memorandum

Date: April 14, 2010

To: **Mr. Pat Allen**
Northern Aggregate, Inc.

From: Allan Tilton, PE
Tony Henderson, EIT

Copy: Ms. Cathy McKeon
Rau and Associates

Project: MEX047

Subject: Errata for *Updated Supplemental Traffic Impact Analysis for the Harris Quarry*

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Whitlock & Weinberger Transportation, Inc. (W-Trans) completed the *Updated Supplemental Traffic Impact Analysis for the Harris Quarry* in the County of Mendocino on January 27, 2010. Since that time, some minor typographical errors have been discovered in the report; note that they do not alter any conclusions or recommendations. To address these errors, the enclosed errata pages have been compiled and should be included with all copies of the report.

Errata 1 – Page 28, Table 17 should read: (red text indicates change)

Table 17
US 101/Black Bart Drive Project Level of Service Calculations – Peak Production

Condition	Production Period	9-10 AM		11 AM-noon		1:15-2:15 PM		4:45-5:45 PM	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
2010 Project	July	16.2	C	27.6	D	20.5	C	19.7	C
Mitigated (turn lanes)	*July*	*13.3*	*B*	*17.3*	*C*	*14.6*	*B*	*14.3*	*B*
	October	13.7	B	19.6	C	21.0	C	15.0	B
Mitigated (turn lanes)	*October*	*12.1*	*B*	*14.7*	*B*	*15.1*	*C*	*12.5*	*B*
2014 Project	July	17.2	C	32.4	D	23.2	C	21.8	C
Mitigated (turn lanes)	*July*	*13.9*	*B*	*18.6*	*C*	*15.4*	*C*	*15.1*	*C*
	October	14.2	B	21.7	C	20.6	C	16.2	C
Mitigated (turn lanes)	*October*	*12.4*	*B*	*15.4*	*C*	*15.9*	*C*	*13.0*	*B*
2014 Project w/Bypass	July	17.7	C	33.6	D	23.7	C	22.5	C
Mitigated (turn lanes)	*July*	*14.0*	*B*	*18.9*	*C*	*15.6*	*C*	*15.1*	*C*
	October	14.6	B	22.5	C	24.3	C	16.2	C
Mitigated (turn lanes)	*October*	*12.6*	*B*	*15.7*	*C*	*16.2*	*C*	*13.0*	*B*
2030 Project	July	23.8	C	**72.6**	**F**	**42.9**	**E**	**40.5**	**E**
Mitigated (turn lanes)	*July*	*16.3*	*C*	*25.1*	*D*	*19.6*	*C*	*19.6*	*C*
	October	17.6	C	34.4	D	40.0	E	22.6	C
Mitigated (turn lanes)	*October*	*13.9*	*B*	*19.0*	*C*	*19.9*	*C*	*15.2*	*C*
2040 Project	July	30.9	D	**	**F**	**73.0**	**F**	**68.7**	**F**
Mitigated (turn lanes)	*July*	*18.3*	*C*	*31.4*	*D*	*23.2*	*C*	*22.4*	*C*
	October	20.6	C	**50.6**	**E**	**63.4**	**F**	29.6	D
Mitigated (turn lanes)	*October*	*15.1*	*C*	*22.1*	*C*	*23.3*	*C*	*16.9*	*C*

Notes: Delay is in average number of seconds per vehicle; LOS = Level of Service;
Bold = deficient operation; ** = greater than 120 seconds of average delay

Errata 2 – Page 10, Table 6 should read: (red text indicates change)

Table 6
Trip Generation Assumptions with Proposed Project

Source	Annual Production	Percent of Annual in: July	October
Material Processed			
Material Mined	200,000 cy	n/a	n/a
Increased Material Volume by Bulking	48,000 cy	n/a	n/a
Recycle Material Imported	10,000 cy	9.4%	12.2%
Total Material Processed	***258,000 cy***		
Material Distributed			
Aggregate Production For Sale	162,520 cy	9.4%	12.2%
Aggregate transferred to Willits for PCC	37,200 cy	10.0%	15.8%
AC Production	58,280 cy	12.0%	17.0%
Total Material Distributed	***258,000 cy***		

Errata 3 –Appendix C, Page 1, last section should read:

Project – Annual Production

$$(Annual\ Production) \times (Bulking\ Factor) + Reycled\ Material = Adjusted\ Production$$

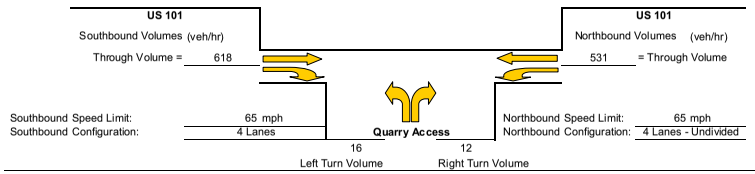
$$(200{,}000\ cubic\ yards) \times (1.24) + (10{,}000\ cubic\ yards) = 258{,}000\ \frac{cubic\ yards}{year}$$

Errata 4 – The attached pages are to be added to Appendix G.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 July Peak Base Permit Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	618
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

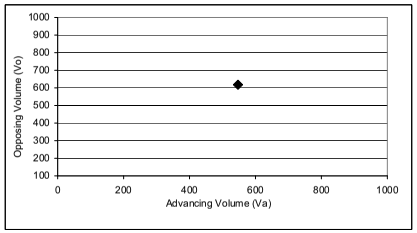
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	618
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.8 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



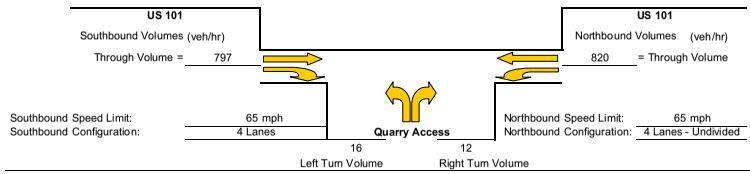
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 July Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	797
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

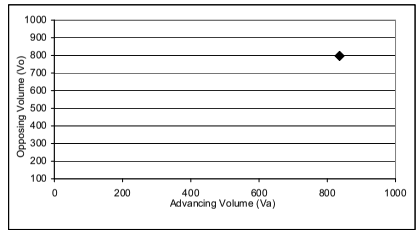
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	797
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 11.7 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



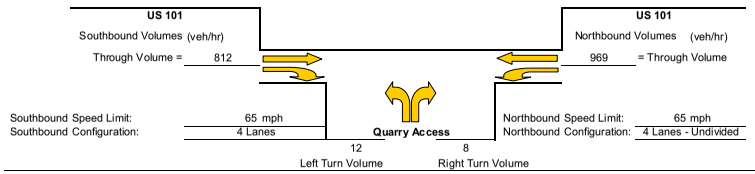
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 July Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	812
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

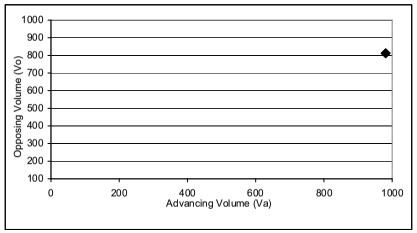
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1066.66667
Advancing Volume	Va =	812
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 11.5 veh/hr
Left Turn Volume Vl = 12 veh/hr
If Vl>LtVol then warrant is met



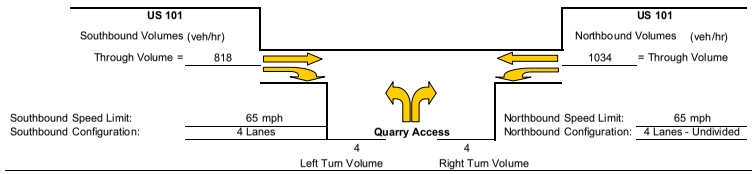
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 July Peak Base Permit Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	818
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

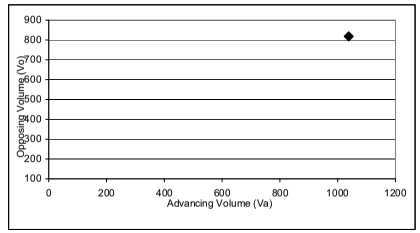
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	818
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 11.4 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



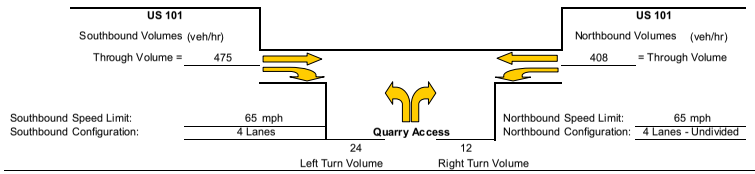
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 October Peak Base Permit Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	475
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

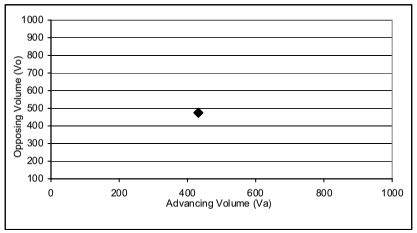
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	475
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 17.9 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



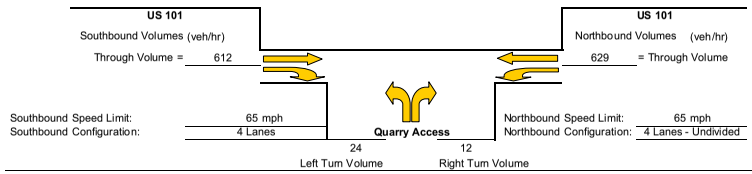
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 October Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	612
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

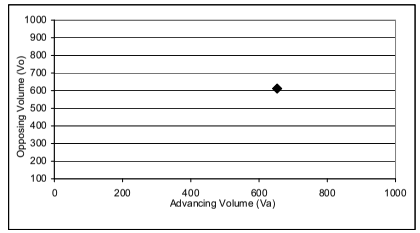
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	612
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.9 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



