

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF APPROVING THE AIR	)	RESOLUTION NO. 08-3973
QUALITY CONFORMITY DETERMINATION	)	
FOR THE OREGON HIGHWAY 213/REDLAND	)	Introduced by Councilor Burkholder
ROAD IMPROVEMENTS AS PART OF THE	)	
FEDERAL COMPONENT OF THE AMENDED	)	
2035 REGIONAL TRANSPORTATION PLAN	)	
AND AMENDED 2008-2011 METROPOLITAN	)	
TRANSPORTATION IMPROVEMENT	)	
PROGRAM.	)	

WHEREAS, clean air contributes to the health of residents and the quality of life of a region; and

WHEREAS, clean air has been and remains a significant interest and concern of the people of the Metro area; and

WHEREAS, the federal Clean Air Act and other federal laws include air quality standards designed to ensure that federally supported activities, including the on-road transportation system, meet air quality standards; and

WHEREAS, these federal standards apply to the Metro area with regard to on-road transportation activities; and

WHEREAS, Chapter 340, Division 252, Transportation Conformity, of the Oregon Administrative Rules was adopted to implement section 176(c) of the federal Clean Air Act, as amended, and these state rules also apply to Metro area on-road transportation activities; and

WHEREAS, the Metro area has been determined by state and federal agencies to be in a maintenance status for carbon monoxide; and

WHEREAS, these federal and state regulations require an air quality assessment for a regionally significant project located within an area with maintenance status whenever such regionally significant project is proposed to be added to a transportation plan or added to a transportation improvement program; and

WHEREAS, the proposed improvements located at Oregon Highway 213 and Redlands Road are regionally significant consistent with the definitions in both state and federal regulations; and

WHEREAS, an analysis has been completed which shows that the combined total carbon monoxide emissions resulting from completion of the Oregon Highway 213/Redland Road improvements along with those resulting from the implementation of all project included in the financially constrained system of the 2035 Regional Transportation Plan are significantly less than the state and federal determined maximums for Carbon Monoxide at the region-wide level; and

WHEREAS, a 30-day period has been provided for public and technical review and comment of this proposed air quality analysis; and

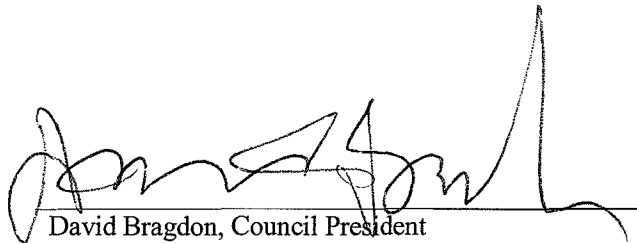
WHEREAS, interagency consultation has been completed through correspondence with representatives of the Federal Highway Administration, Federal Transit Administration, Environmental

Protection Agency, Oregon Department of Environmental Quality, Oregon Department of Transportation, providing a 30-day period to review the analysis and requesting comment; and

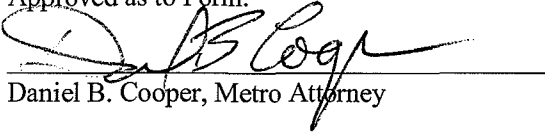
WHEREAS, the responses from public and technical review have been included in Exhibit A and have been considered by the Metro Council; now therefore,

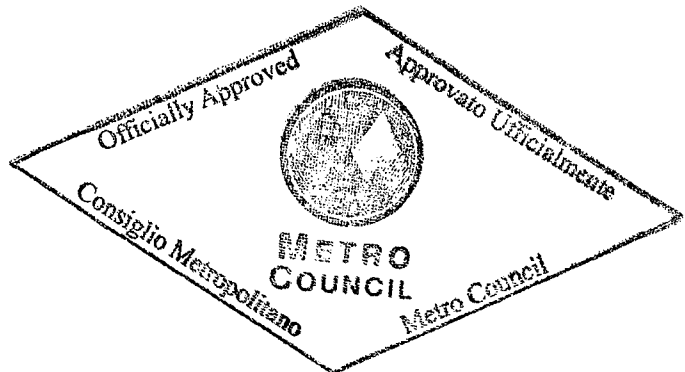
BE IT RESOLVED that the Metro Council approves the air quality conformity determination of the Oregon Highway 213/Redland Road improvements as documented in Exhibit A.

