

## BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Investigation for the purpose of )  
 establishing a list for the fiscal )  
 years 1998-99 and 1999-2000 of )  
 existing and proposed crossings at )  
 grade of city streets, county roads, )  
 or state highways in need of )  
 separation, or projects effecting the )  
 elimination of grade crossings by )  
 removal or relocation of streets or )  
 railroad tracks, or existing )  
 separations in need of alterations or )  
 reconstruction in accordance with )  
 Section 2452 of the Streets and )  
 Highways Code. )

F I L E D  
 PUBLIC UTILITIES COMMISSION  
 July 16, 1997  
 I.97-07-014

**ORIGINAL**

ORDER INSTITUTING INVESTIGATION

By July 1 of each year, the California Public Utilities Commission (Commission) is required pursuant to Streets and Highways (S&H) Code Sections 2452 to establish and furnish to the California Transportation Commission (CTC) a priority list of railroad grade separation projects in need of separation, including the elimination of existing or proposed grade crossings, the elimination of grade crossings by removal or relocation of streets or railroad tracks, and existing grade separations in need of alteration or reconstruction. The list, based on criteria established by the Commission, includes projects on city streets, county roads, and state highways which are not freeways as defined in S&H Code Section 257.

Funding for projects included on each annual priority list is provided by S&H Code Sections 190, and the basis for allocation and state requirements are contained in S&H Code Sections 2450-2461. On projects which eliminate an existing crossing or alter or reconstruct an existing grade separation, an allocation of 80% of the estimated cost of the project is made, with the local agency and railroad each contributing 10%. An allocation of 50% of the estimated project costs is made for a proposed separation crossing project, with the remaining 50 % contributed by the local agency.

Subsequent to the Commission's issuance of the Annual Grade Separation Priority List, applications are accepted by the California Department of Transportation (CALTRANS) for an allocation of funds. The applications are accepted no later than April 1 of each fiscal year. Requirements for filing an application are set forth in the California Administrative Code, Title 21, Chapter 2, Subchapter 13, Grade Separation Projects - Applications for Allocations or Supplemental Allocations. A copy of Subchapter 13 is attached as Appendix 1.

Interim Decision (D.) 88-06-050, dated June 17, 1988, instituted a two year program in which nominations are submitted and hearings are held every other year. In the alternate year, the Commission will submit a list to the CTC which has been revised to delete those projects actually funded for the fiscal year in which the hearings are held. Decision 96-06-041 dated June 19, 1996 established the 39th annual priority list for fiscal years 1996-97. Final D 97-06-051 established the 40th annual priority list for the fiscal year 1997-98. This list will expire on June 30, 1998 necessitating the establishment of a new priority list for the 1998-99 and 1999-2000 fiscal years.

The Commission will consider projects nominated by cities, counties, cities and counties, CALTRANS, or by any railroad company operating within the state for inclusion on the 1998-99 and 1999-2000 Grade Separation Priority Lists. In addition, the Commission's Railroad Safety Branch Special Projects staff may nominate projects which it deems in need of separation but have not been nominated by other agencies or railroad companies.

**ALL AGENCIES CONTEMPLATING THE POSSIBLE NOMINATION OF A PROJECT FOR FISCAL YEAR 1999-2000, ARE HEREBY PLACED ON NOTICE THAT THERE WILL BE NO SEPARATE PROCEEDINGS FOR THE FISCAL YEAR 1999-2000. THEREFORE, TO ASSURE ELIGIBILITY FOR FUNDING A PROJECT DURING THE FISCAL 1999-2000, THE PROJECT MUST BE NOMINATED NOW FOR THIS INVESTIGATION.**

In accordance with S&H Code Section 2452(a), the Commission is responsible for establishing criteria to be used in determining the priority of projects nominated for separation or alteration. By D.90-06-058, a new formula was adopted for project evaluations. After reviewing investigations made since the adoption of the new formula, some minor clarifications are indicated and the changes are discussed below.

In the formula for crossings nominated for separation or elimination, the point allocation has been changed for Blocking Delay, Crossing Geometrics, Alternate Route availability and Other Factors. For the Blocking Delay (BD) factor, the Commission staff will use the actual BD calculation as total point value, rounded to the hundredth of a point, with a maximum of 10 points. Past investigations used a table with 0.5 point increments ranging from 0 to 10 points. For example, a project with a BD of 0.47 min. will receive 0.47 points with this investigation instead of 0 points with the table used in prior investigations. Also, projects with a 5.61 min. BD will receive 5.61 points with this investigation instead of the 6.0 points allocated with the prior table.

The Crossing Geometrics (CG) factor will be increased from a maximum of 7 points to a maximum of 17 points. The new maximum is based on the same criteria used in prior investigations but using the actual 17 point evaluation instead of prorating the evaluation to a 7 point scale. The 17 point crossing geometrics evaluation assigns 1 point for each quadrant where the sight distance is impaired, up to 2 points for track skewed angle, up to 4 points for the elevated surface profiles, up to 2 points for the number of tracks at crossing, and 1 point each for the presence of parallel road(s) near tracks, signals located near crossing, curvature of roadway or track, frequently used entrance or exit (driveways) and raised median protection.

The points for the Alternate Route factor (AR) will not change. However, the criteria for the determination of the AR are clarified for this investigation. When determining the alternate route,

instead of using the nearest crossing to a project site, use the distance to the nearest clear crossing, (one that is not blocked by the train). If a train is passing by a highway-rail grade crossing and is long enough to block its two adjacent crossings, then the nearest crossing that vehicles may cross is at the first alternate route that is not blocked by the train.

To determine the alternate route when trains of various lengths cross a particular crossing, find the nearest alternate route for each train then divide the sum of the alternate routes by the total number of trains. The average alternate route becomes the AR for application evaluation purposes. Each nomination shall have data to justify the AR calculation and will be reviewed by Commission staff.

For example, a four car passenger train crosses a highway-rail grade crossing without blocking any other highway-rail grade crossing. The AR for this case is the closest adjacent crossing (assume an alternate route of 673 ft). On the same day, a 100 car freight train also crosses the same highway-rail grade crossing and blocks up to three highway-rail grade crossings at a time. Assume that the shortest alternate route is 4252 ft. Therefore, the AR for a project to separate traffic at the highway-rail grade crossing in question is the average of each train's alternate route. In this case the AR is  $2463 \text{ ft} = (673 + 4252) / 2$ .

With the Other Factors (OF) section, this investigation will increase the total maximum points from 16 to 18. In the past this section had an allocation of 16 points maximum for 6 categories: secondary accidents, emergency vehicle usage, passenger buses, school buses, hazardous materials trains & trucks, and community impact. For this investigation, the Commission staff will weigh all categories equally allocating up to 3 points for each with the maximum OF of 18 points.

In the formula for alteration or reconstruction of existing separations, the Load Limit (LL) criteria and the Special

Conditions Factor (SCF) are modified. The criteria for LL has been dropped from the equation based on lack of data supplied in past OIIs. In I.91-09-037, I.93-07-032 and I.95-07-003, none of the applications for alteration or reconstruction of existing separations have sufficient data for LL restrictions. As a result, zero points have been allocated for LL restrictions. Since this criteria is not generating any points for the nominations, then there is no need to continue with the criteria. Therefore, this OII will not use load limit restrictions for priority number calculations.

With the SCF, the Probability of Failure Factor & Other Factors has been replaced with its three components: Probability of Failure (PF), Accident Potential (AP) and Delay Effects (DE). No change in point allocations has been made to any of these categories. The change is only to simplify the priority number calculation. This OII will continue to evaluate these categories in the same manner as in past OIIs.

