hazard	ous materials	released, if a	any							
		(single entry)		Code	23. Weather (single						Code
	Dawn 2.1	Day 3. Dusl	4. Dark	2	1. Clear 2. Cloudy			Fog 5. Sleet			
24. Type of Equipment Consist 1. Freight train	4. Work t	train 7. Yard	Switching	Code	25. Track Type Used I Equipment Involve	-	Rail		Code	26. Track Number or I	Name
(single entry) 2. Passenger train	5. Single	car 8. Light	loco(s)	1					(		
3. Commuter train	6. Cut of	cars 9. Othe	r (specify)	1	1. Main 2. Yard	3.	Siding	4. Industry	1	MAIN	
27. FRA 28. Number of		29. Number o			ed (Recorded if availab	ble)	Code	31. Time Tab	le Direc	tion	Code
Track Class Locomotiv (1-6,X) 2 Units	ve 5	Cars 11		Recorde stimate		ph	E	1. North 2.	South	3. East 4. West	4
	Wig wags	7.	Crossbucks	10. F	agged by crew	3	33. Signa	led Crossing		34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5.	Hwy. traff	ic signals 8.	Stop signs	11.0	ther (specify)		Warn	ing		1. Yes	
	Audible	9.	Watchman	12. N	one	_	20 600 1	varn min		2. No	r i
Code(s) 02 03	06	07						<del>r</del>		3. Unknown	
35. Location of Warning		Co		-	Warning Interconnected way Signals		Code		-	nated by Street	Code
1. Both Sides 2. Side of Vehicle Approach		ī.	<sup>w</sup>	iai nigri	way Signais	t		Lights c	or specia	al Lights	
3. Opposite Side of Vehicle Appr	oach	1	1.	Yes 2	2. No 3. Unknown		1	1. Yes	2. No	3. Unknown	3
38. Driver's 39. Driver's Code	40. Driver	Drove Behind	d or in Front	of Train	Code 41. Dri	iver					Code
Age Gender		Struck or was	the same of					d or thru the ga		Stopped on crossing	
1. Male 2. Female		1. Yes 2. No	3. Unknov	vn	2	And Advantage of the	pped and not stop	then proceede	ed 5.	Other (specify)	3
42. Driver Passed Standing	Code	43. View of	Frack Obscu	red by	(primary obstructio		not stop				Code
Highway Vehicle		1. Perma	inent Structu	re	3. Passing Train 5.	Veg		7. Othe			1
1. Yes 2. No 3. Unknown	2	2. Stand	ng railroad e	quipme	nt 4. Topography 6.	High	hway Vel	nicles 8. Not 0	Obstruct	ed	8
			44. Driver w	vas	(	Code	е	45. Was Driv	er in the	e Vehicle?	Code
Casualties to:	Killed	Injured	1. Kille	d 2. Inj	ured 3. Uninjured	3		1. Yes	2. No		1
			47. Highwa	y Vehicl	e Property Damage	-		48. Total Nu	mber of	Highway-Rail Crossing	
46. Highway-Rail Crossing Users	0	0	(est. do	•		\$0		(include d		2	
49. Railroad Employees	0	0	50. Total N	umber o	f People on Train					ent Accident /	Code
52. Passengers on Train	0	0	(include	e passer	ngers and crew)			Incident I 1. Yes		Being Filed	2
53a. Special Study Block					53b. Special Study Blo	ock					I
54. Narrative Description											
55. Typed Name and Title		56. Signature								57. Date	
oo. Typeu mame and thie		So. Signature	Ci.							Jr. Date	
FORM FRA F 6180.57	* NOTE			MUST	BE REPORTED ON FOR	RM		80 554			

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

TEDERAE RAIEROAD ADMINIOTRATION (	TVY								
Name Of						Alphat	petic Coo	le RR Accident/Inci	dent No.
1. Reporting Railroad						1a. A'	TSF	1b. 031090204	
2. Other Railroad Involved in Train Accider	t/Incident					2a.		<sup>2b.</sup> 031090204	
3. Railroad Responsible for Track Mainten	ince					3a. A	TSF	3b. 031090204	
4. U.S. DOT-AAR Grade Crossing ID No.	02802	7R	5. Dat	e of Accident/Incident	10/20/90	6. Time	of Accid	lent/Incident 5:15 A	M
7. Nearest Railroad Station LAIRPORT		8. Divis	sion		9. County LOS A	NGELES		10. State Abbr. CA	Code
11. City (if in a city) LOS ANGEL	D	12. High	way N	ame or No. IMPERI	AL HIWA			Public	Private
Highway Use					Sar Course	uipment Involv	ved		
13. Type C. Truck-trailer F. Bus	J. Other Motor V	/ehicle	Code	17. Equipment		(standing) 6		co(s) (moving)	Code
A. Auto D. Pick-up truck G. School Bu		l		1. Train (units pulling			-	co(s) (standing)	i
B. Truck E. Van H. Motorcycl		ify)	A	2. Train (units pushin			•	(specify)	1
14. Vehicle Speed 15. Direction			Code	18. Position of Car Unit	in Train				
	South 3. East 4.		4				1		0-1-
-	Moving over crossin Trapped	g í	Code 3	19. Circumstance 1. Ra 2. Ra	• •	t struck highw t struck by hig	•	er	Code
20a. Was the highway user and/or rail equ			Code	20b. Was there a hazard					Code
in the impact transporting hazardous				1 Highway Line		Covinnent	2 Dath	4 Neither	
1. Highway User 2. Rail Equipme     20c. State the name and guantity of the ha			4	1. Highway Use		Equipment	3. Both	4. Neither	L
200. State the name and quantity of the na	cardous materiais rei	eased, ir ar	<b>y</b>						
21. Temperature 22. Visibilit	y (single entry)	)	Code	23. Weather (single e	ntry)				Code
(specify if minus) 68 °F 1. Dawn	2. Day 3. Dusk 4	. Dark	4	1. Clear 2. Cloudy	3. Rain 4.	Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment			Code	25. Track Type Used b	y Rail		Code	26. Track Number or	Name
	ork train 7. Yard/Sw	itching							
(single entry) 2. Passenger train 5. Si 3. Commuter train 6. C			1						
27. FRA 28. Number of	29. Number of	30. Consist Speed (Recorded if available) Code 31. Time Table Direction							Code
Track Class Locomotive	Cars	R. Recorded							1
(1-6,X) 1 Units	4 39	E. Estimated 14 mph E 1. North 2. South 3. East 4. Wes						3. East 4. West	3
32. Type of 1. Gates 4. Wig w		ssbucks 10. Flagged by crew 33. Signaled Crossing 34. Whistle Ban							Code
Crossing 2. Cantilever FLS 5. Hwy. Warning 3. Standard FLS 6. Audit	100 A 100								
Code(s) 02 03	05 07		12.10		20 sec w	arn min		3. Unknown	
35. Location of Warning	Code	36. Cros	ssing V	Varning Interconnected	Code	37. Crossir	ng Illumir	nated by Street	Code
1. Both Sides		with	h High	way Signals		Lights	or Specia	al Lights	
2. Side of Vehicle Approach	1	1.1	es 2	. No 3. Unknown	1	1. Yes	2. No	3. Unknown	1
3. Opposite Side of Vehicle Approach 38. Driver's 39. Driver's Code 40. D	iver Drove Behind or			Code 41. Driv	er				Code
	nd Struck or was Stru			Designation for a line and a		or thru the ga	ate 4. S	Stopped on crossing	Code
1. Male	1. Yes 2. No 3	3. Unknown	ו		CONTRACTOR CONTRACTOR	then proceede	ed 5.	Other (specify)	3
2. Female 42. Driver Passed Standing Co	de 43. View of Trac	k Obsaura	dby	(primary obstruction	Did not stop			- · · · · · · · · · · · · · · · · · · ·	L
Highway Vehicle	de 43. View of Trac 1. Permaner		100	3. Passing Train 5. V		7. Othe	r (spe	cify)	Code
1. Yes 2. No 3. Unknown 2	2. Standing	railroad equ	uipmer	nt 4. Topography 6. H	lighway Veh	icles 8. Not			8
		. Driver wa	S	C	ode	45. Was Driv	ver in the	Vehicle?	Code
Casualties to: Kille	Injured	1. Killed	2. Inju	ured 3. Uninjured	3	1. Yes	2. No		1
	47	. Highway	Vehicle	Property Damage		48. Total Nu	mber of	Highway-Rail Crossing	
46. Highway-Rail Crossing Users 0	0	(est. dolla	r dam	age)	60	(include	driver)	1	
49. Railroad Employees 0	0 50	. Total Nun	nber of	People on Train				ent Accident /	Code
52. Passengers on Train 0	0	(include p	assen	gers and crew)		Incident 1. Yes		Being Filed	2
53a. Special Study Block				53b. Special Study Bloc	k	1. 100	2.110		
54. Narrative Description									
55. Typed Name and Title	56. Signature					·····		57. Date	-
FORM FRA F 6180.57 * NO	TE THAT ALL CASE		UISTE	E REPORTED ON FOR		80 554			

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

		/									
Name Of				_				Alphab	etic Coo	de RR Accident/In	cident No.
1. Reporting Railroad					-			1a. A7	ſSF	1b. 15049420	
2. Other Railroad Involved in Train Ac	cident/Inc	ident						2a.		<sup>2b.</sup> 15049420	0
3. Railroad Responsible for Track Mai	intenance							3a. A.	ГSF	3b. 15049420	0
4. U.S. DOT-AAR Grade Crossing ID	No.	0280	27R	5. Date	e of Accident/Incident	04	/30/94	6. Time	of Accid	dent/Incident 2:15	AM
7. Nearest Railroad Station EL SEGUNDO			8. Div	ision		ŝ	9. County LOS A	NGELES		10. State Abbr. C	Code
11. City (if in a city) EL SEGU	NDO		12. Hig	hway N	ame or No. IMPER	JAI	L HIGH	WAY		Public	Private
Highwa	y User Inv	volved					Rail Eq	uipment Involv	red		
13. Type C. Truck-trailer F. Bus		J. Other Motor	Vehicle	Code	17. Equipment		3. Train	(standing) 6.	Light lo	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Scho	ool Bus	K. Pedestrian		1.	1. Train (units pullin	ng)			- 1780 - An		1 4
B. Truck E. Van H. Moto	-	M. Other (sp		A	2. Train (units push			(standing) 8.	Other	(specify)	1
14. Vehicle Speed         15. Dir           (est. mph at impact)         10		(geographic outh 3. East	N. COLUMN	Code	18. Position of Car Uni	it in	Train		86		
16. Position 1. Stalled on crossing		ving over cross		Code	19. Circumstance 1. I	Rail	equipmer	t struck highw			Code
2. Stopped on Crossing	-			3				t struck by hig	hway us	ser	2
20a. Was the highway user and/or rai in the impact transporting hazar				Code	20b. Was there a haza	ardo	us materia	ils release by			Code
1. Highway User 2. Rail Equ			Neither	2	1. Highway U	ser	2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of the	he hazard	lous materials	eleased, if	any							•
		(									
EC OT		(single entry)		Code	23. Weather (single		•				Code
	awn 2.	Day 3. Dusk	4. Dark	4	1. Clear 2. Cloudy			Fog 5. Sleet	6. Sno	1	
24. Type of Equipment Consist 1. Freight train	4. Work	train 7. Yard/S	Switching	Code	25. Track Type Used		Rail		Code	26. Track Number o	r Name
(single entry) 2. Passenger train	oco(s)	1	Equipment Involv	veu							
3. Commuter train	6. Cut of	cars 9. Other	(specify)	1	1. Main 2. Yard	3 3	3. Siding	4. Industry	1	MAIN LINE	
27. FRA 28. Number of Track Class Locomotiv		29. Number of Cars			ed (Recorded if availat	ble)	Code	31. Time Tab	le Direc	tion	Code
Track Class Locomotiv (1-6,X) 3 Units	3	96		R. Recorded E. Estimated 20 mph E 1. North 2. South 3. East 4. We						3. East 4. West	3
32. Type of 1. Gates 4.	Wig wags	<b>5</b> 7.	Crossbucks							34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5.	-	· · · · · · · · · · · · · · · · · · ·	Stop signs		ther (specify)		Warn	ing		1. Yes	
	Audible	9.	Watchman	12. N	one	-	20 sec v	varn min		2. No 3. Unknown	1
Code(s) 01 35. Location of Warning		Cod	le 36 Cr	ossina \	Varning Interconnected		Code	37 Crossin	a Illumi	nated by Street	Code
1. Both Sides					way Signals				•	al Lights	
2. Side of Vehicle Approach		1	1	Yes 2	2. No 3. Unknown		1	1 Yes	2 No	3. Unknown	3
3. Opposite Side of Vehicle Appr 38. Driver's 39. Driver's Code		Drove Behind						1. 100	2.110		Code
Age Gender		Struck or was S			2 6			d or thru the ga	te 4.	Stopped on crossing	Code
1. Male		1. Yes 2. No	3. Unknow	wn	2			then proceede	ed 5.	Other (specify)	1
2. Female 42. Driver Passed Standing	Code	43. View of T		rod by	(primary obstruction		d not stop				Code
Highway Vehicle	Code	2003-0019 - 104 540-2014 - 2010 - 201	nent Structu		3. Passing Train 5.		getation	7. Othe	r (spe	ecify)	L
1. Yes 2. No 3. Unknown	2	2. Standir	g railroad e	quipme	nt 4. Topography 6.	. Hig	ghway Veh	nicles 8. Not (	Obstruct	ted	8
0	Killed		44. Driver v	vas		Coc	de	45. Was Driv	ver in the	e Vehicle?	Code
Casualties to:	Killed	Injured	1. Kille	d 2. Inj	jured 3. Uninjured	3		1. Yes	2. No		1
46. Highway-Rail Crossing Users	0		47. Highwa	y Vehicl	le Property Damage					Highway-Rail Crossin	g Users
	0	0	(est. do	llar dam	nage)	\$2	2,000	(include o			1
49. Railroad Employees	0	0			of People on Train					ent Accident / Being Filed	Code
52. Passengers on Train	0	0	(1101000	e passer	igers and crew)			1. Yes	1000 - 100 - 100	3	2
53a. Special Study Block					53b. Special Study Bl	lock					
54. Narrative Description											
CC Translation 1997		F0. C									
55. Typed Name and Title		56. Signature								57. Date	
FORM FRA F 6180.57	* NOTE		SUALTIES	MUST	BE REPORTED ON FO	RM	FRA F 61	80.55A			
NOT THE OWNER OF THE STREET AND	100000000000000000000000000000000000000	control and at the state	near contractor and contract		separate statut - providenties of the set is set		1 K S C C S 1963	87 (2005) STORES			

