

**I-5 Exits 40 and 43 (Gold Hill)
Interchange Area Management Plans**

**DRAFT Technical Memorandum #5
Appendix C: Preliminary Traffic Signal Warrants**

Prepared for

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Oregon Department of Transportation
Transportation Development Branch
Transportation Planning Analysis Unit

Preliminary Traffic Signal Warrant Analysis¹

Major Street: Blackwell Rd	Minor Street: Access Rd
Project: IAMP 40	City/County: Jackson County
Year: 2012 PM	Alternative: Existing

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	Percent of standard warrants 70	Percent of standard warrants 100	Percent of standard warrants 70

Case A: Minimum Vehicular Traffic

Major Street	Minor Street	Percent of standard warrants 100	Percent of standard warrants 70	Percent of standard warrants 100	Percent of standard warrants 70
1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500

Case B: Interruption of Continuous Traffic

Major Street	Minor Street	Percent of standard warrants 100	Percent of standard warrants 70	Percent of standard warrants 100	Percent of standard warrants 70
1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250

100 percent of standard warrants

X 70 percent of standard warrants²

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	6200	4150	N
	Minor	1	1850	2350	
Case B	Major	1	9300	4150	N
	Minor	1	950	2350	

Analyst and Date: _____ Reviewer and Date: _____

¹ Meeting preliminary signal warrants does **not** guarantee that a signal will be installed. When preliminary signal warrants are met, project analysts need to coordinate with Region Traffic to initiate the traffic signal engineering investigation as outlined in the Traffic Manual. Before a signal can be installed, the engineering investigation must be conducted or reviewed by the Region Traffic Manager who will forward signal recommendations to headquarters. Traffic signal warrants must be met and the State Traffic Engineer's approval obtained before a traffic signal can be installed on a state highway.

² Used due to 85th percentile speed in excess of 40 mph or isolated community with population of less than 10,000.

Oregon Department of Transportation
Transportation Development Branch
Transportation Planning Analysis Unit

Preliminary Traffic Signal Warrant Analysis¹

Major Street: Blackwell Rd	Minor Street: Access Rd
Project: IAMP 40	City/County: Jackson County
Year: 2012 PM	Alternative: Existing

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	Percent of standard warrants 70	Percent of standard warrants 100	Percent of standard warrants 70

Case A: Minimum Vehicular Traffic

Major Street	Minor Street	Percent of standard warrants 100	Percent of standard warrants 70	Percent of standard warrants 100	Percent of standard warrants 70
1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500

Case B: Interruption of Continuous Traffic

Major Street	Minor Street	Percent of standard warrants 100	Percent of standard warrants 70	Percent of standard warrants 100	Percent of standard warrants 70
1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250

100 percent of standard warrants

X 70 percent of standard warrants²

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	6200	4000	N
	Minor	1	1850	570	
Case B	Major	1	9300	4000	N
	Minor	1	950	570	

Analyst and Date: _____ Reviewer and Date: _____

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Preliminary Traffic Signal Warrant Analysis¹

Major Street: Blackwell Rd	Minor Street: Access Rd
Project: IAMP 40	City/County: Jackson County
Year: 2038 PM	Alternative: Future Baseline

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants		Percent of standard warrants	
		100	70	100	70

Case A: Minimum Vehicular Traffic

1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500

Case B: Interruption of Continuous Traffic

1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250

100 percent of standard warrants

X 70 percent of standard warrants²

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	6200	5050	N
	Minor	1	1850	2600	
Case B	Major	1	9300	5050	N
	Minor	1	950	2600	

Analyst and Date: _____ Reviewer and Date: _____

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² Used due to 85th percentile speed in excess of 40 mph or isolated community with population of less than 10,000.

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Preliminary Traffic Signal Warrant Analysis¹

Major Street: Blackwell Rd	Minor Street: Access Rd
Project: IAMP 40	City/County: Jackson County
Year: 2012 PM	Alternative: Existing

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	Percent of standard warrants 70	Percent of standard warrants 100	Percent of standard warrants 70

Case A: Minimum Vehicular Traffic

Major Street	Minor Street	Major Street ADT (100%)	Minor Street ADT (70%)	Major Street ADT (100%)	Minor Street ADT (70%)
1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500

Case B: Interruption of Continuous Traffic

Major Street	Minor Street	Major Street ADT (100%)	Minor Street ADT (70%)	Major Street ADT (100%)	Minor Street ADT (70%)
1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250

100 percent of standard warrants

X 70 percent of standard warrants²

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	6200	5000	N
	Minor	1	1850	750	
Case B	Major	1	9300	5000	N
	Minor	1	950	750	

Analyst and Date: _____ Reviewer and Date: _____

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² Used due to 85th percentile speed in excess of 40 mph or isolated community with population of less than 10,000.

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Preliminary Traffic Signal Warrant Analysis¹

Major Street: Blackwell Rd	Minor Street: Access Rd
Project: IAMP 40	City/County: Jackson County
Year: 2038 PM	Alternative: Land Use Alternative

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	Percent of standard warrants 70	Percent of standard warrants 100	Percent of standard warrants 70

Case A: Minimum Vehicular Traffic

1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500

Case B: Interruption of Continuous Traffic

1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250

100 percent of standard warrants

X 70 percent of standard warrants²

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	6200	5100	N
	Minor	1	1850	2600	
Case B	Major	1	9300	5100	N
	Minor	1	950	2600	

Analyst and Date: _____ Reviewer and Date: _____

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Preliminary Traffic Signal Warrant Analysis¹

Major Street: Access Rd	Minor Street: NB Ramp
Project: IAMP 40	City/County: Jackson County
Year: 2038 PM	Alternative: Land Use Alternative

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants		Percent of standard warrants	
		100	70	100	70

Case A: Minimum Vehicular Traffic

1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500

Case B: Interruption of Continuous Traffic

1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250

100 percent of standard warrants

X 70 percent of standard warrants²

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	6200	5700	N
	Minor	1	1850	1200	
Case B	Major	1	9300	5700	N
	Minor	1	950	1200	

Analyst and Date:	Reviewer and Date:
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Preliminary Traffic Signal Warrant Analysis¹

Major Street: Access Rd	Minor Street: SB Ramp
Project: IAMP 40	City/County: Jackson County
Year: 2038 PM	Alternative: Land Use Alternative

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants		Percent of standard warrants	
		100	70	100	70

Case A: Minimum Vehicular Traffic

Major Street	Minor Street	Major ADT	Minor ADT	Major ADT	Minor ADT
1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500

Case B: Interruption of Continuous Traffic

Major Street	Minor Street	Major ADT	Minor ADT	Major ADT	Minor ADT
1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250

100 percent of standard warrants

X 70 percent of standard warrants²

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	6200	6800	N
	Minor	1	1850	600	
Case B	Major	1	9300	6800	N
	Minor	1	950	600	

Analyst and Date:	Reviewer and Date:
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Preliminary Traffic Signal Warrant Analysis¹

Major Street: Old Stage	Minor Street: Driveway
Project: IAMP 40	City/County: Jackson County
Year: 2038 PM	Alternative: Land Use Alternative

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	Percent of standard warrants 70	Percent of standard warrants 100	Percent of standard warrants 70

Case A: Minimum Vehicular Traffic

1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500

Case B: Interruption of Continuous Traffic

1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250

100 percent of standard warrants

X 70 percent of standard warrants²

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	1	6200	4200	N
	Minor	1	1850	1800	
Case B	Major	1	9300	4200	N
	Minor	1	950	1800	

Analyst and Date: _____ Reviewer and Date: _____

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