TR-950332

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December 15, 1997

Alan Scott (Mike)
Operation Manager - Rail
Washington Utilities and
Transportation Commission
P.O. Box 47250
Olympia, Washington 98504-7250

Re: Spokane County Rail Corridor Evaluation

Dear Allan (Mike):

Attached is my Draft report for the above reference project. I have not attempted to put the report in a format that would be acceptable to the Commission (since I really do not know what it should look like). I am prepared to provide additional supporting information to supplement my opinions. It may not be necessary since I will be cross examined at the hearing.

Please look this over carefully and let me know what changes that you expect for me to make in the format and analysis. I am very comfortable with the recommendation for the four-crossing closure. I also have a strong opinion that Union Pacific (or someone) should prepare a benefit/cost analysis that will identify the railroad's benefits from the closure. I think that they will be substantial.

Sincerely,

Hoy A. Richards
Principal

The basis for the work reported in this statement is a Personal Services Contract (Expert Witness) entered into between Washington Utilities and Transportation Commission and Hoy A. Richards Principal in Richards & Associates. The contract included the following documentation:

THIS CONTRACT is made and entered into between the WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION (Commission) and HOY A. RICHARDS of Richards & Associates, with offices located at P. O. Box 10350, College Station, Texas (Contractor), in the matter of the evaluation of selected highway-rail intersections in the State of Washington Docket Nos. TR-950176, TR-950331, TR-950332, TR-950333, and TR-950334.

The Commission and the Contractor agree as follows:

I. INTRODUCTION

A. Pursuant to earlier discussions between the Commission and the Contractor, in which the terms and conditions of this agreement have been discussed, the Contractor will undertake to prepare analysis and testimony, and appear as an expert witness for the staff of the Commission relating to safety evaluations of selected highway-rail intersections in the State of Washington. More specific directions as to the scope of Contractor's assignment concerning these issues will be communicated to Contractor by Commission Rail Safety personnel.

B. The Commission has determined that the Contractor's extensive familiarity with factors relating to railway safety lead to the conclusion that the Contractor is the person best qualified to undertake this assignment.

II. SCOPE OF WORK

A. The Contractor will prepare testimony for filing in the investigation above-referenced and for cross-examination. The Contractor also will travel to the hearing site in the State of Washington to be available for cross-examination in a hearing involving these issues.

B. The Contractor will evaluate all highway-rail grade crossings in the selected corridor to determine those that are candidates for elimination by closure, grade separation, or improvement by installation of traffic control devices. This evaluation will include the following tasks:

1. Inventory of existing physical and operating characteristics of the grade crossings

as well as the roadway system within the corridor;

2. Evaluation of existing conditions to determine alternative methods for improving safety in the corridor;

3. Estimate of the expected impact of proposed crossing closures upon the key intersections and connecting roadway system;

4. Determination of the impact of diverted traffic from proposed crossing closures upon the highway-rail intersections remaining in the roadway system;

5. Preparation of recommendations to facilitate a safe and efficient traffic flow system for the corridor being evaluated;

6. Preparation of recommendations for implementation of safety improvements, if required, at highway-rail intersections not included in the crossing closure recommendations;

7. Participation in presentation of the plan for corridor safety improvement to governmental bodies and other groups identified by the Commission.

C. The Contractor will perform the above-described services in consultation with Commission staff and with other persons as directed by the staff and make himself available to staff and counsel in the preparation of the testimony and in responding to the case presented by any complainants. Prior to the presentation of Contractor's study and testimony, it will be necessary that Contractor prepare data requests and review all data submitted in response thereto, as well as responses to data requests submitted by other parties to the proceeding, and that Contractor assist counsel for the Commission in analyzing and preparing cross-examination of relevant evidence of the parties relating to the subjects assigned to him. The same requirement will also apply to any relevant rebuttal evidence of the parties that may be made of record. Commission counsel may desire Contractor's assistance in preparation of a brief to the Commission and the preparation of material for oral argument.