1

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

TEDERAE TOTERCOAD ADMINISTRAT		1								
Name Of							Alphat	etic Coo	le RR Accident/Incid	lent No.
1. Reporting Railroad							1a. A7	rsf	1b. 33017201	
2. Other Railroad Involved in Train Ac	cident/Inc	cident					2a.		2b.	
3. Railroad Responsible for Track Ma	intenance						3a. A'	ГSF	3b. 33017201	
4. U.S. DOT-AAR Grade Crossing ID	No.	0280	49R	5. Dat	e of Accident/Incident	01/03/77	6. Time	of Accid	ent/Incident 4:50 P	М
7. Nearest Railroad Station LAIRPORT			8. Div	ision		9. County LOS A	NGELES		10. State Abbr. CA	Code <b>06</b>
11. City (if in a city) EL SEGU	NDO		12. Hig	hway N	ame or No. 124TH S	TREET &			Public	Private
Highwa	y User Inv	volved	······				uipment Involv	ved		-
13. Type C. Truck-trailer F. Bus		J. Other Moto		Code	17. Equipment		(standing) 6.		co(s) (moving)	Code
A Auto D. Pick-up truck G. Scho	ool Bus	K. Pedestrian		r .	1. Train (units pulling				co(s) (standing)	
B. Truck E. Van H. Moto		M. Other (sp	ecify)	A	2. Train (units pushir				(specify)	1
14. Vehicle Speed 15. Dir		(geographic	÷	Code	18. Position of Car Unit	in Train				
			4. West	4				1		
16. Position 1. Stalled on crossing 2. Stopped on Crossing		ving over cros	sing	Code	19. Circumstance 1. R 2. R		nt struck highw nt struck by hig		er	Code
20a. Was the highway user and/or rai				Code	20b. Was there a hazar	dous materi	als release by			Code
in the impact transporting hazan			Neither	4	1. Highway Us	ar 2 Pail	Equipment	3. Both	4. Neither	
1. Highway User 2. Rail Equ 20c. State the name and quantity of the					1. Highway Os	2.110	Lquipment	J. Doin		
200. Otate the name and quantity of th	ne nazaru	ious materials	released, in	any						
21. Temperature 22. V	isibility (	(single entry)		Code	23. Weather (single e	entry)				Code
(specify if minus) 60 °F 1. D	awn 2.	Day 3. Dusk	4. Dark	2	1. Clear 2. Cloudy	3. Rain 4.	Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment				Code	25. Track Type Used b	y Rail		Code	26. Track Number or N	lame
Consist 1. Freight train		train 7. Yard/	•		Equipment Involve					
(single entry) 2. Passenger train 3. Commuter train	-			1	1. Main 2. Yard	3. Siding	4. Industry	1	2H 13.9	
27. FRA 28. Number of		29. Number o		sist Spe	I		31. Time Tab	le Direct		Code
Track Class Locomotiv	re 🛛	Cars	R.F	R. Recorded						1
(1-6,X) 1 Units	5	39	E. E	stimate	d 12 mp	h E	1. North 2	South	3. East 4. West	4
	Wig wags		Crossbucks		agged by crew		led Crossing		34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5. Warning 3. Standard FLS 6.	Hwy. tran Audible		Stop signs Watchman	11. U 12. N	ther <i>(specify)</i>	Warr	ling		1. Yes 2. No	
Code(s) 03 05	06			12.10		20 sec v	warn min		3. Unknown	
35. Location of Warning		Co	de 36. Cr	ossing \	Warning Interconnected	Code	37. Crossin	ig Illumir	nated by Street	Code
1. Both Sides			w	th High	way Signals		Lights of	or Specia	al Lights	
2. Side of Vehicle Approach	<b>b</b>	1	1.	Yes 2	2. No 3. Unknown	1	1. Yes	2. No	3. Unknown	3
3. Opposite Side of Vehicle Appro 38. Driver's 39. Driver's Code		Drove Behind			Code 41. Driv					Code
Age Gender		Struck or was S			ALL		d or thru the ga	te 4. S	Stopped on crossing	Code
1. Male		1. Yes 2. No	3. Unknow	vn			then proceede	ed 5.	Other (specify)	4
2. Female	Orde	40 1/1			3.1	Did not stop	······			
42. Driver Passed Standing Highway Vehicle	Code	43. View of T 1. Perma	nent Structu		(primary obstruction 3. Passing Train 5. V	(S)	7. Othe	r (spe	cify)	Code
1. Yes 2. No 3. Unknown	2		ng railroad e				nicles 8. Not (			8
			44. Driver w	as	c	ode	45. Was Driv	er in the	Vehicle?	Code
Casualties to:	Killed	Injured			urad 2 Uniniurad	3	1. Yes			1
			47. Highway	Vehicl	e Property Damage		48. Total Nu	mber of I	Highway-Rail Crossing	
46. Highway-Rail Crossing Users	0	0	(est. doi			\$0	(include d		1	
49. Railroad Employees	0	0	50. Total Nu	mber o	f People on Train		6.13 CORP. 625-6 AU80004		ent Accident /	Code
52. Passengers on Train	0	0	(include	passer	igers and crew)		1. Yes		eing Filed	2
53a. Special Study Block			M_10		53b. Special Study Bloc	ck				
54. Narrative Description					Les 1 00 0		1. 41.			
			· · · · · · · · · · · · · · · · · · ·							
55. Typed Name and Title		56. Signature							57. Date	
FORM FRA F 6180.57	* NOTE	THAT ALL CA	SUALTIES	MUST	BE REPORTED ON FOR	M FRA F 61	80.55A			

2. Other Railroad Involved in Train Accident/Incident

EL SEGUNDO

3. Railroad Responsible for Track Maintenance

4. U.S. DOT-AAR Grade Crossing ID No.

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

5. Date of Accident/Incident

16. Positi

Name Of

11. City

1. Reporting Railroad

7. Nearest Railroad Station

LOS ANGELES

(if in a city)

			Highwa	ay User In	nvolved	1					Rail Ec	uipment Involv	ed		
13. Type C	. Truck-	railer	F. Bus		J. Ot	her Moto	or Vehicle	Code	17. Equipment		3. Train	(standing) 6.	Light lo	co(s) (moving)	С
A. Auto D	. Pick-u	p truck	G. Sch	ool Bus	K. Pe	edestrian	i i	1 .	1. Train (uni	ts pulling)	4. Car(s)	(moving) 7.	Light lo	co(s) (standing)	Т
B. Truck E	. Van		H. Mot	orcycle	M. O	ther (sp	pecify)	A	2. Train (uni	ts pushing	g) 5. Car(s)	(standing) 8.	Other	(specify)	
14. Vehicle S				rection		eographie		Code	18. Position of	Car Unit i	n Train				
(est. mph at i	mpact)	0	1. N	orth 2.5	South 3	3. East	4. West	4					1		
16. Position	1. Stalle	ed on cr	ossing	3. M	loving c	over cros	sing	Code	19. Circumstan	ce 1. Ra	ail equipmer	nt struck highwa	ay user		С
	2. Stop	ped on (	Crossin	ig 4. Ti	rapped			2		2. Ra	il equipmer	t struck by high	nway us	er	1
20a. Was the	•							Code	20b. Was there	a hazard	lous materia	als release by			С
in the in	npact tra	nsportin	g haza	rdous ma	aterials	?		1							
1. High	way Use	r 2.1	Rail Eq	uipment	3. B	oth 4.	Neither	4	1. Higł	way Use	er 2. Rail	Equipment	3. Both	4. Neither	
20c. State the	e name a	ind quai	ntity of	the hazar	rdous n	naterials	released, i	fany							
21. Temperat	ure		22. \	/isibility	(single	entry)		Code	23. Weather	(single e	ntry)				С
(specify if mir	nus) 6	2 °F	1.1	Dawn 2	. Day	3. Dusk	4. Dark	4	1. Clear 2.	Cloudy	3. Rain 4.	Fog 5. Sleet	6. Sno	w	
24. Type of E Consist (single entry	1.1	Freight t		4. Work 5. Sing			Switching	Code	25. Track Type Equipmen		C. There is a second		Code	26. Track Number of	or Name
(Single chay	S		e	-		-	(specify)	7	1. Main	2 Yard	3 Sidina	4. Industry	1	HARBOR MA	IN
	0				· · ·		11 27			2250.222	and a second				
27. FRA			mber o			umber o			ed (Recorded i	available	e) Code	31. Time Tab	le Direc	tion	с
Track Clas	ss 1		comoti	ve 1		ars 8		Recorde	-	0	hE	d Marth O	0	0 5	Ĩ.
(1-6,X)			nits					Estimate	-	0 mpl		1. North 2.	South		
32. Type of	1. Gat			Wig wag	-		Crossbuck		agged by crew			led Crossing		34. Whistle Ban	С
Crossing				Hwy. tra	iffic sign		Stop signs		ther (specify)		Warn	ing		1. Yes	
Warning	3. Sta	ndard F	_S 6.	Audible		9.	Watchman	12. N	one		20 500 1	varn min		2. No	I
Code(s)	01		03	00	6						20 sec 1	warn min		3. Unknown	
35. Location 1. Both S		ng				Co		-	Warning Intercon way Signals	nected	Code		•	nated by Street al Lights	С
2. Side of 3. Oppos				roach		1	. 3	1.Yes	2. No 3. Unkno	wn	3	1. Yes	2. No	3. Unknown	
38. Driver's	39. Driv	er's (	Code	40 Drive	er Drov	e Behind	or in Fron	t of Train	Code	41. Driv	er		С.		C
Age	Ger						Struck by S					d or thru the ga	te 4	Stopped on crossing	
	1. Mal						3. Unkno					then proceede		Other (specify)	T
	2. Fen								2		1000 B			(0,000.))	
	Z. Fen								1010157	3.0	lid not stop				
42. Driver Pa				Code	43.	View of 1	Frack Obsc	ured by	(primarv ot		) )				c
42. Driver Pa Highway	ssed Sta			Code	5		Frack Obsc	•	<i>(primary of</i> 3. Passing T	struction	)	7. Other	(spe	cify)	c

2. Standing railroad equipment 4. Topography

(est. dollar damage)

1. Killed 2. Injured 3. Uninjured

47. Highway Vehicle Property Damage

50. Total Number of People on Train

(include passengers and crew)

44. Driver was

028052Y

8. Division

12. Highway Name or No.

54. Narrative Description

49. Railroad Employees

52. Passengers on Train

53a. Special Study Block

1. Yes 2. No 3. Unknown

Casualties to:

46. Highway-Rail Crossing Users

55. Typed Name and Title

Injured

0

0

0

2

Killed

0

0

0

OMB Approval No. 2130-0500

1b. 33017202

3b. 33017202

2b

10. State

2

Abbr.

Public

RR Accident/Incident No.

5:30 PM

CA

Code

Private

06

Code

2

Code

Code

Code 1

Code

4

Code

Code

3

Code

4

Code

8

Code

1

Code

2

1

Alphabetic Code

6. Time of Accident/Incident

<sup>1a.</sup> ATSF

3a. ATSF

2a.

01/10/77

DOUGLAS STREET

9. County

LOS ANGELES

6. Highway Vehicles 8. Not Obstructed

Code

3

\$0

53b. Special Study Block

45. Was Driver in the Vehicle?

51. Is a Rail Equipment Accident /

Incident Report Being Filed

48. Total Number of Highway-Rail Crossing Users

1. Yes 2. No

(include driver)

1. Yes 2. No

~

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

FEDERAL RAILROAD ADMINISTRATION (I	rka)					U	VID Approval No. 2	130-0300
Name Of				10 10 10 10 10 10 10 10 10 10 10 10 10 1	Alphabeti	c Code	RR Accident/Incid	dent No.
1. Reporting Railroad			· · · · · · · · · · · · · · · · · · ·		1a. ATS	F	1b. 36045400	
2. Other Railroad Involved in Train Acciden					2a.		2b.	
3. Railroad Responsible for Track Maintena					<sup>3a.</sup> ATS		3b. 36045400	
4. U.S. DOT-AAR Grade Crossing ID No.	02806			04/01/75	6. Time of	Accident/I	0.001	
7. Nearest Railroad Station LAWNDALE		8. Division	1	9. County LOS AN	GELES		10. State Abbr. CA	Code
11. City (if in a city) EL SEGUNDO	)	12. Highway	y Name or No. COMPT	ON AVENU	E		Public	Private
Highway Use	r Involved			Rail Equip	oment involved			
13. Type C. Truck-trailer F. Bus	J. Other Motor V	ehicle Co	de 17. Equipment	3. Train (	standing) 6. Lig	ght loco(s)	) (moving)	Code
A. Auto D. Pick-up truck G. School Bu			1. Train (units pulling		moving) 7. Lig	and the second has		1
B. Truck E. Van H. Motorcyck 14. Vehicle Speed 15. Direction		iiy)	2. Train (units pushir		standing) 8. Ot	ther	(specify)	
is and instantion of entropy of the second	South 3. East 4.					1		
A THE THE THE REPORT OF THE PROPERTY OF	Moving over crossin Trapped	g Cou	And a second	ail equipment s ail equipment s				Code
20a. Was the highway user and/or rail equi		Co				ay user		Code
in the impact transporting hazardous		1		0.0-11-		D.th. 4	N / - / 1	
1. Highway User 2. Rail Equipment 20c. State the name and quantity of the ha			1. Highway Us	er 2. Rail Ec	ulpment 3.	Both 4	. Neither	
200. State the name and quantity of the na	cardous materiais rei	easeu, il any						
21. Temperature 22. Visibilit	(single entry)	Co	de 23. Weather (single e	entry)			• • • • • • • • • • • • • • • • • • •	Code
(specify if minus) 55 °F 1. Dawn	2. Day 3. Dusk 4.	Dark	3 1. Clear 2. Cloudy	3. Rain 4. Fo	g 5. Sleet 6	S. Snow		1
24. Type of Equipment		Co	de 25. Track Type Used b	y Rail	Co	ode 26.	Track Number or N	Name
Consist 1. Freight train 4. W (single entry) 2. Passenger train 5. Si	ork train 7. Yard/Sw		Equipment Involve	d				
3. Commuter train 6. Co	•		7 1. Main 2. Yard	3. Siding 4	Industry 1	1 H	IARBOR DIST	
27. FRA 28. Number of	29. Number of	30. Consist S	Speed (Recorded if available	le) Code 3	1. Time Table	Direction		Code
Track Class Locomotive (1-6,X) 2 Units	Cars	R. Recor		b E	1 North 2 C	outh 2 E	ant d Weat	3
(1-6,X) 2 Units 32. Type of 1. Gates 4. Wig v	_	E. Estim	hated 2 mp ). Flagged by crew	33. Signaled	1. North 2. So		Whistle Ban	Code
Crossing 2. Cantilever FLS 5. Hwy.	•		l. Other (specify)	Warning	•		1. Yes	0000
Warning 3. Standard FLS 6. Audib	le 9. Wa	tchman 12	2. None	20 sec wa	rn min		2. No	r
Code(s) 01 03	06			I			3. Unknown	
35. Location of Warning 1. Both Sides	Code		ng Warning Interconnected lighway Signals	Code	37. Crossing I Lights or S			Code
2. Side of Vehicle Approach	1			3	-		-	3
3. Opposite Side of Vehicle Approach			s 2. No 3. Unknown		1. Yes 2	2. NO 3.	Unknown	
CONTRACTORIZATION CONTRACTORIS DE L'ENCEDEN AUES EN	iver Drove Behind or nd Struck or was Stru	and the second s		/er Drove around o	r thru the gate	4 Stop	ped on crossing	Code
1. Male	1. Yes 2. No 3	· · · · · · · · · · · · · · · · · · ·		Stopped and th		5. Othe		3
2. Female	1. 10 \ (		3.1	Did not stop				
42. Driver Passed Standing Co Highway Vehicle	de 43. View of Trac 1. Permaner		by (primary obstruction 3. Passing Train 5. V	,	7. Other	(specify)		Code
1. Yes 2. No 3. Unknown 3		railroad equip		Highway Vehicl				8
		Driver was	c	ode 4	5. Was Driver	in the Veh	nicle?	Code
Casualties to: Kille	d Injured	1. Killed 2.	Injured 3. Uninjured	3	1. Yes 2. I	No		1
46. Highway-Rail Crossing Users		. Highway Vel	hicle Property Damage	4	8. Total Numb	er of High	way-Rail Crossing	Users
	0	(est. dollar d	lamage)	\$250	(include driv		1	
49. Railroad Employees 0			er of People on Train sengers and crew)		51. Is a Rail Equ Incident Rep			Code
52. Passengers on Train 0	0				1. Yes 2.	No		2
53a. Special Study Block			53b. Special Study Blog	ck				
54. Narrative Description								
55. Typed Name and Title	56. Signature						57. Date	11 H H
·····			ST BE REPORTED ON FOR		EEA			

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

DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION (FRA) Name Of 1. Reporting Railroad 2. Other Railroad Involved in Train Accident/Incident

### OMB Approval No. 2130-0500

RR Accident/Incident No.

1b. 361288206

<sup>2b.</sup> 361288206

Alphabetic Code

1a. ATSF

2a.

