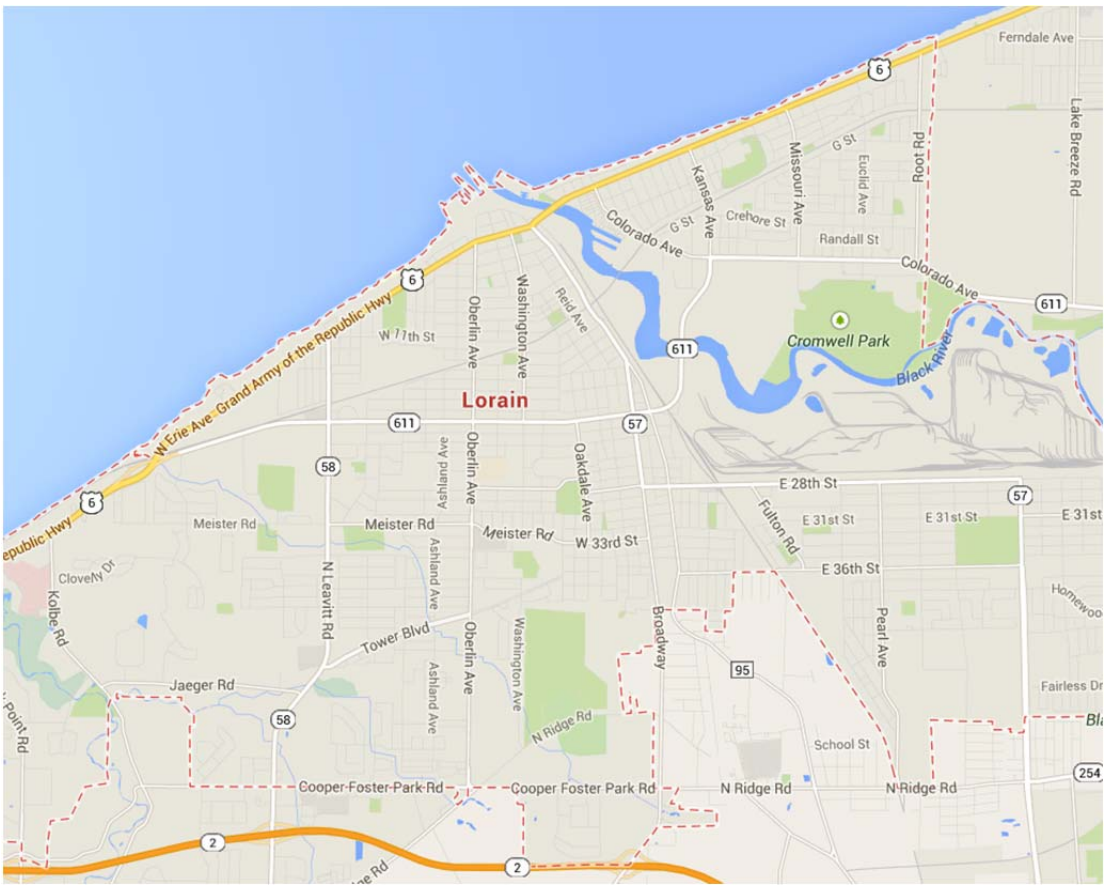


Citywide Traffic Signal Warrant Study Phase 2

City of Lorain, Ohio

Prepared by:

AECOM

564 White Pond Drive
Akron, Ohio 44320
File #15018265

November 2015

Executive Summary

AECOM (formerly URS) has been retained by the City of Lorain to perform a citywide signal warrant study. The results of this study will be used in establishing a program for upgrading and replacing the City's signals, including a determination of whether any signals should be removed, and what type of traffic control should be implemented should a traffic signal be removed. This is the second phase of the citywide signal warrant study.

The first phase (Phase 1) was completed by URS during July 2013. In that phase, twenty-five intersections were analyzed. Nine study intersections met at least one of the signal warrants, and sixteen did not.

For this phase (Phase 2), as directed by the City of Lorain, seventy-one intersections are included in the study area. All of these intersections are either presently signalized, or have been placed in continuous flash mode with the major approaches receiving a yellow (CAUTION) flash indication and the minor approaches receiving a red (STOP) flash indication; or, in the case of three (3) intersections, the traffic signals have already been removed. If this is the case, traffic control is now being provided by a STOP sign(s).

Signal warrant analysis has been performed using eleven-hour turning movement counts (TMC) performed by AECOM during November and December 2014 using Miovision portable traffic cameras. These counts were taken between the hours of 7:00 am and 6:00 pm, on either a Tuesday or Thursday. In addition, pedestrians were counted at each intersection concurrently with the vehicular traffic counts.

The following twenty-eight (28) intersections currently meet a signal warrant, and should remain signalized:

Intersection No.	Intersection
1	E Erie Ave (US 6) and Colorado Ave
3	E Erie Ave (US 6) and Kansas Ave
7	Colorado Ave (SR 611) and Kansas Ave and Henderson Dr (SR 611)
8	Colorado Ave (SR 611) and Missouri Ave
9	Colorado Ave (SR 611) and Root Rd
23	W 21st St (SR 611) and N Leavitt Rd (SR 58)
26	W 21st St (SR 611) and Oberlin Ave
27	W 21st St (SR 611) and Washington Ave
30	W 21st St (SR 611) and Elyria Ave and Henderson Dr (SR 611) and E 21st St
31	W Erie Ave (US 6) and Baumhart Rd
33	W Erie Ave (US 6) and Kolbe Rd
36	N Leavitt Rd (SR 58) and Cooper Foster Park Rd
37	N Leavitt Rd (SR 58) and Super K/Walgreens Entrance
38	N Leavitt Rd (SR 58) and Jaeger Rd/N Nantucket Dr

39	N Leavitt Rd (SR 58) and Tower Blvd/Lighthouse Village Shopping Entrance
41	N Leavitt Rd (SR 58) and Meister Rd
44	Oberlin Ave and Meister Rd
47	Oberlin Ave and W 37th St
49	Oberlin Ave and Tower Blvd
50	Oberlin Ave and Cooper Foster Park Rd
51	Cooper Foster Park Rd and N Ridge Rd
60	Grove Ave (SR 57) and E 31st St
64	SR 2 Eastbound Ramp and Middle Ridge Rd
65	SR 2 Westbound Ramp and Middle Ridge Rd
67	Pearl Ave and N Ridge Rd
69	Grove Ave (SR 57) and Homewood Dr
70	Grove Ave (SR 57) and E 42nd St
71	Grove Ave (SR 57) and Fairless Dr

The following four (4) intersections did not meet any signal warrants, but are recommended to remain signalized as discussed in the study:

29	W 21st St (SR 611) and Reid Ave
34	Oak Point Rd and Buck Horn Blvd/Park Square
45	Oberlin Ave and W 26th St
63	E 31st St and Metro Park Bike Trail

The following thirty-nine (39) intersections did not meet any signal warrants, and should have the signals removed, with traffic control provided by STOP sign(s), as noted in the study:

2	E Erie Ave (US 6) and Idaho Ave
4	E Erie Ave (US 6) and Maine Ave
5	E Erie Ave (US 6) and Missouri Ave
6	E Erie Ave (US 6) and Root Rd
10	W Erie Ave (US 6) and N Leavitt Rd (SR 58)
11	W Erie Ave (US 6) and Archwood Ave/Lakeview Park Exit
12	W Erie Ave (US 6) and Mildred Ave/Lakeview Park Entrance
13	W Erie Ave (US 6) and W 5th St/Ashland Ave
14	W Erie Ave (US 6) and Oberlin Ave
15	W Erie Ave (US 6) and Washington Ave
16	Oberlin Ave and W 5th St
17	Washington Ave and W 4th St
18	Washington Ave and W 5th St
19	Washington Ave and W 6th St*
20	Reid Ave and W 6th St
21	Reid Ave and W 7th St
22	Reid Ave and W 8th St
24	W 21st St (SR 611) and Reeves Ave
25	W 21st St (SR 611) and Pole Ave

28	W 21st St (SR 611) and Oakdale Ave
32	Baumhart Rd and Old Ford Factory Entrance
35	Cooper Foster Park Rd and Super K/Funeral Home Entrance
40	N Leavitt Rd (SR 58) and W 40th St
42	Meister Rd and Pole Ave*
43	Meister Rd and Ashland Ave
46	Oberlin Ave and W 35th St
48	Tower Blvd and Edgewood Dr
52	Elyria Ave and E 25th St*
53	Elyria Ave and E 30th St
54	Elyria Ave and E 36th St/Electric Substation Entrance
55	E 31st St and Vine Ave
56	E 31st St and Globe Ave
57	E 31st St and Pearl Ave
58	E 31st St and Seneca Ave
59	E 31st St and Clinton Ave
61	E 31st St and Palm Ave
62	E 31st St and Tacoma Ave
66	Pearl Ave and E 34th St
68	Grove Ave (SR 57) and E 36th St

*Traffic signals have already been removed

In summary, of the seventy-one (71) intersections reviewed, thirty-two (32) intersections should have their signals remain in operation, and thirty-nine (39) of the intersections analyzed should not be signalized. These signals should be removed by the City, or as part of various traffic signal improvement project(s).

The Ohio Department of Transportation (ODOT) recommended process of removing the signals should be followed (signage posted; notifying stakeholders, law enforcement, and the public; signals placed on flash for ninety (90) days prior to removal; crash monitoring; etc.), and the OMUTCD should be followed as far as installing signage and any necessary modifications to pavement markings.

After the cost of removing the signals has been recouped (approximately two years), the City should expect to save approximately $55,000 per year as the thirty-nine intersections would no longer need signal equipment maintenance or electric power supplied to operate the signals. A general guideline for the average cost to operate and maintain a traffic signal is $1,400 per year per traffic signal (as per the Arizona Department of Transportation). In addition, the City would not have to expend considerable funds upgrading these signals to meet current OMUTCD criteria or to update aging equipment. Safety at these intersections is not anticipated to decline, and may even improve, such as installing an all-way STOP at the intersection of Reid Avenue and W 6th St in Downtown Lorain adjacent to the Lorain Public Library. Pedestrian safety is anticipated to be improved at this intersection, the existing single traffic signal head spanning the intersection does not meet current OMUTCD criteria, and visibility of these older signals (often with 8-inch signal faces as opposed to 12-inch) can be an issue.

Table of Contents

1.0 Introduction 1
1.1 Study Scope 1
1.2 Study Divided Into Sections 3
2.0 Existing Conditions 14
2.1 Existing Arterial and Collector Roadways 14
2.2 Existing Traffic Control 17
2.3 Existing Traffic and Pedestrian Volumes 17
3.0 Signal Warrant Analysis 18
3.1 Traffic Signal Warrants 18
3.2 Signal Warrant Analysis Results 20
3.3 Pedestrian Volume (Warrant 4) and School Warrant (Warrant 5) Analysis 24
3.3.1 Intersection No. 3, E Erie Ave (US 6) and Kansas Ave/St. Anthony of Padua School Exit 24
3.3.2 Intersection No. 4, Erie Ave (US 6) and Maine Ave 25
3.3.3 Intersection No. 19, Washington Ave and W 6th St 25
3.3.4 Intersection No. 28, W 21st St (SR 61) and Oakdale Ave 25
3.3.5 Intersection No. 40, N Leavitt Rd (SR 58) and W 40th St 25
3.3.6 Intersection No. 45, Oberlin Ave and W 26th St 25
3.3.7 Intersection No. 45, Oberlin Ave and W 35th St 26
3.3.8 Intersection No. 55, E 31st St and Vine Ave 26
3.4 Retention Analysis 32
3.5 Recommended Traffic Control 33
4.0 Conclusion and Recommendations 33

Appendix A – Turning Movement Counts (includes Pedestrian Counts)
Appendix B – Signal Warrant Data

Kevin P. Westbrooks, Reg. Engineer No. 65607

1.0 Introduction

AECOM (formerly URS) has been retained by the City of Lorain to perform a citywide signal warrant study. The results of this study will be used in establishing a program for upgrading and replacing the City's signals, including a determination of whether any signals should be removed, and what type of traffic control should be implemented should a traffic signal be removed. This is the second phase of the citywide signal warrant study. The first phase (Phase 1) was completed by URS during July 2013. In that phase, twenty-five intersections were analyzed. In that study, nine study intersections met at least one of the signal warrants, and sixteen did not.

1.1 Study Scope

For this phase (Phase 2), the following seventy-one intersections are included in the study. The intersections analyzed, as directed by the City of Lorain, are as follows:

Intersection No.	Intersection
1	E Erie Ave (US 6) and Colorado Ave
2	E Erie Ave (US 6) and Idaho Ave
3	E Erie Ave (US 6) and Kansas Ave
4	E Erie Ave (US 6) and Maine Ave
5	E Erie Ave (US 6) and Missouri Ave
6	E Erie Ave (US 6) and Root Rd
7	Colorado Ave (SR 611) and Kansas Ave and Henderson Dr (SR 611)
8	Colorado Ave (SR 611) and Missouri Ave
9	Colorado Ave (SR 611) and Root Rd
10	W Erie Ave (US 6) and N Leavitt Rd (SR 58)
11	W Erie Ave (US 6) and Archwood Ave/Lakeview Park Exit
12	W Erie Ave (US 6) and Mildred Ave/Lakeview Park Entrance
13	W Erie Ave (US 6) and W 5th St/Ashland Ave
14	W Erie Ave (US 6) and Oberlin Ave
15	W Erie Ave (US 6) and Washington Ave
16	Oberlin Ave and W 5th St
17	Washington Ave and W 4th St
18	Washington Ave and W 5th St
19	Washington Ave and W 6th St
20	Reid Ave and W 6th St
21	Reid Ave and W 7th St
22	Reid Ave and W 8th St
23	W 21st St (SR 611) and N Leavitt Rd (SR 58)
24	W 21st St (SR 611) and Reeves Ave
25	W 21st St (SR 611) and Pole Ave
26	W 21st St (SR 611) and Oberlin Ave
27	W 21st St (SR 611) and Washington Ave
28	W 21st St (SR 611) and Oakdale Ave

29	W 21st St (SR 611) and Reid Ave
30	W 21st St (SR 611) and Elyria Ave and Henderson Dr (SR 611) and E 21st St
31	W Erie Ave (US 6) and Baumhart Rd
32	Baumhart Road and Old Ford Factory Entrance
33	W Erie Ave (US 6) and Kolbe Rd
34	Oak Point Rd and Buck Horn Blvd/Park Square
35	Cooper Foster Park Rd and Super K/Funeral Home Entrance
36	N Leavitt Rd (SR 58) and Cooper Foster Park Rd
37	N Leavitt Rd (SR 58) and Super K/Walgreens Entrance
38	N Leavitt Rd (SR 58) and Jaeger Rd/N Nantucket Dr
39	N Leavitt Rd (SR 58) and Tower Blvd/Lighthouse Village Shopping
40	N Leavitt Rd (SR 58) and W 40th St
41	N Leavitt Rd (SR 58) and Meister Rd
42	Meister Rd and Pole Ave
43	Meister Rd and Ashland Ave
44	Oberlin Ave and Meister Rd
45	Oberlin Ave and W 26th St
46	Oberlin Ave and W 35th St
47	Oberlin Ave and W 37th St
48	Tower Blvd and Edgewood Dr
49	Oberlin Ave and Tower Blvd
50	Oberlin Ave and Cooper Foster Park Rd
51	Cooper Foster Park Rd and N Ridge Rd
52	Elyria Ave and E 25th St
53	Elyria Ave and E 30th St
54	Elyria Ave and E 36th St/Electric Substation Entrance
55	E 31st St and Vine Ave
56	E 31st St and Globe Ave
57	E 31st St and Pearl Ave
58	E 31st St and Seneca Ave
59	E 31st St and Clinton Ave
60	Grove Ave (SR 57) and E 31st St
61	E 31st St and Palm Ave
62	E 31st St and Tacoma Ave
63	E 31st St and Metro Park Bicycle Trail
64	SR 2 Eastbound Ramp and Middle Ridge Road
65	SR 2 Westbound Ramp and Middle Ridge Road
66	Pearl Ave and E 34th St
67	Pearl Ave and N Ridge Rd
68	Grove Ave (SR 57) and E 36th St
69	Grove Ave (SR 57) and Homewood Dr
70	Grove Ave (SR 57) and E 42nd St
71	Grove Ave (SR 57) and Fairless Dr

All of these intersections are either presently signalized, have been placed in continuous flash mode with the major approaches receiving a yellow (CAUTION) flash indication and the minor approaches receiving a red (STOP) flash indication or the traffic signals have already been removed. This is the case at three intersections, where traffic control is now being provided by STOP sign(s).

1.2 Study Sections

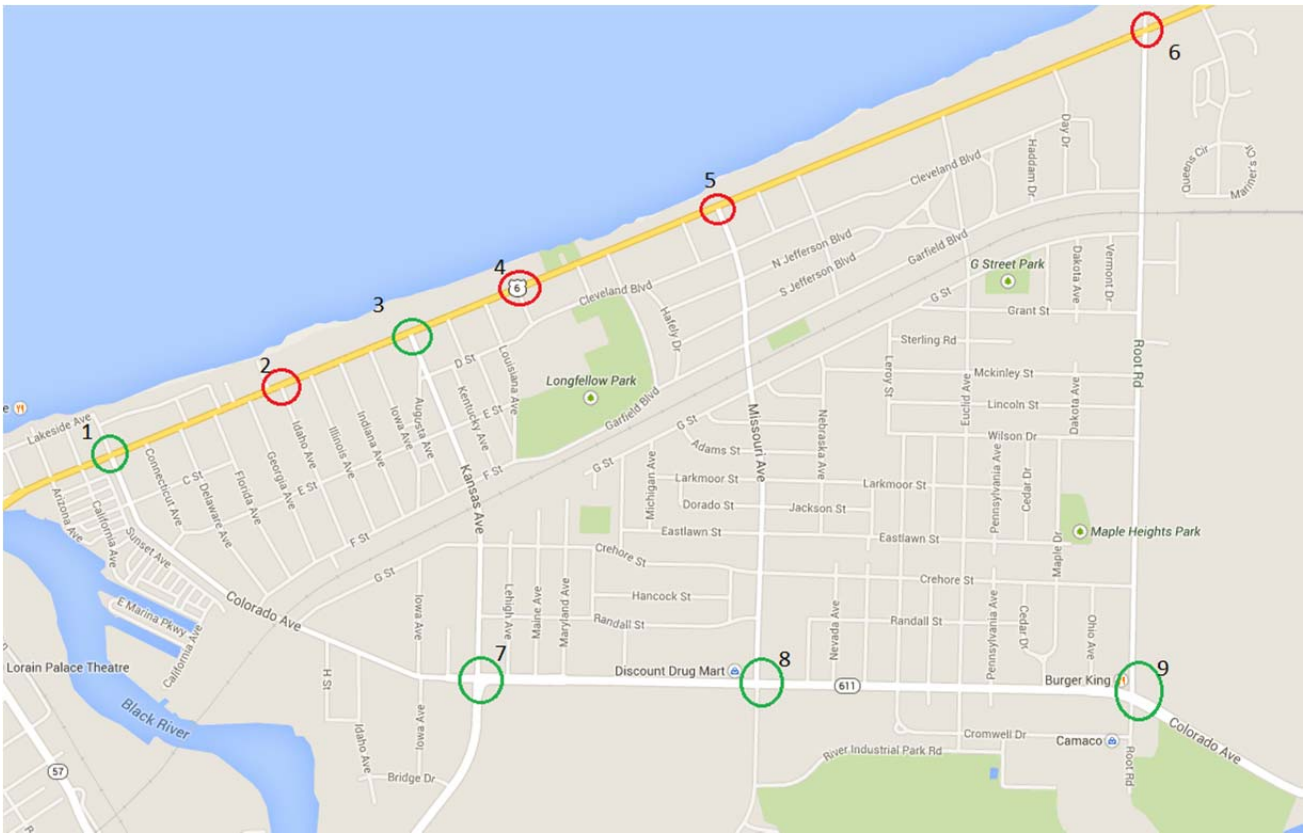
Due to the number of intersections included in this study, which encompass the entire City of Lorain, the City was divided into ten sections based on location, as noted herein. The sections are identified with maps on the following pages.

Section 1- Northeast (9 intersections)

Section 1 covers the E Erie Avenue (US 6) corridor and the Colorado Avenue (SR 611) corridor in the northeast portion of the City of Lorain.

Intersection No.	Intersection
1	E Erie Ave (US 6) and Colorado Ave
2	E Erie Ave (US 6) and Idaho Ave
3	E Erie Ave (US 6) and Kansas Ave
4	E Erie Ave (US 6) and Maine Ave
5	E Erie Ave (US 6) and Missouri Ave
6	E Erie Ave (US 6) and Root Rd
7	Colorado Ave (SR 611) and Kansas Ave and Henderson Dr (SR 611)
8	Colorado Ave (SR 611) and Missouri Ave
9	Colorado Ave (SR 611) and Root Rd

Map 1 of Section 1 is shown below. The intersections listed above are denoted by intersection number and a green or red circle. A green circle denotes that the existing traffic signal is recommended to remain in operation, and a red circle denotes that the existing traffic signal is recommended to be removed (if not already removed).



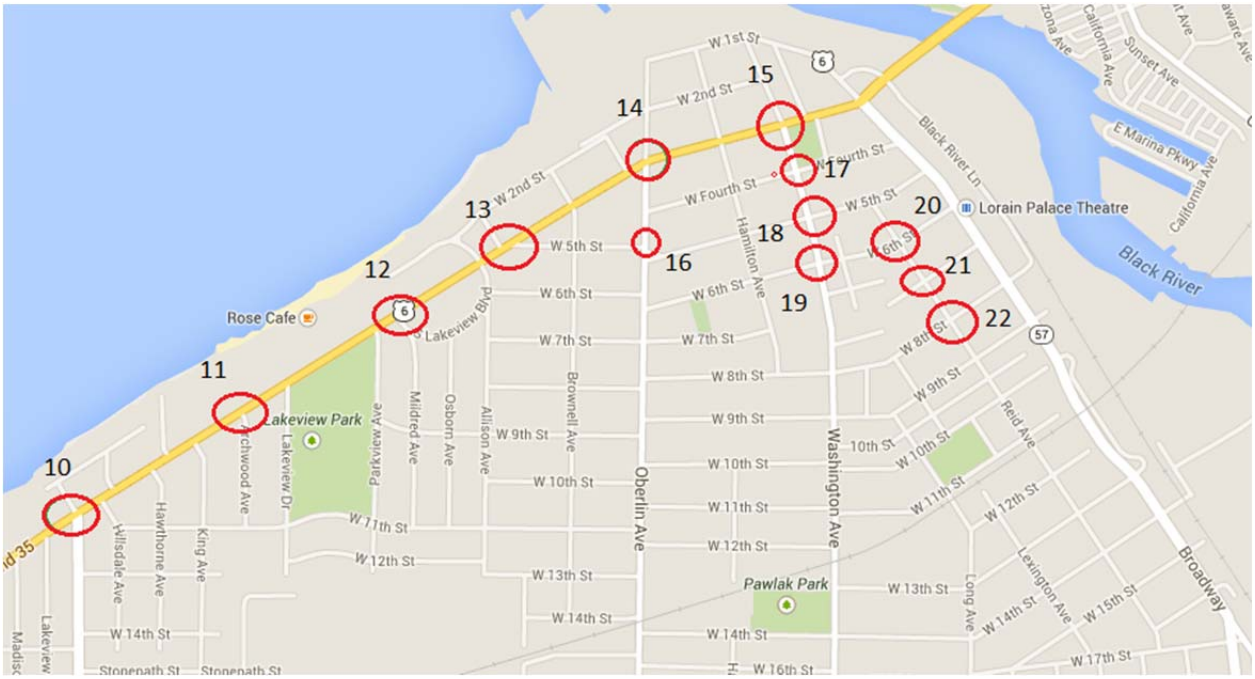
Map 1 – Section 1 (Northeast)

Section 2- Central Lorain (13 intersections)

Section 2 covers W Erie Avenue (US 6), Oberlin Avenue, Washington Avenue, and Reid Avenue in Central (Downtown) Lorain.

Intersection No.	Intersection
10	W Erie Ave (US 6) and N Leavitt Rd (SR 58)
11	W Erie Ave (US 6) and Archwood Ave/Lakeview Park Exit
12	W Erie Ave (US 6) and Mildred Ave/Lakeview Park Entrance
13	W Erie Ave (US 6) and W 5th St/Ashland Ave
14	W Erie Ave (US 6) and Oberlin Ave
15	W Erie Ave (US 6) and Washington Ave
16	Oberlin Ave and W 5th St
17	Washington Ave and W 4th St
18	Washington Ave and W 5th St
19	Washington Ave and W 6th St
20	Reid Ave and W 6th St
21	Reid Ave and W 7th St
22	Reid Ave and W 8th St

Map 2 of Section 2 is shown below.



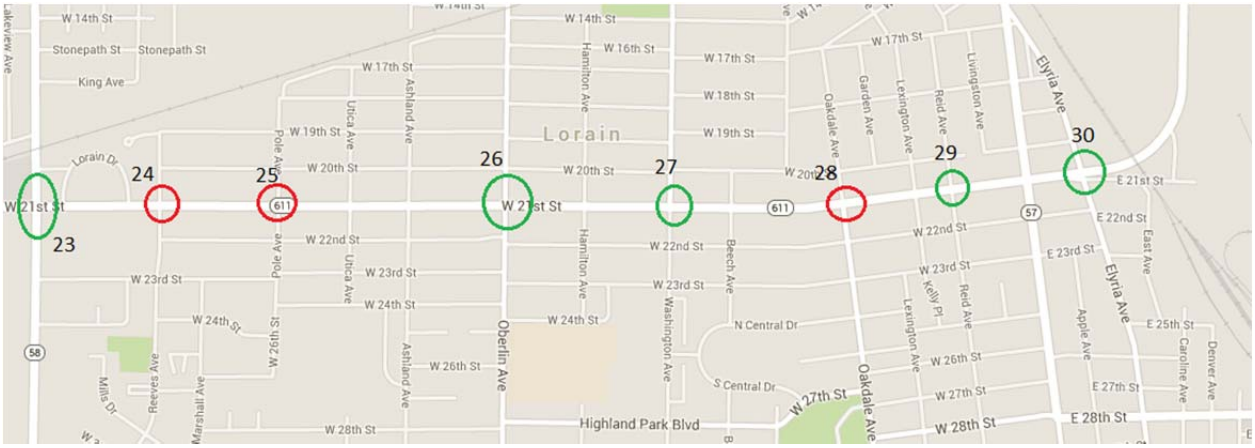
Map 2 – Section 2 (Central Lorain)

Section 3- W 21st Street (SR 611) Corridor (8 intersections)

Section 3 covers the W 21st Street (SR 611) corridor, located immediately south of Downtown Lorain.

Intersection No.	Intersection
23	W 21st St (SR 611) and N Leavitt Rd (SR 58)
24	W 21st St (SR 611) and Reeves Ave
25	W 21st St (SR 611) and Pole Ave
26	W 21st St (SR 611) and Oberlin Ave
27	W 21st St (SR 611) and Washington Ave
28	W 21st St (SR 611) and Oakdale Ave
29	W 21st St (SR 611) and Reid Ave
30	W 21st St (SR 611) and Elyria Ave and Henderson Dr (SR 611) and E 21st St

Map 3 of Section 3 is shown below.



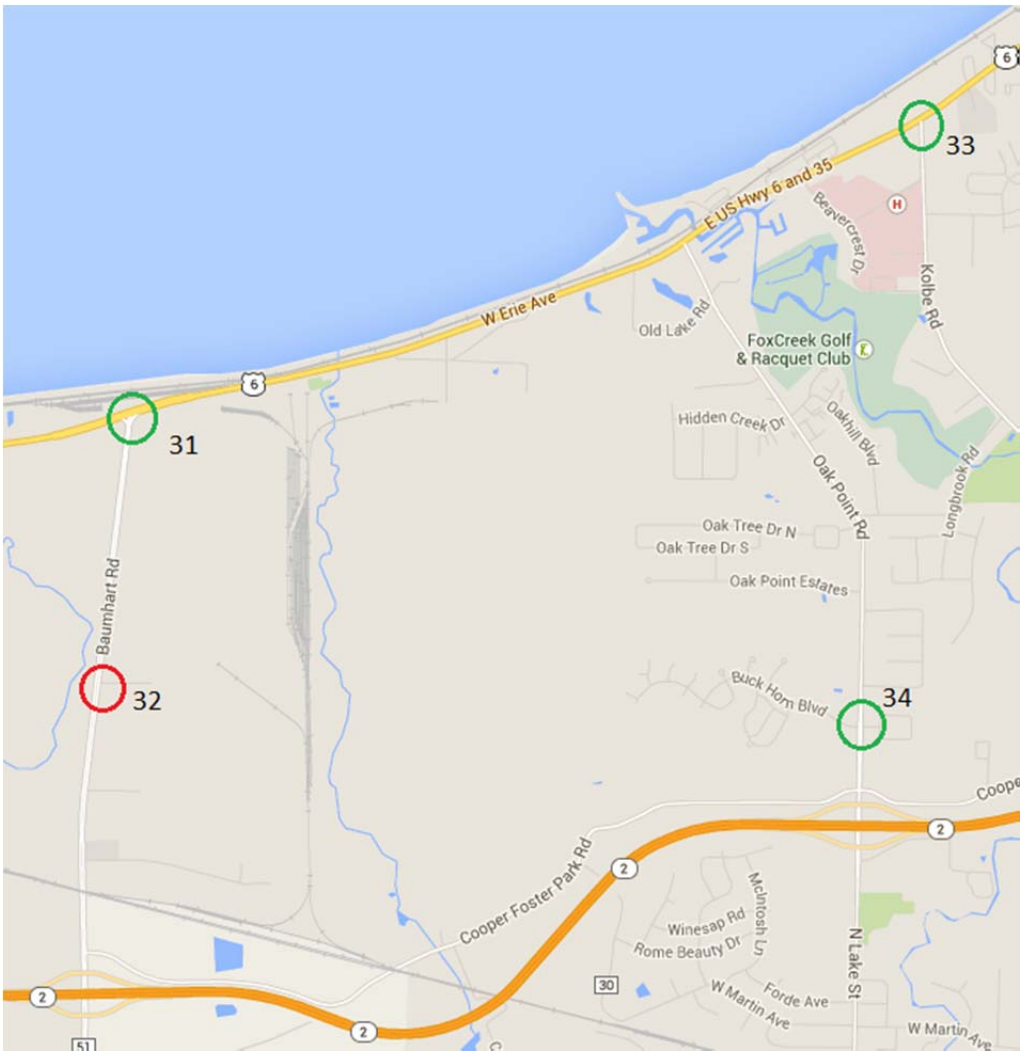
Map 3 – Section 3 (W 21st St Corridor)

Section 4- Southwest (4 intersections)

Section 4 covers W Erie Avenue (US 6), Baumhart Road and Oak Point Road in far Southwest Lorain.

Intersection No.	Intersection
31	W Erie Ave (US 6) and Baumhart Rd
32	Baumhart Road and Old Ford Factory Entrance
33	W Erie Ave (US 6) and Kolbe Rd
34	Oak Point Rd and Buck Horn Blvd/Park Square

Map 4 of Section 4 is shown below.



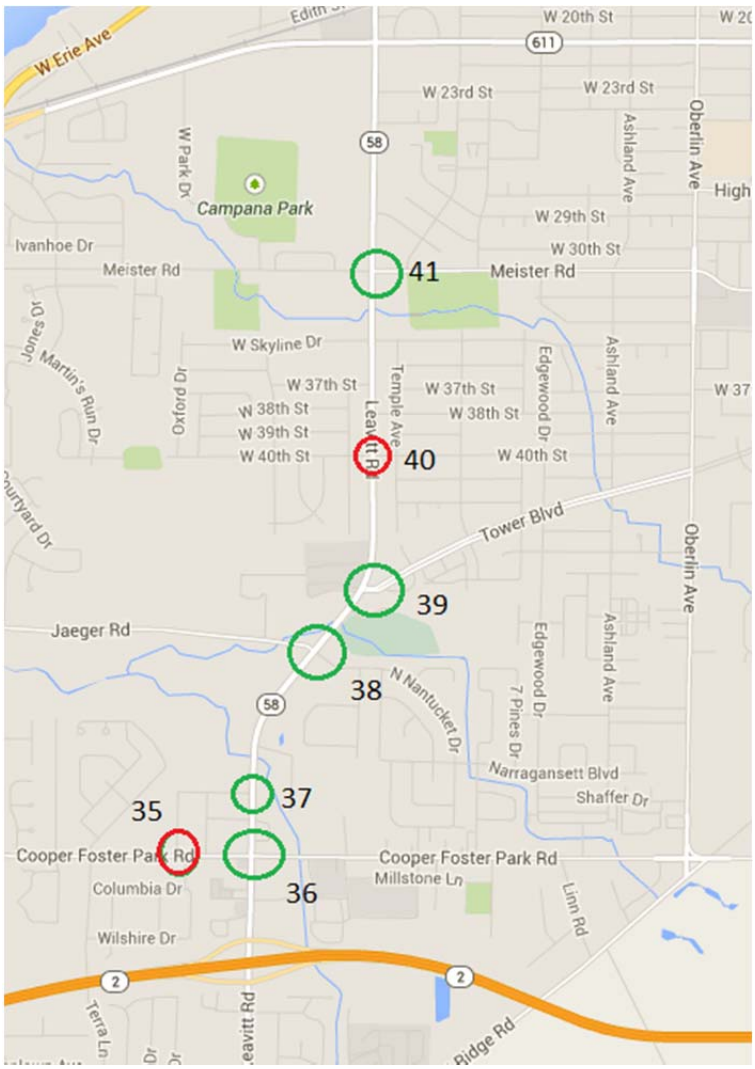
Map 4 – Section 4 (Southwest)

Section 5- N Leavitt Road (SR 58)/Super K Corridor (7 intersections)

Section 4 covers the N Leavitt Road (SR 58) corridor which includes the Super K shopping center entrance intersection on Cooper Foster Park Road.

Intersection No.	Intersection
35	Cooper Foster Park Rd and Super K/Funeral Home Entrance
36	N Leavitt Rd (SR 58) and Cooper Foster Park Rd
37	N Leavitt Rd (SR 58) and Super K/Walgreens Entrance
38	N Leavitt Rd (SR 58) and Jaeger Rd/N Nantucket Dr
39	N Leavitt Rd (SR 58) and Tower Blvd/Lighthouse Villa Shopping Entrance
40	N Leavitt Rd (SR 58) and W 40th St
41	N Leavitt Rd (SR 58) and Meister Rd

Map 5 of Section 5 is shown below.



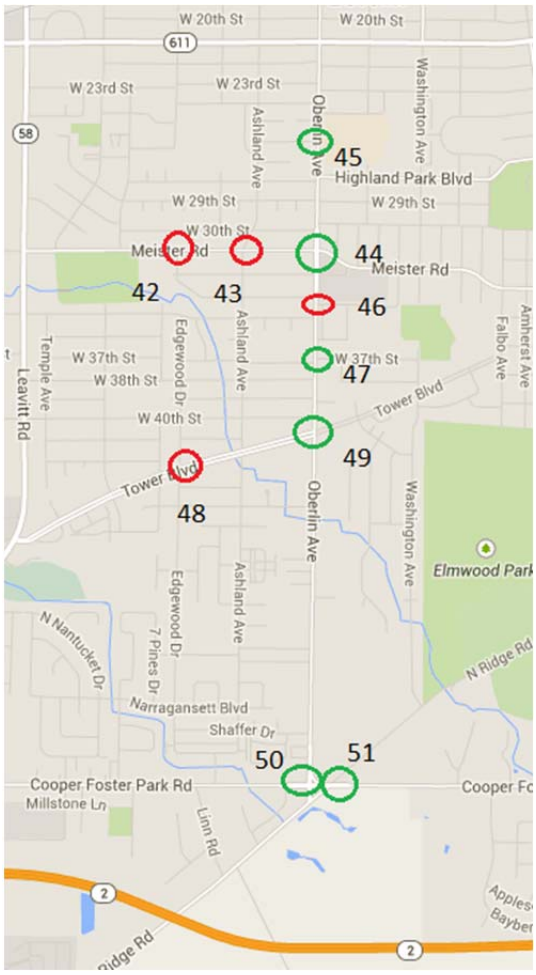
Map 5 – Section 5 (N Leavitt Rd/Super K Corridor)

Section 6- South Central (10 intersections)

Section 6 covers the South Central region of Lorain, including Oberlin Avenue, Meister Road, Tower Boulevard, and Cooper Foster Park Road.

Intersection No.	Intersection
42	Meister Rd and Pole Ave
43	Meister Rd and Ashland Ave
44	Oberlin Ave and Meister Rd
45	Oberlin Ave and W 26th St
46	Oberlin Ave and W 35th St
47	Oberlin Ave and W 37th St
48	Tower Blvd and Edgewood Dr
49	Oberlin Ave and Tower Blvd
50	Oberlin Ave and Cooper Foster Park Rd
51	Cooper Foster Park Rd and N Ridge Rd

Map 6 of Section 6 is shown below.



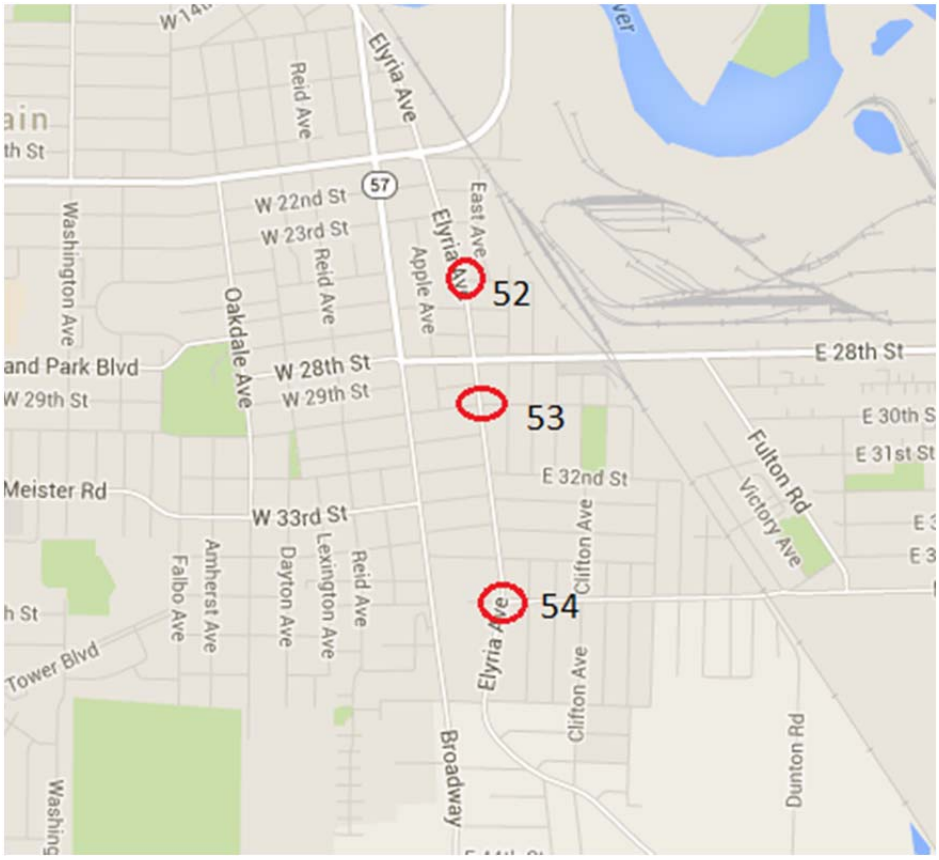
Map 6 – Section 6 (South Central)

Section 7- Elyria Avenue Corridor (3 intersections)

Section 6 covers Elyria Avenue, located southeast of Downtown Lorain, with three (3) intersections.

Intersection No.	Intersection
52	Elyria Ave and E 25th St
53	Elyria Ave and E 30th St
54	Elyria Ave and E 36th St/Electric Substation Entrance

Map 7 of Section 7 is shown below.



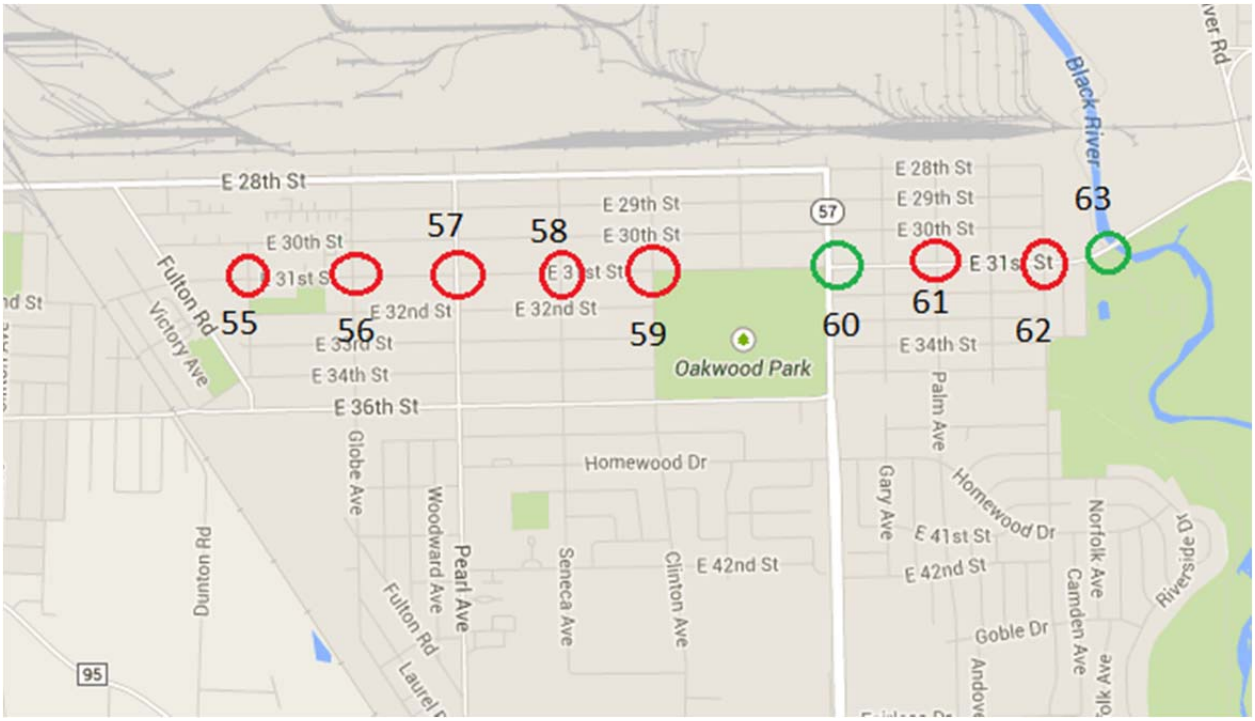
Map 7 – Section 7 (Elyria Avenue Corridor)

Section 8- E 31st Street Corridor (9 intersections)

Section 8 covers the E 31st Street Corridor located in Central Southeast Lorain.

Intersection No.	Intersection
55	E 31st St and Vine Ave
56	E 31st St and Globe Ave
57	E 31st St and Pearl Ave
58	E 31st St and Seneca Ave
59	E 31st St and Clinton Ave
60	Grove Ave (SR 57) and E 31st St
61	E 31st St and Palm Ave
62	E 31st St and Tacoma Ave
63	E 31st St and Metro Park Bicycle Trail

Map 8 of Section 8 is shown below.



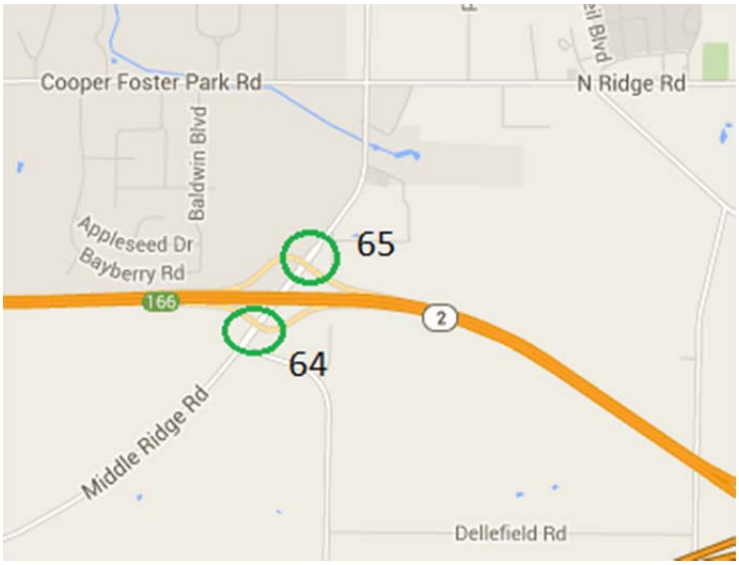
Map 8 – Section 8 (E 31st Street Corridor)

Section 9- SR 2 Freeway and Middle Ridge Road Interchange (2 intersections)

Section 9 covers the signalized ramp terminals at the SR 2 Freeway and Middle Ridge Road diamond interchange.

Intersection No.	Intersection
64	SR 2 Eastbound Interchange Ramp and Middle Ridge Road
65	SR 2 Westbound Interchange Ramp and Middle Ridge Road

Map 9 of Section 9 is shown below.



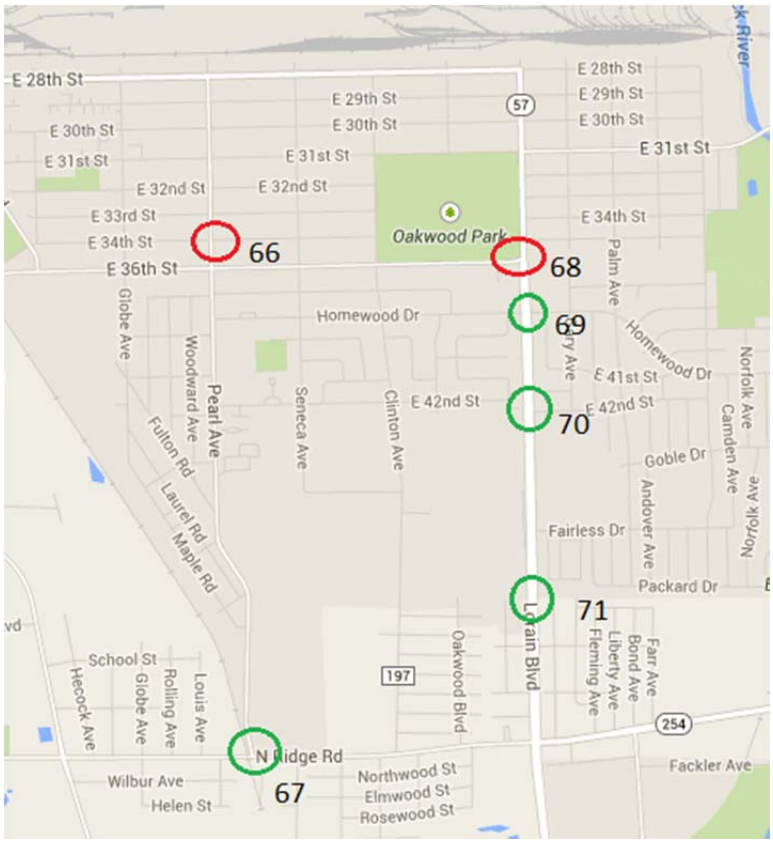
Map 9 – Section 9 (SR 2 Freeway and Middle Ridge Road Interchange)

Section 10- Southeast (6 intersections)

Section 10 covers the far Southeast portion of Lorain, including Grove Ave (SR 57) and Pearl Avenue.

Intersection No.	Intersection
66	Pearl Ave and E 34th St
67	Pearl Ave and N Ridge Rd
68	Grove Ave (SR 57) and E 36th St
69	Grove Ave (SR 57) and Homewood Dr
70	Grove Ave (SR 57) and E 42nd St
71	Grove Ave (SR 57) and Fairless Dr

Map 10 of Section 10 is shown below.



Map 10 – Section 10 (Southeast)

2.0 Existing Conditions

The following sections provide information on the physical characteristics of the roadway system in the study area, existing traffic control, and traffic turning movement counts and pedestrian counts.

2.1 Existing Arterial and Collector Roadways

W Erie Avenue and E Erie Avenue (US 6) is classified by ODOT as an Other Principal Arterial. This roadway is the major east-west roadway which parallels the Lake Erie coastline (runs from southwest to northeast but is substantially more east-west than north-south). It runs from the west limit of the City of Lorain to the east limit of the City. From Baumhart Road at the west end to N Leavitt Road (SR 58), W Erie Ave is a four-lane roadway with a bidirectional center turn lane, with a posted speed limit of 50 mph and 45 mph. East of N Leavitt Road, W Erie Ave is predominantly a residential urban street and passes through Lakeview Park. Here it is a four-lane undivided urban street with a posted speed limit of 35 mph. Then, heading east it passes through Downtown Lorain with a 25-mph speed limit. Between Washington Avenue and Broadway (SR 57), the roadway is six (6) lanes wide. Then, it crosses the Black River via a four-lane wide drawbridge, and becomes a three-lane wide urban street (a single travel lane in each direction with a bidirectional center turn lane) with a 35-mph speed limit to the eastern City limits. Here, the roadway is again predominantly residential with an occasional small business along the roadway. Annual Average Daily Traffic (AADT) counts (from NOACA) vary along the corridor, ranging from 8,050 at the west end at Baumhart Rd; 5,960 in the section just west of Downtown which passes through Lakeview Park; 9,050 through Downtown; and 7,400 east of Downtown. Generally, 3% of the AADT consists of trucks for this corridor.

Baumhart Road is located at the western limit of the City. This north-south roadway has a diamond interchange with the SR 2 freeway at the south end, and the north end is a “T”-intersection with W Erie Ave. The roadway is classified as an Other Principal Arterial. It is a four-lane divided roadway with a posted 50-mph speed limit. This roadway carried more traffic in the past than it does today, as it was the main access route from the SR 2 freeway to the Ford Motor Company factory which is now closed.

Cooper Foster Park Road and N Ridge Road is an east-west minor arterial running just north of the SR 2 freeway at the southern edge of the City. From N Main St to midway between N Leavitt Rd and Oberlin Ave, the roadway is a three-lane wide urban street with a single travel lane in each direction and a bidirectional center turn lane, with a 35-mph posted speed limit. Heading east, midway between N Leavitt Rd and Oberlin Ave, it narrows to a two-lane roadway, and then widens again to allow for dedicated turn lanes where it crosses the closely-spaced signalized intersections of Oberlin Ave and N Ridge Rd. East of N Ridge Rd, it is again a two-lane roadway with a rural cross-section and a 35-mph posted speed limit. East of Broadway it again widens to a four-lane undivided urban roadway with a posted 45-mph speed limit until it reaches Grove Ave (SR 57) at the southeast edge of the City. East of Broadway the roadway is named N

Ridge Rd. Cooper Foster Park Rd and N Ridge Rd comprises a fairly heavily-traveled east-west corridor. For example, the section between Oberlin Ave and Broadway/Middle Ridge Rd carries an AADT of 10,600 even though this section is two lanes. Truck traffic is generally 2% for this corridor.

N Leavitt Rd (SR 58) could be considered Lorain's "main street". It is a north-south roadway classified as an Other Principal Arterial. At the south edge of Lorain, it intersects the SR 2 freeway with a diamond interchange. Heading north, it is a four-lane undivided urban roadway with dedicated left-turn lanes at the major intersections of Cooper Foster Park Rd, Jaeger Rd, and Tower Blvd. Between the SR 2 freeway and Tower Blvd, N Leavitt Rd is lined with restaurants, convenience stores, shopping plazas (such as Lighthouse Village), Wal-Mart, Home Depot, Kohl's, etc., as it is the heaviest traveled corridor in the City. This corridor has several signalized intersections. The posted speed limit is 40 mph. Between just south of Jaeger Rd and W 24th St, the roadway includes bicycle lanes. The roadway remains a four-lane undivided roadway as it heads northward until it runs into W Erie Ave with a "T"-intersection. The posted speed limit is 35 mph from Meister Rd to W Erie Ave. AADT ranges from 19,600 between the SR 2 freeway interchange and Tower Blvd, then decreases northward to 7,050 where it approaches its north end at W Erie Ave. Truck traffic is generally 3% for this corridor.