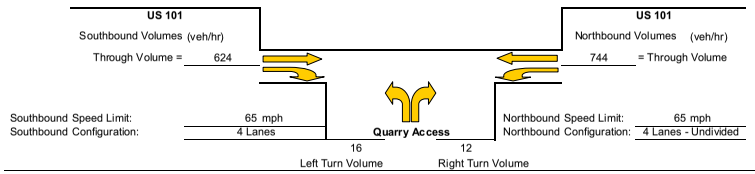
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 October Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 624
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

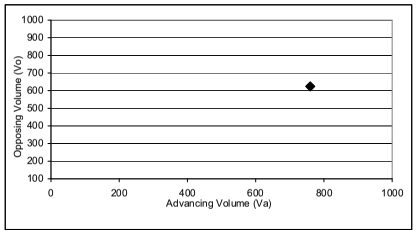
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 933.333333
   - Advancing Volume Va = 624
   - If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.7 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



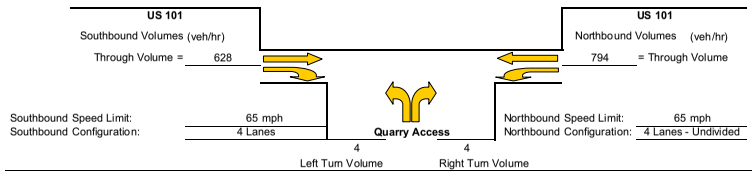
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 October Peak Base Permit Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 628
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

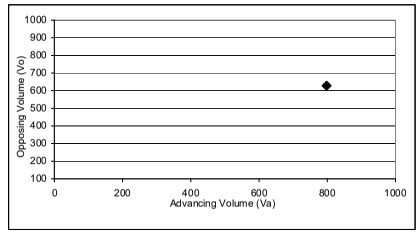
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 1200
   - Advancing Volume Va = 628
   - If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.6 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



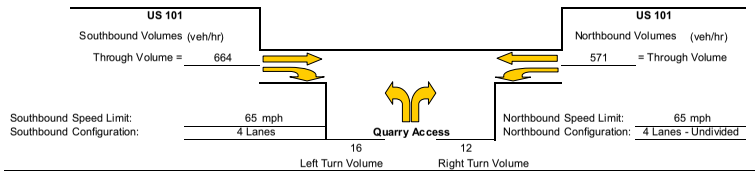
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) July Peak Base Permit Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	664
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

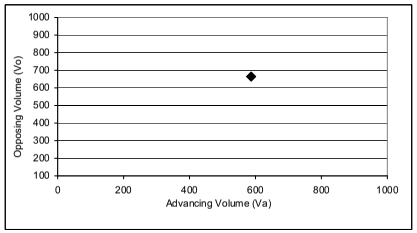
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	664
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.9 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



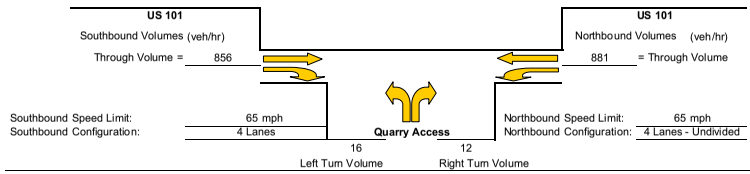
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) July Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	856
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

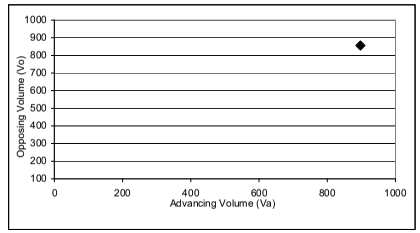
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	856
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.8 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



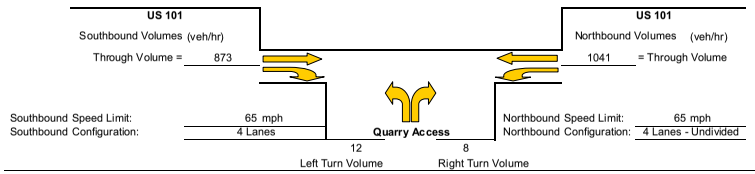
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) July Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	873
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

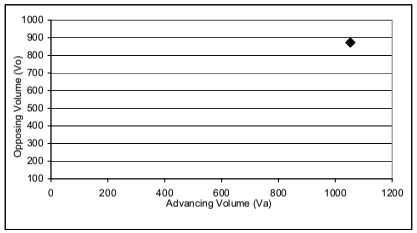
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1066.66667
Advancing Volume	Va =	873
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.6 veh/hr
Left Turn Volume Vl = 12 veh/hr
If Vl>LtVol then warrant is met



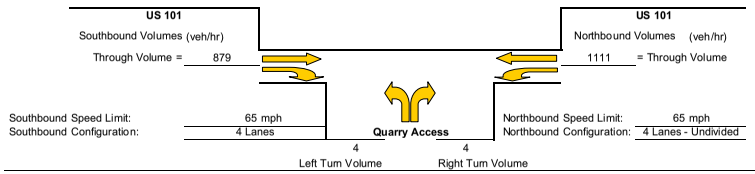
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) July Peak Base Permit Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	879
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

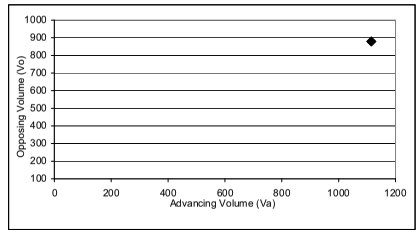
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	879
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.5 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



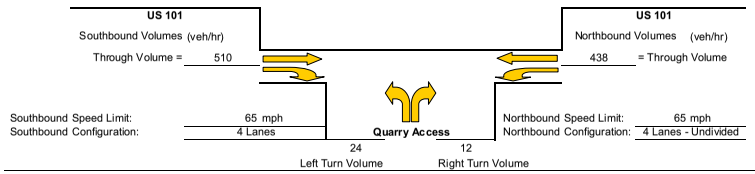
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) October Peak Base Permit Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	510
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

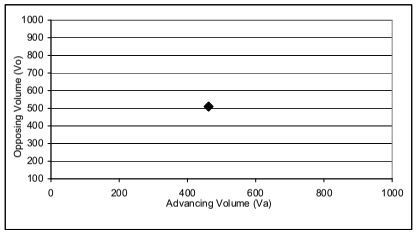
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	510
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 17.1 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



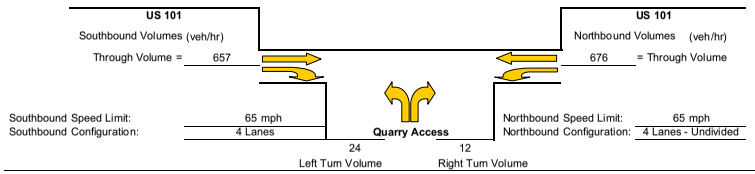
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) October Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	657
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

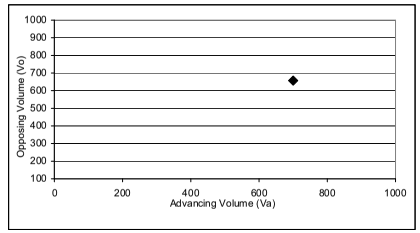
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	657
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.1 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



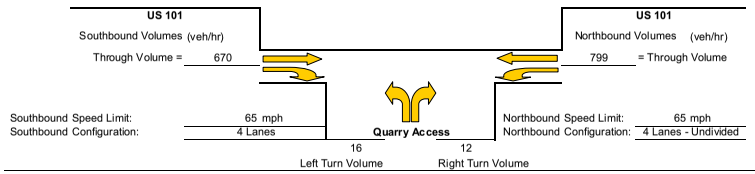
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) October Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	670
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

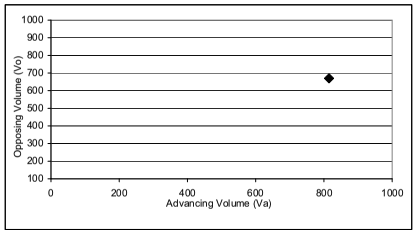
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	670
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.8 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



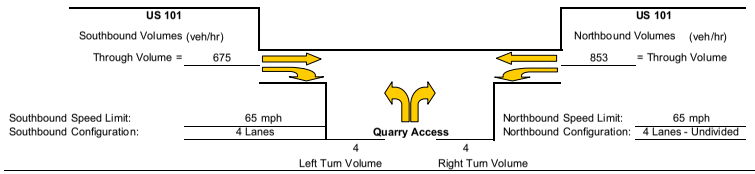
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) October Peak Base Permit Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	675
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

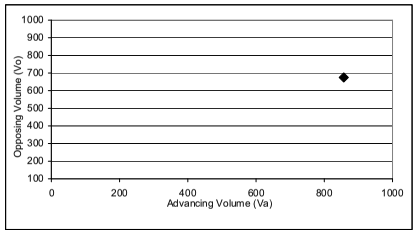
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	675
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.7 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



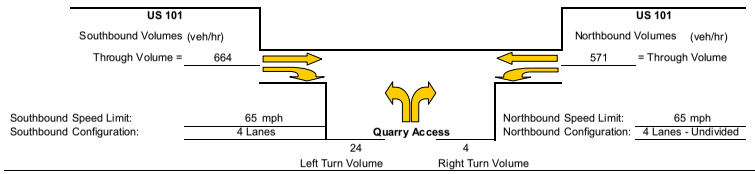
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) July Peak Base Permit Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	664
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

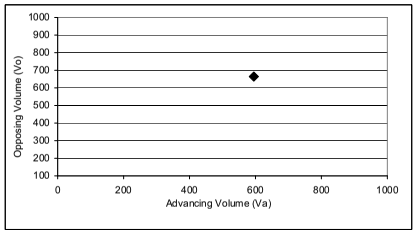
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	664
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.9 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



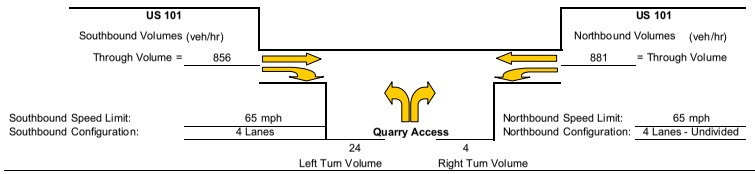
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) July Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	856
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