3. Railroad Responsible for Track Ma	intenance						<sup>3a.</sup> A'	TSF	3b. 3612	88206	
4. U.S. DOT-AAR Grade Crossing ID	No.	028	064T	5. Date	e of Accident/Incident	12/09/88			nt/Incident	2:40 Al	м
7. Nearest Railroad Station LAWNDALE			8. Divi	sion		9. County LOS A	NGELES		10. State Abbr.	CA	Code 06
11. City (if in a city) LAWND	ALE		12. Hig	hway N	ame or No. MANH	ATTON BE	ACH BLVD	)	Public		Private
·	ay User Inv	olved					uipment Involv				
13. Type         C. Truck-trailer         F. Bus           A. Auto         D. Pick-up truck         G. Sch           B. Truck         E. Van         H. Mote	ool Bus	J. Other Mot K. Pedestria M. Other (s	n	Code A	17. Equipment 1. Train <i>(units pullin</i> 2. Train <i>(units push</i>	g) 4. Car(s)	(moving) 7	Light loce	o(s) (moving) o(s) (standing (specify)		Code 1
·····	rection	(geograph		Code	18. Position of Car Uni	t in Train					
		uth 3. East		2				1			0.4
16. Position 1. Stalled on crossing 2. Stopped on Crossin		/ing over cro	ssing	Code	19. Circumstance 1. I 2. F	Contract Contractor Contractor	nt struck highw It struck by hig		r	1	Code 1
<ul><li>20a. Was the highway user and/or ra in the impact transporting hazar</li><li>1. Highway User</li><li>2. Rail Equ</li></ul>	il equipme rdous mate uipment	nt involved erials? 3. Both 4	. Neither	Code	20b. Was there a haza 1. Highway Us	irdous materia	, ,	3. Both	4. Neither		Code
20c. State the name and quantity of t	ine nazaroo	ous materiais	s released, it a	any							
	/isibility (	single entry)		Code	23. Weather (single	entry)					Code
(specify if minus) 55 °F 1. [	Dawn 2. [	Day 3. Dus	k 4. Dark	4	1. Clear 2. Cloudy	y 3. Rain 4.	Fog 5. Sleet	6. Snov	wor		1
24. Type of Equipment Consist 1. Freight train (single entry) 2. Passenger train		rain 7.Yard car 8 Lindu		Code	25. Track Type Used Equipment Involv			Code	26. Track Num	ber or N	ame
3. Commuter train				1	1. Main 2. Yard	3. Siding	4. Industry	1	MAIN		
SELF 71 240.96 27 77 77	Track Class Locomotive Cars				ed (Recorded if availat	ble) Code	31. Time Tat	ole Directi	on		Code
(1-6,X) 1 Units	1-6,X) 1 Units 4				d nd 20 m	nph E	1. North 2	South 3	. East 4. We	est	3
Crossing 2. Cantilever FLS 5.	Type of Crossing         1. Gates         4. Wig wags           2. Cantilever FLS         5. Hwy. traffic signals           Warning         3. Standard FLS         6. Audible				lagged by crew ther <i>(specify)</i> one	Warr		3	34. Whistle Bar 1. Yes 2. No	<u> </u>	Code
Code(s) 01 03	06	_					warn min		3. Unknowr	1	
35. Location of Warning 1. Both Sides		Co		-	Warning Interconnected way Signals	Code		ng Illumina or Special	ated by Street		Code
2. Side of Vehicle Approach 3. Opposite Side of Vehicle Appr	roach	1		1. Yes 2. No 3. Unknown 3 1. Yes 2. No						1	3
38. Driver's 39. Driver's Code Age Gender 1. Male 2. Female	and S	truck or was	d or in Front of Struck by Se o 3. Unknow	cond Tr	2 2.	Drove aroun	d or thru the ga then proceed		topped on cros Other (specif	2 - 17	Code 4
42. Driver Passed Standing	Code	43. View of	Track Obscu	red by	(primary obstruction						Code
Highway Vehicle 1. Yes 2. No 3. Unknown	2		anent Structu ling railroad e		3. Passing Train 5. nt 4. Topography 6.		7. Othen nicles 8. Not				8
Casualties to:	Killed	Injured	44. Driver w			Code	45. Was Driv		Vehicle?	,	Code
46. Highway-Rail Crossing Users	0				e Property Damage	3		mber of H	lighway-Rail C	rossing l	2 Jsers
		0	(est. do			\$0	(include		nt Accident /	0	Code
49. Railroad Employees	0	0			of People on Train ngers and crew)		and the state of the state of the	Report Be			
52. Passengers on Train	0	0					1. Yes	2. No			2
53a. Special Study Block					53b. Special Study Blo	ock					
54. Narrative Description	· · · · · · · · · · · · · · · · · · ·		- 1								
55. Typed Name and Title		56. Signatur	e						57. Dat	е	
FORM FRA F 6180.57	* NOTE	THAT ALL C	CASUALTIES	MUST	BE REPORTED ON FO	RM FRA F 61	80.55A				

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

		.,								
1. Reporting Railroad								petic Cod		
	noident/les	dent					1a. B	NSF	1b. SC0200200	
2. Other Railroad Involved in Train A							2a.		2b. SC020020	
3. Railroad Responsible for Track Ma						1	3a. B		3b. SC0200200	
4. U.S. DOT-AAR Grade Crossing ID	No.	028	072K		e of Accident/Incident	02/09/00	6. Time	of Accid	ent/Incident 2:50 ]	
7. Nearest Railroad Station REDONDO			8. Div SOL		RN CALIF	9. County LOS A	NGELES		10. State Abbr. CA	Code
11. City (if in a city) REDONI	DO BEA	СН	12. Hig	hway N	ame or No. 182ND S				Public	Private
Highwa	ay User In	volved				Rail Eq	uipment Involv	/ed		
13. Type C. Truck-trailer F. Bus		J. Other Mot	or Vehicle	Code	17. Equipment	3. Train	(standing) 6	Light loc	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch		K. Pedestria		A	1. Train (units pulling			-		1
	orcycle rection	M. Other (s		Code	2. Train <i>(units pushin</i> 18. Position of Car Unit		(standing) 8.	Other	(specify)	
14G S. 25228 - 9 - 6 - 6 - 6 - 6 - 6 - 7 - 7 - 7 - 7 - 7		outh 3. East		4				1		
16. Position 1. Stalled on crossing 2. Stopped on Crossin		wing over cro	ssing	Code	19. Circumstance 1. R		t struck highw t struck by hig			Code
20a. Was the highway user and/or ra	-			Code	20b. Was there a hazard			Iway use		2 Code
in the impact transporting haza			N	I	1 History Ha	- 0 D-II	Faulancet	2 Dath	4 Mailtan	4
1. Highway User 2. Rail Equ 20c. State the name and quantity of			Neither	4	1. Highway Use		Equipment	3. Both	4. Neither	
200. State the name and quantity of			released, ir	any						
	/isibility	(single entry)		Code	23. Weather (single e	entry)				Code
	Dawn 2.	Day 3. Dus	k 4. Dark	2	1. Clear 2. Cloudy	3. Rain 4.	Fog 5. Sleet	6. Sno	w	
24. Type of Equipment Consist 1. Freight train	4. Work	train 7. Yard	/Switching	Code	25. Track Type Used b	~		Code	26. Track Number or	Name
(single entry) 2. Passenger train	5. Single	e car 8. Ligh	loco(s)	ī.	Equipment Involve					
3. Commuter train				1	1. Main 2. Yard		4. Industry	1	MAIN LINE	
27. FRA 28. Number o Track Class Locomoti		29. Number Cars		sist Spe Recorde	eed (Recorded if availabl	e) Code	31. Time Tab	le Direct	ion	Code
(1-6,X) 2 Units	5	8		stimate		h E	1. North 2	. South	3. East 4. West	4
	Wig wags				lagged by crew		ed Crossing		34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5. Warning 3. Standard FLS 6.	Hwy. traff Audible	-	. Stop signs . Watchman	11. C	ther (specify)	Warni	ng		1. Yes 2. No	
Code(s) 01 03						20 sec w	varn min		3. Unknown	3
35. Location of Warning		Co	Description and the second second		Warning Interconnected	Code	HEADER THAT PROVIDE	•	ated by Street	Code
1. Both Sides 2. Side of Vehicle Approach		1	w	iun <b>m</b> ign	way Signals	3	Lights t	or Specia	li Lignis	
3. Opposite Side of Vehicle Appr	oach	1	. 1.	Yes 2	2. No 3. Unknown	3	1. Yes	2. No	3. Unknown	3
38. Driver's 39. Driver's Code		Drove Behin								Code
Age Gender		Struck or was 1. Yes 2. No			25		for thru the gat then proceeds		Stopped on crossing Other <i>(specify</i> )	1
30 2. Female 2			-		3 3. [	Did not stop				3
42. Driver Passed Standing Highway Vehicle	Code		Track Obscur anent Structu		(primary obstruction 3. Passing Train 5. V		7. Othe	r (spec	cifu)	Code
1. Yes 2. No 3. Unknown	2		ing railroad e			lighway Veh		Obstructe		8
	1211-1		44. Driver w	as	с	ode	45. Was Driv	ver in the	Vehicle?	Code
Casualties to:	Killed	Injured	1. Kille	d 2. Inj	ured 3. Uninjured	3	1. Yes	2. No		1
46. Highway-Rail Crossing Users	0	0		2 201 - 1177	e Property Damage				Highway-Rail Crossing	Users
			(est. doi			\$100	(include o		nt Accident /	Code
49. Railroad Employees	0	0			f People on Train gers and crew)				eing Filed	
52. Passengers on Train	0	0					1. Yes	2. No		2
53a. Special Study Block					53b. Special Study Bloc	:k				
54. Narrative Description										
55. Typed Name and Title		56. Signature	)						57. Date	
FORM FRA F 6180.57	* NOTE	THAT ALL C	ASUALTIES	MUST	BE REPORTED ON FOR	M FRA F 61	80.55A			

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

FEDERAL RAILROAD ADMINISTRAT										OMB Approval No. 2	2130-0500
Name Of								Alpha	petic Coo	de RR Accident/Inc	ident No.
1. Reporting Railroad								1a. A	ГSF	1b. 150495200	
2. Other Railroad Involved in Train Ad	cident/Inc	ident						2a.		<sup>2b.</sup> 15049520	)
3. Railroad Responsible for Track Ma	intenance							3a. A	TSF	<sup>3b.</sup> 150495200	)
4. U.S. DOT-AAR Grade Crossing ID	No.	028	072K	5. Dat	e of Accident/Incident	0	04/18/95	6. Time	of Accid	dent/Incident 2:15	РМ
7. Nearest Railroad Station			8. Divi	sion			9. County			10. State	Code
ALCOA						-		NGELES		Abbr. C.	
11. City (if in a city) REDONI	O BEAG	CH	12. High	hway N	ame or No. 182ND	S7	TREET			Public	Private
··· ·· ··· ··· ··· ··· ··· ··· ·	y User Inv	olved		0.1			Rail Equ	upment Invol	ved		
13. Type C. Truck-trailer F. Bus		J. Other Mot		Code	17. Equipment					oco(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch B. Truck E. Van H. Mote		K. Pedestrian M. Other (s		A	1. Train <i>(units pulli</i> 2. Train <i>(units pusi</i>	_	1005 (017)			oco(s) (standing) (specify)	1
14. Vehicle Speed 15. Dir		(geograph		Code	18. Position of Car Ur			(standing) c		(specity)	1
(est. mph at impact) 10 1. No	orth 2. So	uth 3. East	4. West	3	L LEUKARDON - LEUKARDON BERGERE BERGERE				1		
16. Position 1. Stalled on crossing		ving over cro	ssing	Code 3	19. Circumstance 1.						Code
2. Stopped on Crossin 20a. Was the highway user and/or ra				Code	2. 20b. Was there a haz			struck by high	nway us	ser	L 1 Code
in the impact transporting hazar	A CONTRACTOR AND A CONTRACTOR AND A CONTRACT	erials?			The sector of the sector						
1. Highway User 2. Rail Equ			. Neither	4	1. Highway U	Jse	er 2. Rail I	Equipment	3. Both	h 4. Neither	
20c. State the name and quantity of t	he hazard	ous materials	s released, if a	any							
21. Temperature 22. V	isibility (	single entry)		Code	23. Weather (single	e ei	ntry)				Code
(specify if minus) 53 °F 1. [	awn 2.1	Day 3. Dus	k 4. Dark	2	1. Clear 2. Cloud	dy	3. Rain 4. I	og 5. Sleet	6. Sno	ow	2
24. Type of Equipment				Code	25. Track Type Used	d by	y Raił		Code	26. Track Number or	Name
Consist 1. Freight train 4. Work train 7. Yard/Switching Equipment Involved											
(single entry) 2. Passenger train 5. Single car 8. Light loco(s) 3. Commuter train 6. Cut of cars 9. Other (specify) 1 1. Main 2. Yard 3. Siding 4. Industry 1 SINGLE MAIN											
27. FRA 28. Number of	f	29. Number	of 30. Cons	sist Spe	ed (Recorded if availated	able	e) Code	31. Time Ta	ble Direc	tion	Code
Track Class Locomotiv (1-6,X) 2 Units	/e 3	Cars 1		tecorde stimate		mpt	hE	1 North	South	3. East 4. West	3
	Wig wags				agged by crew	mpi		ed Crossing	. 5000	34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5.	Hwy. traffi	ic signals 8	. Stop signs	11. 0	ther (specify)		Warni	-		1. Yes	
Warning 3. Standard FLS 6. Code(s) 01	Audible	- 1 - 9	. Watchman	12. N	one		20 sec w	arn min		2. No 3. Unknown	1
Code(s) 01 35. Location of Warning		Cr	ode 36. Cro		Varning Interconnected	4	Code	37 Cross	ng Illumi	nated by Street	Code
1. Both Sides		0	1000 COLD COLD COLD COLD COLD COLD COLD COLD	-	way Signals	u i	oode		-	ial Lights	Code
2. Side of Vehicle Approach		1	1	Vec 1	2. No 3. Unknown		2	1 1	2 No	3. Unknown	2
3. Opposite Side of Vehicle Appr 38. Driver's 39. Driver's Code		Derve Debie	d or in Front o				I	1. 10.	2.110	5. ORKIOWIT	
38. Driver's 39. Driver's Code Age Gender			Struck by Se		10			or thru the g	ate 4.	Stopped on crossing	Code
1. Male			o 3. Unknow					then proceed		Other (specify)	1
2. Female	da	10 1/1-11-06	Teach Observe		<u></u>		Did not stop				
42. Driver Passed Standing Highway Vehicle	Code	THE R. P. LEWIS CO., N. LEWIS	Track Obscur anent Structur	· · · · ·	(primary obstruct 3. Passing Train		,	7. Oth	er (spe	ecify)	Code
1. Yes 2. No 3. Unknown	2		ling railroad e				lighway Vehi		Obstruct		8
			44. Driver w	as		Co	ode	45. Was Dr	ver in the	e Vehicle?	Code
Casualties to:	Killed	Injured	1. Killed	d 2. Inj	ured 3. Uninjured	2	2	1. Yes	2. No		1
46. Highway-Rail Crossing Users	0	1	47. Highway (est. dol		e Property Damage age)		\$3,000	48. Total No (include		Highway-Rail Crossin	
49. Railroad Employees	0	0			f People on Train	L. 4				ent Accident /	Code
52. Passengers on Train	0	0	(include	passer	ngers and crew)			Incident 1. Yes	1.00 DE.10	Being Filed	2
53a. Special Study Block					53b. Special Study B	Bloc	:k				1
54. Narrative Description											
								1000 T			
55. Typed Name and Title		56. Signature	e							57. Date	
FORM FRA F 6180.57	* NOTE	THAT ALL C	ASUALTIES	MUST	BE REPORTED ON FO	OR	M FRA F 618	30.55A			

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

Name Of						Alphat	petic Cod	le RR Accident/Inci	dent No.
1. Reporting Railroad						1a. A'	<u>TSF</u>	1b. 311087208	
2. Other Railroad Involved in Train Ac						2a.		<sup>2b.</sup> 311087208	
3. Railroad Responsible for Track Mai							TSF	<sup>3b.</sup> 311087208	
4. U.S. DOT-AAR Grade Crossing ID	No. 0280			e of Accident/Incident	10/30/87	6. Time	of Accid	ent/Incident 7:30 I	PM
7. Nearest Railroad Station TORRANCE		8. Divi	sion		9. County LOS A	NGELES		10. State Abbr. CA	Code
11. City (if in a city) TORRAN	ICE	12. High	hway N	ame or No. CARSON	N ST			Public	Private
Highway	y User Involved				Rail Eq	uipment Involv	ved		
13. Type C. Truck-trailer F. Bus	J. Other Motor	Vehicle	Code	17. Equipment	3. Train	(standing) 6	. Light loo	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Scho	ool Bus K. Pedestrian	2	в	1. Train (units pulling			•		1
B. Truck E. Van H. Moto				2. Train (units pushin		(standing) 8	. Other	(specify)	<b>`</b>
14. Vehicle Speed15. Dire(est. mph at impact)01. No	rection (geographic orth 2. South 3. East	· · · · · ·	Code	18. Position of Car Unit	in Irain		1		
16. Position 1. Stalled on crossing	3. Moving over cross		Code	19. Circumstance 1. R	ail equipmen	t struck highw			Code
2. Stopped on Crossing			2			t struck by hig	hway use	er	1
20a. Was the highway user and/or rail in the impact transporting hazard		ĩ	Code	20b. Was there a hazard	tous materia	is release by			Code
1. Highway User 2. Rail Equi		leither	4	1. Highway Use	er 2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of the	he hazardous materials r	eleased, if a	any						
	r-11.114 (alarda anta)		0.1	00.14/		6. i			<u> </u>
EE OT	isibility (single entry)		Code	23. Weather (single e			6 6		Code
	Dawn 2. Day 3. Dusk	4. Dark	2	1. Clear 2. Cloudy	And Contraction of Contract	Fog 5. Sleet		967	
24. Type of Equipment Consist 1. Freight train	4. Work train 7. Yard/S	witching	Code	25. Track Type Used by Equipment Involve			Code	26. Track Number or	Name
	5. Single car 8. Light le	oco(s)	r i				,		
	6. Cut of cars 9. Other		1	1. Main 2. Yard	THE REPORT OF	4. Industry	1	MAIN	
27. FRA 28. Number of Track Class Locomotive			sist Spe ecorde	ed (Recorded if availabl	e) Code	31. Time Tab	ole Direct	tion	Code
(1-6,X) 2 Units	2 36		stimate	· · · · · ·	h   E	1. North 2	. South	3. East 4. West	3
32. Type of 1. Gates 4. V	Wig wags 7.0	Crossbucks	10. FI	agged by crew	33. Signal	ed Crossing	1	34. Whistle Ban	Code
	Hwy. traffic signals 8.5			ther (specify)	Warni	ng		1. Yes	
Warning         3. Standard FLS         6. /           Code(s)         01         03	Audible 9. \ 05 07	Vatchman	12. N	one	20 sec w	arn min		2. No 3. Unknown	
35. Location of Warning	03Cod	e 36. Cro	ossing \	Varning Interconnected	L Code	37. Crossir	na Illumin	nated by Street	Code
1. Both Sides	•	Contraction Contraction		way Signals			or Specia	NUMBER ADD TO DE TRANSPORTER	
2. Side of Vehicle Approach 3. Opposite Side of Vehicle Appro	1	1.	Yes 2	2. No 3. Unknown	1	1. Yes	2. No	3. Unknown	1
	40. Driver Drove Behind	or in Front o	of Train	Code 41. Driv	er				Code
Age Gender	and Struck or was S			21 AL 100 AL	Prove around	or thru the ga	ate 4. S	Stopped on crossing	
1. Male 2. Female	1. Yes 2. No	3. Unknow	/n	12		then proceeds	ed 5. (	Other (specify)	4
42. Driver Passed Standing	Code 43. View of Tr	ack Obscur	ed by	(primary obstruction	Did not stop				Code
Highway Vehicle		ent Structur		3. Passing Train 5. V		7. Othe			1
1. Yes 2. No 3. Unknown	2 2. Standin	g railroad eo	quipme	nt 4. Topography 6. H	lighway Veh	icles 8. Not	Obstructe	ed	8
Casualties to:	Killed Injured	4. Driver w			ode	45. Was Driv		Vehicle?	Code
		in the second second second	-		3	1. Yes			1
46. Highway-Rail Crossing Users	0 0			e Property Damage				Highway-Rail Crossing	
40 Delhard Carlos		(est. doll			\$500	(include		ant Accident /	Code
49. Railroad Employees	0 0			f People on Train				leing Filed	. Coue
52. Passengers on Train	0 0	1	paccon	gore and ereny		1. Yes	2. No		2
53a. Special Study Block				53b. Special Study Bloc	:k				
54. Narrative Description									
									1
55 Typed Name and Title	EE Cimpture			•				57. Date	
55. Typed Name and Title	56. Signature							or. Date	
FORM FRA F 6180.57		SUALTIES I	MUST	BE REPORTED ON FOR	M FRA F 61	30.55A			