ADOPTED by the Metro Council this 2nd day of October 2008.

  
David Bragdon, Council President

Approved as to Form:

  
Daniel B. Cooper, Metro Attorney





**TO:** Andy Cotugno, Planning Director  
**FROM:** Mark Turpel, Principal Transportation Planner  
**DATE:** July 28, 2008  
**SUBJECT:** OR Highway 213/Redland Road Improvements – Air Quality Analysis

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#### Background

The City of Oregon City has indicated that a new development, The Rivers at Oregon City, a commercial development like the Bridgeport Village in Tigard, has been proposed for construction and opening. In association with this development are proposed road improvements for Oregon Highway 213 and Redland Road.

These road improvements, while anticipated in the Preferred System of the 2004 Regional Transportation Plan (RTP), were not included in the Financially Constrained System of the 2035 RTP, and were not included in the 2008-2011 Metropolitan Transportation Improvement Program (MTIP). A separate document is being prepared proposing addition of these improvements to the MTIP and RTP.

According to both State and federal regulations, adding a project that is considered “regionally significant” triggers an air quality assessment. “Regionally significant” is defined in these regulations as “...a transportation project that is on a facility which serves regional transportation needs, such as access to...major planned development such as new retail malls... and would normally be included in the modeling of a metropolitan area’s transportation network...” Oregon Highway 213 is one of the region’s mobility corridors as well as an element of the Regional Freight System as determined by in the 2035 RTP. Further, both Oregon Highway 213 and Redland Road, in their current configurations, are included in the regional transportation model.

As these proposed improvements to Oregon Highway 213 and Redland Road were not included in the RTP or MTIP, no air quality conformity determination analysis for regional Carbon Monoxide, the criteria pollutant for which the region is required to analyze, has been performed to date. (A separate localized air quality analysis, or “hot spot” analysis would also have to be performed by the project, but that is not the subject of this region-wide analysis). Accordingly, we conclude that a regional air quality conformity determination analysis must be done in order to meet State and federal regulations.

However, the region has a large existing transportation network with a great many trips. In addition, at a region-wide scale, the State and federal maximum allowed level of Carbon Monoxide is significantly greater than the amount estimated to be generated from on-road transportation sources – both now and in the future out to the year 2035. It seems unlikely that the proposed road improvements will significantly increase the regional level of Carbon

Monoxide. Further, a full air quality emission analysis is both costly and takes a significant amount of time. Representatives of the City of Oregon City have indicated that there is the likelihood that the funding for this project could be lost if approvals are not made quickly. Therefore, it is proposed that a less rigorous quantitative analysis be done.

#### Analysis

An analysis is attached, below. It uses very high emission rate assumptions by assuming very slow speeds (2.5 miles per hour) and that all trips generated by The Rivers at Oregon City and FedEx are heavy duty trucks. This analysis also includes the FedEx Sundial Road and Swiebert Way improvements that were analyzed in July 2008 after the full air quality analysis of the RTP. Other analysis assumptions are noted below as well.

#### Review

Air quality regulations include a 30-day period for public and technical review of air quality conformity determinations. A period between noon July 28, 2008 and noon August 27, 2008 has been set aside for public and technical review. Accordingly, this information is being made available for comment to the public as well as an interagency consultation group consisting of air quality experts from the Federal Highway Administration, Federal Transit Administration, US Environmental Protection Agency, Oregon Department of Environmental Quality, Oregon Department of Transportation and TriMet. The Transportation Policy Alternatives Committee (TPAC) and the Metro Council will also be asked to consider this analysis.

#### Conclusion

The attached qualitative analysis demonstrates that the proposed improvements on Oregon Highway 213 and Redlands Road could be made and the region would still maintain a substantial cushion between the maximum allowed levels of Carbon Monoxide and those that would occur as a result of all of the improvements included in the Financially Constrained System of the 2035 RTP, the FedEx/Sundial Road/Swiebert Way improvement as well as the proposed Oregon Highway 213 and Redland Road improvements.