D. It is anticipated that procedures for evaluation of crossings in the corridor, including traffic engineering studies, described in the Rail-Highway Grade Crossing Handbook and other case studies will form the basis of a large part of the methodology to be employed by the consultant. Data obtained from the Federal Railroad Administration for use in computation of accident prediction values, vehicle traffic counts from local roadway jurisdictions, railroad operating data, and data available through the state and local agencies will form the basis for the evaluation of the selected corridors.

E. The Contractor personally will be responsible for the development of the testimony and will personally be the witness presenting and supporting the same at the public hearings, except as may be authorized by counsel for the Commission. The Contractor

will commit himself to the completion of the purposes for which he is engaged as expert witness. The Contractor understands that it is essential that testimony and exhibits be prepared for distribution in accordance with a schedule to be announced.

F. The work envisioned under this contract does not supplant work which the Commission staff otherwise would be able to perform in a timely manner.

III. PERIOD OF PERFORMANCE

The period of performance for this contract will be from the date the contract, signed by both parties, is received by the Commission until approximately six months after this contract has been signed.

EXPERT WITNESS REPORT

When given authorization to proceed with the study the Witness requested, and received, the following information from the WUTC staff:

1. A large scale county map of Spokane County.
2. A track chart of the corridor
3. A hard copy of the USDOT/AAR Grade Crossing Inventory forms for all Public, Private and Grade Separation crossings in the corridor.
4. A hard copy of supplemental crossing data collected by either the State or the Union Pacific Railroad.
5. A copy of all accident reports, train involved or non-train involved occurring at all crossings during the period 1990-1996.
6. One or more examples of "expert witness" testimony presented at previous Commission hearings.
7. Any published transportation plan that may involve the corridor.
8. The identification of all at-grade crossings that are located on designated as school bus, hazardous material (truck) or other special vehicle routes.

Following a review of this material, and information obtained from the Union Pacific Railroad a Transportation Facilities Map of the Campbell-Wellesley rail-highway grade crossing corridor was developed. Figure 1 is a representation of that map with traffic volumes for each of the public roads included in the corridor study area. This information was obtained from the Spokane County Engineer's office.

Field Evaluation

Accompanied by staff of WUTC the Witness conducted a field evaluation (diagnostic study) of each at-grade crossing in the corridor. Photographs were taken and field note were recorded for future reference. Following the field review the Witness met with the Spokane