S&H Code Section 2460.7 authorizes a local agency to construct a project on the priority list prior to the time that it reaches a high enough position for funding. The following conditions will be applied to prioritize grade separation projects on which construction has commenced:

1. The project must have been nominated for the fiscal year during which construction commenced.
2. The project must be renominated for the fiscal year during which funding consideration is desired.
3. The nomination must include the same data as included in the nomination for the fiscal year during which construction commenced but with the actual cost data.
4. Cost data included in the nomination shall be:
  - a. Final costs for completed projects.

b. Currently anticipated final costs for projects still under construction.

5. All projects nominated under the provisions of Section 2460.7 shall also comply with the filing requirements set forth in this order.

For Investigations prior to I.93-07-032 for establishing the grade separation priority list, the Order Instituting Investigation (OII) was mailed to all cities and counties. However, usually less than 50 such agencies actually participated in the OII by filing nominations. To reduce reproduction, handling and mailing costs, the Rail Safety & Carriers Division mailed the notice appearing on Appendix 3 to cities, counties, and other interested parties. Those agencies interested in this investigation were requested to return the bottom portion of the notice so that this OII would then be mailed to them. This OII will also appear on the Commission's Daily and Transportation Calendars. We believe this to be fair and sufficient notice of this investigation.

O R D E R

IT IS ORDERED that:

1. An investigation on the Commission's own motion is instituted for the purpose of establishing a new priority list for fiscal years 1998-99 and 1999-2000 of existing or proposed railroad grade crossings of public streets, roads, or highways most urgently in need of separation, projects proposing the elimination of grade crossings by removal or relocation of streets or railroad tracks, and existing separation structures most urgently in need of alteration or reconstruction as required by Streets & Highways (S&H) Code Section 2452.

2. The Executive Director shall serve a copy of this order on the following:

Every city or county that returns the bottom portion of the OII notification (appendix 3).

Every railroad corporation

California Department of Transportation

California Transportation Commission

League of California Cities

County Supervisors Association

3. Public Agencies or railroad corporations desiring to have a particular crossing(s) separation(s) considered for inclusion in the 1998-99 and 1999-2000 list, to be established under S&H Code Section 2452, shall file the original nomination with the California Public Utilities Commission, Railroad Safety Branch to Tom Enderle's attention. An additional four copies of

the nomination(s) shall be filed with the California Public Utilities Commission, Docket Office, 505 Van Ness Avenue, San Francisco, CA 94102.

All nominations shall be received by the California Public Utilities Commission in San Francisco no later than 4:00pm on Wednesday, October 1, 1997. Each nominating body is also required to provide two copies of its nomination(s) to CALTRANS, one copy to the appropriate railroads (see addresses contained in Appendix 4), one copy to each of the additional parties listed in Appendix 4, and any other affected party.

4. Each nomination shall include the following data:

- a. For existing or proposed crossings nominated for separation or elimination, a completed Nomination Form GSN-1 (Appendix 5).
- b. For existing grade separations nominated for alteration or reconstruction, a completed Nomination Form GSN-2 (Appendix 6).
- c. A location map of the project, on 8 1/2" x 11" paper (Scale 1"= 500'), showing the existing streets, highways, and railroads.
- d. Two current photographs (size, 8"x10") of the crossing, one from each direction of approach, shall be included with the original nomination copy sent to the Railroad Safety Branch, attention Tom Enderle. Other nomination copies may contain photo-copies of the photographs.
- e. Data submitted in the nomination must be based on verifiable facts occurring on or before the nomination filing date. Speculative data involving events anticipated to occur at some



time in the future will not be considered.

- f. All nominations shall be verified by the nominating party (fill-out the back side of GSN forms). Verification may be made before a notary public, or by certification, or declaration under penalty of perjury.

5. Nomination shall not include multiple projects which are separate and distinct and clearly severable. The combining of severable projects precludes the Commission from effectively determining which projects are most urgently in need of separation or alteration as required by S&H Code Section 2452. Projects for the elimination of existing grade crossings and for the elimination of proposed grade crossings shall not be combined in a single nomination. (See D.86-06-073 at pp. 17-19.)

6. If a nomination is to be considered as a project for the elimination of existing grade crossings, and eligible for 80 percent funding, all data included in the nomination must be premised on all of the crossings proposed to be closed.

7. A nominating agency may elect to exclude preconstruction costs (engineering, right-of-way, preparation of environmental impact reports, and utility relocation), which are not sufficient to meet S&H Code Section 2454 requirements; that is, those preconstruction costs which are less than the local agency share of the total costs. In order for preconstruction costs to be eligible for exclusion, the funds must have been expended on or before February 28th of the year in which the hearings are being held. The involved agency may be required to submit evidence in support of the fact that the funds have been expended. To the extent that preconstruction costs are excluded from a project's cost for the purpose of a nomination, the costs will be considered as non-participating; that is, the railroad will not be required to contribute 10 percent of the excluded preconstruction costs.

8. In addition to submitting the Grade Separation Nomination Form, each party, or its representative, nominating a crossing for inclusion in the Grade Separation Priority List is required to appear in person at either the San Francisco or Los Angeles hearings to present evidence concerning its nomination. Supplemental data may be submitted at the hearings in support of a nomination. The data may include facts not known at time of nomination filing date, such as crossing accidents occurring after the nomination filing date but on or before January 31st of the year during which the hearings are held. Verification of all supplemental data must be received by the staff no later than one week after the last scheduled day of hearing.

9. Appearance schedules will be published after all nominations have been received. Appearances will be limited to one witness per project.

10. Agencies anticipating the need for an allocation greater than \$5,000,000 should be prepared to present evidence at the Grade Separation Priority List hearings to justify the additional award.

S&H Code Section 2454 (g) states:

"(g) Notwithstanding the provisions of Subdivision (a) to (f), inclusive, the total of such allocations for a single project shall not exceed five million dollars (\$5,000,000) without specific legislative authorization, except that the amount for a single project may be increased to either (1) an amount that includes the federal construction cost index increase each year since 1976, or (2) an amount which does not exceed one-third of the total funds appropriated for grade separation projects for the year of allocation, whichever amount is less, as determined each year by the Public Utilities Commission."

11. Failure to supply all of the requested information or to appear before the Commission will constitute grounds for exclusion of a project from the 1998-99 and 1999-2000 Grade Separation Priority List.

12. Public Hearings in this investigation will be held before the assigned Administrative Law Judge at dates, times, and locations to be announced.

This order is effective today.

Dated July 16, 1997, at San Francisco, California.

P. GREGORY CONLON

President

JESSIE J. KNIGHT, JR.

HENRY M. DUQUE

JOSIAH L. NEEPER

RICHARD A. BILAS

Commissioners

GRADE SEPARATION

TITLE 21 Department of Transportation  
(Register 82, No. 34--8-21-82)

SUBCHAPTER 13, GRADE SEPARATION PROJECTS -- APPLICATIONS FOR  
ALLOCATIONS OR SUPPLEMENTAL ALLOCATION

Article 1. Applications

1552. Last Date to File.

April 1 of each fiscal year is the last day on which applications for allocation of grade separation funds in that fiscal year can be filed; provided, however, if April 1 is a Saturday, Sunday or State of California holiday, then the last date of filing shall be the next business day following April 1. Filing is accomplished by filing the application with the Department of Transportation in the manner hereafter stated.

1553. Place to File.

The complete application in triplicate must be received in the Office of the District Director of Transportation, State of California, in the transportation district in which the applicant is located, no later than 4:00pm on the last day for filing.