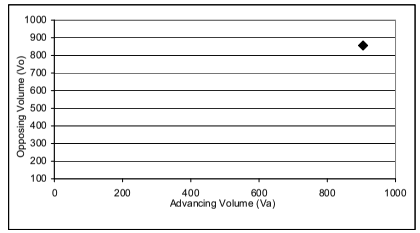
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	856
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.8 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



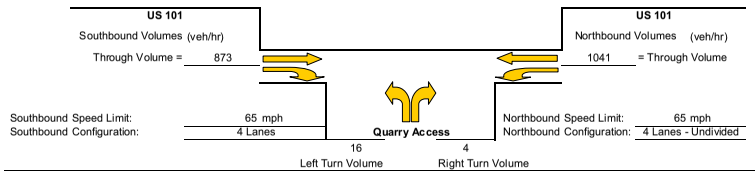
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) July Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	873
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

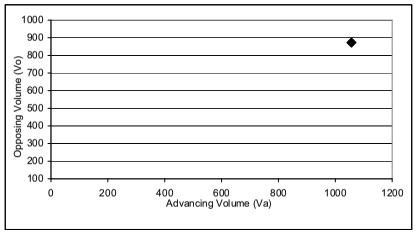
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	873
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.6 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



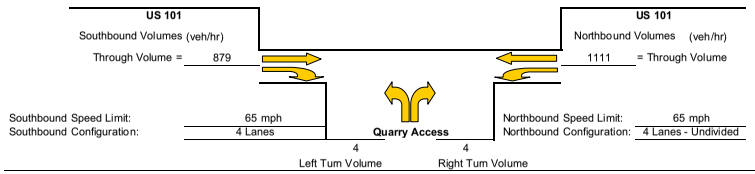
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) July Peak Base Permit Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	879
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

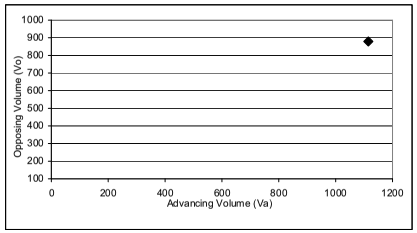
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	879
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.5 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



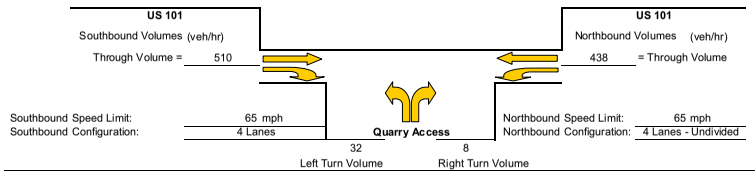
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) October Peak Base Permit Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	510
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

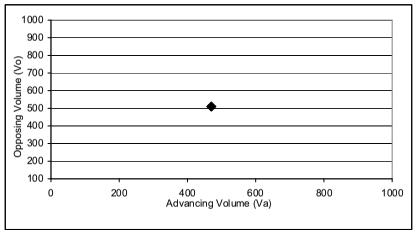
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1066.66667
Advancing Volume	Va =	510
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 17.1 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



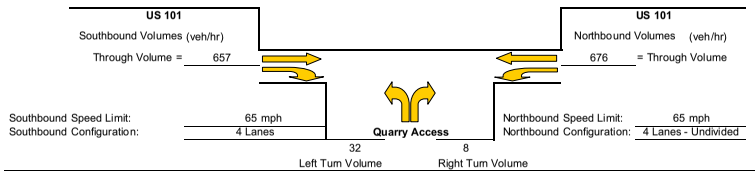
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) October Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	657
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

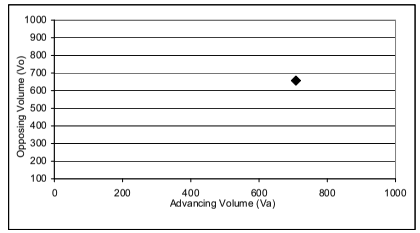
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1066.66667
Advancing Volume	Va =	657
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.1 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



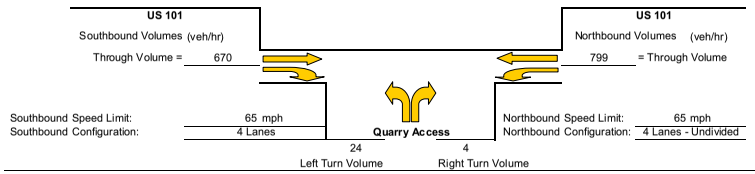
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) October Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	670
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

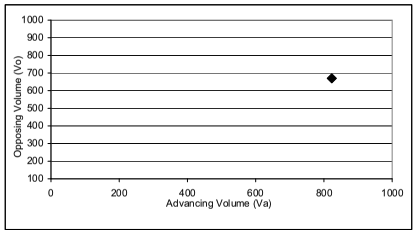
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	670
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.8 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



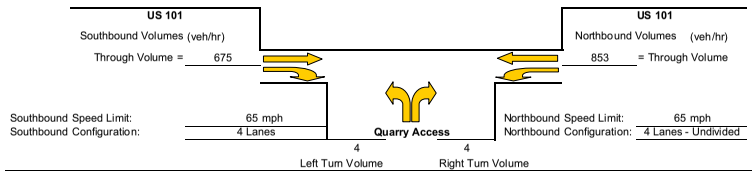
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) October Peak Base Permit Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	675
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

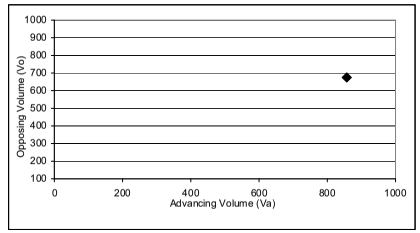
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	675
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.7 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



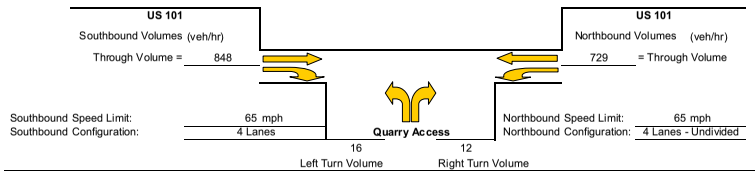
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 July Peak Base Permit Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	848
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

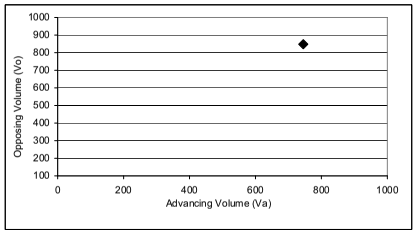
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	848
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.9 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

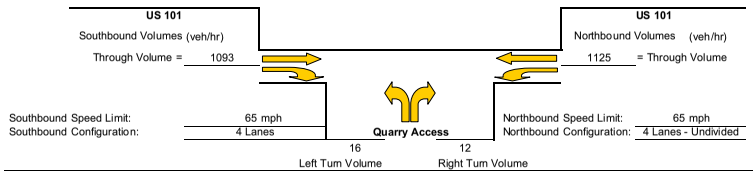
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 July Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	1093
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

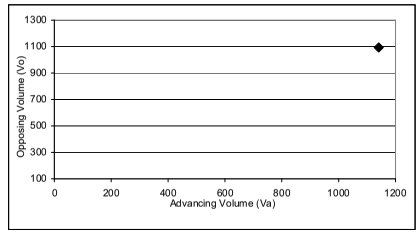
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	1093
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 7.9 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

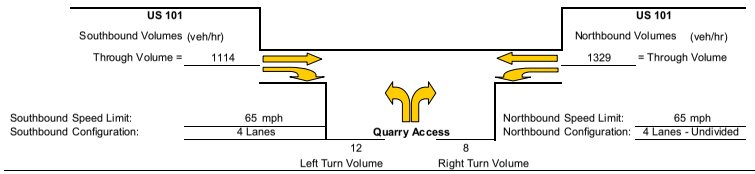
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 July Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 1114
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

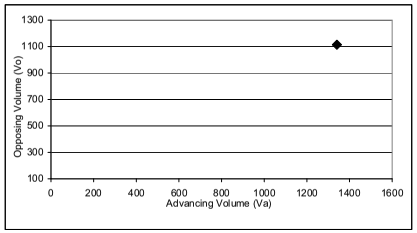
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 1066.66667
   - Advancing Volume Va = 1114
   - If AV<Va then warrant is met Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 7.7 veh/hr
Left Turn Volume Vl = 12 veh/hr
If Vl>LtVol then warrant is met



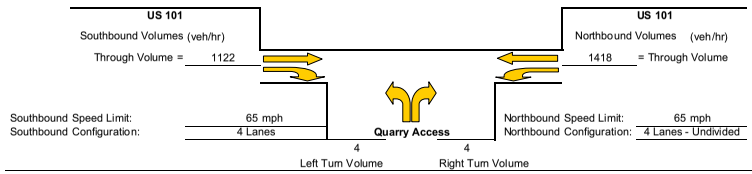
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 July Peak Base Permit Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 1122
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

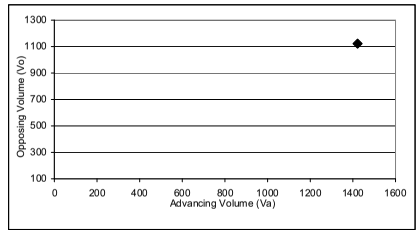
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 1200
   - Advancing Volume Va = 1122
   - If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 7.6 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



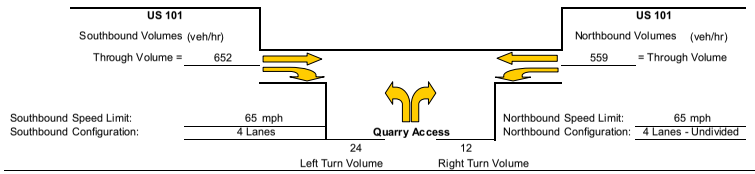
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 October Peak Base Permit Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 652
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