Tower Boulevard is classified as a Major Collector. It runs on a diagonal (more east and west) from N Leavitt Rd/Lighthouse Village Shopping Entrance to Falbo Ave, crossing Oberlin Ave. It is a four-lane divided urban roadway with a wide grass median to accommodate an electrical transmission line corridor that runs in the median. The posted speed limit is 35 mph and the roadway runs through residential areas.

W 21st Street (SR 611) is an east-west urban street which provides the southern boundary for Downtown Lorain. This roadway is classified as an Other Principal Arterial east of N Leavitt Rd, and a Minor Arterial west of N Leavitt Rd. The west end of W 21st Street is a partial interchange with W Erie Ave. Between W Erie Ave and N Leavitt Rd, it is a four-lane undivided urban roadway with a 45-mph posted speed limit. Between N Leavitt Rd and Ashland Ave, it is four-lane undivided urban roadway with a 35-mph posted speed limit, and is a primary east-west corridor through a residential area. Between Ashland Ave and Elyria Ave, it narrows to a three-lane urban street with a single travel lane in each direction with dedicated left-turn lanes for side streets, and is posted with a 35-mph speed limit. The AADT is 9,100 consisting of 4% trucks.

Henderson Drive (SR 611)- East of Elyria Ave W 21st St becomes Henderson Drive and follows a north-south route as a four-lane undivided urban roadway with a 35-mph posted speed limit. It passes beneath a railroad overpass, and crosses the Black River via the Lofton Henderson Memorial Bridge. Henderson Drive ends at the intersection of Colorado Avenue and Kansas Avenue. This roadway is classified as an Other Principal Arterial. The AADT is 14,640 with 7% trucks.

Oberlin Avenue is a north-south urban street classified as a Minor Arterial. It runs basically through the center of the City. From the south, it begins at the intersection with

N Ridge Rd, and is a four-lane undivided urban roadway with a 35-mph posted speed limit northward to Meister Rd. Between Meister Rd and W 21st St, it is a three-lane urban street with a single travel lane in each direction and a bidirectional center turn lane. North of W 21st St, it narrows to a single lane in each direction with a 25-mph speed limit until Oberlin Ave ends adjacent to the City's Utilities Department Building after it intersects with W Erie Ave. The AADT is 9,970 at the south end just north of Cooper Foster Park Rd, with 2% trucks.

Washington Avenue is a north-south urban street in Central Lorain. It is classified as a Major Collector, but carries light, local traffic volumes, serving primarily residential properties and two schools. It is a two-lane street with a posted 25-mph speed limit.

Colorado Avenue (SR 611 east of Kansas Ave) is a major, fairly heavily-traveled roadway that runs east-west, starting from the intersection with Colorado Avenue, Kansas Avenue, and Henderson Drive, heading east and then intersecting the SR 2 freeway with a diamond interchange east of the City, and also leading past the Ford Avon Lake Assembly Plant. It is classified as an Other Principal Arterial, and within the City consists of three-lanes, with a single travel lane in each direction with a bidirectional center turn lane or dedicated left-turn lanes at the major intersections. The posted speed limit is 35 mph. The AADT is 11,820 with 6% trucks.

E 31st Street is an east-west residential street with on-street parking in the east-central portion of the City. The street currently has nine (9) signalized intersections, but carries light traffic loads. The roadway is classified as a Local Road. It is an urban street with a posted 25-mph speed limit, and passes by the Stevan Dohanos Elementary School toward the west end of the street; it also passes by Oakwood Park. East of Tacoma Ave, the roadway crosses the Black River and widens to a four-lane undivided urban roadway. In this section, the roadway intersects the Metro Park Bicycle Trail at a signalized intersection which dwells on green for E 31st St at all times, unless a bicyclist or pedestrian utilizing the shared use path actuates the signal.

Grove Avenue (SR 57) is a primary north-south roadway in the southeast portion of the City. It is classified as a Minor Arterial and is marked as SR 57. The north end of Grove Avenue is a "T"-intersection with E 28th Street. Grove Ave serves as a truck route from the City's industrial/steel areas southward to the Interchange with Interstate 90/SR 2 and another interchange with Interstate 80 (Ohio Turnpike) just to the south of that interchange. Between E 28th St and E 36th St, it is an undivided four-lane urban roadway with a 35-mph posted speed limit. South of E 36th St, it widens into a four-lane rural expressway-type roadway with a grass median and paved shoulders with limited access other than at-grade signalized intersections. This section has a 50-mph posted speed limit. The AADT ranges from 18,020 just north of the I-90/SR 2 interchange to 17,100 between Ridge Rd and Homewood Dr, and then decreases to 10,920 as it approaches E 28th St and the USS Lorain Tubular complex. Trucks comprise 5% of the traffic on this roadway.

Middle Ridge Road is a four-lane undivided roadway with a rural-type cross-section that intersects the SR 2 freeway with a diamond interchange roughly midway between the SR 2 interchanges with N Leavitt Rd (SR 58) and the I-90/SR 2 interchange at Grove Ave (SR 57). Middle Ridge Rd becomes Broadway just north of the SR 2 interchange at the intersection with Cooper Foster Park Rd/N Ridge Rd. It is classified as an Other Principal Arterial and has a 35-mph posted speed limit.

These are the primary routes involved in the study. The remaining roadways involved are generally a mix of collectors and local roads (minor city streets) which serve the downtown area or residential areas. These streets are low-speed (mostly posted with a 25-mph speed limit), do not carry through traffic, and are predominantly lightly traveled with local traffic.

2.2 Existing Traffic Control

The seventy-one (71) intersections included in this study are either presently signalized, or have been placed in continuous flash mode with the major approaches receiving a yellow (CAUTION) flash indication and the minor approaches receiving a red (STOP) flash indication. In the case of three (3) intersections, the traffic signals have already been removed, with traffic control currently being provided by a STOP sign installed on the minor approach at two of these intersections, as they are “T”-intersections. The other intersection has been converted to an all-way STOP.

2.3 Existing Traffic and Pedestrian Volumes

Detailed turning movement counts (TMC) were performed by AECOM using Miovision portable traffic cameras at each study intersection during November and December 2014. These turning movement counts were eleven-hour counts conducted between 7:00 am and 6:00 pm, and taken on either a Tuesday or a Thursday at each intersection. In addition, pedestrians were counted at each intersection concurrently with the vehicular traffic counts. These traffic volumes have been used to perform the traffic signal warrants. The turning movement and pedestrian counts are included in **Appendix A.**

3.0 Signal Warrant Analysis

The data collected in the previous section was used to perform a traffic signal warrant analysis. The Ohio Manual of Uniform Traffic Control Devices (OMUTCD)[1] defines the traffic signal warrants and presents the methodologies for their use. Following a brief explanation of the traffic signal warrants, specific analysis results for the subject intersections are presented.

3.1 Traffic Signal Warrants

The OMUTCD, supported by the Ohio Revised Code, states that traffic control signals should not be installed unless one or more of the signal warrants in the Manual are met. This section presents the eight (8) traffic signal warrants, as presented in the OMUTCD, along with a brief explanation of each.

Warrant No. 1, Eight-Hour Vehicular Volume – The Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

The Interruption of Continuous Traffic, Condition B, is intended for application at locations where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

It is intended that Warrant 1 be treated as a single warrant. If Condition A is satisfied, then the criteria for Warrant 1 are satisfied and Condition B and the combination of Conditions A and B are not needed. Similarly, if Condition B is satisfied, then the criteria for Warrant 1 are satisfied and the combination of Conditions A and B is not needed.

Warrant No. 2, Four-Hour Vehicular Volume - The Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Warrant No. 3, Peak Hour - The Peak Hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

A signal installed under the Peak Hour warrant should be traffic actuated. Consideration should be given to operating the signal in the flashing mode during off-peak periods.

Warrant No. 4, Pedestrian Volume - The Pedestrian Volume signal warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.

[1] "Ohio Manual Of Uniform Traffic Control Devices", Ohio Department of Transportation, 2012 Edition.

The need for a traffic control signal at an intersection or midblock crossing shall be considered if an engineering study finds that the number of pedestrians meets certain thresholds based on a four-hour or a peak hour graph. The minimum hourly number of pedestrians is 100.

The pedestrian Volume signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

Warrant No. 5, School Crossing - The School Crossing signal warrant is intended for application where the fact that school children cross the major street is the principal reason to consider installing a traffic control signal.

Before a decision is made to install a traffic control signal, consideration shall be given to the implementation of other remedial measures, such as warning signs and flashers, school speed zones, school crossing guards, or a grade-separated crossing.

The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

Warrant No. 6, Coordinated Signal System - Progressive movement in a coordinated signal system sometimes necessitates installing traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles.

The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:

A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.
B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.

The coordinated Signal System should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.

Warrant No. 7, Crash Experience - The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal. The crashes must be of a type that is correctable by a traffic signal. Therefore, if a traffic signal is already in place, this warrant cannot be used to justify the installation.

Warrant No. 8, Roadway Network - Installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network. The intersection must be projected to meet Warrant 1, 2 or 3 within the next five years.

Warrant No. 9, Intersection Near a Grade Crossing - This warrant is intended for use at a location where none of the conditions described in the other eight traffic signal warrants are met, but the proximity to the intersection of a grade crossing on an intersection approach controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal.

3.2 Signal Warrant Analysis Results

The traffic signal warrant analysis was conducted at all study intersections to determine if signalization is warranted. The following table **(Table 1)** summarizes the results of the signal warrant analyses. All supporting data, including the standard ODOT (Ohio Department of Transportation) Signal Warrant sheets, can be found in **Appendix B**.

TABLE 1 - Summary of Signal Warrant Analysis - Page 1 of 3
City of Lorain, Ohio - Citywide Traffic Signal Warrant Study, Phase 2

No.	INTERSECTION	Warrant #1		Warrant #2		Warrant #3		Warrant #4	Warrant #5
		Hours Met	Warrant Met?	Hours Met	Warrant Met?	Hours Met	Warrant Met?	Warrant Met?	Warrant Met?
	1) Northeast (9)								
1)	E Erie Ave (US 6)/Colorado Ave	10	Y	4	Y	0	N	N	
2)	E Erie Ave (US 6)/Idaho Ave	0	N	0	N	0	N	N	
3)	E Erie Ave (US 6)/Kansas Ave	0	N	0	N	0	N	N	Y
4)	E Erie Ave (US 6)/Maine Ave	0	N	0	N	0	N	N	N
5)	E Erie Ave (US 6)/Missouri Ave	0	N	0	N	0	N	N	
6)	E Erie Ave (US 6)/Root Rd	2	N	0	N	0	N	N	
7)	Colorado Ave (SR 611)/Kansas Ave/Henderson Dr (SR 611)	11	Y	11	Y	9	Y	N	
8)	Colorado Ave (SR 611)/Missouri Ave	11	Y	9	Y	4	Y	N	
9)	Colorado Ave (SR 611)/Root Rd	11	Y	8	Y	3	Y	N	
	2) Central Lorain & W Erie Ave (US 6) (13)								
10)	W Erie Ave (US 6)/N Leavitt Rd (SR 58)	4	N	1	N	0	N	N	
11)	W Erie Ave (US 6)/Archwood Ave	0	N	0	N	0	N	N	
12)	W Erie Ave (US 6)/Mildred Ave	0	N	0	N	0	N	N	
13)	W Erie Ave (US 6)/W 5th St/Ashland Ave	0	N	0	N	0	N	N	
14)	W Erie Ave (US 6)/Oberlin Ave	2	N	0	N	0	N	N	
15)	W Erie Ave (US 6)/Washington Ave	0	N	0	N	0	N	N	
16)	Oberlin Ave/W 5th St	0	N	0	N	0	N	N	
17)	Washington Ave/W 4th St	0	N	0	N	0	N	N	
18)	Washington Ave/W 5th St	0	N	0	N	0	N	N	
19)	Washington Ave/W 6th St	0	N	0	N	0	N	N	N
20)	Reid Ave/W 6th St	0	N	0	N	0	N	N	
21)	Reid Ave/W 7th St	0	N	0	N	0	N	N	
22)	Reid Ave/W 8th St	0	N	0	N	0	N	N	
	3) 21st Street (SR 611) Corridor (8)								
23)	W 21st St (SR 611)/N Leavitt Rd (SR 58)	7	N	4	Y	0	N	N	
24)	W 21st St (SR 611)/Reeves Ave	0	N	0	N	0	N	N	
25)	W 21st St (SR 611)/Pole Ave	0	N	0	N	0	N	N	
26)	W 21st St (SR 611)/Oberlin Ave	6	N	8	Y	4	Y	N	
27)	W 21st St (SR 611)/Washington Ave	9	Y	3	N	1	Y	N	
28)	W 21st St (SR 611)/Oakdale Ave	4	N	3	N	0	N	N	N
29)	W 21st St (SR 611)/Reid Ave- **leave in place (see Section 3.4)**	4	N	1	N	0	N	N	
30)	E 21st St (SR 611)/Elyria Ave/Henderson Dr (SR 611)	10	Y	9	Y	2	Y	N	

Warrant #1 - 8 Hour Warrant, Condition A or B Warrant #2 - 4 Hour Warrant Warrant #3 - Peak Hour Warrant Warrant #4 - Pedestrian Volume Warrant #5 - School Crossing

TABLE 1 - Summary of Signal Warrant Analysis - Page 2 of 3
City of Lorain, Ohio - Citywide Traffic Signal Warrant Study, Phase 2

No.	INTERSECTION	Warrant #1		Warrant #2		Warrant #3		Warrant #4	Warrant #5
		Hours Met	Warrant Met?	Hours Met	Warrant Met?	Hours Met	Warrant Met?	Warrant Met?	Warrant Met?
	4) Southwest (4)								
31)	W Erie Ave (US 6)/Baumhart Rd	11	Y	9	Y	5	Y	N	
32)	Baumhart Rd/Old Ford Factory Entrance	0	N	0	N	0	N	N	
33)	W Erie Ave (US 6)/Kolbe Rd	7	N	5	Y	0	N	N	
34)	Oak Point Rd/Buck Horn/Park Square- **leave in place (see Sec 3.4)**	3	N	0	N	0	N	N	
	5) N Leavitt Rd (SR 58)/Super K Corridor (7)								
35)	Cooper Foster Park Rd/Super K Entrance	3	N	0	N	0	N	N	
36)	N Leavitt Rd (SR 58)/Cooper Foster Park Rd	11	Y	11	Y	11	Y	N	
37)	N Leavitt Rd (SR 58)/Super K Entrance	8	Y	7	Y	6	Y	N	
38)	N Leavitt Rd (SR 58)/Jaeger Rd/N Nantucket Dr	11	Y	11	Y	6	Y	N	
39)	N Leavitt Rd (SR 58)/Tower Blvd	11	Y	11	Y	7	Y	N	
40)	N Leavitt Rd (SR 58)/W 40th St	4	N	0	N	0	N	N	N
41)	N Leavitt Rd (SR 58)/Meister Rd	11	Y	5	Y	1	Y	N	
	6) South Central (10)								
42)	Meister Rd/Pole Ave	0	N	0	N	0	N	N	
43)	Meister Rd/Ashland Ave	0	N	0	N	0	N	N	
44)	Meister Rd/Oberlin Ave	10	Y	5	Y	1	Y	N	
45)	Oberlin Ave/W 26th St- **leave in place (see Section 3.4)**	0	N	0	N	0	N	N	N
46)	Oberlin Ave/W 35th St	0	N	0	N	0	N	N	N
47)	Oberlin Ave/37th St	6	N	4	Y	0	N	N	
48)	Tower Blvd/Edgewood Dr	0	N	0	N	0	N	N	
49)	Oberlin Ave/Tower Blvd	10	Y	6	Y	4	Y	N	
50)	Oberlin Ave/Cooper Foster Park Rd	7	N	7	Y	4	Y	N	
51)	Cooper Foster Park Rd/N Ridge Rd	7	N	5	Y	1	Y	N	

Warrant #1 - 8 Hour Warrant, Condition A or B Warrant #2 - 4 Hour Warrant Warrant #3 - Peak Hour Warrant Warrant #4 - Pedestrian Volume Warrant #5 - School Crossing

TABLE 1 - Summary of Signal Warrant Analysis - Page 3 of 3
City of Lorain, Ohio - Citywide Traffic Signal Warrant Study, Phase 2

No.	INTERSECTION	Warrant #1		Warrant #2		Warrant #3		Warrant #4	Warrant #5
		Hours Met	Warrant Met?	Hours Met	Warrant Met?	Hours Met	Warrant Met?	Warrant Met?	Warrant Met?
	7) Elyria Ave Corridor (3)								
52)	Elyria Ave/E 25th St	0	N	0	N	0	N	N	
53)	Elyria Ave/E 30th St	0	N	0	N	0	N	N	
54)	Elyria Ave/E 36th St/Electrical substation entrance	3	N	0	N	0	N	N	
	8) E 31st St Corridor (9)								
55)	E 31st St/Vine Ave	0	N	0	N	0	N	N	N
56)	E 31st St/Globe Ave	0	N	0	N	0	N	N	
57)	E 31st St/Pearl Ave	0	N	0	N	0	N	N	
58)	E 31st St/Seneca Ave	0	N	0	N	0	N	N	
59)	E 31st St/Clinton Ave	0	N	0	N	0	N	N	
60)	E 31st St/Grove Ave (SR 57)	5	N	4	Y	0	N	N	
61)	E 31st St/Palm Ave	0	N	0	N	0	N	N	
62)	E 31st St/Tacoma Ave	0	N	0	N	0	N	N	
63)	E 31st St/Metro Park Bike Trail- leave in place (see Section 3.4)	0	N	0	N	0	N	N	
	9) SR 2 Interchange Ramps at Middle Ridge Rd								
64)	SR 2 EB Ramps/Middle Ridge Rd	11	Y	9	Y	4	Y	N	
65)	SR 2 WB Ramps/Middle Ridge Rd	11	Y	11	Y	8	Y	N	
	10) Southeast (6)								
66)	Pearl Ave/E 34th St	0	N	0	N	0	N	N	
67)	N Ridge Rd/Pearl Ave	8	Y	6	Y	3	Y	N	
68)	Grove Ave (SR 57)/E 36th St	2	N	1	N	0	N	N	
69)	Grove Ave (SR 57)/Homewood Dr	7	N	8	Y	5	Y	N	
70)	Grove Ave (SR 57)/E 42nd St	11	Y	7	Y	6	Y	N	
71)	Grove Ave (SR 57)/Fairless Dr	11	Y	11	Y	8	Y	N	

Warrant #1 - 8 Hour Warrant, Condition A or B Warrant #2 - 4 Hour Warrant Warrant #3 - Peak Hour Warrant Warrant #4 - Pedestrian Volume Warrant #5 - School Crossing

As indicated above, based on the traffic counts available, twenty-eight (28) intersections meet at least one of the evaluated traffic signal warrants.

3.3 Pedestrian Volume (Warrant 4) and School Warrant (Warrant 5) Analysis

At several intersections which otherwise did not meet any warrants to justify retention of the existing traffic signal, the Pedestrian Volume (Warrant 4) and/or School Crossing Warrant (Warrant 5) was analyzed. None of the other intersections experienced enough pedestrian volume to trigger the need for analysis, as pedestrian volumes were too low to come close to meeting the criteria involved in these warrants. Information is provided below for the eight (8) intersections that were evaluated in regards to pedestrian or school warrants.

3.3.1 Intersection No. 3, E Erie Ave (US 6) and Kansas Ave/St Anthony of Padua School Exit

This signal should remain in operation as it meets Warrant 5.

During the PM peak hour for pedestrians, which occurred from 2:15 PM to 3:15 PM, twenty-eight (28) schoolchildren crossed E Erie Ave (US 6) on the west approach. Twenty-six (26) used this crosswalk from 2:39 PM to 2:53 PM, a span of fourteen (14) minutes. The average crossing time recorded for these schoolchildren was 9.5 seconds to cross E Erie Ave using the crosswalk (which has its own phase separate from the E Erie Ave, Kansas Ave, and St Anthony Exit traffic signal phases).

A walking speed of 3.5 feet per second was used to determine the required gap. The crosswalk length is 36 feet. Thus, the calculated crosswalk travel time is 36 feet divided by 3.5 feet/sec, which equals 10.3 seconds, which can be rounded up to 11 seconds.

As per the criteria of Warrant 5, the number of gaps in the E Erie Ave traffic stream greater than 11 seconds in one (1) hour from 2:15 PM to 3:15 PM must exceed 14 (the number of minutes where the majority of schoolchildren used the crosswalk).

The number of gaps recorded in this time frame which exceeded 11 seconds was fourteen (14). Also of note was during the time period from 2:24 pm to 2:54 pm, there was only a single instance of an adequate gap to cross W Erie Ave (if no signal was present). The peak time for schoolchildren crossing E Erie Ave occurred from 2:39 PM to 2:53 PM.

Because the number of gaps equaled the number of minutes, it is recommended that the existing signal installation remain in place. Removing this signal would

likely lead to opposition from the school, law enforcement, and the public. During non-peak hours, it can be operated in flash mode.

3.3.2 Intersection No. 4, E Erie Ave (US 6) and Maine Ave

This signal should be removed since it does not meet any vehicular or pedestrian warrants.

Longfellow Middle School is located one block south of the intersection, but there are not sufficient students crossing at this location to warrant the signal. A minimum of 20 students during the highest hour are required, and a total of 14 pedestrians crossed at this intersection during the entire time of the traffic count.

3.3.3 Intersection No. 19, Washington Ave and W 6th St

Analysis of the pedestrian and school warrants indicates that this signal should be removed and replaced with an all-way STOP due to sight distance with a building adjacent to the northwest corner. *This change was implemented by the City of Lorain in early 2015.*

3.3.4 Intersection No. 28, W 21st St (SR 611) and Oakdale Ave

Analysis of pedestrian and school warrants indicates that this signal should be removed. Hawthorne Elementary School is located 1.5 blocks north of the intersection, but there are not enough students crossing at this location to warrant the signal.

3.3.5 Intersection No. 40, N Leavitt Rd (SR 58) and W 40th St

This signal should be removed since it does not satisfy any vehicular or pedestrian warrants. Warrant 5, the School Crossing Warrant was evaluated, but there are not enough students crossing at this location. A minimum of 20 students in the highest hour are needed, and only 13 children crossed during the entire turning movement count.

3.3.6 Intersection No. 45, Oberlin Ave and W 26th St

This signal should remain in place. There is a new high school under construction one block to the west; in addition, George Daniel Field, a middle school and an elementary school are adjacent to the east. There were a total of 41 pedestrians crossing at this intersection during the count period. A minimum of 20 students are needed to warrant the signal under Warrant 5. However, with the opening of the new high school there may be considerable changes to both vehicular and pedestrian traffic patterns.

3.3.7 Intersection No. 46, Oberlin Ave and W 35th St

Based on analysis of Warrant 5, the School Crossing Warrant, this signal should be removed. St. Peter School is located immediately to the east of the intersection, but there are not enough students crossing to satisfy the warrant. A total of 47 pedestrians crossed during the entire count period, and a minimum of 20 students in the peak crossing hour are required.

3.3.8 Intersection No. 55, E 31st St and Vine Ave

It is recommended to remove the traffic signal and install all-way STOP signs, as the intersection is adjacent to the Stevan Dohanos Elementary School. 195 pedestrians utilized the crosswalks from 2:45 PM – 3:45 PM, but the intersection did not meet Warrant 5 (School Crossing Warrant) due to frequent adequate gaps in the traffic stream. A traffic signal is not warranted due to very light traffic volumes on these local streets. An all-way STOP would provide increased pedestrian safety. This intersection is located toward the west end of this length of E 31st St which street carries local, residential traffic. It was noted that a school crossing guard is stationed at the intersection for approximately ten minutes (3:10 pm to 3:20 pm) on school days to assist schoolchildren in crossing the intersection.

3.4 Retention Analysis

For the forty-three (43) intersections that did not satisfy any of the signal warrants, retention analysis was performed following the guidelines contained in ODOT's *Traffic Engineering Manual (TEM)*. A number of evaluation criteria are provided to help determine whether unwarranted signals should be retained or removed. Due to the large number of unwarranted signals, the retention analysis has been summarized in **Table 2.**

The retention analysis focuses on crash history, sight distance issues, history of the signal installation, reasons for volume reductions, potential for traffic growth, capacity analysis, and the cost of removal vs. annual operations and maintenance. Based on the analysis individual signals can be recommended for removal or retention. For the crash history analysis AECOM obtained crash data from the ODOT GIS Crash Analysis Tool (GCAT) website for the years 2012-2014.

In general, the traffic volumes in the City of Lorain have decreased over the years due to population decreases, loss of businesses, and the overall economic downturn. There is no anticipated increase in traffic in most of the City that would lead to the signals satisfying warrants in the foreseeable future. Many of the signals would likely not be installed today based on current traffic volumes and criteria.

Growth is occurring in southwest Lorain with continued development in the vicinity of N Leavitt Rd (SR 58), and other small pockets of development at various locations citywide. In addition, the City is actively involved in rehabilitating Downtown Lorain. Other than improving traffic operations and safety on the arterial streets, the City's goal in the Downtown area should be to improve pedestrian and bicyclist safety, while improving safety for motorists as well. Removing aged traffic signals which do not meet current warrants and OMUTCD design criteria, and which can be difficult to see (due to there often being only a single four-way traffic signal head spanning an intersection) would improve safety at these lightly traveled, non-arterial intersections. In terms of costs, the average cost to remove a signal installation is approximately $2,000 and the average annual cost for maintenance and operations per signalized intersection is $1,400, indicating that within two (2) years the cost of removal would be recouped.

Capacity analysis was conducted using HCM 2010 (Highway Capacity Manual) criteria using SYNCHRO software. The capacity analysis indicates that the vast majority of the intersections would operate efficiently if the signal was removed. However, at three (3) intersections which otherwise do not meet any of the warrants, the Level Of Service (LOS) for at least one of the STOP sign controlled minor approaches would be either a D or F during the PM peak hour. LOS D is considered borderline satisfactory for intersections in urbanized areas, but LOS E and LOS F are considered an unsatisfactory or failure condition. The three (3) intersections are as follows:

28 W 21st St (SR 611) and Oakdale Ave
29 W 21st St (SR 611) and Reid Ave
40 N Leavitt Rd (SR 58) and W 40th St

W 21st St (SR 611) and N Leavitt Rd (SR 58) are both classified as an Other Principal Arterial. W 21st St is three lanes wide where it intersects both Oakdale Ave and Reid Ave, with a single travel lane in each direction and dedicated left-turn lanes at each intersection. It carries an AADT of approximately 9,100.

For Intersection No. 28, W 21st St (SR 611) and Oakdale Ave, Oakdale Ave would be STOP sign controlled while W 21st St (SR 611) would be free-flow should the traffic signal be removed. Northbound Oakdale Ave would experience LOS F conditions during the PM Peak Hour with STOP sign control, using the current traffic volumes for HCM 2010 analysis. However, it is anticipated that a portion of the local traffic utilizing this street would divert to adjacent parallel streets and utilize alternative intersections to access W 21st St (SR 611) should they encounter periods of excessive delay. Traffic could also utilize the signalized intersection (Intersection No. 29) at W 21st St (SR 611) and Reid Ave, located three blocks to the east, which is recommended to remain signalized as noted in the following paragraph.

For Intersection No. 29, W 21st St (SR 611) and Reid Ave, the intersection does not meet warrants, but it is very close to meeting the 80 percent Condition A and Condition B combination warrant of Warrant No. 1, which could occur on days that experience slightly higher traffic volumes than the particular day that traffic volumes were counted. For this reason, along with a sight distance issue in regards to the parking garage located directly adjacent to the northeast corner of the intersection, AECOM recommends that this intersection remain signalized.

For Intersection No. 40, N Leavitt Rd (SR 58) and W 40th St, N Leavitt Rd is a four-lane roadway with no dedicated turn lanes where it intersects W 40th St, and it carries an AADT of approximately 11,070 at this location. Upon removal of the existing traffic signal, N Leavitt Rd (SR 58) would be free-flow, and W 40th St would be STOP sign controlled. Using the current traffic volumes for HCM 2010 analysis, eastbound W 40th St would operate at LOS D and westbound W 40th St would operate at LOS F during the PM Peak Hour. However, due to the availability of alternate routes which provide access to N Leavitt Rd (SR 58), such as Tower Blvd and Meister Rd, both of which intersect N Leavitt Rd (SR 58) with warranted signals, local traffic would naturally divert to these alternative routes should they find delays to be excessive.

At Intersection No. 34, Oak Point Rd and Buck Horn Blvd and Park Square, the signal currently does not meet any warrants, but was recently installed as a new mast arm traffic signal installation as part of the Lowe's Home Improvement store development and a residential development. Further development of Park Square on the east side of the intersection is anticipated. The installation should be maintained and monitored to determine if it meets warrants in the future.

TABLE 2 - TRAFFIC SIGNAL REMOVAL ANALYSIS- Page 1 of 3
CITY OF LORAIN, OHIO - Citywide Traffic Signal Warrant Study, Phase 2

No.	Intersection	2012 - 2014 Crash History	Sight Distance Issues or Other Issues	Recommended Traffic Control	Developmental Growth?	Reasons for Volume Changes	Capacity Analysis after Signal Removed	Cost Summary
2	E Erie Ave (US 6)/Idaho Ave	None		STOP sign for Idaho Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street & private drive approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
4	E Erie Ave (US 6)/Maine Ave	None	Longfellow Middle School one block to south, but does not meet School Crossing Warrant.	STOP sign for Maine Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approach	Removal - $2,000 Annual Operations - $1,400 Savings per year
5	E Erie Ave (US 6)/Missouri Ave	(2)- Rear end		STOP sign for Missouri Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approach	Removal - $2,000 Annual Operations - $1,400 Savings per year
6	E Erie Ave (US 6)/Root Rd	(2)- Angle/Sideswipe (1), Improper left turn (1)	Trees adjoining SE corner which are likely located within right-of-way & could be removed without property owner involvement. Recommend adding left turn lane on WB approach- should be able to be accomplished with minor pavement widening and restriping.	STOP signs for Root Rd, Advance warning signs on W Erie Ave (US 6), STOP AHEAD sign on northbound Root Rd	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street & private drive approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
10	W Erie Ave (US 6)/N Leavitt Rd (SR 58)	(14)- Improper left turn (5), Rear end (5), Fixed object (1), Sideswipe-Meeting (1), Sideswipe-Passing (1), Ran red light (1)		STOP signs for N Leavitt Rd, STOP AHEAD sign for northbound N Leavitt Rd	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B AM & LOS C PM on side street & private approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
11	W Erie Ave (US 6)/Archwood Ave/Lakeview Park Exit	(1)- Rear end		STOP signs for Archwood Ave and Park Exit	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B AM & LOS C PM on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
12	W Erie Ave (US 6)/Mildred Ave/Lakeview Park Entrance	(3)- Rear end (2), Head-on (1)		STOP sign for Mildred Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approach	Removal - $2,000 Annual Operations - $1,400 Savings per year
13	W Erie Ave (US 6)/W 5th St/Ashland Ave	(4)- Rear end (3), Sideswipe-Passing (1)	WB W 5th St difficulty seeing oncoming traffic on WB W Erie Ave due to skew of intersection. Change W 5th St to one-way eastbound for one block, and prohibit WB Erie Ave to EB W 5th St sharp left turn.	ONE WAY and DO NOT ENTER signage for one block of W 5th St, STOP sign for Ashland Ave, NO LEFT TURN signage for westbound W Erie Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
14	W Erie Ave (US 6)/Oberlin Ave	(11)- Fixed object (2), Rear end (6), Head-on (1), Improper left turn (1), Angle (1)		STOP signs for Oberlin Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on NB approach, LOS C on SB approach	Removal - $2,000 Annual Operations - $1,400 Savings per year
15	W Erie Ave (US 6)/Washington Ave	(3)- Rear end (2), Angle (1)		STOP signs for Washington Ave	Downtown Rehabilitation	Decreasing population, poor economy, loss of businesses	LOS C on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
16	Oberlin Ave/W 5th St	(1)- Ran red light		STOP signs for W 5th St	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
17	Washington Ave/W 4th St	(2)- Improper left turn (1), Angle (1)	Sight distance issues caused by buildings adjacent to SE & SW corners.	STOP & ALL-WAY signage	Downtown Rehabilitation	Decreasing population, poor economy, loss of businesses	LOS A for all approaches for all-way STOP	Removal - $2,000 Annual Operations - $1,400 Savings per year
18	Washington Ave/W 5th St	None	Sight distance issues caused by shrubs adjacent to SE & NW corners.	STOP signs for W 5th St	Downtown Rehabilitation	Decreasing population, poor economy, loss of businesses	LOS A for side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
19	Washington Ave/W 6th St	(1)- Angle	Sight distance issue caused by building adjacent to NW corner; Pedestrian traffic; Signal was removed in early 2015.	Signal already removed, STOP & ALL-WAY signage	Downtown Rehabilitation	Decreasing population, poor economy, loss of businesses	LOS A for all approaches for all-way STOP	Annual Operations - $1,400 Savings per year

TABLE 2 - TRAFFIC SIGNAL REMOVAL ANALYSIS- Page 2 of 3
CITY OF LORAIN, OHIO - Citywide Traffic Signal Warrant Study, Phase 2

No.	Intersection	2012 - 2014 Crash History	Sight Distance Issues or Other Issues	Recommended Traffic Control	Developmental Growth?	Reasons for Volume Changes	Capacity Analysis after Signal Removed	Cost Summary
20	Reid Ave/W 6th St	(1)- Angle	Lorain Public Library adjacent to SW corner; Frequent pedestrian traffic, but not enough to meet Warrant 4.	STOP & ALL-WAY signage	Downtown Rehabilitation	Decreasing population, poor economy, loss of businesses	LOS A for all approaaches for all-way STOP	Removal - $2,000 Annual Operations - $1,400 Savings per year
21	Reid Ave/W 7th St	(1)- Angle- Ran red light		STOP signs for W 7th St	Downtown Rehabilitation	Decreasing population, poor economy, loss of businesses	LOS A on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
22	Reid Ave/W 8th St	(3)- Sideswipe-Passing (1), Angle (1), Rear end (1)		STOP signs for W 8th St	Downtown Rehabilitation	Decreasing population, poor economy, loss of businesses	LOS B on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
24	W 21st St (SR 611)/Reeves Ave	(9)- Improper left turn (3), Bicycle (1), Angle (2), Improper backing (1), Sideswipe-Meeting (1), Head-on (1)	27 pedestrians crossing W 21st St west approach during 2:15-3:15 PM, but not enough to meet Warrant 4.	STOP signs for Reeves Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B AM & LOS C PM on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
25	W 21st St (SR 611)/Pole Ave	(2)- Improper left turn (1), Rear end (1)		STOP signs for Pole Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B AM & LOS C PM on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
28	W 21st St (SR 611)/Oakdale Ave	(19)- Ran red light (6), Angle- Failure to Yield (5), Angle- Unknown (2), Rear end (2), Bicycle failure to Yield (1), Improper left turn (1), Head-on (1), Improper backing (1)	Sight distance issue caused by trees adjacent to SW & NE corners; does not meet School Crossing Warrant (Hawthorne Elementary School is 1.5 blocks north).	STOP AHEAD and STOP signs for Oakdale Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOC C AM NB & SB, LOS D PM SB, LOS F PM NB on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
29	W 21st St (SR 611)/Reid Ave	(6)- Rear end (2), Angle (1), Bicycle (1), Sideswipe-Meeting (1), Moped (1)	Sight distance issue with parking garage adjacent to NE corner. Very close to meeting 80% warrant for Warrant 1.	Leave signal in place	Downtown Rehabilitation	Decreasing population, poor economy, loss of businesses	LOS C AM, LOS D PM on side street approaches	Recommended to remain.
32	Baumhart Rd/Old Ford Factory Entrance	None	Extremely sharp skew of intersection. Recommend removing intersection or make it enter-only from northbound Baumhart Road. Exiting traffic could use adjacent entrance to the north. Work with property owner(s).	Work with property owner(s) to remove entrance and use adjacent entrance to north; STOP sign for Old Ford Factory Entrance if not possible to remove; Consider making one-way northbound entry only	None planned or anticipated	Ford Factory Closed	Only one (1) vehicle approached intersection from Old Ford Factory Entrance. This entrance is bascially being used as enter-only from northbound Baumhart Road, much like an exit ramp.	Removal - $2,000 Annual Operations - $1,400 Savings per year
35	Cooper Foster Park Rd/Super K/Funeral Home Entrance	(1)- Ran red light		STOP signs for Super K and Funeral Home entrances	Further nearby development anticipated	Decreasing population, poor economy, loss of businesses	LOS C on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
40	N Leavitt Rd (SR 58)/W 40th St	(15)- Improper left turn (6), Rear end (4), Angle- Failure to Yield (3), Ran red light (1), Sideswipe-Passing (1)	Does not meet School Crossing Warrant (Lorain Preparatory Academy 1 block south, Toni Morrison Elementary School 4 blocks east).	STOP signs for W 40th St	Further nearby development anticipated	Decreasing population, poor economy, loss of businesses	LOS C AM EB & WB, LOS D EB PM, LOS F WB PM on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
42	Meister Rd/Pole Ave	(1)- Angle		Signal already removed; STOP sign for Pole Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS A on side street approaches	Annual Operations - $1,400 Savings per year
43	Meister Rd/Ashland Ave	(4)- Angle (2), Rear end (1), Improper backing (1)	Reconfigure crosswalks across Ashland approaches so they are closer to intersection which would allow stop bars to be better located.	STOP signs for Ashland Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year

TABLE 2 - TRAFFIC SIGNAL REMOVAL ANALYSIS- Page 3 of 3
CITY OF LORAIN, OHIO - Citywide Traffic Signal Warrant Study, Phase 2

No.	Intersection	2012 - 2014 Crash History	Sight Distance Issues or Other Issues	Recommended Traffic Control	Developmental Growth?	Reasons for Volume Changes	Capacity Analysis after Signal Removed	Cost Summary
45	Oberlin Ave/W 26th St	(3)- Rear end (3)	New High School under construction one block west; George Daniel Field & Gen. Wilson Middle School & Washington Elementary School adjacent to east; currently does not meet School Crossing Warrant.	Leave signal in place	New High School one block to west currently under construction.	Decreasing population, poor economy, loss of businesses	LOS B AM, LOS C PM on side street approach	Recommended to remain; Reconsider after new High School is completed
46	Oberlin Ave/W 35th St	(3)- Rear end (2), Angle (1)	St Peter School adjacent to east; does not meet School Crossing Warrant.	STOP sign for W 35th St	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS C on side street approach	Removal - $2,000 Annual Operations - $1,400 Savings per year
48	Tower Blvd/Edgewood Dr	(2)- Rear end (1), Angle (1)		STOP and YIELD signs for Edgewood Dr (Tower Blvd has a wide grass median)	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
52	Elyria Ave/E 25th St	None		Signal already removed; STOP sign for E 25th St	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approach	Annual Operations - $1,400 Savings
53	Elyria Ave/E 30th St	(8)- Angle (6)- 5 caused by ran red light, Rear end (2)		STOP signs for E 30th St	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
54	Elyria Ave/E 36th St/Electrical Substation Entrance	(3)- Rear end (2), Ran red light (1)		STOP signs for E 36th St and Substation entrance	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B AM, LOS C PM on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
55	E 31st St/Vine Ave	None	Stevan Dohanos Elementary School adjacent to SE corner; 195 pedestrians during 2:45 PM - 3:45 PM, but did not meet School Crossing Warrant.	STOP & ALL-WAY signage	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS A for all approaches for all-way STOP	Removal - $2,000 Annual Operations - $1,400 Savings per year
56	E 31st St/Globe Ave	(1)- Rear end		STOP signs for Glove Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS A on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
57	E 31st St/Pearl Ave	(6)- Ran red light (4), Bicycle (1), Failure to Yield (1)		STOP signs for E 31st St	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
58	E 31st St/Seneca Ave	(1)- Ran red light		STOP signs for Seneca Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS A AM, LOS A NB PM, LOS B SB PM o n side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
59	E 31st St/Clinton Ave	(2)- Sideswipe-Passing (1), Improper backing (1)		STOP signs for Clinton Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS A NB AM, LOS B SB AM, LOS B PM on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
61	E 31st St/Palm Ave	(1)- Improper left turn		STOP signs for Palm Ave	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
62	E 31st St/Tacoma Ave	(5)- Rear end (2), Failure to Yield (1), Improper left turn (1), Sideswipe- Passing (1)	Restripe to provide dedicated left turn lanes on E 31st St.	STOP signs for Tacoma Ave; Restripe E 31st St to provide dedicated left turn lanes	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B NB, LOS C SB on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
63	E 31st St/Metro Park Bicycle Trail	None	Signal on E 31st dwells in green at all times until pushbutton on trail is activated.	Leave signal in place	None planned or anticipated	Decreasing population, poor economy, loss of businesses		Recommended to remain; Consider change to HAWK signal in future if funding permits
66	Pearl Ave/E 34th St	(4)- Ran red light (3), Sideswipe- Passing (1)		STOP signs for E 34th St	None planned or anticipated	Decreasing population, poor economy, loss of businesses	LOS B EB AM, LOS A WB AM, LOS B PM on side street approaches	Removal - $2,000 Annual Operations - $1,400 Savings per year
68	Grove Ave (SR 57)/E 36th St	(13)- Rear end (8), Ran red light (2), Bicycle (1), Improper left turn (1), Improper backing (1)	Consider widening Grove Ave to provide a dedicated left turn lane for northbound to westbound to decrease rear end accidents.	STOP AHEAD sign and STOP sign for E 36th St	Further development towards south	Decreasing population, poor economy, loss of businesses	LOS B AM, LOS C PM on side street approach	Removal - $2,000 Annual Operations - $1,400 Savings per year

3.5 Recommended Traffic Control

Based on the signal warrant analysis and retention analysis, as shown in Tables 1 and 2, there are twenty-eight (28) existing signals that satisfy signal warrants. An additional four (4) signals are recommended to be retained for various reasons, such as sight distance issues or potential for further development in the area. The remaining thirty-nine (39) signals have either already been removed or should be removed as the City moves forward.

4.0 Conclusions and Recommendations

A total of seventy-one (71) intersections in the City of Lorain have been investigated to determine if the existing traffic signals are warranted. Using turning movement traffic counts and pedestrian counts conducted by AECOM during November and December 2014, the results indicate that the following twenty-eight (28) intersections currently meet a signal warrant, and should remain signalized:

Intersection No.	Intersection
1	E Erie Ave (US 6) and Colorado Ave
3	E Erie Ave (US 6) and Kansas Ave
7	Colorado Ave (SR 611) and Kansas Ave and Henderson Dr (SR 611)
8	Colorado Ave (SR 611) and Missouri Ave
9	Colorado Ave (SR 611) and Root Rd
23	W 21st St (SR 611) and N Leavitt Rd (SR 58)
26	W 21st St (SR 611) and Oberlin Ave
27	W 21st St (SR 611) and Washington Ave
30	W 21st St (SR 611) and Elyria Ave and Henderson Dr (SR 611) and E 21st St
31	W Erie Ave (US 6) and Baumhart Rd
33	W Erie Ave (US 6) and Kolbe Rd
36	N Leavitt Rd (SR 58) and Cooper Foster Park Rd
37	N Leavitt Rd (SR 58) and Super K/Walgreens Entrance
38	N Leavitt Rd (SR 58) and Jaeger Rd/N Nantucket Dr
39	N Leavitt Rd (SR 58) and Tower Blvd/Lighthouse Village Shopping Entrance
41	N Leavitt Rd (SR 58) and Meister Rd
44	Oberlin Ave and Meister Rd
47	Oberlin Ave and W 37th St
49	Oberlin Ave and Tower Blvd
50	Oberlin Ave and Cooper Foster Park Rd
51	Cooper Foster Park Rd and N Ridge Rd
60	Grove Ave (SR 57) and E 31st St
64	SR 2 Eastbound Ramp and Middle Ridge Rd
65	SR 2 Westbound Ramp and Middle Ridge Rd
67	Pearl Ave and N Ridge Rd
69	Grove Ave (SR 57) and Homewood Dr
70	Grove Ave (SR 57) and E 42nd St
71	Grove Ave (SR 57) and Fairless Dr

The following four (4) intersections did not meet any signal warrants, but are recommended to remain signalized as discussed in the study:

29	W 21st St (SR 611) and Reid Ave
34	Oak Point Rd and Buck Horn Blvd/Park Square
45	Oberlin Ave and W 26th St
63	E 31st St and Metro Park Bike Trail

The following thirty-nine (39) intersections did not meet any signal warrants, and should have the signals removed, with traffic control provided by STOP sign(s), as noted in the study:

2	E Erie Ave (US 6) and Idaho Ave
4	E Erie Ave (US 6) and Maine Ave
5	E Erie Ave (US 6) and Missouri Ave
6	E Erie Ave (US 6) and Root Rd
10	W Erie Ave (US 6) and N Leavitt Rd (SR 58)
11	W Erie Ave (US 6) and Archwood Ave/Lakeview Park Exit
12	W Erie Ave (US 6) and Mildred Ave/Lakeview Park Entrance
13	W Erie Ave (US 6) and W 5th St/Ashland Ave
14	W Erie Ave (US 6) and Oberlin Ave
15	W Erie Ave (US 6) and Washington Ave
16	Oberlin Ave and W 5th St
17	Washington Ave and W 4th St
18	Washington Ave and W 5th St
19	Washington Ave and W 6th St*
20	Reid Ave and W 6th St
21	Reid Ave and W 7th St
22	Reid Ave and W 8th St
24	W 21st St (SR 611) and Reeves Ave
25	W 21st St (SR 611) and Pole Ave
28	W 21st St (SR 611) and Oakdale Ave
32	Baumhart Rd and Old Ford Factory Entrance
35	Cooper Foster Park Rd and Super K/Funeral Home Entrance
40	N Leavitt Rd (SR 58) and W 40th St
42	Meister Rd and Pole Ave*
43	Meister Rd and Ashland Ave
46	Oberlin Ave and W 35th St
48	Tower Blvd and Edgewood Dr
52	Elyria Ave and E 25th St*
53	Elyria Ave and E 30th St
54	Elyria Ave and E 36th St/Electric Substation Entrance
55	E 31st St and Vine Ave
56	E 31st St and Globe Ave

57	E 31st St and Pearl Ave
58	E 31st St and Seneca Ave
59	E 31st St and Clinton Ave
61	E 31st St and Palm Ave
62	E 31st St and Tacoma Ave
66	Pearl Ave and E 34th St
68	Grove Ave (SR 57) and E 36th St

*Traffic signals have already been removed

These signals should be removed by the City, or as part of various traffic signal improvement projects. The Ohio Department of Transportation (ODOT) recommended process of removing the signals should be followed (signage posted; notifying stakeholders, law enforcement, and the public; signals placed on flash for ninety (90) days prior to removal; crash monitoring; etc.), and the OMUTCD should be followed as far as installing signage and any necessary modifications to pavement markings.

After the cost of removing the signals has been recouped (approximately two years), the City should expect to save approximately $55,000 per year as the thirty-nine intersections would no longer need signal equipment maintenance or electric power supplied to operate the signals. A general guideline for the average cost to operate and maintain a traffic signal is $1,400 per year per traffic signal (as per the Arizona Department of Transportation). In addition, the City would not have to expend considerable funds upgrading these signals to meet current OMUTCD criteria or to update aging equipment. Safety at these intersections is not anticipated to decline, and may even improve, such as installing an all-way STOP at the intersection of Reid Avenue and W 6th St in Downtown Lorain adjacent to the Lorain Public Library. Pedestrian safety is anticipated to be improved at this intersection as a result of the change to an all-way STOP, the existing single traffic signal head spanning the intersection does not meet current OMUTCD criteria and visibility of these older signals (often with 8-inch signal faces as opposed to 12-inch) can be an issue.