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

		·									
Name Of					61 - 64 - <b>1</b> - 10 - 10				etic Coo	de RR Accident/Inci	dent No.
1. Reporting Railroad								1a. A7	<b>TSF</b>	1b. 33108201	
2. Other Railroad Involved in Train Ad				10 AL A				2a.		2b.	
3. Railroad Responsible for Track Ma								3a. A.		3b. 33108201	
4. U.S. DOT-AAR Grade Crossing ID	No.	0281	03G		e of Accident/Incident	-	17/78	6. Time	of Accid	lent/Incident 6:0 Al	
7. Nearest Railroad Station WATSON			8. Div	ision		9.	County	NGELES		10. State Abbr. CA	Code 06
11. City (if in a city) TORRAN	NCE		12. Hig	hway N	ame or No. ARLING	GTC	ON STR	ЕЕТ		Public	Private
Highwa	ay User Inv	volved					Rail Eq	uipment Involv	ved		
13. Type C. Truck-trailer F. Bus		J. Other Moto	r Vehicle	Code	17. Equipment		3. Train	(standing) 6.	Light lo	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch		K. Pedestrian		A	1. Train (units pullin	•			•	co(s) (standing)	1
	orcycle rection	M. Other (sp (geographic		Code	2. Train (units pushi 18. Position of Car Unit			(standing) 8.	Other	(specify)	
		outh 3. East		2					1		
16. Position 1. Stalled on crossing		ving over cros	sing	Code	19. Circumstance 1. F			C 17 10 100 10 10 10		1.0.5	Code
2. Stopped on Crossin 20a. Was the highway user and/or ra	•				2. F 20b. Was there a haza			t struck by high	hway us	er	1
in the impact transporting haza				Code	200. Was there a haza	liuuu	is materia	is release by			Code
1. Highway User 2. Rail Equ			Neither	4	1. Highway Us	ser	2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of	the hazard	ous materials	released, if	any							
21. Temperature 22. V	/isibility	(single entry)		Code	23. Weather (single	entr	v)		-		Code
(0.05		Day 3. Dusk	4. Dark	1 1	1. Clear 2. Cloudy			Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment			t Internet internet	Code	25. Track Type Used		•		Code	26. Track Number or	l
Consist 1. Freight train		train 7. Yard/	•	Code	Equipment Involv	-			Code	20. Hack Number of	ame
(single entry) 2. Passenger train 3. Commuter train	-			1	1. Main 2. Yard	1 3	Siding	4. Industry	1	HARBOR MAIN	z
27. FRA 28. Number o		29. Number o			ed (Recorded if availab		Code	31. Time Tab		l	Code
Track Class Locomoti	ve	Cars		Recorde		010)	,				1
(1-6,X) 2 Units	2	9		stimate		ph	R	1. North 2	. South	3. East 4. West	4
32. Type of 1. Gates 4. Crossing 2. Cantilever FLS 5.	Wig wags		Crossbucks Stop signs		agged by crew ther <i>(specify)</i>	3	33. Signa Warn	ed Crossing		34. Whistle Ban 1. Yes	Code
	Audible	-	Watchman	12. N			wan	ing	1	2. No	
Code(s) 01 06							200 W. C.			3. Unknown	
35. Location of Warning		Co		-	Narning Interconnected		Code		-	nated by Street	Code
1. Both Sides 2. Side of Vehicle Approach		I.	w	ith High	way Signals	1	•	Lights o	or Speci	al Lights	
3. Opposite Side of Vehicle App	oach	1	1.	Yes 2	2. No 3. Unknown		3	1. Yes	2. No	3. Unknown	2
222 329 34		Drove Behind			Code 41. Dr						Code
Age Gender 1. Male I	102 17 100 19 10	Struck or was			2			d or thru the ga then proceede		Stopped on crossing Other (specify)	r
2. Female					2		not stop				1
42. Driver Passed Standing Highway Vehicle	Code	43. View of	Frack Obscu nent Structu		(primary obstruction 3. Passing Train 5.		atation	7. Othe	- (000	ecify)	Code
1. Yes 2. No 3. Unknown	3		ng railroad e					icles 8. Not			8
			44. Driver w	vas		Code	e	45. Was Driv	ver in the	e Vehicle?	Code
Casualties to:	Killed	Injured	1. Kille	d 2. Inj	ured 3. Uninjured	3		1. Yes	2. No		1
40 Ulation Dation			47. Highwa	y Vehicl	e Property Damage			48. Total Nu	mber of	Highway-Rail Crossing	
46. Highway-Rail Crossing Users	0	1	(est. do	llar dam	age)	\$1,	000	(include )	driver)	2	
49. Railroad Employees	0	0			f People on Train					ent Accident / Being Filed	Code
52. Passengers on Train	0	0	(include	e passer	ngers and crew)			1. Yes	100 2000		2
53a. Special Study Block					53b. Special Study Blo	ock					
54. Narrative Description											
55 Tupod Name and Title	- 1	ER Signation	•							57. Date	
55. Typed Name and Title		56. Signature								Sr. Date	1
FORM FRA F 6180.57	* NOTE	THAT ALL C	ASUALTIES	MUST	BE REPORTED ON FO	RM	FRA F 61	80.55A			

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

OMB Approval No. 2130-0500

TEDERAL RAILROAD ADMINISTRAT		·/							Onio Approvante: 2		
Name Of							Al	phabetic Cod	e RR Accident/Incid	dent No.	
1. Reporting Railroad					<del> </del>			ATSF	1b. 36025411		
2. Other Railroad Involved in Train A							2a.		2b.		
3. Railroad Responsible for Track Ma			C recommendation				3a.		3b.		
4. U.S. DOT-AAR Grade Crossing ID	No.	028	107J	10220001807000	e of Accident/Incident	02/19/75	6. T	ime of Accide	7.201		
7. Nearest Railroad Station IRONSIDES			8. Div	ISION		9. County LOS A	NGELE	s	10. State Abbr. CA	Code 06	
11. City (if in a city) TORRAN	NCE		12. Hig	hway N	ame or No.				Public	Private	
Highwa	ay User In	volved				Rail Ec	uipment Ir	nvolved			
13. Type C. Truck-trailer F. Bus		J. Other Mot	tor Vehicle	Code	17. Equipment	3. Train	(standing	7) 6. Light loc	co(s) (moving)	Code	
A. Auto D. Pick-up truck G. Sch		K. Pedestria		A	1. Train (units pullir				co(s) (standing)	1	
	orcycle	M. Other (s			2. Train (units push		(standing	g) 8. Other	(specify)		
The second s	rection orth 2. So	outh 3. East		Code 3	18. Position of Car Un			1			
16. Position 1. Stalled on crossing 2. Stopped on Crossin		ving over cro	ssing	Code 1	19. Circumstance 1.			-		Code	
20a. Was the highway user and/or ra				Code	20b. Was there a haza	Rail equipmer ardous materia				1 Code	
in the impact transporting haza	rdous mat	erials?									
1. Highway User 2. Rail Equ	and the second s		. Neither	4	1. Highway U	ser 2. Rail	Equipmer	at 3. Both	4. Neither	L	
20c. State the name and quantity of the second seco	the hazard	lous materials	s released, if a	any							
21. Temperature 22. \	/isibility	(single entry)		Code	23. Weather (single	entry)				Code	
(specify if minus) 60 °F 1. [	Dawn 2.	Day 3. Dus	k 4. Dark	2	1. Clear 2. Cloud	y 3. Rain 4.	Fog 5. Sl	eet 6. Sno	w	1	
24. Type of Equipment	4 Work	train 7 Vard	VSwitching	Code	25. Track Type Used	-		Code	26. Track Number or N	Name	
	Consist     1. Freight train     4. Work train     7. Yard/Switching     Equipment Involved       (single entry)     2. Passenger train     5. Single car     8. Light loco(s)     1										
(single entry) 2. Passenger train 5. Single car 6. Light loco(s) 3. Commuter train 6. Cut of cars 9. Other (specify) 1 1. Main 2. Yard 3. Siding 4. Industry 1 HAR											
27. FRA 28. Number o		29. Number							ion	Code	
Track Class Locomoti (1-6,X) 2 Units	ve 1	Cars 2		Recorde stimate		nph	1. Nort	h 2. South 3	3. East 4. West	3	
	Wig wags	s 7	. Crossbucks	10. FI	agged by crew	33. Signal	ed Crossir	ng i	34. Whistle Ban	Code	
Crossing 2. Cantilever FLS 5.		-	. Stop signs		ther (specify)	Warn	ing		1. Yes		
Warning 3. Standard FLS 6. Code(s) 03	Audible	g	. Watchman	12. N	one	20 sec v	varn min	ι	2. No 3. Unknown		
35. Location of Warning		LC	ode 36. Cr	ossina \	Warning Interconnected	Code	37. Cro	ossina Illumin	ated by Street	Code	
1. Both Sides			10/5/000 - 200M	-	way Signals		200-001 27 UNDERCORD	hts or Specia	ero en esporte acconente a la constante		
<ol> <li>Side of Vehicle Approach</li> <li>Opposite Side of Vehicle Appr</li> </ol>	oach	1	1.	Yes 2	2. No 3. Unknown	3	1.	Yes 2. No	3. Unknown	3	
38. Driver's 39. Driver's Code	20041 849 2625	Drove Behin	d or in Front of	of Train	Code 41. Di	river			11	Code	
Age Gender			Struck by Se			Drove around			Stopped on crossing		
1. Male 2. Female		1. Yes 2. No	o 3. Unknov	vn	2	. Stopped and Did not stop	then proc	eeded 5. C	Other (specify)	5	
42. Driver Passed Standing	Code	43. View of	Track Obscur	red by	(primary obstruction					Code	
Highway Vehicle	3		anent Structui ling railroad e		3. Passing Train 5. nt 4. Topography 6.	. Vegetation . Highway Veh		Other (spec		8	
1. Yes 2. No 3. Unknown	5		44. Driver w			Code		Driver in the		L	
Casualties to:	Killed	Injured		ured 3. Uninjured	3	10.000	es 2. No	v GriiGe (	Code		
		<u>├</u>	47. Highway	Vehicl	e Property Damage	5	48. Tota	I Number of H	Highway-Rail Crossing		
46. Highway-Rail Crossing Users	0	0	(est. dol			\$500		ude driver)	1		
49. Railroad Employees	0	0	50. Total Number of People on Train 51. Is a Rail Equipment (include passengers and crew) Incident Report Beir						Code		
52. Passengers on Train	0	0	(include	passer	igers and crew)			es 2. No	eng riled	2	
53a. Special Study Block					53b. Special Study Bl	ock					
54. Narrative Description											
55. Typed Name and Title		56. Signature	9				·····		57. Date		
1 <u>80</u>											

FORM FRA F 6180.57

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

Name Of							Alphat	etic Coc	e RR Accident/Incid	lent No.
1. Reporting Railroad										
2. Other Railroad Involved in Train Ad	cident/loc	ident					1a. Br 2a.	NSF	1b. SC1097200	
3. Railroad Responsible for Track Ma									2b. SC1097200	
4. U.S. DOT-AAR Grade Crossing ID				6 Det			3a. B		3b. SC1097200	
	NO.	028	107J		e of Accident/Incident	10/09/97		OF ACCIO	lent/Incident 1:55 P	
7. Nearest Railroad Station TORRANCE			8. Div SOL		RN CALIFORNIA	9. County	ANGELES		10. State Abbr. CA	Code
11. City (if in a city)			12. Hig	hway N	ame or No. WESTE	RN AVE.			Public	Private
Highwa	y User Inv	volved				Rail E	quipment Involv	ved		
13. Type C. Truck-trailer F. Bus		J. Other Moto	or Vehicle	Code	17. Equipment	3. Train	(standing) 6	Light lo	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Sch	ool Bus	K. Pedestriar	ı	к	1. Train (units pulling				co(s) (standing)	
B. Truck E. Van H. Mot		M. Other (s			2. Train (units pushi		) (standing) 8	Other	(specify)	1
	rection	(geographi outh 3. East		Code	18. Position of Car Unit	in Train		1		
16. Position 1. Stalled on crossing		ving over cros		1 Code	19. Circumstance 1. F	ail equipme	nt struck highw	1.68		Code
2. Stopped on Crossin			ang	2			nt struck by hig		er	1
20a. Was the highway user and/or ra				Code	20b. Was there a hazar					Code
in the impact transporting hazar			N   = 144 = =	2	1. Highway Us	or 2 Do	Equipment	3. Both	4. Neither	4
1. Highway User 2. Rail Equ 20c. State the name and quantity of t			Neither		1. Highway Us	2. Rd	I Equipment	3. DUIN	4. Neither	L
zoc. State the name and quantity of			released, in	ariy					0	
	/isibility	(single entry)		Code	23. Weather (single	entry)				Code
(specify if minus) 79 °F 1. [	Dawn 2.	Day 3. Dusl	4. Dark	2	1. Clear 2. Cloudy	3. Rain 4	. Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment		teria 7 Mand	Outlacking	Code	25. Track Type Used b			Code	26. Track Number or I	Name
Consist 1. Freight train (single entry) 2. Passenger train		train 7. Yard			Equipment Involve	ed				
3. Commuter train				1	1. Main 2. Yard	3. Siding	4. Industry	1	MAIN	
27. FRA 28. Number o	f	29. Number o	f 30. Con	sist Spe	eed (Recorded if availab	ole) Code	31. Time Tat	le Direc	tion	Code
Track Class Locomotiv		Cars		Recorde		. I				
(1-6,X) <b>1</b> Units	3	3'		stimate			1. North 2	. South		4
32. Type of 1. Gates 4. Crossing 2. Cantilever FLS 5.	Wig wags				lagged by crew ther <i>(specify)</i>		aled Crossing		34. Whistle Ban	Code
	Audible	-	Watchman	12. N		War	ning		1. Yes 2. No	
Code(s) 01						20 sec	warn min	1	3. Unknown	3
35. Location of Warning		Co	de 36. Cr	ossing \	Warning Interconnected	Code	37. Crossi	ng Illumir	nated by Street	Code
1. Both Sides			w	ith High	way Signals		Lights	or Specia	al Lights	
<ol> <li>Side of Vehicle Approach</li> <li>Opposite Side of Vehicle Appr</li> </ol>	nach	1	1.	Yes 2	2. No 3. Unknown	3	1. Yes	2. No	3. Unknown	3
		Drove Behind	d or in Front	of Train	Code 41. Dri	ver				Code
Age Gender	and \$	Struck or was	Struck by Se	cond Tr	rain 1.	Drove arour	nd or thru the ga	ate 4.	Stopped on crossing	
39 1. Male		1. Yes 2. No	3. Unknov	vn			d then proceed	ed 5.	Other (specify)	
42. Driver Passed Standing	Code	43. View of	Track Obscu	red by	(primary obstructio	Did not stop			constraint of a	Code
Highway Vehicle	1	1. Perma	nent Structu	re	3. Passing Train 5.	Vegetation	7. Othe			1
1. Yes 2. No 3. Unknown		2. Stand	ng railroad e	quipme	nt 4. Topography 6.	Highway Ve	hicles 8. Not	Obstruct	ed	8
	Killed		44. Driver w	/as	C	Code	45. Was Driv	ver in the	e Vehicle?	Code
Casualties to:	Killed	Injured	1. Kille	d 2. Inj	ured 3. Uninjured		1. Yes	2. No		
46 Ulahusu Bail Creasian Usan			47. Highwa	y Vehicl	e Property Damage		48. Total Nu	mber of	Highway-Rail Crossing	Users
46. Highway-Rail Crossing Users	0	1	(est. do	llar dam	nage)	\$0	(include	driver)	0	
49. Railroad Employees	0	0			of People on Train				ent Accident / Being Filed	Code
52. Passengers on Train	0	0	(include	passer	ngers and crew)	3	1. Yes		seing Flied	2
53a. Special Study Block					53b. Special Study Blo	ock				
54. Narrative Description										
55. Typed Name and Title		56. Signature							57. Date	
FORM FRA F 6180.57	* NOTE	THAT ALL C	ASUALTIES	MUST	BE REPORTED ON FOR	RM FRA F 6	180 55A			