#### Recommendation

Staff recommend concurrence with a finding that the proposed Oregon Highway 213 and Redland Road improvements are consistent with maintaining air quality in the region and amending the air quality conformity determination

cc: Kim Ellis  
Ted Leybold

## Worst Case Air Quality Estimate for the OR 213/Redland Road &amp; FedEx/Sundail Road/Swigert Road Projects

Year	Maximum Allowed CO (SIP budget pounds/day)	Forecast CO (2035 RTP Forecast CO pounds/day)	Existing Pounds/day below SIP budget	Cushion (Grams/day below SIP budget)	Total Additional From The Rivers and FEDEX (in grams)	Worst case grams/mile	Average trip length in miles	FEDEX		Cushion After OR 213 & Fedex (in grams)
								The Rivers	Trips	
2010	1,033,578	856,054	177,524	80,523,532	20,408,657.85	115	5.16	30,305	4,088	60,114,874
2017	1,181,341	670,926	510,415	231,520,350	20,597,075.00	115	5	30,305	5,516	210,923,275
2025	1,181,341	801,203	380,138	172,427,696	20,185,133.50	115	4.9	30,305	5,516	152,242,563
2035	1,181,341	822,596	358,745	162,723,995	19,814,386.15	115	4.81	30,305	5,516	142,909,609

## Assumes:

- Very high Carbon Monoxide emission rates based on speeds of 2.5 miles per hour and all vehicle trips for both The Rivers at Oregon City and Fedex facility are HGDGV, or heavy duty trucks with higher emission rates than cars.
- 454 grams per pound conversion rate.
- Average trip length of 5.16 in 2010 decreasing to 4.81 in 2035 (Metro Transportation Model results show for auto trips in 2005 the average trip length was 5.16 and forecasts a length of 4.81 in the year 2035)
- The total number of trips from The Rivers at Oregon City to be 30305 based on the Traffic Impact Report prepared by Kittelson & Associates and dated July 8, 2008.
- That the Fedex facility will be built and occupy 415,000 square feet by 2010 and expanded to 560,000 square feet by 2017 and that the trip generation rate of 9.85 trips per 1,000 gross floor area based on the rate for Truck Terminals rate from *Trip Generation*, Institute of Transportation Engineers, 1991.
- The Fedex project is another, earlier project that was not included in the 2008 air quality conformity determination of the 2035 RTP and so is included here to ensure that the cumulative impact of all transportation projects is calculated.

## **STAFF REPORT**

### **IN CONSIDERATION OF RESOLUTION NO. 08-3973, FOR THE PURPOSE OF APPROVING THE AIR QUALITY CONFORMITY DETERMINATION FOR THE OREGON HIGHWAY 213/REDLAND ROAD IMPROVEMENTS AS PART OF THE FEDERAL COMPONENT OF THE AMENDED 2035 REGIONAL TRANSPORTATION PLAN AND AMENDED 2008-2011 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM**

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Date: August 22, 2008

Prepared by: Mark Turpel

## **BACKGROUND**

### Overview

The proposed Oregon Highway 213 at Redland Road project is intended to serve a new regional shopping center. The proposed improvements include transportation capacity investments to both Highway 213 and Redland Road. A request has been made by the City of Oregon City to add the proposed project to the Regional Transportation Plan (RTP) and Metropolitan Transportation Improvement Program (MTIP).

Federal regulations require that that an air quality assessment must be completed if a regionally significant project is proposed to be added to the regional transportation plan if the region has a “maintenance” status. Staff recommends that it be concluded that the proposed Oregon Highway 213/Redland Road project meets the definition of a regionally significant project. The regulations, state, in part, that regionally significant projects include: “...a transportation project that is a facility which serves regional transportation needs, such as access to...major planned development such as new retail malls, ... ” (see Attachment 1 for more project details.)

The Metro area is in compliance with the standards for all air pollutants regulated by federal and state regulations. However, the current Environmental Protection Agency (EPA) status for the Metro region is that it is a “maintenance” area for Carbon Monoxide. That is, while the region has greatly reduced Carbon Monoxide levels and has not exceeded maximum levels since 1989, it still must assess total regional Carbon Monoxide levels and complete air quality conformity determinations for Carbon Monoxide emissions from on-road transportation sources. Therefore, a regionally significant project added to a regional transportation plan in a region with a maintenance status must include an air quality assessment.