Appendix A

Turning Movement Counts (TMC)

Intersection Number

1	E Erie Ave (US 6) and Colorado Ave
2	E Erie Ave (US 6) and Idaho Ave
3	E Erie Ave (US 6) and Kansas Ave
4	E Erie Ave (US 6) and Maine Ave
5	E Erie Ave (US 6) and Missouri Ave
6	E Erie Ave (US 6) and Root Rd
7	Colorado Ave (SR 611) and Kansas Ave and Henderson Dr (SR 611)
8	Colorado Ave (SR 611) and Missouri Ave
9	Colorado Ave (SR 611) and Root Rd
10	W Erie Ave (US 6) and N Leavitt Rd (SR 58)
11	W Erie Ave (US 6) and Archwood Ave/Lakeview Park Exit
12	W Erie Ave (US 6) and Mildred Ave/Lakeview Park Entrance
13	W Erie Ave (US 6) and W 5th St/Ashland Ave
14	W Erie Ave (US 6) and Oberlin Ave
15	W Erie Ave (US 6) and Washington Ave
16	Oberlin Ave and W 5th St
17	Washington Ave and W 4th St
18	Washington Ave and W 5th St
19	Washington Ave and W 6th St
20	Reid Ave and W 6th St
21	Reid Ave and W 7th St
22	Reid Ave and W 8th St
23	W 21st St (SR 611) and N Leavitt Rd (SR 58)
24	W 21st St (SR 611) and Reeves Ave
25	W 21st St (SR 611) and Pole Ave
26	W 21st St (SR 611) and Oberlin Ave
27	W 21st St (SR 611) and Washington Ave
28	W 21st St (SR 611) and Oakdale Ave
29	W 21st St (SR 611) and Reid Ave
30	W 21st St (SR 611) and Elyria Ave and Henderson Dr (SR 611) and E 21st St
31	W Erie Ave (US 6) and Baumhart Rd
32	Baumhart Road and Old Ford Factory Entrance
33	W Erie Ave (US 6) and Kolbe Rd
34	Oak Point Rd and Buck Horn Blvd/Park Square
35	Cooper Foster Park Rd and Super K/Funeral Home Entrance

(contents continued on next page)

Appendix A

Turning Movement Counts (TMC)
(contents continued)

Intersection number

36	N Leavitt Rd (SR 58) and Cooper Foster Park Rd
37	N Leavitt Rd (SR 58) and Super K/Walgreens Entrance
38	N Leavitt Rd (SR 58) and Jaeger Rd/N Nantucket Dr
39	N Leavitt Rd (SR 58) and Tower Blvd/Lighthouse Village Shopping Entrance
40	N Leavitt Rd (SR 58) and W 40th St
41	N Leavitt Rd (SR 58) and Meister Rd
42	Meister Rd and Pole Ave
43	Meister Rd and Ashland Ave
44	Oberlin Ave and Meister Rd
45	Oberlin Ave and W 26th St
46	Oberlin Ave and W 35th St
47	Oberlin Ave and W 37th St
48	Tower Blvd and Edgewood Dr
49	Oberlin Ave and Tower Blvd
50	Oberlin Ave and Cooper Foster Park Rd
51	Cooper Foster Park Rd and N Ridge Rd
52	Elyria Ave and E 25th St
53	Elyria Ave and E 30th St
54	Elyria Ave and E 36th St
55	E 31st St and Vine Ave
56	E 31st St and Globe Ave
57	E 31st St and Pearl Ave
58	E 31st St and Seneca Ave
59	E 31st St and Clinton Ave
60	Grove Ave (SR 57) and E 31st St
61	E 31st St and Palm Ave
62	E 31st St and Tacoma Ave
63	E 31st St and Metro Park Bicycle Trail
64	SR 2 Eastbound Ramp and Middle Ridge Road
65	SR 2 Westbound Ramp and Middle Ridge Road
66	Pearl Ave and E 34th St
67	Pearl Ave and N Ridge Rd
68	Grove Ave (SR 57) and E 36th St
69	Grove Ave (SR 57) and Homewood Dr
70	Grove Ave (SR 57) and E 42nd St
71	Grove Ave (SR 57) and Fairless Dr

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: E Erie Ave at Colorado Ave
Site Code:
Start Date: 11/04/2014
Page No: 1

Turning Movement Data

Start Time	Colorado Ave Southbound							E Erie Ave Westbound							Colorado Ave Northbound							E Erie Ave Eastbound							
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	2	1	2	2	0	0	7	2	1	42	1	0	0	46	1	2	2	28	0	0	33	28	13	49	0	0	0	90	176
7:15 AM	0	1	1	5	0	0	7	1	0	62	2	0	0	65	0	1	3	24	0	0	28	38	6	49	0	0	0	93	193
7:30 AM	1	1	2	0	0	0	4	2	0	69	0	0	0	71	3	2	4	42	0	2	51	38	5	51	1	0	0	95	221
7:45 AM	0	0	1	1	0	0	2	2	0	71	1	0	0	74	3	1	5	47	0	1	56	31	10	75	0	0	0	116	248
Hourly Total	3	3	6	8	0	0	20	7	1	244	4	0	0	256	7	6	14	141	0	3	168	135	34	224	1	0	0	394	838
8:00 AM	2	1	3	3	0	0	9	0	0	96	2	0	0	98	2	1	2	33	0	0	38	42	7	76	1	0	0	126	271
8:15 AM	1	2	2	3	0	0	8	2	0	71	4	0	0	77	3	1	0	37	0	0	41	27	10	58	0	0	0	95	221
8:30 AM	0	1	0	1	0	0	2	2	1	64	0	0	0	67	3	0	1	39	0	1	43	49	14	34	0	0	0	97	209
8:45 AM	0	0	0	2	0	3	2	1	0	62	2	0	2	65	1	2	5	30	0	1	38	21	7	47	0	0	0	75	180
Hourly Total	3	4	5	9	0	3	21	5	1	293	8	0	2	307	9	4	8	139	0	2	160	139	38	215	1	0	0	393	881
9:00 AM	0	0	6	3	0	2	9	1	0	48	2	0	0	51	1	0	5	36	0	2	42	21	10	31	0	0	0	62	164
9:15 AM	1	0	3	1	0	0	5	1	0	46	2	0	0	49	0	3	2	23	0	2	28	30	1	30	1	0	0	62	144
9:30 AM	0	0	6	2	0	0	8	2	0	52	4	0	1	58	0	2	1	31	0	0	34	30	0	33	0	0	0	63	163
9:45 AM	3	0	2	2	0	1	7	0	0	51	0	0	0	51	1	2	2	40	0	0	45	26	8	42	0	0	0	76	179
Hourly Total	4	0	17	8	0	3	29	4	0	197	8	0	1	209	2	7	10	130	0	4	149	107	19	136	1	0	0	263	650
10:00 AM	3	0	3	1	0	0	7	3	0	38	3	0	0	44	1	1	4	30	0	3	36	25	2	46	0	0	1	73	160
10:15 AM	2	0	1	2	0	1	5	2	0	46	0	0	0	48	3	1	2	31	0	0	37	34	4	33	0	0	0	71	161
10:30 AM	0	1	2	2	0	0	5	0	0	59	4	0	0	63	0	2	5	40	0	1	47	24	12	54	1	0	0	91	206
10:45 AM	1	0	0	3	0	0	4	1	0	48	6	0	0	55	0	1	4	30	0	2	35	31	5	40	3	0	0	79	173
Hourly Total	6	1	6	8	0	1	21	6	0	191	13	0	0	210	4	5	15	131	0	6	155	114	23	173	4	0	1	314	700
11:00 AM	0	0	4	4	0	0	8	0	0	62	4	0	0	66	1	1	5	33	0	0	40	29	6	44	1	0	0	80	194
11:15 AM	2	1	4	3	0	0	10	0	0	53	2	0	0	55	1	2	1	41	0	2	45	22	11	55	0	0	0	88	198
11:30 AM	1	2	6	3	0	1	12	4	0	46	3	0	1	53	5	1	5	48	0	0	59	22	9	54	0	0	0	85	209
11:45 AM	0	1	9	4	0	2	14	2	0	44	2	0	2	48	3	1	4	48	0	1	56	24	17	74	0	0	0	115	233
Hourly Total	3	4	23	14	0	3	44	6	0	205	11	0	3	222	10	5	15	170	0	3	200	97	43	227	1	0	0	368	834
12:00 PM	2	0	4	3	0	0	9	4	1	51	1	0	1	57	1	1	1	42	0	1	45	34	5	47	0	0	0	86	197
12:15 PM	1	0	6	3	0	3	10	3	0	65	0	0	1	68	2	2	1	45	0	0	50	29	12	66	0	0	0	107	235
12:30 PM	2	0	3	4	0	1	9	3	0	55	1	0	1	59	1	4	5	40	0	0	50	32	9	43	4	0	0	88	206
12:45 PM	4	0	3	3	0	0	10	2	0	48	2	0	1	52	3	1	5	49	0	0	58	29	17	48	1	0	0	95	215
Hourly Total	9	0	16	13	0	4	38	12	1	219	4	0	4	236	7	8	12	176	0	1	203	124	43	204	5	0	0	376	853
1:00 PM	1	0	6	3	0	0	10	2	0	54	3	0	0	59	2	0	5	47	0	0	54	29	13	60	1	0	0	103	226
1:15 PM	1	1	8	4	0	0	14	3	0	49	3	0	0	55	4	1	5	41	0	0	51	20	10	62	0	0	0	92	212
1:30 PM	1	0	5	3	0	0	9	5	0	46	3	0	0	54	6	0	2	39	0	1	47	33	13	60	0	0	0	106	216
1:45 PM	1	0	3	4	0	1	8	2	0	49	1	0	1	52	1	0	4	33	0	2	38	30	8	51	1	0	0	90	188
Hourly Total	4	1	22	14	0	1	41	12	0	198	10	0	1	220	13	1	16	160	0	3	190	112	44	233	2	0	0	391	842
2:00 PM	3	0	6	4	0	2	13	1	2	63	3	0	1	69	2	1	5	40	0	0	48	28	7	70	1	0	0	106	236
2:15 PM	1	1	6	2	0	1	10	2	0	63	2	0	0	67	3	3	1	40	0	1	47	32	8	58	0	0	0	98	222

2:30 PM	1	2	3	1	0	0	7	2	0	62	0	0	0	64	6	5	2	58	0	0	71	30	10	94	0	0	0	134	276
2:45 PM	0	0	4	3	0	0	7	1	1	102	5	0	3	109	2	0	2	53	0	1	57	33	6	63	0	0	0	102	275
Hourly Total	5	3	19	10	0	3	37	6	3	290	10	0	4	309	13	9	10	191	0	2	223	123	31	285	1	0	0	440	1009
3:00 PM	1	2	7	3	0	1	13	3	0	59	2	0	0	64	2	2	1	65	0	0	70	24	15	80	1	0	0	120	267
3:15 PM	2	1	5	4	0	0	12	1	0	58	4	0	0	63	2	2	1	61	0	0	66	40	9	81	0	0	0	130	271
3:30 PM	1	0	3	3	0	0	7	5	0	89	2	0	0	96	2	1	3	61	0	1	67	37	10	87	1	0	0	135	305
3:45 PM	0	1	3	2	0	0	6	0	0	75	6	0	0	81	0	4	3	55	0	0	62	36	7	91	1	0	0	135	284
Hourly Total	4	4	18	12	0	1	38	9	0	281	14	0	0	304	6	9	8	242	0	1	265	137	41	339	3	0	0	520	1127
4:00 PM	2	0	4	2	0	1	8	1	0	75	4	0	1	80	2	2	5	62	0	0	71	42	12	105	0	0	2	159	318
4:15 PM	1	0	3	2	0	1	6	2	0	78	0	0	0	80	5	1	2	52	0	0	60	27	15	85	0	0	0	127	273
4:30 PM	0	2	4	3	0	0	9	1	0	66	1	0	0	68	3	0	2	49	0	1	54	34	20	86	0	0	0	140	271
4:45 PM	3	0	5	1	0	0	9	1	0	81	2	0	0	84	1	1	2	53	0	0	57	19	12	65	0	0	0	96	246
Hourly Total	6	2	16	8	0	2	32	5	0	300	7	0	1	312	11	4	11	216	0	1	242	122	59	341	0	0	2	522	1108
5:00 PM	3	0	5	5	0	2	13	0	2	73	3	0	0	78	5	4	4	79	0	3	92	34	11	74	0	0	0	119	302
5:15 PM	0	0	2	2	0	0	4	0	0	70	2	0	0	72	3	1	2	50	0	0	56	24	17	90	2	0	0	133	265
5:30 PM	0	0	2	6	0	0	8	0	0	93	4	0	0	97	1	1	4	60	0	1	66	19	12	64	0	0	0	95	266
5:45 PM	0	0	2	0	0	0	2	1	1	47	0	0	0	49	0	2	3	43	0	0	48	27	8	54	0	0	0	89	188
Hourly Total	3	0	11	13	0	2	27	1	3	283	9	0	0	296	9	8	13	232	0	4	262	104	48	282	2	0	0	436	1021
Grand Total	50	22	159	117	0	23	348	73	9	2701	98	0	16	2881	91	66	132	1928	0	30	2217	1314	423	2659	21	0	3	4417	9863
Approach %	14.4	6.3	45.7	33.6	0.0	-	-	2.5	0.3	93.8	3.4	0.0	-	-	4.1	3.0	6.0	87.0	0.0	-	-	29.7	9.6	60.2	0.5	0.0	-	-	-
Total %	0.5	0.2	1.6	1.2	0.0	-	3.5	0.7	0.1	27.4	1.0	0.0	-	29.2	0.9	0.7	1.3	19.5	0.0	-	22.5	13.3	4.3	27.0	0.2	0.0	-	44.8	-
Lights	41	21	153	104	0	-	319	70	9	2628	93	0	-	2800	88	63	127	1855	0	-	2133	1272	405	2590	16	0	-	4283	9535
% Lights	82.0	95.5	96.2	88.9	-	-	91.7	95.9	100.0	97.3	94.9	-	-	97.2	96.7	95.5	96.2	96.2	-	-	96.2	96.8	95.7	97.4	76.2	-	-	97.0	96.7
Other Vehicles	9	1	6	13	0	-	29	3	0	73	5	0	-	81	3	3	5	73	0	-	84	42	18	69	5	0	-	134	328
% Other Vehicles	18.0	4.5	3.8	11.1	-	-	8.3	4.1	0.0	2.7	5.1	-	-	2.8	3.3	4.5	3.8	3.8	-	-	3.8	3.2	4.3	2.6	23.8	-	-	3.0	3.3
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	3	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	10.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	23	-	-	-	-	-	-	16	-	-	-	-	-	-	27	-	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	90.0	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: E Erie Ave at Idaho Ave
Site Code:
Start Date: 11/04/2014

Turning Movement Data

Start Time	Private Driveway Southbound						E Erie Ave Westbound						Idaho Ave Northbound						E Erie Ave Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	0	2	0	1	3	0	45	0	0	0	45	1	0	0	0	1	1	2	53	0	0	0	55	104
7:15 AM	0	0	1	0	0	1	0	57	1	0	0	58	0	0	1	0	2	1	6	50	0	0	0	56	116
7:30 AM	0	0	0	0	0	0	0	69	1	0	0	70	2	0	3	0	0	5	2	58	0	0	0	60	135
7:45 AM	0	0	0	0	0	0	0	66	6	0	0	72	1	0	6	0	2	7	1	82	0	0	0	83	162
Hourly Total	1	0	3	0	1	4	0	237	8	0	0	245	4	0	10	0	5	14	11	243	0	0	0	254	517
8:00 AM	0	0	0	0	0	0	0	88	0	0	0	88	1	0	4	0	0	5	5	76	0	0	0	81	174
8:15 AM	0	0	0	0	0	0	0	73	0	0	0	73	2	0	1	0	0	3	3	58	1	0	0	62	138
8:30 AM	0	0	0	0	0	0	0	63	0	0	0	63	1	0	2	0	1	3	1	49	0	0	0	50	116
8:45 AM	0	0	0	0	0	0	0	67	0	0	0	67	0	0	2	0	2	2	0	45	0	0	0	45	114
Hourly Total	0	0	0	0	0	0	0	291	0	0	0	291	4	0	9	0	3	13	9	228	1	0	0	238	542
9:00 AM	0	0	0	0	0	0	0	49	1	0	0	50	0	0	0	0	1	0	1	30	0	0	0	31	81
9:15 AM	0	0	0	0	0	0	0	44	1	0	0	45	0	0	0	0	0	0	0	35	0	0	0	35	80
9:30 AM	0	0	0	0	1	0	0	52	0	0	0	52	0	0	0	0	1	0	0	27	0	0	0	27	79
9:45 AM	0	0	0	0	1	0	0	52	0	0	0	52	0	0	1	0	0	1	1	43	0	0	0	44	97
Hourly Total	0	0	0	0	2	0	0	197	2	0	0	199	0	0	1	0	2	1	2	135	0	0	0	137	337
10:00 AM	0	0	0	0	0	0	0	38	0	0	0	38	0	0	1	0	0	1	0	42	0	0	0	42	81
10:15 AM	0	0	0	0	0	0	0	42	0	0	0	42	0	0	0	0	0	0	3	34	0	0	0	37	79
10:30 AM	0	0	0	0	2	0	0	52	2	0	0	54	0	0	3	0	2	3	4	51	0	0	0	55	112
10:45 AM	0	0	0	0	0	0	0	54	0	0	0	54	1	0	3	0	0	4	1	41	0	0	1	42	100
Hourly Total	0	0	0	0	2	0	0	186	2	0	0	188	1	0	7	0	2	8	8	168	0	0	1	176	372
11:00 AM	0	0	0	0	0	0	0	64	1	0	0	65	0	0	2	0	2	2	2	43	0	0	1	45	112
11:15 AM	0	0	0	0	1	0	0	50	0	0	0	50	0	0	1	0	1	1	1	61	0	0	0	62	113
11:30 AM	0	0	0	0	0	0	1	53	1	0	0	55	1	0	2	0	0	3	2	52	0	0	0	54	112
11:45 AM	1	0	0	0	1	1	0	46	1	0	0	47	0	0	0	0	1	0	1	68	0	0	0	69	117
Hourly Total	1	0	0	0	2	1	1	213	3	0	0	217	1	0	5	0	4	6	6	224	0	0	1	230	454
12:00 PM	0	0	1	0	1	1	0	46	0	0	0	46	2	0	3	0	2	5	1	50	0	0	0	51	103
12:15 PM	0	0	0	0	1	0	0	51	1	0	0	52	0	0	4	0	0	4	4	58	0	0	0	62	118
12:30 PM	0	0	0	0	0	0	0	51	0	0	0	51	0	0	4	0	1	4	1	51	0	0	0	52	107
12:45 PM	0	0	0	0	0	0	0	47	0	0	0	47	0	0	3	0	0	3	6	51	1	0	0	58	108
Hourly Total	0	0	1	0	2	1	0	195	1	0	0	196	2	0	14	0	3	16	12	210	1	0	0	223	436
1:00 PM	0	0	0	0	0	0	0	57	1	0	0	58	0	0	2	0	1	2	2	58	0	0	0	60	120
1:15 PM	0	0	0	0	1	0	0	46	0	0	0	46	0	0	0	0	3	0	1	76	0	0	0	77	123
1:30 PM	0	0	0	0	0	0	0	49	0	0	0	49	1	0	0	0	0	1	2	61	0	0	0	63	113
1:45 PM	0	0	0	0	0	0	0	54	0	0	0	54	0	0	1	0	1	1	3	55	0	0	0	58	113
Hourly Total	0	0	0	0	1	0	0	206	1	0	0	207	1	0	3	0	5	4	8	250	0	0	0	258	469
2:00 PM	0	0	0	0	1	0	0	64	0	0	0	64	0	0	3	0	1	3	1	69	0	0	0	70	137
2:15 PM	0	0	0	0	0	0	0	57	0	0	0	57	1	0	1	0	0	2	3	61	0	0	0	64	123

2:30 PM	0	0	0	0	0	0	0	66	2	0	0	68	2	0	6	0	0	8	9	87	0	0	0	96	172
2:45 PM	0	0	0	0	0	0	0	91	1	0	0	92	0	0	5	0	0	5	3	66	0	0	0	69	166
Hourly Total	0	0	0	0	1	0	0	278	3	0	0	281	3	0	15	0	1	18	16	283	0	0	0	299	598
3:00 PM	1	0	0	0	0	1	0	53	0	0	0	53	1	0	1	0	0	2	4	72	0	0	0	76	132
3:15 PM	0	0	0	0	2	0	0	70	0	0	0	70	0	0	2	0	2	2	4	84	0	0	0	88	160
3:30 PM	0	0	0	0	1	0	0	94	1	0	0	95	2	0	6	0	2	8	4	89	0	0	0	93	196
3:45 PM	0	0	0	0	0	0	1	80	0	0	0	81	0	0	4	0	0	4	2	86	0	0	0	88	173
Hourly Total	1	0	0	0	3	1	1	297	1	0	0	299	3	0	13	0	4	16	14	331	0	0	0	345	661
4:00 PM	0	0	0	0	0	0	0	74	0	0	0	74	1	0	1	0	0	2	2	99	0	0	0	101	177
4:15 PM	0	0	0	0	0	0	0	82	0	0	0	82	3	0	2	0	1	5	0	86	1	0	0	87	174
4:30 PM	0	0	0	0	0	0	0	69	0	0	0	69	0	0	0	0	0	0	1	91	0	0	0	92	161
4:45 PM	0	0	0	0	1	0	0	88	2	0	0	90	1	0	3	0	0	4	0	61	0	0	0	61	155
Hourly Total	0	0	0	0	1	0	0	313	2	0	0	315	5	0	6	0	1	11	3	337	1	0	0	341	667
5:00 PM	0	0	0	0	0	0	0	70	2	0	0	72	1	0	0	0	0	1	1	79	0	0	0	80	153
5:15 PM	0	0	0	0	0	0	0	75	2	0	0	77	2	0	3	0	0	5	2	94	0	0	0	96	178
5:30 PM	0	0	0	0	2	0	0	90	1	0	0	91	0	0	2	0	0	2	3	57	0	0	0	60	153
5:45 PM	0	0	0	0	1	0	0	47	3	0	0	50	2	0	1	0	0	3	1	52	0	0	0	53	106
Hourly Total	0	0	0	0	3	0	0	282	8	0	0	290	5	0	6	0	0	11	7	282	0	0	0	289	590
Grand Total	3	0	4	0	18	7	2	2695	31	0	0	2728	29	0	89	0	30	118	96	2691	3	0	2	2790	5643
Approach %	42.9	0.0	57.1	0.0	-	-	0.1	98.8	1.1	0.0	-	-	24.6	0.0	75.4	0.0	-	-	3.4	96.5	0.1	0.0	-	-	-
Total %	0.1	0.0	0.1	0.0	-	0.1	0.0	47.8	0.5	0.0	-	48.3	0.5	0.0	1.6	0.0	-	2.1	1.7	47.7	0.1	0.0	-	49.4	-
Lights	3	0	4	0	-	7	2	2626	30	0	-	2658	25	0	80	0	-	105	83	2611	3	0	-	2697	5467
% Lights	100.0	-	100.0	-	-	100.0	100.0	97.4	96.8	-	-	97.4	86.2	-	89.9	-	-	89.0	86.5	97.0	100.0	-	-	96.7	96.9
Other Vehicles	0	0	0	0	-	0	0	69	1	0	-	70	4	0	9	0	-	13	13	80	0	0	-	93	176
% Other Vehicles	0.0	-	0.0	-	-	0.0	0.0	2.6	3.2	-	-	2.6	13.8	-	10.1	-	-	11.0	13.5	3.0	0.0	-	-	3.3	3.1
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	16.7	-	-	-	-	-	-	-	-	-	-	-	13.3	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	15	-	-	-	-	-	0	-	-	-	-	-	26	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	83.3	-	-	-	-	-	-	-	-	-	-	-	86.7	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: E Erie Ave at Kansas Ave
Site Code:
Start Date: 11/04/2014

Turning Movement Data

Start Time	St Anthonys School Exit Southbound						E Erie Ave Westbound						Kansas Ave Northbound						E Erie Ave Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	1	2	0	2	4	0	49	16	0	0	65	6	0	5	0	1	11	6	46	0	0	0	52	132
7:15 AM	0	6	5	0	2	11	0	57	16	0	0	73	5	0	7	0	0	12	2	44	0	0	0	46	142
7:30 AM	2	7	4	0	0	13	0	74	15	0	0	89	8	0	10	0	1	18	5	57	0	0	0	62	182
7:45 AM	3	13	9	0	2	25	1	62	13	0	0	76	6	0	23	0	0	29	11	43	0	0	0	54	184
Hourly Total	6	27	20	0	6	53	1	242	60	0	0	303	25	0	45	0	2	70	24	190	0	0	0	214	640
8:00 AM	29	34	30	0	0	93	0	84	5	0	0	89	7	0	28	0	0	35	6	44	0	0	0	50	267
8:15 AM	4	6	2	0	5	12	0	63	11	0	0	74	7	0	6	0	1	13	9	44	0	0	0	53	152
8:30 AM	0	0	0	0	0	0	0	54	11	0	0	65	5	0	14	0	0	19	8	41	0	0	0	49	133
8:45 AM	1	0	0	0	2	1	0	48	8	0	0	56	7	0	6	0	2	13	6	36	0	0	0	42	112
Hourly Total	34	40	32	0	7	106	0	249	35	0	0	284	26	0	54	0	3	80	29	165	0	0	0	194	664
9:00 AM	0	0	0	0	13	0	0	41	5	0	0	46	10	0	6	0	0	16	4	25	0	0	0	29	91
9:15 AM	0	0	1	0	2	1	0	36	10	0	0	46	3	0	7	0	0	10	8	24	0	0	0	32	89
9:30 AM	2	2	1	0	8	5	0	50	4	0	0	54	3	0	7	0	0	10	3	25	0	0	0	28	97
9:45 AM	0	0	1	0	4	1	0	42	3	0	0	45	5	0	5	0	0	10	12	29	0	0	0	41	97
Hourly Total	2	2	3	0	27	7	0	169	22	0	0	191	21	0	25	0	0	46	27	103	0	0	0	130	374
10:00 AM	0	1	0	0	2	1	0	29	6	0	0	35	6	0	3	0	0	9	5	35	0	0	0	40	85
10:15 AM	0	0	1	0	0	1	0	42	5	0	0	47	1	0	3	0	0	4	7	24	0	0	0	31	83
10:30 AM	0	1	1	0	1	2	0	44	6	0	0	50	4	0	7	0	1	11	5	43	0	0	0	48	111
10:45 AM	2	2	1	0	6	5	0	48	9	0	0	57	4	0	9	0	0	13	7	35	0	0	0	42	117
Hourly Total	2	4	3	0	9	9	0	163	26	0	0	189	15	0	22	0	1	37	24	137	0	0	0	161	396
11:00 AM	1	1	0	0	3	2	0	57	6	0	0	63	8	2	10	0	0	20	3	35	0	0	0	38	123
11:15 AM	7	1	5	0	3	13	0	38	3	0	0	41	7	0	5	0	1	12	9	47	0	0	0	56	122
11:30 AM	2	0	1	0	1	3	0	48	4	0	0	52	3	0	8	0	1	11	9	46	0	0	0	55	121
11:45 AM	0	0	0	0	2	0	0	39	5	0	0	44	6	1	11	0	0	18	9	51	0	0	0	60	122
Hourly Total	10	2	6	0	9	18	0	182	18	0	0	200	24	3	34	0	2	61	30	179	0	0	0	209	488
12:00 PM	0	0	0	0	0	0	0	40	3	0	0	43	10	0	7	0	1	17	5	36	0	0	0	41	101
12:15 PM	0	0	0	0	1	0	1	40	4	0	0	45	5	0	8	0	0	13	9	50	0	0	0	59	117
12:30 PM	0	0	0	0	0	0	0	48	6	0	0	54	5	0	7	0	0	12	8	37	0	0	0	45	111
12:45 PM	2	2	2	0	2	6	0	37	8	0	0	45	6	0	7	0	0	13	9	45	0	0	0	54	118
Hourly Total	2	2	2	0	3	6	1	165	21	0	0	187	26	0	29	0	1	55	31	168	0	0	0	199	447
1:00 PM	1	2	1	0	3	4	0	45	8	0	0	53	1	0	7	0	1	8	11	50	0	0	0	61	126
1:15 PM	0	0	0	0	8	0	0	46	4	0	0	50	8	0	7	0	0	15	7	70	0	0	0	77	142
1:30 PM	1	1	1	0	4	3	0	38	6	0	0	44	4	0	3	0	1	7	5	54	0	0	0	59	113
1:45 PM	0	0	0	0	16	0	0	40	7	0	0	47	4	0	6	0	0	10	5	48	0	0	0	53	110
Hourly Total	2	3	2	0	31	7	0	169	25	0	0	194	17	0	23	0	2	40	28	222	0	0	0	250	491
2:00 PM	1	2	0	0	6	3	0	58	7	0	0	65	6	0	12	0	1	18	14	49	0	0	0	63	149
2:15 PM	0	2	0	0	10	2	0	63	4	0	0	67	8	0	12	0	2	20	5	43	0	1	0	49	138

2:30 PM	3	3	3	0	1	9	0	71	12	0	0	83	6	0	21	0	0	27	8	62	0	0	11	70	189
2:45 PM	21	26	41	0	4	88	0	60	5	0	0	65	8	0	15	0	4	23	6	48	0	0	17	54	230
Hourly Total	25	33	44	0	21	102	0	252	28	0	0	280	28	0	60	0	7	88	33	202	0	1	28	236	706
3:00 PM	2	3	1	0	0	6	0	45	6	0	0	51	11	0	9	0	0	20	12	67	0	0	0	79	156
3:15 PM	1	1	6	0	1	8	0	59	5	0	0	64	11	0	15	0	0	26	9	63	0	0	0	72	170
3:30 PM	5	4	3	0	3	12	0	89	11	0	0	100	11	0	17	0	0	28	10	79	0	0	0	89	229
3:45 PM	7	6	8	0	1	21	0	64	9	0	0	73	10	0	13	0	0	23	12	70	0	0	0	82	199
Hourly Total	15	14	18	0	5	47	0	257	31	0	0	288	43	0	54	0	0	97	43	279	0	0	0	322	754
4:00 PM	0	1	4	0	0	5	0	67	12	0	0	79	4	0	10	0	0	14	11	92	0	0	0	103	201
4:15 PM	2	3	2	0	1	7	0	72	3	0	0	75	17	0	10	0	0	27	13	69	0	0	0	82	191
4:30 PM	1	0	0	0	0	1	0	58	7	0	0	65	7	0	12	0	0	19	11	77	0	0	0	88	173
4:45 PM	0	0	2	0	0	2	0	75	12	0	0	87	7	0	10	0	0	17	7	56	0	0	0	63	169
Hourly Total	3	4	8	0	1	15	0	272	34	0	0	306	35	0	42	0	0	77	42	294	0	0	0	336	734
5:00 PM	1	0	1	0	0	2	0	61	5	0	0	66	16	0	15	0	0	31	3	75	0	0	0	78	177
5:15 PM	5	1	0	0	0	6	1	66	8	0	1	75	11	0	11	0	0	22	11	74	0	0	0	85	188
5:30 PM	1	0	1	0	0	2	0	81	7	0	0	88	11	0	11	0	0	22	6	54	0	0	0	60	172
5:45 PM	1	0	0	0	0	1	0	40	7	0	0	47	10	0	7	0	0	17	8	48	0	0	0	56	121
Hourly Total	8	1	2	0	0	11	1	248	27	0	1	276	48	0	44	0	0	92	28	251	0	0	0	279	658
Grand Total	109	132	140	0	119	381	3	2368	327	0	1	2698	308	3	432	0	18	743	339	2190	0	1	28	2530	6352
Approach %	28.6	34.6	36.7	0.0	-	-	0.1	87.8	12.1	0.0	-	-	41.5	0.4	58.1	0.0	-	-	13.4	86.6	0.0	0.0	-	-	-
Total %	1.7	2.1	2.2	0.0	-	6.0	0.0	37.3	5.1	0.0	-	42.5	4.8	0.0	6.8	0.0	-	11.7	5.3	34.5	0.0	0.0	-	39.8	-
Lights	106	130	138	0	-	374	3	2312	318	0	-	2633	294	3	424	0	-	721	326	2139	0	1	-	2466	6194
% Lights	97.2	98.5	98.6	-	-	98.2	100.0	97.6	97.2	-	-	97.6	95.5	100.0	98.1	-	-	97.0	96.2	97.7	-	100.0	-	97.5	97.5
Other Vehicles	3	2	2	0	-	7	0	56	9	0	-	65	14	0	8	0	-	22	13	51	0	0	-	64	158
% Other Vehicles	2.8	1.5	1.4	-	-	1.8	0.0	2.4	2.8	-	-	2.4	4.5	0.0	1.9	-	-	3.0	3.8	2.3	-	0.0	-	2.5	2.5
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	3.4	-	-	-	-	-	0.0	-	-	-	-	-	11.1	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	115	-	-	-	-	-	1	-	-	-	-	-	16	-	-	-	-	-	28	-	-
% Pedestrians	-	-	-	-	96.6	-	-	-	-	-	100.0	-	-	-	-	-	88.9	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: E Erie Ave at Maine Ave
Site Code:
Start Date: 11/04/2014
Page No: 1

Turning Movement Data

Start Time	E Erie Ave Westbound					Maine Ave Northbound					E Erie Ave Eastbound					
	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	55	0	0	0	55	2	3	0	0	5	6	39	0	0	45	105
7:15 AM	73	0	0	0	73	3	1	0	1	4	4	60	0	0	64	141
7:30 AM	79	1	0	0	80	1	3	0	1	4	7	58	0	0	65	149
7:45 AM	70	1	0	0	71	1	1	0	0	2	4	57	0	0	61	134
Hourly Total	277	2	0	0	279	7	8	0	2	15	21	214	0	0	235	529
8:00 AM	92	3	0	0	95	2	2	0	0	4	3	69	0	0	72	171
8:15 AM	65	2	0	0	67	3	2	0	0	5	6	53	0	0	59	131
8:30 AM	49	3	0	0	52	5	9	0	0	14	15	32	0	0	47	113
8:45 AM	50	3	0	0	53	6	9	0	0	15	5	37	0	0	42	110
Hourly Total	256	11	0	0	267	16	22	0	0	38	29	191	0	0	220	525
9:00 AM	44	1	0	0	45	2	5	0	1	7	3	39	0	0	42	94
9:15 AM	37	0	0	0	37	2	4	0	1	6	2	27	0	0	29	72
9:30 AM	46	0	0	0	46	0	2	0	0	2	0	32	0	0	32	80
9:45 AM	49	0	0	0	49	0	4	0	0	4	2	31	0	0	33	86
Hourly Total	176	1	0	0	177	4	15	0	2	19	7	129	0	0	136	332
10:00 AM	35	3	0	0	38	1	1	0	0	2	1	39	0	0	40	80
10:15 AM	38	0	0	0	38	1	2	0	0	3	2	27	0	0	29	70
10:30 AM	47	1	0	0	48	1	5	0	3	6	0	44	0	0	44	98
10:45 AM	61	1	0	0	62	1	0	0	0	1	1	34	0	0	35	98
Hourly Total	181	5	0	0	186	4	8	0	3	12	4	144	0	0	148	346
11:00 AM	53	1	0	0	54	1	3	0	2	4	1	44	0	0	45	103
11:15 AM	42	2	0	0	44	2	3	0	0	5	2	58	0	0	60	109
11:30 AM	47	0	0	0	47	0	1	0	0	1	4	42	0	0	46	94
11:45 AM	40	0	0	0	40	3	4	0	0	7	2	50	0	0	52	99
Hourly Total	182	3	0	0	185	6	11	0	2	17	9	194	0	0	203	405
12:00 PM	41	0	0	0	41	2	3	0	0	5	0	56	0	0	56	102
12:15 PM	40	2	0	0	42	0	2	0	0	2	0	52	0	0	52	96
12:30 PM	52	2	0	0	54	3	0	0	1	3	2	46	0	0	48	105
12:45 PM	46	2	0	0	48	2	1	0	0	3	2	44	0	0	46	97
Hourly Total	179	6	0	0	185	7	6	0	1	13	4	198	0	0	202	400
1:00 PM	52	0	0	0	52	1	3	0	0	4	4	54	0	0	58	114
1:15 PM	42	1	0	0	43	3	3	0	0	6	1	74	0	0	75	124
1:30 PM	49	4	0	0	53	2	0	0	0	2	1	51	0	0	52	107
1:45 PM	42	2	0	0	44	3	2	0	0	5	3	52	0	0	55	104
Hourly Total	185	7	0	0	192	9	8	0	0	17	9	231	0	0	240	449
2:00 PM	64	2	0	0	66	0	3	0	1	3	2	53	0	0	55	124
2:15 PM	62	0	0	0	62	0	2	0	0	2	2	48	0	0	50	114
2:30 PM	68	1	0	0	69	2	6	0	0	8	8	60	0	0	68	145

2:45 PM	70	0	0	0	70	3	3	0	0	6	2	93	0	0	95	171
Hourly Total	264	3	0	0	267	5	14	0	1	19	14	254	0	0	268	554
3:00 PM	52	0	0	0	52	2	1	0	0	3	5	67	0	0	72	127
3:15 PM	63	2	0	0	65	0	2	0	0	2	7	84	0	0	91	158
3:30 PM	83	3	0	0	86	4	14	0	0	18	7	68	0	0	75	179
3:45 PM	69	1	0	0	70	2	8	0	1	10	1	96	0	0	97	177
Hourly Total	267	6	0	0	273	8	25	0	1	33	20	315	0	0	335	641
4:00 PM	64	2	0	0	66	2	8	0	0	10	6	84	0	0	90	166
4:15 PM	71	1	0	0	72	0	7	0	2	7	2	99	0	0	101	180
4:30 PM	65	0	0	0	65	0	3	0	0	3	1	72	0	0	73	141
4:45 PM	83	3	0	0	86	0	1	0	0	1	1	68	0	0	69	156
Hourly Total	283	6	0	0	289	2	19	0	2	21	10	323	0	0	333	643
5:00 PM	73	0	0	0	73	1	1	0	0	2	0	90	0	0	90	165
5:15 PM	67	4	0	0	71	1	5	0	0	6	1	88	0	0	89	166
5:30 PM	87	1	0	0	88	2	3	0	0	5	1	64	0	0	65	158
5:45 PM	46	1	0	0	47	1	1	0	0	2	2	55	0	0	57	106
Hourly Total	273	6	0	0	279	5	10	0	0	15	4	297	0	0	301	595
Grand Total	2523	56	0	0	2579	73	146	0	14	219	131	2490	0	0	2621	5419
Approach %	97.8	2.2	0.0	-	-	33.3	66.7	0.0	-	-	5.0	95.0	0.0	-	-	-
Total %	46.6	1.0	0.0	-	47.6	1.3	2.7	0.0	-	4.0	2.4	45.9	0.0	-	48.4	-
Lights	2454	55	0	-	2509	69	144	0	-	213	124	2425	0	-	2549	5271
% Lights	97.3	98.2	-	-	97.3	94.5	98.6	-	-	97.3	94.7	97.4	-	-	97.3	97.3
Other Vehicles	69	1	0	-	70	4	2	0	-	6	7	65	0	-	72	148
% Other Vehicles	2.7	1.8	-	-	2.7	5.5	1.4	-	-	2.7	5.3	2.6	-	-	2.7	2.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	14.3	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	12	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	85.7	-	-	-	-	-	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: E Erie Ave at Missouri Ave
Site Code:
Start Date: 11/04/2014

Turning Movement Data

Start Time	E Erie Ave Westbound					Missouri Ave Northbound						E Erie Ave Eastbound						
	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	47	1	0	0	48	0	0	8	0	0	8	5	0	35	0	0	40	96
7:15 AM	62	2	0	0	64	4	0	9	0	0	13	5	0	63	0	0	68	145
7:30 AM	72	2	0	0	74	4	0	8	0	0	12	3	1	54	0	0	58	144
7:45 AM	63	2	0	0	65	2	0	6	1	0	9	11	2	45	0	0	58	132
Hourly Total	244	7	0	0	251	10	0	31	1	0	42	24	3	197	0	0	224	517
8:00 AM	72	2	0	0	74	3	1	19	0	0	23	14	2	56	0	0	72	169
8:15 AM	58	1	0	0	59	0	1	7	0	0	8	5	1	45	0	0	51	118
8:30 AM	44	1	0	0	45	0	3	4	0	0	7	3	0	38	0	0	41	93
8:45 AM	48	3	0	0	51	1	2	3	0	0	6	5	0	35	0	0	40	97
Hourly Total	222	7	0	0	229	4	7	33	0	0	44	27	3	174	0	0	204	477
9:00 AM	35	2	0	0	37	7	0	12	0	1	19	2	0	35	0	0	37	93
9:15 AM	33	4	0	0	37	2	0	5	0	1	7	3	0	27	0	0	30	74
9:30 AM	40	1	0	0	41	3	1	3	0	0	7	3	0	31	0	0	34	82
9:45 AM	41	7	0	0	48	0	0	7	0	0	7	1	0	28	0	0	29	84
Hourly Total	149	14	0	0	163	12	1	27	0	2	40	9	0	121	0	0	130	333
10:00 AM	29	1	0	0	30	0	0	6	0	0	6	4	0	35	0	0	39	75
10:15 AM	38	2	0	0	40	2	1	5	0	1	8	5	0	25	0	0	30	78
10:30 AM	37	1	0	0	38	2	1	9	0	1	12	2	2	41	0	0	45	95
10:45 AM	56	0	0	0	56	5	2	2	0	0	9	4	2	29	0	0	35	100
Hourly Total	160	4	0	0	164	9	4	22	0	2	35	15	4	130	0	0	149	348
11:00 AM	46	0	0	0	46	0	2	10	0	1	12	1	0	36	0	0	37	95
11:15 AM	33	2	0	0	35	0	0	8	0	1	8	8	0	57	0	0	65	108
11:30 AM	42	2	0	0	44	1	2	5	0	0	8	10	0	33	0	0	43	95
11:45 AM	34	1	0	0	35	2	2	4	0	0	8	7	0	47	0	0	54	97
Hourly Total	155	5	0	0	160	3	6	27	0	2	36	26	0	173	0	0	199	395
12:00 PM	35	1	0	0	36	1	1	6	0	0	8	7	0	45	0	0	52	96
12:15 PM	36	3	0	0	39	0	0	6	0	0	6	2	0	46	0	0	48	93
12:30 PM	49	3	0	0	52	2	2	4	0	0	8	6	0	47	0	0	53	113
12:45 PM	38	1	0	0	39	2	2	6	0	0	10	3	0	40	0	0	43	92
Hourly Total	158	8	0	0	166	5	5	22	0	0	32	18	0	178	0	0	196	394
1:00 PM	46	1	0	0	47	0	0	4	0	0	4	7	0	54	0	0	61	112
1:15 PM	40	6	0	0	46	3	0	5	0	0	8	9	1	61	0	0	71	125
1:30 PM	50	4	0	0	54	6	0	4	0	1	10	3	0	53	0	0	56	120
1:45 PM	41	3	0	0	44	4	1	3	0	1	8	7	1	45	0	0	53	105
Hourly Total	177	14	0	0	191	13	1	16	0	2	30	26	2	213	0	0	241	462
2:00 PM	51	5	0	0	56	1	1	12	0	0	14	0	1	48	0	0	49	119
2:15 PM	59	8	0	0	67	1	2	3	0	0	6	6	0	42	0	0	48	121

2:30 PM	47	7	0	0	54	4	0	22	0	0	26	7	1	49	0	0	57	137
2:45 PM	58	6	0	0	64	3	2	11	0	0	16	13	2	73	0	0	88	168
Hourly Total	215	26	0	0	241	9	5	48	0	0	62	26	4	212	0	0	242	545
3:00 PM	43	5	0	0	48	1	1	6	0	0	8	8	0	65	0	0	73	129
3:15 PM	46	9	0	0	55	5	2	15	0	0	22	11	1	59	0	0	71	148
3:30 PM	95	6	0	0	101	0	2	5	0	0	7	11	0	59	0	0	70	178
3:45 PM	64	3	0	0	67	1	3	6	0	0	10	12	0	85	0	0	97	174
Hourly Total	248	23	0	0	271	7	8	32	0	0	47	42	1	268	0	0	311	629
4:00 PM	54	7	0	0	61	2	0	10	0	1	12	11	0	67	0	0	78	151
4:15 PM	59	3	0	0	62	4	0	12	0	0	16	11	0	92	0	0	103	181
4:30 PM	59	3	0	0	62	6	0	6	0	0	12	10	1	60	0	0	71	145
4:45 PM	83	6	0	0	89	4	0	3	0	0	7	6	0	63	0	0	69	165
Hourly Total	255	19	0	0	274	16	0	31	0	1	47	38	1	282	0	0	321	642
5:00 PM	62	13	0	0	75	4	4	11	0	0	19	10	1	76	0	0	87	181
5:15 PM	68	5	0	0	73	1	4	6	0	0	11	8	0	75	0	0	83	167
5:30 PM	81	2	0	0	83	0	4	3	0	0	7	7	0	61	0	0	68	158
5:45 PM	41	4	0	0	45	4	2	5	0	0	11	5	0	56	0	0	61	117
Hourly Total	252	24	0	0	276	9	14	25	0	0	48	30	1	268	0	0	299	623
Grand Total	2235	151	0	0	2386	97	51	314	1	9	463	281	19	2216	0	0	2516	5365
Approach %	93.7	6.3	0.0	-	-	21.0	11.0	67.8	0.2	-	-	11.2	0.8	88.1	0.0	-	-	-
Total %	41.7	2.8	0.0	-	44.5	1.8	1.0	5.9	0.0	-	8.6	5.2	0.4	41.3	0.0	-	46.9	-
Lights	2182	146	0	-	2328	91	51	302	1	-	445	275	18	2151	0	-	2444	5217
% Lights	97.6	96.7	-	-	97.6	93.8	100.0	96.2	100.0	-	96.1	97.9	94.7	97.1	-	-	97.1	97.2
Other Vehicles	53	5	0	-	58	6	0	12	0	-	18	6	1	65	0	-	72	148
% Other Vehicles	2.4	3.3	-	-	2.4	6.2	0.0	3.8	0.0	-	3.9	2.1	5.3	2.9	-	-	2.9	2.8
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	33.3	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	66.7	-	-	-	-	-	-	-	-

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Count Name: E Erie Ave at Root Rd
Site Code:
Start Date: 11/04/2014
Page No: 1

Turning Movement Data

Start Time	Dead End Private Entrance Southbound							E Erie Ave Westbound							Root Rd Northbound							E Erie Ave Eastbound							
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	0	0	47	10	0	0	57	0	6	0	2	0	0	8	8	0	33	0	0	0	41	106
7:15 AM	0	0	0	0	0	1	0	0	0	53	13	0	0	66	0	10	0	3	0	0	13	9	0	63	0	0	1	72	151
7:30 AM	0	0	1	0	0	0	1	0	0	61	10	0	0	71	0	10	0	1	0	0	11	13	0	61	0	0	0	74	157
7:45 AM	0	0	0	0	0	0	0	0	0	57	12	0	0	69	0	11	0	6	0	0	17	10	0	50	0	0	0	60	146
Hourly Total	0	0	1	0	0	1	1	0	0	218	45	0	0	263	0	37	0	12	0	0	49	40	0	207	0	0	1	247	560
8:00 AM	0	0	0	0	0	0	0	1	0	41	12	0	0	54	3	9	0	7	0	0	19	13	1	40	0	0	0	54	127
8:15 AM	0	1	0	0	0	0	1	0	0	50	13	0	0	63	3	10	0	5	0	0	18	7	3	37	0	0	0	47	129
8:30 AM	0	0	0	0	0	0	0	0	0	41	12	0	0	53	4	7	0	3	0	0	14	10	2	39	0	0	0	51	118
8:45 AM	0	0	0	0	0	0	0	0	0	36	6	0	0	42	6	7	0	4	0	0	17	7	1	27	0	0	0	35	94
Hourly Total	0	1	0	0	0	0	1	1	0	168	43	0	0	212	16	33	0	19	0	0	68	37	7	143	0	0	0	187	468
9:00 AM	0	0	0	0	0	0	0	0	0	28	9	0	0	37	8	3	0	3	0	2	14	4	1	34	0	0	0	39	90
9:15 AM	0	0	0	0	0	0	0	0	0	38	15	0	0	53	10	2	0	6	0	1	18	7	1	25	0	0	0	33	104
9:30 AM	0	1	1	0	0	2	2	0	0	29	9	0	0	38	5	11	0	3	0	0	19	9	1	32	1	0	3	43	102
9:45 AM	0	0	0	0	0	0	0	0	0	45	11	0	0	56	10	5	0	1	0	0	16	9	0	21	1	0	0	31	103
Hourly Total	0	1	1	0	0	2	2	0	0	140	44	0	0	184	33	21	0	13	0	3	67	29	3	112	2	0	3	146	399
10:00 AM	0	0	0	0	0	0	0	0	0	22	13	0	0	35	2	13	0	5	0	0	20	2	2	32	0	0	0	36	91
10:15 AM	0	0	0	0	0	0	0	0	0	30	12	0	0	42	1	13	0	5	0	1	19	2	4	20	0	0	0	26	87
10:30 AM	0	0	0	0	0	1	0	0	0	33	11	0	0	44	2	15	0	5	0	0	22	4	5	33	0	0	1	42	108
10:45 AM	0	0	1	0	0	1	1	0	0	44	9	0	0	53	5	2	0	8	0	0	15	3	1	30	0	0	1	34	103
Hourly Total	0	0	1	0	0	2	1	0	0	129	45	0	0	174	10	43	0	23	0	1	76	11	12	115	0	0	2	138	389
11:00 AM	0	0	0	0	0	0	0	0	0	36	11	0	0	47	1	10	0	7	0	0	18	5	0	30	0	0	0	35	100
11:15 AM	0	0	0	0	0	0	0	0	0	33	13	0	0	46	2	17	0	5	0	0	24	5	0	47	0	0	0	52	122
11:30 AM	0	0	1	0	0	0	1	0	0	36	11	0	0	47	0	9	0	5	0	0	14	5	0	29	0	0	0	34	96
11:45 AM	0	0	0	0	0	1	0	0	0	37	15	0	0	52	4	12	0	4	0	0	20	6	1	37	0	0	0	44	116
Hourly Total	0	0	1	0	0	1	1	0	0	142	50	0	0	192	7	48	0	21	0	0	76	21	1	143	0	0	0	165	434
12:00 PM	0	0	0	0	0	0	0	0	0	32	13	0	0	45	2	13	0	6	0	2	21	3	1	47	0	0	0	51	117
12:15 PM	0	0	0	0	0	0	0	0	0	38	15	0	0	53	1	11	0	6	0	0	18	8	2	36	0	0	0	46	117
12:30 PM	0	0	0	0	0	0	0	0	0	43	14	0	0	57	1	6	0	3	0	0	10	2	4	49	0	0	0	55	122
12:45 PM	0	0	0	0	0	0	0	0	0	36	21	0	0	57	2	8	0	3	0	1	13	5	0	48	0	0	0	53	123
Hourly Total	0	0	0	0	0	0	0	0	0	149	63	0	0	212	6	38	0	18	0	3	62	18	7	180	0	0	0	205	479
1:00 PM	0	0	1	0	0	0	1	1	0	31	17	0	0	49	2	17	0	3	0	1	22	10	1	41	0	0	1	52	124
1:15 PM	0	0	0	0	0	2	0	0	0	43	12	0	0	55	5	8	0	8	0	0	21	7	1	60	0	0	1	68	144
1:30 PM	0	0	0	0	0	1	0	0	0	43	17	0	0	60	5	11	0	8	0	0	24	6	1	49	0	0	0	56	140
1:45 PM	0	0	0	0	0	0	0	0	0	43	20	0	0	63	4	5	0	4	0	0	13	2	0	43	0	0	0	45	121
Hourly Total	0	0	1	0	0	3	1	1	0	160	66	0	0	227	16	41	0	23	0	1	80	25	3	193	0	0	2	221	529
2:00 PM	0	0	0	0	0	0	0	0	0	55	9	0	0	64	5	7	0	8	0	0	20	3	0	41	0	0	0	44	128
2:15 PM	0	0	0	0	0	0	0	0	0	46	17	0	0	63	5	6	0	11	0	0	22	4	0	42	0	0	0	46	131

2:30 PM	0	0	0	0	0	0	0	0	0	52	15	0	0	67	2	12	0	6	0	0	20	9	0	44	0	0	0	53	140
2:45 PM	0	0	0	0	0	0	0	0	0	48	14	0	0	62	10	11	0	6	0	0	27	12	1	55	0	0	0	68	157
Hourly Total	0	0	0	0	0	0	0	0	0	201	55	0	0	256	22	36	0	31	0	0	89	28	1	182	0	0	0	211	556
3:00 PM	0	0	0	0	0	0	0	0	0	46	11	0	0	57	10	13	0	5	0	0	28	7	0	60	0	0	0	67	152
3:15 PM	0	0	0	0	0	0	0	0	0	71	21	0	0	92	6	15	0	5	0	0	26	4	1	56	0	0	0	61	179
3:30 PM	0	0	0	0	0	0	0	0	0	74	14	0	0	88	13	8	0	12	0	0	33	6	0	60	0	0	0	66	187
3:45 PM	0	0	0	0	0	1	0	0	0	64	17	0	0	81	13	11	0	10	0	2	34	10	2	72	0	0	0	84	199
Hourly Total	0	0	0	0	0	1	0	0	0	255	63	0	0	318	42	47	0	32	0	2	121	27	3	248	0	0	0	278	717
4:00 PM	0	0	0	0	0	0	0	0	0	68	21	0	0	89	1	15	0	5	0	0	21	7	2	55	0	0	0	64	174
4:15 PM	0	0	0	0	0	2	0	0	0	53	13	0	0	66	8	19	0	4	0	0	31	9	0	90	0	0	2	99	196
4:30 PM	0	0	0	0	0	0	0	1	0	58	19	0	0	78	6	23	0	9	0	1	38	9	0	57	0	0	0	66	182
4:45 PM	0	0	0	0	0	0	0	0	0	98	14	0	0	112	13	13	0	8	0	0	34	5	1	71	0	0	0	77	223
Hourly Total	0	0	0	0	0	2	0	1	0	277	67	0	0	345	28	70	0	26	0	1	124	30	3	273	0	0	2	306	775
5:00 PM	0	0	0	1	0	0	1	0	0	77	24	0	0	101	3	14	0	4	0	0	21	7	1	69	0	0	0	77	200
5:15 PM	0	0	0	0	0	0	0	0	0	76	20	0	0	96	14	12	0	11	0	0	37	9	0	69	0	0	0	78	211
5:30 PM	0	0	0	0	0	0	0	0	0	80	14	0	0	94	3	14	0	8	0	0	25	4	0	49	0	0	0	53	172
5:45 PM	0	0	0	0	0	0	0	0	0	46	14	0	0	60	1	23	0	6	0	0	30	9	0	56	0	0	0	65	155
Hourly Total	0	0	0	1	0	0	1	0	0	279	72	0	0	351	21	63	0	29	0	0	113	29	1	243	0	0	0	273	738
Grand Total	0	2	5	1	0	12	8	3	0	2118	613	0	0	2734	201	477	0	247	0	11	925	295	41	2039	2	0	10	2377	6044
Approach %	0.0	25.0	62.5	12.5	0.0	-	-	0.1	0.0	77.5	22.4	0.0	-	-	21.7	51.6	0.0	26.7	0.0	-	-	12.4	1.7	85.8	0.1	0.0	-	-	-
Total %	0.0	0.0	0.1	0.0	0.0	-	0.1	0.0	0.0	35.0	10.1	0.0	-	45.2	3.3	7.9	0.0	4.1	0.0	-	15.3	4.9	0.7	33.7	0.0	0.0	-	39.3	-
Lights	0	2	5	1	0	-	8	3	0	2068	604	0	-	2675	201	473	0	241	0	-	915	284	37	1997	2	0	-	2320	5918
% Lights	-	100.0	100.0	100.0	-	-	100.0	100.0	-	97.6	98.5	-	-	97.8	100.0	99.2	-	97.6	-	-	98.9	96.3	90.2	97.9	100.0	-	-	97.6	97.9
Other Vehicles	0	0	0	0	0	-	0	0	0	50	9	0	-	59	0	4	0	6	0	-	10	11	4	42	0	0	-	57	126
% Other Vehicles	-	0.0	0.0	0.0	-	-	0.0	0.0	-	2.4	1.5	-	-	2.2	0.0	0.8	-	2.4	-	-	1.1	3.7	9.8	2.1	0.0	-	-	2.4	2.1
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	8.3	-	-	-	-	-	-	-	-	-	-	-	-	-	18.2	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	11	-	-	-	-	-	-	0	-	-	-	-	-	-	9	-	-	-	-	-	-	10	-	-
% Pedestrians	-	-	-	-	-	91.7	-	-	-	-	-	-	-	-	-	-	-	-	-	81.8	-	-	-	-	-	-	100.0	-	-