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

							CIVID Approvariate. 2	
Name Of					Aiphat	etic Cod	e RR Accident/Inci	dent No.
1. Reporting Railroad					1a. BN	NSF	1b. SC0600200	
2. Other Railroad Involved in Train Accident/Incide					2a.		2b. SC0600200	
3. Railroad Responsible for Track Maintenance					3a. B		3b. SC0600200	
4. U.S. DOT-AAR Grade Crossing ID No.	028113M		e of Accident/Incident	06/26/00	6. Time	of Accide	ent/Incident 9:50 I	5. 
7. Nearest Railroad Station WATSON	100 A 100	Division DUTHE	RN CALIF	9. County LOS A	NGELES		10. State Abbr. CA	Code 06
11. City (if in a city) CARSON		1961 M 1070		OA STRE			Public	Private
Highway User Invol	lved			Rail Eq	uipment Involv	ved		
13. Type C. Truck-trailer F. Bus J.	. Other Motor Vehicle	Code	17. Equipment	3. Train	(standing) 6.	Light loc	co(s) (moving)	Code
· · · · · · · · · · · · · · · · · · ·	. Pedestrian	A	1. Train (units pulling				co(s) (standing)	3
	I. Other (specify) (geographical)	Code	2. Train <i>(units pushin</i> 18. Position of Car Unit		(standing) 8.	Other	(specify)	
ALCON A CONSTRUCT OF A CONSTRUCT OF A CONSTRUCT OF	th 3. East 4. West	1				15		
16. Position 1. Stalled on crossing 3. Movir 2. Stopped on Crossing 4. Trapp	ng over crossing	Code	19. Circumstance 1. R	and the board of the second	t struck highw t struck by hig			Code
20a. Was the highway user and/or rail equipment	the sum day to the sum day to the sum of the	Code	20b. Was there a hazard			ilway use	51	2 Code
in the impact transporting hazardous materia			1. Highway Use	a 2 Dail	Equipment	2 Dath	4. Neither	4
1. Highway User 2. Rail Equipment 3     20c. State the name and quantity of the hazardou	3. Both 4. Neither	2 if any	1. Highway Ose		Equipment	3. Both	4. Neitrier	
	ao matemato released,	in any						
21. Temperature 22. Visibility (sin	ingle entry)	Code	23. Weather (single e	entry)				Code
	ay 3. Dusk 4. Dark	4	1. Clear 2. Cloudy	3. Rain 4. I	Fog 5. Sleet	6. Sno	w	
24. Type of Equipment Consist 1. Freight train 4. Work tra	ain 7. Yard/Switching	Code	25. Track Type Used by	-		Code	26. Track Number or	Name
(single entry) 2. Passenger train 5. Single ca	ar 8. Light loco(s)	1	Equipment Involve	u				
3. Commuter train 6. Cut of ca			1. Main 2. Yard		4. Industry	1	MAIN	
27. FRA 28. Number of 29 Track Class Locomotive		onsist Spe Recorde	ed (Recorded if availabl	e) Code	31. Time Tab	le Direct	ion	Code
(1-6,X) 2 Units 1		. Estimate		h E	1. North 2	South 3	3. East 4. West	4
32. Type of 1. Gates 4. Wig wags			agged by crew	-	ed Crossing	1	34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5. Hwy. traffic Warning 3. Standard FLS 6. Audible	signals 8. Stop sign: 9. Watchma		ther <i>(specify)</i> one	Warni	ng		1. Yes 2. No	
Code(s) 01		Ī		20 sec w	arn min		3. Unknown	2
35. Location of Warning	Code 36.		Warning Interconnected	Code		•	ated by Street	Code
1. Both Sides 2. Side of Vehicle Approach		with High	way Signals	1.	Lights d	or Specia	li Lights	
3. Opposite Side of Vehicle Approach	1	1. Yes 2	2. No 3. Unknown	1	1. Yes	2. No	3. Unknown	2
	Prove Behind or in From		Code 41. Driv				Name and an array law	Code
1. Male I 1	uck or was Struck by S Yes 2. No 3. Unkn		2 2 5		or thru the ga then proceede		Stopped on crossing Other (specify)	
2. Female 1				Did not stop				3
42. Driver Passed Standing Code 4 Highway Vehicle	<ol> <li>View of Track Obso 1. Permanent Struc </li> </ol>		(primary obstruction 3. Passing Train 5. V		7. Othe	r (spec	cify)	Code
1. Yes 2. No 3. Unknown 2	2. Standing railroad				cles 8. Not (			8
	44. Driver	rwas	с	ode	45. Was Driv	er in the	Vehicle?	Code
Casualties to: Killed	Injured 1. Kil	lled 2. Inj	ured 3. Uninjured	1	1. Yes	2. No		1
46. Highway-Rail Crossing Users 1	0		e Property Damage				Highway-Rail Crossing	Users
	(est t	dollar dam		\$2,000	(include o		nt Accident /	Code
49. Railroad Employees 0	(inclu		f People on Train				eing Filed	
52. Passengers on Train 0	0		3	3	1. Yes	2. No		2
53a. Special Study Block			53b. Special Study Bloc	:k				
54. Narrative Description AGE OF DRIVER UNKNOWN.								
55. Typed Name and Title 56	6. Signature						57. Date	
FORM FRA F 6180.57 * NOTE TI	HAT ALL CASUALTIE	S MUST I	BE REPORTED ON FOR	M FRA F 618	30.55A			

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

FEDERAL RAILROAD ADMINISTRATIO	N (FRA)							OMB Approval No. 2	130-0300
Name Of				1		Alphab	etic Code	RR Accident/Inc	ident No.
1. Reporting Railroad					10.100.00.1	1a. A'I	SF	<sup>1b.</sup> 151294200	
2. Other Railroad Involved in Train Acci	ident/Incident					2a.		<sup>2b.</sup> 151294200	)
3. Railroad Responsible for Track Maint	tenance					3a. A7	ſSF	3b. 151294200	
4. U.S. DOT-AAR Grade Crossing ID N	<sup>Io.</sup> 02812	4A 5	5. Date	e of Accident/Incident	2/23/94	6. Time	of Accide	ent/Incident 1:45	PM
7. Nearest Railroad Station WATSON		8. Divisio	on		9. County LOS AN	GELES		10. State Abbr. C.	Code A 06
11. City (if in a city) LOS ANGE	ELES	12. Highw	vay Na	ame or No. LAKME		-		Public	Private
	User involved	Į			Rail Equi	pment Involv	ed		
13. Type C. Truck-trailer F. Bus	J. Other Motor V	ehicle C	Code	17. Equipment	3 Train	standing) 6	Light loc	o(s) (moving)	Code
A. Auto D. Pick-up truck G. Schoo				1. Train (units pulling)		•.	-	o(s) (standing)	1 4
B. Truck E. Van H. Motoro			K	2. Train (units pushin		standing) 8.	Other	(specify)	1
14. Vehicle Speed     15. Direction       (est. mph at impact)     1. North	ction (geographical) th 2. South 3. East 4.		Code	18. Position of Car Unit i	n Train		1		
16. Position 1. Stalled on crossing 2. Stopped on Crossing	3. Moving over crossin 4. Trapped	g C	Code 3	19. Circumstance 1. Ra	ail equipment il equipment :				Code
20a. Was the highway user and/or rail e			Code	20b. Was there a hazard			Iway use		1 Code
in the impact transporting hazardo		. 1							
1. Highway User 2. Rail Equip			2	1. Highway Use	er 2. Rail E	quipment	3. Both	4. Neither	
20c. State the name and quantity of the	e nazardous materiais rei	eased, it an	y						
21. Temperature 22. Visi	ibility (single entry)	c	Code	23. Weather (single e	ntry)				Code
(specify if minus) 57 °F 1. Day	wn 2. Day 3. Dusk 4	. Dark	2	1. Clear 2. Cloudy	3. Rain 4. F	og 5. Sleet	6. Snov	N	1
24. Type of Equipment			Code	25. Track Type Used by	y Rail		Code	26. Track Number or	Name
	4. Work train 7. Yard/Sw	•		Equipment Involved					
	5. Single car 8. Light loc 6. Cut of cars 9. Other (a		1	1. Main 2. Yard	3. Siding	. Industry	1	SINGLE MAIN	
27. FRA 28. Number of	29. Number of	30. Consis	st Spe	ed (Recorded if available	e) Code :	31. Time Tab	le Directi	on	Code
Track Class Locomotive (1-6.X) 3 Units	Cars 3 58	R. Red E. Esti			h E	1 Month 2	Couth 2	East 4 West	4
		1		agged by crew	33. Signale	a strandstrand		3. East 4. West	Code
	lwy. traffic signals 8. Ste			ther (specify)	Warnin		(	1. Yes	oouo
	udible 9. Wa	atchman	12. No	one	20 sec wa	rn min		2. No	E
Code(s) 01					L			3. Unknown	
35. Location of Warning 1. Both Sides	Code		-	Varning Interconnected way Signals	Code		or Special	ated by Street Lights	Code
2. Side of Vehicle Approach	1			2. No 3. Unknown	2	-		-	3
3. Opposite Side of Vehicle Approa						1. Yes	2. NO	3. Unknown	
38. Driver's 39. Driver's Code 40 Age Gender	<ol> <li>Driver Drove Behind or and Struck or was Stru</li> </ol>			Code 41. Driv ain 1. D	er )rove around (	or thru the ga	te 4.S	topped on crossing	Code
1. Male	1. Yes 2. No				stopped and the			Other (specify)	1
2. Female 42. Driver Passed Standing	Code 43. View of Tra		d by	(primary obstruction	Did not stop		<u></u>		Code
Highway Vehicle	1. Permanei			3. Passing Train 5. V		7. Othe	r (spec	ify)	L
1. Yes 2. No 3. Unknown	2. Standing	railroad equ	uipmer	nt 4. Topography 6. H	lighway Vehic	les 8. Not (	Obstructe	d	8
Convelling to		. Driver was	s	C	ode	45. Was Driv	ver in the	Vehicle?	Code
Casualties to:	Killed Injured	1. Killed	2. Inji	ured 3. Uninjured		1. Yes	2. No		
46. Highway-Rail Crossing Users	1 0 47			e Property Damage				lighway-Rail Crossing	
		(est. dollar			50	(include of 51. Is a Rail		nt Accident /	0 Code
	0 0 <sup>50</sup> 0 0			f People on Train ogers and crew)		Incident	Report Be	eing Filed	2
· · · · · · · · · · · · · · · · · · ·						1. Yes	2. No		2
53a. Special Study Block				53b. Special Study Bloc	ж		÷		
54. Narrative Description									
55. Typed Name and Title	56. Signature							57. Date	
FORM FRA F 6180.57	* NOTE THAT ALL CAS	UALTIES M	UST I	BE REPORTED ON FOR	M FRA F 618	0.55A			