Generally, the way that an air quality analysis is done is that the region’s travel is estimated using household and job growth forecasts out to the transportation plan horizon year (in this case the year 2035) and the transportation investments included in the financially constrained RTP. These travel results are then used with the Environmental Protection Agency’s approved MOBILE6.2 air quality model to determine air pollutant levels from on-road sources. These emission levels are then compared with the motor vehicle emission budgets, or maximum air pollution levels from on-road transportation sources. The Oregon Environmental Quality Commission and the EPA determine the maximum pollutant levels based on the analysis and recommendations of the Oregon Department of Environmental Quality.

Given the cost and amount of time needed to perform a full transportation and air quality modeling effort, an abbreviated approach has been used to estimate the air quality impact of this proposed project. The abbreviated approach uses the emission results from the full air quality analysis performed for the RTP and adds an estimate for the project and compares the total estimated Carbon Monoxide emissions with the total maximum allowed emissions.

The technical conclusion reached is that even with the proposed Oregon Highway 213/Redland Road transportation investment, that air quality standards for Carbon Monoxide will still be met.

#### Carbon Monoxide Conformity Determination

Attachment 1 to this staff report, includes a Carbon Monoxide emission analysis of on-road transportation sources from the region based on the 2035 RTP and the proposed Oregon Highway 213/Redland Road investments.

The analysis shows that federal and state air quality standards for Carbon Monoxide can easily be met now and in the future in the Metro region even with: 1) the existing transportation system, and, 2) the projects included in the 2008-2011 Metropolitan Transportation Improvement Program; and, 3) all of the other improvements included in the financially constrained system of the 2035 Regional Transportation Plan; and 4) the proposed Oregon Highway 213/Redland Road project and 5) the FEDEX/Sundial Road/Swigert Way project (an earlier project that was also assessed without the full air quality model in July 2008). (In addition, a "hot spot", or localized Carbon Monoxide analysis will also be needed to be done by the project, but is not the subject of this action.)

Accordingly, approval of the air quality conformity determination can be considered. Staff recommend that it be concluded that the proposed Oregon Highway 213/Redland Road project be found to be in compliance with the regional Carbon Monoxide motor vehicle emission budget – that the project meets region-wide air quality standards.

#### **ANALYSIS/INFORMATION**

1. **Known Opposition** None.

#### **2. Legal Antecedents**

Federal: 40 CFR 93, as amended. (transportation air quality conformity)

State: OAR 340-252 (transportation air quality conformity)

Metro:

Resolution No. 03-3381A, "For the Purpose of Adopting the 2004-2007 Metropolitan Transportation Improvement Program for the Portland Metropolitan Area," adopted December 11, 2003.

Resolution No. 03-3382A, "For the Purpose of Adopting the Portland Area Air Quality Conformity Determination for the 2004 Regional Transportation Plan and 2004-2007 Metropolitan Transportation Improvement Program," adopted January 15, 2004.

Resolution No. 05-3529A, "For the Purpose of Allocating \$62.2 Million of Transportation Priorities Funding for the Years 2008 and 2009, Pending Air Quality Conformity Determination," adopted March 24, 2005.

Resolution No. 05-3589A, "For the Purpose of Amending the Regional Transportation Plan to Move the I-205 Northbound Onramp/Airport Way Interchange Improvements From the Illustrative List to the Financially Constrained List," adopted June 9, 2005.

Resolution No. 07-3824, "For the Purpose of Approving an Air Quality Conformity Determination for the 2008-11 Metropolitan Transportation Improvement Program," adopted August 16, 2007.

Resolution No. 07-3831B, "For the Purpose of Approving the Federal Component of the 2035 Regional Transportation Plan (RTP) Update, Pending Air Quality Conformity Analysis," adopted December 13, 2007.

Resolution No. 08-3911, "For the Purpose of Approving the Air Quality Conformity Determination for the Federal Component of the 2035 Regional Transportation Plan and Reconfirming the 2008-2011 Metropolitan Transportation Improvement Program," adopted February 28, 2008.

**3. Anticipated Effects** Approval of this resolution allows for funding of proposed Oregon Highway 213/Redland Road project and associated land use development.