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Count Name: Colorado Ave at Kansas Ave/Henderson Dr
Site Code:
Start Date: 11/04/2014
Page No: 1

Turning Movement Data

Start Time	Kansas Ave Southbound							Colorado Ave Westbound							Henderson Dr Northbound							Colorado Ave Eastbound							
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	37	7	0	0	44	9	1	14	71	0	1	95	20	31	23	4	0	1	78	2	10	40	0	0	0	52	269
7:15 AM	2	0	46	18	0	1	66	18	5	31	66	0	0	120	32	48	19	12	0	2	111	2	11	28	0	0	1	41	338
7:30 AM	0	2	43	12	0	2	57	20	6	42	102	0	1	170	24	37	30	15	0	4	106	8	10	35	0	0	0	53	386
7:45 AM	1	3	43	10	0	0	57	16	0	46	77	0	0	139	57	38	59	15	0	0	169	4	20	32	1	0	0	57	422
Hourly Total	3	5	169	47	0	3	224	63	12	133	316	0	2	524	133	154	131	46	0	7	464	16	51	135	1	0	1	203	1415
8:00 AM	1	0	51	16	0	0	68	16	4	28	81	0	0	129	35	49	45	8	0	2	137	9	7	39	1	0	0	56	390
8:15 AM	1	1	43	9	0	0	54	9	0	38	60	0	0	107	37	39	33	14	0	0	123	5	5	31	1	0	0	42	326
8:30 AM	4	2	36	7	0	1	49	8	4	24	57	0	0	93	32	32	51	11	0	0	126	6	10	36	0	0	0	52	320
8:45 AM	3	0	49	17	0	1	69	3	3	27	78	0	2	111	27	46	46	14	0	1	133	4	2	25	0	0	2	31	344
Hourly Total	9	3	179	49	0	2	240	36	11	117	276	0	2	440	131	166	175	47	0	3	519	24	24	131	2	0	2	181	1380
9:00 AM	3	0	14	5	0	0	22	9	2	27	45	0	0	83	38	26	17	11	0	1	92	12	9	35	0	0	1	56	253
9:15 AM	1	0	31	10	0	0	42	6	1	24	67	0	0	98	39	24	15	12	0	0	90	12	4	27	0	0	2	43	273
9:30 AM	2	0	28	2	0	1	32	5	0	34	77	0	0	116	52	31	14	11	0	0	108	8	8	36	2	0	4	54	310
9:45 AM	3	0	25	7	0	1	35	6	1	28	82	0	0	117	43	33	24	12	0	0	112	3	4	33	2	0	0	42	306
Hourly Total	9	0	98	24	0	2	131	26	4	113	271	0	0	414	172	114	70	46	0	1	402	35	25	131	4	0	7	195	1142
10:00 AM	3	0	30	4	0	0	37	7	1	34	72	0	0	114	41	36	19	14	0	0	110	14	1	29	2	0	0	46	307
10:15 AM	2	1	19	12	0	0	34	3	2	32	55	0	0	92	38	29	19	10	0	0	96	10	0	31	2	0	1	43	265
10:30 AM	3	1	19	2	0	0	25	6	0	31	53	0	0	90	22	30	26	17	0	0	95	11	4	33	3	0	0	51	261
10:45 AM	4	2	30	8	0	0	44	4	3	36	69	0	0	112	34	24	15	16	0	0	89	8	11	25	4	0	0	48	293
Hourly Total	12	4	98	26	0	0	140	20	6	133	249	0	0	408	135	119	79	57	0	0	390	43	16	118	11	0	1	188	1126
11:00 AM	3	1	25	10	0	0	39	10	2	32	64	0	0	108	57	14	24	15	0	3	110	8	6	42	3	0	2	59	316
11:15 AM	1	0	17	9	0	0	27	5	0	44	79	0	0	128	42	24	19	11	0	0	96	12	5	36	0	0	1	53	304
11:30 AM	3	0	22	13	0	0	38	6	0	45	76	0	0	127	56	30	23	13	0	0	122	10	10	31	2	0	0	53	340
11:45 AM	2	0	26	12	0	0	40	10	0	37	48	0	0	95	49	21	23	24	0	1	117	7	11	33	0	0	0	51	303
Hourly Total	9	1	90	44	0	0	144	31	2	158	267	0	0	458	204	89	89	63	0	4	445	37	32	142	5	0	3	216	1263
12:00 PM	4	0	24	15	0	0	43	6	2	36	79	0	0	123	29	53	31	21	0	0	134	8	19	32	3	0	0	62	362
12:15 PM	3	0	16	14	0	0	33	6	3	38	69	0	0	116	50	25	22	19	0	1	116	9	7	33	5	0	0	54	319
12:30 PM	2	1	27	11	0	1	41	13	1	40	76	0	0	130	35	39	30	17	0	0	121	12	6	27	3	0	1	48	340
12:45 PM	3	2	33	4	0	0	42	8	1	36	72	0	0	117	38	36	26	17	0	1	117	7	5	38	5	0	2	55	331
Hourly Total	12	3	100	44	0	1	159	33	7	150	296	0	0	486	152	153	109	74	0	2	488	36	37	130	16	0	3	219	1352
1:00 PM	3	2	40	10	0	0	55	6	2	30	56	0	0	94	33	45	27	19	0	0	124	3	10	39	2	0	0	54	327
1:15 PM	3	0	30	14	0	0	47	6	2	45	72	0	0	125	31	66	28	14	0	1	139	5	12	35	1	0	0	53	364
1:30 PM	3	0	32	9	0	0	44	7	1	33	81	0	0	122	30	64	21	21	0	0	136	10	9	46	2	0	0	67	369
1:45 PM	4	1	28	7	0	0	40	5	1	34	73	0	0	113	48	57	27	11	0	0	143	9	16	35	5	0	0	65	361
Hourly Total	13	3	130	40	0	0	186	24	6	142	282	0	0	454	142	232	103	65	0	1	542	27	47	155	10	0	0	239	1421
2:00 PM	1	0	22	17	0	0	40	9	1	35	87	0	0	132	38	45	27	13	0	0	123	11	4	44	0	0	0	59	354
2:15 PM	1	3	37	8	0	0	49	7	7	37	112	0	0	163	61	40	27	14	0	0	142	8	6	40	0	0	2	54	408

2:30 PM	2	3	34	16	0	0	55	11	6	59	125	0	0	201	40	67	44	8	0	0	159	12	10	33	0	0	1	55	470
2:45 PM	2	2	64	24	0	0	92	10	6	50	105	0	0	171	51	77	33	14	0	1	175	7	6	27	0	0	0	40	478
Hourly Total	6	8	157	65	0	0	236	37	20	181	429	0	0	667	190	229	131	49	0	1	599	38	26	144	0	0	3	208	1710
3:00 PM	3	0	38	13	0	0	54	14	0	39	78	0	1	131	73	57	50	16	0	0	196	14	8	34	5	0	3	61	442
3:15 PM	4	1	28	2	0	0	35	14	1	70	107	0	0	192	58	66	40	26	0	1	190	14	5	46	3	0	5	68	485
3:30 PM	1	1	64	11	0	2	77	12	0	65	113	0	0	190	48	72	44	18	0	1	182	8	10	61	5	0	0	84	533
3:45 PM	5	1	36	30	0	0	72	17	0	74	106	0	0	197	48	57	36	15	0	0	156	10	8	46	2	0	0	66	491
Hourly Total	13	3	166	56	0	2	238	57	1	248	404	0	1	710	227	252	170	75	0	2	724	46	31	187	15	0	8	279	1951
4:00 PM	3	1	56	14	0	0	74	5	5	51	81	0	0	142	72	44	38	19	0	0	173	7	10	53	0	0	0	70	459
4:15 PM	3	0	41	26	0	0	70	8	1	49	106	0	0	164	57	64	40	21	0	0	182	7	14	37	2	0	0	60	476
4:30 PM	2	1	42	19	0	1	64	7	4	55	86	0	0	152	80	44	37	10	0	1	171	4	12	56	3	0	0	75	462
4:45 PM	2	0	30	31	0	0	63	13	3	51	89	0	2	156	77	57	31	12	0	0	177	8	10	39	2	0	0	59	455
Hourly Total	10	2	169	90	0	1	271	33	13	206	362	0	2	614	286	209	146	62	0	1	703	26	46	185	7	0	0	264	1852
5:00 PM	3	1	30	20	0	0	54	12	7	66	96	0	0	181	45	56	33	19	0	0	153	11	4	48	3	0	1	66	454
5:15 PM	3	0	39	13	0	0	55	12	5	58	75	0	0	150	56	52	28	18	0	0	154	12	4	34	2	0	0	52	411
5:30 PM	1	1	26	15	0	0	43	13	1	64	69	0	0	147	45	50	31	11	0	0	137	11	5	35	7	0	0	58	385
5:45 PM	3	2	19	11	0	0	35	9	2	41	77	0	0	129	48	38	32	13	0	0	131	7	4	37	3	0	0	51	346
Hourly Total	10	4	114	59	0	0	187	46	15	229	317	0	0	607	194	196	124	61	0	0	575	41	17	154	15	0	1	227	1596
Grand Total	106	36	1470	544	0	11	2156	406	97	1810	3469	0	7	5782	1966	1913	1327	645	0	22	5851	369	352	1612	86	0	29	2419	16208
Approach %	4.9	1.7	68.2	25.2	0.0	-	-	7.0	1.7	31.3	60.0	0.0	-	-	33.6	32.7	22.7	11.0	0.0	-	-	15.3	14.6	66.6	3.6	0.0	-	-	-
Total %	0.7	0.2	9.1	3.4	0.0	-	13.3	2.5	0.6	11.2	21.4	0.0	-	35.7	12.1	11.8	8.2	4.0	0.0	-	36.1	2.3	2.2	9.9	0.5	0.0	-	14.9	-
Lights	104	35	1429	527	0	-	2095	401	97	1755	3172	0	-	5425	1811	1739	1295	592	0	-	5437	350	323	1546	86	0	-	2305	15262
% Lights	98.1	97.2	97.2	96.9	-	-	97.2	98.8	100.0	97.0	91.4	-	-	93.8	92.1	90.9	97.6	91.8	-	-	92.9	94.9	91.8	95.9	100.0	-	-	95.3	94.2
Other Vehicles	2	1	41	17	0	-	61	5	0	55	297	0	-	357	155	174	32	53	0	-	414	19	29	66	0	0	-	114	946
% Other Vehicles	1.9	2.8	2.8	3.1	-	-	2.8	1.2	0.0	3.0	8.6	-	-	6.2	7.9	9.1	2.4	8.2	-	-	7.1	5.1	8.2	4.1	0.0	-	-	4.7	5.8
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	-	2	-	-	-	-	-	-	5	-	-	-	-	-	-	7	-	-
% Bicycles on Crosswalk	-	-	-	-	-	18.2	-	-	-	-	-	-	28.6	-	-	-	-	-	-	22.7	-	-	-	-	-	-	24.1	-	-
Pedestrians	-	-	-	-	-	9	-	-	-	-	-	-	5	-	-	-	-	-	-	17	-	-	-	-	-	-	22	-	-
% Pedestrians	-	-	-	-	-	81.8	-	-	-	-	-	-	71.4	-	-	-	-	-	-	77.3	-	-	-	-	-	-	75.9	-	-

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Count Name: Colorado Ave at Missouri Ave
Site Code:
Start Date: 11/04/2014
Page No: 1

Turning Movement Data

Start Time	Missouri Ave Southbound							Colorado Ave Westbound							Missouri Ave Northbound							Colorado Ave Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	9	8	1	22	0	1	40	5	1	89	0	0	0	95	0	0	0	1	0	0	1	0	0	92	15	0	0	107	243
7:15 AM	3	11	0	17	0	0	31	4	0	126	0	0	0	130	0	0	0	0	0	2	0	0	0	116	11	0	0	127	288
7:30 AM	14	17	0	20	0	0	51	9	0	148	0	0	0	157	0	0	0	0	0	0	0	0	0	107	10	0	0	117	325
7:45 AM	7	29	0	13	0	0	49	5	4	110	0	0	0	119	0	0	0	0	0	1	0	0	0	87	26	0	0	113	281
Hourly Total	33	65	1	72	0	1	171	23	5	473	0	0	0	501	0	0	0	1	0	3	1	0	0	402	62	0	0	464	1137
8:00 AM	4	23	0	14	0	0	41	8	0	114	0	0	0	122	0	0	0	0	0	0	0	0	0	117	25	0	0	142	305
8:15 AM	9	11	0	22	0	1	42	12	3	71	0	0	0	86	0	0	0	0	0	0	0	0	0	102	18	0	0	120	248
8:30 AM	4	11	0	29	0	0	44	10	1	82	0	0	0	93	0	0	0	0	0	1	0	0	0	97	9	0	0	106	243
8:45 AM	11	6	0	22	0	0	39	10	1	85	0	0	0	96	0	0	0	0	0	1	0	0	0	81	13	0	1	94	229
Hourly Total	28	51	0	87	0	1	166	40	5	352	0	0	0	397	0	0	0	0	0	2	0	0	0	397	65	0	1	462	1025
9:00 AM	4	6	0	21	0	0	31	10	0	67	0	0	0	77	0	1	0	0	0	0	1	0	0	98	13	0	0	111	220
9:15 AM	4	4	0	19	0	0	27	14	1	74	0	0	0	89	0	0	0	0	0	1	0	0	0	81	8	0	0	89	205
9:30 AM	9	14	0	23	0	0	46	9	1	102	0	0	0	112	0	0	0	0	0	2	0	0	0	95	16	0	0	111	269
9:45 AM	6	10	0	11	0	1	27	11	0	88	0	0	0	99	0	0	0	0	0	0	0	0	0	84	16	0	0	100	226
Hourly Total	23	34	0	74	0	1	131	44	2	331	0	0	0	377	0	1	0	0	0	3	1	0	0	358	53	0	0	411	920
10:00 AM	3	10	0	19	0	0	32	22	1	82	0	0	0	105	0	0	0	0	0	1	0	0	0	98	12	0	0	110	247
10:15 AM	9	3	0	17	0	0	29	10	0	73	0	0	0	83	0	0	0	0	0	0	0	0	0	95	8	0	0	103	215
10:30 AM	5	3	0	18	0	0	26	14	2	83	0	0	0	99	0	0	0	0	0	0	0	0	0	76	7	0	1	83	208
10:45 AM	2	10	0	12	0	0	24	16	2	89	0	0	0	107	0	0	0	0	0	0	0	0	0	74	8	0	1	82	213
Hourly Total	19	26	0	66	0	0	111	62	5	327	0	0	0	394	0	0	0	0	0	1	0	0	0	343	35	0	2	378	883
11:00 AM	7	4	0	20	0	0	31	16	5	86	0	0	0	107	0	0	0	0	0	1	0	0	0	97	11	0	0	108	246
11:15 AM	5	12	0	22	0	0	39	18	3	118	0	0	0	139	0	0	0	0	0	0	0	0	0	100	15	0	0	115	293
11:30 AM	1	12	0	25	0	1	38	21	0	99	0	0	0	120	0	0	0	0	0	0	0	0	0	103	14	0	0	117	275
11:45 AM	2	7	0	19	0	0	28	23	1	79	0	0	0	103	0	0	0	0	0	1	0	0	0	89	18	0	0	107	238
Hourly Total	15	35	0	86	0	1	136	78	9	382	0	0	0	469	0	0	0	0	0	2	0	0	0	389	58	0	0	447	1052
12:00 PM	8	7	0	19	0	0	34	21	0	99	0	0	0	120	0	1	0	0	0	2	1	1	0	120	10	0	0	131	286
12:15 PM	3	10	0	20	0	0	33	18	2	105	0	0	0	125	0	0	0	0	0	0	0	0	0	99	12	0	0	111	269
12:30 PM	8	8	0	17	0	0	33	18	1	100	0	0	0	119	0	0	0	0	0	0	0	0	0	92	24	0	0	116	268
12:45 PM	4	10	0	16	0	0	30	12	1	91	0	0	0	104	0	0	0	0	0	0	0	0	0	77	10	0	0	87	221
Hourly Total	23	35	0	72	0	0	130	69	4	395	0	0	0	468	0	1	0	0	0	2	1	1	0	388	56	0	0	445	1044
1:00 PM	9	8	0	23	0	1	40	11	4	84	0	0	0	99	0	0	0	0	0	1	0	0	0	102	11	0	0	113	252
1:15 PM	10	8	0	16	0	0	34	24	0	97	0	0	0	121	0	0	0	0	0	0	0	0	0	117	13	0	0	130	285
1:30 PM	15	3	0	19	0	0	37	19	1	116	0	0	0	136	0	0	0	0	0	0	0	0	0	113	11	0	0	124	297
1:45 PM	9	21	0	32	0	0	62	23	4	90	2	0	0	119	0	0	0	0	0	0	0	0	0	121	21	0	0	142	323
Hourly Total	43	40	0	90	0	1	173	77	9	387	2	0	0	475	0	0	0	0	0	1	0	0	0	453	56	0	0	509	1157
2:00 PM	20	8	0	19	0	0	47	25	0	109	0	0	0	134	0	0	2	0	0	1	2	1	0	114	17	0	0	132	315
2:15 PM	11	12	0	15	0	0	38	23	2	101	0	0	0	126	0	1	0	0	0	1	1	0	0	94	37	0	0	131	296

2:30 PM	44	4	0	30	0	0	78	13	1	150	0	0	0	164	0	0	0	0	0	0	0	0	0	107	24	0	0	131	373
2:45 PM	8	11	0	17	0	0	36	23	0	130	0	0	0	153	0	0	0	0	0	3	0	0	0	129	21	0	0	150	339
Hourly Total	83	35	0	81	0	0	199	84	3	490	0	0	0	577	0	1	2	0	0	5	3	1	0	444	99	0	0	544	1323
3:00 PM	3	14	0	20	0	0	37	32	0	120	0	0	0	152	0	0	0	0	0	0	0	0	0	140	24	0	0	164	353
3:15 PM	14	10	1	22	0	0	47	19	1	153	0	0	0	173	0	0	0	0	0	0	0	0	0	114	21	0	0	135	355
3:30 PM	14	10	0	29	0	0	53	25	5	158	0	0	0	188	0	1	0	0	0	0	1	0	0	137	22	0	0	159	401
3:45 PM	12	12	0	19	0	0	43	27	2	156	0	0	0	185	0	0	0	0	0	2	0	0	0	133	32	0	0	165	393
Hourly Total	43	46	1	90	0	0	180	103	8	587	0	0	0	698	0	1	0	0	0	2	1	0	0	524	99	0	0	623	1502
4:00 PM	12	5	0	29	0	0	46	42	2	109	0	0	1	153	0	0	0	0	0	2	0	0	0	146	17	0	0	163	362
4:15 PM	15	10	0	25	0	0	50	36	3	134	0	0	0	173	0	0	0	0	0	0	0	0	0	120	25	0	0	145	368
4:30 PM	4	12	0	23	0	0	39	25	4	110	0	0	0	139	0	0	0	0	0	4	0	0	0	166	21	0	0	187	365
4:45 PM	5	14	0	20	0	0	39	39	4	148	0	0	0	191	0	0	0	0	0	1	0	0	0	147	30	0	0	177	407
Hourly Total	36	41	0	97	0	0	174	142	13	501	0	0	1	656	0	0	0	0	0	7	0	0	0	579	93	0	0	672	1502
5:00 PM	7	7	0	26	0	0	40	53	3	146	0	0	0	202	0	0	0	0	0	0	0	0	0	123	28	0	0	151	393
5:15 PM	16	6	0	23	0	0	45	38	2	125	0	0	0	165	0	0	0	0	0	0	0	0	0	123	28	0	0	151	361
5:30 PM	8	14	0	24	0	0	46	34	0	112	0	0	0	146	0	0	0	0	0	0	0	0	0	109	25	0	0	134	326
5:45 PM	12	5	0	20	0	0	37	22	2	101	0	0	0	125	0	0	0	0	0	2	0	0	0	96	20	0	0	116	278
Hourly Total	43	32	0	93	0	0	168	147	7	484	0	0	0	638	0	0	0	0	0	2	0	0	0	451	101	0	0	552	1358
Grand Total	389	440	2	908	0	5	1739	869	70	4709	2	0	1	5650	0	4	2	1	0	30	7	2	0	4728	777	0	3	5507	12903
Approach %	22.4	25.3	0.1	52.2	0.0	-	-	15.4	1.2	83.3	0.0	0.0	-	-	0.0	57.1	28.6	14.3	0.0	-	-	0.0	0.0	85.9	14.1	0.0	-	-	-
Total %	3.0	3.4	0.0	7.0	0.0	-	13.5	6.7	0.5	36.5	0.0	0.0	-	43.8	0.0	0.0	0.0	0.0	0.0	-	0.1	0.0	0.0	36.6	6.0	0.0	-	42.7	-
Lights	360	433	2	882	0	-	1677	853	69	4401	0	0	-	5323	0	4	0	1	0	-	5	2	0	4395	752	0	-	5149	12154
% Lights	92.5	98.4	100.0	97.1	-	-	96.4	98.2	98.6	93.5	0.0	-	-	94.2	-	100.0	0.0	100.0	-	-	71.4	100.0	-	93.0	96.8	-	-	93.5	94.2
Other Vehicles	29	7	0	26	0	-	62	16	1	308	2	0	-	327	0	0	2	0	0	-	2	0	0	333	25	0	-	358	749
% Other Vehicles	7.5	1.6	0.0	2.9	-	-	3.6	1.8	1.4	6.5	100.0	-	-	5.8	-	0.0	100.0	0.0	-	-	28.6	0.0	-	7.0	3.2	-	-	6.5	5.8
Bicycles on Crosswalk	-	-	-	-	-	3	-	-	-	-	-	-	0	-	-	-	-	-	-	16	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	60.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	53.3	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-	-	-	14	-	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	40.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	46.7	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Colorado Ave at Root Rd
Site Code:
Start Date: 11/04/2014

Turning Movement Data

Start Time	Root Rd Southbound							Colorado Ave Westbound							Root Rd Northbound							Colorado Ave Eastbound							
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	4	6	1	44	0	0	55	13	2	59	2	0	0	76	2	2	0	1	0	0	5	2	4	97	2	0	0	105	241
7:15 AM	8	7	0	62	0	0	77	18	0	104	7	0	0	129	0	1	0	4	0	0	5	5	1	102	8	0	0	116	327
7:30 AM	9	5	0	72	0	0	86	14	1	95	6	0	0	116	14	17	3	30	0	0	64	3	0	112	4	0	0	119	385
7:45 AM	7	1	0	57	0	0	65	11	2	105	6	0	0	124	2	1	1	2	0	0	6	1	1	66	7	0	0	75	270
Hourly Total	28	19	1	235	0	0	283	56	5	363	21	0	0	445	18	21	4	37	0	0	80	11	6	377	21	0	0	415	1223
8:00 AM	6	2	1	53	0	0	62	18	0	84	3	0	0	105	2	2	0	1	0	0	5	2	0	104	6	0	0	112	284
8:15 AM	6	3	0	66	0	0	75	11	0	40	0	0	0	51	0	1	0	0	0	0	1	4	1	97	8	0	0	110	237
8:30 AM	6	3	0	47	0	0	56	9	0	76	2	0	0	87	1	1	0	2	0	0	4	5	2	93	9	0	0	109	256
8:45 AM	0	3	1	26	0	0	30	13	0	80	3	0	0	96	0	0	0	1	0	0	1	3	0	85	5	0	0	93	220
Hourly Total	18	11	2	192	0	0	223	51	0	280	8	0	0	339	3	4	0	4	0	0	11	14	3	379	28	0	0	424	997
9:00 AM	4	0	0	26	0	0	30	7	6	53	0	0	0	66	1	1	3	1	0	0	6	2	0	92	9	0	0	103	205
9:15 AM	3	4	3	35	0	0	45	7	8	54	1	0	0	70	2	0	1	2	0	0	5	2	0	72	11	0	0	85	205
9:30 AM	6	4	3	38	0	0	51	7	2	59	3	0	0	71	0	3	2	2	0	0	7	3	0	84	10	0	0	97	226
9:45 AM	7	1	2	24	0	0	34	5	10	66	2	0	0	83	2	3	2	2	0	0	9	2	0	67	11	0	0	80	206
Hourly Total	20	9	8	123	0	0	160	26	26	232	6	0	0	290	5	7	8	7	0	0	27	9	0	315	41	0	0	365	842
10:00 AM	10	1	1	32	0	0	44	8	8	53	5	0	0	74	1	0	1	2	0	0	4	4	0	89	14	0	0	107	229
10:15 AM	10	1	2	31	0	0	44	7	7	48	3	0	0	65	1	1	2	4	0	0	8	0	0	75	11	0	0	86	203
10:30 AM	2	2	3	36	0	1	43	16	11	64	3	0	1	94	0	0	0	3	0	0	3	3	0	80	10	0	0	93	233
10:45 AM	4	0	2	28	0	0	34	12	9	64	2	0	0	87	1	1	3	4	0	0	9	3	1	77	3	0	0	84	214
Hourly Total	26	4	8	127	0	1	165	43	35	229	13	0	1	320	3	2	6	13	0	0	24	10	1	321	38	0	0	370	879
11:00 AM	3	3	4	22	0	0	32	15	12	59	1	0	0	87	2	4	1	8	0	0	15	2	1	67	5	0	0	75	209
11:15 AM	7	4	1	24	0	0	36	12	4	82	1	0	0	99	2	0	5	13	0	0	20	7	0	85	13	0	0	105	260
11:30 AM	6	4	3	27	0	0	40	8	11	75	3	0	0	97	2	4	8	10	0	0	24	4	1	85	7	0	0	97	258
11:45 AM	2	5	5	43	0	0	55	7	10	67	2	0	0	86	5	1	6	13	0	0	25	5	0	76	10	0	0	91	257
Hourly Total	18	16	13	116	0	0	163	42	37	283	7	0	0	369	11	9	20	44	0	0	84	18	2	313	35	0	0	368	984
12:00 PM	6	7	10	26	0	0	49	14	14	87	6	0	0	121	2	3	5	10	0	0	20	8	0	99	12	0	0	119	309
12:15 PM	5	3	6	27	0	0	41	15	14	79	1	0	0	109	0	1	1	3	0	0	5	5	0	92	10	0	0	107	262
12:30 PM	5	5	3	28	0	0	41	17	12	76	2	0	0	107	0	0	2	3	0	0	5	4	0	66	6	0	0	76	229
12:45 PM	6	2	6	28	0	0	42	19	6	66	4	0	0	95	4	0	2	0	0	0	6	4	0	66	6	0	0	76	219
Hourly Total	22	17	25	109	0	0	173	65	46	308	13	0	0	432	6	4	10	16	0	0	36	21	0	323	34	0	0	378	1019
1:00 PM	15	6	2	22	0	0	45	12	9	73	8	0	0	102	1	0	2	2	0	0	5	2	0	99	10	0	3	111	263
1:15 PM	7	1	1	23	0	0	32	10	20	83	5	0	0	118	2	1	0	3	0	0	6	3	1	73	10	0	0	87	243
1:30 PM	11	1	5	40	0	0	57	24	10	80	6	0	0	120	1	6	3	9	0	0	19	10	1	76	10	0	0	97	293
1:45 PM	11	3	5	24	0	0	43	11	11	81	13	0	0	116	2	3	1	1	0	0	7	5	3	112	10	0	0	130	296
Hourly Total	44	11	13	109	0	0	177	57	50	317	32	0	0	456	6	10	6	15	0	0	37	20	5	360	40	0	3	425	1095
2:00 PM	10	4	1	35	0	0	50	13	16	85	7	0	0	121	2	3	2	7	0	0	14	8	3	97	12	0	0	120	305
2:15 PM	6	6	5	25	0	0	42	14	16	84	6	0	0	120	2	2	0	5	0	0	9	9	0	66	9	0	1	84	255

2:30 PM	8	6	10	26	0	0	50	19	18	103	13	0	0	153	8	12	6	25	0	0	51	17	2	82	12	0	0	113	367
2:45 PM	7	1	10	24	0	0	42	23	19	123	12	0	0	177	2	6	4	15	0	0	27	20	4	62	12	0	0	98	344
Hourly Total	31	17	26	110	0	0	184	69	69	395	38	0	0	571	14	23	12	52	0	0	101	54	9	307	45	0	1	415	1271
3:00 PM	3	2	1	23	0	0	29	31	8	106	0	0	0	145	1	2	1	5	0	0	9	2	1	97	16	0	0	116	299
3:15 PM	15	0	3	19	0	0	37	20	17	141	6	0	0	184	3	2	1	6	0	0	12	9	2	90	15	0	0	116	349
3:30 PM	6	0	0	35	0	0	41	21	15	115	2	0	0	153	6	14	9	43	0	0	72	3	0	111	15	0	0	129	395
3:45 PM	15	1	1	34	0	0	51	28	18	135	4	0	0	185	2	3	0	6	0	0	11	2	0	99	13	0	0	114	361
Hourly Total	39	3	5	111	0	0	158	100	58	497	12	0	0	667	12	21	11	60	0	0	104	16	3	397	59	0	0	475	1404
4:00 PM	9	0	0	30	0	0	39	25	20	101	1	0	0	147	6	1	1	3	0	0	11	1	0	109	17	0	0	127	324
4:15 PM	14	0	1	29	0	0	44	18	36	146	2	0	0	202	2	2	4	3	0	0	11	1	0	106	16	0	0	123	380
4:30 PM	10	2	2	39	0	0	53	34	20	104	1	0	0	159	3	0	2	2	0	0	7	4	0	127	17	0	0	148	367
4:45 PM	9	1	1	20	0	0	31	19	32	154	2	0	0	207	6	0	3	6	0	0	15	2	0	106	28	0	0	136	389
Hourly Total	42	3	4	118	0	0	167	96	108	505	6	0	0	715	17	3	10	14	0	0	44	8	0	448	78	0	0	534	1460
5:00 PM	15	2	0	35	0	0	52	36	22	135	4	0	0	197	2	1	2	6	0	0	11	0	0	101	14	0	0	115	375
5:15 PM	6	3	3	35	0	0	47	29	31	115	1	0	0	176	1	0	2	1	0	0	4	0	0	97	14	0	0	111	338
5:30 PM	5	2	0	31	0	0	38	42	26	98	5	0	0	171	2	0	0	3	0	0	5	0	0	90	14	0	0	104	318
5:45 PM	3	3	3	32	0	0	41	25	20	90	2	0	0	137	1	0	2	3	0	0	6	1	0	75	11	0	0	87	271
Hourly Total	29	10	6	133	0	0	178	132	99	438	12	0	0	681	6	1	6	13	0	0	26	1	0	363	53	0	0	417	1302
Grand Total	317	120	111	1483	0	1	2031	737	533	3847	168	0	1	5285	101	105	93	275	0	0	574	182	29	3903	472	0	4	4586	12476
Approach %	15.6	5.9	5.5	73.0	0.0	-	-	13.9	10.1	72.8	3.2	0.0	-	-	17.6	18.3	16.2	47.9	0.0	-	-	4.0	0.6	85.1	10.3	0.0	-	-	-
Total %	2.5	1.0	0.9	11.9	0.0	-	16.3	5.9	4.3	30.8	1.3	0.0	-	42.4	0.8	0.8	0.7	2.2	0.0	-	4.6	1.5	0.2	31.3	3.8	0.0	-	36.8	-
Lights	307	119	110	1464	0	-	2000	724	531	3573	145	0	-	4973	88	97	92	260	0	-	537	177	26	3602	463	0	-	4268	11778
% Lights	96.8	99.2	99.1	98.7	-	-	98.5	98.2	99.6	92.9	86.3	-	-	94.1	87.1	92.4	98.9	94.5	-	-	93.6	97.3	89.7	92.3	98.1	-	-	93.1	94.4
Other Vehicles	10	1	1	19	0	-	31	13	2	274	23	0	-	312	13	8	1	15	0	-	37	5	3	301	9	0	-	318	698
% Other Vehicles	3.2	0.8	0.9	1.3	-	-	1.5	1.8	0.4	7.1	13.7	-	-	5.9	12.9	7.6	1.1	5.5	-	-	6.4	2.7	10.3	7.7	1.9	-	-	6.9	5.6
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: W Erie Ave at N Leavitt Rd
Site Code:
Start Date: 11/11/2014
Page No: 1

Turning Movement Data

Start Time	N Leavitt Rd Southbound						W Erie Ave Westbound						N Leavitt Rd Northbound						W Erie Ave Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	0	0	0	0	1	0	53	22	1	0	76	9	0	6	0	0	15	7	40	0	0	0	47	139
7:15 AM	1	1	0	0	0	2	0	39	26	0	0	65	22	0	5	0	0	27	9	46	0	0	0	55	149
7:30 AM	1	2	0	0	0	3	0	52	18	0	0	70	27	0	3	0	0	30	11	74	0	0	0	85	188
7:45 AM	0	0	0	0	0	0	0	60	27	0	0	87	27	0	11	0	0	38	6	88	0	0	0	94	219
Hourly Total	3	3	0	0	0	6	0	204	93	1	0	298	85	0	25	0	0	110	33	248	0	0	0	281	695
8:00 AM	0	0	0	0	0	0	0	50	29	0	0	79	28	0	10	0	0	38	13	42	0	0	0	55	172
8:15 AM	1	1	0	0	0	2	1	55	24	0	0	80	28	1	6	0	0	35	6	49	0	0	0	55	172
8:30 AM	0	1	1	0	0	2	0	43	28	0	0	71	11	0	13	0	0	24	11	62	0	0	0	73	170
8:45 AM	0	3	0	0	0	3	0	48	24	0	0	72	24	0	8	0	0	32	6	48	0	0	0	54	161
Hourly Total	1	5	1	0	0	7	1	196	105	0	0	302	91	1	37	0	0	129	36	201	0	0	0	237	675
9:00 AM	0	2	0	0	0	2	0	35	19	0	0	54	21	1	9	0	0	31	12	38	0	0	0	50	137
9:15 AM	0	0	2	0	0	2	0	40	18	0	0	58	20	1	6	0	1	27	9	36	0	0	0	45	132
9:30 AM	0	2	1	0	0	3	1	50	21	0	1	72	17	3	10	0	0	30	18	36	0	0	0	54	159
9:45 AM	1	0	0	0	0	1	1	41	15	0	0	57	22	0	9	0	1	31	12	46	1	0	0	59	148
Hourly Total	1	4	3	0	0	8	2	166	73	0	1	241	80	5	34	0	2	119	51	156	1	0	0	208	576
10:00 AM	0	0	0	0	0	0	0	47	33	0	0	80	27	1	11	0	0	39	20	39	2	0	0	61	180
10:15 AM	1	1	2	0	0	4	0	34	24	0	0	58	30	2	7	0	0	39	11	40	0	0	0	51	152
10:30 AM	1	1	0	0	0	2	0	36	22	0	0	58	34	0	12	0	0	46	12	33	1	0	0	46	152
10:45 AM	0	1	1	0	2	2	0	35	23	0	0	58	25	0	10	0	0	35	16	36	0	0	0	52	147
Hourly Total	2	3	3	0	2	8	0	152	102	0	0	254	116	3	40	0	0	159	59	148	3	0	0	210	631
11:00 AM	0	0	0	0	0	0	0	49	33	0	0	82	34	0	10	0	0	44	20	35	0	0	0	55	181
11:15 AM	2	0	0	0	0	2	0	34	26	0	0	60	30	0	12	0	1	42	7	27	0	0	0	34	138
11:30 AM	2	0	1	0	0	3	2	52	30	0	0	84	25	1	12	0	1	38	10	60	0	0	0	70	195
11:45 AM	0	1	1	0	0	2	1	49	22	0	1	72	25	0	12	0	0	37	17	39	0	0	0	56	167
Hourly Total	4	1	2	0	0	7	3	184	111	0	1	298	114	1	46	0	2	161	54	161	0	0	0	215	681
12:00 PM	0	1	0	0	1	1	0	46	23	0	0	69	30	0	11	0	0	41	15	43	1	0	0	59	170
12:15 PM	2	0	1	0	0	3	0	56	24	0	0	80	37	3	9	0	1	49	9	50	0	0	0	59	191
12:30 PM	0	3	0	0	1	3	0	45	29	0	0	74	39	1	26	0	0	66	12	33	0	0	0	45	188
12:45 PM	0	4	0	0	0	4	2	51	26	0	0	79	43	0	18	0	0	61	13	54	0	0	0	67	211
Hourly Total	2	8	1	0	2	11	2	198	102	0	0	302	149	4	64	0	1	217	49	180	1	0	0	230	760
1:00 PM	0	1	2	0	3	3	0	44	24	0	0	68	32	0	13	0	0	45	18	51	0	0	0	69	185
1:15 PM	0	1	0	0	0	1	0	50	30	0	0	80	39	0	6	0	1	45	18	46	0	0	0	64	190
1:30 PM	0	0	0	0	1	0	0	53	30	0	0	83	38	1	14	0	0	53	11	54	0	0	0	65	201
1:45 PM	0	1	1	0	0	2	0	63	35	0	0	98	34	2	10	0	0	46	23	41	1	0	0	65	211
Hourly Total	0	3	3	0	4	6	0	210	119	0	0	329	143	3	43	0	1	189	70	192	1	0	0	263	787
2:00 PM	0	1	0	0	0	1	0	67	29	0	0	96	24	1	19	0	0	44	24	57	0	0	0	81	222
2:15 PM	0	1	0	0	2	1	1	48	29	0	0	78	24	1	10	0	1	35	23	50	0	0	0	73	187

2:30 PM	0	1	0	0	3	1	0	59	30	0	0	89	35	0	12	0	3	47	16	63	0	0	0	79	216
2:45 PM	0	1	0	0	1	1	1	53	29	0	0	83	42	0	14	0	2	56	9	61	0	0	0	70	210
Hourly Total	0	4	0	0	6	4	2	227	117	0	0	346	125	2	55	0	6	182	72	231	0	0	0	303	835
3:00 PM	1	3	0	0	2	4	0	70	32	0	0	102	46	2	8	0	1	56	11	59	1	0	0	71	233
3:15 PM	1	2	0	0	2	3	0	63	26	0	0	89	34	1	18	0	0	53	1	55	0	0	0	56	201
3:30 PM	1	0	0	0	0	1	1	76	50	0	0	127	41	0	10	0	0	51	11	70	0	0	0	81	260
3:45 PM	1	0	0	0	2	1	0	68	32	0	0	100	39	1	11	0	0	51	9	66	0	0	0	75	227
Hourly Total	4	5	0	0	6	9	1	277	140	0	0	418	160	4	47	0	1	211	32	250	1	0	0	283	921
4:00 PM	1	1	0	0	0	2	1	59	34	0	2	94	47	0	9	0	0	56	15	82	0	0	0	97	249
4:15 PM	1	0	0	0	1	1	1	80	33	0	0	114	37	0	21	0	3	58	15	59	0	1	0	75	248
4:30 PM	1	1	0	0	0	2	0	94	33	0	0	127	42	1	24	0	0	67	11	74	2	0	0	87	283
4:45 PM	0	1	0	0	0	1	0	69	43	0	0	112	37	2	12	0	0	51	13	57	1	0	0	71	235
Hourly Total	3	3	0	0	1	6	2	302	143	0	2	447	163	3	66	0	3	232	54	272	3	1	0	330	1015
5:00 PM	0	2	0	0	0	2	1	79	27	0	0	107	28	0	19	0	1	47	23	69	1	0	0	93	249
5:15 PM	0	2	0	0	0	2	0	79	26	0	0	105	40	1	13	0	0	54	8	70	1	0	0	79	240
5:30 PM	1	1	0	0	0	2	0	73	36	0	0	109	29	1	18	0	0	48	17	52	1	0	0	70	229
5:45 PM	2	1	0	0	0	3	0	72	25	0	0	97	41	2	22	0	1	65	19	47	0	0	0	66	231
Hourly Total	3	6	0	0	0	9	1	303	114	0	0	418	138	4	72	0	2	214	67	238	3	0	0	308	949
Grand Total	23	45	13	0	21	81	14	2419	1219	1	4	3653	1364	30	529	0	18	1923	577	2277	13	1	0	2868	8525
Approach %	28.4	55.6	16.0	0.0	-	-	0.4	66.2	33.4	0.0	-	-	70.9	1.6	27.5	0.0	-	-	20.1	79.4	0.5	0.0	-	-	-
Total %	0.3	0.5	0.2	0.0	-	1.0	0.2	28.4	14.3	0.0	-	42.9	16.0	0.4	6.2	0.0	-	22.6	6.8	26.7	0.2	0.0	-	33.6	-
Lights	22	44	12	0	-	78	13	2347	1197	1	-	3558	1332	29	507	0	-	1868	566	2219	13	1	-	2799	8303
% Lights	95.7	97.8	92.3	-	-	96.3	92.9	97.0	98.2	100.0	-	97.4	97.7	96.7	95.8	-	-	97.1	98.1	97.5	100.0	100.0	-	97.6	97.4
Other Vehicles	1	1	1	0	-	3	1	72	22	0	-	95	32	1	22	0	-	55	11	58	0	0	-	69	222
% Other Vehicles	4.3	2.2	7.7	-	-	3.7	7.1	3.0	1.8	0.0	-	2.6	2.3	3.3	4.2	-	-	2.9	1.9	2.5	0.0	0.0	-	2.4	2.6
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	4.8	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	20	-	-	-	-	-	4	-	-	-	-	-	18	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	95.2	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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Count Name: W Erie Ave at Archwood Ave/Park Exit
Site Code:
Start Date: 11/11/2014

Turning Movement Data

Start Time	Park Exit Southbound					W Erie Ave Westbound					Archwood Ave Northbound					W Erie Ave Eastbound					
	Right	Thru	Left	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	2	3	2	69	0	0	0	69	0	0	0	0	0	0	50	0	0	50	121
7:15 AM	3	0	0	2	3	58	0	0	0	58	2	4	0	0	6	1	66	0	3	67	134
7:30 AM	1	0	1	3	2	70	0	0	0	70	1	0	0	0	1	1	109	0	0	110	183
7:45 AM	3	0	0	1	3	82	2	0	0	84	0	1	0	0	1	2	113	0	0	115	203
Hourly Total	7	0	3	9	10	279	2	0	0	281	3	5	0	0	8	4	338	0	3	342	641
8:00 AM	3	0	1	2	4	74	1	0	0	75	2	1	0	0	3	1	69	0	1	70	152
8:15 AM	1	0	2	3	3	75	1	0	0	76	0	0	0	0	0	2	76	0	0	78	157
8:30 AM	3	0	1	2	4	64	1	0	1	65	3	0	0	0	3	2	79	0	0	81	153
8:45 AM	2	0	1	5	3	65	1	0	0	66	0	2	0	0	2	0	70	0	0	70	141
Hourly Total	9	0	5	12	14	278	4	0	1	282	5	3	0	0	8	5	294	0	1	299	603
9:00 AM	2	0	9	1	11	50	0	0	0	50	0	0	0	1	0	1	63	0	1	64	125
9:15 AM	1	0	0	1	1	61	1	0	0	62	1	1	0	0	2	2	58	0	0	60	125
9:30 AM	3	0	3	1	6	65	2	0	1	67	3	0	0	0	3	0	58	0	0	58	134
9:45 AM	3	0	2	2	5	51	0	0	0	51	0	0	0	1	0	0	68	0	1	68	124
Hourly Total	9	0	14	5	23	227	3	0	1	230	4	1	0	2	5	3	247	0	2	250	508
10:00 AM	6	0	3	0	9	67	0	0	0	67	0	3	0	1	3	1	66	0	0	67	146
10:15 AM	5	0	4	0	9	55	0	0	1	55	1	0	0	0	1	1	75	0	0	76	141
10:30 AM	2	1	11	0	14	57	0	0	0	57	0	0	0	0	0	0	64	0	0	64	135
10:45 AM	1	1	2	4	4	55	0	0	0	55	1	0	0	1	1	2	65	0	0	67	127
Hourly Total	14	2	20	4	36	234	0	0	1	234	2	3	0	2	5	4	270	0	0	274	549
11:00 AM	9	0	8	1	17	68	0	0	0	68	1	1	0	0	2	0	69	0	0	69	156
11:15 AM	3	0	6	0	9	61	0	0	1	61	0	0	0	1	0	0	63	0	0	63	133
11:30 AM	10	0	7	0	17	72	2	0	0	74	0	0	0	1	0	1	77	0	0	78	169
11:45 AM	5	0	4	1	9	68	1	0	0	69	1	1	0	0	2	2	70	0	0	72	152
Hourly Total	27	0	25	2	52	269	3	0	1	272	2	2	0	2	4	3	279	0	0	282	610
12:00 PM	7	0	10	0	17	58	0	0	0	58	0	2	0	0	2	0	67	0	0	67	144
12:15 PM	12	0	10	0	22	69	0	0	0	69	1	0	0	0	1	0	84	0	0	84	176
12:30 PM	10	0	5	0	15	68	3	0	0	71	0	0	0	1	0	0	76	0	1	76	162
12:45 PM	10	2	11	0	23	68	0	0	0	68	0	0	0	0	0	1	98	0	1	99	190
Hourly Total	39	2	36	0	77	263	3	0	0	266	1	2	0	1	3	1	325	0	2	326	672
1:00 PM	16	1	7	3	24	53	1	0	0	54	1	0	0	1	1	0	90	0	1	90	169
1:15 PM	10	0	8	0	18	73	0	0	0	73	1	1	0	0	2	0	84	0	0	84	177
1:30 PM	17	0	8	1	25	69	1	0	0	70	1	2	0	1	3	1	98	0	0	99	197
1:45 PM	14	2	6	0	22	84	2	0	0	86	4	0	0	2	4	3	72	0	1	75	187
Hourly Total	57	3	29	4	89	279	4	0	0	283	7	3	0	4	10	4	344	0	2	348	730
2:00 PM	9	0	11	2	20	84	0	0	1	84	0	1	0	0	1	0	77	0	0	77	182
2:15 PM	9	0	9	2	18	62	0	0	1	62	0	0	0	3	0	0	86	0	0	86	166
2:30 PM	11	3	3	3	17	79	1	0	0	80	1	1	0	1	2	0	92	0	0	92	191

2:45 PM	7	0	9	4	16	80	0	0	0	80	0	1	0	4	1	0	96	0	0	96	193
Hourly Total	36	3	32	11	71	305	1	0	2	306	1	3	0	8	4	0	351	0	0	351	732
3:00 PM	5	1	14	4	20	95	0	0	0	95	1	1	0	0	2	0	103	0	0	103	220
3:15 PM	7	0	7	4	14	84	1	0	0	85	2	1	0	0	3	1	91	0	0	92	194
3:30 PM	6	0	11	1	17	120	2	0	0	122	1	1	0	0	2	3	109	0	0	112	253
3:45 PM	5	1	8	3	14	96	0	0	0	96	1	1	0	0	2	1	98	0	2	99	211
Hourly Total	23	2	40	12	65	395	3	0	0	398	5	4	0	0	9	5	401	0	2	406	878
4:00 PM	6	1	6	1	13	92	0	0	0	92	2	0	0	1	2	2	126	0	0	128	235
4:15 PM	7	1	2	6	10	107	1	0	0	108	1	0	0	3	1	0	97	0	3	97	216
4:30 PM	6	0	6	1	12	125	4	0	0	129	0	0	0	2	0	0	104	0	1	104	245
4:45 PM	4	1	2	0	7	105	1	0	0	106	1	1	0	0	2	2	101	0	0	103	218
Hourly Total	23	3	16	8	42	429	6	0	0	435	4	1	0	6	5	4	428	0	4	432	914
5:00 PM	6	0	5	0	11	105	0	0	0	105	0	1	0	1	1	0	102	0	0	102	219
5:15 PM	3	0	9	2	12	109	1	0	0	110	2	1	0	0	3	3	100	0	0	103	228
5:30 PM	4	0	4	0	8	102	1	0	0	103	1	3	0	0	4	0	78	0	0	78	193
5:45 PM	2	0	1	1	3	94	2	0	0	96	2	2	0	1	4	0	83	0	0	83	186
Hourly Total	15	0	19	3	34	410	4	0	0	414	5	7	0	2	12	3	363	0	0	366	826
Grand Total	259	15	239	70	513	3368	33	0	6	3401	39	34	0	27	73	36	3640	0	16	3676	7663
Approach %	50.5	2.9	46.6	-	-	99.0	1.0	0.0	-	-	53.4	46.6	0.0	-	-	1.0	99.0	0.0	-	-	-
Total %	3.4	0.2	3.1	-	6.7	44.0	0.4	0.0	-	44.4	0.5	0.4	0.0	-	1.0	0.5	47.5	0.0	-	48.0	-
Lights	257	15	237	-	509	3272	33	0	-	3305	38	34	0	-	72	35	3537	0	-	3572	7458
% Lights	99.2	100.0	99.2	-	99.2	97.1	100.0	-	-	97.2	97.4	100.0	-	-	98.6	97.2	97.2	-	-	97.2	97.3
Other Vehicles	2	0	2	-	4	96	0	0	-	96	1	0	0	-	1	1	103	0	-	104	205
% Other Vehicles	0.8	0.0	0.8	-	0.8	2.9	0.0	-	-	2.8	2.6	0.0	-	-	1.4	2.8	2.8	-	-	2.8	2.7
Bicycles on Crosswalk	-	-	-	8	-	-	-	-	2	-	-	-	-	1	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	11.4	-	-	-	-	33.3	-	-	-	-	3.7	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	62	-	-	-	-	4	-	-	-	-	26	-	-	-	-	16	-	-
% Pedestrians	-	-	-	88.6	-	-	-	-	66.7	-	-	-	-	96.3	-	-	-	-	100.0	-	-

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Count Name: W Erie Ave at MIldred Ave/Park Entrance
Site Code:
Start Date: 11/11/2014

Turning Movement Data

Start Time	Park Entrance Southbound		W Erie Ave Westbound						Mildred Ave Northbound						W Erie Ave Eastbound						
	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	2	62	2	0	0	66	4	0	3	0	0	7	1	50	0	0	0	51	124
7:15 AM	0	0	2	54	0	0	0	56	3	0	3	0	0	6	2	63	0	0	0	65	127
7:30 AM	0	0	2	63	0	0	0	65	2	0	2	0	0	4	4	96	0	0	0	100	169
7:45 AM	0	0	2	75	0	0	1	77	0	0	4	0	0	4	3	113	0	0	0	116	197
Hourly Total	0	0	8	254	2	0	1	264	9	0	12	0	0	21	10	322	0	0	0	332	617
8:00 AM	0	0	2	73	1	0	0	76	1	0	1	0	0	2	1	71	0	0	0	72	150
8:15 AM	0	0	0	71	1	0	0	72	2	0	4	0	0	6	1	74	0	0	1	75	153
8:30 AM	0	0	2	66	0	0	0	68	0	0	3	0	0	3	0	74	0	0	0	74	145
8:45 AM	0	0	4	66	0	0	0	70	1	0	4	0	0	5	5	64	0	0	0	69	144
Hourly Total	0	0	8	276	2	0	0	286	4	0	12	0	0	16	7	283	0	0	1	290	592
9:00 AM	0	0	4	47	1	0	0	52	1	0	1	0	0	2	5	64	0	0	0	69	123
9:15 AM	1	0	3	59	0	0	1	62	0	0	2	0	1	2	0	65	0	0	0	65	129
9:30 AM	1	0	4	60	0	0	0	64	2	0	4	0	0	6	0	57	0	0	0	57	127
9:45 AM	0	0	7	51	1	0	0	59	1	0	0	0	0	1	0	62	0	0	0	62	122
Hourly Total	2	0	18	217	2	0	1	237	4	0	7	0	1	11	5	248	0	0	0	253	501
10:00 AM	0	0	2	70	1	0	0	73	2	1	0	0	0	3	2	58	1	0	1	61	137
10:15 AM	0	0	5	55	0	0	0	60	0	0	2	0	0	2	0	78	0	0	0	78	140
10:30 AM	0	0	9	55	0	0	0	64	2	0	1	0	0	3	2	71	0	0	0	73	140
10:45 AM	0	0	6	52	0	0	0	58	2	0	2	0	0	4	4	64	0	0	0	68	130
Hourly Total	0	0	22	232	1	0	0	255	6	1	5	0	0	12	8	271	1	0	1	280	547
11:00 AM	0	0	6	69	1	0	0	76	1	1	3	0	1	5	1	68	0	0	0	69	150
11:15 AM	0	0	6	63	0	0	0	69	0	0	1	0	0	1	2	63	0	0	0	65	135
11:30 AM	0	0	10	80	2	0	0	92	0	0	0	0	1	0	1	68	0	0	0	69	161
11:45 AM	1	0	7	67	1	0	1	75	1	1	2	0	1	4	3	65	0	0	0	68	147
Hourly Total	1	0	29	279	4	0	1	312	2	2	6	0	3	10	7	264	0	0	0	271	593
12:00 PM	0	0	13	60	0	0	0	73	1	0	1	0	1	2	2	71	0	0	1	73	148
12:15 PM	0	0	17	63	0	0	0	80	1	0	0	0	0	1	2	81	0	0	1	83	164
12:30 PM	0	0	13	66	0	0	0	79	0	1	3	0	2	4	4	75	0	0	0	79	162
12:45 PM	2	0	8	67	0	0	0	75	1	0	0	0	0	1	2	92	0	0	0	94	170
Hourly Total	2	0	51	256	0	0	0	307	3	1	4	0	3	8	10	319	0	0	2	329	644
1:00 PM	0	0	14	52	0	0	0	66	0	0	0	0	1	0	2	94	0	0	0	96	162
1:15 PM	1	0	10	68	2	0	0	80	1	0	2	0	0	3	1	82	0	0	1	83	166
1:30 PM	0	0	15	68	0	0	0	83	4	0	1	0	0	5	4	80	0	0	0	84	172
1:45 PM	0	0	11	82	4	0	1	97	0	0	4	0	0	4	5	78	2	0	0	85	186
Hourly Total	1	0	50	270	6	0	1	326	5	0	7	0	1	12	12	334	2	0	1	348	686
2:00 PM	0	0	9	65	0	0	0	74	0	0	3	0	1	3	1	78	0	0	0	79	156
2:15 PM	0	0	11	57	1	0	0	69	2	0	2	0	2	4	2	90	0	0	0	92	165
2:30 PM	1	0	7	68	2	0	0	77	0	0	2	0	0	2	1	84	0	0	0	85	164