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

Name Of         Application Code         RAR Academy Moder Number of Name Academy Moder Number Number of Name Academy Moder Number Number of Name Academy Moder Number Num		( · · · ·	,					_			
2. Other Rulinad Involved In Tran Academblinident     22. Bits (Absolution)     23. Barlos Responsible for Track Mainformance     22. Bits (Absolution)     23. Barlos Responsible for Track Mainformance     24. Barlos Responsible for Track Mainformance     24. Barlos Responsible for Track Mainformance     25. Constraint State State Formance     26. Constraint Formance											
3. Rulational description is not series in a serie of a second of the second		ident/Inc	ident						NSF		** ****
4. U.S. DCP-ARG Grade Cossing ID No.         028125G         S. Date of Academ/Incident         03/2401         6. Time of Academ/Incident         12:45 AM           7. Nearest Railand Station         8. Division         9. County         0. Sourty         Dis State         Code           MATSON         12. Highway Name or No.         9. County         Dis Note         Code         Dis Note         Dis Note<						min a carao					
7. Nearest Ratined Station       9. Division       9. Ocurity       10. State       Adv.       Code         11. Oby (if n e dry)       CARSON       12. Hybrwy Name N. WULLINICTON AVELUE       Public       Protein         13. Trait       C. Truck ratine       1. Obv (if n e dry)       2. Obver Motor Vehicle       Fighway User Involved       Image: State				4050	E Det	a of Appident/Incident	0.010.110.1				
WASON         LOS ANCELES TEM         LOS ANCELES         Abit         C.A.         06           11. Chy (fr a chy)         CARSON         12 Highmay Name or No.         WILMINGTON AVENUE         Public         Public         Public         Chulc         Public         Chulc         Public         Public         Color         Color         Color         Auto         Drivate         Vanue         Public         Public         Color         Color         Color         Color         Auto         Drivate         Color         Train (unpublic Value)         Color		NO.	028			e of Accident/Incident	1	6. Time	of Accid		
11 City (if is a city)       CARSON       12. Highway Name or No.       WILMINGTON AVENUE       Public       Provate         11 City (if is a city)       CARSON       12. Highway Name or No.       WILMINGTON AVENUE       Public       Provate         13. Tripe (. Truck heiler F. Bis J. Other Motor Vehicle Cate (the provate intermotor)       10. Truin (units putting): 4. Cerks) (moving)       Control (the provate intermotor)       Code         14. Vehicle Speed       15. Direction (grographical)       Code       15. Foreiton (Grographical)       Code       15. Train (units putting): 5. Cerks) (standing): 8. Other (groedy)       1         14. Vehicle Speed       15. Direction (grographical)       Code       18. Presition (Grad Uthin Train (units putting): 5. Cerks) (standing): 8. Other (groedy)       1         15. Direction (Grad Uthin Train (units putting): Cerks) (standing): 5. Cerks) (standing): 5. Cerks) (standing): 5. Cerks)       Code       2. Real equipment struck highway user       Code         20. Wate the city and the columnent involved (in the impact transportin haradown materials)?       1       10. Gera 2. Cloudy 3. Rain 4. Fog 5. Steet 6. Snow       1         21. Temperature (groed virtum): 4. Single cark Lipting (Groed)       21. Train (groegraphical)       Code       28. Track Xipu user       Code       28. Track Xipu user <td></td> <td></td> <td></td> <td></td> <td></td> <td>FLFS TERM</td> <td></td> <td>ICFLES</td> <td></td> <td></td> <td>1</td>						FLFS TERM		ICFLES			1
Highway User Involved         Rail Equipment         Rail Equipment         Rail Equipment         Rail Equipment         Code           13. Type         C. Tuck-trailer         F. Bus         Code         17. Equipment         3. Train         (readring) 8. (particle cole)         (particole)					1. The second					and the second s	
A use D. Dicketagen r. Base and P. Stand B. R. Pederation version in the standard P. Carlos (Second P. Light Bock)) (Mark 100) (Second P. Light Bock)) (Second P. Light Bock) (Second P. Light Bock)) (Second P. Light Bock) (Second P. Lig		User Inv	volved						ved		
A Add       D. Pickup truck       Generalization       B       1. Train       Land	13. Type C. Truck-trailer F. Bus		J. Other Mot	tor Vehicle	Code	17. Equipment	3. Train	(standing) 6	Light lo	co(s) (movina)	Code
B. Inck E. Van       In. Moticrycle       M. Othef (specify)       1. Train (units pushing)       2. Train (units pushing)       Code       1. Train (units pushing)       Code       2. Rall equipment struck highway user       Code       1. Train (units pushing)       Code       2. Rall equipment struck highway user       Code       Code       1. Train (units pushing)       Code       2. Rall equipment struck highway user       Code       Co	The second description of a second	ol Bus			In	1. Train (units pulling			-		
(ext. mpl at impace)         1         1. Norh         2. South         3. Bade of cossing         3. Moving over crossing         Code         3. Rain equipment struck highway user         Code         3. Rain equipment struck highway user         1           20a. Was the highway user and/or rail equipment involved         Code         20. Was there a hazardous materials release by         Code         20. Was there a hazardous materials release by         Code         20. Was there a hazardous materials release by         Code           20a. Was thore a hazardous materials release by         Code         20. Was there a hazardous materials release by         Code         20. Was there a hazardous materials release by         Code         20. Was there a hazardous materials release by         Code         20. Was there a hazardous materials release by         Code         20. Was there a hazardous materials release by         Code         20. Was there a hazardous materials release by         Code         20. Was there a hazardous materials release by         Code         20. Was there a hazardous materials release by         1         4         1. Clear 2. Cloudy 3. Rain 4. Fog 5. Silet         6. Snow         1         20. Was there a hazardous materials release by         Code         20. Track Number of         20. Comaterial release the was there in the was the release by         Code         20. Track Number of         20. Comaterial release the was the release by         1         MAIN LINE         MAIN LI		-						(standing) 8	Other	(specify)	1
16. Position       1. Stated carcosang       3. Moving over crossing       2       Code       19. Circumstance       1. Ball equipment struck by highway user       1       Code       2       Rail equipment struck by highway user       1       1       Code       1       Code       2       Rail equipment struck by highway user       1       1       Code       Code       20. Was there a hazardoux materials release by       Code       Code       Code       Code       20. Was there a hazardoux materials release by       Code       Code       Code       Code       20. Was there a hazardoux materials release by       Code       Code       Code       20. Was there a hazardoux materials release by       Code       Code       Code       20. Was there a hazardoux materials release by       Code       Code       Code       20. Was there a hazardoux materials released, if ary       Code       Code       20. Track Type Used by Rail       Code       20. Track Type Used by Rail       Code       20. Track Number or Name         Cirgle entry       1. Second 2. Strack Type Used by Rail       2. Number of       20. Strack Type Used by Rail       Code       20. Track Number or Name       Code       20. Track Number or Name         Cirgle entry       2. Rained Class       1. Units       3       3       Strack Type Used by Rail       Code       20. Track Number or Name					1	18. Position of Car Unit	in Train		1		
2. Stopped on Crossing         4. Tapped         3         2. Rail equipment structures         1           200, Was the humps user and/or ing buzzardous materials release U         Code         200. Was there a hazardous materials release U         Code         200. Was there a hazardous materials release U         Code         200. Was there a hazardous materials release U         Code         200. Was there a hazardous materials release U         Code         200. Was there a hazardous materials release U         Code         200. Was there a hazardous materials release U         Code         200. Was there a hazardous materials release U         1         4         1         1         Code         200. Was there a hazardous materials release U         1         1         Code         200. Was there a hazardous materials release U         1         1         Code         200. Was there a hazardous materials release U         1         1         Code         200. Was there a hazardous materials release U         1         1         Code         200. Was there a hazardous materials release U         1         1         Code         200. Was there a hazardous materials release U         1         1         Code         200. Was there a hazardous materials release U         1         1         Code         200. Was there a hazardous materials release U         1         1         Code         200. Was there a hazardous there a hazardous materials release U			už <u>1. 1097</u> 2		1 -	19. Circumstance 1. R	ail equipment	struck highw			Code
In the impact transporting hazardous materials?       Units       4       1. Highway User       2. Rail Equipment       3. Boh       4. Neither       4         20c. State the name and quantity of the hazardous materials released, if any       22. Visability (single entry)       Code       23. Weather (single entry)       Code       23. Weather (single entry)       Code       Code       1. Clear 2. Cloudy 3. Rain 4. Fog 5. Steet 6. Snow       1         24. Type of Equipment Consist       1. Freight Taim       4. Works train 7. Yard(Swichong Code       Code       25. Track Type Used by Rai       Code       26. Track Number of Name       Code       20. Consist Speed (Recorded if available)       Code       1. North 2. South 3. East 4. West 3       3       Southart 5. Song and 3.	Contraction of the second seco		• • • • • •							er	1
1. Highway User         2. Rail Equipment         3. Both         4. Neither         4         1. Highway User         2. Rail Equipment         3. Both         4. Neither         4           20c. State the name and quantity of the hazardous materials released, if any         21. Temperature         22. Viability (single entry)         Code         23. Weather (single entry)         Code         23. Weather (single entry)         Code         6. Snow         1           24. Type of Equipment         1. Single entry         Single entry         Code         25. Track Type Used by Rail         Code         26. Track Number or Name         27. Track Type Used by Rail         Code         26. Track Number or Name         20. Track Number or Name         26. Track Number or Name         27. Track Number or Name         26. Track Number or Name </td <td>• • •</td> <td></td> <td></td> <td></td> <td>Code</td> <td>20b. Was there a hazard</td> <td>dous materia</td> <td>s release by</td> <td></td> <td></td> <td>•</td>	• • •				Code	20b. Was there a hazard	dous materia	s release by			•
20c. State the name and quantity of the hazardous materials released, if any       21. Temperature (apedi firminus)       22. Visibility (single entry)       Code       23. Weather (single entry)       1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sileet 6. Snow       1         24. Type of Equipment Consist       1. Preight tain 4. Work train 7. Yard/Switching (single entry)       Code       25. Track Type Used by Rail Constat Supernorm Monte of Name Constat Guerren Name Constat Guerren Name Constat Guerren Name Constat Guerren Name Code (single entry)       26. Track Number of Name Code (single entry)       27. FRA       32. Number of Constat Super (single entry)       1. Main 2. Yard 3. Signified Constat Super (single entry)       1       MAIN LINE         27. FRA       2       28. Number of Cars       29. Number of Cars       29. Number of Cars       30. Consult Super (single Constat Super (s	The week of the second se			Neither	4	1. Highway Use	er 2. Rail I	Equipment	3. Both	4. Neither	4
(apecify if minus)       45 °F       1. Dawn       2. Day       3. Dusk       4. Dark       4       1. Clear       2. Cloudy       3. Rain       4. Fog       5. Sleet       6. Snow       1         24. Type of Equipment Consist       1. Freight train       4. Work train       7. Yard/Switcoc(s)       2       2       Track Number of Single entry)       2       25. Track Number of 2. Passenger train       5. Other (specify)       1       1       1. Main       2. Yard       3. Siding       4. Industry       1       MAIN LINE         27. FRA Track Class       28. Number of Locomotive       29. Number of Cars       30. Consist Speed (Recorded if available)       Code       3. Time Table Direction       Code       Code       3. Time Table Direction       Code       Code       3. Ninh       1       MAIN LINE       3.         32. Type of       1. Gates       4. Ways       7. Crossbucks       10. Flagged by crew       33. Signaled Crossing       3. Unknown       20 sec       31. Crossing Uluminated by Street Lights or Special Lights       2. No       3. Unknown       1       2. No       3. Unknown       1       3. Signale       3. Unknown       1       3. Signale       3. Unknown       1       3. Signale       3. Unknown       1       3. Unknown       1       3. Unknown       1					any						
(apecify if minus)       45 °F       1. Dawn       2. Day       3. Dusk       4. Dark       4       1. Clear       2. Cloudy       3. Rain       4. Fog       5. Sleet       6. Snow       1         24. Type of Equipment Consist       1. Freight train       4. Work train       7. Yard/Switcoc(s)       2       2       Track Number of Single entry)       2       25. Track Number of 2. Passenger train       5. Other (specify)       1       1       1. Main       2. Yard       3. Siding       4. Industry       1       MAIN LINE         27. FRA Track Class       28. Number of Locomotive       29. Number of Cars       30. Consist Speed (Recorded if available)       Code       3. Time Table Direction       Code       Code       3. Time Table Direction       Code       Code       3. Ninh       1       MAIN LINE       3.         32. Type of       1. Gates       4. Ways       7. Crossbucks       10. Flagged by crew       33. Signaled Crossing       3. Unknown       20 sec       31. Crossing Uluminated by Street Lights or Special Lights       2. No       3. Unknown       1       2. No       3. Unknown       1       3. Signale       3. Unknown       1       3. Signale       3. Unknown       1       3. Signale       3. Unknown       1       3. Unknown       1       3. Unknown       1											
Light exploring minuted     1. Cash at 2. Day     1. Cash at 2. Day     1. Cash at 2. Day     2. Stack at 2. Day     2. No     2. Day     2. D		sibility (	(single entry)		Code	23. Weather (single e	entry)				
Consist (single entry)       1. Freight train       4. Work train       7. Yard/Switching       Equipment Involved         Consist       2. Passengers       8. Suph locosity       1       Main       2. Yard       3. Skindig       4. Industry       1       MAIN LINE         27. FRA (1-X)       28. Number of Locomotive       29. Number of Cars       20. Scientify       1       1       Main       2. Yard       3. Skindig       4. Industry       1       MAIN LINE         27. FRA (1-X)       2       Number of Units       29. Number of Locomotive       20. Scientify       1       1       Main       2. Yard       3. Skindig       4. West       3         33. Zrype of 1. Gates       1. Gates       4. Wig wags       7. Crossbuck       10. Floge glog (rew Varing)       30. Skindig       1. Other (specify)       30. Unknown       20 sec warm       20. No       20 sec warm       2. No       3. Unknown       2         35. Location of Warning       0.1       0.3       1. Yes       2. No       3. Unknown       1       1. Yes       2. No       3. Unknown       1         36. Driver's       Code       40. Driver Drove Behind or in Front of Train       Code       30. Unknown       1       1. Yes       2. No       3. Unknown       1	(specify if minus) 45 °F 1. Da	awn 2.	Day 3. Dus	k 4. Dark	4	1. Clear 2. Cloudy	3. Rain 4. I	og 5. Sleet	6. Sno	W	1
(single entry)     2. Passenger train 5. Single car 8. Light loco(s)     Locomater train 6. Cut of cars 9. Other (specify)     1     1     Main 2. Yard     3. Siding     4. Industry     1     MAIN LINE       27. FRA Track Class     28. Number of Locomotive     29. Number of Cars     30. Consist Speed (Recorded if available)     Code     31. Time Table Direction     Code       32. Type of     1. Gates     4. Wig wags     7. Crossbuck 10. Flagged by crew Crossing     33. Signaled Crossing     34. Whiste Ban S. Stondar PLS     Code       33. Signaled Crossing     3. Standard PLS     6. Audible     9. Wathman 12. None     20 sec warn min     3. Unknown     2       26. Location of Warning     0. Standard PLS     6. Crossbuck Signals     1     1. Yes     2. No     3. Unknown     1       3. Optower's     39. Driver's     Code     40. Cross Sing Warning Interconnected I. Both Sides     Code     36. Crossing Warning Interconnected I. Stond Side of Vehicle Approach     1     1. Yes     2. No     3. Unknown     1       38. Driver's     39. Driver's     Code     40. Driver Drove Behind or in Front of Train A ge     Code     41. Driver     Code     1. Ves     2. No     3. Unknown     1       39. Driver's     Sobe of Vehicle Approach     1     1. Yes     2. No     3. Unknown     2     Stopped on		A Mork	train 7 Var	1/Switching	Code	200 a 100 a 100 au			Code	26. Track Number or	Name
27. FRA Track Class       28. Number of Locomotive       29. Number of Locomotive       29. Number of Cas       30. Consist Speed ( <i>Recorded i available</i> )       Code       31. Time Table Direction       Code         33. 2       View of Crossing       2. Suther of Locomotive       29. Number of Locomotive       30. Consist Speed ( <i>Recorded i available</i> )       Code       31. Time Table Direction       Code         33. 2       Type of Crossing       1. Gates       4. Wig wags       7. Crossbucks       10. Flagged by crew       33. Signaled Crossing       34. Whistle Ban       Code         S. Location of Warning       5. Standard FLS       6. Audibe       9. Wachman 12. None       20 sec warn min       3. Unknown       2         35. Location of Warning       Code       36. Crossing Warning Interconnected with Highway Signals       Code       37. Crossing Illuminated by Street Lights or Special Lights       Code         3. Oprosits Side of Vehice Approach       1       1. Yes       2. No       3. Unknown       3       1. Yes       No       0. Opositing         3. Oprosits Side of Vehice Approach       1       1. Yes       2. No       3. Unknown       3       1. Yes       3. Unknown       1         3. Oprosits Side of Vehice Approach       1       1. Yes       2. No       3. Unknown       2       3. Unknown						Equipment Involve	đ		.		
Tack Class         2         Locomotive Units         3         Cars         R. Recorded Estimated         10         mph         E         1. North 2. South 3. East         4. West         3           27 Type of Crossing         1. Gates         4. Wig wags         7. Crossbucks 10. Flagged by crew Warning         3. Standard FLS         6. Audibe         9. Watchman         12. None         3. Standard Crossing         3. Unknown         2         2. No         3. Unknown         1         1. Yes         2. No         3. Unknown         1         1. Yes         2. No         3. Unknown         1         1. Size of Vehicle Approach         1         1. Yes         2. No         3. Unknown         1         2. Size of Vehicle Approach         1         1. Yes         2. No         3. Unknown         1	3. Commuter train	6. Cut of	cars 9. Othe	er (specify)	1	1. Main 2. Yard	3. Siding	4. Industry	1	MAIN LINE	
(1-6,X)         2         Units         3         3         E Estimated         10         mph         E         1. North         2. South         3. East         4. West         3           32. Type of Warning         1. Gates         4. Wig wags         7. Crossbrucks         10. Flagged by crew Warning         33. Signaled Crossing Warning         34. Whistle Ban         Code         35. Signaled Crossing         34. Whistle Ban         Code         36. Crossing Warning         20 sec warn min         3. Unknown         2           35. Location of Warning         0.         0.         Code         36. Crossing Warning Interconnected with Highway Signals         Code         37. Crossing Illuminated by Street Lights or Special Lights         Code           3. Opnowers         39. Driver's         Code         40. Driver Drove Behind or in Front of Train 3. Opnowers         Code         41. Driver 1. Yes 2. No         3. Unknown         1         1. Yes 2. No         3. Unknown         1           42. Driver Passed Standing Highway Vehicle         1.         Yes 2. No         3. Unknown         1         2         Stopped on crossing 2. Stopped on then proceeded         5. Other (specify)         1           42. Driver Passed Standing Highway Vehicle         1. Permanent Structure         3. Unknown         2         Stopped on trossing         2	And the second sec						e) Code	31. Time Tab	le Direct	lion	Code
32. Type of 1. Gates       4. Wig wags       7. Crossbucks 10. Flagged by crew (mainly marring)       33. Signaled Crossing       34. Whistle Ban       Code         33. Standard FLS       6. Audible       9. Watchman 12. None       20 sec warn min       3. Signaled Crossing       1. Yes       2. No       2. No         Code(s)       01       03       03       03. Unknown       20 sec warn min       2. No       2. No         35. Location of Warning       0. Oco       36. Crossing Warning Interconnected with Highway Signals       Code       36. Crossing Warning Interconnected Lights       2. No       3. Unknown       1         38. Driver's       39. Driver Cross Code       40. Driver Drove Behind or in Front Of Train       Code       41. Driver       Code       30. Unknown       1       1. Yes 2. No       3. Unknown       1         38. Driver's       39. Driver's       39. Driver's Code       40. Driver Drove Behind or in Front Of Train       Code       41. Driver       1. Drove around or thru the gate       4. Stopped on crossing       Code         1. Yes 2. No       3. Unknown       1       1. Yes 2. No       3. Unknown       2       Stopped and then proceeded       5. Other (specify)       1         42. Driver Passed Standing       Code       43. View of Track Obscured by       (primary obstruction)       7.						4.0	ьIE	1 North 2	South	3 Fast 4 West	3
Crossing Warning 3. Standard FLS       6. Audible 6. Audible 9. Watchman       9. Watchman       12. None       20 sec warn min       1. Yes 2. No       2. No         Code(s) 0       0       03       0       0       20 sec warn min       20 sec warn min       2. No       3. Unknown       2         35. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach 3. Opposite Side of Vehicle Approach 3. Opposite Side of Vehicle Approach 1. Male 2. Female       1       1. Yes 2. No       3. Unknown       3       1. Yes 2. No       3. Unknown       1         42. Driver Passed Standing Highway Vehicle 1. Yes 2. No       3. Unknown       1       1. Yes 2. No       3. Unknown       2       Stopped and then proceeded 5. Other (specify)       1         42. Driver Passed Standing Highway Vehicle       1       Yes 2. No       3. Unknown       1       2. Stopped and then proceeded 5. Other (specify)       1         1. Yes 2. No       3. Unknown       1       2. Stopped and then proceeded 5. Other (specify)       1         42. Driver Passed Standing Highway Vehicle       Code 1. Permanent Structure       3. Passing Train 5. Vegetation 1. New 2. No       7. Other (specify)       2. Stopped and then proceeded 5. Other (specify)       1         46. Highway-Rail Crossing Users       0       0       44. Driver was       Code 1. Killed 2. Injured <td< td=""><td>(1.2)</td><td></td><td></td><td></td><td></td><td></td><td></td><td>these second sector is a</td><td></td><td></td><td></td></td<>	(1.2)							these second sector is a			
Code(s)       01       03       20 sec warn min       3. Unknown       2         35. Location of Warning 1. Both Sides       Code       36. Crossing Warning Interconnected with Highway Signals       Code       37. Crossing Illuminated by Street Lights or Special Lights       Code         3. Dirlver Age       39. Driver's Englie       Code       40. Driver Drove Behind or in Front of Train and Struck or was Struck by Scoord Train 1. Yes       Code       41. Driver       1. Yes       2. No       3. Unknown       1         42. Driver Passed Standing Highway Vehicle       1       Code       43. View of Track Obscured by 1. Permanent Structure       (primary obstructor)       7. Other (specify) 3. Did not stop       1         42. Driver Passed Standing Highway Vehicle       Code       43. View of Track Obscured by 2. Standing railroad equipment       (primary obstructor)       7. Other (specify) 3. Did not stop       Code         44. Driver was       Code       44. Driver was       Code       45. Was Driver in the Vehicle?       Code         45. Highway-Rail Crossing Users       0       0       47. Highway Vehicle Property Damage (est dollar damage)       S1,000       1. Yes 2. No       1         46. Highway-Rail Crossing Users       0       0       50. Total Number of People on Train (include passengers and crew)       3       1. Yes 2. No       2       1. Se Rail Equipment Accident	Crossing 2. Cantilever FLS 5. H						_	-			
Code(s)       01       03       03       04		udible	9	. Watchman	12. N	one	20 sec w	arn min			2
1. Both Sides       with Highway Signals       Lights or Special Lights         2. Side of Vehicle Approach       1       1.Yes 2. No 3. Unknown       3       1.Yes 2. No 3. Unknown       1         38. Driver's       39. Driver's       Code       40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train       Code       41. Driver       1. Orove around or thru the gate       4. Stopped on crossing       2. Stopped and then proceeded       5. Other (specify)       1         42. Driver Passed Standing       Code       43. View of Track Obscured by       (primary obstruction)       7. Other (specify)       1         1. Yes 2. No       3. Unknown       1       2. Stopped and then proceeded       5. Other (specify)       1         42. Driver Passed Standing       Code       43. View of Track Obscured by       (primary obstruction)       7. Other (specify)       1         1. Yes 2. No       3. Unknown       1       2. Standing rain 5. Vegetation       7. Other (specify)       8         Casualties to:       Killed       Injured       44. Driver was       Code       45. Was Driver in the Vehicle?       Code         46. Highway-Rail Crossing Users       0       0       47. Highway Vehicle Property Damage       48. Total Number of Highway-Rail Crossing Users       51. Is a Rail Equipment Accident / Incident / Incident / Incident / Inci	0.	I		20.01		Namina Internation	L				L.,
3. Opposite Side of Vehicle Approach       1       1. Yes       2. No       3. Unknown       5       1. Yes       2. No       3. Unknown       1         38. Driver's       39. Driver's       Code       40. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train 2. Female       Code       41. Driver       Code       1. Drove around or thru the gate       4. Stopped on crossing       Code         42. Driver Passed Standing Highway Vehicle       1. Yes       2. No       3. Unknown       2       2. Stoged and then proceeded       5. Other       (specify)       1         42. Driver Passed Standing Highway Vehicle       Code       43. View of Track Obscured by 1. Permanent Structure       (primary obstruction)       Code       8       Code       8         Casualties to:       Killed       Injured       44. Driver was       Code       45. Was Driver in the Vehicle?       Code       1       9       0       1       6. Highway Vehicles       8. Not Obstructed       8       1. Yes 2. No       1       1       2       2       1       1       1       2       1       1       2       1       1       2       3. Unknown       1       3. Unknown       1       3. Unknown       1       3       1       3       1       3       1 <td></td> <td></td> <td></td> <td>2002040- AVC12807- 122301</td> <td></td> <td></td> <td>Code</td> <td></td> <td>-</td> <td>CONTRACTOR CONTRACTOR CONTRACTOR</td> <td>Code</td>				2002040- AVC12807- 122301			Code		-	CONTRACTOR CONTRACTOR CONTRACTOR	Code
38. Driver's       39. Driver's       30. Driver's       30. Driver's       30. Driver's       30. Driver's       40. Driver Drove Behind or in Front of Train       Code       41. Driver       Code       40. Driver's       Code       40. Driver's       Code       41. Driver       Code       1. Drove around or thru the gate       4. Stopped on crossing       2. Stopped and then proceeded       5. Other (specify)       1         42. Driver Passed Standing       Code       43. View of Track Obscured by       (primary obstruction)       7. Other (specify)       1       Code         Highway Vehicle       1. Permanent Structure       3. Driver was       2. Standing railroad equipment       4. Dropography       6. Highway Vehicles       8. Not Obstructed       8         Casualties to:       Killed       Injured       44. Driver was       Code       45. Was Driver in the Vehicle?       Code         46. Highway-Rail Crossing Users       0       0       47. Highway Vehicle Property Damage       48. Total Number of Highway-Rail Crossing Users       (include driver)       2       2         49. Railroad Employees       0       1       50. Total Number of People on Train       51. Is a Rail Equipment Accident / Incident Report Being Filed       Code         52. Passengers on Train       0       0       53b. Special Study Block       1. Yes 2. No			1		Vec		3	1 Van	2 No.	2 Linknown	1
Age       Gender       and Struck or was Struck by Second Train       1. Drove around or thru the gate       4. Stopped on crossing         1. Male       1. Yes       2. No       3. Unknown       2       2. Stopped and then proceeded       5. Other (specify)       1         42. Drive Passed Standing       Code       43. View of Track Obscured by       (primary obstruction)       Code       3. Did not stop       Code         1. Yes       2. No       3. Unknown       1       2. Stopped and then proceeded       5. Other (specify)       1         42. Drive Passed Standing       Code       43. View of Track Obscured by       (primary obstruction)       7. Other (specify)       6. Highway Vehicles       8. Not Obstructed       8         1. Yes       2. No       3. Unknown       1       2. Standing railroad equipment       4. Topography       6. Highway Vehicles       8. Not Obstructed       8         Casualties to:       Killed       Injured       3. Uninjured       3       1. Yes       2. No       1         46. Highway-Rail Crossing Users       0       1       50. Total Number of People on Train       48. Total Number of Highway-Rail Crossing Users       (include passengers and crew)       51. Is a Rail Equipment Accident / Incident Report Being Filed       Code         52. Passengers on Train       0       <		Salar Some Long						I. tes	2. 110	3. Unknown	
1. Male       1. Yes 2. No 3. Unknown       2       2. Stopped and then proceeded 5. Other (specify)       1         42. Driver Passed Standing       Code       43. View of Track Obscured by       (primary obstruction)       Code         42. Driver Passed Standing       Code       43. View of Track Obscured by       (primary obstruction)       Code         1. Yes 2. No 3. Unknown       1       Permanent Structure       3. Passing Train 5. Vegetation       7. Other (specify)         1. Yes 2. No 3. Unknown       1       1. Permanent Structure       3. Passing Train 5. Vegetation       7. Other (specify)         1. Yes 2. No 3. Unknown       1       2. Standing railroad equipment       4. Topography       6. Highway Vehicles       8. Not Obstructed       8         Casualties to:       Killed       Injured       44. Driver was       Code       45. Was Driver in the Vehicle?       Code         46. Highway-Rail Crossing Users       0       47. Highway Vehicle Property Damage (est dollar damage)       \$1, Yes 2. No       1         49. Railroad Employees       0       1       50. Total Number of People on Train (include driver)       2       51. Is a Rail Equipment Accident / Incident Report Being Filed       Code         52. Passengers on Train       0       0       53b. Special Study Block       1. Yes 2. No       2	CONTRACTOR AND							or thru the a	ate 4.5	Stopped on crossing	Code
42. Driver Passed Standing Highway Vehicle       Code       43. View of Track Obscured by I. Permanent Structure       (primary obstruction)       Code       Subicity       Code       Subicity       Code       Subicity       Subicity       Subicity       Code       Subicity       Subicity       Subicity       Code       Subicity       Subicity       Code       Subicity       Subicity       Code       Subicity       Subicity       Code       Subicity       Subicity       Subicity       Code       Subicity       Subicity       Subicity       Subicity       Code       Subicity	1 Male I		1. Yes 2. No	o 3. Unknov	vn	29					1 1
Highway Vehicle       1       1. Permanent Structure       3. Passing Train       5. Vegetation       7. Other       (specify)       8         1. Yes       2. No       3. Unknown       1       2. Standing railroad equipment       4. Topography       6. Highway Vehicles       8. Not Obstructed       8         Casualties to:       Killed       Injured       1. Killed 2. Injured       3. Uninjured       3       1. Yes       2. No       1         46. Highway-Rail Crossing Users       0       0       47. Highway Vehicle Property Damage (est. dollar damage)       \$1,000       48. Total Number of Highway-Rail Crossing Users (include driver)       2         49. Railroad Employees       0       1       50. Total Number of People on Train (include passengers and crew)       3       1. Yes 2. No       2         52. Passengers on Train       0       0       53b. Special Study Block       3       1. Yes 2. No       2         53a. Special Study Block       53b. Special Study Block       53b. Special Study Block       53b. Special Study Block       1. Yes 2. No       2	2. Female	Cada	42 1/1014 05	Track Observ		3.1	10.00				L
1. Yes       2. No       3. Unknown       1       2. Starling railroad equipment       4. Topography       6. Highway Vei/Les       8. Not Obstructed       8         Casualties to:       Killed       Injured       44. Driver was       Code       45. Was Driver in the Vehicle?       Code       1. Yes       2. No       1         46. Highway-Rail Crossing Users       0       0       47. Highway Vehicle Property Damage (est dollar damage)       \$1,000       48. Total Number of Highway-Rail Crossing Users (include driver)       2         49. Railroad Employees       0       1       50. Total Number of People on Train (include passengers and crew)       3       51. Is a Rail Equipment Accident / Incident Report Being Filed       Code Incident Report Being Filed       2         52. Passengers on Train       0       0       53b. Special Study Block		Code					-	7. Othe	r (spe	cify)	Code
Casualties to:       Killed       Injured       1. Killed 2. Injured       3. Uninjured       3       1. Yes 2. No       1         46. Highway-Rail Crossing Users       0       47. Highway Vehicle Property Damage (est. dollar damage)       51.000       48. Total Number of Highway-Rail Crossing Users (include driver)       2         49. Railroad Employees       0       1       50. Total Number of People on Train (include passengers and crew)       3       51. Is a Rail Equipment Accident / Incident Report Being Filed       Code Incident Report Being Filed         52. Passengers on Train       0       0       53b. Special Study Block       53b. Special Study Block       2         54. Narrative Description       AGE OF DRIVER UNKNOWN       Killed View       Sign View <td>A CAN CALL A CAL</td> <td>1</td> <td>2. Stand</td> <td>ling railroad e</td> <td>quipme</td> <td>nt 4. Topography 6. I</td> <td>lighway Vehi</td> <td>cles 8. Not</td> <td></td> <td></td> <td>8</td>	A CAN CALL A CAL	1	2. Stand	ling railroad e	quipme	nt 4. Topography 6. I	lighway Vehi	cles 8. Not			8
Addition     Additin additin addition     Addition     Addition <td></td> <td>KIII 1</td> <td></td> <td>44. Driver w</td> <td>as</td> <td>С</td> <td>ode</td> <td>45. Was Driv</td> <td>ver in the</td> <td>Vehicle?</td> <td>Code</td>		KIII 1		44. Driver w	as	С	ode	45. Was Driv	ver in the	Vehicle?	Code
46. Highway-Rail Crossing Users       0       0       (est. dollar damage)       \$1,000       (include driver)       2         49. Railroad Employees       0       1       50. Total Number of People on Train (include passengers and crew)       51. Is a Rail Equipment Accident / Incident Report Being Filed       Code         52. Passengers on Train       0       0       0       3       1. Yes 2. No       2         53a. Special Study Block       53b. Special Study Block	Casualties to:	Killed	Injured	1. Killed	d 2. Inj	ured 3. Uninjured	3	1. Yes	2. No		1
49. Railroad Employees       0       1       50. Total Number of People on Train (include passengers and crew)       51. Is a Rail Equipment Accident / Incident Report Being Filed       Code         52. Passengers on Train       0       0       0       3       1. Yes 2. No       2         53a. Special Study Block       53b. Special Study Block       53b. Special Study Block       53b. Special Study Block       2	16 Hisbway Pail Crossing Liner	•		47. Highway	Vehicl		-	48. Total Nu	mber of	Highway-Rail Crossing	
Sc. Passengers on Train     0     0     1       52. Passengers on Train     0     0     0       53a. Special Study Block     53b. Special Study Block     2       54. Narrative Description     AGE OF DRIVER UNKNOWN	46. Highway-Rail Crossing Users	0	0	(est. doi	llar darr	age)	\$1,000	(include	driver)		2
52. Passengers on Train     0     0     0     1. Yes 2. No     2       53a. Special Study Block     53b. Special Study Block     53b. Special Study Block     53b. Special Study Block     53b. Special Study Block	49. Railroad Employees	0	1								Code
53a. Special Study Block     53b. Special Study Block       54. Narrative Description       AGE OF DRIVER UNKNOWN	52. Passengers on Train	0	0	(include	passer	ngers and crew)	3			eing Filed	2
AGE OF DRIVER UNKNOWN	53a. Special Study Block		I			53b. Special Study Bloc	1				1
	54. Narrative Description				5 - S						
55. Typed Name and Title     56. Signature     57. Date	THE MEDIA CONTRACTOR AND THE REPORT OF THE R										
55. Typed Name and Title     56. Signature     57. Date											
55. Typed Name and Title     56. Signature     57. Date											
55. Typed Name and Title 56. Signature 57. Date											
	55. Typed Name and Title		56. Signature	B						57. Date	
FORM FRA F 6180.57 * NOTE THAT ALL CASUALTIES MUST BE REPORTED ON FORM FRA F 6180.55A	FORM FRA F 6180.57						State -				