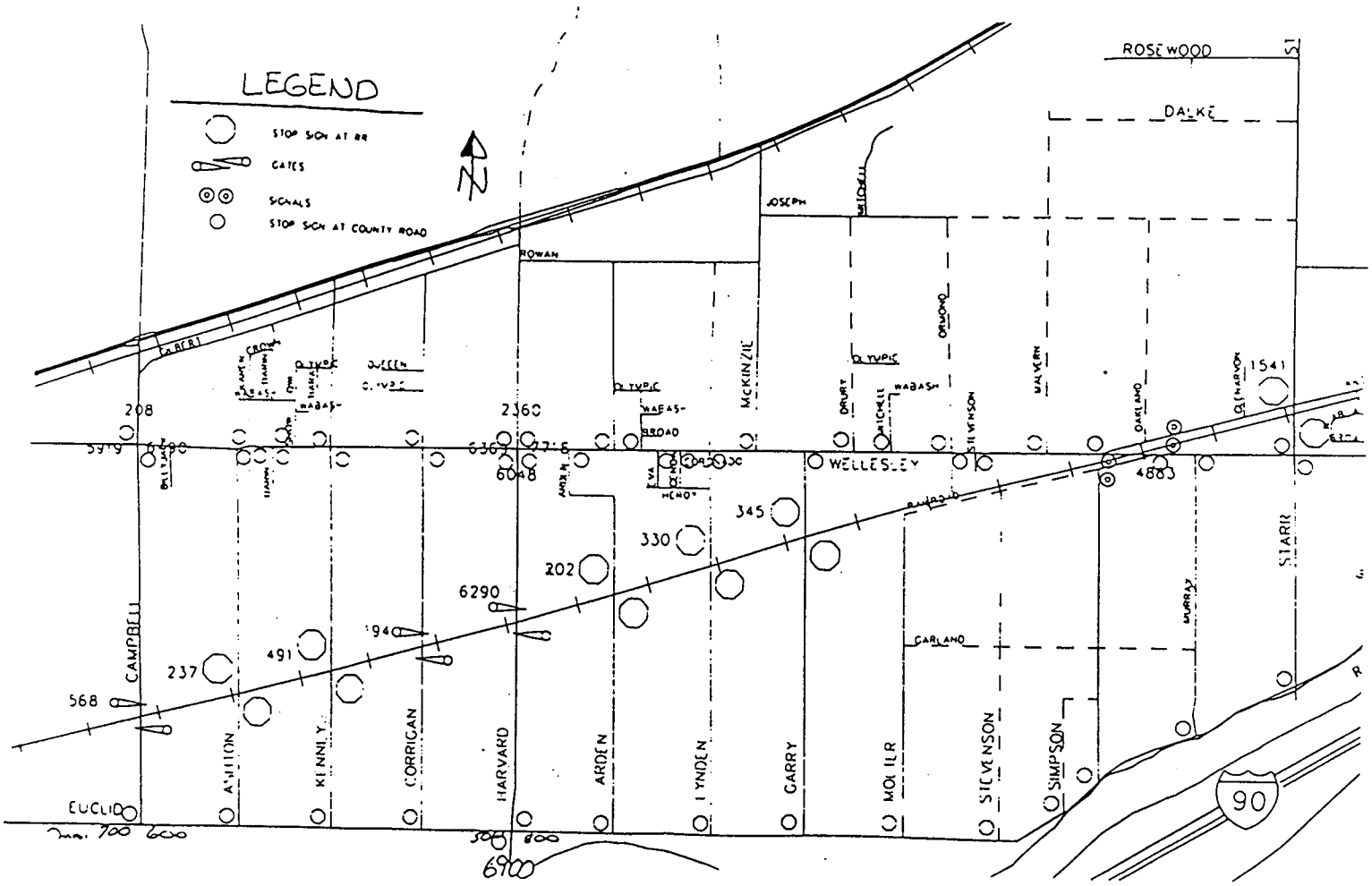

Figure 1 - Existing Transportation Facilities and Traffic Volumes in the Study Area

County Engineer and his staff to obtain current traffic volumes and other data and information significant to the corridor evaluation. Union Pacific's Public Works Engineer, having responsibility for UP's crossings in the corridor was interviewed. Current and future train volumes, along with UP's plans for future operations in the corridor were products of this interview. WUTC staff were interviewed to obtain information regarding past studies and regulatory proceedings regarding railroad grade crossings in the corridor. Documents related to previous applications filed with the WUTC were obtained for future reference.

Railroad Crossing Safety Improvement and Circulation Investigation:

The next step in the procedure was to conduct a detailed railroad crossing safety improvement and traffic circulation investigation on the segment of Union Pacific's rail line located between Campbell Road and Wellesley Road in Spokane County, as shown in Figure 1. This investigation focused primarily on the circulation of vehicular traffic within the study area under a variety of proposed railroad grade crossing closure scenarios. This letter documents the findings of this investigation and provides estimates of the daily traffic at each railroad crossing and the necessary transportation system improvements under each closure scenario.

Due to the forecasted increase in train travel along the Union Pacific rail line in Spokane County, the railroad and county transportation officials have requested that the five stop-controlled crossings on Ashton, Kenney, Arden, Lynden, and Garry Roads and the one gated crossings on Corrigan Road be examined for traffic control improvements and/or potential closure. This investigation is intended to provide a bettering understanding of the transportation circulation impacts related to the potential closures and the resultant at-grade crossing volumes for the requested railroad crossing safety study.