2:45 PM	0	0	13	76	2	0	0	91	2	2	0	0	1	4	3	93	1	0	0	97	192
Hourly Total	1	0	40	266	5	0	0	311	4	2	7	0	4	13	7	345	1	0	0	353	677
3:00 PM	1	0	10	93	1	0	0	104	4	1	3	0	1	8	4	110	0	0	0	114	226
3:15 PM	3	0	6	82	0	0	0	88	1	0	1	0	4	2	6	91	0	0	0	97	187
3:30 PM	1	0	6	124	0	0	1	130	1	0	5	0	0	6	4	94	1	0	0	99	235
3:45 PM	2	0	7	92	2	0	0	101	2	0	2	0	3	4	3	98	0	0	0	101	206
Hourly Total	7	0	29	391	3	0	1	423	8	1	11	0	8	20	17	393	1	0	0	411	854
4:00 PM	0	0	2	95	2	0	0	99	3	0	4	0	0	7	6	121	0	0	0	127	233
4:15 PM	3	0	7	106	3	0	0	116	4	0	0	0	0	4	6	90	0	0	0	96	216
4:30 PM	1	0	4	130	2	0	0	136	1	0	2	0	2	3	2	99	0	0	0	101	240
4:45 PM	0	0	2	108	1	0	1	111	0	0	3	0	0	3	4	91	0	0	0	95	209
Hourly Total	4	0	15	439	8	0	1	462	8	0	9	0	2	17	18	401	0	0	0	419	898
5:00 PM	0	0	10	104	2	0	1	116	1	0	2	0	1	3	2	94	0	0	2	96	215
5:15 PM	2	0	4	111	0	0	1	115	4	0	1	0	0	5	6	108	0	0	1	114	234
5:30 PM	0	0	1	97	3	0	0	101	0	1	0	0	0	1	2	82	0	0	0	84	186
5:45 PM	0	0	1	97	4	0	0	102	1	0	0	0	0	1	3	78	1	0	0	82	185
Hourly Total	2	0	16	409	9	0	2	434	6	1	3	0	1	10	13	362	1	0	3	376	820
Grand Total	20	0	286	3289	42	0	8	3617	59	8	83	0	23	150	114	3542	6	0	8	3662	7429
Approach %	-	-	7.9	90.9	1.2	0.0	-	-	39.3	5.3	55.3	0.0	-	-	3.1	96.7	0.2	0.0	-	-	-
Total %	-	0.0	3.8	44.3	0.6	0.0	-	48.7	0.8	0.1	1.1	0.0	-	2.0	1.5	47.7	0.1	0.0	-	49.3	-
Lights	-	0	285	3184	41	0	-	3510	58	8	81	0	-	147	112	3449	6	0	-	3567	7224
% Lights	-	-	99.7	96.8	97.6	-	-	97.0	98.3	100.0	97.6	-	-	98.0	98.2	97.4	100.0	-	-	97.4	97.2
Other Vehicles	-	0	1	105	1	0	-	107	1	0	2	0	-	3	2	93	0	0	-	95	205
% Other Vehicles	-	-	0.3	3.2	2.4	-	-	3.0	1.7	0.0	2.4	-	-	2.0	1.8	2.6	0.0	-	-	2.6	2.8
Bicycles on Crosswalk	3	-	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	15.0	-	-	-	-	-	12.5	-	-	-	-	-	21.7	-	-	-	-	-	0.0	-	-
Pedestrians	17	-	-	-	-	-	7	-	-	-	-	-	18	-	-	-	-	-	8	-	-
% Pedestrians	85.0	-	-	-	-	-	87.5	-	-	-	-	-	78.3	-	-	-	-	-	100.0	-	-

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : W_Erie_Ave_at_5th_St_198834_11-11-2014(1)
Site Code :
Start Date : 11/11/2014
Page No : 1

Groups Printed- Lights - Other Vehicles - Pedestrians

	Ashland Ave From North				W Erie Ave From Northeast				5th St From East				W Erie Ave From Southwest				
Start Time	Bear Right	Left	Hard Left	Peds	Hard Right	Thru	Hard Left	Peds	Hard Right	Right	Bear Left	Peds	Bear Right	Thru	Bear Left	Peds	Int. Total
07:00 AM	0	0	0	0	0	57	0	0	0	0	5	0	4	53	0	0	119
07:15 AM	1	0	1	1	0	48	0	0	0	0	1	0	4	66	0	1	123
07:30 AM	3	1	1	0	1	58	0	0	0	1	3	0	8	96	0	0	172
07:45 AM	0	0	1	0	0	63	1	0	0	0	6	0	9	105	1	0	186
Total	4	1	3	1	1	226	1	0	0	1	15	0	25	320	1	1	600
08:00 AM	1	0	0	0	0	68	0	0	1	0	8	0	6	76	0	0	160
08:15 AM	1	1	3	0	0	60	0	0	0	0	1	0	5	76	0	0	147
08:30 AM	0	0	0	0	0	61	1	0	0	0	6	0	6	73	0	0	147
08:45 AM	3	0	0	0	1	55	0	0	0	0	5	0	7	56	0	0	127
Total	5	1	3	0	1	244	1	0	1	0	20	0	24	281	0	0	581
09:00 AM	0	0	0	0	0	49	0	0	0	0	4	0	15	48	0	0	116
09:15 AM	1	0	1	4	0	61	0	2	0	0	6	0	4	65	0	0	144
09:30 AM	0	0	0	0	0	54	0	0	0	0	3	0	9	51	0	0	117
09:45 AM	0	0	1	0	0	54	1	0	0	0	6	0	12	55	0	0	129
Total	1	0	2	4	0	218	1	2	0	0	19	0	40	219	0	0	506
10:00 AM	0	0	0	0	0	59	0	0	0	0	6	0	10	50	0	0	125
10:15 AM	0	0	1	0	0	56	0	0	1	0	4	0	5	65	0	0	132
10:30 AM	0	0	1	0	0	53	0	0	0	0	7	0	6	66	0	0	133
10:45 AM	0	0	0	0	0	48	0	0	0	0	7	0	6	58	0	0	119
Total	0	0	2	0	0	216	0	0	1	0	24	0	27	239	0	0	509
11:00 AM	0	0	0	0	0	76	0	0	0	0	1	0	10	63	0	0	150
11:15 AM	0	0	0	0	0	70	1	0	0	0	3	0	10	50	0	0	134
11:30 AM	0	0	0	0	1	77	1	0	0	0	5	0	13	54	0	0	151
11:45 AM	0	0	2	0	0	61	0	0	1	0	9	0	7	57	0	0	137
Total	0	0	2	0	1	284	2	0	1	0	18	0	40	224	0	0	572
12:00 PM	2	0	0	0	0	74	0	0	0	0	4	0	10	59	0	0	149
12:15 PM	0	0	0	0	0	62	0	0	0	0	7	0	7	69	0	0	145
12:30 PM	2	0	0	0	0	70	1	0	0	2	6	2	11	67	0	0	161
12:45 PM	1	0	0	2	0	61	0	0	0	0	7	4	11	81	0	0	167
Total	5	0	0	2	0	267	1	0	0	2	24	6	39	276	0	0	622
01:00 PM	0	0	0	2	0	55	0	0	0	0	9	0	16	81	0	0	163
01:15 PM	0	0	0	0	0	71	0	0	1	0	5	0	18	69	0	0	164
01:30 PM	0	0	0	0	1	72	0	0	0	0	10	0	13	70	0	0	166
01:45 PM	1	2	0	0	0	85	0	0	0	0	11	0	8	61	0	0	168
Total	1	2	0	2	1	283	0	0	1	0	35	0	55	281	0	0	661
02:00 PM	1	0	1	2	1	70	1	0	0	0	8	0	9	71	0	0	164
02:15 PM	0	1	0	0	0	63	0	0	0	0	6	2	13	77	1	0	163
02:30 PM	0	0	0	0	0	83	0	0	0	1	6	0	9	76	0	0	175
02:45 PM	0	2	0	0	0	91	0	0	1	1	10	0	14	79	0	0	198
Total	1	3	1	2	1	307	1	0	1	2	30	2	45	303	1	0	700
03:00 PM	1	0	0	0	0	102	0	0	0	0	4	6	19	94	0	0	226
03:15 PM	2	1	1	4	1	82	0	0	0	0	8	0	10	82	0	0	191

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : W_Erie_Ave_at_5th_St_198834_11-11-2014(1)
Site Code :
Start Date : 11/11/2014
Page No : 2

Groups Printed- Lights - Other Vehicles - Pedestrians

	Ashland Ave From North				W Erie Ave From Northeast				5th St From East				W Erie Ave From Southwest				
Start Time	Bear Right	Left	Hard Left	Peds	Hard Right	Thru	Hard Left	Peds	Hard Right	Right	Bear Left	Peds	Bear Right	Thru	Bear Left	Peds	Int. Total
03:30 PM	0	0	0	0	0	124	0	0	1	0	5	2	11	85	0	0	228
03:45 PM	1	1	1	0	0	86	0	0	0	0	15	2	10	89	0	0	205
Total	4	2	2	4	1	394	0	0	1	0	32	10	50	350	0	0	850
04:00 PM	0	0	0	2	1	95	0	2	0	0	8	0	19	93	0	0	220
04:15 PM	1	0	0	0	2	105	0	0	0	0	15	0	8	80	0	0	211
04:30 PM	1	0	1	0	1	110	0	0	0	0	16	4	17	75	1	0	226
04:45 PM	1	0	0	2	0	100	0	0	1	0	8	0	8	70	0	0	190
Total	3	0	1	4	4	410	0	2	1	0	47	4	52	318	1	0	847
05:00 PM	0	0	0	0	1	117	2	0	1	0	7	0	13	77	1	0	219
05:15 PM	1	0	2	0	0	106	0	0	1	0	10	0	9	97	0	0	226
05:30 PM	0	0	0	0	1	90	0	0	0	0	9	0	8	64	0	0	172
05:45 PM	1	1	0	0	1	103	0	0	0	0	4	0	8	69	0	0	187
Total	2	1	2	0	3	416	2	0	2	0	30	0	38	307	1	0	804
Grand Total	26	10	18	19	13	3265	9	4	9	5	294	22	435	3118	4	1	7252
Apprch %	35.6	13.7	24.7	26	0.4	99.2	0.3	0.1	2.7	1.5	89.1	6.7	12.2	87.6	0.1	0	
Total %	0.4	0.1	0.2	0.3	0.2	45	0.1	0.1	0.1	0.1	4.1	0.3	6	43	0.1	0	
Lights	23	9	17	10	12	3183	9	2	9	4	285	13	424	3026	3	1	7030
% Lights	88.5	90	94.4	52.6	92.3	97.5	100	50	100	80	96.9	59.1	97.5	97	75	100	96.9
Other Vehicles	3	1	1	0	1	82	0	0	0	1	9	0	11	92	1	0	202
% Other Vehicles	11.5	10	5.6	0	7.7	2.5	0	0	0	20	3.1	0	2.5	3	25	0	2.8
Pedestrians	0	0	0	9	0	0	0	2	0	0	0	9	0	0	0	0	20
% Pedestrians	0	0	0	47.4	0	0	0	50	0	0	0	40.9	0	0	0	0	0.3

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: W Erie Ave at Oberlin Ave
Site Code:
Start Date: 11/06/2014

Turning Movement Data

Start Time	Oberlin Ave Southbound						W Erie Ave Westbound						Oberlin Ave Northbound						W Erie Ave Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	1	0	0	0	2	0	48	5	0	0	53	9	4	2	0	0	15	1	71	1	0	0	73	143
7:15 AM	3	1	0	0	0	4	0	38	6	0	0	44	19	2	3	0	0	24	0	63	5	0	0	68	140
7:30 AM	2	1	0	0	0	3	0	57	14	0	1	71	18	4	1	0	0	23	1	93	5	0	0	99	196
7:45 AM	2	0	1	0	0	3	1	62	21	0	0	84	21	1	4	0	0	26	3	123	11	0	0	137	250
Hourly Total	8	3	1	0	0	12	1	205	46	0	1	252	67	11	10	0	0	88	5	350	22	0	0	377	729
8:00 AM	1	3	0	0	0	4	0	75	21	0	0	96	27	2	4	0	0	33	5	102	12	0	0	119	252
8:15 AM	3	1	1	0	0	5	2	67	12	0	0	81	40	7	6	0	0	53	3	107	8	0	0	118	257
8:30 AM	3	5	3	0	0	11	0	52	10	0	0	62	10	6	1	0	1	17	1	68	5	0	0	74	164
8:45 AM	2	3	0	0	2	5	0	60	14	0	0	74	17	2	3	0	1	22	0	64	5	0	0	69	170
Hourly Total	9	12	4	0	2	25	2	254	57	0	0	313	94	17	14	0	2	125	9	341	30	0	0	380	843
9:00 AM	2	6	5	0	0	13	0	46	13	0	0	59	12	3	1	0	0	16	1	55	6	0	0	62	150
9:15 AM	4	4	7	0	0	15	1	54	9	0	0	64	10	2	4	0	1	16	2	49	6	0	0	57	152
9:30 AM	6	10	2	0	0	18	1	42	7	0	0	50	6	3	3	0	0	12	3	42	3	0	0	48	128
9:45 AM	4	5	4	0	0	13	3	53	8	0	0	64	14	3	0	0	2	17	1	53	5	0	0	59	153
Hourly Total	16	25	18	0	0	59	5	195	37	0	0	237	42	11	8	0	3	61	7	199	20	0	0	226	583
10:00 AM	4	5	3	0	0	12	1	57	6	0	0	64	13	2	4	0	0	19	1	46	2	0	0	49	144
10:15 AM	1	4	1	0	0	6	0	49	10	0	0	59	9	6	1	0	0	16	4	43	7	0	0	54	135
10:30 AM	5	5	2	0	2	12	1	42	18	0	0	61	11	2	2	0	0	15	3	53	7	0	2	63	151
10:45 AM	6	6	4	0	0	16	1	48	9	0	0	58	16	7	5	0	0	28	2	68	7	0	0	77	179
Hourly Total	16	20	10	0	2	46	3	196	43	0	0	242	49	17	12	0	0	78	10	210	23	0	2	243	609
11:00 AM	7	10	1	0	0	18	0	54	10	0	0	64	10	1	3	0	0	14	1	54	6	0	0	61	157
11:15 AM	11	7	2	0	1	20	0	58	12	0	0	70	8	5	4	0	0	17	2	45	9	0	0	56	163
11:30 AM	7	9	2	0	0	18	1	46	12	0	1	59	7	4	8	0	0	19	3	44	11	0	0	58	154
11:45 AM	11	7	3	0	0	21	0	63	15	0	0	78	13	3	3	0	0	19	2	48	6	0	0	56	174
Hourly Total	36	33	8	0	1	77	1	221	49	0	1	271	38	13	18	0	0	69	8	191	32	0	0	231	648
12:00 PM	7	10	2	0	0	19	1	75	16	0	0	92	19	7	4	0	0	30	2	48	6	0	0	56	197
12:15 PM	12	6	5	0	0	23	0	73	11	0	0	84	12	7	5	0	0	24	1	55	9	0	0	65	196
12:30 PM	4	3	4	0	1	11	2	67	9	0	0	78	23	5	4	0	0	32	3	82	6	0	1	91	212
12:45 PM	5	7	5	0	0	17	0	50	12	0	0	62	22	4	5	0	0	31	4	74	9	0	0	87	197
Hourly Total	28	26	16	0	1	70	3	265	48	0	0	316	76	23	18	0	0	117	10	259	30	0	1	299	802
1:00 PM	3	8	2	0	0	13	0	68	16	0	0	84	21	6	2	0	0	29	0	70	6	0	0	76	202
1:15 PM	5	3	1	0	0	9	0	72	15	0	0	87	13	2	4	0	0	19	1	85	3	0	0	89	204
1:30 PM	8	8	3	0	0	19	2	81	8	0	0	91	21	6	5	0	0	32	0	64	6	0	0	70	212
1:45 PM	1	2	2	0	0	5	1	56	12	0	0	69	16	6	5	0	0	27	4	68	1	0	0	73	174
Hourly Total	17	21	8	0	0	46	3	277	51	0	0	331	71	20	16	0	0	107	5	287	16	0	0	308	792
2:00 PM	3	9	2	0	0	14	0	66	23	0	0	89	22	3	7	0	0	32	5	56	4	0	0	65	200
2:15 PM	4	2	2	0	0	8	1	69	14	0	0	84	17	2	3	0	1	22	0	74	3	0	0	77	191

2:30 PM	5	6	3	0	0	14	4	74	21	0	0	99	16	4	4	0	0	24	8	75	6	0	0	89	226
2:45 PM	3	3	6	0	0	12	1	82	25	0	0	108	22	2	1	0	0	25	3	69	6	0	0	78	223
Hourly Total	15	20	13	0	0	48	6	291	83	0	0	380	77	11	15	0	1	103	16	274	19	0	0	309	840
3:00 PM	7	17	0	0	0	24	0	90	16	0	0	106	16	7	2	0	0	25	5	80	7	0	0	92	247
3:15 PM	1	8	5	0	0	14	4	75	21	0	0	100	17	3	7	0	2	27	1	65	5	0	0	71	212
3:30 PM	11	7	3	0	0	21	0	77	18	0	0	95	36	4	12	0	2	52	2	73	1	0	0	76	244
3:45 PM	3	6	2	0	2	11	0	80	36	0	0	116	22	2	2	0	0	26	1	81	3	0	0	85	238
Hourly Total	22	38	10	0	2	70	4	322	91	0	0	417	91	16	23	0	4	130	9	299	16	0	0	324	941
4:00 PM	13	2	1	0	0	16	1	109	25	0	0	135	19	2	8	0	0	29	3	70	1	0	0	74	254
4:15 PM	5	6	0	0	0	11	0	79	17	0	0	96	14	1	3	0	4	18	2	69	3	0	0	74	199
4:30 PM	11	17	2	0	0	30	0	109	19	0	0	128	16	0	7	0	0	23	1	81	2	0	0	84	265
4:45 PM	5	3	0	0	0	8	0	87	12	0	0	99	23	1	3	0	0	27	4	66	3	0	0	73	207
Hourly Total	34	28	3	0	0	65	1	384	73	0	0	458	72	4	21	0	4	97	10	286	9	0	0	305	925
5:00 PM	1	4	1	0	0	6	1	110	16	0	0	127	24	0	6	0	0	30	0	89	0	0	0	89	252
5:15 PM	5	1	0	0	0	6	1	93	29	0	0	123	14	2	4	0	0	20	3	53	0	0	0	56	205
5:30 PM	1	3	0	0	0	4	1	100	23	0	0	124	14	1	3	0	0	18	3	59	2	0	0	64	210
5:45 PM	1	3	0	0	0	4	0	79	25	0	0	104	16	1	5	0	0	22	3	66	2	0	0	71	201
Hourly Total	8	11	1	0	0	20	3	382	93	0	0	478	68	4	18	0	0	90	9	267	4	0	0	280	868
Grand Total	209	237	92	0	8	538	32	2992	671	0	2	3695	745	147	173	0	14	1065	98	2963	221	0	3	3282	8580
Approach %	38.8	44.1	17.1	0.0	-	-	0.9	81.0	18.2	0.0	-	-	70.0	13.8	16.2	0.0	-	-	3.0	90.3	6.7	0.0	-	-	-
Total %	2.4	2.8	1.1	0.0	-	6.3	0.4	34.9	7.8	0.0	-	43.1	8.7	1.7	2.0	0.0	-	12.4	1.1	34.5	2.6	0.0	-	38.3	-
Lights	202	236	91	0	-	529	29	2908	659	0	-	3596	715	144	165	0	-	1024	92	2895	220	0	-	3207	8356
% Lights	96.7	99.6	98.9	-	-	98.3	90.6	97.2	98.2	-	-	97.3	96.0	98.0	95.4	-	-	96.2	93.9	97.7	99.5	-	-	97.7	97.4
Other Vehicles	7	1	1	0	-	9	3	84	12	0	-	99	30	3	8	0	-	41	6	68	1	0	-	75	224
% Other Vehicles	3.3	0.4	1.1	-	-	1.7	9.4	2.8	1.8	-	-	2.7	4.0	2.0	4.6	-	-	3.8	6.1	2.3	0.5	-	-	2.3	2.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	50.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	1	-	-	-	-	-	14	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	50.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: W Erie Ave at Washington Ave
Site Code:
Start Date: 11/06/2014

Turning Movement Data

Start Time	Washington Ave Southbound						W Erie Ave Westbound						Washington Ave Northbound						W Erie Ave Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	2	1	0	0	3	0	52	5	0	0	57	2	1	0	0	1	3	5	74	1	0	0	80	143
7:15 AM	2	1	0	0	0	3	2	50	7	0	0	59	1	0	0	0	2	1	2	84	1	0	0	87	150
7:30 AM	0	2	1	0	0	3	0	71	4	0	0	75	0	2	2	0	0	4	3	107	0	0	1	110	192
7:45 AM	1	1	2	0	0	4	1	86	7	0	0	94	7	3	11	0	0	21	11	124	1	0	0	136	255
Hourly Total	3	6	4	0	0	13	3	259	23	0	0	285	10	6	13	0	3	29	21	389	3	0	1	413	740
8:00 AM	0	3	0	0	0	3	0	110	10	0	1	120	4	0	4	0	1	8	2	128	0	0	3	130	261
8:15 AM	2	3	1	0	0	6	1	84	9	0	0	94	8	1	5	0	0	14	9	139	1	0	0	149	263
8:30 AM	1	3	1	0	0	5	2	50	5	0	3	57	8	1	8	0	0	17	6	78	0	0	0	84	163
8:45 AM	1	3	2	0	1	6	1	69	6	0	0	76	6	1	4	0	2	11	10	71	3	0	0	84	177
Hourly Total	4	12	4	0	1	20	4	313	30	0	4	347	26	3	21	0	3	50	27	416	4	0	3	447	864
9:00 AM	1	3	1	0	0	5	2	53	3	0	0	58	3	3	7	0	0	13	10	55	3	0	1	68	144
9:15 AM	0	2	1	0	0	3	2	58	3	0	0	63	2	4	4	0	0	10	4	53	2	0	0	59	135
9:30 AM	0	0	1	0	0	1	1	53	4	0	0	58	2	1	3	0	1	6	2	46	1	0	0	49	114
9:45 AM	0	1	0	1	0	2	2	67	2	0	2	71	1	2	2	0	2	5	8	50	3	0	0	61	139
Hourly Total	1	6	3	1	0	11	7	231	12	0	2	250	8	10	16	0	3	34	24	204	9	0	1	237	532
10:00 AM	1	6	3	0	0	10	1	63	5	0	0	69	4	1	3	0	0	8	6	56	1	0	0	63	150
10:15 AM	2	1	3	0	0	6	0	48	4	0	0	52	3	3	4	0	0	10	1	50	1	0	0	52	120
10:30 AM	1	2	0	0	2	3	0	56	8	0	1	64	3	2	9	0	1	14	9	61	1	0	0	71	152
10:45 AM	2	0	0	0	0	2	0	58	3	0	1	61	6	3	2	0	1	11	11	78	1	0	0	90	164
Hourly Total	6	9	6	0	2	21	1	225	20	0	2	246	16	9	18	0	2	43	27	245	4	0	0	276	586
11:00 AM	0	1	0	0	0	1	0	53	6	0	0	59	7	2	9	0	2	18	2	66	0	0	0	68	146
11:15 AM	0	1	1	0	0	2	1	60	3	0	0	64	5	2	9	0	1	16	1	51	2	0	0	54	136
11:30 AM	1	4	1	0	0	6	0	56	8	0	2	64	3	1	6	0	1	10	3	55	0	0	0	58	138
11:45 AM	0	2	1	0	1	3	0	77	7	0	1	84	3	0	10	0	0	13	7	56	1	0	0	64	164
Hourly Total	1	8	3	0	1	12	1	246	24	0	3	271	18	5	34	0	4	57	13	228	3	0	0	244	584
12:00 PM	1	1	0	0	0	2	1	76	2	0	2	79	6	4	8	0	1	18	9	65	0	0	1	74	173
12:15 PM	5	3	3	0	0	11	2	76	4	0	0	82	3	4	8	0	0	15	9	65	0	0	0	74	182
12:30 PM	3	2	0	0	0	5	1	66	9	0	0	76	2	1	10	0	1	13	3	105	2	0	0	110	204
12:45 PM	2	1	3	0	0	6	0	54	6	0	0	60	10	1	5	0	0	16	7	90	2	0	1	99	181
Hourly Total	11	7	6	0	0	24	4	272	21	0	2	297	21	10	31	0	2	62	28	325	4	0	2	357	740
1:00 PM	4	2	1	0	0	7	1	71	2	0	1	74	13	2	9	0	0	24	12	82	2	0	0	96	201
1:15 PM	1	0	3	0	0	4	3	83	7	0	0	93	2	1	5	0	0	8	12	92	2	0	0	106	211
1:30 PM	4	6	0	0	0	10	3	84	6	0	1	93	6	3	9	0	0	18	6	86	0	0	0	92	213
1:45 PM	1	2	2	0	0	5	1	58	3	0	1	62	4	4	5	0	0	13	9	75	1	0	0	85	165
Hourly Total	10	10	6	0	0	26	8	296	18	0	3	322	25	10	28	0	0	63	39	335	5	0	0	379	790
2:00 PM	2	1	5	0	0	8	2	78	10	0	0	90	6	0	12	0	2	18	1	79	1	0	0	81	197
2:15 PM	0	2	0	0	1	2	3	81	9	0	0	93	6	3	10	0	2	19	5	89	0	0	1	94	208

2:30 PM	2	6	1	0	0	9	3	91	8	0	1	102	2	2	11	0	1	15	8	85	1	0	0	94	220
2:45 PM	1	3	1	0	0	5	2	99	13	0	0	114	9	2	5	0	4	16	9	82	1	0	0	92	227
Hourly Total	5	12	7	0	1	24	10	349	40	0	1	399	23	7	38	0	9	68	23	335	3	0	1	361	852
3:00 PM	3	2	0	0	0	5	4	102	5	0	1	111	9	3	6	0	5	18	8	88	1	0	0	97	231
3:15 PM	1	0	0	0	0	1	4	97	13	0	1	114	10	4	17	0	2	31	10	73	1	0	2	84	230
3:30 PM	4	2	2	0	2	8	2	89	15	0	1	106	14	5	12	0	0	31	8	109	1	0	4	118	263
3:45 PM	0	2	1	0	0	3	0	114	15	0	0	129	13	4	5	0	0	22	8	100	0	0	0	108	262
Hourly Total	8	6	3	0	2	17	10	402	48	0	3	460	46	16	40	0	7	102	34	370	3	0	6	407	986
4:00 PM	0	0	0	0	0	0	1	122	6	0	2	129	9	0	17	0	0	26	3	81	0	0	0	84	239
4:15 PM	5	6	0	0	0	11	2	80	8	0	0	90	9	8	13	0	2	30	4	81	1	0	0	86	217
4:30 PM	0	1	0	0	0	1	1	113	8	0	0	122	5	1	9	0	3	15	3	95	1	0	0	99	237
4:45 PM	0	3	0	0	0	3	0	93	14	0	0	107	3	1	15	0	1	19	4	92	0	0	0	96	225
Hourly Total	5	10	0	0	0	15	4	408	36	0	2	448	26	10	54	0	6	90	14	349	2	0	0	365	918
5:00 PM	0	3	1	0	1	4	1	116	12	0	1	129	6	2	16	0	0	24	3	115	0	0	0	118	275
5:15 PM	0	0	1	0	0	1	1	121	10	0	3	132	3	4	2	0	0	9	5	68	0	0	0	73	215
5:30 PM	0	0	0	0	0	0	1	128	13	0	2	142	4	0	11	0	0	15	5	68	1	0	2	74	231
5:45 PM	0	2	2	0	0	4	2	94	12	0	0	108	5	2	9	0	0	16	1	88	0	0	0	89	217
Hourly Total	0	5	4	0	1	9	5	459	47	0	6	511	18	8	38	0	0	64	14	339	1	0	2	354	938
Grand Total	54	91	46	1	8	192	57	3460	319	0	28	3836	237	94	331	0	39	662	264	3535	41	0	16	3840	8530
Approach %	28.1	47.4	24.0	0.5	-	-	1.5	90.2	8.3	0.0	-	-	35.8	14.2	50.0	0.0	-	-	6.9	92.1	1.1	0.0	-	-	-
Total %	0.6	1.1	0.5	0.0	-	2.3	0.7	40.6	3.7	0.0	-	45.0	2.8	1.1	3.9	0.0	-	7.8	3.1	41.4	0.5	0.0	-	45.0	-
Lights	53	86	44	1	-	184	56	3360	306	0	-	3722	219	89	315	0	-	623	254	3439	40	0	-	3733	8262
% Lights	98.1	94.5	95.7	100.0	-	95.8	98.2	97.1	95.9	-	-	97.0	92.4	94.7	95.2	-	-	94.1	96.2	97.3	97.6	-	-	97.2	96.9
Other Vehicles	1	5	2	0	-	8	1	100	13	0	-	114	18	5	16	0	-	39	10	96	1	0	-	107	268
% Other Vehicles	1.9	5.5	4.3	0.0	-	4.2	1.8	2.9	4.1	-	-	3.0	7.6	5.3	4.8	-	-	5.9	3.8	2.7	2.4	-	-	2.8	3.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	10.7	-	-	-	-	-	2.6	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	25	-	-	-	-	-	38	-	-	-	-	-	16	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	89.3	-	-	-	-	-	97.4	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Oberlin Ave at W 5th St
Site Code:
Start Date: 12/02/2014

Turning Movement Data

Start Time	Oberlin Ave Southbound						W 5th St Westbound						Oberlin Ave Northbound						W 5th St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	10	0	0	0	10	0	0	1	0	0	1	0	23	1	0	0	24	2	1	0	0	0	3	38
7:15 AM	0	6	0	0	0	6	0	0	0	0	0	0	1	18	3	0	0	22	3	3	1	0	0	7	35
7:30 AM	0	10	0	0	1	10	2	4	1	0	0	7	2	22	3	0	0	27	5	2	0	0	0	7	51
7:45 AM	0	24	0	0	0	24	1	0	3	0	2	4	6	27	2	0	0	35	5	3	0	0	0	8	71
Hourly Total	0	50	0	0	1	50	3	4	5	0	2	12	9	90	9	0	0	108	15	9	1	0	0	25	195
8:00 AM	1	35	0	0	1	36	1	3	3	0	3	7	16	38	3	0	0	57	4	6	3	0	0	13	113
8:15 AM	2	37	3	0	3	42	0	2	9	0	4	11	8	41	3	0	3	52	5	2	2	0	5	9	114
8:30 AM	0	15	2	0	1	17	0	8	3	1	0	12	5	22	3	0	0	30	4	5	0	0	0	9	68
8:45 AM	1	17	0	0	0	18	4	3	4	0	0	11	8	13	2	0	0	23	5	8	1	0	0	14	66
Hourly Total	4	104	5	0	5	113	5	16	19	1	7	41	37	114	11	0	3	162	18	21	6	0	5	45	361
9:00 AM	1	15	0	0	0	16	0	4	6	0	1	10	6	24	2	0	2	32	2	8	1	0	0	11	69
9:15 AM	0	19	3	0	0	22	0	5	3	0	0	8	9	19	2	0	0	30	4	6	0	0	0	10	70
9:30 AM	0	13	0	0	1	13	0	1	5	0	0	6	5	13	1	0	0	19	2	2	0	0	0	4	42
9:45 AM	0	19	0	0	0	19	2	1	5	0	0	8	4	17	3	0	0	24	1	6	1	0	0	8	59
Hourly Total	1	66	3	0	1	70	2	11	19	0	1	32	24	73	8	0	2	105	9	22	2	0	0	33	240
10:00 AM	0	18	2	0	0	20	0	1	4	0	0	5	5	15	0	0	0	20	4	4	0	0	1	8	53
10:15 AM	0	23	0	0	0	23	1	2	6	0	0	9	10	19	4	0	0	33	6	6	0	0	0	12	77
10:30 AM	3	17	3	0	0	23	0	1	6	1	0	8	2	13	1	0	0	16	1	9	0	0	0	10	57
10:45 AM	0	15	0	0	1	15	0	1	3	0	0	4	3	17	4	0	0	24	5	0	1	0	0	6	49
Hourly Total	3	73	5	0	1	81	1	5	19	1	0	26	20	64	9	0	0	93	16	19	1	0	1	36	236
11:00 AM	1	20	0	0	1	21	0	3	7	0	0	10	7	24	3	0	0	34	8	6	2	0	0	16	81
11:15 AM	0	11	0	0	0	11	2	7	5	0	0	14	7	14	3	0	0	24	2	4	0	0	1	6	55
11:30 AM	0	26	0	0	0	26	0	6	6	0	0	12	8	17	1	0	0	26	4	4	1	0	1	9	73
11:45 AM	0	21	1	0	0	22	1	5	7	0	0	13	7	20	7	0	1	34	7	6	1	0	0	14	83
Hourly Total	1	78	1	0	1	80	3	21	25	0	0	49	29	75	14	0	1	118	21	20	4	0	2	45	292
12:00 PM	1	28	1	0	0	30	1	2	8	0	1	11	6	35	4	0	0	45	3	2	1	0	0	6	92
12:15 PM	0	30	1	0	0	31	1	4	5	0	0	10	2	28	3	0	0	33	8	11	0	0	0	19	93
12:30 PM	1	13	2	0	0	16	1	5	7	0	0	13	9	25	6	0	2	40	8	2	0	0	0	10	79
12:45 PM	0	22	0	0	1	22	1	2	8	0	0	11	4	24	3	1	0	32	8	6	0	0	0	14	79
Hourly Total	2	93	4	0	1	99	4	13	28	0	1	45	21	112	16	1	2	150	27	21	1	0	0	49	343
1:00 PM	0	24	0	0	0	24	1	4	10	0	0	15	6	21	5	0	0	32	8	5	0	0	0	13	84
1:15 PM	0	27	1	0	0	28	1	4	6	1	0	12	5	17	2	0	2	24	3	6	1	0	1	10	74
1:30 PM	1	25	0	0	1	26	1	5	6	0	0	12	4	19	3	0	1	26	6	2	0	0	0	8	72
1:45 PM	1	20	0	0	0	21	2	4	3	0	0	9	8	22	6	0	0	36	3	4	0	0	0	7	73
Hourly Total	2	96	1	0	1	99	5	17	25	1	0	48	23	79	16	0	3	118	20	17	1	0	1	38	303
2:00 PM	0	25	0	0	3	25	1	3	7	0	0	11	9	19	3	0	0	31	7	8	0	0	0	15	82
2:15 PM	0	21	1	0	0	22	0	4	6	0	0	10	12	27	3	0	0	42	8	7	2	0	0	17	91

2:30 PM	0	22	0	0	1	22	2	5	3	0	0	10	10	26	4	0	0	40	4	8	0	0	1	12	84
2:45 PM	2	38	1	0	0	41	1	2	7	0	0	10	9	30	5	0	0	44	9	6	0	0	0	15	110
Hourly Total	2	106	2	0	4	110	4	14	23	0	0	41	40	102	15	0	0	157	28	29	2	0	1	59	367
3:00 PM	1	41	0	0	4	42	1	8	7	0	0	16	8	30	10	0	4	48	5	6	0	0	3	11	117
3:15 PM	0	27	2	0	2	29	3	3	9	0	0	15	11	36	4	0	0	51	8	7	1	0	0	16	111
3:30 PM	0	56	2	0	0	58	1	7	16	0	0	24	7	36	4	0	0	47	6	2	0	0	3	8	137
3:45 PM	1	41	1	0	0	43	1	1	10	0	2	12	4	26	5	0	0	35	4	7	2	0	0	13	103
Hourly Total	2	165	5	0	6	172	6	19	42	0	2	67	30	128	23	0	4	181	23	22	3	0	6	48	468
4:00 PM	1	37	1	0	1	39	0	8	5	0	0	13	9	29	4	0	0	42	5	5	1	0	0	11	105
4:15 PM	1	34	1	0	0	36	1	10	4	0	1	15	1	32	10	0	1	43	8	6	0	0	0	14	108
4:30 PM	1	31	0	0	0	32	0	8	2	0	0	10	7	28	5	0	0	40	12	6	0	0	1	18	100
4:45 PM	1	35	1	0	0	37	2	4	11	0	1	17	10	29	4	0	0	43	8	6	1	0	0	15	112
Hourly Total	4	137	3	0	1	144	3	30	22	0	2	55	27	118	23	0	1	168	33	23	2	0	1	58	425
5:00 PM	4	27	0	0	0	31	0	8	5	0	0	13	7	14	5	0	0	26	5	7	1	0	0	13	83
5:15 PM	3	30	0	0	0	33	0	4	10	0	0	14	9	26	9	0	0	44	9	1	0	0	0	10	101
5:30 PM	2	24	0	0	0	26	1	5	8	1	0	15	0	22	4	0	0	26	6	7	1	0	0	14	81
5:45 PM	1	25	0	0	0	26	0	4	2	0	1	6	8	20	1	0	2	29	6	5	2	0	0	13	74
Hourly Total	10	106	0	0	0	116	1	21	25	1	1	48	24	82	19	0	2	125	26	20	4	0	0	50	339
Grand Total	31	1074	29	0	22	1134	37	171	252	4	16	464	284	1037	163	1	18	1485	236	223	27	0	17	486	3569
Approach %	2.7	94.7	2.6	0.0	-	-	8.0	36.9	54.3	0.9	-	-	19.1	69.8	11.0	0.1	-	-	48.6	45.9	5.6	0.0	-	-	-
Total %	0.9	30.1	0.8	0.0	-	31.8	1.0	4.8	7.1	0.1	-	13.0	8.0	29.1	4.6	0.0	-	41.6	6.6	6.2	0.8	0.0	-	13.6	-
Lights	28	1050	29	0	-	1107	30	169	246	4	-	449	283	1007	153	0	-	1443	232	216	24	0	-	472	3471
% Lights	90.3	97.8	100.0	-	-	97.6	81.1	98.8	97.6	100.0	-	96.8	99.6	97.1	93.9	0.0	-	97.2	98.3	96.9	88.9	-	-	97.1	97.3
Other Vehicles	3	24	0	0	-	27	7	2	6	0	-	15	1	30	10	1	-	42	4	7	3	0	-	14	98
% Other Vehicles	9.7	2.2	0.0	-	-	2.4	18.9	1.2	2.4	0.0	-	3.2	0.4	2.9	6.1	100.0	-	2.8	1.7	3.1	11.1	-	-	2.9	2.7
Pedestrians	-	-	-	-	22	-	-	-	-	-	16	-	-	-	-	-	18	-	-	-	-	-	17	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Washington Ave at 4th St
Site Code:
Start Date: 11/06/2014

Turning Movement Data

Start Time	Washington Ave Southbound						4th St Westbound						Washington Ave Northbound						4th St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	9	1	0	0	10	0	0	1	0	0	1	3	4	0	0	0	7	0	2	1	0	0	3	21
7:15 AM	0	12	2	0	0	14	0	2	1	0	0	3	2	2	0	0	0	4	1	3	0	0	0	4	25
7:30 AM	0	4	1	0	1	5	2	0	0	0	1	2	3	6	0	0	0	9	0	3	1	0	1	4	20
7:45 AM	4	9	7	0	1	20	7	3	3	0	0	13	5	13	4	0	1	22	1	4	2	0	0	7	62
Hourly Total	4	34	11	0	2	49	9	5	5	0	1	19	13	25	4	0	1	42	2	12	4	0	1	18	128
8:00 AM	1	14	3	0	0	18	1	8	3	0	0	12	1	8	12	0	1	21	2	5	2	0	6	9	60
8:15 AM	1	12	5	0	0	18	2	9	3	0	0	14	4	17	7	0	2	28	5	3	1	0	0	9	69
8:30 AM	0	12	3	0	1	15	3	2	2	0	3	7	3	12	1	0	3	16	3	3	0	0	0	6	44
8:45 AM	0	13	5	0	0	18	4	1	1	0	0	6	2	12	1	0	0	15	0	4	0	0	1	4	43
Hourly Total	2	51	16	0	1	69	10	20	9	0	3	39	10	49	21	0	6	80	10	15	3	0	7	28	216
9:00 AM	1	10	5	0	1	16	2	2	4	0	0	8	2	14	0	0	1	16	0	1	0	0	2	1	41
9:15 AM	1	7	3	0	2	11	5	6	4	0	1	15	2	11	0	0	1	13	0	2	0	0	1	2	41
9:30 AM	0	4	2	0	0	6	4	2	2	0	0	8	2	6	0	0	0	8	3	2	0	0	0	5	27
9:45 AM	1	12	2	0	1	15	2	0	6	0	0	8	1	14	0	0	0	15	1	4	1	0	0	6	44
Hourly Total	3	33	12	0	4	48	13	10	16	0	1	39	7	45	0	0	2	52	4	9	1	0	3	14	153
10:00 AM	0	13	3	0	1	16	1	1	1	0	0	3	2	7	1	0	2	10	0	2	0	0	1	2	31
10:15 AM	0	8	1	0	0	9	0	2	4	0	0	6	3	17	3	0	0	23	0	4	0	0	0	4	42
10:30 AM	1	11	4	0	0	16	3	2	6	0	0	11	2	15	0	0	0	17	0	0	0	0	3	0	44
10:45 AM	0	8	5	0	1	13	1	2	3	0	1	6	5	8	2	0	1	15	0	2	0	0	0	2	36
Hourly Total	1	40	13	0	2	54	5	7	14	0	1	26	12	47	6	0	3	65	0	8	0	0	4	8	153
11:00 AM	1	6	3	0	0	10	4	7	0	0	1	11	3	15	1	0	0	19	0	1	1	0	1	2	42
11:15 AM	0	3	1	0	2	4	5	1	3	0	0	9	1	11	0	0	1	12	0	2	0	0	2	2	27
11:30 AM	1	11	4	0	2	16	5	3	3	0	4	11	2	13	2	0	0	17	1	5	1	0	1	7	51
11:45 AM	0	14	2	0	0	16	3	8	3	0	0	14	1	13	1	0	3	15	0	6	0	0	0	6	51
Hourly Total	2	34	10	0	4	46	17	19	9	0	5	45	7	52	4	0	4	63	1	14	2	0	4	17	171
12:00 PM	1	9	1	0	0	11	8	5	5	0	0	18	1	10	1	0	0	12	0	2	1	0	0	3	44
12:15 PM	1	12	6	0	0	19	2	3	3	0	0	8	4	13	2	0	2	19	0	3	1	0	2	4	50
12:30 PM	0	11	3	0	1	14	7	2	4	0	0	13	1	9	0	0	0	10	3	0	0	0	0	3	40
12:45 PM	2	7	4	1	1	14	5	4	4	0	1	13	2	12	0	0	2	14	3	5	1	0	1	9	50
Hourly Total	4	39	14	1	2	58	22	14	16	0	1	52	8	44	3	0	4	55	6	10	3	0	3	19	184
1:00 PM	0	9	7	0	1	16	8	4	4	0	0	16	2	14	1	0	0	17	0	2	0	0	0	2	51
1:15 PM	1	13	6	0	1	20	2	6	2	0	0	10	1	11	0	0	0	12	0	2	0	0	0	2	44
1:30 PM	0	10	8	0	0	18	6	3	7	0	0	16	1	15	2	0	2	18	0	4	1	0	0	5	57
1:45 PM	1	8	3	0	4	12	4	9	2	0	2	15	4	12	0	0	0	16	1	3	2	0	0	6	49
Hourly Total	2	40	24	0	6	66	20	22	15	0	2	57	8	52	3	0	2	63	1	11	3	0	0	15	201
2:00 PM	1	10	2	0	0	13	5	7	1	0	0	13	4	16	1	0	1	21	2	2	0	0	2	4	51
2:15 PM	1	12	2	1	0	16	2	4	3	0	1	9	4	19	1	0	2	24	2	4	1	0	2	7	56

2:30 PM	0	14	7	0	0	21	5	4	4	0	2	13	0	10	2	0	0	12	1	5	0	0	0	6	52
2:45 PM	1	18	8	0	0	27	6	2	6	0	3	14	5	15	4	0	2	24	1	1	2	0	0	4	69
Hourly Total	3	54	19	1	0	77	18	17	14	0	6	49	13	60	8	0	5	81	6	12	3	0	4	21	228
3:00 PM	1	10	4	0	3	15	13	7	6	0	4	26	2	7	2	0	2	11	0	4	0	0	2	4	56
3:15 PM	3	16	2	0	1	21	8	15	6	0	0	29	3	19	5	0	5	27	1	1	1	0	9	3	80
3:30 PM	5	15	4	0	7	24	7	10	6	0	1	23	5	28	8	0	10	41	5	9	2	0	9	16	104
3:45 PM	2	18	5	0	1	25	6	5	7	0	1	18	1	17	2	0	1	20	0	5	2	0	0	7	70
Hourly Total	11	59	15	0	12	85	34	37	25	0	6	96	11	71	17	0	18	99	6	19	5	0	20	30	310
4:00 PM	2	7	1	0	1	10	7	8	5	0	1	20	1	16	0	0	0	17	3	8	1	0	1	12	59
4:15 PM	0	17	4	0	0	21	6	5	4	0	0	15	3	29	1	0	1	33	1	4	0	0	0	5	74
4:30 PM	0	7	3	0	0	10	7	7	7	0	0	21	1	10	1	0	0	12	1	4	0	0	0	5	48
4:45 PM	1	16	2	0	0	19	8	6	6	0	1	20	6	13	4	0	0	23	1	3	1	0	1	5	67
Hourly Total	3	47	10	0	1	60	28	26	22	0	2	76	11	68	6	0	1	85	6	19	2	0	2	27	248
5:00 PM	2	12	4	0	2	18	10	11	6	0	0	27	1	16	1	0	1	18	0	4	0	0	1	4	67
5:15 PM	1	12	3	0	1	16	2	5	3	0	1	10	4	7	1	0	0	12	1	4	0	0	0	5	43
5:30 PM	0	14	2	0	0	16	5	2	4	0	0	11	4	12	2	0	0	18	0	2	1	0	0	3	48
5:45 PM	3	11	3	0	1	17	4	5	0	0	0	9	0	11	3	0	0	14	0	2	0	0	0	2	42
Hourly Total	6	49	12	0	4	67	21	23	13	0	1	57	9	46	7	0	1	62	1	12	1	0	1	14	200
Grand Total	41	480	156	2	38	679	197	200	158	0	29	555	109	559	79	0	47	747	43	141	27	0	49	211	2192
Approach %	6.0	70.7	23.0	0.3	-	-	35.5	36.0	28.5	0.0	-	-	14.6	74.8	10.6	0.0	-	-	20.4	66.8	12.8	0.0	-	-	-
Total %	1.9	21.9	7.1	0.1	-	31.0	9.0	9.1	7.2	0.0	-	25.3	5.0	25.5	3.6	0.0	-	34.1	2.0	6.4	1.2	0.0	-	9.6	-
Lights	41	457	154	2	-	654	187	199	152	0	-	538	105	532	78	0	-	715	40	140	26	0	-	206	2113
% Lights	100.0	95.2	98.7	100.0	-	96.3	94.9	99.5	96.2	-	-	96.9	96.3	95.2	98.7	-	-	95.7	93.0	99.3	96.3	-	-	97.6	96.4
Other Vehicles	0	23	2	0	-	25	10	1	6	0	-	17	4	27	1	0	-	32	3	1	1	0	-	5	79
% Other Vehicles	0.0	4.8	1.3	0.0	-	3.7	5.1	0.5	3.8	-	-	3.1	3.7	4.8	1.3	-	-	4.3	7.0	0.7	3.7	-	-	2.4	3.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	6.9	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	38	-	-	-	-	-	27	-	-	-	-	-	47	-	-	-	-	-	49	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	93.1	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Washington Ave at 5th St
Site Code:
Start Date: 11/06/2014

Turning Movement Data

Start Time	Washington Ave Southbound						5th St Westbound						Washington Ave Northbound						5th St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	2	5	1	0	1	8	0	0	3	0	0	3	1	5	0	0	0	6	0	5	1	0	1	6	23
7:15 AM	1	13	2	0	1	16	0	0	0	0	0	0	0	4	2	0	0	6	1	5	0	0	0	6	28
7:30 AM	0	4	0	0	2	4	1	1	0	0	0	2	4	6	1	0	0	11	0	3	1	0	3	4	21
7:45 AM	0	10	2	0	2	12	2	1	1	0	0	4	0	18	1	0	2	19	1	7	2	0	2	10	45
Hourly Total	3	32	5	0	6	40	3	2	4	0	0	9	5	33	4	0	2	42	2	20	4	0	6	26	117
8:00 AM	0	18	0	1	0	19	0	4	2	0	1	6	2	20	1	0	0	23	5	9	0	0	7	14	62
8:15 AM	0	17	2	0	1	19	3	6	2	0	2	11	1	23	1	0	1	25	4	10	5	0	0	19	74
8:30 AM	0	15	1	0	0	16	3	3	3	0	2	9	5	13	2	0	0	20	0	6	2	0	0	8	53
8:45 AM	0	12	3	0	2	15	3	5	8	0	0	16	2	11	1	0	1	14	1	14	0	0	1	15	60
Hourly Total	0	62	6	1	3	69	9	18	15	0	5	42	10	67	5	0	2	82	10	39	7	0	8	56	249
9:00 AM	0	14	0	0	0	14	7	8	4	0	0	19	2	9	0	0	0	11	0	2	1	0	1	3	47
9:15 AM	1	7	2	0	1	10	3	5	2	0	1	10	2	11	1	0	0	14	2	6	0	0	1	8	42
9:30 AM	2	7	1	0	1	10	1	4	3	0	0	8	0	4	0	0	0	4	2	10	2	0	0	14	36
9:45 AM	0	13	5	0	1	18	6	6	4	0	0	16	0	9	1	0	2	10	4	9	0	0	0	13	57
Hourly Total	3	41	8	0	3	52	17	23	13	0	1	53	4	33	2	0	2	39	8	27	3	0	2	38	182
10:00 AM	1	13	1	0	0	15	3	4	1	0	2	8	1	6	0	0	1	7	1	8	1	0	1	10	40
10:15 AM	1	7	2	0	0	10	4	7	1	0	0	12	3	19	0	0	1	22	3	11	0	0	0	14	58
10:30 AM	0	15	4	0	1	19	6	11	6	0	0	23	4	10	1	0	0	15	3	7	1	0	0	11	68
10:45 AM	2	9	0	0	0	11	4	7	4	0	0	15	2	9	1	0	0	12	2	6	1	0	0	9	47
Hourly Total	4	44	7	0	1	55	17	29	12	0	2	58	10	44	2	0	2	56	9	32	3	0	1	44	213
11:00 AM	0	4	2	0	2	6	5	10	6	0	0	21	0	10	0	0	0	10	3	8	3	0	0	14	51
11:15 AM	1	5	0	0	0	6	3	6	3	0	0	12	4	9	1	0	0	14	5	11	0	0	1	16	48
11:30 AM	0	11	4	0	0	15	4	8	2	0	1	14	5	15	1	0	0	21	0	8	0	0	0	8	58
11:45 AM	1	15	2	0	0	18	3	9	4	0	0	16	5	13	2	0	1	20	1	8	0	0	2	9	63
Hourly Total	2	35	8	0	2	45	15	33	15	0	1	63	14	47	4	0	1	65	9	35	3	0	3	47	220
12:00 PM	1	9	5	0	0	15	5	4	2	0	1	11	1	6	2	0	0	9	2	9	0	0	0	11	46
12:15 PM	0	11	3	0	0	14	4	6	4	0	0	14	5	12	2	0	0	19	4	10	2	0	0	16	63
12:30 PM	1	14	3	0	4	18	6	8	3	0	2	17	5	5	1	0	0	11	1	10	0	0	2	11	57
12:45 PM	3	11	1	0	1	15	1	8	4	0	0	13	4	12	3	1	1	20	0	9	1	0	0	10	58
Hourly Total	5	45	12	0	5	62	16	26	13	0	3	55	15	35	8	1	1	59	7	38	3	0	2	48	224
1:00 PM	1	10	2	0	1	13	1	12	5	0	1	18	2	15	0	0	1	17	1	7	1	0	0	9	57
1:15 PM	1	9	5	0	0	15	4	3	6	0	0	13	2	8	0	0	2	10	1	6	2	0	0	9	47
1:30 PM	1	13	0	0	0	14	3	12	6	0	1	21	4	12	1	1	0	18	2	4	0	0	0	6	59
1:45 PM	0	7	3	0	0	10	4	8	0	0	0	12	7	12	2	0	1	21	2	7	0	0	0	9	52
Hourly Total	3	39	10	0	1	52	12	35	17	0	2	64	15	47	3	1	4	66	6	24	3	0	0	33	215
2:00 PM	1	13	0	0	0	14	6	13	5	0	0	24	1	14	0	0	2	15	0	12	3	0	1	15	68
2:15 PM	1	14	3	0	0	18	8	5	5	0	1	18	6	15	4	0	0	25	4	9	2	0	0	15	76