1554. Contents of Application.

The complete application must include a written request for an allocation in a specified monetary amount along with copies of each of the following attached to it:

- (a) All necessary orders of the Public Utilities Commission of the State of California. Necessary orders of the Public Utilities Commission include:
- (1) An order authorizing construction of the project;
  - (2) A statement of the applicant's position on the annual priority list established by the Public Utilities Commission pursuant to Streets & Highways Code Section 2452.
  - (3) In case the applicant and affected railroad or railroads cannot agree as to the apportionment of the cost of the project between them, an order apportioning such cost pursuant to Public Utilities Commission Code Section 1202.5, but in no case shall an allocation be made unless the railroad or railroads contribute no less than the amount required by Section 2454 of the Streets &

GRADE SEPARATION (Continued)

- (3) (Continued)  
Highways Code, except as may be otherwise provided by law.
- (b) All necessary agreements with the affected railroad or railroads fully executed by railroad or railroads and applicant. The necessary agreements with the railroad include:
- (1) Permission to enter upon railway right-of-way for construction, or in lieu thereof, an order of the Public Utilities Commission or of a court of competent jurisdiction authorizing such entry for construction purposes;
  - (2) A description of the project on a plan setting forth the area and items of the project and the particular area and items of the project to which the railroad or railroads agree to contribute.
  - (3) The percentage of railroad's or railroads' contribution to the cost of the area and items to which railroad or railroads agree to contribute;
  - (4) Identification or estimated cost of the area and items to which railroad or railroads do not contribute;
  - (5) Agreement that railroad or railroads shall contribute a minimum of 10 percent of the project without a maximum dollar limitation on the railroad's contribution, except that the contribution may be less than 10 percent of the cost of the project where expressly so provided by law.
  - (6) When two or more railroads are affected by a project, their combined contribution must be a minimum of 10 percent of the cost of the project without a maximum dollar limitation on the combined contribution, except that such combined contribution may be less than 10 percent of the cost of the project when expressly so provided by law.
- (c) A certified resolution by the applicant's governing body authorizing the filing of application.
- (d) Certified resolution by applicant's governing body stating that all matters prerequisite to the awarding of the construction contract can be accomplished within one year after allocation of funds for the project by the California Transportation Commission.

GRADE SEPARATION (Continued)

- (e) A certified resolution by applicant's governing body stating that sufficient local funds will be made available as the work of the project progresses.
- (f) Copies of all necessary Environmental Impact Reports or Negative Declarations, with a certified Notice of Determination and approval or acceptance of these documents by the Lead Agency. In cases where an Environmental Impact Statement or Negative Declaration has been prepared for the project pursuant to the requirements of the National Environmental Policy Act of 1969 and implementing regulations thereto, such documents may be submitted in lieu of an approved Environmental Impact Report or Negative Declaration and Notice of Determination, provided the Environmental Impact Statement or Negative Declaration fully develops the factors required in Title 14, Section 15143, of the State Administrative Code including Title 20, Section 17.1(d)(2), of the State Administrative Code and such Environmental Impact Statement or Negative Declaration has received Federal approval.
- (g) General plan of the project, including profiles and typical sections.
- (h) Project cost estimate, which is to be broken down to construction, preliminary and construction engineering, work by railroad forces, right of way costs, and utility relocation.

## 1555. Project Limitation

Participation of the grade separation fund is limited only to that portion of the project which, in the determination of the California Transportation Commission, is necessary to make the grade separation operable and to effect the separation of grades between the highway and the railroad track or tracks, or necessary to effect the relocation of track or highway. Off-track maintenance roads shall be nonparticipating unless the existing access for maintenance purposes is severely impaired by the project. Participating items include, but are not limited to, approaches, ramps, connections, drainage, erosion control of slopes, such as ivy, iceplant, and rye grass, and preconstruction costs, such as right of way acquisition, preparation of environmental impact reports and utility relocation, necessary to make the grade separation operable. In any dispute as to scope of the project or qualification of an item, the decision of the California Transportation Commission shall be conclusive.

## 1556. Allocation Limitation

Initial allocation of grade separation funds by the California Transportation Commission shall be limited to that based upon applicant's estimate of cost of project specified by applicant

GRADE SEPARATION (Continued)

1556. Allocation Limitation (Continued)

and utilized by the Public Utilities Commission of the State of California in establishment of applicant's priority pursuant to Streets and Highways Code Section 2452 of the State of California, and in no case shall the original and supplemental allocation for a single project exceed a total of five million dollars (\$5,000,000) without specific legislative authorization in effect for the project at the final date and time for filing an application. A planned project must be a complete and operable project, and effect the separation of grades, relocation of the highways or railroad, in order to qualify for an allocation.

Article 2. Supplemental Allocation

1557. Last Date to File.

The last date on which an application for a supplemental allocation can be filed for the subsequent fiscal year is May 1 of the current calendar year. If May 1 is a Saturday, Sunday, or a State of California holiday, then the last date of filing shall be the next business day following May 1. A formal application must be filed by the applicant, accompanied with the project final report.

1558. Place to File.

The complete application in triplicate must be received in the Office of the District Director of Transportation, State of California, in the transportation district in which the applicant is located, no later than 4:00 p.m. on the last day of filing.

1559. Contents of Application

The application must include a written request for a supplemental allocation in a specified amount along with copies of each of the following attached thereto.

- (a) A certified resolution by the applicant's governing body certifying that:
  - (1) Applicant has authority to make request for supplemental allocation;
  - (2) The project has been completed and has been accepted by the governing body;
  - (3) The actual and final cost of the project has been determined and set forth in the supplemental application;

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GRADE SEPARATION (Continued)

- (4) All costs set forth in the request for supplemental allocation were necessary to make the grade separation operable and effect the separation of grades or the relocation of track or highway.
- (5) That railroad or railroads have contributed 10 percent of the cost of the project unless a lesser contribution is expressly provided by law.
- (b) Evidence that funds would have been allocated for the project had the actual cost been used by the Public Utilities Commission of the State of California in determining the project's ranking on the priority list.
- (c) A final accounting of the cost of the project with a statement explaining the detail why the original allocation was not sufficient.



APPENDIX 2  
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FORMULA FOR CROSSINGS NOMINATED  
FOR SEPARATION OR ELIMINATION

$$P = \frac{V ( T + 0.1 \times LRT )}{C \times X \times F} (AH + BD) + SCF$$

Where:

- P = Priority Index Number  
V = Average 24-Hour Vehicular Volume  
C = Total Separation Project Costs  
(in Thousands of Dollars)  
T = Average 24-Hour Train Volume  
LRT = Light Rail Train Volume  
F = Cost Inflation Factor  
(based on Current Construction Cost Index)  
AH = Accident History  
BD = Crossing Blocking Delay  
SCF = Special Conditions Factor  
    VS = VS + RS + CG + AR + PT + OF  
    VS = Vehicular Speed Limit  
    RS = Railroad Prevailing Maximum Speed  
    CG = Crossing Geometrics  
    AR = Alternate Route Availability  
    PT = Passenger Trains  
    OF = Other Factors  
    (secondary accidents, emergency vehicle  
usage, passenger buses, school buses,  
hazardous materials trains and trucks,  
community impact)

POINTS IN EACH CATEGORY ARE ASSIGNED ACCORDING TO THE  
FOLLOWING SCHEDULE:

V = Average 24-Hour Vehicular Volume = 1 point per vehicle

C = Total Separation Project Costs = 1 point per thousand  
dollars in costs

T = Average 24-Hour Train Volume = 1 point per train

LRT = Light Rail Train Volume = 1 point per train

F = Cost Inflation Factor =  $\frac{CCI('75-'76) \times '75-'76 \text{ "f" }}{CCI \text{ (Current Year)}}$

Construction Cost Index (CCI) 1975-76 = 2100

"f" for 1975-76 = 24

Construction Cost Index for Current Year =

(see current Engineering News Record Journal)

For this investigation, the Cost Inflation Factor (F)  
is (2100 x 24) / CCI for current year

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AH = Accident History (last 10 years from filing due date)

The Commission records reportable incidents for each crossing under jurisdiction in a form called FORM A. The AH points will be based on accidents which involve trains at the crossing and are recorded on the Commission's Crossing record, Form A. For each accident the Commission will assign points based on the following:

$$\text{Points} = (1 + 2 \times \text{No. Killed} + \text{No. Injured}) \times \text{PF}$$

PF = Crossing Protection Factor based on warning device at crossing:

<u>STANDARD #</u>	<u>POINTS</u>
#9	1.0
#8	0.4
#3	0.2
#1	0.1

Note 1: No more than three points shall be allowed for each incident prior to modification by protection factor.