Existing Conditions

The Union Pacific rail line provides a connection between Spokane and the Canadian border. The study site for this investigation is located approximately 14 miles east of Spokane, Washington between State Route 290 and Interstate 90 in Spokane County. The Spokane River forms the southern boundary of the study area, and Wellesley Road represents the northern boundary. The at-grade railroad crossings within the study area are located on six north-south county roadways placed at one-quarter mile spacings which connect Wellesley Road and Euclid Road. Harvard Road is a two-lane county road which runs north-south providing a connection between State Route 290 and Interstate 90. Wellesley Road is a two-lane county road which intersects State Route 290 approximately one-mile west of the study area. The Harvard Road/Wellesley Road intersection is currently all-way stop-controlled. Figure 1 shows the study area and the corresponding average daily traffic volumes (provided by Spokane County) and existing traffic control at the rail line crossings and major intersections.

Railroad Crossing Closure Scenarios

Due to the lane use restrictions (i.e., zoning) and relatively low traffic volumes in the area, all six of the railroad crossing locations were examined for potential closure. To conduct a thorough examination of potential at-grade railroad crossing closures within the study area, six closure scenarios were developed based on the existing transportation network and land uses. These closure scenarios are outlined below:

1. Closure of Arden Road only;
2. Closure of Arden and Corrigan Roads;
3. Closure of Arden, Corrigan, and Ashton Roads;
4. Closure of Arden, Corrigan, Ashton, and Lynden Roads;
5. Closure of Arden, Corrigan, Ashton, Lynden, and Kenney Roads; and
6. Closure of Arden, Corrigan, Ashton, Lynden, Kenney, and Garry Roads.

Using the closure scenarios described above, the resulting link volumes on the open at-grade railroad crossings and the necessary transportation improvements (i.e., traffic signals, crossing gates, roadway widening, etc.) were determined based on the existing transportation facilities and provided daily traffic volumes.

Circulation Analysis

The traffic within the study area was redistributed under each closure scenarios by initially establishing a distribution pattern between State Route 290 and Interstate 90. Based on the land use densities in this area of the county and the proximity of Interstate 90, it was estimated that approximately 75 percent of the traffic within the study area is generated to/from the freeway and the remaining 25 percent to/from State Route 290. Using this distribution, the local (i.e., traffic generated along each study roadway between Wellesley and Euclid Roads) and through (i.e., traffic generated along each study roadway between Wellesley and Euclid Roads) and through (i.e., traffic generated from origination/destination locations not accessing the study roadways) traffic was calculated at each at-grade railroad crossing based on the number of residential homes located north and south of the rail line and accessing the study roadways.

The amount of local traffic along each study roadway was calculated based on a land use inventory using an area-wide, mid-1990s, aerial photograph. The daily trip generation for each land use (i.e., primarily single-family residential homes) was determined using the Trip Generation Manual, Fifty Edition, published by the Institute of Transportation Engineers. Based on the calculated amount of local traffic using the existing at-grade railroad crossings, the through traffic using the crossings was determined by subtracting the local traffic from the total daily traffic volume data provided by the county. Table 1 provides a summary of the land use inventory, local traffic by location, and through traffic using each at-grade railroad crossing within the study area.

Table 1 -Study Roadway Land Use Inventory and Traffic Characteristics

As shown in Table 1, the majority of traffic using the Ashton, Corrigan, Arden, and Lynden Roads at-grade railroad crossings is locally generated. Conversely, the majority of traffic using the Kenny and Garry Road at-grade railroad crossings is generated external to the study area. In addition, it can be easily identified that Harvard Road carries the majority of north-south traffic within the study area.