2:30 PM	2	17	2	0	0	21	4	12	5	0	0	21	4	8	3	0	1	15	1	7	0	0	0	8	65
2:45 PM	6	15	1	0	0	22	4	8	2	0	6	14	2	15	3	0	0	20	3	9	4	0	1	16	72
Hourly Total	10	59	6	0	0	75	22	38	17	0	7	77	13	52	10	0	3	75	8	37	9	0	2	54	281
3:00 PM	2	15	1	0	1	18	2	9	4	0	5	15	1	11	3	0	0	15	4	13	0	0	1	17	65
3:15 PM	3	18	1	0	3	22	4	11	7	0	4	22	5	18	0	0	4	23	0	3	2	0	5	5	72
3:30 PM	3	23	0	0	1	26	4	14	6	0	3	24	4	30	3	0	1	37	6	16	6	0	3	28	115
3:45 PM	3	20	3	0	2	26	3	15	11	0	0	29	5	16	2	0	0	23	1	12	0	0	2	13	91
Hourly Total	11	76	5	0	7	92	13	49	28	0	12	90	15	75	8	0	5	98	11	44	8	0	11	63	343
4:00 PM	1	14	0	0	0	15	4	12	3	0	0	19	5	12	3	0	0	20	5	11	0	0	1	16	70
4:15 PM	4	15	1	0	2	20	4	15	9	0	0	28	4	24	0	0	0	28	4	6	2	0	1	12	88
4:30 PM	1	16	2	0	5	19	1	7	7	0	1	15	4	10	1	0	2	15	0	9	1	0	0	10	59
4:45 PM	2	20	1	0	2	23	5	6	4	0	0	15	5	17	1	0	1	23	0	10	0	0	2	10	71
Hourly Total	8	65	4	0	9	77	14	40	23	0	1	77	18	63	5	0	3	86	9	36	3	0	4	48	288
5:00 PM	0	19	0	0	0	19	3	13	4	0	1	20	2	12	2	0	3	16	1	8	2	0	0	11	66
5:15 PM	1	14	1	0	2	16	4	6	8	0	0	18	3	7	3	0	1	13	3	6	2	0	0	11	58
5:30 PM	2	16	1	0	0	19	4	5	4	0	0	13	4	10	2	0	1	16	2	6	2	0	0	10	58
5:45 PM	4	7	0	0	0	11	1	4	7	0	0	12	3	12	1	0	3	16	1	6	0	0	0	7	46
Hourly Total	7	56	2	0	2	65	12	28	23	0	1	63	12	41	8	0	8	61	7	26	6	0	0	39	228
Grand Total	56	554	73	1	39	684	150	321	180	0	35	651	131	537	59	2	33	729	86	358	52	0	39	496	2560
Approach %	8.2	81.0	10.7	0.1	-	-	23.0	49.3	27.6	0.0	-	-	18.0	73.7	8.1	0.3	-	-	17.3	72.2	10.5	0.0	-	-	-
Total %	2.2	21.6	2.9	0.0	-	26.7	5.9	12.5	7.0	0.0	-	25.4	5.1	21.0	2.3	0.1	-	28.5	3.4	14.0	2.0	0.0	-	19.4	-
Lights	52	526	72	1	-	651	143	318	176	0	-	637	131	506	54	2	-	693	84	357	52	0	-	493	2474
% Lights	92.9	94.9	98.6	100.0	-	95.2	95.3	99.1	97.8	-	-	97.8	100.0	94.2	91.5	100.0	-	95.1	97.7	99.7	100.0	-	-	99.4	96.6
Other Vehicles	4	28	1	0	-	33	7	3	4	0	-	14	0	31	5	0	-	36	2	1	0	0	-	3	86
% Other Vehicles	7.1	5.1	1.4	0.0	-	4.8	4.7	0.9	2.2	-	-	2.2	0.0	5.8	8.5	0.0	-	4.9	2.3	0.3	0.0	-	-	0.6	3.4
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	5.1	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	37	-	-	-	-	-	35	-	-	-	-	-	33	-	-	-	-	-	39	-	-
% Pedestrians	-	-	-	-	94.9	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Washington Ave at 6th St
Site Code:
Start Date: 11/06/2014

Turning Movement Data

Start Time	Washington Ave Southbound						6th St Westbound						Washington Ave Northbound						6th St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	1	4	2	0	0	7	0	1	0	0	0	1	1	6	1	0	0	8	1	1	0	0	1	2	18
7:15 AM	1	11	2	0	0	14	0	0	0	0	0	0	0	6	1	0	0	7	0	1	0	0	1	1	22
7:30 AM	1	5	0	0	0	6	0	1	0	0	0	1	0	9	0	0	0	9	1	1	1	0	0	3	19
7:45 AM	1	9	3	0	2	13	1	0	3	0	1	4	5	18	0	0	0	23	1	5	0	0	1	6	46
Hourly Total	4	29	7	0	2	40	1	2	3	0	1	6	6	39	2	0	0	47	3	8	1	0	3	12	105
8:00 AM	0	14	10	0	8	24	2	4	6	0	3	12	10	22	2	0	5	34	3	14	2	0	0	19	89
8:15 AM	0	17	6	0	2	23	4	13	11	0	6	28	7	19	1	0	1	27	1	6	3	0	1	10	88
8:30 AM	2	15	2	0	1	19	0	3	1	0	1	4	2	18	1	0	1	21	1	4	0	0	0	5	49
8:45 AM	1	17	3	0	0	21	3	3	0	0	0	6	3	12	3	0	0	18	1	4	0	0	0	5	50
Hourly Total	3	63	21	0	11	87	9	23	18	0	10	50	22	71	7	0	7	100	6	28	5	0	1	39	276
9:00 AM	6	12	0	0	0	18	0	3	1	0	1	4	2	12	1	0	0	15	0	6	0	0	0	6	43
9:15 AM	0	12	0	0	0	12	2	2	2	0	0	6	3	11	1	0	0	15	1	3	3	0	0	7	40
9:30 AM	0	8	3	0	0	11	0	1	0	0	2	1	3	3	0	0	0	6	4	2	0	0	0	6	24
9:45 AM	1	15	6	0	0	22	2	3	4	0	0	9	3	10	0	0	0	13	0	6	2	0	0	8	52
Hourly Total	7	47	9	0	0	63	4	9	7	0	3	20	11	36	2	0	0	49	5	17	5	0	0	27	159
10:00 AM	0	11	3	1	4	15	1	4	1	0	0	6	1	6	0	0	1	7	1	7	0	0	1	8	36
10:15 AM	0	11	1	0	0	12	4	6	0	0	0	10	4	16	0	0	0	20	0	10	2	0	0	12	54
10:30 AM	2	17	5	0	0	24	1	5	1	0	0	7	1	13	1	0	1	15	1	5	1	0	0	7	53
10:45 AM	1	12	2	0	1	15	1	7	2	0	0	10	3	9	3	0	1	15	1	7	0	0	0	8	48
Hourly Total	3	51	11	1	5	66	7	22	4	0	0	33	9	44	4	0	3	57	3	29	3	0	1	35	191
11:00 AM	0	12	2	0	0	14	5	5	1	0	1	11	1	8	1	0	0	10	0	5	2	0	0	7	42
11:15 AM	1	7	4	0	3	12	2	4	1	0	0	7	3	11	1	0	0	15	1	5	1	0	0	7	41
11:30 AM	0	12	3	0	0	15	5	9	2	0	2	16	2	17	0	0	1	19	1	6	0	0	0	7	57
11:45 AM	0	15	4	0	1	19	2	7	1	0	2	10	2	16	1	0	0	19	1	4	2	0	0	7	55
Hourly Total	1	46	13	0	4	60	14	25	5	0	5	44	8	52	3	0	1	63	3	20	5	0	0	28	195
12:00 PM	1	10	3	0	0	14	3	5	1	0	1	9	6	8	1	0	1	15	1	5	0	0	0	6	44
12:15 PM	0	17	2	0	0	19	2	10	2	0	2	14	2	15	1	0	0	18	1	8	0	0	0	9	60
12:30 PM	0	16	2	0	1	18	0	9	2	0	1	11	0	11	1	0	0	12	1	6	0	0	0	7	48
12:45 PM	0	15	1	0	0	16	2	4	2	0	0	8	1	17	3	0	1	21	1	7	0	0	0	8	53
Hourly Total	1	58	8	0	1	67	7	28	7	0	4	42	9	51	6	0	2	66	4	26	0	0	0	30	205
1:00 PM	0	13	4	0	1	17	1	5	3	0	0	9	3	14	2	0	0	19	0	4	2	0	0	6	51
1:15 PM	1	12	2	0	1	15	1	6	4	0	0	11	3	7	0	0	0	10	1	5	1	0	0	7	43
1:30 PM	2	15	5	0	0	22	2	2	0	0	3	4	5	14	2	0	0	21	3	8	2	0	0	13	60
1:45 PM	1	5	4	0	1	10	1	4	4	0	3	9	0	16	1	0	0	17	2	6	4	0	0	12	48
Hourly Total	4	45	15	0	3	64	5	17	11	0	6	33	11	51	5	0	0	67	6	23	9	0	0	38	202
2:00 PM	1	17	0	0	1	18	2	5	4	0	2	11	4	12	2	0	0	18	0	6	2	0	0	8	55
2:15 PM	2	18	5	0	3	25	5	4	0	0	3	9	3	16	1	0	0	20	1	8	2	0	0	11	65

2:30 PM	1	20	1	0	0	22	1	3	2	0	0	6	6	16	0	0	0	22	2	7	1	0	0	10	60
2:45 PM	1	16	3	0	0	20	2	5	2	0	6	9	6	19	5	0	0	30	3	7	0	0	0	10	69
Hourly Total	5	71	9	0	4	85	10	17	8	0	11	35	19	63	8	0	0	90	6	28	5	0	0	39	249
3:00 PM	2	17	5	0	0	24	1	9	1	0	1	11	7	12	2	0	0	21	4	11	2	0	0	17	73
3:15 PM	2	17	6	0	2	25	3	5	12	0	1	20	13	20	0	0	5	33	1	11	0	0	2	12	90
3:30 PM	4	29	3	0	0	36	9	11	4	0	0	24	3	29	2	0	9	34	4	9	1	0	0	14	108
3:45 PM	5	24	3	0	4	32	2	6	0	0	0	8	1	19	0	0	0	20	2	6	3	0	0	11	71
Hourly Total	13	87	17	0	6	117	15	31	17	0	2	63	24	80	4	0	14	108	11	37	6	0	2	54	342
4:00 PM	2	17	3	0	2	22	2	7	2	0	1	11	0	17	2	0	0	19	0	3	0	0	1	3	55
4:15 PM	1	23	6	0	0	30	4	4	1	0	0	9	3	25	0	0	1	28	0	6	2	0	2	8	75
4:30 PM	0	19	3	0	0	22	2	7	1	0	2	10	9	15	1	0	0	25	2	6	1	0	0	9	66
4:45 PM	5	21	0	0	2	26	2	2	3	0	1	7	7	23	1	0	0	31	1	3	1	0	1	5	69
Hourly Total	8	80	12	0	4	100	10	20	7	0	4	37	19	80	4	0	1	103	3	18	4	0	4	25	265
5:00 PM	0	21	1	0	3	22	5	7	2	0	4	14	3	10	0	0	0	13	0	2	0	0	0	2	51
5:15 PM	2	22	2	0	0	26	1	7	3	0	3	11	5	10	0	0	2	15	2	4	0	0	0	6	58
5:30 PM	2	18	2	0	1	22	2	7	2	0	0	11	1	16	1	0	2	18	1	3	0	0	1	4	55
5:45 PM	2	13	0	0	0	15	1	6	1	0	0	8	3	15	0	0	0	18	1	3	0	0	0	4	45
Hourly Total	6	74	5	0	4	85	9	27	8	0	7	44	12	51	1	0	4	64	4	12	0	0	1	16	209
Grand Total	55	651	127	1	44	834	91	221	95	0	53	407	150	618	46	0	32	814	54	246	43	0	12	343	2398
Approach %	6.6	78.1	15.2	0.1	-	-	22.4	54.3	23.3	0.0	-	-	18.4	75.9	5.7	0.0	-	-	15.7	71.7	12.5	0.0	-	-	-
Total %	2.3	27.1	5.3	0.0	-	34.8	3.8	9.2	4.0	0.0	-	17.0	6.3	25.8	1.9	0.0	-	33.9	2.3	10.3	1.8	0.0	-	14.3	-
Lights	51	629	116	1	-	797	90	218	93	0	-	401	144	587	45	0	-	776	47	244	42	0	-	333	2307
% Lights	92.7	96.6	91.3	100.0	-	95.6	98.9	98.6	97.9	-	-	98.5	96.0	95.0	97.8	-	-	95.3	87.0	99.2	97.7	-	-	97.1	96.2
Other Vehicles	4	22	11	0	-	37	1	3	2	0	-	6	6	31	1	0	-	38	7	2	1	0	-	10	91
% Other Vehicles	7.3	3.4	8.7	0.0	-	4.4	1.1	1.4	2.1	-	-	1.5	4.0	5.0	2.2	-	-	4.7	13.0	0.8	2.3	-	-	2.9	3.8
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	8	-	-	-	-	-	2	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	2.3	-	-	-	-	-	15.1	-	-	-	-	-	6.3	-	-	-	-	-	8.3	-	-
Pedestrians	-	-	-	-	43	-	-	-	-	-	45	-	-	-	-	-	30	-	-	-	-	-	11	-	-
% Pedestrians	-	-	-	-	97.7	-	-	-	-	-	84.9	-	-	-	-	-	93.8	-	-	-	-	-	91.7	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Reid Ave at 6th St
Site Code:
Start Date: 11/06/2014

Turning Movement Data

Start Time	Reid Ave Southbound						6th St Westbound						Reid Ave Northbound						6th St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	5	0	0	0	5	1	2	0	0	1	3	1	2	0	0	1	3	3	3	0	0	0	6	17
7:15 AM	0	3	0	0	0	3	1	0	1	0	1	2	0	5	0	0	0	5	0	3	0	0	0	3	13
7:30 AM	0	2	0	0	0	2	0	2	0	0	0	2	0	3	1	0	1	4	0	0	0	0	0	0	8
7:45 AM	2	5	2	0	1	9	0	1	1	0	0	2	0	5	3	0	3	8	1	4	1	0	0	6	25
Hourly Total	2	15	2	0	1	19	2	5	2	0	2	9	1	15	4	0	5	20	4	10	1	0	0	15	63
8:00 AM	0	6	0	0	0	6	1	6	2	0	0	9	1	4	6	0	0	11	9	6	1	0	3	16	42
8:15 AM	1	8	0	0	0	9	1	2	2	0	0	5	1	6	1	0	2	8	12	6	1	0	11	19	41
8:30 AM	1	1	0	0	0	2	1	4	1	0	0	6	0	10	1	0	1	11	3	3	1	0	3	7	26
8:45 AM	2	6	0	0	1	8	1	5	3	0	3	9	2	18	5	0	3	25	2	3	1	0	7	6	48
Hourly Total	4	21	0	0	1	25	4	17	8	0	3	29	4	38	13	0	6	55	26	18	4	0	24	48	157
9:00 AM	0	10	0	0	0	10	3	4	4	0	1	11	1	17	1	0	1	19	3	6	1	0	13	10	50
9:15 AM	0	7	0	0	0	7	1	5	4	0	3	10	4	10	6	0	1	20	3	4	1	0	9	8	45
9:30 AM	0	8	0	0	2	8	3	3	0	0	4	6	0	7	2	0	1	9	3	2	1	0	10	6	29
9:45 AM	0	16	1	0	1	17	3	14	3	0	1	20	3	9	2	0	4	14	5	5	2	0	7	12	63
Hourly Total	0	41	1	0	3	42	10	26	11	0	9	47	8	43	11	0	7	62	14	17	5	0	39	36	187
10:00 AM	2	9	2	0	0	13	1	5	3	0	6	9	5	8	1	0	2	14	3	6	0	0	7	9	45
10:15 AM	0	9	1	0	0	10	2	9	4	0	0	15	1	16	5	0	0	22	7	7	1	0	15	15	62
10:30 AM	4	13	1	0	1	18	1	6	5	0	1	12	2	18	2	0	1	22	4	5	2	0	12	11	63
10:45 AM	1	5	0	0	0	6	1	11	4	0	0	16	3	17	4	0	2	24	7	13	1	0	5	21	67
Hourly Total	7	36	4	0	1	47	5	31	16	0	7	52	11	59	12	0	5	82	21	31	4	0	39	56	237
11:00 AM	0	13	0	0	0	13	4	9	2	0	0	15	4	13	3	0	0	20	5	5	1	0	9	11	59
11:15 AM	0	14	1	0	0	15	4	8	4	0	1	16	3	9	4	0	3	16	4	5	0	0	6	9	56
11:30 AM	2	12	1	0	0	15	1	7	5	0	1	13	2	9	6	0	1	17	7	6	2	0	4	15	60
11:45 AM	1	13	2	0	1	16	1	7	3	0	4	11	2	12	9	0	1	23	8	3	2	0	4	13	63
Hourly Total	3	52	4	0	1	59	10	31	14	0	6	55	11	43	22	0	5	76	24	19	5	0	23	48	238
12:00 PM	2	17	2	0	0	21	1	7	4	0	5	12	6	12	4	0	3	22	7	11	1	0	4	19	74
12:15 PM	0	9	1	0	2	10	4	8	2	0	4	14	2	7	5	0	0	14	8	12	2	0	5	22	60
12:30 PM	2	11	4	0	0	17	5	11	2	0	0	18	2	20	5	0	3	27	4	9	0	0	9	13	75
12:45 PM	1	11	0	0	0	12	2	6	1	0	5	9	3	9	0	0	0	12	1	10	1	0	5	12	45
Hourly Total	5	48	7	0	2	60	12	32	9	0	14	53	13	48	14	0	6	75	20	42	4	0	23	66	254
1:00 PM	0	7	0	0	0	7	1	9	3	0	0	13	1	12	5	0	4	18	6	6	1	0	5	13	51
1:15 PM	1	11	1	0	0	13	5	5	3	0	0	13	2	9	4	0	2	15	1	8	3	0	12	12	53
1:30 PM	2	7	0	0	0	9	4	4	1	0	0	9	0	13	1	0	3	14	7	6	0	0	7	13	45
1:45 PM	0	19	1	0	0	20	5	7	0	0	0	12	6	12	2	0	0	20	6	4	0	0	13	10	62
Hourly Total	3	44	2	0	0	49	15	25	7	0	0	47	9	46	12	0	9	67	20	24	4	0	37	48	211
2:00 PM	2	5	0	0	1	7	3	7	2	0	2	12	1	12	5	0	1	18	11	8	0	0	13	19	56
2:15 PM	1	11	1	0	2	13	5	3	3	0	1	11	2	10	7	0	2	19	4	9	0	0	10	13	56

2:30 PM	2	7	0	0	1	9	0	7	1	0	5	8	4	17	1	0	1	22	3	8	2	0	4	13	52
2:45 PM	3	11	1	0	0	15	3	5	1	0	0	9	3	11	0	0	0	14	4	11	2	1	6	18	56
Hourly Total	8	34	2	0	4	44	11	22	7	0	8	40	10	50	13	0	4	73	22	36	4	1	33	63	220
3:00 PM	1	15	1	0	2	17	0	7	1	0	1	8	1	13	7	0	0	21	7	7	3	0	9	17	63
3:15 PM	1	8	1	0	2	10	6	7	4	0	3	17	2	18	5	0	7	25	9	11	3	0	11	23	75
3:30 PM	1	18	0	0	0	19	2	4	3	0	1	9	3	13	6	0	3	22	11	10	7	0	9	28	78
3:45 PM	1	10	2	0	0	13	2	9	2	0	2	13	2	7	2	0	0	11	7	5	4	0	11	16	53
Hourly Total	4	51	4	0	4	59	10	27	10	0	7	47	8	51	20	0	10	79	34	33	17	0	40	84	269
4:00 PM	0	19	1	0	2	20	2	9	2	0	0	13	1	15	2	0	0	18	4	6	0	0	13	10	61
4:15 PM	2	8	1	0	1	11	2	8	1	0	0	11	4	18	3	0	1	25	6	9	0	0	8	15	62
4:30 PM	2	10	1	0	0	13	3	5	2	0	1	10	3	15	6	0	0	24	5	6	2	0	8	13	60
4:45 PM	4	12	1	0	0	17	2	5	1	0	0	8	2	13	1	0	1	16	4	10	2	0	12	16	57
Hourly Total	8	49	4	0	3	61	9	27	6	0	1	42	10	61	12	0	2	83	19	31	4	0	41	54	240
5:00 PM	2	6	0	0	1	8	2	9	3	0	1	14	5	9	3	0	1	17	2	4	0	0	10	6	45
5:15 PM	0	14	1	0	2	15	1	4	1	0	1	6	2	5	0	0	5	7	2	7	0	0	11	9	37
5:30 PM	1	6	1	0	0	8	2	6	4	0	2	12	5	8	7	0	2	20	5	5	2	0	11	12	52
5:45 PM	0	7	1	0	0	8	3	6	0	0	0	9	1	8	2	0	0	11	5	8	1	1	6	15	43
Hourly Total	3	33	3	0	3	39	8	25	8	0	4	41	13	30	12	0	8	55	14	24	3	1	38	42	177
Grand Total	47	424	33	0	23	504	96	268	98	0	61	462	98	484	145	0	67	727	218	285	55	2	337	560	2253
Approach %	9.3	84.1	6.5	0.0	-	-	20.8	58.0	21.2	0.0	-	-	13.5	66.6	19.9	0.0	-	-	38.9	50.9	9.8	0.4	-	-	-
Total %	2.1	18.8	1.5	0.0	-	22.4	4.3	11.9	4.3	0.0	-	20.5	4.3	21.5	6.4	0.0	-	32.3	9.7	12.6	2.4	0.1	-	24.9	-
Lights	47	419	29	0	-	495	94	266	96	0	-	456	98	471	143	0	-	712	203	281	54	2	-	540	2203
% Lights	100.0	98.8	87.9	-	-	98.2	97.9	99.3	98.0	-	-	98.7	100.0	97.3	98.6	-	-	97.9	93.1	98.6	98.2	100.0	-	96.4	97.8
Other Vehicles	0	5	4	0	-	9	2	2	2	0	-	6	0	13	2	0	-	15	15	4	1	0	-	20	50
% Other Vehicles	0.0	1.2	12.1	-	-	1.8	2.1	0.7	2.0	-	-	1.3	0.0	2.7	1.4	-	-	2.1	6.9	1.4	1.8	0.0	-	3.6	2.2
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	10	-	-
% Bicycles on Crosswalk	-	-	-	-	4.3	-	-	-	-	-	1.6	-	-	-	-	-	0.0	-	-	-	-	-	3.0	-	-
Pedestrians	-	-	-	-	22	-	-	-	-	-	60	-	-	-	-	-	67	-	-	-	-	-	327	-	-
% Pedestrians	-	-	-	-	95.7	-	-	-	-	-	98.4	-	-	-	-	-	100.0	-	-	-	-	-	97.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Reid Ave at 7th St
Site Code:
Start Date: 11/06/2014

Turning Movement Data

Start Time	Reid Ave Southbound						7th St Westbound						Reid Ave Northbound						7th St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	8	0	0	0	8	0	1	1	0	0	2	0	4	0	0	0	4	0	1	0	0	0	1	15
7:15 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	1	0	9
7:30 AM	0	2	0	0	0	2	0	0	1	0	0	1	1	3	1	0	0	5	1	0	0	0	2	1	9
7:45 AM	0	6	0	0	1	6	0	2	0	0	0	2	1	7	1	0	0	9	0	0	0	0	2	0	17
Hourly Total	0	20	0	0	1	20	0	3	2	0	0	5	2	19	2	0	0	23	1	1	0	0	5	2	50
8:00 AM	0	12	1	0	0	13	1	0	0	0	0	1	1	11	0	0	1	12	0	0	0	0	3	0	26
8:15 AM	0	23	0	0	0	23	0	0	1	0	0	1	0	8	0	0	1	8	1	1	0	0	1	2	34
8:30 AM	0	3	0	0	1	3	1	0	1	0	0	2	2	12	0	0	0	14	1	1	0	0	1	2	21
8:45 AM	2	8	1	0	0	11	0	1	1	0	0	2	2	23	2	0	1	27	2	1	0	0	4	3	43
Hourly Total	2	46	2	0	1	50	2	1	3	0	0	6	5	54	2	0	3	61	4	3	0	0	9	7	124
9:00 AM	1	16	0	0	0	17	0	0	2	0	0	2	1	18	0	0	0	19	1	1	2	0	4	4	42
9:15 AM	0	10	3	0	0	13	2	4	1	0	3	7	2	16	1	0	0	19	1	1	0	0	4	2	41
9:30 AM	1	9	1	0	0	11	3	1	1	0	3	5	3	8	0	0	1	11	2	1	0	0	0	3	30
9:45 AM	1	21	1	0	2	23	0	1	2	0	3	3	1	14	1	0	1	16	2	0	1	0	1	3	45
Hourly Total	3	56	5	0	2	64	5	6	6	0	9	17	7	56	2	0	2	65	6	3	3	0	9	12	158
10:00 AM	1	14	1	0	1	16	5	2	2	0	4	9	4	10	1	0	1	15	0	1	0	0	14	1	41
10:15 AM	1	17	0	0	2	18	1	2	4	0	3	7	0	19	2	0	2	21	2	4	1	0	6	7	53
10:30 AM	0	21	2	0	1	23	1	1	1	0	1	3	0	19	1	0	0	20	1	1	1	0	1	3	49
10:45 AM	0	13	0	0	0	13	2	0	0	0	3	2	1	25	1	0	1	27	0	2	0	0	4	2	44
Hourly Total	2	65	3	0	4	70	9	5	7	0	11	21	5	73	5	0	4	83	3	8	2	0	25	13	187
11:00 AM	0	18	2	0	0	20	1	1	2	0	1	4	2	17	0	0	0	19	2	0	0	0	4	2	45
11:15 AM	0	22	1	0	2	23	2	1	1	0	1	4	1	15	1	0	2	17	2	1	1	0	10	4	48
11:30 AM	0	22	1	0	0	23	4	2	3	0	0	9	1	11	1	0	1	13	0	0	1	0	3	1	46
11:45 AM	0	18	4	0	2	22	3	1	0	0	1	4	2	21	1	0	0	24	1	0	1	0	0	2	52
Hourly Total	0	80	8	0	4	88	10	5	6	0	3	21	6	64	3	0	3	73	5	1	3	0	17	9	191
12:00 PM	1	26	1	0	2	28	0	1	2	0	0	3	1	22	0	0	1	23	2	3	1	0	3	6	60
12:15 PM	2	19	0	0	0	21	0	2	1	0	1	3	1	15	0	0	0	16	1	5	1	0	1	7	47
12:30 PM	1	15	1	0	0	17	3	3	2	0	1	8	0	23	1	0	1	24	2	4	2	0	2	8	57
12:45 PM	1	10	1	0	3	12	4	2	1	0	3	7	1	12	3	0	1	16	2	2	0	0	5	4	39
Hourly Total	5	70	3	0	5	78	7	8	6	0	5	21	3	72	4	0	3	79	7	14	4	0	11	25	203
1:00 PM	0	15	0	0	0	15	1	1	0	0	0	2	2	21	1	0	0	24	2	2	0	0	2	4	45
1:15 PM	2	9	2	0	0	13	6	1	1	0	0	8	1	12	1	0	0	14	5	0	1	0	3	6	41
1:30 PM	0	14	1	0	0	15	0	1	1	0	2	2	0	11	2	0	0	13	2	1	2	0	3	5	35
1:45 PM	1	20	2	0	0	23	2	0	2	0	0	4	0	16	3	0	0	19	1	1	3	0	4	5	51
Hourly Total	3	58	5	0	0	66	9	3	4	0	2	16	3	60	7	0	0	70	10	4	6	0	12	20	172
2:00 PM	1	11	0	0	0	12	0	2	2	0	0	4	0	18	0	0	0	18	1	2	0	0	2	3	37
2:15 PM	2	15	2	0	0	19	1	0	2	0	0	3	6	13	2	0	0	21	4	1	0	0	1	5	48

2:30 PM	0	11	0	0	0	11	0	1	2	0	2	3	1	21	1	0	0	23	0	2	0	0	2	2	39
2:45 PM	0	15	0	0	0	15	0	3	1	0	0	4	0	13	1	0	0	14	1	0	0	0	2	1	34
Hourly Total	3	52	2	0	0	57	1	6	7	0	2	14	7	65	4	0	0	76	6	5	0	0	7	11	158
3:00 PM	2	18	1	0	0	21	0	1	0	0	4	1	2	19	1	0	1	22	3	0	0	0	1	3	47
3:15 PM	1	19	0	0	0	20	4	1	2	0	0	7	3	21	1	0	0	25	4	2	0	0	4	6	58
3:30 PM	0	26	3	0	0	29	1	6	1	0	0	8	4	24	1	0	0	29	4	2	1	0	7	7	73
3:45 PM	0	16	0	0	0	16	4	2	2	0	4	8	0	9	4	0	0	13	4	2	0	0	5	6	43
Hourly Total	3	79	4	0	0	86	9	10	5	0	8	24	9	73	7	0	1	89	15	6	1	0	17	22	221
4:00 PM	2	21	1	0	1	24	1	2	1	0	0	4	1	19	0	0	0	20	3	3	1	0	2	7	55
4:15 PM	0	18	0	0	0	18	1	2	1	0	0	4	2	21	2	0	0	25	3	2	1	0	1	6	53
4:30 PM	0	13	0	0	0	13	2	1	3	0	1	6	2	22	2	0	0	26	0	2	2	0	2	4	49
4:45 PM	0	16	0	0	0	16	5	1	2	0	0	8	1	14	1	0	0	16	2	1	0	0	6	3	43
Hourly Total	2	68	1	0	1	71	9	6	7	0	1	22	6	76	5	0	0	87	8	8	4	0	11	20	200
5:00 PM	1	12	0	0	0	13	0	4	2	0	0	6	2	16	0	0	0	18	0	1	0	0	2	1	38
5:15 PM	1	12	2	0	0	15	2	0	3	0	0	5	3	7	1	0	0	11	3	2	0	0	2	5	36
5:30 PM	0	10	4	0	0	14	2	0	1	0	4	3	1	17	1	0	0	19	1	0	0	0	1	1	37
5:45 PM	0	8	1	0	0	9	0	1	1	0	0	2	0	12	0	0	0	12	3	0	1	0	4	4	27
Hourly Total	2	42	7	0	0	51	4	5	7	0	4	16	6	52	2	0	0	60	7	3	1	0	9	11	138
Grand Total	25	636	40	0	18	701	65	58	60	0	45	183	59	664	43	0	16	766	72	56	24	0	132	152	1802
Approach %	3.6	90.7	5.7	0.0	-	-	35.5	31.7	32.8	0.0	-	-	7.7	86.7	5.6	0.0	-	-	47.4	36.8	15.8	0.0	-	-	-
Total %	1.4	35.3	2.2	0.0	-	38.9	3.6	3.2	3.3	0.0	-	10.2	3.3	36.8	2.4	0.0	-	42.5	4.0	3.1	1.3	0.0	-	8.4	-
Lights	24	618	39	0	-	681	62	52	60	0	-	174	59	653	42	0	-	754	70	54	23	0	-	147	1756
% Lights	96.0	97.2	97.5	-	-	97.1	95.4	89.7	100.0	-	-	95.1	100.0	98.3	97.7	-	-	98.4	97.2	96.4	95.8	-	-	96.7	97.4
Other Vehicles	1	18	1	0	-	20	3	6	0	0	-	9	0	11	1	0	-	12	2	2	1	0	-	5	46
% Other Vehicles	4.0	2.8	2.5	-	-	2.9	4.6	10.3	0.0	-	-	4.9	0.0	1.7	2.3	-	-	1.6	2.8	3.6	4.2	-	-	3.3	2.6
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	11	-	-
% Bicycles on Crosswalk	-	-	-	-	5.6	-	-	-	-	-	4.4	-	-	-	-	-	6.3	-	-	-	-	-	8.3	-	-
Pedestrians	-	-	-	-	17	-	-	-	-	-	43	-	-	-	-	-	15	-	-	-	-	-	121	-	-
% Pedestrians	-	-	-	-	94.4	-	-	-	-	-	95.6	-	-	-	-	-	93.8	-	-	-	-	-	91.7	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Reid Ave at W 8th St
Site Code:
Start Date: 11/06/2014

Turning Movement Data

Start Time	Reid Ave Southbound						W 8th St Westbound						Reid Ave Northbound						W 8th St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	1	7	0	0	0	8	1	0	1	0	1	2	2	3	1	0	0	6	1	6	0	0	0	7	23
7:15 AM	0	4	0	0	0	4	0	2	0	0	0	2	0	4	0	0	0	4	0	5	0	0	1	5	15
7:30 AM	0	4	0	0	0	4	1	1	1	0	0	3	0	4	3	0	0	7	2	4	0	0	2	6	20
7:45 AM	0	6	0	0	0	6	0	3	0	0	0	3	1	8	2	0	2	11	0	5	3	0	0	8	28
Hourly Total	1	21	0	0	0	22	2	6	2	0	1	10	3	19	6	0	2	28	3	20	3	0	3	26	86
8:00 AM	1	11	0	0	0	12	0	1	3	0	0	4	1	11	1	0	0	13	2	5	1	0	0	8	37
8:15 AM	3	21	2	0	0	26	0	2	4	0	0	6	2	7	0	0	0	9	0	4	0	0	0	4	45
8:30 AM	0	5	0	0	0	5	0	1	2	1	0	4	3	14	1	0	1	18	4	6	0	0	1	10	37
8:45 AM	1	8	2	0	0	11	2	5	4	0	0	11	3	23	0	0	2	26	0	6	2	0	3	8	56
Hourly Total	5	45	4	0	0	54	2	9	13	1	0	25	9	55	2	0	3	66	6	21	3	0	4	30	175
9:00 AM	0	18	0	0	0	18	1	2	1	0	0	4	3	19	2	0	0	24	0	1	0	0	2	1	47
9:15 AM	1	10	1	0	2	12	1	1	4	0	2	6	1	17	0	0	0	18	1	4	2	0	2	7	43
9:30 AM	1	11	0	0	0	12	0	0	2	1	2	3	3	10	0	0	4	13	3	6	4	0	0	13	41
9:45 AM	1	20	4	0	0	25	0	0	5	0	0	5	2	15	1	0	3	18	2	1	1	0	0	4	52
Hourly Total	3	59	5	0	2	67	2	3	12	1	4	18	9	61	3	0	7	73	6	12	7	0	4	25	183
10:00 AM	2	13	1	0	0	16	3	1	5	0	2	9	3	10	2	0	0	15	3	3	4	0	5	10	50
10:15 AM	1	22	0	0	0	23	1	2	1	0	3	4	4	20	1	0	0	25	1	2	1	0	1	4	56
10:30 AM	0	18	2	0	0	20	2	0	6	0	2	8	6	17	3	0	0	26	2	2	3	0	0	7	61
10:45 AM	2	13	1	0	0	16	3	3	2	0	0	8	3	22	0	0	2	25	1	4	0	0	1	5	54
Hourly Total	5	66	4	0	0	75	9	6	14	0	7	29	16	69	6	0	2	91	7	11	8	0	7	26	221
11:00 AM	1	17	4	0	0	22	4	3	4	0	1	11	1	15	0	0	0	16	0	4	0	0	0	4	53
11:15 AM	1	21	3	0	0	25	2	4	3	0	0	9	2	15	1	0	1	18	2	5	1	0	9	8	60
11:30 AM	2	20	4	0	0	26	3	1	4	0	0	8	3	8	0	0	0	11	1	2	1	0	0	4	49
11:45 AM	1	16	1	0	0	18	2	4	3	0	1	9	0	19	1	0	4	20	2	3	2	0	2	7	54
Hourly Total	5	74	12	0	0	91	11	12	14	0	2	37	6	57	2	0	5	65	5	14	4	0	11	23	216
12:00 PM	1	26	3	0	0	30	1	5	4	0	0	10	5	22	1	0	2	28	3	1	0	0	0	4	72
12:15 PM	0	20	2	0	0	22	1	3	1	0	1	5	2	15	1	0	1	18	2	3	2	0	0	7	52
12:30 PM	1	18	2	0	0	21	1	2	0	0	2	3	3	19	0	0	3	22	2	1	3	0	0	6	52
12:45 PM	2	9	2	0	0	13	1	5	3	0	0	9	1	14	2	0	1	17	2	4	2	0	0	8	47
Hourly Total	4	73	9	0	0	86	4	15	8	0	3	27	11	70	4	0	7	85	9	9	7	0	0	25	223
1:00 PM	1	17	0	0	0	18	1	0	0	0	1	1	2	22	4	0	0	28	1	1	0	0	1	2	49
1:15 PM	2	11	1	0	0	14	1	4	5	0	0	10	2	11	1	0	0	14	0	5	2	0	2	7	45
1:30 PM	2	15	2	0	0	19	0	3	4	0	2	7	5	14	0	0	0	19	1	8	0	0	2	9	54
1:45 PM	1	22	1	0	0	24	0	7	1	1	0	9	2	19	0	0	0	21	1	4	0	0	1	5	59
Hourly Total	6	65	4	0	0	75	2	14	10	1	3	27	11	66	5	0	0	82	3	18	2	0	6	23	207
2:00 PM	1	11	2	0	0	14	1	13	0	0	1	14	4	15	4	0	0	23	1	6	3	0	1	10	61
2:15 PM	3	15	2	0	0	20	4	4	0	0	1	8	1	17	1	0	5	19	4	4	1	0	4	9	56

2:30 PM	1	12	1	0	1	14	0	6	3	0	2	9	1	23	3	0	1	27	1	4	1	0	4	6	56
2:45 PM	0	16	1	0	0	17	1	3	3	0	1	7	2	9	4	0	0	15	2	2	1	0	1	5	44
Hourly Total	5	54	6	0	1	65	6	26	6	0	5	38	8	64	12	0	6	84	8	16	6	0	10	30	217
3:00 PM	1	19	2	0	0	22	0	1	0	0	3	1	1	21	3	0	0	25	3	4	3	0	0	10	58
3:15 PM	2	23	0	0	0	25	3	4	0	0	0	7	1	23	2	0	0	26	1	1	1	0	1	3	61
3:30 PM	5	28	0	0	0	33	1	7	2	0	1	10	4	21	1	0	0	26	2	2	6	0	1	10	79
3:45 PM	1	19	2	0	0	22	0	3	1	0	3	4	3	11	1	0	0	15	1	3	2	0	0	6	47
Hourly Total	9	89	4	0	0	102	4	15	3	0	7	22	9	76	7	0	0	92	7	10	12	0	2	29	245
4:00 PM	1	26	0	0	0	27	0	4	2	0	0	6	1	20	1	0	0	22	3	4	0	0	1	7	62
4:15 PM	2	18	1	0	0	21	0	6	3	0	0	9	6	23	1	0	1	30	3	6	2	0	0	11	71
4:30 PM	2	13	0	0	0	15	6	4	1	0	1	11	1	23	5	0	0	29	1	4	2	0	1	7	62
4:45 PM	1	19	1	0	0	21	2	8	0	0	0	10	0	13	0	0	0	13	1	4	3	0	3	8	52
Hourly Total	6	76	2	0	0	84	8	22	6	0	1	36	8	79	7	0	1	94	8	18	7	0	5	33	247
5:00 PM	3	10	1	0	0	14	1	9	1	0	0	11	1	17	4	0	0	22	2	5	0	0	0	7	54
5:15 PM	2	15	1	0	0	18	2	7	3	0	0	12	2	7	2	0	1	11	1	2	1	0	2	4	45
5:30 PM	0	11	1	0	0	12	0	4	0	0	3	4	1	18	0	0	0	19	0	1	1	0	1	2	37
5:45 PM	2	11	0	0	0	13	1	1	0	0	0	2	0	10	1	0	0	11	1	2	0	0	0	3	29
Hourly Total	7	47	3	0	0	57	4	21	4	0	3	29	4	52	7	0	1	63	4	10	2	0	3	16	165
Grand Total	56	669	53	0	3	778	54	149	92	3	36	298	94	668	61	0	34	823	66	159	61	0	55	286	2185
Approach %	7.2	86.0	6.8	0.0	-	-	18.1	50.0	30.9	1.0	-	-	11.4	81.2	7.4	0.0	-	-	23.1	55.6	21.3	0.0	-	-	-
Total %	2.6	30.6	2.4	0.0	-	35.6	2.5	6.8	4.2	0.1	-	13.6	4.3	30.6	2.8	0.0	-	37.7	3.0	7.3	2.8	0.0	-	13.1	-
Lights	49	657	52	0	-	758	52	145	90	3	-	290	92	662	60	0	-	814	65	156	60	0	-	281	2143
% Lights	87.5	98.2	98.1	-	-	97.4	96.3	97.3	97.8	100.0	-	97.3	97.9	99.1	98.4	-	-	98.9	98.5	98.1	98.4	-	-	98.3	98.1
Other Vehicles	7	12	1	0	-	20	2	4	2	0	-	8	2	6	1	0	-	9	1	3	1	0	-	5	42
% Other Vehicles	12.5	1.8	1.9	-	-	2.6	3.7	2.7	2.2	0.0	-	2.7	2.1	0.9	1.6	-	-	1.1	1.5	1.9	1.6	-	-	1.7	1.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	11.1	-	-	-	-	-	0.0	-	-	-	-	-	5.5	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	32	-	-	-	-	-	34	-	-	-	-	-	52	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	88.9	-	-	-	-	-	100.0	-	-	-	-	-	94.5	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: W 21st St at N Leavitt Rd
Site Code:
Start Date: 11/11/2014

Turning Movement Data

Start Time	N Leavitt Rd Southbound						W 21st St Westbound						N Leavitt Rd Northbound						W 21st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	3	42	10	0	0	55	5	28	17	0	0	50	9	14	8	0	0	31	8	28	1	0	0	37	173
7:15 AM	4	48	6	0	0	58	5	22	18	0	0	45	8	25	10	0	0	43	12	34	1	0	0	47	193
7:30 AM	0	48	9	0	0	57	4	24	13	0	0	41	21	24	7	0	0	52	12	36	6	0	0	54	204
7:45 AM	2	44	10	0	0	56	5	28	28	0	0	61	24	53	10	0	0	87	6	33	3	0	0	42	246
Hourly Total	9	182	35	0	0	226	19	102	76	0	0	197	62	116	35	0	0	213	38	131	11	0	0	180	816
8:00 AM	5	40	13	0	0	58	12	30	31	0	0	73	27	47	19	0	0	93	7	22	3	0	0	32	256
8:15 AM	5	42	13	0	0	60	6	23	27	0	1	56	12	34	12	0	0	58	12	21	2	0	0	35	209
8:30 AM	3	62	9	0	0	74	12	26	19	0	0	57	22	23	12	0	0	57	10	27	2	0	0	39	227
8:45 AM	3	40	7	0	0	50	7	24	20	0	0	51	21	39	6	0	0	66	7	23	3	0	0	33	200
Hourly Total	16	184	42	0	0	242	37	103	97	0	1	237	82	143	49	0	0	274	36	93	10	0	0	139	892
9:00 AM	9	48	11	0	0	68	5	21	16	0	1	42	14	38	10	0	0	62	12	20	4	0	1	36	208
9:15 AM	4	34	6	0	0	44	9	31	16	0	0	56	19	34	11	0	0	64	5	29	2	0	0	36	200
9:30 AM	5	53	5	0	0	63	8	16	28	0	0	52	23	38	10	0	0	71	9	25	2	0	0	36	222
9:45 AM	4	50	4	0	0	58	11	32	19	0	1	62	28	27	9	0	0	64	12	21	5	0	0	38	222
Hourly Total	22	185	26	0	0	233	33	100	79	0	2	212	84	137	40	0	0	261	38	95	13	0	1	146	852
10:00 AM	4	49	9	0	0	62	5	16	16	0	1	37	24	49	8	0	0	81	13	21	5	0	0	39	219
10:15 AM	3	56	11	0	0	70	9	25	27	0	0	61	16	38	6	0	0	60	17	23	5	0	0	45	236
10:30 AM	3	43	10	0	0	56	16	29	27	0	1	72	16	49	16	0	0	81	11	29	3	0	0	43	252
10:45 AM	7	47	10	0	0	64	12	23	31	0	3	66	25	42	9	0	0	76	10	27	3	0	0	40	246
Hourly Total	17	195	40	0	0	252	42	93	101	0	5	236	81	178	39	0	0	298	51	100	16	0	0	167	953
11:00 AM	3	53	11	0	0	67	17	16	23	0	0	56	33	44	14	0	0	91	12	34	2	0	0	48	262
11:15 AM	3	47	9	0	0	59	10	36	35	0	2	81	24	53	12	0	0	89	14	29	0	0	1	43	272
11:30 AM	5	57	7	0	0	69	7	20	28	0	0	55	22	50	15	0	0	87	17	22	3	0	0	42	253
11:45 AM	3	40	9	0	0	52	8	29	33	0	0	70	33	47	9	0	0	89	24	35	3	0	0	62	273
Hourly Total	14	197	36	0	0	247	42	101	119	0	2	262	112	194	50	0	0	356	67	120	8	0	1	195	1060
12:00 PM	5	52	13	0	0	70	24	30	41	0	0	95	29	44	23	0	0	96	22	25	5	0	0	52	313
12:15 PM	5	52	9	0	0	66	13	28	28	0	2	69	32	56	12	0	0	100	18	30	2	0	0	50	285
12:30 PM	2	52	7	0	0	61	10	27	44	0	2	81	30	68	20	0	0	118	14	34	7	0	0	55	315
12:45 PM	7	58	11	0	0	76	13	33	31	0	3	77	27	55	18	0	0	100	22	19	10	0	0	51	304
Hourly Total	19	214	40	0	0	273	60	118	144	0	7	322	118	223	73	0	0	414	76	108	24	0	0	208	1217
1:00 PM	4	45	10	0	0	59	11	19	27	0	0	57	28	46	14	0	0	88	12	19	7	0	0	38	242
1:15 PM	0	57	9	0	0	66	15	26	18	0	3	59	22	54	10	0	0	86	15	36	5	0	0	56	267
1:30 PM	0	51	9	0	2	60	15	32	31	0	2	78	19	56	14	0	0	89	21	30	3	0	1	54	281
1:45 PM	3	72	8	0	0	83	19	30	30	0	2	79	26	56	12	0	0	94	21	29	3	0	0	53	309
Hourly Total	7	225	36	0	2	268	60	107	106	0	7	273	95	212	50	0	0	357	69	114	18	0	1	201	1099
2:00 PM	3	83	17	0	0	103	16	29	32	0	0	77	35	47	15	0	0	97	16	39	3	0	0	58	335
2:15 PM	2	63	9	0	0	74	11	35	19	0	0	65	23	46	17	0	0	86	16	31	2	0	0	49	274

2:30 PM	4	56	13	0	0	73	20	35	43	0	0	98	37	58	11	0	0	106	9	35	6	0	0	50	327
2:45 PM	5	48	11	0	0	64	12	31	36	0	0	79	26	78	18	0	0	122	15	33	5	0	0	53	318
Hourly Total	14	250	50	0	0	314	59	130	130	0	0	319	121	229	61	0	0	411	56	138	16	0	0	210	1254
3:00 PM	5	65	17	0	1	87	14	34	39	0	1	87	39	59	11	0	0	109	18	46	10	0	0	74	357
3:15 PM	8	54	12	0	0	74	19	60	38	0	2	117	39	69	14	0	0	122	20	39	3	0	0	62	375
3:30 PM	6	65	19	0	0	90	17	49	33	0	1	99	31	57	18	0	0	106	21	56	5	0	0	82	377
3:45 PM	7	54	10	0	0	71	16	45	37	0	0	98	36	63	18	0	0	117	13	50	6	0	0	69	355
Hourly Total	26	238	58	0	1	322	66	188	147	0	4	401	145	248	61	0	0	454	72	191	24	0	0	287	1464
4:00 PM	8	54	8	0	0	70	17	41	37	0	0	95	35	66	19	0	0	120	19	57	9	0	0	85	370
4:15 PM	5	66	15	0	0	86	23	36	23	0	1	82	25	73	7	0	0	105	15	46	5	0	2	66	339
4:30 PM	2	51	14	0	0	67	14	39	39	0	0	92	36	69	22	0	0	127	23	50	8	0	2	81	367
4:45 PM	6	69	12	0	0	87	16	26	37	0	2	79	30	61	13	0	0	104	13	36	7	0	0	56	326
Hourly Total	21	240	49	0	0	310	70	142	136	0	3	348	126	269	61	0	0	456	70	189	29	0	4	288	1402
5:00 PM	5	51	10	0	0	66	21	38	32	0	1	91	34	63	14	0	0	111	20	62	7	0	2	89	357
5:15 PM	9	55	13	0	0	77	14	26	38	0	0	78	29	69	12	0	0	110	17	34	5	0	1	56	321
5:30 PM	7	64	15	0	0	86	23	31	36	0	0	90	21	56	12	0	0	89	19	31	3	0	0	53	318
5:45 PM	4	52	13	0	0	69	17	43	37	0	0	97	25	80	14	0	0	119	16	26	5	0	0	47	332
Hourly Total	25	222	51	0	0	298	75	138	143	0	1	356	109	268	52	0	0	429	72	153	20	0	3	245	1328
Grand Total	190	2332	463	0	3	2985	563	1322	1278	0	32	3163	1135	2217	571	0	0	3923	645	1432	189	0	10	2266	12337
Approach %	6.4	78.1	15.5	0.0	-	-	17.8	41.8	40.4	0.0	-	-	28.9	56.5	14.6	0.0	-	-	28.5	63.2	8.3	0.0	-	-	-
Total %	1.5	18.9	3.8	0.0	-	24.2	4.6	10.7	10.4	0.0	-	25.6	9.2	18.0	4.6	0.0	-	31.8	5.2	11.6	1.5	0.0	-	18.4	-
Lights	179	2304	454	0	-	2937	549	1264	1240	0	-	3053	1095	2163	539	0	-	3797	618	1363	182	0	-	2163	11950
% Lights	94.2	98.8	98.1	-	-	98.4	97.5	95.6	97.0	-	-	96.5	96.5	97.6	94.4	-	-	96.8	95.8	95.2	96.3	-	-	95.5	96.9
Other Vehicles	11	28	9	0	-	48	14	58	38	0	-	110	40	54	32	0	-	126	27	69	7	0	-	103	387
% Other Vehicles	5.8	1.2	1.9	-	-	1.6	2.5	4.4	3.0	-	-	3.5	3.5	2.4	5.6	-	-	3.2	4.2	4.8	3.7	-	-	4.5	3.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	28.1	-	-	-	-	-	-	-	-	-	-	-	30.0	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	23	-	-	-	-	-	0	-	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	71.9	-	-	-	-	-	-	-	-	-	-	-	70.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: W 21st St at Reeves Ave
Site Code:
Start Date: 11/11/2014
Page No: 1