Note 2: Each Incident shall be rated separately and modified by a factor appropriate to the warning devices in existence at the time of incident.

BD = Blocking Delay Per Train (The time by which vehicular traffic is delayed to allow a train to pass at crossing.)

1. To calculate the blocking delay for a typical day, observe when trains pass the crossing and begin timing from the point that warning devices are activated at the crossing and stop timing after the train has passed and warning devices are reset. Measure the elapsed time in minutes. i.e. If delay was 2 minutes and 30 seconds, then the time is 2.5 minutes.
2. Using the above method, calculate a delay time for each train that crosses the intersection.
3. Add all delays and divide the total time by the number of trains that passed the intersection. This average is the Blocking Delay points. Note: The maximum BD points is 10. If the average delay per train is 10 minutes or more, then your agency will be credited with the maximum of 10 points for the BD.

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EXAMPLE: At a highway-railroad crossing the following observations were made:

- \* A train with 100 cars passed the crossing with a blocking delay time of 7.5 minutes.
- \* Later that day, another train passed the crossing with a blocking delay time of 5.6 minutes.
- \* In the afternoon, another train passed the crossing with a blocking delay time of 8.1 minutes.
- \* The BD per train is:

$$(7.5 \text{ min.} + 5.6 \text{ min.} + 8.1 \text{ min.}) / 3 = 7.1 \text{ **}$$

\*\* Round off the average to the nearest tenth of a point.

VS = Vehicular Speed Limit

Posted Speed Limit MPH	POINTS
0 - 30	0
31 - 35	1
36 - 40	2
41 - 45	3
46 - 50	4
51 - 55	5

RS = Railroad Prevailing Maximum Speed

MPH	POINTS
0 - 25	0
26 - 35	1
36 - 45	2
46 - 55	3
56 - 65	4
66 - 75	5
76 - 85	6
86 +	7

CG = Crossing Geometrics

0 - 17 points based on relative severity of physical conditions, i.e. grade, alignment, site distance, etc.

AR = Alternate Route Availability:

The AR is the nearest crossing available that vehicles may cross if the highway-railroad grade crossing is blocked by train(s). i.e. If a train is passing by the Avenue T grade crossing and is long enough that it also blocks Avenue S and Avenue R, then the nearest crossing

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## AR = Alternate Route Availability (Continued)

that vehicles may cross is at Avenue Q. Assume that Avenue Q is 4252 ft. from the Avenue T grade crossing. Therefore, based on the table below, the AR for Avenue T is 4 pts.

<u>Distance in Feet</u>	<u>POINTS</u>
up to 1,000	0
1,001 - 2,000	1
2,001 - 3,000	2
3,001 - 4,000	3
4,001 - 5,000	4
5,001 +	5

Since some crossings are shared by railroads the alternate route may vary depending on the train length and speed. For situations where trains of different lengths utilize the crossing, determine the Alternate Route for each train that crosses on a typical day. Then, average the Alternate Route calculations and use the average number to determine the AR points.

For example, at a crossing three trains travelled on the same day. First, a 100 car train crossed and blocked two adjacent crossings in addition to the proposed crossing for separation. Assume that the nearest alternate route for the train was 4,852 ft. Next, a 10 car passenger train crossed and only blocked one additional adjacent crossing. Assume that the alternate route for the passenger train was 1,734 ft. A two car commuter train then crossed later that day and only blocked the intersection of the proposed grade separation. Assume that the nearest alternate route for the commuter train was 851 ft.

The average of the three trains is 2479 ft [  $(4852 + 1734 + 851) / 3 = 2,479$  ft.]. This average corresponds to an AR of 2 points.

## PT = Passenger Trains

<u>Number of Trains Per Day</u>	<u>POINTS</u>
1 - 2	1
3 - 5	2
6 - 10	3
11 - 20	4
21 - 30	5
31 - 40	6
41 - 50	7
51 - 60	8
61 - 70	9
71 +	10

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OF = Other Factors

Other Factors are valued in a range from 0 to 18 points based on:

<u>Category</u>	<u>POINTS</u>
Secondary Accidents	3
Emergency Vehicle Usage	3
Passenger Buses	3
School Buses	3
Hazardous Materials Trains and Trucks*	3
Community Impact	3

\* NOTE: In past OIIs, applicants were counting each and every train and truck that passed by the crossing as carrying hazardous materials because the vehicles operate on a fuel which is considered hazardous (diesel, gasoline, etc.). This is not acceptable. The correct tally is the count of trains and trucks which transport hazardous materials (chemicals, fuels, etc.) and its cargo is clearly labeled as hazardous content by a diamond shaped sign. If the load is not labeled, then the vehicle or train can not be counted as transporting hazardous materials.

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FORMULA FOR EXISTING SEPARATIONS  
NOMINATED FOR ALTERATION OR RECONSTRUCTION

$$P = \frac{V * (T + 0.1 * LRT)}{C * X * F} + SCF$$

Where:

- P = Priority Index Number  
V = Average 24-Hour Vehicular Volume  
T = Average 24-Hour Train Volume  
LRT = Average 24-Hour Light Rail Train Volume  
C = Total Separation Project Costs  
(in Thousands of Dollars)  
F = Cost Inflation Factor  
(based on Current Construction Cost Index)  
SCF = Special Conditions Factor  
SCF = WC + HC + SR + AS + PF + AP + DE

Where:

- WC = Width Clearance  
HC = Height Clearance  
SR = Speed Reduction  
AS = Accidents at or near structure  
PF = Probability of Failure  
AP = Accident Potential  
DE = Delay Effects

POINTS IN EACH CATEGORY ARE ASSIGNED ACCORDING TO THE  
FOLLOWING SCHEDULE:

V = Average 24-Hour Vehicular Volume = 1 point per  
vehicle

C = Total Separation Project Costs = 1 point per thousand  
of dollars in costs

T = Average 24-Hour Train Volume = 1 point per train

LRT = Light Rail Train Volume = 1 point per train

F = Cost Inflation Factor =  $\frac{CCI('75-'76) * '75-'76 "f"}{CCI (Current Year)}$

CCI (Construction Cost Index) for 1975-76 = 2100

"f" for 1975-76 = 24

Construction Cost Index for Current Year (see current  
Engineering News Record Journal)

For this investigation the Construction Cost Index (F)  
is (2100 x 24) / CCI for current year

APPENDIX 2  
Sheet 7 of 8

SCF = Special Conditions Factor  
= WC + HC + AS + PF + AP + DE

Where:

WC = Width Clearance	<u>POINTS</u>
Based On:	0-10
<u>Width (in Feet)</u>	<u>Points</u>
16' + 12(N)	0
12' but less than 16' + 12(N)	2
8' but less than 12' + 12(N)	4
Less than 8' + 12(N)	6
11(N)	8
Less than 11(N)	10
Note: N = Number of Traffic Lanes	

HC = Separation Height Clearance	0-10
Based On:	

Underpass	<u>POINTS</u>
<u>Height (feet)</u>	<u>Points</u>
15' and above	0
14' but less than 15'	4
13' but less than 14'	8
Less than 13'	10

Overpass	<u>POINTS</u>
<u>Height (feet)</u>	<u>Points</u>
22.5' and above	0
20' but less than 22.5'	4
18' but less than 20'	8
Less than 18'	10

SR = Speed Reduction or Slow Order	<u>POINTS</u>
None	0
Moderate	2
Severe	5

AS = Accidents at or Near Structure (10 years)	<u>POINTS</u>
<u>Number</u>	<u>Points</u>
0-10	0
11-20	1
21-30	2
31-40	3
41-50	4
51-60	5
61-70	6
71-80	7
81-90	8
91-100	9
100 +	10

APPENDIX 2  
Sheet 8 of 8

PF = Probability of Failure (10 points maximum)  
(Taking structure age into account)

	<u>Points</u>
Minimal/None	0
Slight	2-3
Moderate	4-6
Extreme	7-10

AP = Accident Potential (10 points maximum)

	<u>Points</u>
None	0
Slight	2-3
Moderate	4-6
Extreme	7-10

DE = Delay Effects (10 points maximum)

	<u>Points</u>
None	0
Slight	2-3
Moderate	4-6
Extreme	7-10



**APPENDIX 3  
IMPORTANT NOTICE**

May 30, 1997

To: CITIES, COUNTIES AND INTERESTED PARTIES

Re: Establishment of the 1998-99 & 1999-2000 Grade Separation Priority List under Streets & Highways Code Section 2452.

The Commission is anticipating the issue of an Order Instituting Investigation (OII) for establishing the 1998-99 & 1999-2000 highway-railroad grade separation priority list. The California Transportation Commission and the Department of Transportation (CALTRANS) use the priority list to allocate \$15 million (\$5 million maximum per project) each fiscal year to assist local governments in financing grade separation projects.

If you are interested in the grade separation priority list program and would like to receive the OII, please return the bottom portion of this letter to the address indicated by July 15, 1997. The OII includes an explanation of the program, application and requirements for filing. The OII also includes the criteria and formula used to rank all nominations. If your agency wishes to nominate grade separation project(s) for inclusion on the priority list, you must return the bottom of this form and participate in the Commission's OII. Unless we hear from you, the OII will not be mailed to your agency.

If you have any questions, please contact Tack Joe at (415) 703-2280, James (Jim) Esparza at (213) 897-3924, or Tom Enderle at (415) 703-1890.

Very truly yours,

Tom Enderle, Senior Transportation Engineer  
Rail Safety & Carriers Division

-----cut-----cut-----cut-----  
Mail to: California Public Utilities Commission DUE: July 15,1997  
Attn: Tack Joe, RR Safety Special Projects  
505 Van Ness Avenue  
San Francisco, CA 94102

Please place me/my agency on the mailing list for Order Instituting Investigation to establish the 1998-99 & 1999-2000 Railroad Highway Grade Separation Priority List.

Name / Agency Name: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ CA Zip Code: \_\_\_\_\_  
Contact Telephone Number: ( \_\_\_\_\_ ) \_\_\_\_\_

ADDRESS LIST  
GRADE SEPARATION NOMINATION

This is a partial listing, only. Applicant's are still responsible to serve copies of their nominations on the railroad(s) involved in their proposals.

RAILROADS

Dan A. Barringer, G.M.  
Amador Railroad Company  
909 Terminal Sales Bldg.  
Portland, OR 97205

Jeff E. Forbis, Pres & CEO  
McCloud Railway  
P.O. Box 1500  
McCloud, CA 96057

Annette L. Polte, G.M.  
Amador Central Railroad Co.  
P.O. Box 66  
Martell, CA 95654

James L. Beard, Pres.  
Modesto & Empire Traction Co.  
P.O. Box 3106  
Modesto, CA 95353

L.E. Mueller, G.M.  
Burlington Northern Railroad Co.  
2000 First Interstate Center  
Seattle, WA 98104

Tom Schuler, Dir. of Engr.  
Port of Sacramento  
Sacramento-Yolo Port  
District Belt Railroad  
P.O. Box 815  
West Sacramento, CA 95691

G.J. Allen, G.M.  
California Western Railroad  
(DBA: Mendocino Coast Railway)  
P.O. Box 907  
Fort Bragg, CA 95437

A.G. Beckman, Dir of Oprns  
Port of Stockton  
Stockton Public Belt Railroad  
P.O. Box 2089  
Stockton, CA 95201

Steve Crook, G.M.  
North Coast Railroad Co.  
P.O. Box 2014  
Eureka, CA 95502

Thomas G. Matoff, Gen. Manager  
Sacramento Regional Transit  
Dist. Light Rail Project  
P.O. Box 2110  
Sacramento, CA 95812-2110

R.A. Igo, G.M.  
Harbor Beltline Railroad  
Box A  
P.O. Wilmington, CA 90748

Dennis Kling, G.M.  
San Diego & Imperial Valley RR  
743 Imperial Avenue  
San Diego, CA 92101

Richard Levin, Pres.  
Levin-Richmond Ter. Corp  
(Parr Terminal Railroad)  
402 Wright Avenue  
Richmond, CA 94804

Peter Tereschuck, Vice Pres.  
San Diego Trolley, Inc.  
1255 Imperial Avenue  
San Diego, CA 92101

APPENDIX 4  
Sheet 2 of 2

Neil Peterson, - Exec. Dir.  
Los Angeles County Transp.  
Commission - RCC  
818 W. 7th Street, Suite 1100  
Los Angeles, CA 90017

Lawrence Reuter, Dir. of Trans.  
Santa Clara County Transportation  
Agency  
101 West Younger Avenue  
San Jose, CA 95110

Mrs. Sue J. Swörd, Pres. & Man.  
Santa Maria Valley Railroad Co.  
P.O. Box 340  
Santa Maria, CA 93456

L.T. Cecil, V.P. & G.M.  
Yreka Western Railroad Co.  
P.O. Box 660  
Yreka, CA 96097

Jerry Gregg, Exec. V.P.  
Sierra Railroad Company  
13645 Tuolumne Road  
Sonora, CA 95370

Ken A. Moore, V.P. Operations  
Southern Pacific Transportation Co  
One Market Plaza  
San Francisco, CA 94105

Greg N. Carney, V.P. & COO  
Stockton Terminal & Eastern RR.  
1330 North Broadway Avenue  
Stockton, CA 95205

Roy Ketring, Special Proj. Mngr.  
The Atchison, Topeka, & Santa Fe  
Railway Company  
740 E. Garnégie Drive  
San Bernardino, CA 92408-3571

Marc C. Demétree, Pres.  
Trona Railway Company  
13068 Main St.  
Trona, CA 93562

E.C. May, G.M.  
Union Pacific Railroad Co.  
406 W. First South  
Salt Lake City, UT 94101

Carmen Chapell, Pres.  
Ventura County Railway Co.  
P.O. Box 432  
Oxnard, CA 93032

CALTRANS ( Send one copy to each addressee)

J.E. Robert, Chief  
Division of Structures  
Department of Transportation  
Sate of California  
Attn: Jack Boda  
P.O. Box 942874  
Sacramento, CA 94274-20001

E. C. Bonnstetter, Attorney  
Department of Transportation  
Sate of California  
P.O. Box 1438  
Sacramento, CA 95812-1438