TABLE 1

	Annual Average Daily Traffic (AADT)							
	Campbell	Ashton	Kenney	Corrigan	Harvard	Arden	Lynden	Garry
Homes to North		14	17	15		School	19	4
Homes to South		10	4	8		12	17	36
Local Track Traffic From North		105	128	113		150	143	30
Local Track Traffic From Sorth		25	10	20		30	43	90
Local Track Traffic		130	138	133		180	186	120
Non-Local Traffic		107	354	62		22	145	225
Total Traffic at Railroad Crossing	568	237	491	194	6290	202	330	345

From the information provided in the Table 1 and a visual inspection of the existing land uses and transportation facilities within the study area, each closure scenario was evaluated to determine the re-circulation of traffic based on the available north-south routes. Table 2 shows the results of this re-circulation evaluation. It should be noted that the percentages shown under each closure scenario represent the reassignment of traffic from the latest railroad crossing closure and traffic previously reassigned to that route (e.g., the closure of Arden Road required the redistribution of 202 trips of which 65 percent were reassigned to Harvard Road).

Table 2 - Estimated Daily Traffic Volumes Under Closure Scenarios

As shown in Table 2, each additional at-grade railroad crossing contributes to additional traffic on the remaining available north-south routes with the majority of traffic being re-routed alone Harvard Road. This increase in traffic on Harvard Road is also accompanied by increased turning movements at the Wellesley Road all-way and Euclid Road two-way stop-controlled intersections. it should be noted that by implementing Closure Scenario #6, the daily traffic on Harvard Road and Campbell Road will increase by approximately 25 and 50 percent, respectively. This increase in traffic will degrade the

existing operation levels on each of these facilities; however, acceptable levels of service should still be attainable through traffic control and/or turning lane mitigation treatments.

TABLE 2

#		Annual Average Daily Traffic (AADT)							
		Campbell	Ashton	Kenney	Corrigan	Harvard	Arden	Lynden	Garry
0	No Road Closures (Existing Conditions)	568	237	491	194	6290	202	330	345
1	Arden Road Only					66%		30%	5%
		568	237	491	194	6421		391	355
2	Arden & Corrigan Roads	10%	5%	15%		70%			
		587	247	520		6657		391	355
3	Arden, Corrigan, & Ashton Roads	55%		10%		35%			
		723		545		6643		391	355
4	Arden, Corrigan, Ashton & Lynden Roads					85%			15%
		723		545		6975			414
5	Arden, Corrigan, Ashton, Lynden & Kenney Roads	30%				70%			
		887				7357			414
6	Arden, Corrigan, Ashton, Lynden, Kenney, & Garry Roads					90%			
		887				7729			

The increase in traffic on Harvard Road from Closure Scenarios 4 through 6 will likely require the construction of turning lanes and a traffic signal at the Wellesley Road/Harvard Road intersection. However, the specific closure scenario and time frame under which the Wellesley Road/Harvard Road intersection will warrant a traffic signal will require additional analysis and information regarding the existing peak hour turning movements. These closure scenarios will also reduce the level of service at the Euclid Road/Harvard Road intersection. In addition to these potential off-site transportation improvements, each closure scenario will require the construction and maintenance of a service/emergency road to provide additional access to the closed study roadway. Table 3 outlines the recommended service/emergency road improvements for each railroad crossing closure scenario.

Table 3 - Recommended Service/Emergency Road Improvements

TABLE 3

#	Closure Scenario	Improvements
0	No Road Closures (Existing Conditions)	None
1	Arden Road Only	Emergency service road between Harvard & Arden on the north and south side of the tracks.
2	Arden & Corrigan Roads	Emergency service road between Corrigan & Arden on the north and south side of the tracks.
3	Arden, Corrigan, & Ashton Roads	Emergency service road between Campbell & Ashton and Corrigan & Arden on the
4	Arden, Corrigan, Ashton & Lynden Roads	Emergency service road between Campbell & Ashton, Corrigan & Harvard, and Arden & Lynden on the north and south side of the tracks.
5	Arden, Corrigan, Ashton, Lynden & Kenney Roads	Emergency service road between Ashton & Kenney, Corrigan & Harvard, and Arden & Lynden on the north and south side of the tracks.
6	Arden, Corrigan, Ashton, Lynden, Kenney, & Garry Roads	Emergency service road between Ashton & Kenney, Corrigan & Harvard, and Arden & Garry on the north side of the tracks; and between Ashton & Kenney, Corrigan & Harvard, Arden & Lynden, and Garry & Molter on the south side of the tracks.