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

Name Of					1 122				Alphab	etic Coo	le RR Acciden	t/Incident No.
1. Reporting Railroad									1a. A7	<b>TSF</b>	1b. 330780	201
2. Other Railroad Involved in Train Ac	cident/Inc	ident							2a.		2b.	
3. Railroad Responsible for Track Ma	intenance					·			3a. A'	ГSF	3b. 330780	201
4. U.S. DOT-AAR Grade Crossing ID	No.	0281	25G	5. Date	e of Acciden	t/Incident	07	/21/80	6. Time	of Accid	lent/Incident 6:	15 PM
7. Nearest Railroad Station			8. Div	ision			9	. County			10. State	Code
WILMINGTON									NGELES		Abbr.	CA 06
11. City (if in a city) CARSON			12. Hig	nway N	ame or No.	WILN	1ING	TON AV			Public	Private
12 Tuno	y User Inv	1	100 0 A 3	Code	17. Equipm	ent			uipment Involv			Code
A. Auto D. Pick-up truck G. Sch		J. Other Moto K. Pedestrian	Vehicle			(units pul	lina)		- 19 - 17 - 17 - 17 - 17 - 17 - 17 - 17		co(s) (moving) co(s) (standing)	Code
B. Truck E. Van H. Moto		M. Other (sp	ecify)	A			•		(standing) 8.		(specify)	2
14. Vehicle Speed 15. Dir		(geographic		Code	18. Position	n of Car U	Init in	Train				
(est. mph at impact) 0 1. No 16. Position 1. Stalled on crossing	annon ittar arroad	with 3. East	1908 - FACE FOI DESIGNAL	1 Code	10 Circum	stanco 1	Dail	oquinmon	t struck highw	1		Code
2. Stopped on Crossing			ang	1	19. Circum			10.1	t struck highw		er	
20a. Was the highway user and/or ra				Code	20b. Was t	here a ha	zardo	us materia	Is release by			Code
in the impact transporting hazar 1. Highway User 2. Rail Equ			Neither	4	1.	Highway	User	2. Rail	Equipment	3. Both	4. Neither	
20c. State the name and quantity of t	and the second second second		eleased, if	any								
79 OF		single entry)	1 Deele	Code	23. Weath				Fra E Diret	6.6-		Code
	Dawn 2.1	Day 3. Dusk	4. Dark	2				*** *	Fog 5. Sleet		1	
24. Type of Equipment Consist 1. Freight train	4. Work t	train 7. Yard/S	Switching	Code	25. Track Equin	Type Use ment Invo		Rail		Code	26. Track Numbe	er or Name
(single entry) 2. Passenger train				- ۱							W. BROR B	
3. Commuter train				7		in 2. Ya			4. Industry	1	HARBOR D	
27. FRA 28. Number of Track Class Locomotiv		29. Number of Cars		Recorde	ed ( <i>Recor</i> d d	ied if avai	iabie)	Code	31. Time Tab	ble Direc	aon	Code
(1-6,X) 2 Units	2	5	E.E	stimate	d	10	mph	E	1. North 2	. South	3. East 4. West	4
32. Type of 1. Gates 4. Crossing 2. Cantilever FLS 5.	Wig wags				agged by cr ther (speci			33. Signal Warn	ed Crossing		34. Whistle Ban 1. Yes	Code
12 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C 1 C	Audible	-	Watchman	12. N		( <b>y</b> )				[	2. No	
Code(s) 01 03	06							20 sec v	varn min		3. Unknown	
<ol> <li>35. Location of Warning</li> <li>1. Both Sides</li> </ol>		Co	staat staat staat staat st	-	Warning Inte way Signals		ed	Code	Concerning and a second s	-	nated by Street al Lights	Code
2. Side of Vehicle Approach		1		-			1	2	-		-	2
3. Opposite Side of Vehicle Appr			223		2. No 3. Ur			_	1. Yes	2. No	3. Unknown	
38. Driver's 39. Driver's Code Age Gender		Drove Behind Struck or was S			Cod	le 41.	Driver		l or thru the ga	ato 4	Stopped on crossi	Code
1. Male		1. Yes 2. No	and second a		2				then proceede		Other (specify)	1
2. Female	Code	12 View of T	rack Obsou	rod by		n, obstruc	1011 11	not stop			10 J. 2200 10 1	
42. Driver Passed Standing Highway Vehicle		43. View of T 1. Perma	nent Structu			ry obstruc ng Train		getation	7. Othe	r (spe	ecify)	Code
1. Yes 2. No 3. Unknown	2	2. Standir	ng railroad e	quipme	nt 4. Topo	graphy	6. Hig	hway Veh	icles 8. Not	Obstruct	ed	8
Casualties to:	Killed	Injured	44. Driver v				Coc	le	45. Was Driv		e Vehicle?	Code
Casualles lo.	Temod	Injuled	1. Kille	d 2. Inj	ured 3. Un	injured	3		1. Yes			1
46. Highway-Rail Crossing Users	0	0		-	e Property D	Damage	1				Highway-Rail Cros	•
			(est. do				\$5	500	(include		ent Accident /	1 Code
49. Railroad Employees	0	0			f People on agers and cr		I		10 10 10 10 10 10 10 10 10 10 10 10 10 1		Being Filed	
52. Passengers on Train	0	0	4000 COMPANY					61472 - X	1. Yes	2. No		2
53a. Special Study Block					53b. Spec	al Study	Block		100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100			
54. Narrative Description												
55. Typed Name and Title		56. Signature							To definite the		57. Date	• (PL)
FORM FRA F 6180.57	* NOTE	THAT ALL CA	SUALTIES	MUST	BE REPOR	TED ON F	ORM	FRAF61	80.55A			