ADDITIONAL PARTIES ( Send one copy to each addressee)

Jeff S. Assay, Staff Attorney  
Union Pacific Railroad Co.  
5500 Ferguson Dr., Ste J  
Los Angeles, CA 90022

General Attorney  
Southern Pacific Transp. Co.  
Southern Pacific Building  
One Market Plaza  
San Francisco, CA 94105

Curtis Ballantyne, Attorney  
Santa Fe Southern Pacific Corp.  
35th Floor, Union Bank Square  
445 S. Figueroa Street  
Los Angeles, CA 90071

(FOR ORANGE COUNTY APPL. ONLY)  
Roger Hohnbaum, Manager  
EMA/Transportation Programs  
County of Orange  
P.O. Box 4048  
Santa Ana, CA 92702-4048

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Investigation for the purpose  
of establishing a list for the  
fiscal years 1998-1999 and 1999-  
2000 of existing and proposed  
crossings at grade of city  
streets, county roads, or state  
highways in need of separation,  
or projects effecting the elimi-  
nation of grade crossings by  
removal or relocation of streets  
or railroad tracks, or existing  
separations in need of alteration  
or reconstruction as contemplated  
by Section 2452 of the Streets  
and Highways Code.

DOCKET NO. \_\_\_\_\_

Nomination for Separation or Elimination  
of  
Existing Railroad Grade Crossing

Nomination by City / County of \_\_\_\_\_  
in Compliance with I.97-07-014

Location Name (street): \_\_\_\_\_  
PUC ID Number: \_\_\_\_\_

NOMINATION FOR GRADE SEPARATION - GSN-1 FORM

A. Information about your Agency

Name: \_\_\_\_\_
Address: \_\_\_\_\_
City: \_\_\_\_\_ CA \_\_\_\_\_
Contact: \_\_\_\_\_
Title: \_\_\_\_\_
Telephone: (\_\_\_\_) \_\_\_\_\_

Consultant: \_\_\_\_\_
Address: \_\_\_\_\_
City: \_\_\_\_\_ CA \_\_\_\_\_
Contact: \_\_\_\_\_
Title: \_\_\_\_\_
Telephone: (\_\_\_\_) \_\_\_\_\_

B. Crossing Location and Project Type

PUC Crossing No.: \_\_\_\_\_
Street: \_\_\_\_\_
Nearest Cross St.: \_\_\_\_\_
City: \_\_\_\_\_ County: \_\_\_\_\_
Railroad Co.: \_\_\_\_\_

Project Type: [ ] Underpass [ ] Overpass
Is project part of a Consolidation? [ ] Y [ ] N

C. Crossing Geometrics

Track Skewed Angle: \_\_\_\_\_ degrees
Number of Tracks: \_\_\_\_\_
Elevated Surface Profile:
Direction: \_\_\_\_\_ Height: \_\_\_\_\_ in.
Direction: \_\_\_\_\_ Height: \_\_\_\_\_ in.

Parallel Road to Tracks [ ] Y [ ] N
Signals within 50' [ ] Y [ ] N
Entrance/Exit within 150' [ ] Y [ ] N
Raised Median Protection [ ] Y [ ] N
Curvature of Road or Track [ ] Y [ ] N

D. Average Daily Volume of:

Vehicles: \_\_\_\_\_ Trains: \_\_\_\_\_
School Buses: \_\_\_\_\_ Light Rail: \_\_\_\_\_
Other Buses: \_\_\_\_\_ Passenger: \_\_\_\_\_
Haz. Mat. Trucks: \_\_\_\_\_
Emergency: \_\_\_\_\_
Other: \_\_\_\_\_ Pedestrians: \_\_\_\_\_
Date of Count: \_\_\_\_\_

E. Blocking Delay and Speed Limits

Blocking Delay: \_\_\_\_\_ min.
Number of Delays: \_\_\_\_\_
Average Blocking Delay: \_\_\_\_\_ min./delay
Information Provided by:
[ ] Railroad or [ ] Observation,
Date: \_\_\_\_\_

Nearest Alternate Route: \_\_\_\_\_ feet
Posted Vehicular Speed Limit \_\_\_\_\_ MPH
Train Speed Limit: \_\_\_\_\_ MPH

F. Accident/Incident Data

Total Number of Train Vs. Vehicle: \_\_\_\_\_
No. of Fatalities: \_\_\_\_\_ Injuries: \_\_\_\_\_
Total Number of Secondary Incidents: \_\_\_\_\_
Data Source: \_\_\_\_\_

G. Costs and Contributions

Total Project Costs (\$000) \$ \_\_\_\_\_
Contributions by: (Enter % of Costs)
City/County: \_\_\_\_\_ %
Railroad: \_\_\_\_\_ %
Other: \_\_\_\_\_ %
Specify Source: \_\_\_\_\_

H. Other Information / Attachments

- 1. Has a construction/engineering contract been awarded? [ ] Yes [ ] No
2. When will construction begin? \_\_\_\_\_
3. When will project be completed? \_\_\_\_\_
4. Did you enclose?: [ ] a Location Map
[ ] Two 8"x10" Pictures of Crossing

\*\*\*\*\*

I. For Office Use Only:

Date Application Filed: \_\_\_\_\_
Inspection Date: \_\_\_\_\_
Engineer(s): \_\_\_\_\_
Audit Date: \_\_\_\_\_
Engineer(s): \_\_\_\_\_
PN: \_\_\_\_\_ RANK: \_\_\_\_\_

**INSTRUCTIONS FOR FILLING THE GSN-1 FORM  
NOMINATION FOR GRADE SEPARATION****Introduction:**

By July 1 of each year, the California Public Utilities Commission (Commission) is required to establish and furnish to the California Transportation Commission a priority list of railroad grade separation projects most urgently in need of separation or elimination. The Commission requests nominations of projects for grade separation / elimination to be submitted via this GSN-1 Form (attached) application by the specified due date in the Commissions Order Instituting an Investigation. All nominations will be reviewed and taken into consideration for the development of the Commission's Priority List. Please follow the instructions below to fill the application. Should you need assistance with this form please contact Jim Esparza at (213) 897-3924 or Tom Enderle at (415) 703-1890.

**A. Information about your Agency:**

In the spaces provided, enter your company's name, address and contact person along with your contacts title and phone number. If your agency has hired a consultant to process the nomination, please provide the consultant's company name, address, contact person and phone number. If your agency will not use the services of a consultant write "NONE" for "Consultant".

**B. Crossing Location and Project type:**

Provide the PUC Crossing Number for your agency's proposed project along with the street location, nearest cross street, city and county of crossing and the name of the railroad company operating the tracks. If the project involves the construction of a new grade separation at a site where there is no existing at grade crossing, then enter "NEW" for the PUC Crossing Number. Also specify the type of project the grade separation proposal involves with respect to train traffic. i.e. If a bridge is to be built where the train will ride under the bridge and vehicular traffic over the bridge, the project is an "UNDERPASS". If a bridge is to be built where the train will ride over of the bridge and vehicular traffic under the bridge, the project is an "OVERPASS".

**NOTE:** If your project involves more than one crossing, fill a separate GSN-1 form for each crossing and also mark the Consolidation box under Project Type.