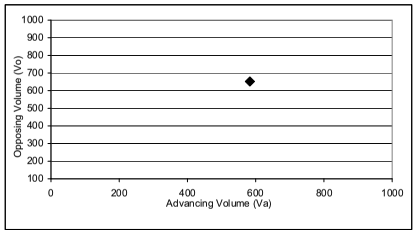
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 933.333333
   - Advancing Volume Va = 652
   - If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.1 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



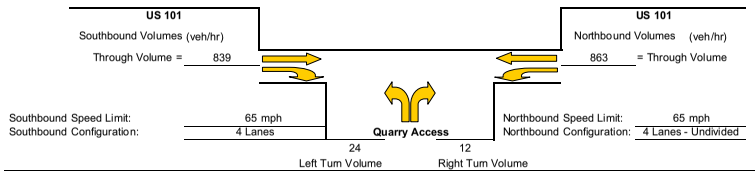
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 October Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 839
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

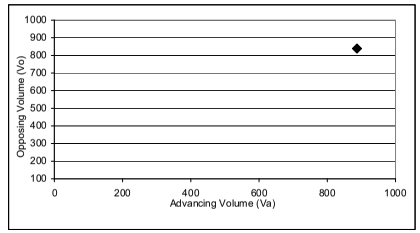
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 933.333333
   - Advancing Volume Va = 839
   - If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 11.1 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



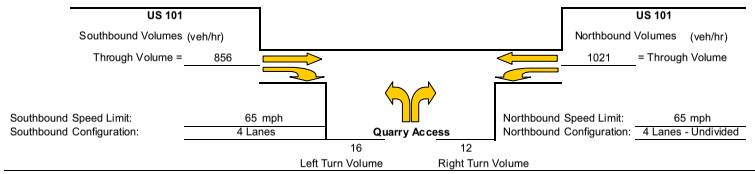
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 October Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 856
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

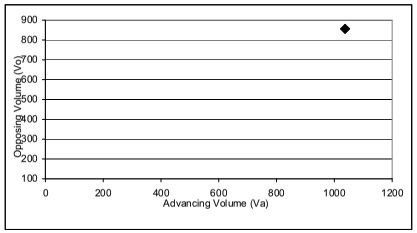
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 933.333333
   - Advancing Volume Va = 856
   - If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.8 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

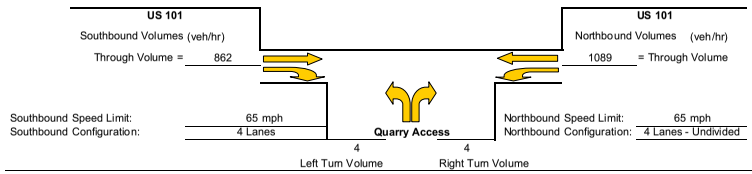
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 October Peak Base Permit Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 862
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

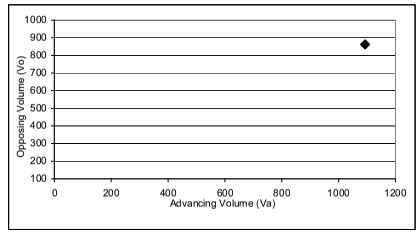
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 1200
   - Advancing Volume Va = 862
   - If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.7 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

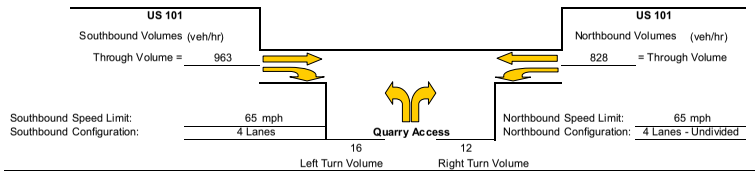
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 July Peak Base Permit Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	963
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

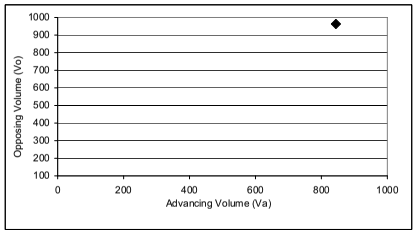
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	963
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 9.4 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



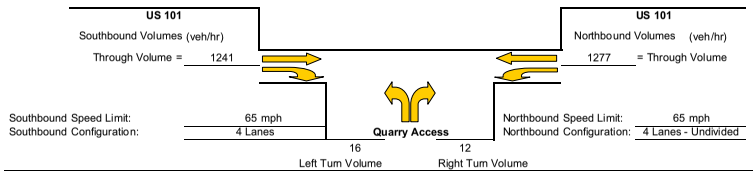
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 July Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	1241
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

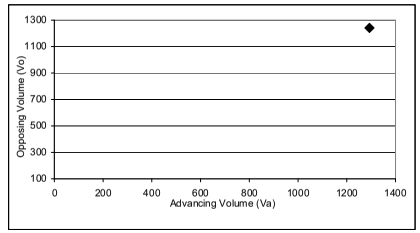
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	1241
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 6.5 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



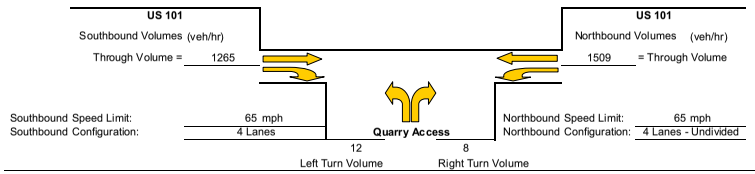
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 July Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	1265
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

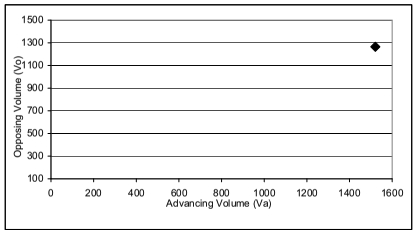
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1066.66667
Advancing Volume	Va =	1265
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 6.3 veh/hr
Left Turn Volume Vl = 12 veh/hr
If Vl>LtVol then warrant is met



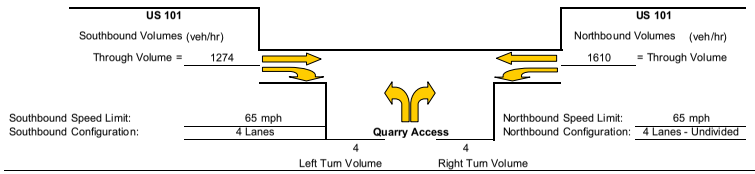
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroboty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 July Peak Base Permit Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	1274
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

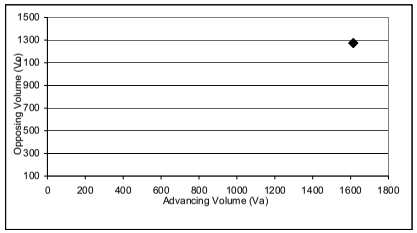
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	1274
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 6.2 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



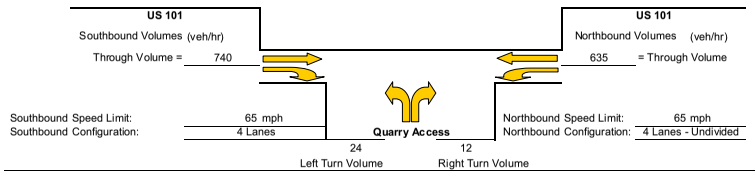
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroboty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 October Peak Base Permit Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 740
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

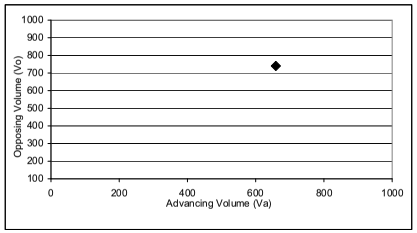
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 933.333333
   - Advancing Volume Va = 740
   - If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 12.6 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



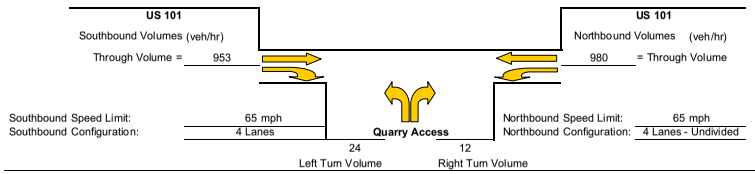
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 October Peak Base Permit Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 953
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

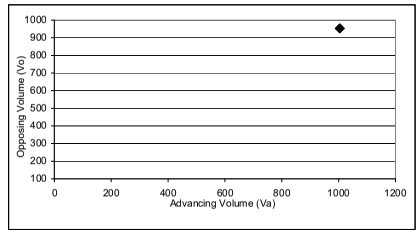
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 933.333333
   - Advancing Volume Va = 953
   - If AV<Va then warrant is met Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 9.5 veh/hr
Left Turn Volume Vl = 24 veh/hr
If Vl>LtVol then warrant is met



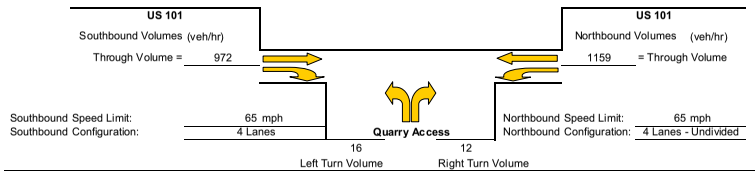
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 October Peak Base Permit Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	972
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

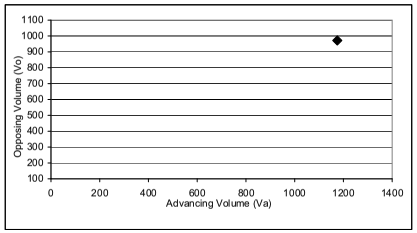
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	933.333333
Advancing Volume	Va =	972
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 9.3 veh/hr
Left Turn Volume Vl = 16 veh/hr
If Vl>LtVol then warrant is met



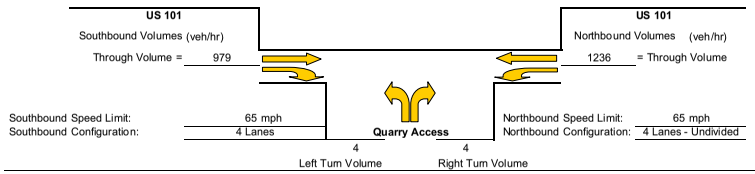
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 October Peak Base Permit Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	979
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