Turning Movement Data

Start Time	Reeves Ave Southbound						W 21st St Westbound						Reeves Ave Northbound						W 21st St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	1	0	2	0	1	3	1	46	3	0	1	50	8	1	0	0	1	9	3	33	2	0	1	38	100
7:15 AM	1	3	0	0	0	4	1	41	4	0	0	46	3	0	0	0	0	3	3	53	1	0	0	57	110
7:30 AM	1	2	3	0	0	6	1	40	5	0	0	46	6	0	1	0	0	7	7	57	1	0	5	65	124
7:45 AM	7	1	2	0	0	10	3	60	13	0	3	76	9	1	6	0	0	16	9	70	0	0	2	79	181
Hourly Total	10	6	7	0	1	23	6	187	25	0	4	218	26	2	7	0	1	35	22	213	4	0	8	239	515
8:00 AM	4	0	2	0	2	6	3	59	7	0	0	69	6	0	10	0	1	16	7	56	5	0	3	68	159
8:15 AM	2	2	1	0	0	5	0	52	10	0	0	62	6	0	0	0	0	6	1	49	3	0	2	53	126
8:30 AM	2	4	2	0	0	8	0	59	6	0	0	65	6	4	4	0	0	14	4	57	4	0	1	65	152
8:45 AM	5	2	2	0	0	9	1	44	4	0	0	49	0	1	3	0	0	4	2	49	2	0	1	53	115
Hourly Total	13	8	7	0	2	28	4	214	27	0	0	245	18	5	17	0	1	40	14	211	14	0	7	239	552
9:00 AM	2	3	0	0	0	5	0	51	3	0	0	54	3	0	3	0	0	6	4	36	3	0	0	43	108
9:15 AM	6	0	0	0	0	6	0	43	2	0	0	45	7	1	4	0	1	12	0	48	3	0	2	51	114
9:30 AM	5	1	2	0	0	8	1	44	4	0	0	49	3	4	1	0	0	8	3	57	3	0	3	63	128
9:45 AM	5	2	3	0	0	10	0	59	2	0	0	61	0	0	1	0	0	1	2	50	3	0	0	55	127
Hourly Total	18	6	5	0	0	29	1	197	11	0	0	209	13	5	9	0	1	27	9	191	12	0	5	212	477
10:00 AM	4	0	2	0	0	6	1	43	2	0	0	46	6	0	3	0	2	9	1	53	2	0	0	56	117
10:15 AM	3	1	0	0	0	4	2	60	3	0	0	65	9	0	3	0	1	12	1	49	3	0	0	53	134
10:30 AM	2	3	2	0	0	7	1	68	12	0	0	81	6	0	0	0	0	6	1	55	5	0	0	61	155
10:45 AM	6	2	4	0	0	12	1	61	1	0	0	63	7	3	4	0	1	14	2	61	2	0	0	65	154
Hourly Total	15	6	8	0	0	29	5	232	18	0	0	255	28	3	10	0	4	41	5	218	12	0	0	235	560
11:00 AM	6	1	1	0	0	8	2	57	4	0	0	63	3	1	2	0	0	6	1	73	2	0	0	76	153
11:15 AM	3	0	0	0	3	3	3	69	9	0	0	81	7	1	2	0	0	10	3	56	2	0	2	61	155
11:30 AM	4	5	0	0	0	9	0	62	7	0	0	69	3	2	2	0	0	7	0	50	3	0	0	53	138
11:45 AM	5	4	1	0	0	10	2	59	8	0	0	69	2	2	6	0	1	10	3	72	6	0	1	81	170
Hourly Total	18	10	2	0	3	30	7	247	28	0	0	282	15	6	12	0	1	33	7	251	13	0	3	271	616
12:00 PM	5	1	2	0	1	8	2	69	5	0	0	76	10	0	2	0	0	12	2	69	4	0	0	75	171
12:15 PM	9	0	4	0	0	13	3	61	8	0	2	72	4	2	4	0	1	10	5	65	3	0	4	73	168
12:30 PM	3	1	0	0	0	4	1	79	5	0	0	85	6	0	3	0	0	9	5	58	7	0	2	70	168
12:45 PM	7	2	3	0	0	12	2	70	6	0	0	78	2	3	4	0	0	9	1	58	2	0	3	61	160
Hourly Total	24	4	9	0	1	37	8	279	24	0	2	311	22	5	13	0	1	40	13	250	16	0	9	279	667
1:00 PM	7	4	1	0	0	12	1	49	5	0	0	55	10	2	2	0	0	14	5	52	2	0	0	59	140
1:15 PM	1	1	2	0	0	4	3	56	5	0	0	64	2	2	4	0	0	8	3	65	2	0	0	70	146
1:30 PM	4	0	2	0	0	6	2	82	5	0	0	89	4	5	3	0	2	12	5	67	2	0	3	74	181
1:45 PM	2	4	0	0	1	6	2	75	9	0	1	86	5	1	4	0	1	10	4	71	3	0	0	78	180
Hourly Total	14	9	5	0	1	28	8	262	24	0	1	294	21	10	13	0	3	44	17	255	9	0	3	281	647
2:00 PM	5	0	2	0	0	7	5	68	6	0	0	79	10	1	6	0	0	17	5	81	2	0	1	88	191
2:15 PM	2	5	0	0	2	7	0	66	11	0	0	77	10	0	1	0	1	11	6	59	4	0	3	69	164

2:30 PM	3	0	3	0	3	6	6	83	7	0	3	96	8	4	9	0	0	21	4	87	4	0	10	95	218
2:45 PM	9	4	2	0	0	15	6	76	10	0	4	92	6	1	3	0	3	10	5	60	5	0	14	70	187
Hourly Total	19	9	7	0	5	35	17	293	34	0	7	344	34	6	19	0	4	59	20	287	15	0	28	322	760
3:00 PM	7	7	1	0	0	15	2	74	6	0	0	82	4	4	8	0	0	16	3	94	5	0	0	102	215
3:15 PM	10	1	4	0	2	15	3	111	8	0	1	122	11	3	8	0	0	22	2	89	7	0	4	98	257
3:30 PM	8	4	4	0	2	16	3	92	8	0	1	103	6	1	3	0	1	10	4	99	2	0	2	105	234
3:45 PM	9	6	1	0	6	16	12	89	4	0	1	105	10	5	7	0	1	22	2	87	4	0	4	93	236
Hourly Total	34	18	10	0	10	62	20	366	26	0	3	412	31	13	26	0	2	70	11	369	18	0	10	398	942
4:00 PM	7	4	0	0	3	11	2	82	15	0	1	99	7	4	8	0	0	19	5	99	7	0	7	111	240
4:15 PM	4	3	3	0	4	10	2	77	13	0	9	92	9	2	9	0	2	20	3	88	4	0	4	95	217
4:30 PM	9	2	5	0	5	16	4	77	9	0	0	90	11	1	2	0	0	14	5	88	6	0	4	99	219
4:45 PM	3	2	3	0	3	8	0	74	6	0	2	80	14	2	3	0	0	19	5	76	7	0	0	88	195
Hourly Total	23	11	11	0	15	45	8	310	43	0	12	361	41	9	22	0	2	72	18	351	24	0	15	393	871
5:00 PM	8	1	0	0	4	9	2	84	8	0	1	94	15	1	8	0	0	24	4	92	5	0	0	101	228
5:15 PM	3	2	1	0	3	6	1	72	16	0	0	89	8	3	6	0	0	17	5	78	4	0	0	87	199
5:30 PM	3	3	2	0	0	8	1	87	14	0	0	102	2	1	7	0	0	10	1	61	7	0	0	69	189
5:45 PM	3	0	1	0	1	4	5	85	11	0	1	101	3	0	1	0	0	4	4	70	4	0	1	78	187
Hourly Total	17	6	4	0	8	27	9	328	49	0	2	386	28	5	22	0	0	55	14	301	20	0	1	335	803
Grand Total	205	93	75	0	46	373	93	2915	309	0	31	3317	277	69	170	0	20	516	150	2897	157	0	89	3204	7410
Approach %	55.0	24.9	20.1	0.0	-	-	2.8	87.9	9.3	0.0	-	-	53.7	13.4	32.9	0.0	-	-	4.7	90.4	4.9	0.0	-	-	-
Total %	2.8	1.3	1.0	0.0	-	5.0	1.3	39.3	4.2	0.0	-	44.8	3.7	0.9	2.3	0.0	-	7.0	2.0	39.1	2.1	0.0	-	43.2	-
Lights	195	90	73	0	-	358	90	2821	303	0	-	3214	273	65	164	0	-	502	145	2788	152	0	-	3085	7159
% Lights	95.1	96.8	97.3	-	-	96.0	96.8	96.8	98.1	-	-	96.9	98.6	94.2	96.5	-	-	97.3	96.7	96.2	96.8	-	-	96.3	96.6
Other Vehicles	10	3	2	0	-	15	3	94	6	0	-	103	4	4	6	0	-	14	5	109	5	0	-	119	251
% Other Vehicles	4.9	3.2	2.7	-	-	4.0	3.2	3.2	1.9	-	-	3.1	1.4	5.8	3.5	-	-	2.7	3.3	3.8	3.2	-	-	3.7	3.4
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	6.5	-	-	-	-	-	12.9	-	-	-	-	-	5.0	-	-	-	-	-	3.4	-	-
Pedestrians	-	-	-	-	43	-	-	-	-	-	27	-	-	-	-	-	19	-	-	-	-	-	86	-	-
% Pedestrians	-	-	-	-	93.5	-	-	-	-	-	87.1	-	-	-	-	-	95.0	-	-	-	-	-	96.6	-	-

URS Corp. : Akron (OH)
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Count Name: W 21st St at Pole Ave
Site Code:
Start Date: 11/11/2014
Page No: 1

Turning Movement Data

Start Time	Pole Ave Southbound						W 21st St Westbound						Pole Ave Northbound						W 21st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	2	0	4	0	0	6	0	46	0	0	0	46	1	0	1	0	0	2	1	39	0	0	0	40	94
7:15 AM	4	0	0	0	0	4	1	46	4	0	0	51	1	1	0	0	0	2	2	52	0	0	0	54	111
7:30 AM	0	0	0	0	0	0	0	46	6	0	0	52	3	2	1	0	0	6	2	65	1	0	0	68	126
7:45 AM	0	5	1	0	0	6	0	78	11	0	0	89	5	3	0	0	0	8	0	73	3	0	0	76	179
Hourly Total	6	5	5	0	0	16	1	216	21	0	0	238	10	6	2	0	0	18	5	229	4	0	0	238	510
8:00 AM	2	2	1	0	1	5	2	65	10	0	0	77	9	3	2	0	0	14	0	66	2	0	1	68	164
8:15 AM	0	0	1	0	0	1	2	60	0	0	0	62	4	0	1	0	0	5	2	53	0	0	1	55	123
8:30 AM	1	0	1	0	1	2	2	64	1	0	0	67	3	1	1	0	0	5	1	59	2	0	0	62	136
8:45 AM	1	1	2	0	0	4	1	48	1	0	0	50	3	1	0	0	0	4	1	53	1	0	0	55	113
Hourly Total	4	3	5	0	2	12	7	237	12	0	0	256	19	5	4	0	0	28	4	231	5	0	2	240	536
9:00 AM	2	0	2	0	0	4	0	51	3	0	0	54	5	0	0	0	0	5	0	39	1	0	0	40	103
9:15 AM	2	2	0	0	0	4	0	41	1	0	0	42	1	2	1	0	0	4	0	52	1	0	0	53	103
9:30 AM	1	0	2	0	0	3	3	46	3	0	0	52	2	0	2	0	0	4	2	61	1	0	0	64	123
9:45 AM	4	2	0	0	0	6	1	54	1	0	0	56	0	2	1	0	0	3	0	49	2	0	0	51	116
Hourly Total	9	4	4	0	0	17	4	192	8	0	0	204	8	4	4	0	0	16	2	201	5	0	0	208	445
10:00 AM	2	1	1	0	0	4	0	45	1	0	0	46	5	1	1	0	2	7	1	54	1	0	0	56	113
10:15 AM	2	0	1	0	0	3	0	62	2	0	0	64	4	0	0	0	0	4	2	58	2	0	0	62	133
10:30 AM	5	0	2	0	0	7	5	70	1	0	0	76	4	0	2	0	0	6	2	59	0	0	0	61	150
10:45 AM	1	1	0	0	0	2	1	62	3	0	0	66	3	0	3	0	1	6	2	64	2	0	0	68	142
Hourly Total	10	2	4	0	0	16	6	239	7	0	0	252	16	1	6	0	3	23	7	235	5	0	0	247	538
11:00 AM	4	1	2	0	0	7	1	59	1	0	0	61	2	1	1	0	0	4	2	76	3	0	0	81	153
11:15 AM	3	1	0	0	0	4	1	78	2	0	0	81	2	2	0	0	0	4	0	67	1	0	0	68	157
11:30 AM	4	2	2	0	1	8	0	64	0	0	0	64	5	0	3	0	1	8	3	52	5	0	0	60	140
11:45 AM	2	3	1	0	0	6	5	67	5	0	0	77	2	1	1	0	1	4	0	72	2	0	0	74	161
Hourly Total	13	7	5	0	1	25	7	268	8	0	0	283	11	4	5	0	2	20	5	267	11	0	0	283	611
12:00 PM	8	0	0	0	1	8	3	71	0	0	1	74	4	1	0	0	0	5	2	67	5	0	1	74	161
12:15 PM	1	0	2	0	0	3	0	67	1	0	0	68	0	1	3	0	0	4	0	75	2	0	0	77	152
12:30 PM	3	0	2	0	0	5	1	77	1	0	0	79	7	1	2	0	0	10	1	62	2	0	0	65	159
12:45 PM	7	0	2	0	0	9	5	69	1	0	0	75	3	1	1	0	0	5	2	56	3	0	0	61	150
Hourly Total	19	0	6	0	1	25	9	284	3	0	1	296	14	4	6	0	0	24	5	260	12	0	1	277	622
1:00 PM	3	1	0	0	3	4	1	56	3	0	0	60	2	1	1	0	0	4	1	61	2	0	0	64	132
1:15 PM	2	0	0	0	0	2	3	63	5	0	0	71	5	1	0	0	0	6	0	68	2	0	0	70	149
1:30 PM	1	1	1	0	0	3	0	87	2	0	0	89	3	1	3	0	0	7	1	70	2	0	1	73	172
1:45 PM	4	2	6	0	1	12	2	83	5	0	0	90	3	1	1	0	0	5	1	74	2	0	0	77	184
Hourly Total	10	4	7	0	4	21	6	289	15	0	0	310	13	4	5	0	0	22	3	273	8	0	1	284	637
2:00 PM	0	3	0	0	2	3	2	74	5	0	0	81	9	0	3	0	0	12	3	86	1	0	0	90	186
2:15 PM	3	2	2	0	0	7	3	71	11	0	0	85	3	1	2	0	0	6	3	64	0	0	0	67	165

2:30 PM	4	3	2	0	0	9	3	93	6	0	0	102	13	7	1	0	0	21	1	98	1	0	0	100	232
2:45 PM	3	3	4	0	1	10	2	90	8	0	2	100	7	0	2	0	0	9	2	69	0	0	0	71	190
Hourly Total	10	11	8	0	3	29	10	328	30	0	2	368	32	8	8	0	0	48	9	317	2	0	0	328	773
3:00 PM	4	3	3	0	0	10	0	78	4	0	0	82	1	1	2	0	0	4	1	91	3	0	0	95	191
3:15 PM	3	1	3	0	0	7	0	117	2	0	0	119	1	1	8	0	0	10	4	96	6	0	0	106	242
3:30 PM	4	2	2	0	0	8	2	95	1	0	0	98	2	4	5	0	1	11	2	112	1	0	1	115	232
3:45 PM	1	1	0	0	0	2	4	107	5	0	0	116	4	0	0	0	1	4	1	95	3	0	0	99	221
Hourly Total	12	7	8	0	0	27	6	397	12	0	0	415	8	6	15	0	2	29	8	394	13	0	1	415	886
4:00 PM	5	1	1	0	0	7	2	92	6	0	0	100	7	3	0	0	3	10	1	94	4	0	0	99	216
4:15 PM	6	2	2	0	1	10	5	83	6	0	0	94	4	1	3	0	0	8	5	96	3	0	0	104	216
4:30 PM	2	1	0	0	1	3	2	89	1	0	3	92	14	1	2	0	0	17	4	96	6	0	0	106	218
4:45 PM	3	2	4	0	2	9	2	73	2	0	0	77	5	0	4	0	1	9	3	89	4	0	2	96	191
Hourly Total	16	6	7	0	4	29	11	337	15	0	3	363	30	5	9	0	4	44	13	375	17	0	2	405	841
5:00 PM	2	0	0	0	0	2	2	91	3	0	0	96	1	1	1	0	0	3	0	107	1	0	1	108	209
5:15 PM	6	1	2	0	0	9	3	80	2	0	0	85	6	0	1	0	3	7	1	81	5	0	1	87	188
5:30 PM	5	0	0	0	0	5	0	96	2	1	0	99	5	3	2	0	0	10	0	63	2	0	0	65	179
5:45 PM	4	0	1	0	0	5	3	94	6	0	0	103	0	2	2	0	0	4	2	69	3	0	0	74	186
Hourly Total	17	1	3	0	0	21	8	361	13	1	0	383	12	6	6	0	3	24	3	320	11	0	2	334	762
Grand Total	126	50	62	0	15	238	75	3148	144	1	6	3368	173	53	70	0	14	296	64	3102	93	0	9	3259	7161
Approach %	52.9	21.0	26.1	0.0	-	-	2.2	93.5	4.3	0.0	-	-	58.4	17.9	23.6	0.0	-	-	2.0	95.2	2.9	0.0	-	-	-
Total %	1.8	0.7	0.9	0.0	-	3.3	1.0	44.0	2.0	0.0	-	47.0	2.4	0.7	1.0	0.0	-	4.1	0.9	43.3	1.3	0.0	-	45.5	-
Lights	125	50	60	0	-	235	72	3041	136	1	-	3250	168	52	67	0	-	287	62	2999	87	0	-	3148	6920
% Lights	99.2	100.0	96.8	-	-	98.7	96.0	96.6	94.4	100.0	-	96.5	97.1	98.1	95.7	-	-	97.0	96.9	96.7	93.5	-	-	96.6	96.6
Other Vehicles	1	0	2	0	-	3	3	107	8	0	-	118	5	1	3	0	-	9	2	103	6	0	-	111	241
% Other Vehicles	0.8	0.0	3.2	-	-	1.3	4.0	3.4	5.6	0.0	-	3.5	2.9	1.9	4.3	-	-	3.0	3.1	3.3	6.5	-	-	3.4	3.4
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	13.3	-	-	-	-	-	0.0	-	-	-	-	-	7.1	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	13	-	-	-	-	-	6	-	-	-	-	-	13	-	-	-	-	-	9	-	-
% Pedestrians	-	-	-	-	86.7	-	-	-	-	-	100.0	-	-	-	-	-	92.9	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: W 21st St at Oberlin Ave
Site Code:
Start Date: 11/11/2014

Turning Movement Data

Start Time	Oberlin Ave Southbound						W 21st St Westbound						Oberlin Ave Northbound						W 21st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	6	32	8	0	0	46	1	40	9	0	0	50	9	17	6	0	0	32	7	34	6	0	0	47	175
7:15 AM	3	37	6	0	0	46	3	40	10	0	0	53	15	20	7	0	0	42	7	39	7	0	0	53	194
7:30 AM	7	50	10	0	0	67	8	44	21	0	0	73	15	29	3	0	0	47	10	58	2	0	0	70	257
7:45 AM	14	66	9	0	0	89	10	52	22	0	0	84	14	48	11	0	0	73	8	55	17	0	2	80	326
Hourly Total	30	185	33	0	0	248	22	176	62	0	0	260	53	114	27	0	0	194	32	186	32	0	2	250	952
8:00 AM	6	52	14	0	1	72	6	48	13	0	0	67	18	57	16	0	0	91	14	51	13	0	0	78	308
8:15 AM	9	52	13	0	0	74	4	42	16	0	3	62	15	39	5	0	1	59	10	45	5	0	0	60	255
8:30 AM	7	52	16	0	0	75	3	49	13	0	1	65	21	36	6	0	0	63	7	60	4	0	1	71	274
8:45 AM	4	43	9	0	0	56	7	42	19	0	1	68	19	45	11	0	0	75	9	42	5	0	0	56	255
Hourly Total	26	199	52	0	1	277	20	181	61	0	5	262	73	177	38	0	1	288	40	198	27	0	1	265	1092
9:00 AM	9	38	9	0	0	56	7	34	19	0	0	60	13	32	2	0	0	47	5	34	4	0	0	43	206
9:15 AM	3	36	12	0	0	51	4	35	20	0	0	59	7	34	9	0	0	50	4	41	7	0	0	52	212
9:30 AM	3	30	9	0	1	42	7	41	15	0	0	63	17	34	4	0	1	55	4	52	7	0	2	63	223
9:45 AM	6	37	10	0	0	53	7	36	28	0	0	71	12	29	8	0	0	49	7	43	8	0	0	58	231
Hourly Total	21	141	40	0	1	202	25	146	82	0	0	253	49	129	23	0	1	201	20	170	26	0	2	216	872
10:00 AM	2	30	4	0	0	36	8	40	21	0	0	69	10	29	5	0	0	44	5	47	12	0	0	64	213
10:15 AM	4	35	12	0	0	51	1	51	16	0	0	68	12	35	6	0	0	53	4	46	9	0	1	59	231
10:30 AM	8	36	8	0	1	52	3	46	21	0	1	70	21	40	10	0	0	71	10	44	15	0	0	69	262
10:45 AM	6	38	4	0	0	48	6	57	16	0	1	79	21	32	6	0	0	59	12	46	8	0	0	66	252
Hourly Total	20	139	28	0	1	187	18	194	74	0	2	286	64	136	27	0	0	227	31	183	44	0	1	258	958
11:00 AM	7	47	12	0	0	66	6	43	19	0	1	68	25	44	7	0	0	76	9	54	7	0	1	70	280
11:15 AM	10	39	8	0	0	57	9	58	28	0	0	95	20	45	7	0	0	72	5	55	8	0	1	68	292
11:30 AM	8	53	9	0	1	70	5	57	21	0	2	83	15	53	8	0	0	76	2	32	9	0	1	43	272
11:45 AM	6	42	12	0	0	60	3	54	25	0	1	82	16	31	8	0	0	55	4	64	15	0	0	83	280
Hourly Total	31	181	41	0	1	253	23	212	93	0	4	328	76	173	30	0	0	279	20	205	39	0	3	264	1124
12:00 PM	11	48	13	0	0	72	13	58	25	0	0	96	22	47	9	0	0	78	10	54	11	0	0	75	321
12:15 PM	7	54	8	0	0	69	9	65	24	0	0	98	22	49	11	0	1	82	9	55	8	0	1	72	321
12:30 PM	8	42	9	0	0	59	6	62	30	0	0	98	16	46	7	0	0	69	8	51	11	0	1	70	296
12:45 PM	8	41	11	0	0	60	11	50	17	0	0	78	22	47	15	0	0	84	4	41	13	0	1	58	280
Hourly Total	34	185	41	0	0	260	39	235	96	0	0	370	82	189	42	0	1	313	31	201	43	0	3	275	1218
1:00 PM	4	39	10	0	0	53	10	39	21	0	2	70	24	40	8	0	0	72	5	40	13	0	0	58	253
1:15 PM	6	46	11	0	0	63	6	63	25	0	0	94	15	39	10	0	0	64	8	59	3	0	2	70	291
1:30 PM	9	60	14	0	0	83	7	53	27	0	0	87	17	62	12	0	0	91	10	59	11	0	0	80	341
1:45 PM	11	54	15	0	1	80	16	70	28	0	1	114	12	53	14	0	0	79	9	64	12	0	0	85	358
Hourly Total	30	199	50	0	1	279	39	225	101	0	3	365	68	194	44	0	0	306	32	222	39	0	2	293	1243
2:00 PM	11	58	13	0	0	82	9	57	30	0	0	96	24	54	10	0	1	88	11	58	21	0	0	90	356
2:15 PM	8	49	16	0	0	73	8	53	26	0	0	87	35	58	14	0	0	107	7	48	14	0	0	69	336

2:30 PM	7	47	18	0	0	72	9	87	31	0	9	127	26	63	19	0	0	108	13	73	13	0	0	99	406
2:45 PM	13	49	13	0	0	75	4	69	29	0	3	102	21	61	10	0	0	92	10	58	11	0	0	79	348
Hourly Total	39	203	60	0	0	302	30	266	116	0	12	412	106	236	53	0	1	395	41	237	59	0	0	337	1446
3:00 PM	13	65	23	0	0	101	15	56	28	0	0	99	23	75	9	0	0	107	18	61	19	0	0	98	405
3:15 PM	13	63	7	0	0	83	20	79	25	0	1	124	32	73	15	0	0	120	20	77	17	0	0	114	441
3:30 PM	11	76	17	0	0	104	17	75	31	0	2	123	19	86	27	0	0	132	10	73	21	0	0	104	463
3:45 PM	12	57	23	0	1	92	18	75	29	0	3	122	24	71	13	0	0	108	13	68	19	0	0	100	422
Hourly Total	49	261	70	0	1	380	70	285	113	0	6	468	98	305	64	0	0	467	61	279	76	0	0	416	1731
4:00 PM	13	65	10	0	0	88	15	66	27	0	1	108	19	85	16	0	0	120	8	67	19	0	0	94	410
4:15 PM	12	58	14	0	0	84	21	78	24	0	1	123	12	65	15	0	0	92	12	71	16	0	0	99	398
4:30 PM	11	61	12	0	3	84	13	59	37	0	0	109	21	53	13	0	0	87	9	78	24	0	0	111	391
4:45 PM	9	60	20	0	0	89	13	52	24	0	0	89	18	74	15	0	0	107	12	58	23	0	0	93	378
Hourly Total	45	244	56	0	3	345	62	255	112	0	2	429	70	277	59	0	0	406	41	274	82	0	0	397	1577
5:00 PM	8	59	10	0	0	77	13	70	29	0	2	112	16	71	22	0	2	109	16	66	21	0	0	103	401
5:15 PM	11	51	11	0	0	73	17	62	21	0	0	100	10	55	13	0	0	78	12	69	10	0	1	91	342
5:30 PM	9	53	11	0	0	73	13	72	23	0	2	108	15	57	17	0	0	89	12	46	10	0	0	68	338
5:45 PM	11	51	11	0	0	73	17	75	27	0	1	119	17	73	17	0	0	107	12	41	15	0	0	68	367
Hourly Total	39	214	43	0	0	296	60	279	100	0	5	439	58	256	69	0	2	383	52	222	56	0	1	330	1448
Grand Total	364	2151	514	0	9	3029	408	2454	1010	0	39	3872	797	2186	476	0	6	3459	401	2377	523	0	15	3301	13661
Approach %	12.0	71.0	17.0	0.0	-	-	10.5	63.4	26.1	0.0	-	-	23.0	63.2	13.8	0.0	-	-	12.1	72.0	15.8	0.0	-	-	-
Total %	2.7	15.7	3.8	0.0	-	22.2	3.0	18.0	7.4	0.0	-	28.3	5.8	16.0	3.5	0.0	-	25.3	2.9	17.4	3.8	0.0	-	24.2	-
Lights	360	2123	502	0	-	2985	397	2362	971	0	-	3730	769	2146	464	0	-	3379	398	2287	509	0	-	3194	13288
% Lights	98.9	98.7	97.7	-	-	98.5	97.3	96.3	96.1	-	-	96.3	96.5	98.2	97.5	-	-	97.7	99.3	96.2	97.3	-	-	96.8	97.3
Other Vehicles	4	28	12	0	-	44	11	92	39	0	-	142	28	40	12	0	-	80	3	90	14	0	-	107	373
% Other Vehicles	1.1	1.3	2.3	-	-	1.5	2.7	3.7	3.9	-	-	3.7	3.5	1.8	2.5	-	-	2.3	0.7	3.8	2.7	-	-	3.2	2.7
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	9	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	11.1	-	-	-	-	-	23.1	-	-	-	-	-	16.7	-	-	-	-	-	13.3	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	30	-	-	-	-	-	5	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	88.9	-	-	-	-	-	76.9	-	-	-	-	-	83.3	-	-	-	-	-	86.7	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: W 21st St at Washington Ave
Site Code:
Start Date: 11/13/2014
Page No: 1

Turning Movement Data

Start Time	Washington Ave Southbound						W 21st St Westbound						Washington Ave Northbound						W 21st St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	6	6	15	0	0	27	5	47	1	0	0	53	4	1	0	0	0	5	3	49	6	0	0	58	143
7:15 AM	9	3	12	0	0	24	6	55	3	0	0	64	4	3	1	0	0	8	4	56	6	0	0	66	162
7:30 AM	6	7	8	0	0	21	3	47	4	0	0	54	3	5	2	0	0	10	3	76	6	0	1	85	170
7:45 AM	11	21	17	0	0	49	14	67	7	0	1	88	5	12	8	0	1	25	7	100	11	0	0	118	280
Hourly Total	32	37	52	0	0	121	28	216	15	0	1	259	16	21	11	0	1	48	17	281	29	0	1	327	755
8:00 AM	6	14	17	0	0	37	8	45	8	0	1	61	14	17	2	0	0	33	1	80	10	0	7	91	222
8:15 AM	13	9	16	0	0	38	9	62	5	0	1	76	2	14	3	0	0	19	5	59	7	0	4	71	204
8:30 AM	13	26	12	0	1	51	10	57	10	0	3	77	11	23	3	0	1	37	7	79	7	0	9	93	258
8:45 AM	10	26	11	0	0	47	7	70	10	0	3	87	10	31	5	0	0	46	8	71	5	0	3	84	264
Hourly Total	42	75	56	0	1	173	34	234	33	0	8	301	37	85	13	0	1	135	21	289	29	0	23	339	948
9:00 AM	7	10	15	0	0	32	3	63	4	0	0	70	2	9	4	0	0	15	0	73	2	0	2	75	192
9:15 AM	7	9	8	0	0	24	4	44	1	0	0	49	2	6	3	0	0	11	5	58	6	0	1	69	153
9:30 AM	8	6	9	0	0	23	9	66	1	0	0	76	2	4	0	0	0	6	3	57	6	0	0	66	171
9:45 AM	10	9	9	0	0	28	7	60	2	0	1	69	2	6	1	0	0	9	0	65	6	0	0	71	177
Hourly Total	32	34	41	0	0	107	23	233	8	0	1	264	8	25	8	0	0	41	8	253	20	0	3	281	693
10:00 AM	11	5	7	0	0	23	4	57	4	0	0	65	2	2	1	0	0	5	2	60	5	0	1	67	160
10:15 AM	15	6	10	0	0	31	2	65	3	0	0	70	1	6	6	0	0	13	1	70	6	0	0	77	191
10:30 AM	8	4	8	0	0	20	5	73	2	0	0	80	2	7	1	0	0	10	1	61	6	0	0	68	178
10:45 AM	14	11	12	0	0	37	8	72	4	0	0	84	3	7	4	0	0	14	4	81	8	0	0	93	228
Hourly Total	48	26	37	0	0	111	19	267	13	0	0	299	8	22	12	0	0	42	8	272	25	0	1	305	757
11:00 AM	11	6	6	0	0	23	12	70	3	0	0	85	2	4	0	0	0	6	2	69	3	0	1	74	188
11:15 AM	8	14	9	0	0	31	4	80	1	0	0	85	4	15	3	0	0	22	1	56	4	0	0	61	199
11:30 AM	15	19	11	0	0	45	7	73	1	0	1	81	2	6	1	0	0	9	5	74	6	0	0	85	220
11:45 AM	16	6	13	0	1	35	8	79	2	0	0	89	0	7	1	0	0	8	1	86	8	0	1	95	227
Hourly Total	50	45	39	0	1	134	31	302	7	0	1	340	8	32	5	0	0	45	9	285	21	0	2	315	834
12:00 PM	10	3	8	0	1	21	6	68	1	0	1	75	3	6	1	0	1	10	3	81	10	0	1	94	200
12:15 PM	10	8	12	0	0	30	10	92	3	0	0	105	0	6	1	0	0	7	1	89	6	0	0	96	238
12:30 PM	13	14	16	0	0	43	10	73	2	0	0	85	2	13	3	0	0	18	4	72	6	0	0	82	228
12:45 PM	18	9	13	0	0	40	9	61	5	0	1	75	2	10	0	0	0	12	4	70	7	0	1	81	208
Hourly Total	51	34	49	0	1	134	35	294	11	0	2	340	7	35	5	0	1	47	12	312	29	0	2	353	874
1:00 PM	15	11	10	0	0	36	6	68	2	0	0	76	3	9	5	0	0	17	1	65	6	0	0	72	201
1:15 PM	12	14	11	0	0	37	13	82	5	0	1	100	1	9	1	0	1	11	1	73	8	0	0	82	230
1:30 PM	8	13	10	0	0	31	13	77	5	0	1	95	1	7	1	0	0	9	0	75	6	0	0	81	216
1:45 PM	10	11	15	0	0	36	13	81	5	0	0	99	1	11	3	0	0	15	2	82	6	0	0	90	240
Hourly Total	45	49	46	0	0	140	45	308	17	0	2	370	6	36	10	0	1	52	4	295	26	0	0	325	887
2:00 PM	13	13	12	0	3	38	15	74	7	0	2	96	2	8	1	0	0	11	4	103	4	0	0	111	256
2:15 PM	28	15	13	0	0	56	19	79	3	0	0	101	1	10	2	0	0	13	4	91	6	0	0	101	271

2:30 PM	24	23	15	0	0	62	13	88	5	0	1	106	10	20	8	0	2	38	2	107	9	0	1	118	324
2:45 PM	13	21	15	0	0	49	19	93	5	0	1	117	7	19	1	0	1	27	5	111	8	0	11	124	317
Hourly Total	78	72	55	0	3	205	66	334	20	0	4	420	20	57	12	0	3	89	15	412	27	0	12	454	1168
3:00 PM	17	20	14	0	0	51	15	81	6	0	0	102	5	14	3	0	0	22	8	101	10	0	2	119	294
3:15 PM	20	26	11	0	0	57	20	108	5	0	2	133	5	21	3	0	0	29	10	109	4	0	2	123	342
3:30 PM	18	18	23	0	0	59	14	110	10	0	4	134	7	36	6	0	0	49	15	104	4	0	20	123	365
3:45 PM	30	14	10	0	0	54	15	99	5	0	3	119	9	17	3	0	0	29	7	95	5	0	8	107	309
Hourly Total	85	78	58	0	0	221	64	398	26	0	9	488	26	88	15	0	0	129	40	409	23	0	32	472	1310
4:00 PM	15	11	15	0	0	41	15	96	4	0	1	115	3	9	4	0	0	16	2	90	4	0	1	96	268
4:15 PM	18	18	17	0	0	53	19	106	11	0	3	136	6	14	6	0	0	26	6	87	7	0	0	100	315
4:30 PM	15	12	16	0	0	43	22	117	5	0	1	144	3	19	4	0	0	26	5	84	11	0	1	100	313
4:45 PM	12	25	21	0	0	58	14	97	7	0	2	118	5	12	3	0	0	20	2	91	8	0	0	101	297
Hourly Total	60	66	69	0	0	195	70	416	27	0	7	513	17	54	17	0	0	88	15	352	30	0	2	397	1193
5:00 PM	19	24	15	0	1	58	16	68	2	0	0	86	7	14	5	0	0	26	5	87	6	0	1	98	268
5:15 PM	9	24	13	0	0	46	14	64	2	0	0	80	4	12	5	0	0	21	5	85	8	0	0	98	245
5:30 PM	19	13	13	0	1	45	10	54	3	0	1	67	0	13	2	0	0	15	5	57	4	0	1	66	193
5:45 PM	7	15	11	0	0	33	14	58	2	0	0	74	2	11	2	0	0	15	4	67	6	0	2	77	199
Hourly Total	54	76	52	0	2	182	54	244	9	0	1	307	13	50	14	0	0	77	19	296	24	0	4	339	905
Grand Total	577	592	554	0	8	1723	469	3246	186	0	36	3901	166	505	122	0	7	793	168	3456	283	0	82	3907	10324
Approach %	33.5	34.4	32.2	0.0	-	-	12.0	83.2	4.8	0.0	-	-	20.9	63.7	15.4	0.0	-	-	4.3	88.5	7.2	0.0	-	-	-
Total %	5.6	5.7	5.4	0.0	-	16.7	4.5	31.4	1.8	0.0	-	37.8	1.6	4.9	1.2	0.0	-	7.7	1.6	33.5	2.7	0.0	-	37.8	-
Lights	558	583	531	0	-	1672	446	3129	174	0	-	3749	162	492	117	0	-	771	160	3344	275	0	-	3779	9971
% Lights	96.7	98.5	95.8	-	-	97.0	95.1	96.4	93.5	-	-	96.1	97.6	97.4	95.9	-	-	97.2	95.2	96.8	97.2	-	-	96.7	96.6
Other Vehicles	19	9	23	0	-	51	23	117	12	0	-	152	4	13	5	0	-	22	8	112	8	0	-	128	353
% Other Vehicles	3.3	1.5	4.2	-	-	3.0	4.9	3.6	6.5	-	-	3.9	2.4	2.6	4.1	-	-	2.8	4.8	3.2	2.8	-	-	3.3	3.4
Pedestrians	-	-	-	-	8	-	-	-	-	-	36	-	-	-	-	-	7	-	-	-	-	-	82	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: W 21st St at Oakdale Ave
Site Code:
Start Date: 11/13/2014

Turning Movement Data

Start Time	Oakdale Ave Southbound						W 21st St Westbound						Oakdale Ave Northbound						W 21st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	2	2	1	0	0	5	4	56	5	0	0	65	6	1	9	0	0	16	12	62	0	0	0	74	160
7:15 AM	2	3	1	0	0	6	4	40	5	0	0	49	6	3	8	0	0	17	7	66	4	0	0	77	149
7:30 AM	2	6	1	0	0	9	4	66	14	0	0	84	16	6	7	0	0	29	9	78	4	0	0	91	213
7:45 AM	5	7	2	0	2	14	6	63	15	0	3	84	12	7	5	0	1	24	18	101	8	0	0	127	249
Hourly Total	11	18	5	0	2	34	18	225	39	0	3	282	40	17	29	0	1	86	46	307	16	0	0	369	771
8:00 AM	2	12	1	0	1	15	3	60	9	0	8	72	15	9	5	0	0	29	9	85	2	0	0	96	212
8:15 AM	0	4	1	0	0	5	2	64	4	0	0	70	9	3	7	0	0	19	4	81	0	0	0	85	179
8:30 AM	1	7	0	0	0	8	0	71	5	0	1	76	10	3	12	0	1	25	14	86	1	0	0	101	210
8:45 AM	2	6	2	0	0	10	1	71	9	0	0	81	12	4	8	0	0	24	7	85	1	0	0	93	208
Hourly Total	5	29	4	0	1	38	6	266	27	0	9	299	46	19	32	0	1	97	34	337	4	0	0	375	809
9:00 AM	2	5	2	0	0	9	3	55	5	0	2	63	5	6	8	0	0	19	11	69	1	0	0	81	172
9:15 AM	0	3	3	0	0	6	1	46	6	0	0	53	9	4	6	0	0	19	6	60	1	0	1	67	145
9:30 AM	1	7	2	0	0	10	1	70	7	0	2	78	5	7	9	0	0	21	7	59	2	0	0	68	177
9:45 AM	2	3	2	0	2	7	2	60	7	0	2	69	6	4	9	0	0	19	8	68	0	0	0	76	171
Hourly Total	5	18	9	0	2	32	7	231	25	0	6	263	25	21	32	0	0	78	32	256	4	0	1	292	665
10:00 AM	0	1	2	0	0	3	1	64	5	0	0	70	1	4	3	0	0	8	5	64	1	0	0	70	151
10:15 AM	1	4	1	0	0	6	2	71	6	0	0	79	6	1	4	0	0	11	10	66	3	0	0	79	175
10:30 AM	0	2	2	0	0	4	1	70	12	0	0	83	8	5	6	0	0	19	6	70	1	0	0	77	183
10:45 AM	1	4	1	0	0	6	3	70	12	0	0	85	10	6	11	0	0	27	13	83	0	0	0	96	214
Hourly Total	2	11	6	0	0	19	7	275	35	0	0	317	25	16	24	0	0	65	34	283	5	0	0	322	723
11:00 AM	1	8	2	0	0	11	4	80	6	0	0	90	7	2	10	0	0	19	14	63	2	0	0	79	199
11:15 AM	0	6	1	0	0	7	1	79	11	0	0	91	11	3	8	0	2	22	6	62	0	0	0	68	188
11:30 AM	0	5	1	0	0	6	2	77	10	0	0	89	12	1	8	0	0	21	12	84	1	0	0	97	213
11:45 AM	3	1	1	0	0	5	0	72	13	0	0	85	11	6	11	0	0	28	7	83	2	0	0	92	210
Hourly Total	4	20	5	0	0	29	7	308	40	0	0	355	41	12	37	0	2	90	39	292	5	0	0	336	810
12:00 PM	0	4	1	0	0	5	2	76	12	0	0	90	13	3	10	0	1	26	14	75	1	0	0	90	211
12:15 PM	1	2	1	0	0	4	0	75	5	0	0	80	15	2	9	0	0	26	14	95	0	0	0	109	219
12:30 PM	1	2	2	0	0	5	0	75	12	0	0	87	12	1	10	0	0	23	8	71	3	0	0	82	197
12:45 PM	0	3	1	0	0	4	1	64	10	0	0	75	9	6	13	0	0	28	11	82	3	0	0	96	203
Hourly Total	2	11	5	0	0	18	3	290	39	0	0	332	49	12	42	0	1	103	47	323	7	0	0	377	830
1:00 PM	0	2	1	0	0	3	1	64	15	0	0	80	12	6	10	0	0	28	12	60	1	0	0	73	184
1:15 PM	3	4	2	0	0	9	0	79	7	0	1	86	13	3	18	0	0	34	13	73	1	0	0	87	216
1:30 PM	4	3	3	0	0	10	2	82	5	0	0	89	13	5	10	0	1	28	7	75	5	0	1	87	214
1:45 PM	2	8	1	0	1	11	1	94	16	0	2	111	8	7	18	0	0	33	10	90	4	0	0	104	259
Hourly Total	9	17	7	0	1	33	4	319	43	0	3	366	46	21	56	0	1	123	42	298	11	0	1	351	873
2:00 PM	0	10	0	0	2	10	2	75	15	0	0	92	9	6	11	0	0	26	9	105	4	0	0	118	246
2:15 PM	2	10	0	0	0	12	9	89	7	0	1	105	14	8	14	0	0	36	16	86	3	0	1	105	258

2:30 PM	5	15	3	0	0	23	3	91	13	0	5	107	17	8	12	0	0	37	12	117	7	0	0	136	303
2:45 PM	1	2	1	0	0	4	2	95	18	0	1	115	13	8	24	0	0	45	18	107	1	0	0	126	290
Hourly Total	8	37	4	0	2	49	16	350	53	0	7	419	53	30	61	0	0	144	55	415	15	0	1	485	1097
3:00 PM	1	5	1	0	0	7	2	93	9	0	0	104	13	6	12	0	0	31	20	97	3	0	0	120	262
3:15 PM	3	6	4	0	0	13	2	116	11	0	2	129	8	15	20	0	0	43	9	113	3	0	0	125	310
3:30 PM	1	7	2	0	0	10	2	107	19	0	1	128	11	7	10	0	0	28	14	116	3	0	2	133	299
3:45 PM	1	5	2	0	0	8	2	97	11	0	2	110	8	14	15	0	0	37	7	100	2	0	1	109	264
Hourly Total	6	23	9	0	0	38	8	413	50	0	5	471	40	42	57	0	0	139	50	426	11	0	3	487	1135
4:00 PM	0	6	1	0	0	7	0	118	17	0	0	135	17	3	15	0	0	35	14	95	3	0	0	112	289
4:15 PM	2	1	1	0	1	4	1	112	15	0	0	128	11	8	11	0	0	30	13	92	1	0	0	106	268
4:30 PM	2	7	1	0	0	10	2	134	22	0	1	158	8	8	15	0	0	31	22	78	3	0	0	103	302
4:45 PM	2	3	3	0	0	8	1	79	6	0	1	86	14	6	16	0	0	36	11	98	3	0	0	112	242
Hourly Total	6	17	6	0	1	29	4	443	60	0	2	507	50	25	57	0	0	132	60	363	10	0	0	433	1101
5:00 PM	1	6	2	0	1	9	1	82	6	0	0	89	13	6	14	0	0	33	12	92	2	0	0	106	237
5:15 PM	2	4	2	0	0	8	1	53	9	0	0	63	10	6	19	0	0	35	12	88	2	0	0	102	208
5:30 PM	1	3	0	0	0	4	1	57	4	0	1	62	4	5	14	0	0	23	11	58	0	0	0	69	158
5:45 PM	1	2	1	0	0	4	0	61	3	0	1	64	5	3	8	0	0	16	18	59	1	0	0	78	162
Hourly Total	5	15	5	0	1	25	3	253	22	0	2	278	32	20	55	0	0	107	53	297	5	0	0	355	765
Grand Total	63	216	65	0	10	344	83	3373	433	0	37	3889	447	235	482	0	6	1164	492	3597	93	0	6	4182	9579
Approach %	18.3	62.8	18.9	0.0	-	-	2.1	86.7	11.1	0.0	-	-	38.4	20.2	41.4	0.0	-	-	11.8	86.0	2.2	0.0	-	-	-
Total %	0.7	2.3	0.7	0.0	-	3.6	0.9	35.2	4.5	0.0	-	40.6	4.7	2.5	5.0	0.0	-	12.2	5.1	37.6	1.0	0.0	-	43.7	-
Lights	59	213	62	0	-	334	78	3223	425	0	-	3726	435	228	474	0	-	1137	476	3461	89	0	-	4026	9223
% Lights	93.7	98.6	95.4	-	-	97.1	94.0	95.6	98.2	-	-	95.8	97.3	97.0	98.3	-	-	97.7	96.7	96.2	95.7	-	-	96.3	96.3
Other Vehicles	4	3	3	0	-	10	5	150	8	0	-	163	12	7	8	0	-	27	16	136	4	0	-	156	356
% Other Vehicles	6.3	1.4	4.6	-	-	2.9	6.0	4.4	1.8	-	-	4.2	2.7	3.0	1.7	-	-	2.3	3.3	3.8	4.3	-	-	3.7	3.7
Pedestrians	-	-	-	-	10	-	-	-	-	-	37	-	-	-	-	-	6	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: W 21st St at Reid Ave
Site Code:
Start Date: 11/13/2014

Turning Movement Data

Start Time	Reid Ave Southbound						W 21st St Westbound						Reid Ave Northbound						W 21st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	3	6	0	0	0	9	5	51	0	0	0	56	3	3	2	0	0	8	6	53	4	0	0	63	136
7:15 AM	3	5	1	0	0	9	12	43	1	0	1	56	0	6	2	0	0	8	2	66	6	0	0	74	147
7:30 AM	3	4	5	0	0	12	15	77	1	0	0	93	3	5	3	0	1	11	6	72	11	0	0	89	205
7:45 AM	4	7	6	0	2	17	14	79	0	0	1	93	3	7	0	0	0	10	11	89	16	0	0	116	236
Hourly Total	13	22	12	0	2	47	46	250	2	0	2	298	9	21	7	0	1	37	25	280	37	0	0	342	724
8:00 AM	4	12	4	0	0	20	11	64	4	0	0	79	0	7	6	0	0	13	6	82	15	0	0	103	215
8:15 AM	7	5	9	0	1	21	12	63	1	0	0	76	2	8	4	0	1	14	8	69	15	0	0	92	203
8:30 AM	11	16	8	0	0	35	15	59	2	0	0	76	1	12	3	0	0	16	4	74	16	0	0	94	221
8:45 AM	15	9	3	0	0	27	10	62	2	0	1	74	4	10	2	0	0	16	8	75	13	0	0	96	213
Hourly Total	37	42	24	0	1	103	48	248	9	0	1	305	7	37	15	0	1	59	26	300	59	0	0	385	852
9:00 AM	7	9	9	0	0	25	10	59	1	0	0	70	3	10	2	0	0	15	9	48	17	0	0	74	184
9:15 AM	7	8	7	0	0	22	17	43	2	0	0	62	0	3	4	0	0	7	3	58	16	0	0	77	168
9:30 AM	6	4	8	0	0	18	11	76	3	0	0	90	2	6	1	0	0	9	3	53	12	0	0	68	185
9:45 AM	6	6	9	0	0	21	1	60	3	0	1	64	2	6	4	0	0	12	4	58	18	0	0	80	177
Hourly Total	26	27	33	0	0	86	39	238	9	0	1	286	7	25	11	0	0	43	19	217	63	0	0	299	714
10:00 AM	13	7	7	0	0	27	7	51	1	0	1	59	0	7	1	0	0	8	2	52	9	0	0	63	157
10:15 AM	13	10	4	0	2	27	11	60	2	0	1	73	1	13	4	0	0	18	3	55	11	0	0	69	187
10:30 AM	10	8	7	0	0	25	16	69	2	0	1	87	2	8	1	0	1	11	4	65	10	0	0	79	202
10:45 AM	6	10	6	0	0	22	6	76	2	0	0	84	2	9	0	0	0	11	2	84	8	0	0	94	211
Hourly Total	42	35	24	0	2	101	40	256	7	0	3	303	5	37	6	0	1	48	11	256	38	0	0	305	757
11:00 AM	10	9	12	0	0	31	5	78	4	0	0	87	3	5	3	0	0	11	2	61	10	0	0	73	202
11:15 AM	13	12	6	0	0	31	10	76	1	0	0	87	1	6	2	0	0	9	2	61	8	0	0	71	198
11:30 AM	20	16	10	0	0	46	3	68	2	0	1	73	3	6	2	0	0	11	3	78	17	0	0	98	228
11:45 AM	26	13	5	0	0	44	7	58	3	0	2	68	3	11	0	0	0	14	7	73	20	0	0	100	226
Hourly Total	69	50	33	0	0	152	25	280	10	0	3	315	10	28	7	0	0	45	14	273	55	0	0	342	854
12:00 PM	16	10	5	0	0	31	3	65	3	0	2	71	3	14	4	0	0	21	8	62	9	0	0	79	202
12:15 PM	6	12	7	0	1	25	12	71	3	0	0	86	3	12	4	0	0	19	5	83	15	0	0	103	233
12:30 PM	16	6	0	0	0	22	6	74	3	0	0	83	3	7	2	0	0	12	4	67	17	0	0	88	205
12:45 PM	10	3	3	0	0	16	13	56	5	0	2	74	3	16	6	0	0	25	5	69	18	0	0	92	207
Hourly Total	48	31	15	0	1	94	34	266	14	0	4	314	12	49	16	0	0	77	22	281	59	0	0	362	847
1:00 PM	14	22	1	0	1	37	13	67	1	0	0	81	1	17	5	0	0	23	4	59	11	0	0	74	215
1:15 PM	10	11	5	0	0	26	9	68	4	0	1	81	1	9	1	0	0	11	4	75	13	0	0	92	210
1:30 PM	13	17	6	0	0	36	6	73	4	0	0	83	3	15	2	0	0	20	8	71	11	0	0	90	229
1:45 PM	18	8	4	0	2	30	8	84	2	0	0	94	3	8	6	0	2	17	5	82	12	0	0	99	240
Hourly Total	55	58	16	0	3	129	36	292	11	0	1	339	8	49	14	0	2	71	21	287	47	0	0	355	894
2:00 PM	16	11	5	0	0	32	5	74	2	0	0	81	3	9	3	0	0	15	9	93	10	0	0	112	240
2:15 PM	11	13	8	0	1	32	10	87	6	0	0	103	7	9	7	0	0	23	7	77	12	0	0	96	254