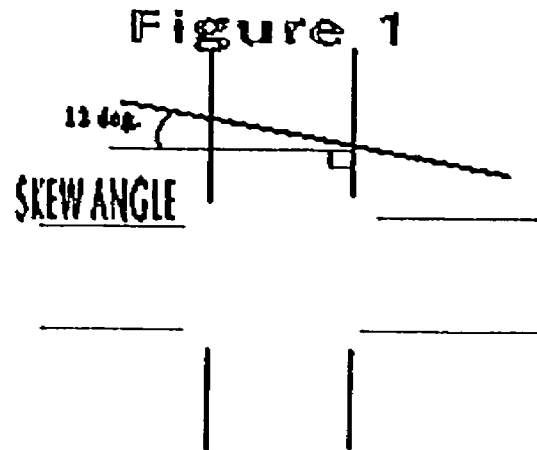
**C. Crossing Geometrics:**

Provide the information requested about the physical attributes of existing crossing using the following guidelines:

### INSTRUCTIONS FOR FILLING THE GSN-1 FORM NOMINATION FOR GRADE SEPARATION

**TRACK SKEWED ANGLE:** Enter the skewed angle from the perpendicular to the roadway. In Figure 1, the skewed angle is 12 degrees from the perpendicular.

**Note:** If more than one track exists at the crossing, measure the skewed angle of the main track.



**NUMBER OF TRACKS:** Specify the total number of tracks at the existing crossing.

**NOTE:** If more than one set of tracks are present but only one train can occupy the tracks at the crossing, then enter "1" for the number of tracks. If more than one train can use the tracks then enter the total number of tracks present.

**ELEVATED SURFACE PROFILE:** The elevated surface profile is the change in height from the top of the nearest rail track to the top of the roadway 30 ft. from the tracks. The measurement should be in inches and the direction in which traffic is flowing should be specified as N for North, S for South, E for East and W for West.

**PARALLEL ROAD TO TRACKS:** Is there a road running parallel to the track(s)? Mark "Y" for Yes and "N" for no.

**SIGNALS WITHIN 50 ft:** Are there any traffic signals within 50 ft of crossing? (stop signs, traffic control devices, etc) Mark "Y" for Yes and "N" for No.

**ENTRANCE / EXIT WITHIN 150 ft:** Is there a driveway entrance or exit within 150 ft from crossing? Mark "Y" for Yes and "N" for No.

**RAISED MEDIAN PROTECTION:** Is there a raised median protection at the crossing? Mark "Y" for Yes and "N" for No.

**CURVATURE OF ROAD OR TRACK:** Is the road and/or track curvature sufficient to

**INSTRUCTIONS FOR FILLING THE GSN-1 FORM  
NOMINATION FOR GRADE SEPARATION**

impair visibility by vehicular traffic? If visibility is hindered mark "Y" for Yes. If curvature does not interfere with visibility mark "N" for No.

**D. AVERAGE DAILY VOLUME :**

For all categories specified in this section, provide the vehicle and train count of a typical day. In the "VEHICLES" category specify the total number of vehicles flowing through crossing that are not specified in the other categories. For example: all automobiles, pick-up trucks, vans, limos, 4WD Vehicles, etc. Count school buses, passenger buses, transport trucks, emergency vehicles (police, fire, ambulance, medical transport), and haz-mat trucks separately.

For the train count specify the total number of trains which use the crossing into three categories: Heavy Rail, Light Rail and Passenger Trains.

At the bottom of this category include the date when the vehicle count was taken. This date should be within the last year of filing the application. If an older vehicle count is used, then specify in the affidavit that the vehicle count is an accurate representation of current traffic flow.

**E. BLOCKING DELAY AND SPEED LIMITS**

In this section, specify the requested blocking delay information for a typical day. For example: Three trains used the crossing on average a day. The blocking delay is the time, in minutes, from when crossing signals are active until the train clears the crossing and signals return to normal. The blocking delay was 5 min. for the first train, 3.5 min. for the second, and 7.75 min. for the third train. The total blocking delay was therefore the sum of each delay for a total of 16.25 min. The average Blocking Delay (BD) is the total delay time divided by total number of delays. In this example, the  $BD = (16.25 / 3)$  which is equal to 5.4 min.

**NEAREST ALTERNATE ROUTE:** Specify the distance, in feet, of the nearest alternate route that vehicular traffic can use when the highway - railroad crossing is blocked by a train. Suppose there are three crossings 300 ft. apart and trains block two of the three crossings, then the next alternate route is 900 ft from the crossing proposed for grade separation. If the tracks are used by trains of different lengths and travelling speeds, then determine the nearest alternate route for each train that passes by the grade crossing. Average the alternate route calculations to determine the nearest alternate route for the application purposes.

For example: On any typical day, three trains are known to travel by a highway - railroad crossing proposed for separation. The first train is a freight train pulling 100 cars of cargo and travels at 10 mph when passing by the crossing. At a given time, this train blocks the crossing proposed for separation and two additional adjacent crossings. The alternate route for vehicles



**INSTRUCTIONS FOR FILLING THE GSN-1 FORM  
NOMINATION FOR GRADE SEPARATION**

due to the blocked crossings is a road located 4,326 ft away.

The second train is a high speed commuter train that only blocks the crossing proposed for separation when passing by. Therefore, the nearest alternate route for this train is the next crossing located 600 ft. away. The third train is a smaller freight train with 20 cars and only blocks the crossing proposed for separation and its adjacent crossing. The nearest alternate route for vehicles is a road 1,128 ft. away.

The average alternate route for the above example is 2,018 ft.  $[(4,326 + 600 + 1,128) / 3]$ . This average will be used to determine the alternate route points in evaluating the proposed separation for the Priority List.

**POSTED VEHICULAR SPEED LIMIT:** Specify the posted vehicular speed limit in direction of traffic flow that passes through crossing. If no signs are posted then assume a 35 MPH speed limit.

**F. ACCIDENT / INCIDENT DATA**

Provide all train vs. vehicle accidents / incidents that have occurred at the crossing proposed for grade separation. The Commission maintains accident data for each jurisdictional crossing in a file called FORM A. The data submitted with the application will be checked with the Commission's records. All accidents involving trains vs vehicles should have been reported to the Commission. The Commission reserves the right to audit any records involving the accident / incident data for correctness and maximum point allocation. Also, for each accident / incident, specify the number of injuries and fatalities.

For secondary accidents, specify the number of accidents / incidents attributed to the crossing that did not involve a train vs. vehicle. Specify the source of your data and maintain copies of your data should the Commission wish to review the information.

**G. Costs and Contributions:**

Fill in the following work sheet to determine the total project costs. Of the total, also enter the percentages expected /negotiated to be covered by the sources specified on GSN-1 form.

**INSTRUCTIONS FOR FILLING THE GSN-1 FORM  
NOMINATION FOR GRADE SEPARATION**

**WORK SHEET:**

Right-of-way allowance.....	\$ _____
Preliminary Engineering.....	\$ _____
Construction Engineering.....	\$ _____
Total Engineering.....	\$ _____
Bridge Construction.....	\$ _____
Railroad Work.....	\$ _____
Highway approaches and connections .....	\$ _____
Utility relocation.....	\$ _____
Contingencies.....	\$ _____
Removing existing crossing .....	\$ _____
Total Construction Cost.....	\$ _____
<b>TOTAL PROJECT COSTS .....</b>	<b>\$ _____</b>

**NOTE:** For projects involving more than one crossing, complete the cost work sheet for each individual crossing and show a summary for the complete project.

**H. OTHER INFORMATION**

Answer the three questions regarding the expected dates for construction and project completion. Attach a location map and two 8 x 10 pictures of the proposed crossing location (one from each approach) showing the entire crossing and pertinent crossing geometrics. Also fill the affidavit section (in back of GSN-1 Form) explaining any information discrepancies. Keep a copy of all information submitted to the Commission for your files and submit your application by the filing due date. Thank you for your interest in improving highway - railroad crossing safety and we hope that this program may provide your agency with some funds for your project(s).