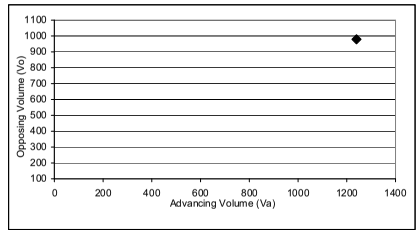
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1200
Advancing Volume	Va =	979
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 9.2 veh/hr
Left Turn Volume Vl = 4 veh/hr
If Vl>LtVol then warrant is met



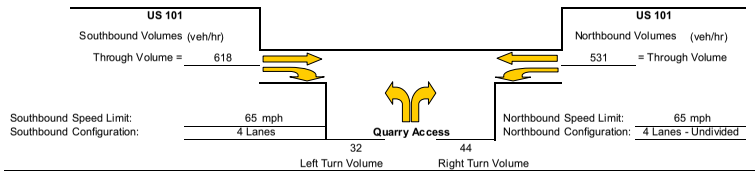
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 July Peak Project Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	618
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

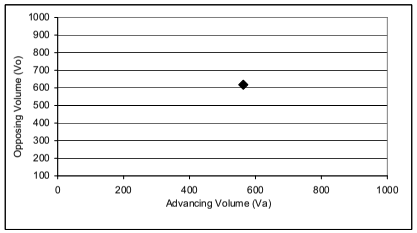
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	618
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.8 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



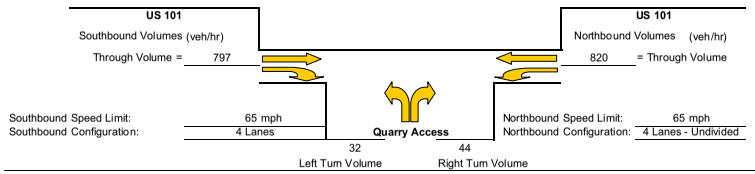
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 July Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	797
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

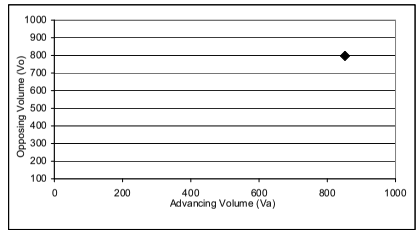
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	797
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 11.7 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



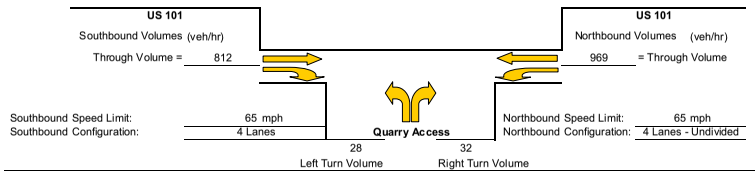
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 July Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	812
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

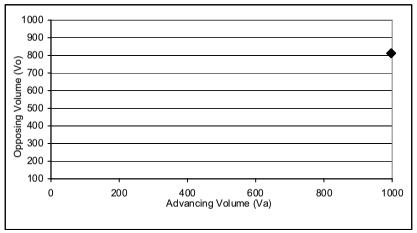
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	266.666667
Advancing Volume	Va =	812
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 11.5 veh/hr
Left Turn Volume Vl = 28 veh/hr
If Vl>LtVol then warrant is met



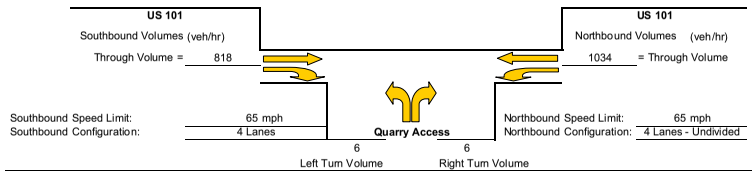
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 July Peak Project Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	818
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

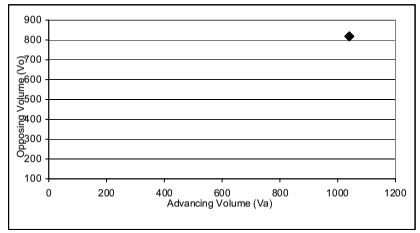
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1133.33333
Advancing Volume	Va =	818
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 11.4 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



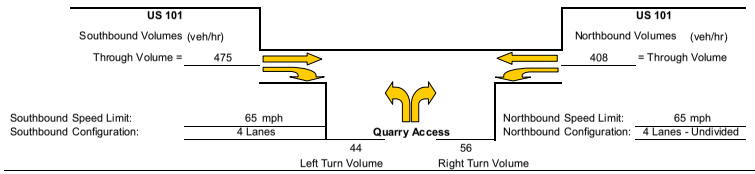
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 October Peak Project Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	975.9
Advancing Volume	Va =	475
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

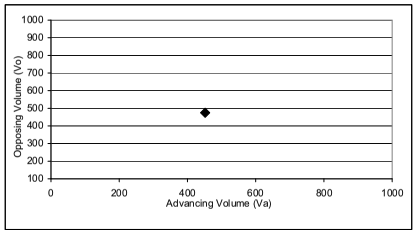
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-533.33333
Advancing Volume	Va =	475
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 17.9 veh/hr
Left Turn Volume Vl = 44 veh/hr
If Vl>LtVol then warrant is met



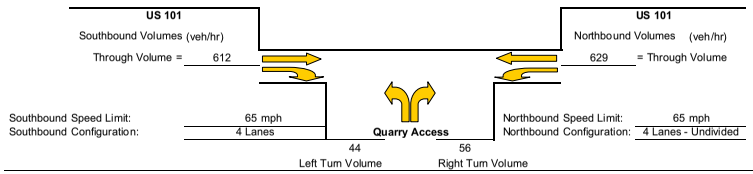
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 October Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	975.9
Advancing Volume	Va =	612
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

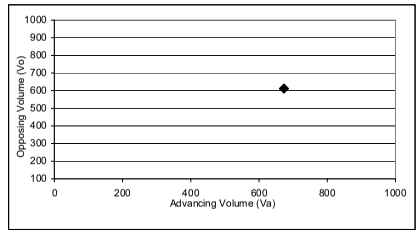
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-533.33333
Advancing Volume	Va =	612
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.9 veh/hr
Left Turn Volume Vl = 44 veh/hr
If Vl>LtVol then warrant is met



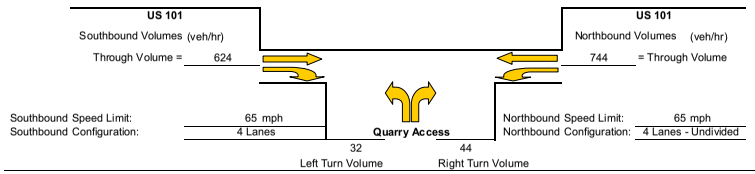
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 October Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	624
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

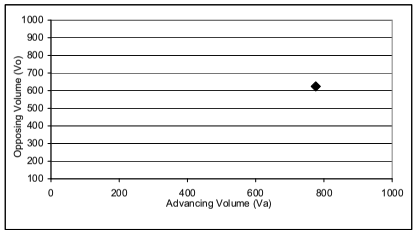
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	624
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.7 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



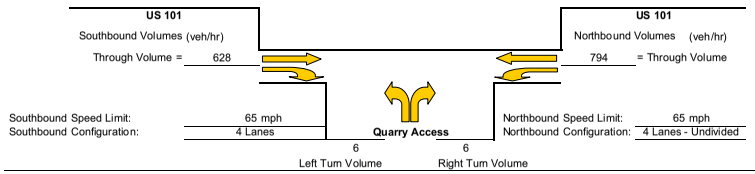
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2010 October Peak Project Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	628
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

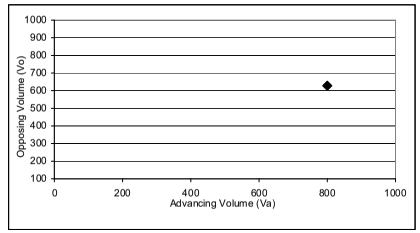
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1133.33333
Advancing Volume	Va =	628
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.6 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



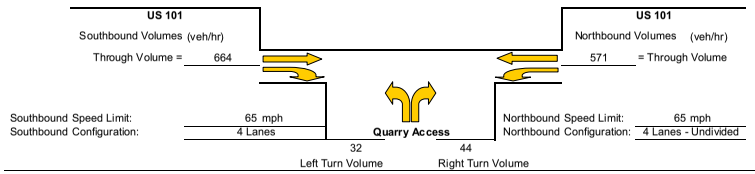
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) July Peak Project Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	664
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

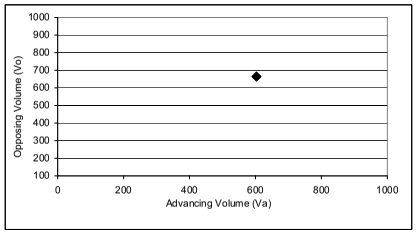
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	664
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.9 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



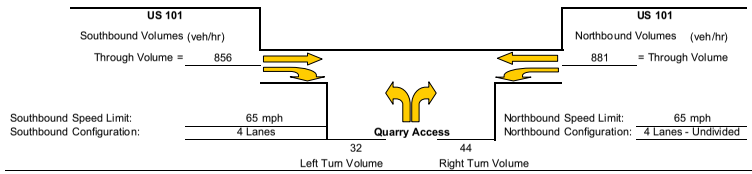
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) July Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	856
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

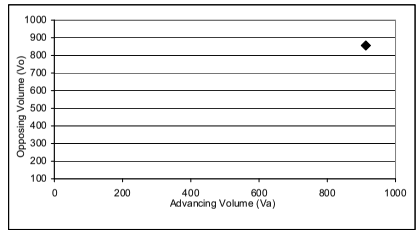
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	856
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.8 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