Conclusions

Based on the railroad closure and circulation investigation conducted on the Union Pacific rail line in Spokane County, Washington, it was determined that all of the proposed at-grade railroad crossing closure scenarios can be implemented without significantly impacting the integrity of the local transportation system provided the proper off-site transportation improvements and service/emergency roads are provided.

Safety Analysis

The next step in the procedure was the implementation of a corridor safety analysis, The U.S. Department of Transportation Accident Prediction Model was chosen for the Campbell-Wellesley Rail Corridor evaluation. This model is model is the only "national" model that is used by states and the U.S. DOT to establish priority ratings for rail-highway grade crossing safety improvements based upon predicted accidents rather than a "hazard rating". The basic U.S. DOT formula provides an initial prediction of accidents on the basis of a crossing characteristics, similar to other formulae such as the Peabody-Dimmick formula and the New Hampshire Index. The accident prediction formula can be expressed as a series of factors that, when multiplied together, yield a predicted number of accidents per year at a crossing. Each factor in the formula represents a characteristic of the crossing described in the national inventory. The structure of the accident prediction formula makes it possible to construct tables for numerical values for each factor. To predict accidents at a particular crossing whose characteristics are known, the values are entered into the formula and based upon the device installed, or assumed to be installed, the predicted accident factor is calculated.

This safety evaluation procedure was chosen by the witness because of its unique application for rail corridor grade crossing safety analysis. The model not only provides for the opportunity to calculate an accident prediction value for each crossing in the corridor but also provides the opportunity to calculate the results of "what-if" statements. In the application to the Campbell-Wellesley Rail Corridor several "what-if" questions were raised. In the following sections of this report the answers to those questions are documented. The Computation of the predicted accidents includes the following data elements: 1) Average Annual Daily Traffic (AADT); 2) number of day-trains; 3) number of night-trains; train speed; 4) number of traffic lanes; 5) type of warning device; type of roadway; and 6) number of main tracks. Using current (or projected) data and information provided by the Union Pacific and Spokane County the U.S. DOT accident prediction model calculated (predicted) that 4 motor vehicle/train accidents would occur in the corridor during the next ten years. Table 4 provides the results of that analysis. The safety effectiveness of gates can be seen from data presented in this table. For example, Campbell R. and Corrigan Rd. are predicting less that three accidents in 100 years while the STOP sign passive crossings are predicting almost one accident every ten years. The entire corridor is predicting just over 4 motor vehicle/train accidents in a ten year period. This is approximately the number of accidents that have occurred in the corridor during the past ten years.

TABLE 4.
PREDICTED 10-YEAR ACCIDENTS: U.S. DOT MODEL
CURRENT OPERATING CHARACTERISTICS

Street	Device	AADT	Trains	Accidents
Campbell Rd.	Gates	568	10	0.28
Ashton Rd.	Stop Signs	237	10	0.54
Kenney Rd.	Stop Signs	491	10	0.71
Corrigan Rd.	Gates	194	10	0.20
Harvard Rd.	Gates	6,290	10	0.57
Arden Rd.	Stop Signs	202	10	0.51
Lynden Rd.	Stop Signs	330	10	0.61
Garry Rd.	Stop Signs	345	10	0.62
				4.04

Safety Improvement Alternatives

Based upon the analysis conducted, and reported, in phase one of the study several "what-if" questions were asked of the analysis. For example, the six closure scenarios were evaluated to determine which would provide the highest measure of safety with minimum impact on traffic circulation and emergency vehicle operation and access. Based upon this analysis closure scenario #4 was selected for implementation. Table 5 provides the results of the safety analysis following the implementation of scenario #4. Scenario #4 involves the closure of Arden, Corrigan, Ashton and Lynden Roads; the relocation of gates from Corrigan to Kenney Road and the installation of gates at Gary Road.