**I. FOR OFFICE USE ONLY - This section will be filled by Commission staff.**

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Investigation for the purpose )  
of establishing a list for the )  
fiscal years 1998-1999 and 1999- )  
2000 of existing and proposed )  
crossings at grade of city )  
streets, county roads, or state )  
highways in need of separation, )  
or projects effecting the elimi- )  
nation of grade crossings by )  
removal or relocation of streets )  
or railroad tracks, or existing )  
separations in need of alteration )  
or reconstruction as contemplated )  
by Section 2452 of the Streets )  
and Highways Code. )

DOCKET NO. \_\_\_\_\_

Nomination for Alteration or Reconstruction  
of  
Existing Grade Separation

Nomination by City / County of \_\_\_\_\_  
in Compliance with I.97-07-014

Location Name (street): \_\_\_\_\_  
PUC ID Number: \_\_\_\_\_

NOMINATION FOR ALTERATION/RECONSTRUCTION - GSN-2 FORM

A. Information about your Agency

Name: \_\_\_\_\_
Address: \_\_\_\_\_
City: \_\_\_\_\_ CA \_\_\_\_\_
Contact: \_\_\_\_\_
Title: \_\_\_\_\_
Telephone: (\_\_\_\_) \_\_\_\_\_

Consultant: \_\_\_\_\_
Address: \_\_\_\_\_
City: \_\_\_\_\_ CA \_\_\_\_\_
Contact: \_\_\_\_\_
Title: \_\_\_\_\_
Telephone: (\_\_\_\_) \_\_\_\_\_

B. Crossing Location

PUC Crossing No.: \_\_\_\_\_
Street: \_\_\_\_\_
Nearest Cross St.: \_\_\_\_\_
City: \_\_\_\_\_ County: \_\_\_\_\_
Railroad Co.: \_\_\_\_\_

C. Clearances:

Horizontal Width: \_\_\_\_\_ ft. # of Lanes: \_\_\_\_\_
Height Clearance: \_\_\_\_\_ ft.
[ ] Underpass [ ] Overpass

D. Speed Reduction and/or Slow Order

Vehicle: \_\_\_\_\_ MPH
Railroad Slow Order: \_\_\_\_\_ MPH
Is there a center divider? [ ] Y [ ] N

E. Average Daily Volume of:

Vehicles: \_\_\_\_\_ Trains: \_\_\_\_\_
Light Rail: \_\_\_\_\_
Passenger: \_\_\_\_\_
Other: \_\_\_\_\_

F. Accident/Incident Data

Total Number of Secondary Incidents: \_\_\_\_\_
Data Source: \_\_\_\_\_

G. Costs and Contributions

Total Project Costs (\$000) \$ \_\_\_\_\_
Contributions by: (Enter % of Costs)
City/County: \_\_\_\_\_ %
Railroad: \_\_\_\_\_ %
Other: \_\_\_\_\_ %
Specify Source: \_\_\_\_\_

H. Probability of Failure Data

Date Structure Was Built: \_\_\_\_\_
Is Street Lighting Present Before and After the
Structure: [ ] Yes [ ] No
Are Traffic Signals near (within 150 ft.) of
Structure? [ ] Yes [ ] No

I. Other Information / Attachments

- 1. Has a construction/engineering contract been awarded? [ ] Yes [ ] No
2. When will construction begin? \_\_\_\_\_
3. When will project be completed? \_\_\_\_\_
4. Did you enclose:
[ ] Two 8" x 10" Pictures of Separation
[ ] Affidavit/Verification Form
(see other side)

\*\*\*\*\*

J. For Office Use Only:

Date Application Filed: \_\_\_\_\_
Inspection Date: \_\_\_\_\_
Engineer(s): \_\_\_\_\_
Audit Date: \_\_\_\_\_
Engineer(s): \_\_\_\_\_
PN: \_\_\_\_\_ RANK: \_\_\_\_\_

**INSTRUCTIONS FOR FILLING THE GSN-2 FORM  
NOMINATION FOR GRADE SEPARATION****Introduction:**

By July 1 of each year, the California Public Utilities Commission (Commission is required to establish and furnish to the California Transportation Commission a priority list of railroad grade separation projects most urgently in need of separation, modification or elimination. The Commission requests nominations of projects to modify existing separations to be filed with the attached GSN-2 Form application by the specified due date in the Commission's Order Instituting an Investigation. All nominations will be reviewed and taken into consideration for the development of the Commission's priority List. Please follow the instructions below to fill the application. Should you need assistance with this form, please contact Jim Esparza at (213) 897-3924 or Tom Enderle at (415) 703-1890.

**A. Information about your Agency:**

In the spaces provided, enter your company's name, address and contact person along with your contacts title and phone number. If your agency has hired a consultant to process the nomination, please provide the consultant's company name, address, contact person and phone number. If your agency will not use the services of a consultant write "NONE" for "Consultant".

**B. Crossing Location and Project type:**

Provide the PUC Crossing Number for your agency's proposed project along with the street location, nearest cross street, city and county of crossing and the name of the railroad company operating the tracks. If you do not know the PUC Crossing Number, please contact the Commission's staff.

**C. Clearances:**

Provide the information requested about the physical attributes of existing separation. The Horizontal Width should be measured between the edge of roadway / curb to the opposite edge of roadway / curb. For the Height Clearance, measure from the top of rail to bottom of structure, if an overpass, else; measure from the pavement to bottom of structure for the Underpass.

**D. SPEED REDUCTION AND/OR SLOW ORDER**

Quantitatively identify any vehicular speed reduction which may be due to the presence of the structure. For example, speed over the structure must be reduced from 60 mph to 30 mph. Information regarding a railroad slow order may be obtained from the railroad company.

**INSTRUCTIONS FOR FILLING THE GSN-2 FORM  
NOMINATION FOR GRADE SEPARATION**

**E. AVERAGE DAILY VOLUME**

Provide an average 24 hour, -day count of vehicles and trains. The count should be done after January 1, 1997.

**F. Accident /Incident Data:**

Provide a count of the total number of accidents/incidents which may be attributed to the presence of the grade separation structure. Divide the information into the two categories specified and keep documentation for your response.

**G. Costs and Contributions:**

Fill in the following work sheet to determine the total project costs. Of the total , also enter the percentages expected /negotiated to be covered by the sources specified.

**WORK SHEET:**

Right-of-way allowance.....	\$	_____
Preliminary Engineering.....	\$	_____
Construction Engineering.....	\$	_____
Total Engineering.....	\$	_____
Bridge Construction.....	\$	_____
Railroad Work.....	\$	_____
Highway approaches and connections .....	\$	_____
Utility relocation.....	\$	_____
Contingencies.....	\$	_____
Total Construction Cost.....	\$	_____
<b>TOTAL PROJECT COSTS .....</b>	<b>\$</b>	<b>_____</b>

**NOTE:** For projects involving more than one crossing, complete the cost work sheet for each individual crossing and show a summary for the complete project.

**INSTRUCTIONS FOR FILLING THE GSN-2 FORM  
NOMINATION FOR GRADE SEPARATION**

**H. Probability of Failure Data:**

Provide the information requested regarding the existing structure.

**I. Other Information / Attachments**

Answer the questions regarding the expected dates for construction and project completion. Also remember to attach two 8"x 10" pictures of the existing separation (one from each approach) showing the entire structure.

Please fill out the community impact and affidavit form on the back of the GSN-2 Form. Remember to keep a copy of all information submitted to the Commission for your files and submit your application by the filing due date.

**J. FOR OFFICE USE ONLY** - Please leave this section blank.