**4. Budget Impacts** None.

### **RECOMMENDED ACTION**

Approve Resolution No. 08-3973, "For the Purpose of Approving the Air Quality Conformity Determination for the Oregon Highway 213/Redland Road Improvements as Part of the Federal Component of the Amended 2035 Regional Transportation Plan and Amended 2008-2011 Metropolitan Transportation Improvement Program."





# CITY OF OREGON CITY

## PUBLIC WORKS

PUBLIC PROJECTS DIVISION  
CODE ENFORCEMENT / PARKING  
*City Engineer/Public Works Director*  
P.O. Box 3040  
320 Warner Milne Road  
Oregon City, OR 97045  
(503) 657-0891  
Fax (503) 657-7892

### MEMORANDUM

TO: Joshua Naramore, Metro  
CC: Nancy Kraushaar, City of Oregon City, Ted Leybold, Metro  
FROM: Aleta Froman-Goodrich, P.E.  
DATE: July 18, 2008  
PROJECT: OR 213: OR 213 @ Redland Rd Intersection  
SUBJECT: MTIP-RTP Amendment Request for STIP ODOT Key 14866

#### ODOT Project Name

OR 213: OR 213 @ Redland Rd Intersection

#### ODOT Key

14866

#### Total Cost and Funding for Phase 1 Intersection Improvements "OR 213: OR 213 @ Redland Rd Intersection"

	Total Cost
Design	\$ 357,719
Land Purchase	\$0
Construction	\$2,384,793
<b>Total</b>	<b>\$2,742,512</b>

#### Funding Details

Federal Funds Available (subject to actual FFY 2009 SAFETEA-LU HPP Allocation):

\$2,041,862 (HPP)

\$ 430,650 (IM)

**\$2,472,512 Total Federal Funds for Project in Yr 2009**

City Local Agency Match:

\$ 233,700 (HPP)

\$ 36,300 (IM)

**\$ 270,000 Total City Local Match Funds for Project**

OR213 at Redland Road Phase 1 Funding:

\$2,472,512 Total Federal Funds for Project 2 in Yr 2009

\$ 270,000 Total City Local Match Funds for Project 2

**\$2,742,512 Total Funds for Project 2 OR213 at Redland Rd Phase 1**

### **Project Description**

Design and construct the Phase 1 improvements for OR213 at Redland Road intersection.

### **Description of Phase 1 Intersection Improvements**

There is a distance of approximately 1,650 feet from Washington Street to Redland Road on OR 213. There are three southbound lanes on OR 213 from Washington Street to Redland Road. The third southbound outside lane changes from a through lane to a right turn only lane at approximately 450 feet north of the OR213/ Redland Road intersection.

The proposed Phase 1 improvements are:

1. The continuation of the existing third southbound outside lane through the intersection;
2. Widen the west side of OR 213 approximately 450 feet north of Redland Road and construct a right turn lane;
3. Widen the west side of OR 213 south of Redland Road and construct the third southbound through lane adjacent to the existing second southbound lane;
4. Drop the third southbound through lane and merge into the existing second southbound lane south of the OR 213/ Redland Road intersection at a distance that is in accordance with ODOT standards.