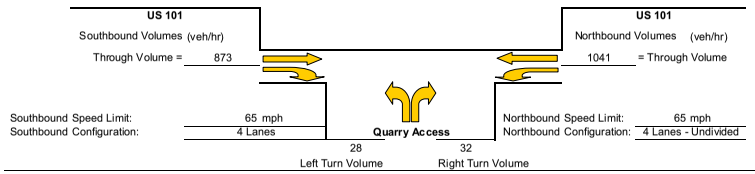
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) July Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	873
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

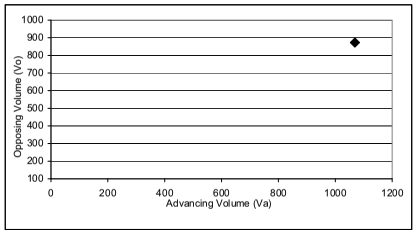
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	266.666667
Advancing Volume	Va =	873
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.6 veh/hr
Left Turn Volume Vl = 28 veh/hr
If Vl>LtVol then warrant is met



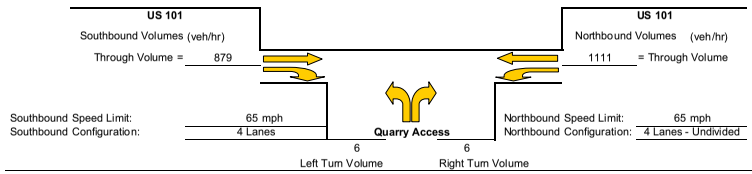
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) July Peak Project Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	879
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

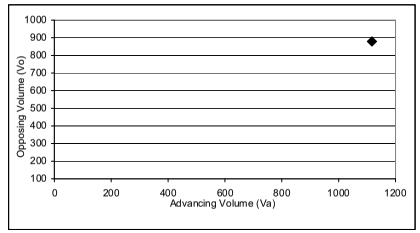
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1133.33333
Advancing Volume	Va =	879
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.5 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



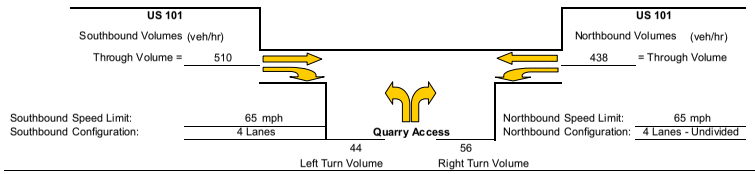
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) October Peak Project Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	975.9
Advancing Volume	Va =	510
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

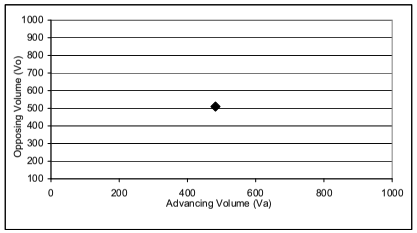
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-533.33333
Advancing Volume	Va =	510
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 17.1 veh/hr
Left Turn Volume Vl = 44 veh/hr
If Vl>LtVol then warrant is met



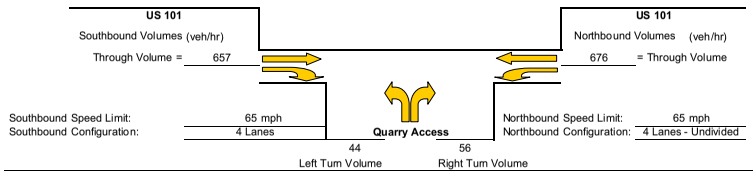
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) October Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	975.9
Advancing Volume	Va =	657
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

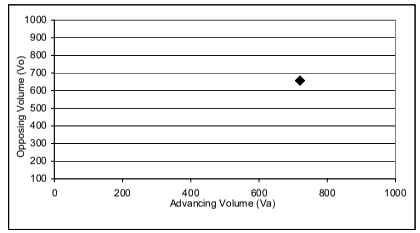
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-533.33333
Advancing Volume	Va =	657
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.1 veh/hr
Left Turn Volume Vl = 44 veh/hr
If Vl>LtVol then warrant is met



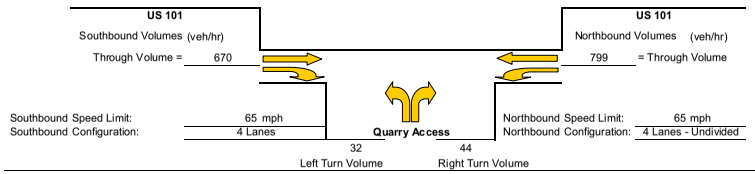
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) October Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	670
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

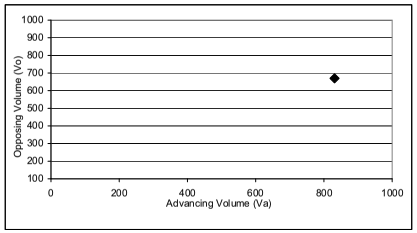
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	670
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.8 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



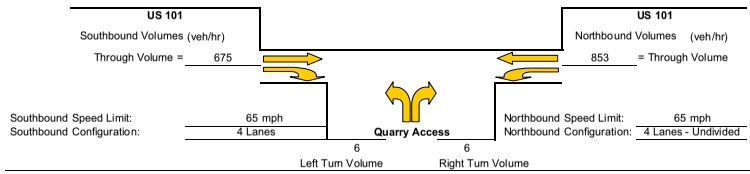
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (without Willits Bypass) October Peak Project Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	675
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

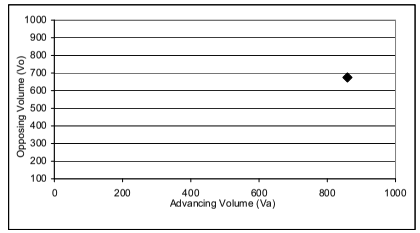
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1133.33333
Advancing Volume	Va =	675
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.7 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



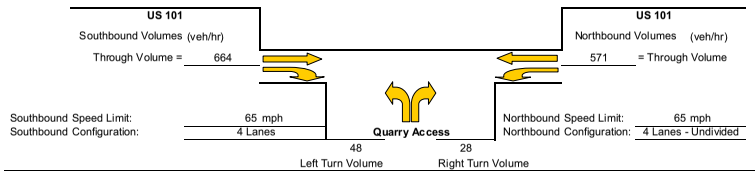
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) July Peak Project Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	664
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

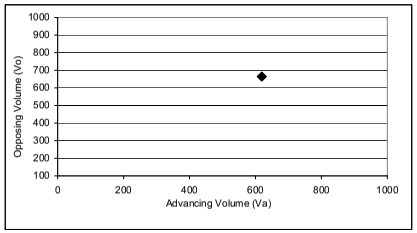
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	400
Advancing Volume	Va =	664
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.9 veh/hr
Left Turn Volume Vl = 48 veh/hr
If Vl>LtVol then warrant is met



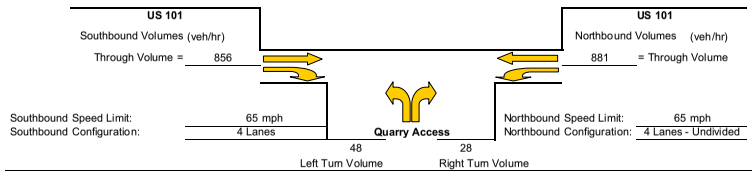
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) July Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	856
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

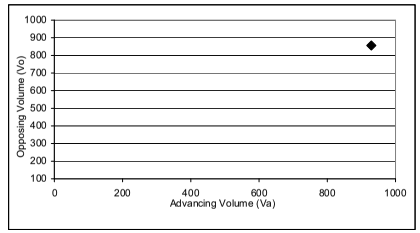
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	400
Advancing Volume	Va =	856
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.8 veh/hr
Left Turn Volume Vl = 48 veh/hr
If Vl>LtVol then warrant is met



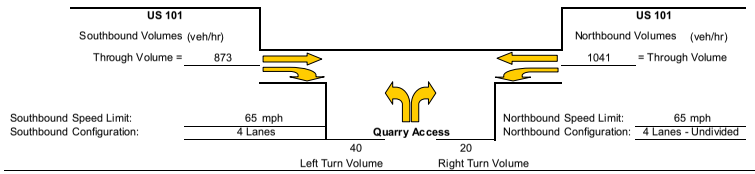
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) July Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 873
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

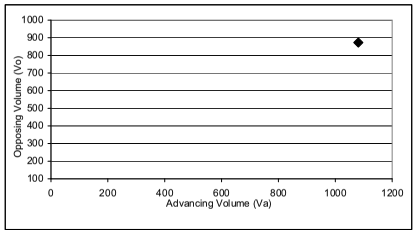
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 666.666667
   - Advancing Volume Va = 873
   - If AV<Va then warrant is met Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.6 veh/hr
Left Turn Volume Vl = 40 veh/hr
If Vl>LtVol then warrant is met



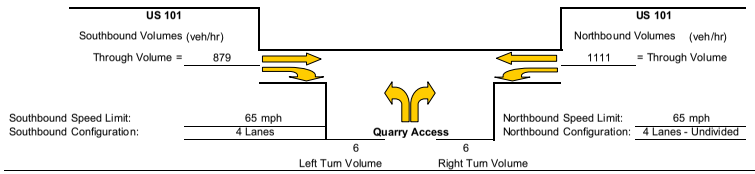
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) July Peak Project Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane
   - Advancing Volume Threshold AV = -
   - Advancing Volume Va = 879
   - If AV<Va then warrant is met -

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

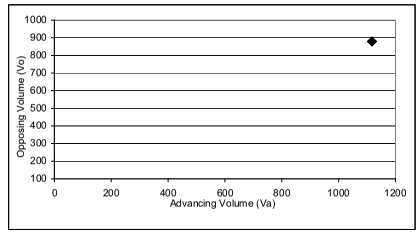
Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper
   - Advancing Volume Threshold AV = 1133.33333
   - Advancing Volume Va = 879
   - If AV<Va then warrant is met No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.5 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