TABLE 5.
PREDICTED 10-YEAR ACCIDENTS: U.S. DOT MODEL
CURRENT OPERATING CHARACTERISTICS
FOLLOWING RECOMMENDED CLOSURES

Street	Device	AADT	Trains	Accidents
Campbell Rd.	Gates	723	10	0.30
Ashton Rd.	Closed	-0-	10	0.0
Kenney Rd.	Gates	545	10	0.27
Corrigan Rd.	Closed	-0-	10	0.0
Harvard Rd.	Gates	6,975	10	0.59
Arden Rd.	Closed	-0-	10	0.0
Lynden Rd.	Closed	-0-	10	0.0
Garry Rd.	Gates	414	10	0.26

1.42 = 2.62 less

Accident prediction for the remaining crossings in the corridor is recalculated using increased traffic volumes established in the traffic circulation analysis for scenario #4. The "new" prediction for the corridor is less than 1.5 motor vehicle/train accidents in ten years. This compares to the four accidents in ten years for current crossing characteristics.

Table 6 provides the results of one additional "what-if" question. For example, what significance will a ten percent increase in vehicular traffic have upon the predicted accidents for the corridor. Based upon the calculations from the model there will be little change in the predicted accidents. This suggests that the installation of gates at all at-grade crossings in the corridor will provide a rather consistent measure of safety as traffic increases in the corridor. Obviously if significant vehicular traffic increase occur, due to rerouting or opening of access to heavy traffic generating facilities additional analysis of the effectiveness of the warning systems will be required.

TABLE 6.
PREDICTED 10-YEAR ACCIDENTS: U.S. DOT MODEL
ASSUME 10% INCREASE IN ROADWAY OPERATING CHARACTERISTICS
FOLLOWING RECOMMENDED CLOSURES

Street	Device	AADT	Trains	Accidents
Campbell Rd.	Gates	800	10	0.31
Ashton Rd.	Closed	-0-	10	0.0
Kenney Rd.	Gates	600	10	0.29
Corrigan Rd.	Closed	-0-	10	0.0
Harvard Rd.	Gates	7,500	10	0.60
Arden Rd.	Closed	-0-	10	0.0
Lynden Rd.	Closed	-0-	10	0.0
Garry Rd.	Gates	550	10	0.28

School Bus Operations

Based upon information provided by the school bus supervisor and dispatcher, for the East Valley Transportation School District 361, there are some 32 school bus routes in Spokane Valley serving eight schools (five elementary, two middle schools and one high school. In the Campbell-Wellesley rail corridor alone there are 22 bus trips daily over at-grade railroad-highway grade crossings. Of the six grade crossings used by school buses only Corrigan Street has active warning devices. Of the 22 trips reported only five are at the Corrigan railroad crossing. The remaining 17 are at corridor railroad grade crossings equipped with passive warning devices only. Table XX provides a summary of school bus use by number of trips, time of day and Average Annual Daily Traffic count for each of the six at-grade crossings, in the corridor, on the School District's school bus route

TABLE 7
School Bus Operations
In the Campbell - Wellesley Road Rail Corridor

				SCHOOL BUS TRIPS (AM - MIDDAY - PM)			
ROAD NAME	RR/MP	VADT	WARNING(S)	0555-0920	1035-1300	1400-1745	TOTAL PER DAY
Flora	12.0	813	x-bucks	-	-	-	-
Ashton	14.3	237	x-bucks	2	1	1	4
Kenney	14.5	491	x-bucks	1	-	1	2
Arden	15.3	202	x-bucks	2	1	2	5
Corrigan	14.8	194	gates, lights	1	2	2	5
Lynden	15.5	330	x-bucks	1	-	1	2
Garry	15.8	345	2-bucks	1	1	2	4
TOTAL TRIPS							22

An aerial photograph of the corridor indicates the location of a school at the junction of Arden and Wellesley Road. In fact Arden passes through the center of the campus. This may be the reason that more than one-fifth of the daily school bus trips are over the Arden railroad grade crossing.