### **Milepoints**

Approximate Milepoints: from MP 0.40 to MP 0.70

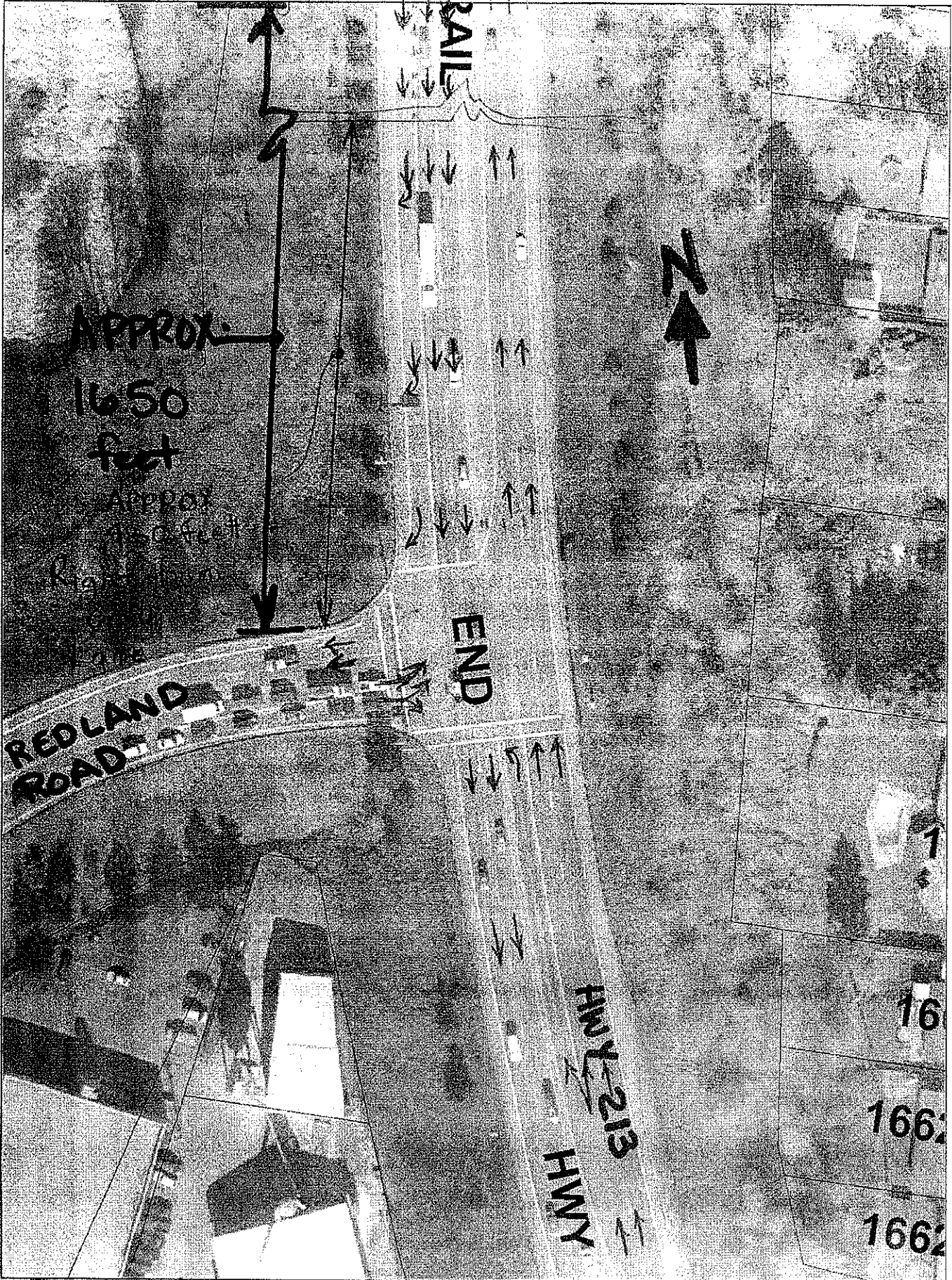
MP 0.14

Washington St

1st St

2nd St

3rd St



MP  
0.48

REDLAND  
ROAD

END

HWY 213  
HWY 11

16

1662

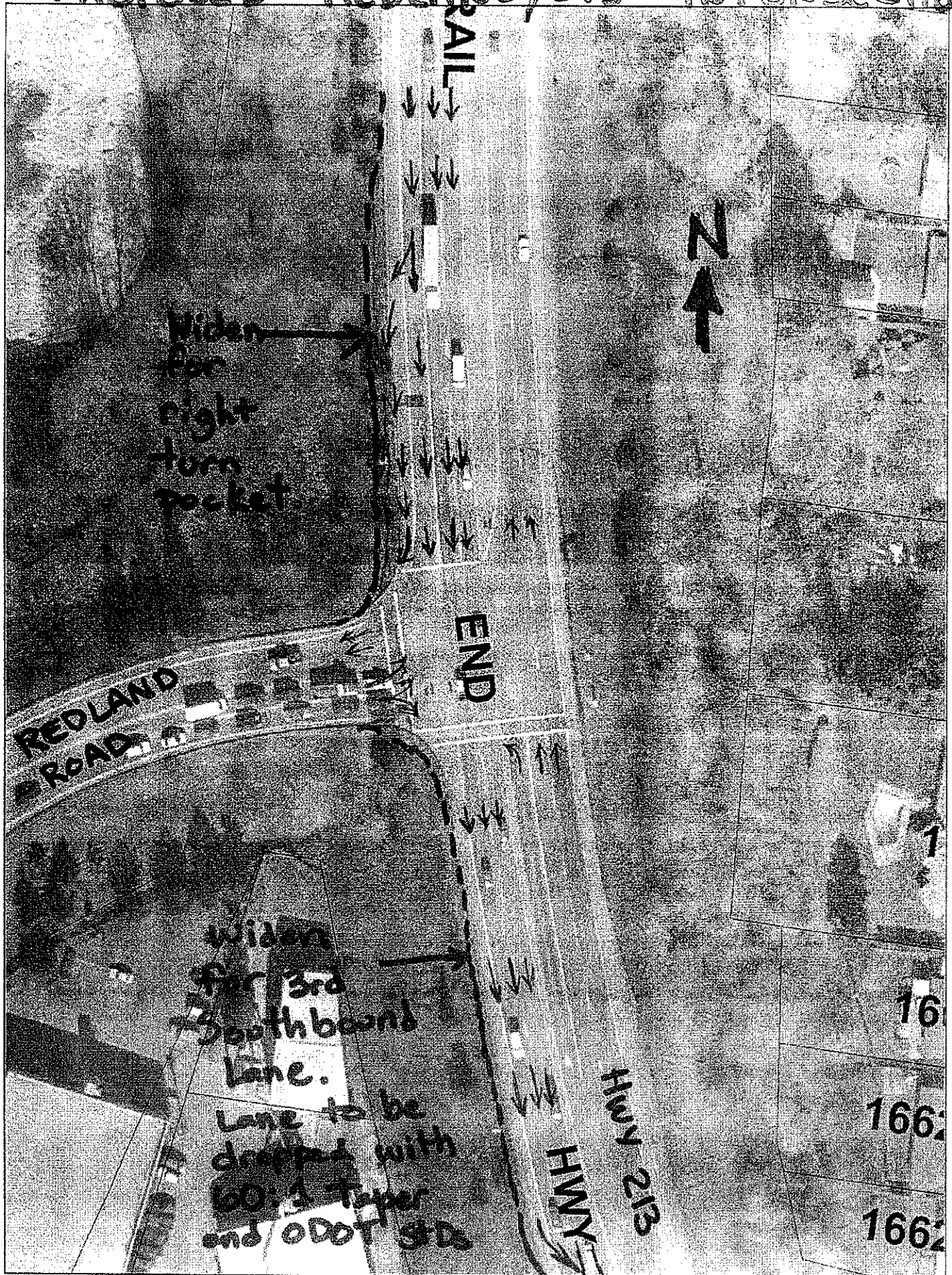
1662

EXISTING REDLAND/213 INTERSECTION



PROPOSED REDLAND/213 INTERSECTION

Attachment 1 to Resolution No 08-3973



3rd Southbound Travel Lane Merge to Two Southbound

The Rivers at Oregon City Development  
July 9, 2008

Project #: 7919.003  
Page 2

**KAI Response:** The traffic count data for the Bridgeport Village development in Tualatin is provided in *Appendix "J"* of the revised TIA. In addition, the following three tables provide a trip generation comparison, either representing characteristics associated with shopping center and lifestyle center data (see Table 1, consistent with revised May 2008 TIA) or with all retail uses assumed as shopping center (see Table 2, consistent with the revised analysis presented in the *July 2008 Signal Approval Request Memorandum*). Table 3 summarizes the comparison between the two approaches.