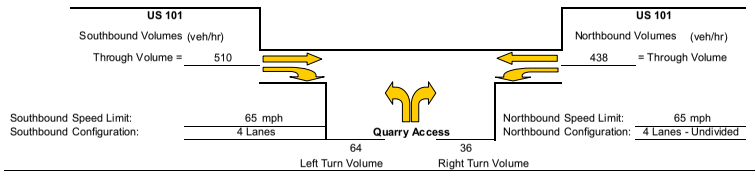
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) October Peak Project Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	510
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

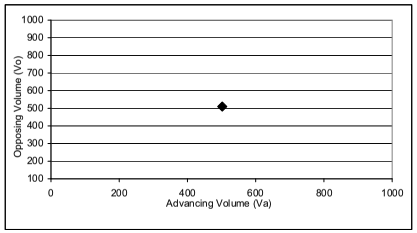
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	133.333333
Advancing Volume	Va =	510
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 17.1 veh/hr
Left Turn Volume Vl = 64 veh/hr
If Vl>LtVol then warrant is met



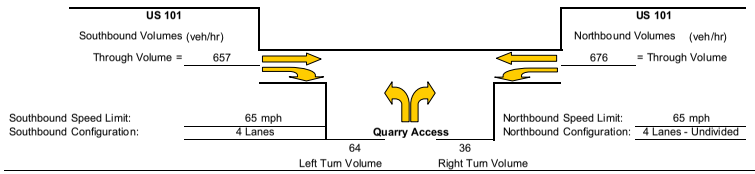
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) October Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	657
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

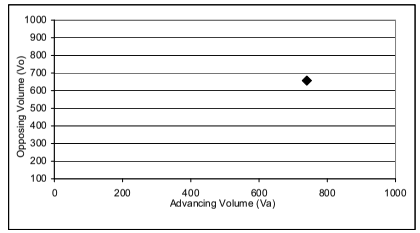
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	133.333333
Advancing Volume	Va =	657
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.1 veh/hr
Left Turn Volume Vl = 64 veh/hr
If Vl>LtVol then warrant is met



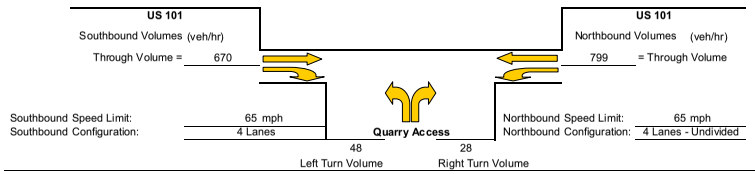
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) October Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	670
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

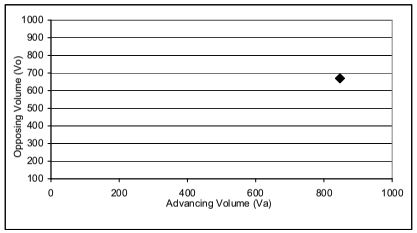
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	400
Advancing Volume	Va =	670
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.8 veh/hr
Left Turn Volume Vl = 48 veh/hr
If Vl>LtVol then warrant is met



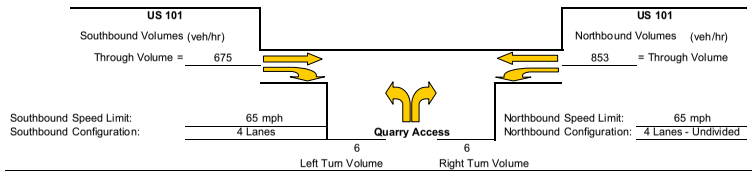
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2014 (with Willits Bypass) October Peak Project Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	675
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

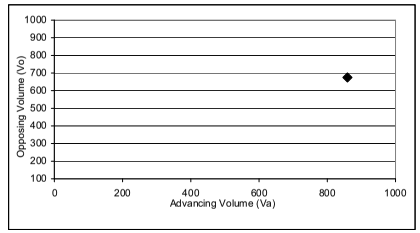
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1133.33333
Advancing Volume	Va =	675
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 13.7 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



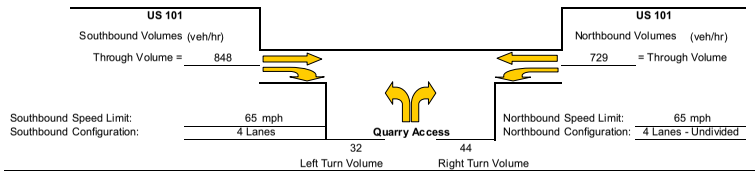
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 July Peak Project Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	848
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

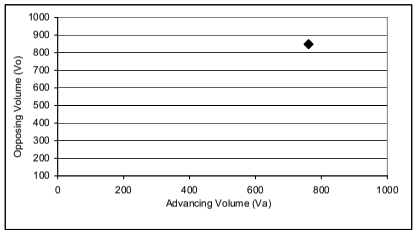
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	848
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.9 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



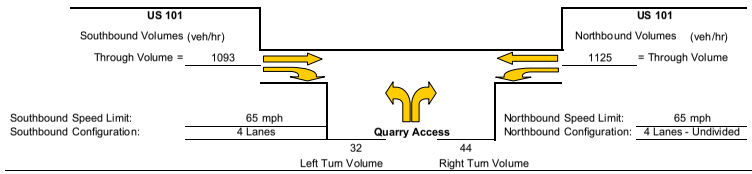
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 July Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	1093
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

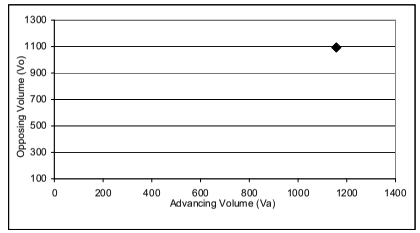
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	1093
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 7.9 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



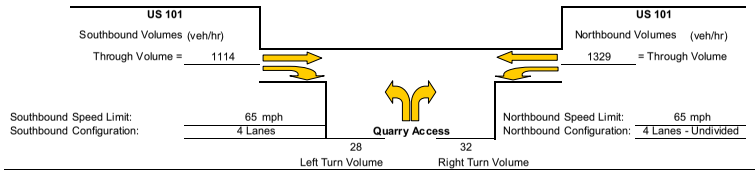
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 July Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	1114
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

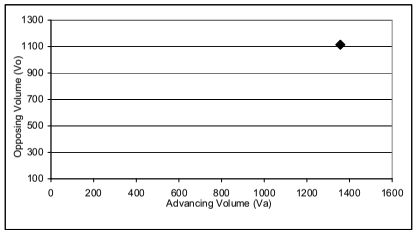
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	266.666667
Advancing Volume	Va =	1114
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 7.7 veh/hr
Left Turn Volume Vl = 28 veh/hr
If Vl>LtVol then warrant is met



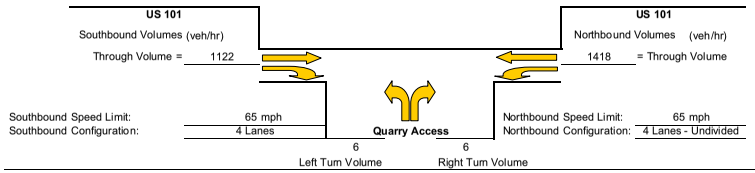
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 July Peak Project Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	1122
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

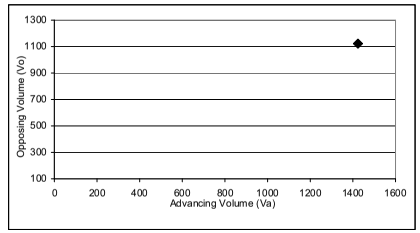
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1133.33333
Advancing Volume	Va =	1122
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 7.6 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



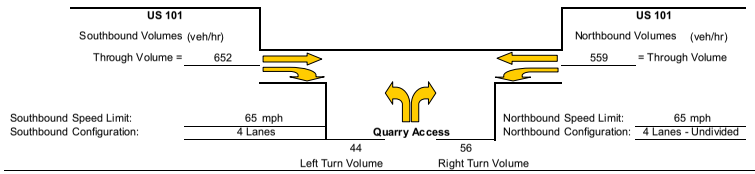
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 October Peak Project Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	975.9
Advancing Volume	Va =	652
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

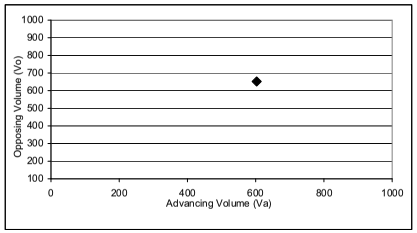
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-533.33333
Advancing Volume	Va =	652
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 14.1 veh/hr
Left Turn Volume Vl = 44 veh/hr
If Vl>LtVol then warrant is met



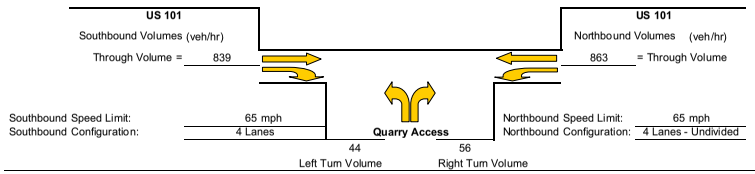
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 October Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	975.9
Advancing Volume	Va =	839
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

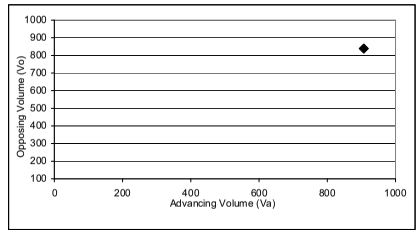
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-533.33333
Advancing Volume	Va =	839
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 11.1 veh/hr
Left Turn Volume Vl = 44 veh/hr
If Vl>LtVol then warrant is met



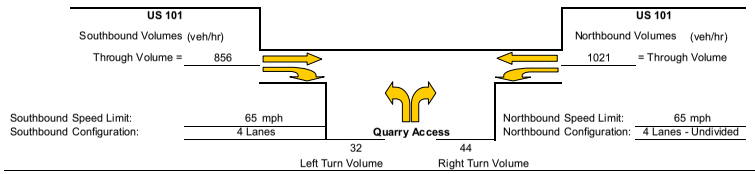
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 October Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	856
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