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

		4								
Name Of							Alphat	petic Coo	de RR Accident/Inc	ident No.
1. Reporting Railroad							1a. A'	ГSF	1b. 150893201	
2. Other Railroad Involved in Train Ac	cident/Inc	cident	and some				2a.	W.1	<sup>2b.</sup> 15089320	1
3. Railroad Responsible for Track Mai	intenance						3a. A'	TSF	3b. 15089320	l
4. U.S. DOT-AAR Grade Crossing ID	No.	028	125G	5. Dat	e of Accident/Incident	08/26/93	6. Time	of Accid	lent/Incident 12:20	AM
7. Nearest Railroad Station WATSON			8. Div	ision		9. County LOS A	NGELES		10. State Abbr. C	Code
11. City (if in a city) LOS ANG	GELES		12. Hig	hway N	ame or No. WILMIN	NGTON A	VE		Public	Private
Highwa	y User In	volved				Rail Ed	quipment Involv	/ed		1 mm
13. Type C. Truck-trailer F. Bus		J. Other Mot	or Vehicle	Code	17. Equipment	3. Train	(standing) 6	Light lo	co(s) (moving)	Code
A. Auto D. Pick-up truck G. Scho	ool Bus	K. Pedestria			1. Train (units pulling			-	co(s) (standing)	
B. Truck E. Van H. Moto		M. Other (		A	2. Train (units pushir		) (standing) 8	Other	(specify)	3
14. Vehicle Speed 15. Dir		(geograph outh 3. East	1. C	Code	18. Position of Car Unit	in Train		61		
(est. mph at impact) 30 1. No 16. Position 1. Stalled on crossing		ving over cro	121.1	1 Code	19. Circumstance 1. R	ail equipmo	nt struck highw	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -		Code
2. Stopped on Crossing		•	Song	3			nt struck by hig		er	2
20a. Was the highway user and/or rai				Code	20b. Was there a hazar	dous materia	als release by			Code
in the impact transporting hazar 1. Highway User 2. Rail Equ			. Neither	2	1. Highway Us	er 2 Rail	Equipment	3. Both	4. Neither	1
20c. State the name and guantity of th					1. Highway Ca	2.110	Lquipment	J. Dour		
			o released, ir c	any						
21. Temperature 22. Vi	isibility	(single entry)		Code	23. Weather (single e	entry)				Code
(specify if minus) 65 °F 1. D	awn 2.	Day 3. Dus	k 4. Dark	4	1. Clear 2. Cloudy	3. Rain 4.	Fog 5. Sleet	6. Sno	w	1
24. Type of Equipment				Code	25. Track Type Used b	ov Rail		Code	26. Track Number or	Name
Consist 1. Freight train		train 7. Yard			Equipment Involve	-				
(single entry) 2. Passenger train 3. Commuter train	•		• •	1	1. Main 2. Yard	2 Siding	4. Industry	1	MAIN LINE	
27. FRA 28. Number of		29. Number			ed (Recorded if available		31. Time Tat			Code
Track Class Locomotiv		Cars		sist Spe Recorde		ie) Code	ST. TIME Tat	Direct	uon	Code
(1-6,X) 3 Units	8	7	7 E.E	stimate	d 0 mp	h R	1. North 2	. South	3. East 4. West	
	Wig wags				agged by crew	33. Signa	led Crossing		34. Whistle Ban	Code
Crossing 2. Cantilever FLS 5. Warning 3. Standard FLS 6. /	Hwy. traff Audible		. Stop signs . Watchman	11. O 12. N	ther (specify)	Warr	ing		1. Yes 2. No	
Code(s) 01		ı	. Waterinari	12.1		20 sec 1	warn min		3. Unknown	1
35. Location of Warning		C	ode 36. Cr	ossing \	Warning Interconnected	Code	37. Crossir	ng Illumir	nated by Street	Code
1. Both Sides			w	th High	way Signals		Lights	or Specia	al Lights	
2. Side of Vehicle Approach	nach	1	1.	Yes 2	2. No 3. Unknown	3	1. Yes	2. No	3. Unknown	3
3. Opposite Side of Vehicle Appro 38. Driver's 39. Driver's Code	tonar arreston	Drove Behin	d or in Front of	and the second second	Code 41. Driv					Code
Age Gender			Struck by Se				d or thru the ga	ate 4.	Stopped on crossing	oode
1. Male		1. Yes 2. No	o 3. Unknov	vn	2		then proceede	ed 5.	Other (specify)	4
2. Female 42. Driver Passed Standing	Code	43 View of	Track Obscur	ed by	(primary obstruction	Did not stop				Code
Highway Vehicle	0006		anent Structu		3. Passing Train 5.		7. Othe	r (spe	cífy)	1
1. Yes 2. No 3. Unknown	2	2. Stand	ling railroad e	quipme	nt 4. Topography 6. I	Highway Vel	nicles 8. Not	Obstruct	ed	8
			44. Driver w	as	c	ode	45. Was Driv	ver in the	Vehicle?	Code
Casualties to:	Killed	Injured	1. Killed	d 2. Inj	ured 3. Uninjured	1	1. Yes	2. No		1
			47. Highway	Vehicl	e Property Damage		48. Total Nu	mber of	Highway-Rail Crossin	
46. Highway-Rail Crossing Users	1	0	(est. dol	lar dam	age)	\$5,000	(include	driver)		1
49. Railroad Employees	0	0			f People on Train				ent Accident /	Code
52. Passengers on Train	0	0	(include	passer	igers and crew)		1. Yes		Being Filed	2
53a. Special Study Block					53b. Special Study Blog	ck				
54. Narrative Description										
55. Typed Name and Title		56. Signature	•						57. Date	
FORM FRA F 6180.57	* NOTE	THAT ALL C	ASUALTIES	MUST	BE REPORTED ON FOR	M FRA F 61	80.55A			

Year	Month	Day	Station/City	Mile	Cause	Injury
1975	04	12	Torrance	21.5	Human Error	
1976	10	23	Los Angeles	NR	Human Error	
1770	10	04	Los Angeles	NR	Handling	
1977	11	09	Los Angeles	NR	Human Error	
1978	11	12	Los Angeles	NR	Worn Rail	
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11	13	Los Angeles	NR	Handling	
	02	10	Watson Yard	26.6	Handling	
1979	07	05	Los Angeles	NR	Worn Wheel	
	02	02	Watson Yard	26.6	Worn Rail	
	06	14	Los Angeles	NR	Human Error	1
1980	06	24	Alcoa Yard	20.1	Equip. Defect	
1981					1 1	
1982	01	30	Los Angeles	NR	Human Error	
	01	10	Los Angeles	NR	Human Error	
	01	14	Los Angeles	NR	Human Error	
1983			C C			
1984	03	06	Watson Yard	24.3	Handling	
	09	05	Alcoa Yard	20.1	Rail Defect	
1985						
1986						
1987						
1988	07	17	Alcoa Yard	20.2	Equip. Defect	
1989						
1990						
1991	06	09	El Segundo	14.9	Wheel Defect	
1992	01	15	Watson Yard	26.6	Human Error	
1993						
1994	03	30	Watson Yard	26.6	Worn Wheel	
	08	28	Watson Yard	26.6	Handling	
	04	22	Lawndale	16.8	Handling	
1995						
1996						
1997	02	14	Watson Yard	26.6	Switching	
	10	13	Los Angeles	NR	Wheel Defect	
	01	24	Alcoa Yard	20.1	Handling	
1998	10	11	Los Angeles	NR	Switching	
	05	21	El Segundo	NR	Vandalism/Track	

Table 1Railroad Train Accidents1975 – 2001

				- 2001		
Year	Month	Day	Station/City	Mile	Cause	Injury
1999	07	30	Los Angeles	NR	Switching	
	01	05	Los Angeles	NR	Switching	
	04	25	El Segundo	14.7	Track Alignment	
	11	22	Los Angeles	NR	Switching	
	11	27	Los Angeles	NR	Handling	
	11	30	Alcoa Yard	21.3	Worn Switch	
	06	16	Torrance	NR	Handling	
	08	07	Los Angeles	NR	Handling	
	08	21	Los Angeles	NR	Vandalism/Track	
	10	08	Los Angeles	NR	Switching	
2000	03	15	Los Angeles	NR	Switching	
	03	17	Torrance	NR	Track Alignment	
	03	18	Los Angeles	NR	Equip. Defect	
	01	20	Los Angeles	NR	Human Error	1
	12	29	Los Angeles	NR	Track Alignment	
	08	02	Los Angeles	NR	Handling	
	04	04	Alcoa Yard	19.6	Handling	
2001						

### Table 1 **Railroad Train Accidents** 1975 - 2001

2001

Source: FRA

\* NR = Not reported to FRA

Appearing in this appendix are two tables with demographic projections. Table 1 shows the population growth projections for the South Bay cities from 1997 to 2025. The column to the right of each year from 2000 is the percentage of annual growth within each interval. The numbers for the year 2000 are different from the U.S. Census Bureau numbers included elsewhere in the report. The U.S. Census population figures are actual counts, whereas the SCAG data are projections. Although the SCAG 2000 populations may differ slightly from the U.S. Census Bureau 2000 populations, the growth rates projected by SCAG are a good guide for understanding growth in the region.

Table 2 presents employment growth projections for the South Bay cities from 1997 to 2025. The growth percentage in the column to the right of each year, is the percentage of annual growth for each year within each interval.

 Table 1

 South Bay Cities Population Forecasts

City	1997	2000	Annual	2005	Annual	2010	Annual	2015	Annual	2020	Annual	2025	Annual
• •			Growth										
Carson	89,998	93,942	1.4%	100,902	1.4%	101,656	0.1%	102,403	0.1%	103,413	0.2%	104,456	0.2%
El Segundo	16,323	16,736	0.8%	17,448	0.8%	17,583	0.2%	17,715	0.1%	17,895	0.2%	18,081	0.2%
Gardena	57,644	59,804	1.2%	63,586	1.2%	64,256	0.2%	64,916	0.2%	65,815	0.3%	66,735	0.3%
Hawthorne	78,040	79,482	0.6%	81,944	0.6%	81,968	0.0%	81,993	0.0%	82,024	0.0%	82,060	0.0%
Hermosa Beach	18,990	19,205	0.4%	19,568	0.4%	19,609	0.0%	19,648	0.0%	19,700	0.1%	19,755	0.1%
Inglewood	117,781	121,020	0.9%	126,618	0.9%	127,284	0.1%	127,925	0.1%	128,756	0.1%	129,559	0.1%
Lawndale	30,014	31,235	1.3%	33,381	1.3%	33,855	0.3%	34,324	0.3%	34,959	0.4%	35,614	0.4%
Lomita	20,382	21,163	1.3%	22,531	1.3%	22,737	0.2%	22,939	0.2%	23,217	0.2%	23,500	0.2%
Manhattan Beach	34,680	34,951	0.3%	35,408	0.3%	35,433	0.0%	35,456	0.0%	35,489	0.0%	35,523	0.0%
Palos Verdes Estates	14,226	14,528	0.7%	15,046	0.7%	15,304	0.3%	15,557	0.3%	15,900	0.4%	16,258	0.4%
Rancho Palos Verdes	43,363	44,403	0.8%	46,191	0.8%	46,510	0.1%	46,804	0.1%	47,201	0.2%	47,614	0.2%
Redondo Beach	65,158	66,453	0.7%	68,668	0.7%	68,792	0.0%	68,914	0.0%	69,080	0.0%	69,252	0.0%
Rolling Hills	2,006	2,052	0.8%	2,130	0.8%	2,136	0.1%	2,142	0.1%	2,151	0.1%	2,159	0.1%
<b>Rolling Hills Estates</b>	8,341	8,541	0.8%	8,884	0.8%	8,937	0.1%	8,993	0.1%	9,066	0.2%	9,142	0.2%
Torrance	142,425	143,611	0.3%	145,609	0.3%	145,629	0.0%	145,653	0.0%	145,682	0.0%	145,712	0.0%
Unincorporated County	113,462	115,352	0.6%	118,571	0.6%	118,595	0.0%	118,622	0.0%	118,657	0.0%	118,698	0.0%
<b>Total South Bay Cities</b>	852,833	872,475	0.8%	906,485	0.8%	910,284	0.1%	914,004	0.1%	919,005	0.1%	924,118	0.1%

Source: Southern California Association of Governments, RTP

Table 2

South Bay Cities Employment Forecasts

City	1997	2000	Annual	2005	Annual	2010	Annual	2015	Annual	2020	Annual	2025	Annual
			Growth										
Carson	55,176	57,340	1.3%	61,136	1.3%	64,313	1.0%	66,191	0.6%	67,908	0.5%	69,732	0.5%
El Segundo	52,679	55,930	2.0%	61,801	2.0%	66,214	1.4%	68,821	0.8%	71,206	0.7%	73,740	0.7%
Gardena	34,961	34,665	-0.3%	34,177	-0.3%	34,554	0.2%	34,777	0.1%	34,979	0.1%	35,196	0.1%
Hawthorne	34,034	33,853	-0.2%	33,554	-0.2%	33,963	0.2%	34,203	0.1%	34,425	0.1%	34,658	0.1%
Hermosa Beach	8,699	8,787	0.3%	8,935	0.3%	9,175	0.5%	9,314	0.3%	9,444	0.3%	9,579	0.3%
Inglewood	50,029	50,397	0.2%	51,017	0.2%	52,441	0.6%	53,282	0.3%	54,052	0.3%	54,871	0.3%
Lawndale	7,333	7,405	0.3%	7,527	0.3%	7,757	0.6%	7,894	0.4%	8,018	0.3%	8,149	0.3%
Lomita	7,801	7,891	0.4%	8,042	0.4%	8,243	0.5%	8,364	0.3%	8,475	0.3%	8,590	0.3%
Manhattan Beach	13,783	13,895	0.3%	14,083	0.3%	14,486	0.6%	14,724	0.3%	14,942	0.3%	15,176	0.3%
Palos Verdes Estates	1,274	1,284	0.3%	1,301	0.3%	1,337	0.5%	1,361	0.4%	1,380	0.3%	1,402	0.3%
Rancho Palos Verdes	4,265	4,303	0.3%	4,368	0.3%	4,491	0.6%	4,560	0.3%	4,626	0.3%	4,695	0.3%
Redondo Beach	24,321	24,539	0.3%	24,906	0.3%	25,598	0.5%	26,011	0.3%	26,385	0.3%	26,783	0.3%
Rolling Hills	270	274	0.5%	282	0.5%	287	0.4%	292	0.3%	296	0.3%	298	0.1%
Rolling Hills Estates	4,623	4,668	0.3%	4,744	0.3%	4,871	0.5%	4,949	0.3%	5,017	0.3%	5,090	0.3%
Torrance	105,488	109,295	1.2%	115,948	1.2%	122,837	1.2%	126,911	0.7%	130,638	0.6%	134,596	0.6%
Unincorporated County	21,064	21,946	1.4%	23,499	1.4%	25,149	1.4%	26,122	0.8%	27,016	0.7%	27,962	0.7%
<b>Total South Bay Cities</b>	425,800	436,472	0.8%	455,320	0.8%	475,716	0.9%	487,776	0.5%	498,807	0.4%	510,517	0.5%

Source: Southern California Association of Governments, RTP