Method 1

**Table 1 May 2008 TIA Estimated Trip Generation (with lifestyle center data)**

Land Use	ITE Code	Size (SF/units)	Daily Weekday Trips	Weekday PM Peak Hour			Saturday Daily	Saturday Midday Peak Hour		
				Total	In	Out		Total	In	Out
Shopping Center	820	325,000	11,315	1,065	530	555	14,815	1,440	750	690
Lifestyle Center	Field Data	350,000	9,535	895	430	465	12,405	1,210	630	580
Pass-by			(7,005)	(660)	(330)	(330)	(8,695)	(900)	(450)	(450)
Internal			(250)	(25)	(18)	(7)	(50)	(5)	(2)	(3)
General Office	710	50,000	780	135	25	110	125	20	10	10
Internal			(250)	(25)	(7)	(18)	(50)	(5)	(3)	(2)
Existing Driveways			(920)	(95)	(45)	(50)	(590)	(60)	(30)	(30)
Total New Trips			20,710	2,000	920	1,085	26,755	2,610	1,360	1,250
Total Pass-by Trips			(7,005)	(660)	(330)	(330)	(8,695)	(900)	(450)	(450)
Total Internal Trips			(500)	(50)	(25)	(25)	(100)	(10)	(5)	(5)
Net New Trips			13,205	1,295	565	730	17,960	1,700	905	795

Method 2

**Table 2 May 2008 TIA Estimated Trip Generation (retail all shopping center)**

Land Use	ITE Code	Size (SF/units)	Daily Weekday Trips	Weekday PM Peak Hour			Saturday Daily	Saturday Midday Peak Hour		
				Total	In	Out		Total	In	Out
Shopping Center	820	675,000	23,495	2,210	1,060	1,150	30,770	2,995	1,560	1,435
Pass-by			(7,990)	(750)	(375)	(375)	(9,845)	(1,020)	(510)	(510)
General Office			780	135	25	110	125	20	10	10
Internal	710	50,000	(250)	(25)	(5)	(20)	(50)	(5)	(5)	(0)
Existing Driveways			(920)	(95)	(45)	(50)	(590)	(60)	(30)	(30)
<b>Total New Trips</b>			23,355	2,250	1,040	1,210	30,305	2,955	1,540	1,415
Total Pass-by Trips			(7,990)	(750)	(375)	(375)	(9,845)	(1,020)	(510)	(510)
Total Internal Trips			(250)	(25)	(5)	(20)	(50)	(5)	(5)	(0)
<b>Net New Trips</b>			15,115	1,475	660	815	20,410	1,930	1,025	905

## Land Use: 030 Truck Terminal

### *Independent Variables With One Observation*

The following trip generation data are for independent variables with only one observation. This information is shown in this table only; there are no related plots for these data.

Users are cautioned to use these data with care due to the small sample size.

<u>Independent Variable</u>	<u>Trip Generation Rate</u>	<u>Size of Independent Variable</u>	<u>Number of Studies</u>	<u>Directional Distribution</u>
<b>1,000 Square Feet Gross Floor Area</b>				
Weekday	9.85	131	1	50% entering, 50% exiting
A.M. Peak Hour of Adjacent Street Traffic	0.90	131	1	40% entering, 60% exiting
P.M. Peak Hour of Adjacent Street Traffic	0.82	131	1	47% entering, 53% exiting
A.M. Peak Hour of Gen.	0.90	131	1	40% entering, 60% exiting
P.M. Peak Hour of Gen.	0.82	131	1	47% entering, 53% exiting
Saturday	1.89	131	1	50% entering, 50% exiting
Saturday Peak Hour of Generator	0.29	131	1	49% entering, 51% exiting
Sunday	1.02	131	1	50% entering, 50% exiting
Sunday Peak Hour of Generator	0.11	131	1	36% entering, 64% exiting

<b>Truck Berths</b>				
Weekday	6.79	190	1	50% entering, 50% exiting
A.M. Peak Hour of Adjacent Street Traffic	0.62	190	1	40% entering, 60% exiting
P.M. Peak Hour of Adjacent Street Traffic	0.57	190	1	47% entering, 53% exiting
A.M. Peak Hour of Gen.	0.62	190	1	40% entering, 60% exiting
P.M. Peak Hour of Gen.	0.57	190	1	47% entering, 53% exiting
Saturday	1.31	190	1	50% entering, 50% exiting
Saturday Peak Hour of Generator	0.20	190	1	49% entering, 51% exiting
Sunday	0.71	190	1	50% entering, 50% exiting
Sunday Peak Hour of Generator	0.08	190	1	36% entering, 64% exiting