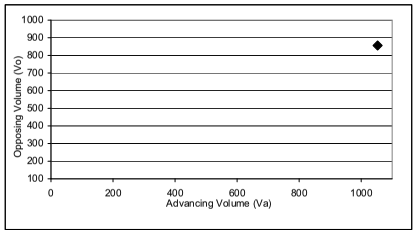
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	856
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.8 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



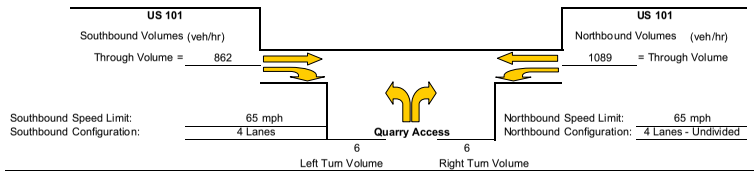
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2030 October Peak Project Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	862
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

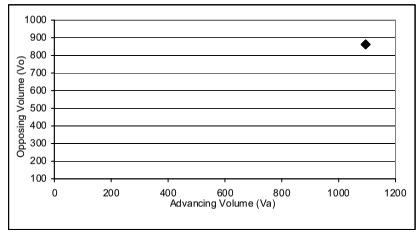
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1133.33333
Advancing Volume	Va =	862
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 10.7 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



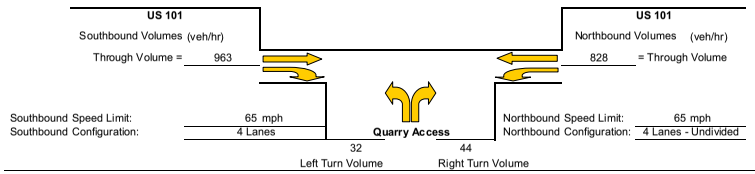
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 July Peak Project Conditions - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	963
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

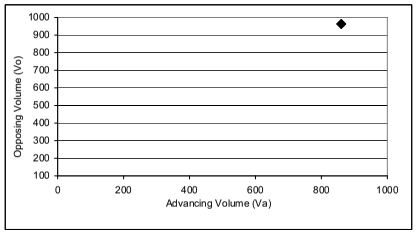
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	963
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 9.4 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



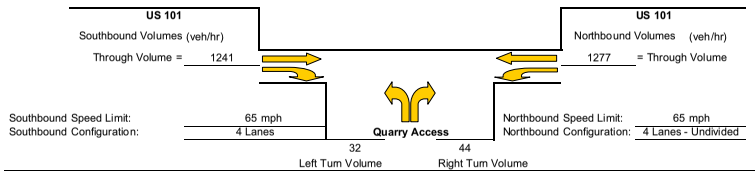
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 July Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	1241
If AV<Va then warrant is met		Yes

Right Turn Lane Warranted: **YES**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

N/A

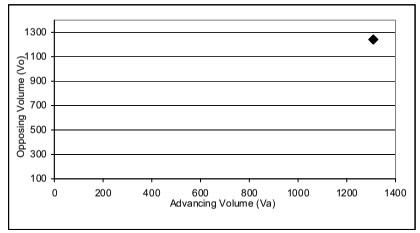
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	-
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **-**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 6.5 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



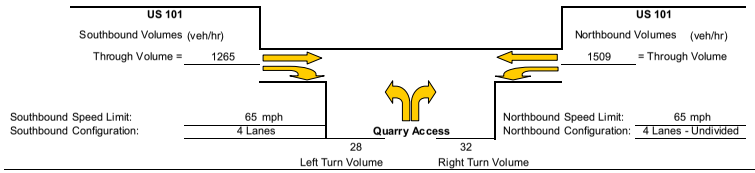
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 July Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	1265
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

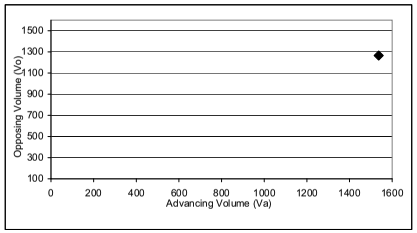
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	266.666667
Advancing Volume	Va =	1265
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 6.3 veh/hr
Left Turn Volume Vl = 28 veh/hr
If Vl>LtVol then warrant is met



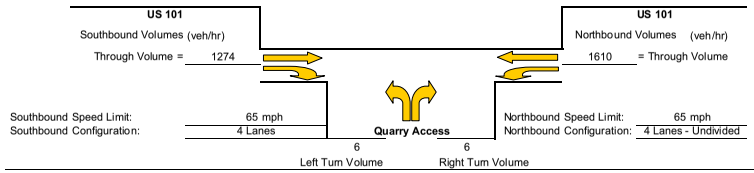
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 July Peak Project Conditions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	1274
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

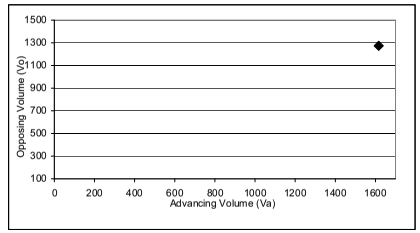
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1133.33333
Advancing Volume	Va =	1274
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 6.2 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



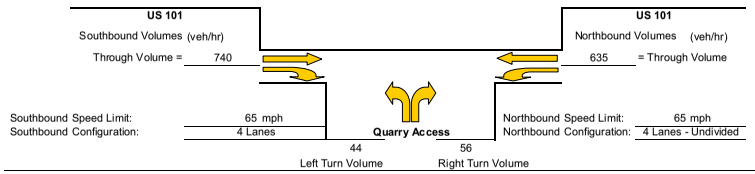
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 October Peak Project Conditons - 9:00-10:00am

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	975.9
Advancing Volume	Va =	740
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

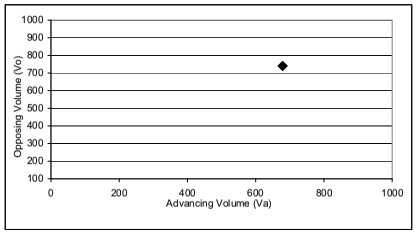
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-533.33333
Advancing Volume	Va =	740
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 12.6 veh/hr
Left Turn Volume Vl = 44 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

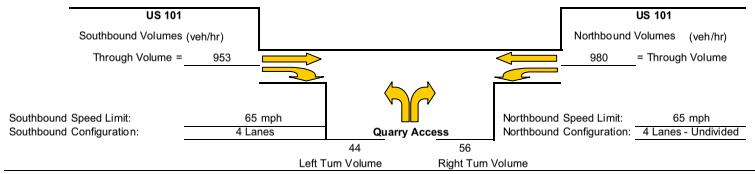
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 October Peak Project Conditions - 11:00am-Noon

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	975.9
Advancing Volume	Va =	953
If AV<Va then warrant is met		Yes

Right Turn Lane Warranted: **YES**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

N/A

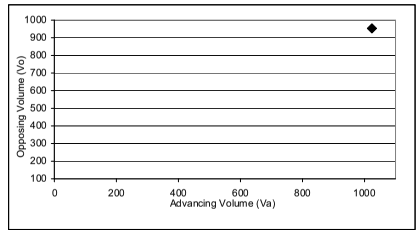
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	-
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **-**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 9.5 veh/hr
Left Turn Volume Vl = 44 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

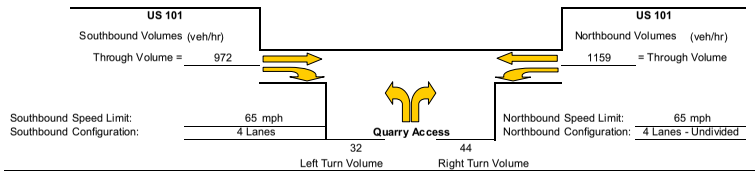
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 October Peak Project Conditions - 1:15-2:15pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1144
Advancing Volume	Va =	972
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

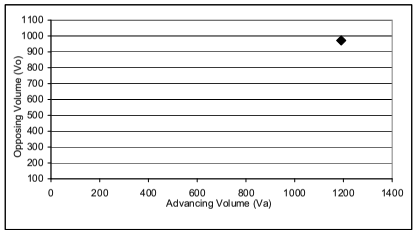
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-133.33333
Advancing Volume	Va =	972
If AV<Va then warrant is met		Yes

Right Turn Taper Warranted: **YES**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 9.3 veh/hr
Left Turn Volume Vl = 32 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

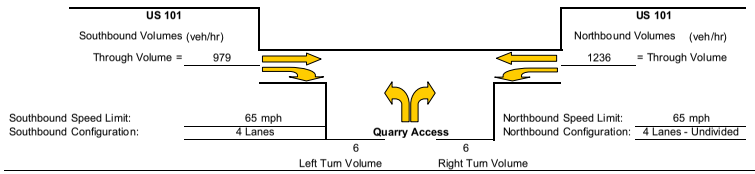
Left Turn Lane Warranted: **YES**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroboty in 1991.

Acceleration Lane Warrant Analysis - Tee Intersections

Study Intersection: US 101/Harris Quarry Access
Study Scenario: 2040 October Peak Project Condtions - 4:45-5:45pm

Direction of Analysis Street: North/South
Cross Street Intersects: From the West



Southbound Right Turn Lane Warrants

1. Check for right turn volume criteria

NOT WARRANTED - Less than 40 vehicles

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	979
If AV<Va then warrant is met		-

Right Turn Lane Warranted: **NO**

Southbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

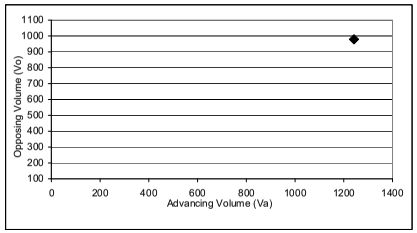
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	1133.33333
Advancing Volume	Va =	979
If AV<Va then warrant is met		No

Right Turn Taper Warranted: **NO**

Northbound Left Turn Lane Warrants

Left Turn Volume Threshold LtVol 9.2 veh/hr
Left Turn Volume Vl = 6 veh/hr
If Vl>LtVol then warrant is met



◆ Study Intersection

Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroboty in 1991.