Emergency Services

Fire Station #4 is located at E 22406 Wellesley Road near the Arden railroad crossing. According to a statement from one fireman the river crossing logistics are often more of a response challenge than the railroad crossings. There are two other Fire Stations serving the area, Station # 3 just South of I90 at Harvard Road and Station #5 just north of the UP tracks at Sullivan Road.

Police services are provided to the area by Spokane County Sheriff's Department. The police dispatcher is located in the Spokane County Courthouse.

Hazardous Materials

Truck routes for hazardous materials transport are primarily in a North/South direction of travel. Sullivan Road, Barker Road and Harvard Road are the primary routes.

RECOMMENDATIONS

It is the opinion of this witness that the following recommendations should be implemented in an effort to improve safety and provide efficient traffic circulation in the Campbell-Wellesely rail-highway grade crossing corridor:

A. Ashton Road, Corrigan Road, Arden Road and Lynden Road closed.

B. Gates removed from Corrigan Road and installed at Kenney Road
State-of-the-art systems

C. Gates installed at Garry road.
State-of-the-art systems

D. The Union Pacific provide an all-weather emergency service road between Campbell and Ashton; Corrigan and Harvard; and Arden and Lynden on both the North and South side of the tracks.

E. The geometry of Kenney Road and Garry Road be reconstructed to the criteria of both the AASHTO Policy and Design for Local Roads and Streets and the AREA Bulletin

F. Where warranted at highway-highway intersections in the corridor signalized traffic control intersections be constructed. Specifically at Harvard and Wellesley.

G. Appropriate provision for school bus turns at closed crossings on Arden, Corrigan, Ashton and Lynden Roads.

Funding Recommendations

A. Section 130 funds be used where appropriate

B. Union Pacific be required, or sponsor, a benefit/cost analysis of the benefits to accrue the railroad resulting from crossing closure. The study is to reflect all benefits including maintenance, replacement, litigation, operation associated with the at-grade crossing. The results of this study will determine the financial participation of the Union Pacific in the project. Funds provided by Union Pacific may only be used for safety improvements in the immediate area of the corridor. (e.g., highway-highway intersection signalization, AASHTO road construction standards and etc.)

C. Incentives for Crossing Closures

The fiscal year 1997 U.S. Department of Transportation Appropriations Bill included the following Section:

SEC.353. (a) Section 120C of title 23, United States Code, is amended by inserting 'rail-highway crossing closure,' after' carpooling and vanpooling', (b) Section 130 of such title is amended by adding at the end the following:

(I) INCENTIVE PAYMENTS FOR AT-GRADE CROSSING CLOSURES-

(1) IN GENERAL- Notwithstanding any other provision of this section and subject to paragraphs (2) and (3), a State may, from sums available to the State under this section make incentive payments to local governments in the State upon the permanent closure by such governments of public at-grade railway-highway crossings under the jurisdiction of such governments.

(2) INCENTIVE PAYMENTS BY RAILROADS- A State may not make an incentive payment under paragraph (1) to a local government with respect to the closure of a crossing unless the railroad owning the tracks on which the crossing is located makes an incentive payment to the government with respect to the closure.

(3) AMOUNT OF STATE PAYMENT- The amount of the incentive payment payable to the local government by a State under paragraph (1) with respect to a crossing may not exceed the lesser of--

(A) the amount of the incentive payment paid to the government with respect to the crossing by the railroad concerned under paragraph (2); or

(B) $7,500.00

(4) USE OF STATE PAYMENTS- A local government receiving an incentive payment from a State under paragraph (1) shall use the amount of the incentive payment for transportation safety improvements.