2:30 PM	14	18	9	0	0	41	12	84	2	0	2	98	4	13	7	0	0	24	13	109	15	0	0	137	300
2:45 PM	12	14	6	0	0	32	5	92	2	0	0	99	3	14	5	0	0	22	12	91	14	0	0	117	270
Hourly Total	53	56	28	0	1	137	32	337	12	0	2	381	17	45	22	0	0	84	41	370	51	0	0	462	1064
3:00 PM	10	14	9	0	0	33	4	92	4	0	0	100	2	16	4	0	0	22	10	93	13	0	0	116	271
3:15 PM	11	6	5	0	2	22	5	106	0	0	0	111	3	15	8	0	0	26	6	101	13	0	0	120	279
3:30 PM	14	12	6	0	0	32	2	109	1	0	0	112	3	8	4	0	0	15	3	124	8	0	0	135	294
3:45 PM	9	10	2	0	0	21	3	97	5	0	0	105	1	9	4	0	0	14	6	92	12	0	0	110	250
Hourly Total	44	42	22	0	2	108	14	404	10	0	0	428	9	48	20	0	0	77	25	410	46	0	0	481	1094
4:00 PM	19	13	13	0	1	45	6	117	0	0	1	123	3	12	8	0	0	23	6	87	18	0	0	111	302
4:15 PM	14	18	6	0	0	38	7	103	3	0	0	113	2	10	5	0	0	17	4	74	19	0	0	97	265
4:30 PM	22	15	10	0	0	47	2	127	2	0	0	131	7	10	4	0	0	21	11	69	13	0	0	93	292
4:45 PM	16	6	5	0	1	27	5	66	2	0	1	73	3	12	4	0	0	19	5	93	12	0	0	110	229
Hourly Total	71	52	34	0	2	157	20	413	7	0	2	440	15	44	21	0	0	80	26	323	62	0	0	411	1088
5:00 PM	14	13	4	0	0	31	6	66	2	0	1	74	5	12	6	0	0	23	9	81	9	0	0	99	227
5:15 PM	13	7	6	0	2	26	3	48	0	0	0	51	0	7	2	0	0	9	7	77	12	0	0	96	182
5:30 PM	13	14	8	0	0	35	1	45	3	0	0	49	1	10	2	0	0	13	3	51	7	0	0	61	158
5:45 PM	8	14	3	0	0	25	2	54	0	0	0	56	0	9	5	0	0	14	4	52	4	0	0	60	155
Hourly Total	48	48	21	0	2	117	12	213	5	0	1	230	6	38	15	0	0	59	23	261	32	0	0	316	722
Grand Total	506	463	262	0	16	1231	346	3197	96	0	20	3639	105	421	154	0	5	680	253	3258	549	0	0	4060	9610
Approach %	41.1	37.6	21.3	0.0	-	-	9.5	87.9	2.6	0.0	-	-	15.4	61.9	22.6	0.0	-	-	6.2	80.2	13.5	0.0	-	-	-
Total %	5.3	4.8	2.7	0.0	-	12.8	3.6	33.3	1.0	0.0	-	37.9	1.1	4.4	1.6	0.0	-	7.1	2.6	33.9	5.7	0.0	-	42.2	-
Lights	493	455	258	0	-	1206	343	3058	92	0	-	3493	103	413	147	0	-	663	248	3112	540	0	-	3900	9262
% Lights	97.4	98.3	98.5	-	-	98.0	99.1	95.7	95.8	-	-	96.0	98.1	98.1	95.5	-	-	97.5	98.0	95.5	98.4	-	-	96.1	96.4
Other Vehicles	13	8	4	0	-	25	3	139	4	0	-	146	2	8	7	0	-	17	5	146	9	0	-	160	348
% Other Vehicles	2.6	1.7	1.5	-	-	2.0	0.9	4.3	4.2	-	-	4.0	1.9	1.9	4.5	-	-	2.5	2.0	4.5	1.6	-	-	3.9	3.6
Pedestrians	-	-	-	-	16	-	-	-	-	-	20	-	-	-	-	-	5	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : Elyria_Ave_at_21st_St_Henderson_Dr_196842_11-04-2014(1)
Site Code :
Start Date : 11/4/2014
Page No : 1

Groups Printed- Lights - Other Vehicles - Pedestrians

	Elyria Ave From North					Henderson Dr From East					21st St From Southeast					Elyria Ave From South					21st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
07:00 AM	0	21	0	2	0	8	62	28	0	0	0	0	0	0	0	0	10	9	0	0	15	3	47	0	0	205
07:15 AM	1	9	0	9	1	8	65	28	0	0	0	0	3	0	0	0	23	26	0	0	8	2	68	0	0	251
07:30 AM	1	22	1	5	0	7	111	37	0	0	0	1	0	0	0	0	22	29	0	0	7	1	67	0	0	311
07:45 AM	1	22	0	9	1	10	82	30	0	0	0	1	0	0	0	0	44	43	0	0	13	0	104	0	0	360
Total	3	74	1	25	2	33	320	123	0	0	0	2	3	0	0	0	99	107	0	0	43	6	286	0	0	1127
08:00 AM	0	25	1	6	0	14	81	25	0	0	0	0	0	3	0	1	24	38	0	0	12	3	96	0	0	329
08:15 AM	2	29	0	9	0	13	56	24	0	0	0	2	2	0	0	1	19	48	0	0	13	0	62	0	0	280
08:30 AM	3	30	1	9	0	9	61	15	0	0	0	0	0	0	0	0	22	39	0	0	15	1	73	0	2	280
08:45 AM	2	28	1	7	0	22	72	25	0	0	0	1	1	0	0	0	25	51	1	0	9	0	70	0	0	315
Total	7	112	3	31	0	58	270	89	0	0	0	3	3	3	0	2	90	176	1	0	49	4	301	0	2	1204
09:00 AM	3	29	0	13	0	8	49	18	0	0	0	0	0	1	0	1	17	15	0	0	9	3	54	0	0	220
09:15 AM	5	23	0	12	0	9	64	15	0	0	0	2	0	1	0	0	19	30	0	0	11	1	55	0	0	247
09:30 AM	3	26	1	13	0	12	72	25	0	0	1	0	0	0	0	2	17	39	0	0	15	2	59	0	0	287
09:45 AM	5	22	0	17	0	16	65	18	0	6	0	0	1	1	6	2	26	37	0	2	7	4	63	0	0	298
Total	16	100	1	55	0	45	250	76	0	6	1	2	1	3	6	5	79	121	0	2	42	10	231	0	0	1052
10:00 AM	3	29	0	14	0	12	67	25	0	0	0	0	4	1	0	0	20	29	0	0	11	2	44	0	0	261
10:15 AM	2	22	1	11	0	9	51	16	0	0	0	3	4	1	0	0	15	41	1	0	12	0	51	0	4	244
10:30 AM	0	35	0	12	0	5	50	16	1	4	0	1	1	0	2	1	13	40	0	0	15	1	60	0	0	257
10:45 AM	4	31	3	10	0	13	63	19	0	2	0	0	0	0	2	1	27	38	0	0	6	2	41	0	0	262
Total	9	117	4	47	0	39	231	76	1	6	0	4	9	2	4	2	75	148	1	0	44	5	196	0	4	1024
11:00 AM	2	26	0	12	1	13	51	22	0	0	0	3	1	0	0	0	21	30	0	4	18	2	81	0	4	291
11:15 AM	3	32	0	12	0	15	67	25	0	0	0	0	3	0	0	0	22	34	0	2	12	1	53	0	0	281
11:30 AM	2	24	0	17	0	17	61	25	0	0	0	1	1	0	0	0	22	44	0	0	20	3	57	0	0	294
11:45 AM	0	47	0	17	0	15	44	22	0	4	1	1	2	1	3	2	20	51	0	1	9	4	83	0	1	328
Total	7	129	0	58	1	60	223	94	0	4	1	5	7	1	3	2	85	159	0	7	59	10	274	0	5	1194
12:00 PM	3	42	0	15	0	18	51	32	0	0	0	2	0	0	0	0	28	39	0	0	13	1	73	0	0	317
12:15 PM	4	35	0	19	0	13	72	16	0	0	0	0	1	1	0	2	20	52	0	2	10	0	65	0	0	312
12:30 PM	4	34	0	17	0	14	75	26	0	0	0	0	3	0	0	0	15	30	0	0	18	4	74	0	0	314
12:45 PM	2	36	0	14	0	17	61	28	0	0	0	0	1	0	0	0	36	57	0	0	18	4	64	0	0	338
Total	13	147	0	65	0	62	259	102	0	0	0	2	5	1	0	2	99	178	0	2	59	9	276	0	0	1281
01:00 PM	4	38	0	17	1	10	64	23	0	0	0	3	0	0	0	0	13	47	0	0	16	0	74	0	0	310
01:15 PM	2	39	2	10	0	9	66	33	0	0	0	1	4	0	0	1	32	39	0	0	10	0	88	0	0	336
01:30 PM	5	29	1	22	0	9	70	19	0	1	0	0	1	0	1	1	17	36	0	0	15	2	69	0	0	298
01:45 PM	4	27	2	13	0	6	77	30	0	2	0	1	2	0	2	0	24	40	0	0	11	2	81	0	4	328
Total	15	133	5	62	1	34	277	105	0	3	0	5	7	0	3	2	86	162	0	0	52	4	312	0	4	1272
02:00 PM	5	31	0	14	3	9	87	19	1	0	0	0	3	0	0	1	24	39	1	0	20	0	71	1	0	329
02:15 PM	0	32	0	7	0	14	98	33	0	0	0	0	1	0	0	0	29	46	1	0	15	0	91	0	0	367
02:30 PM	1	31	0	12	2	16	97	35	0	0	0	0	4	0	0	1	31	30	0	0	12	0	103	0	0	375
02:45 PM	1	23	0	8	1	7	111	39	0	0	0	2	2	3	0	1	32	41	0	2	20	3	124	0	0	420
Total	7	117	0	41	6	46	393	126	1	0	0	2	10	3	0	3	116	156	2	2	67	3	389	1	0	1491
03:00 PM	5	36	0	10	0	10	97	31	0	2	0	1	2	1	2	0	34	45	0	2	12	1	109	1	0	401
03:15 PM	4	43	0	26	0	16	86	35	0	0	0	2	3	0	2	3	41	47	0	0	5	0	102	0	0	415

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : Elyria_Ave_at_21st_St_Henderson_Dr_196842_11-04-2014(1)
Site Code :
Start Date : 11/4/2014
Page No : 2

Groups Printed- Lights - Other Vehicles - Pedestrians

	Elyria Ave From North					Henderson Dr From East					21st St From Southeast					Elyria Ave From South					21st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
03:30 PM	3	38	1	14	0	16	106	51	0	2	0	3	2	1	1	0	41	54	0	0	12	2	103	0	0	450
03:45 PM	1	33	1	13	0	19	87	44	0	0	0	1	0	0	0	0	32	45	0	2	11	2	95	0	0	386
Total	13	150	2	63	0	61	376	161	0	4	0	7	7	2	5	3	148	191	0	4	40	5	409	1	0	1652
04:00 PM	2	41	0	16	0	21	97	24	0	0	0	0	4	0	0	1	48	41	0	1	24	1	102	0	0	423
04:15 PM	2	34	0	18	2	15	88	33	0	1	0	2	0	0	1	0	39	43	0	0	19	1	98	0	0	396
04:30 PM	3	47	1	16	0	12	96	36	0	0	0	0	0	0	0	2	37	52	1	0	20	0	102	0	0	425
04:45 PM	1	23	1	17	1	15	94	21	0	0	0	1	0	1	0	0	47	36	1	0	18	1	89	0	0	367
Total	8	145	2	67	3	63	375	114	0	1	0	3	4	1	1	3	171	172	2	1	81	3	391	0	0	1611
05:00 PM	3	48	0	20	0	15	101	31	0	0	0	0	0	0	0	0	39	24	0	0	20	1	85	0	0	387
05:15 PM	3	34	0	12	0	5	74	20	0	0	0	1	0	0	0	0	33	34	0	0	18	0	85	0	0	319
05:30 PM	2	22	1	15	0	11	79	25	0	0	0	2	0	0	0	0	24	32	0	0	13	2	67	0	0	295
05:45 PM	2	31	0	12	1	6	59	22	0	0	0	0	0	0	0	0	21	28	0	0	11	1	76	0	2	272
Total	10	135	1	59	1	37	313	98	0	0	0	3	0	0	0	0	117	118	0	0	62	4	313	0	2	1273
Grand Total	108	1359	19	573	14	538	3287	1164	2	24	2	38	56	16	22	24	1165	1688	6	18	598	63	3378	2	17	14181
Apprch %	5.2	65.6	0.9	27.6	0.7	10.7	65.5	23.2	0	0.5	1.5	28.4	41.8	11.9	16.4	0.8	40.2	58.2	0.2	0.6	14.7	1.6	83.2	0	0.4	
Total %	0.8	9.6	0.1	4	0.1	3.8	23.2	8.2	0	0.2	0	0.3	0.4	0.1	0.2	0.2	8.2	11.9	0	0.1	4.2	0.4	23.8	0	0.1	
Lights	102	1332	11	547	12	518	3049	1110	2	13	2	28	23	16	13	23	1106	1654	6	10	590	38	3125	2	9	13341
% Lights	94.4	98	57.9	95.5	85.7	96.3	92.8	95.4	100	54.2	100	73.7	41.1	100	59.1	95.8	94.9	98	100	55.6	98.7	60.3	92.5	100	52.9	94.1
Other Vehicles	6	27	8	26	0	20	238	54	0	0	0	10	33	0	0	1	59	34	0	0	8	25	253	0	0	802
% Other Vehicles	5.6	2	42.1	4.5	0	3.7	7.2	4.6	0	0	0	26.3	58.9	0	0	4.2	5.1	2	0	0	1.3	39.7	7.5	0	0	5.7
Pedestrians	0	0	0	0	2	0	0	0	0	11	0	0	0	0	9	0	0	0	0	8	0	0	0	0	8	38
% Pedestrians	0	0	0	0	14.3	0	0	0	0	45.8	0	0	0	0	40.9	0	0	0	0	44.4	0	0	0	0	47.1	0.3

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: W Erie Ave at Baumhart Rd
Site Code:
Start Date: 12/02/2014

Turning Movement Data

Start Time	W Erie Ave Westbound					Baumhart Rd Northbound					W Erie Ave Eastbound					
	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	18	37	0	0	55	39	21	0	0	60	66	35	0	0	101	216
7:15 AM	23	21	0	0	44	50	21	0	0	71	60	58	0	0	118	233
7:30 AM	28	32	0	0	60	38	26	0	0	64	63	66	0	0	129	253
7:45 AM	30	27	0	0	57	53	33	0	0	86	48	51	0	0	99	242
Hourly Total	99	117	0	0	216	180	101	0	0	281	237	210	0	0	447	944
8:00 AM	37	24	0	0	61	30	24	0	0	54	48	33	0	0	81	196
8:15 AM	33	18	0	0	51	44	32	0	0	76	57	39	0	0	96	223
8:30 AM	29	11	0	0	40	27	33	0	0	60	57	45	0	0	102	202
8:45 AM	39	14	0	0	53	26	47	0	0	73	43	54	0	0	97	223
Hourly Total	138	67	0	0	205	127	136	0	0	263	205	171	0	0	376	844
9:00 AM	27	16	0	0	43	26	31	0	0	57	50	37	0	0	87	187
9:15 AM	26	10	0	0	36	17	31	0	0	48	42	36	0	0	78	162
9:30 AM	29	13	0	0	42	27	42	0	0	69	36	43	0	0	79	190
9:45 AM	41	19	0	0	60	16	31	0	0	47	37	37	0	0	74	181
Hourly Total	123	58	0	0	181	86	135	0	0	221	165	153	0	0	318	720
10:00 AM	37	11	0	0	48	10	45	0	0	55	41	44	0	0	85	188
10:15 AM	34	8	0	0	42	22	21	0	0	43	32	39	0	0	71	156
10:30 AM	37	15	0	0	52	20	34	0	0	54	36	36	0	0	72	178
10:45 AM	40	17	0	0	57	10	39	0	0	49	29	39	0	0	68	174
Hourly Total	148	51	0	0	199	62	139	0	0	201	138	158	0	0	296	696
11:00 AM	34	14	0	0	48	21	34	0	0	55	57	55	0	0	112	215
11:15 AM	38	14	0	0	52	16	33	0	0	49	44	44	0	0	88	189
11:30 AM	48	15	0	0	63	22	43	0	0	65	45	48	0	0	93	221
11:45 AM	56	24	0	0	80	22	37	0	0	59	44	44	0	0	88	227
Hourly Total	176	67	0	0	243	81	147	0	0	228	190	191	0	0	381	852
12:00 PM	58	15	0	0	73	10	55	0	0	65	43	50	0	0	93	231
12:15 PM	42	23	0	0	65	16	42	0	0	58	47	50	0	0	97	220
12:30 PM	42	11	0	0	53	26	38	0	0	64	56	40	0	0	96	213
12:45 PM	52	14	0	0	66	20	42	0	0	62	38	46	0	0	84	212
Hourly Total	194	63	0	0	257	72	177	0	0	249	184	186	0	0	370	876
1:00 PM	45	17	0	0	62	13	45	0	0	58	31	47	0	0	78	198
1:15 PM	48	9	0	0	57	19	48	0	0	67	41	51	0	0	92	216
1:30 PM	58	25	0	0	83	20	43	0	0	63	51	34	0	0	85	231
1:45 PM	50	17	0	0	67	14	37	0	0	51	59	45	0	0	104	222
Hourly Total	201	68	0	0	269	66	173	0	0	239	182	177	0	0	359	867
2:00 PM	42	27	0	0	69	14	45	0	0	59	47	49	0	0	96	224
2:15 PM	57	20	0	0	77	15	52	0	0	67	50	65	0	0	115	259
2:30 PM	45	13	0	0	58	26	44	0	0	70	45	62	0	0	107	235

2:45 PM	56	23	0	0	79	29	48	0	0	77	49	49	0	0	98	254
Hourly Total	200	83	0	0	283	84	189	0	0	273	191	225	0	0	416	972
3:00 PM	67	39	1	0	107	22	42	0	0	64	42	37	0	0	79	250
3:15 PM	55	31	0	0	86	24	60	0	0	84	39	58	0	0	97	267
3:30 PM	59	23	0	0	82	29	60	0	0	89	52	48	0	0	100	271
3:45 PM	66	27	0	0	93	25	68	0	0	93	44	37	0	0	81	267
Hourly Total	247	120	1	0	368	100	230	0	0	330	177	180	0	0	357	1055
4:00 PM	51	36	0	0	87	33	83	0	0	116	43	45	0	0	88	291
4:15 PM	83	25	0	0	108	22	90	0	0	112	37	55	0	0	92	312
4:30 PM	76	42	0	0	118	25	71	0	0	96	41	45	0	0	86	300
4:45 PM	76	42	0	0	118	19	83	0	0	102	33	50	0	0	83	303
Hourly Total	286	145	0	0	431	99	327	0	0	426	154	195	0	0	349	1206
5:00 PM	73	37	0	0	110	25	74	0	0	99	55	39	0	0	94	303
5:15 PM	67	48	0	0	115	16	72	0	0	88	42	28	0	0	70	273
5:30 PM	57	33	0	0	90	28	70	0	0	98	39	40	0	0	79	267
5:45 PM	58	19	0	0	77	28	67	0	0	95	32	28	0	0	60	232
Hourly Total	255	137	0	0	392	97	283	0	0	380	168	135	0	0	303	1075
Grand Total	2067	976	1	0	3044	1054	2037	0	0	3091	1991	1981	0	0	3972	10107
Approach %	67.9	32.1	0.0	-	-	34.1	65.9	0.0	-	-	50.1	49.9	0.0	-	-	-
Total %	20.5	9.7	0.0	-	30.1	10.4	20.2	0.0	-	30.6	19.7	19.6	0.0	-	39.3	-
Lights	2020	860	1	-	2881	938	1906	0	-	2844	1851	1936	0	-	3787	9512
% Lights	97.7	88.1	100.0	-	94.6	89.0	93.6	-	-	92.0	93.0	97.7	-	-	95.3	94.1
Other Vehicles	47	116	0	-	163	116	131	0	-	247	140	45	0	-	185	595
% Other Vehicles	2.3	11.9	0.0	-	5.4	11.0	6.4	-	-	8.0	7.0	2.3	-	-	4.7	5.9
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : Baumhart_Rd_at_Old_Ford_Factory_Entrance_204684_12-02-2014
Site Code :
Start Date : 12/2/2014
Page No : 1

Groups Printed- Lights - Other Vehicles - Pedestrians

	Baumhart Rd From North			Old Ford Factory Entrance From Northeast			Baumhart Rd From South			
Start Time	Thru	Hard Left	Peds	Hard Right	Bear Left	Peds	Bear Right	Thru	Peds	Int. Total
07:00 AM	109	0	0	0	0	0	5	56	0	170
07:15 AM	88	0	0	0	1	0	2	71	0	162
07:30 AM	92	0	0	0	0	0	3	70	0	165
07:45 AM	90	0	0	0	0	0	4	82	0	176
Total	379	0	0	0	1	0	14	279	0	673
08:00 AM	68	0	0	0	0	0	4	62	0	134
08:15 AM	69	0	0	0	0	0	2	87	0	158
08:30 AM	76	0	0	0	0	0	3	68	0	147
08:45 AM	57	0	0	1	0	0	3	73	0	134
Total	270	0	0	1	0	0	12	290	0	573
09:00 AM	67	0	0	0	0	0	0	59	0	126
09:15 AM	48	0	0	0	0	0	1	51	0	100
09:30 AM	60	0	0	0	0	0	2	65	0	127
09:45 AM	50	0	0	0	0	0	2	47	0	99
Total	225	0	0	0	0	0	5	222	0	452
10:00 AM	53	1	0	0	0	0	1	57	0	112
10:15 AM	56	0	0	0	0	0	0	44	0	100
10:30 AM	50	0	0	0	0	0	0	57	0	107
10:45 AM	50	0	0	0	0	0	2	48	0	100
Total	209	1	0	0	0	0	3	206	0	419
11:00 AM	79	0	0	0	0	0	0	59	0	138
11:15 AM	66	0	0	0	0	0	1	50	0	117
11:30 AM	64	0	0	0	0	0	1	57	0	122
11:45 AM	66	0	0	0	0	0	6	59	0	131
Total	275	0	0	0	0	0	8	225	0	508
12:00 PM	67	0	0	0	0	0	2	68	0	137
12:15 PM	67	0	0	0	0	0	2	50	0	119
12:30 PM	61	0	0	0	0	0	0	66	0	127
12:45 PM	49	0	0	0	0	0	2	59	0	110
Total	244	0	0	0	0	0	6	243	0	493
01:00 PM	48	0	0	0	0	0	2	65	0	115
01:15 PM	54	0	0	0	0	0	2	65	0	121
01:30 PM	78	0	0	0	0	0	0	62	0	140
01:45 PM	74	0	0	0	0	0	1	55	0	130
Total	254	0	0	0	0	0	5	247	0	506
02:00 PM	83	0	0	0	0	0	1	59	0	143
02:15 PM	71	0	0	0	0	0	1	71	0	143
02:30 PM	70	0	0	0	0	0	0	75	0	145
02:45 PM	70	0	0	0	0	0	1	79	0	150
Total	294	0	0	0	0	0	3	284	0	581
03:00 PM	91	0	0	0	0	0	4	62	0	157

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : Baumhart_Rd_at_Old_Ford_Factory_Entrance_204684_12-02-2014
Site Code :
Start Date : 12/2/2014
Page No : 2

Groups Printed- Lights - Other Vehicles - Pedestrians

	Baumhart Rd From North			Old Ford Factory Entrance From Northeast			Baumhart Rd From South			
Start Time	Thru	Hard Left	Peds	Hard Right	Bear Left	Peds	Bear Right	Thru	Peds	Int. Total
03:15 PM	74	0	0	0	0	0	1	90	0	165
03:30 PM	87	0	0	0	0	0	1	91	0	179
03:45 PM	75	0	0	0	0	0	3	94	0	172
Total	327	0	0	0	0	0	9	337	0	673
04:00 PM	87	0	0	0	0	0	0	118	0	205
04:15 PM	79	0	0	0	0	0	0	116	0	195
04:30 PM	95	0	0	0	0	0	0	102	0	197
04:45 PM	90	0	0	0	0	0	0	101	0	191
Total	351	0	0	0	0	0	0	437	0	788
05:00 PM	102	0	0	0	0	0	1	94	0	197
05:15 PM	101	0	0	0	0	0	0	91	0	192
05:30 PM	72	0	0	0	0	0	1	93	0	166
05:45 PM	56	0	0	0	0	0	0	89	0	145
Total	331	0	0	0	0	0	2	367	0	700
Grand Total	3159	1	0	1	1	0	67	3137	0	6366
Apprch %	100	0	0	50	50	0	2.1	97.9	0	
Total %	49.6	0	0	0	0	0	1.1	49.3	0	
Lights	2860	1	0	1	0	0	40	2830	0	5732
% Lights	90.5	100	0	100	0	0	59.7	90.2	0	90
Other Vehicles	299	0	0	0	1	0	27	307	0	634
% Other Vehicles	9.5	0	0	0	100	0	40.3	9.8	0	10
Pedestrians	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0	0	0	0	0	0	0	0	0	0

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: W Erie Ave at Kolbe Rd
Site Code:
Start Date: 12/02/2014

Turning Movement Data

Start Time	Private Entrance Southbound						W Erie Ave Westbound						Kolbe Rd Northbound						W Erie Ave Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	75	28	0	0	103	10	0	9	0	0	19	13	51	0	0	0	64	186
7:15 AM	0	0	0	0	0	0	0	78	32	0	0	110	16	0	13	0	0	29	18	85	0	0	0	103	242
7:30 AM	0	0	0	0	0	0	0	59	29	0	0	88	36	0	14	0	0	50	29	91	0	0	0	120	258
7:45 AM	0	1	0	0	0	1	0	59	39	0	0	98	32	0	10	0	0	42	20	115	0	0	0	135	276
Hourly Total	0	1	0	0	0	1	0	271	128	0	0	399	94	0	46	0	0	140	80	342	0	0	0	422	962
8:00 AM	0	0	0	0	1	0	0	61	37	0	0	98	16	0	13	0	0	29	17	56	0	0	0	73	200
8:15 AM	0	0	0	0	0	0	0	54	26	0	0	80	32	0	10	0	0	42	17	51	0	0	0	68	190
8:30 AM	0	1	0	0	0	1	0	46	29	0	0	75	21	0	4	0	0	25	17	66	0	0	0	83	184
8:45 AM	0	0	0	0	0	0	1	55	34	0	0	90	16	0	8	0	0	24	28	57	0	0	0	85	199
Hourly Total	0	1	0	0	1	1	1	216	126	0	0	343	85	0	35	0	0	120	79	230	0	0	0	309	773
9:00 AM	0	0	0	0	0	0	0	44	25	0	0	69	18	0	12	0	0	30	17	45	0	0	0	62	161
9:15 AM	0	0	0	0	0	0	0	37	22	0	0	59	21	0	13	0	0	34	17	45	0	0	0	62	155
9:30 AM	0	0	0	0	0	0	0	52	25	0	0	77	20	0	16	0	0	36	26	53	0	0	0	79	192
9:45 AM	0	0	0	0	0	0	0	55	30	0	0	85	23	0	12	0	0	35	25	42	0	0	0	67	187
Hourly Total	0	0	0	0	0	0	0	188	102	0	0	290	82	0	53	0	0	135	85	185	0	0	0	270	695
10:00 AM	0	0	0	0	0	0	0	45	16	0	0	61	23	0	15	0	0	38	27	39	0	0	0	66	165
10:15 AM	0	0	0	0	0	0	0	43	32	0	0	75	23	1	16	0	0	40	21	60	0	0	0	81	196
10:30 AM	0	0	0	0	0	0	0	47	25	0	0	72	17	0	18	0	0	35	20	47	0	0	0	67	174
10:45 AM	0	0	0	0	0	0	0	47	40	0	0	87	31	0	18	0	0	49	15	32	0	0	0	47	183
Hourly Total	0	0	0	0	0	0	0	182	113	0	0	295	94	1	67	0	0	162	83	178	0	0	0	261	718
11:00 AM	0	0	1	0	0	1	0	53	18	0	0	71	28	0	14	0	0	42	26	53	0	0	0	79	193
11:15 AM	0	0	1	0	0	1	0	40	31	0	0	71	28	0	20	0	0	48	28	52	0	0	0	80	200
11:30 AM	0	0	0	0	0	0	0	47	26	0	0	73	24	0	15	0	0	39	25	57	0	0	0	82	194
11:45 AM	1	0	0	0	0	1	1	68	41	0	0	110	36	0	20	0	0	56	27	51	0	0	0	78	245
Hourly Total	1	0	2	0	0	3	1	208	116	0	0	325	116	0	69	0	0	185	106	213	0	0	0	319	832
12:00 PM	0	0	0	0	0	0	0	69	29	2	0	100	32	0	25	0	0	57	51	65	0	0	0	116	273
12:15 PM	0	0	0	0	0	0	0	57	30	2	0	89	43	0	29	0	0	72	20	51	0	0	0	71	232
12:30 PM	0	0	0	0	0	0	0	50	29	2	0	81	29	0	23	0	0	52	31	48	0	0	0	79	212
12:45 PM	0	0	0	0	0	0	0	61	36	2	0	99	26	1	22	0	0	49	25	58	0	0	0	83	231
Hourly Total	0	0	0	0	0	0	0	237	124	8	0	369	130	1	99	0	0	230	127	222	0	0	0	349	948
1:00 PM	0	0	0	0	0	0	0	61	34	1	0	96	24	0	18	0	0	42	24	49	0	0	0	73	211
1:15 PM	0	0	0	0	0	0	0	47	26	3	0	76	31	0	24	0	0	55	22	50	0	0	0	72	203
1:30 PM	0	1	0	0	0	1	0	70	45	1	0	116	32	0	23	0	0	55	26	46	0	0	0	72	244
1:45 PM	0	0	0	0	0	0	0	60	29	1	0	90	30	1	27	0	0	58	24	37	0	0	0	61	209
Hourly Total	0	1	0	0	0	1	0	238	134	6	0	378	117	1	92	0	0	210	96	182	0	0	0	278	867
2:00 PM	0	0	0	0	0	0	0	73	35	0	0	108	39	0	19	0	0	58	24	71	0	0	0	95	261
2:15 PM	0	0	0	0	0	0	0	61	33	0	0	94	33	0	23	0	0	56	22	68	0	0	0	90	240

2:30 PM	0	0	0	0	0	0	0	53	31	0	0	84	33	0	18	0	0	51	32	63	0	0	0	95	230
2:45 PM	0	0	0	0	0	0	0	72	40	0	0	112	39	0	35	0	0	74	23	77	0	0	0	100	286
Hourly Total	0	0	0	0	0	0	0	259	139	0	0	398	144	0	95	0	0	239	101	279	0	0	0	380	1017
3:00 PM	0	0	0	0	0	0	0	68	43	2	0	113	38	0	28	0	0	66	13	73	0	0	0	86	265
3:15 PM	0	0	0	0	0	0	0	71	29	0	0	100	42	0	24	0	0	66	18	72	0	0	0	90	256
3:30 PM	0	0	0	0	0	0	0	63	39	2	0	104	53	0	33	0	0	86	18	64	0	0	0	82	272
3:45 PM	0	0	0	0	0	0	0	84	26	2	0	112	40	0	25	0	0	65	18	82	0	0	0	100	277
Hourly Total	0	0	0	0	0	0	0	286	137	6	0	429	173	0	110	0	0	283	67	291	0	0	0	358	1070
4:00 PM	0	0	1	0	2	1	0	68	28	0	0	96	40	0	30	0	0	70	24	84	0	0	0	108	275
4:15 PM	0	0	0	0	0	0	0	96	32	0	1	128	30	0	26	0	0	56	28	89	0	0	0	117	301
4:30 PM	0	0	0	0	0	0	0	117	25	0	0	142	43	0	36	0	0	79	29	78	0	0	0	107	328
4:45 PM	0	0	0	0	0	0	1	106	25	0	0	132	38	1	24	0	0	63	28	58	0	0	0	86	281
Hourly Total	0	0	1	0	2	1	1	387	110	0	1	498	151	1	116	0	0	268	109	309	0	0	0	418	1185
5:00 PM	0	0	0	0	0	0	0	94	39	0	0	133	41	0	29	0	0	70	15	64	0	0	0	79	282
5:15 PM	0	0	1	0	1	1	0	104	34	0	0	138	40	0	35	0	0	75	20	53	0	0	0	73	287
5:30 PM	0	0	0	0	0	0	0	71	28	0	0	99	32	0	16	0	0	48	13	69	0	0	0	82	229
5:45 PM	0	0	0	0	1	0	0	72	25	0	0	97	19	0	15	0	0	34	23	52	0	0	0	75	206
Hourly Total	0	0	1	0	2	1	0	341	126	0	0	467	132	0	95	0	0	227	71	238	0	0	0	309	1004
Grand Total	1	3	4	0	5	8	3	2813	1355	20	1	4191	1318	4	877	0	0	2199	1004	2669	0	0	0	3673	10071
Approach %	12.5	37.5	50.0	0.0	-	-	0.1	67.1	32.3	0.5	-	-	59.9	0.2	39.9	0.0	-	-	27.3	72.7	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.1	0.0	27.9	13.5	0.2	-	41.6	13.1	0.0	8.7	0.0	-	21.8	10.0	26.5	0.0	0.0	-	36.5	-
Lights	1	3	4	0	-	8	3	2663	1324	19	-	4009	1277	4	863	0	-	2144	983	2554	0	0	-	3537	9698
% Lights	100.0	100.0	100.0	-	-	100.0	100.0	94.7	97.7	95.0	-	95.7	96.9	100.0	98.4	-	-	97.5	97.9	95.7	-	-	-	96.3	96.3
Other Vehicles	0	0	0	0	-	0	0	150	31	1	-	182	41	0	14	0	-	55	21	115	0	0	-	136	373
% Other Vehicles	0.0	0.0	0.0	-	-	0.0	0.0	5.3	2.3	5.0	-	4.3	3.1	0.0	1.6	-	-	2.5	2.1	4.3	-	-	-	3.7	3.7
Pedestrians	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Oak Point Rd at Buck Horn Blvd/Park Square
Site Code:
Start Date: 12/02/2014

Turning Movement Data

Start Time	Oak Point Rd Southbound						Buck Horn Blvd Westbound						Oak Point Rd Northbound						Park Square Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	5	103	3	0	0	111	1	0	4	0	0	5	5	9	7	0	0	21	38	1	2	0	0	41	178
7:15 AM	11	74	9	0	0	94	0	0	6	0	1	6	5	47	16	0	0	68	21	3	5	0	0	29	197
7:30 AM	6	80	7	0	0	93	2	0	4	0	0	6	7	41	16	0	0	64	16	2	5	0	0	23	186
7:45 AM	13	46	16	0	0	75	3	0	4	0	0	7	10	38	13	0	0	61	15	0	8	0	0	23	166
Hourly Total	35	303	35	0	0	373	6	0	18	0	1	24	27	135	52	0	0	214	90	6	20	0	0	116	727
8:00 AM	10	53	9	0	0	72	3	1	6	0	0	10	14	19	9	0	0	42	15	1	9	0	0	25	149
8:15 AM	8	53	8	0	0	69	2	1	2	0	0	5	12	30	13	0	0	55	19	0	5	0	0	24	153
8:30 AM	7	46	5	0	0	58	4	3	4	0	0	11	14	37	11	0	0	62	18	2	7	0	0	27	158
8:45 AM	11	59	4	0	0	74	3	0	3	0	0	6	6	29	9	0	0	44	13	1	3	0	0	17	141
Hourly Total	36	211	26	0	0	273	12	5	15	0	0	32	46	115	42	0	0	203	65	4	24	0	0	93	601
9:00 AM	10	50	4	0	0	64	3	1	1	0	0	5	6	24	11	0	0	41	10	2	14	0	0	26	136
9:15 AM	7	29	1	0	0	37	2	1	3	0	0	6	1	29	7	0	0	37	4	1	10	0	0	15	95
9:30 AM	12	32	2	0	0	46	4	1	1	0	0	6	3	24	17	0	0	44	10	0	7	0	0	17	113
9:45 AM	7	31	3	0	0	41	0	1	3	0	0	4	7	26	11	0	0	44	7	0	15	0	0	22	111
Hourly Total	36	142	10	0	0	188	9	4	8	0	0	21	17	103	46	0	0	166	31	3	46	0	0	80	455
10:00 AM	9	24	2	0	0	35	3	1	2	0	1	6	5	28	9	0	0	42	15	0	11	0	0	26	109
10:15 AM	11	43	3	0	0	57	2	2	1	0	0	5	3	22	7	0	0	32	6	0	9	0	0	15	109
10:30 AM	15	35	3	0	0	53	0	0	0	0	0	0	2	16	11	0	0	29	11	0	8	0	0	19	101
10:45 AM	12	33	2	0	0	47	2	1	4	0	0	7	3	20	13	0	0	36	11	1	9	0	0	21	111
Hourly Total	47	135	10	0	0	192	7	4	7	0	1	18	13	86	40	0	0	139	43	1	37	0	0	81	430
11:00 AM	17	28	3	0	0	48	0	3	4	0	0	7	5	19	12	0	0	36	15	1	14	0	0	30	121
11:15 AM	13	20	1	0	0	34	5	4	7	0	0	16	4	32	10	0	0	46	16	1	12	0	0	29	125
11:30 AM	17	35	4	0	0	56	6	1	2	0	0	9	4	37	13	0	0	54	9	0	7	0	0	16	135
11:45 AM	22	30	0	0	0	52	2	6	5	0	0	13	6	25	13	0	0	44	9	2	13	0	0	24	133
Hourly Total	69	113	8	0	0	190	13	14	18	0	0	45	19	113	48	0	0	180	49	4	46	0	0	99	514
12:00 PM	17	27	2	0	0	46	5	5	7	0	0	17	2	23	18	0	0	43	12	1	22	0	0	35	141
12:15 PM	26	33	1	0	0	60	1	0	6	0	0	7	4	30	18	0	1	52	11	2	19	0	0	32	151
12:30 PM	23	31	7	0	0	61	4	6	8	0	0	18	5	33	12	0	0	50	8	3	13	0	0	24	153
12:45 PM	18	41	1	0	0	60	2	2	4	0	0	8	7	46	9	0	1	62	21	4	14	0	0	39	169
Hourly Total	84	132	11	0	0	227	12	13	25	0	0	50	18	132	57	0	2	207	52	10	68	0	0	130	614
1:00 PM	16	34	4	0	0	54	2	2	6	0	0	10	4	30	18	0	0	52	9	0	26	0	0	35	151
1:15 PM	15	40	3	0	0	58	3	1	5	0	0	9	9	33	14	0	0	56	5	4	18	0	0	27	150
1:30 PM	17	34	6	0	0	57	2	0	8	0	0	10	8	44	21	0	0	73	10	1	16	0	0	27	167
1:45 PM	15	41	5	0	0	61	4	0	2	0	0	6	7	32	13	0	0	52	12	1	17	0	0	30	149
Hourly Total	63	149	18	0	0	230	11	3	21	0	0	35	28	139	66	0	0	233	36	6	77	0	0	119	617
2:00 PM	17	41	0	0	0	58	2	2	4	0	0	8	9	39	13	0	0	61	9	2	17	0	0	28	155
2:15 PM	16	50	3	0	0	69	3	2	7	0	0	12	2	32	16	0	0	50	16	1	30	0	0	47	178

2:30 PM	14	62	2	0	0	78	2	2	4	0	0	8	5	48	21	0	0	74	18	1	21	0	0	40	200
2:45 PM	25	38	2	0	0	65	4	0	4	0	0	8	8	54	22	0	0	84	18	1	14	0	0	33	190
Hourly Total	72	191	7	0	0	270	11	6	19	0	0	36	24	173	72	0	0	269	61	5	82	0	0	148	723
3:00 PM	16	58	1	0	0	75	3	1	4	0	0	8	4	45	25	0	0	74	22	3	16	0	0	41	198
3:15 PM	20	65	0	0	0	85	6	3	11	0	1	20	3	63	20	0	1	86	14	3	25	0	0	42	233
3:30 PM	23	51	1	0	0	75	5	1	8	0	0	14	3	59	34	0	0	96	15	2	15	0	0	32	217
3:45 PM	20	57	2	0	0	79	8	1	7	0	0	16	7	58	32	0	0	97	13	0	27	0	0	40	232
Hourly Total	79	231	4	0	0	314	22	6	30	0	1	58	17	225	111	0	1	353	64	8	83	0	0	155	880
4:00 PM	10	45	2	0	0	57	4	3	8	0	0	15	2	60	28	0	0	90	14	1	26	0	0	41	203
4:15 PM	25	54	2	0	0	81	6	1	12	0	0	19	10	65	30	0	0	105	15	2	23	0	0	40	245
4:30 PM	24	52	2	0	0	78	10	1	22	0	0	33	2	50	16	0	0	68	21	2	25	0	0	48	227
4:45 PM	23	62	0	0	0	85	4	3	16	0	0	23	4	55	25	0	0	84	23	0	19	0	0	42	234
Hourly Total	82	213	6	0	0	301	24	8	58	0	0	90	18	230	99	0	0	347	73	5	93	0	0	171	909
5:00 PM	12	68	1	0	0	81	5	3	15	0	0	23	3	77	23	0	0	103	10	0	21	0	0	31	238
5:15 PM	24	69	2	0	0	95	7	1	12	0	0	20	3	53	28	0	0	84	14	0	20	0	0	34	233
5:30 PM	11	69	2	0	1	82	3	1	10	0	0	14	3	65	26	0	0	94	17	0	23	0	0	40	230
5:45 PM	22	39	2	0	1	63	2	1	4	0	0	7	4	50	23	0	0	77	20	0	21	0	0	41	188
Hourly Total	69	245	7	0	2	321	17	6	41	0	0	64	13	245	100	0	0	358	61	0	85	0	0	146	889
Grand Total	672	2065	142	0	2	2879	144	69	260	0	3	473	240	1696	733	0	3	2669	625	52	661	0	0	1338	7359
Approach %	23.3	71.7	4.9	0.0	-	-	30.4	14.6	55.0	0.0	-	-	9.0	63.5	27.5	0.0	-	-	46.7	3.9	49.4	0.0	-	-	-
Total %	9.1	28.1	1.9	0.0	-	39.1	2.0	0.9	3.5	0.0	-	6.4	3.3	23.0	10.0	0.0	-	36.3	8.5	0.7	9.0	0.0	-	18.2	-
Lights	658	2025	137	0	-	2820	136	68	256	0	-	460	235	1664	709	0	-	2608	599	50	649	0	-	1298	7186
% Lights	97.9	98.1	96.5	-	-	98.0	94.4	98.6	98.5	-	-	97.3	97.9	98.1	96.7	-	-	97.7	95.8	96.2	98.2	-	-	97.0	97.6
Other Vehicles	14	40	5	0	-	59	8	1	4	0	-	13	5	32	24	0	-	61	26	2	12	0	-	40	173
% Other Vehicles	2.1	1.9	3.5	-	-	2.0	5.6	1.4	1.5	-	-	2.7	2.1	1.9	3.3	-	-	2.3	4.2	3.8	1.8	-	-	3.0	2.4
Pedestrians	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: Cooper Foster Park Rd at Super K Entrance
Site Code:
Start Date: 12/02/2014

Turning Movement Data

Start Time	Super K Entrance Southbound						Cooper Foster Park Rd Westbound						Funeral Home Entrance Northbound						Cooper Foster Park Rd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	2	0	2	0	0	4	7	112	0	0	0	119	0	0	0	0	0	0	0	88	5	0	0	93	216
7:15 AM	0	0	0	0	0	0	2	82	0	0	0	84	0	0	0	0	0	0	0	136	1	0	0	137	221
7:30 AM	2	0	2	0	0	4	4	87	0	0	0	91	0	0	0	0	0	0	0	105	7	0	0	112	207
7:45 AM	3	0	1	0	0	4	8	80	1	0	0	89	0	0	0	0	0	0	0	109	2	0	0	111	204
Hourly Total	7	0	5	0	0	12	21	361	1	0	0	383	0	0	0	0	0	0	0	438	15	0	0	453	848
8:00 AM	4	0	3	0	0	7	7	90	1	0	0	98	0	0	0	0	0	0	0	68	2	0	0	70	175
8:15 AM	3	0	4	0	0	7	16	75	0	0	0	91	2	0	0	0	0	2	1	97	7	0	0	105	205
8:30 AM	7	0	5	0	0	12	7	65	0	0	0	72	0	0	0	0	1	0	0	92	1	0	0	93	177
8:45 AM	1	0	0	0	0	1	4	84	1	0	0	89	0	0	0	0	0	0	0	89	5	0	0	94	184
Hourly Total	15	0	12	0	0	27	34	314	2	0	0	350	2	0	0	0	1	2	1	346	15	0	0	362	741
9:00 AM	3	0	3	0	0	6	5	67	1	0	0	73	1	0	0	0	0	1	1	74	3	0	0	78	158
9:15 AM	1	0	3	0	0	4	12	78	1	0	0	91	1	0	0	0	0	1	0	93	5	0	0	98	194
9:30 AM	3	0	3	0	0	6	11	77	2	0	0	90	0	0	0	0	0	0	0	99	8	0	0	107	203
9:45 AM	6	0	6	0	0	12	16	77	2	0	0	95	1	0	0	0	0	1	0	99	4	0	0	103	211
Hourly Total	13	0	15	0	0	28	44	299	6	0	0	349	3	0	0	0	0	3	1	365	20	0	0	386	766
10:00 AM	5	0	3	0	0	8	15	74	0	0	0	89	0	0	0	0	0	0	1	87	4	0	0	92	189
10:15 AM	7	0	8	0	0	15	8	83	0	0	0	91	1	1	0	0	0	2	0	88	5	0	0	93	201
10:30 AM	6	0	1	0	0	7	17	64	0	0	0	81	0	0	0	0	0	0	0	101	8	0	0	109	197
10:45 AM	6	0	11	0	0	17	13	96	1	0	0	110	0	0	0	0	0	0	1	91	7	0	0	99	226
Hourly Total	24	0	23	0	0	47	53	317	1	0	0	371	1	1	0	0	0	2	2	367	24	0	0	393	813
11:00 AM	5	0	9	0	0	14	22	73	0	0	1	95	4	0	0	0	0	4	0	89	10	0	0	99	212
11:15 AM	3	0	17	0	0	20	12	88	0	0	0	100	0	0	0	0	0	0	0	110	4	0	0	114	234
11:30 AM	7	0	11	0	0	18	22	88	0	0	0	110	0	0	1	0	0	1	0	101	14	0	0	115	244
11:45 AM	9	0	6	0	1	15	17	93	0	0	0	110	1	0	0	0	0	1	1	124	7	0	0	132	258
Hourly Total	24	0	43	0	1	67	73	342	0	0	1	415	5	0	1	0	0	6	1	424	35	0	0	460	948
12:00 PM	5	0	13	0	0	18	22	89	3	0	0	114	0	0	0	0	0	0	0	107	5	0	0	112	244
12:15 PM	8	0	10	0	0	18	24	92	0	0	0	116	0	0	0	0	0	0	0	98	8	0	0	106	240
12:30 PM	11	0	7	0	0	18	17	106	0	0	0	123	2	0	0	0	1	2	0	111	7	0	0	118	261
12:45 PM	12	0	14	0	0	26	22	99	0	0	0	121	0	0	0	0	0	0	0	98	7	0	0	105	252
Hourly Total	36	0	44	0	0	80	85	386	3	0	0	474	2	0	0	0	1	2	0	414	27	0	0	441	997
1:00 PM	11	0	13	0	0	24	25	83	2	0	0	110	2	0	0	0	0	2	0	87	8	0	0	95	231
1:15 PM	5	0	6	0	0	11	17	86	0	0	0	103	1	0	0	0	0	1	0	95	5	0	0	100	215
1:30 PM	6	0	9	0	0	15	18	91	1	0	0	110	1	0	0	0	0	1	0	89	5	0	0	94	220
1:45 PM	9	0	8	0	0	17	15	107	1	0	1	123	1	0	0	0	0	1	1	88	5	0	0	94	235
Hourly Total	31	0	36	0	0	67	75	367	4	0	1	446	5	0	0	0	0	5	1	359	23	0	0	383	901
2:00 PM	9	0	5	0	0	14	17	119	1	0	0	137	1	0	1	0	0	2	0	100	7	0	0	107	260
2:15 PM	10	0	11	0	0	21	19	121	1	0	0	141	2	0	0	0	0	2	0	102	3	0	0	105	269

2:30 PM	8	0	9	0	0	17	14	126	0	0	0	140	0	0	0	0	0	0	0	137	9	0	0	146	303
2:45 PM	5	0	12	0	0	17	14	91	2	0	0	107	3	0	0	0	0	3	0	181	8	0	0	189	316
Hourly Total	32	0	37	0	0	69	64	457	4	0	0	525	6	0	1	0	0	7	0	520	27	0	0	547	1148
3:00 PM	9	0	7	0	0	16	15	96	0	0	0	111	0	0	0	0	0	0	0	125	6	0	0	131	258
3:15 PM	12	0	10	0	0	22	15	99	3	0	0	117	3	0	0	0	0	3	0	129	5	0	0	134	276
3:30 PM	11	0	4	0	0	15	16	117	1	0	0	134	1	0	0	0	0	1	0	127	6	0	0	133	283
3:45 PM	6	0	6	0	0	12	11	117	0	0	0	128	0	0	0	0	0	0	0	100	6	0	0	106	246
Hourly Total	38	0	27	0	0	65	57	429	4	0	0	490	4	0	0	0	0	4	0	481	23	0	0	504	1063
4:00 PM	11	0	18	0	0	29	19	118	1	0	0	138	1	0	0	0	0	1	0	120	4	0	0	124	292
4:15 PM	7	0	9	0	0	16	13	119	0	0	0	132	0	0	1	0	0	1	0	97	15	0	0	112	261
4:30 PM	6	0	7	0	0	13	23	106	0	0	0	129	0	0	1	0	0	1	1	126	2	0	0	129	272
4:45 PM	11	0	6	0	0	17	21	113	2	0	0	136	1	0	0	0	0	1	0	129	8	0	0	137	291
Hourly Total	35	0	40	0	0	75	76	456	3	0	0	535	2	0	2	0	0	4	1	472	29	0	0	502	1116
5:00 PM	8	0	11	0	0	19	17	128	0	0	0	145	0	0	0	0	0	0	0	127	7	0	0	134	298
5:15 PM	9	0	14	0	0	23	19	127	0	0	0	146	0	0	0	0	1	0	0	96	6	0	0	102	271
5:30 PM	6	0	6	0	0	12	17	99	0	0	0	116	0	0	0	0	0	0	0	88	3	0	0	91	219
5:45 PM	6	0	17	0	0	23	10	90	0	0	0	100	1	0	0	0	0	1	0	90	8	0	0	98	222
Hourly Total	29	0	48	0	0	77	63	444	0	0	0	507	1	0	0	0	1	1	0	401	24	0	0	425	1010
Grand Total	284	0	330	0	1	614	645	4172	28	0	2	4845	31	1	4	0	3	36	7	4587	262	0	0	4856	10351
Approach %	46.3	0.0	53.7	0.0	-	-	13.3	86.1	0.6	0.0	-	-	86.1	2.8	11.1	0.0	-	-	0.1	94.5	5.4	0.0	-	-	-
Total %	2.7	0.0	3.2	0.0	-	5.9	6.2	40.3	0.3	0.0	-	46.8	0.3	0.0	0.0	0.0	-	0.3	0.1	44.3	2.5	0.0	-	46.9	-
Lights	282	0	322	0	-	604	635	4094	28	0	-	4757	31	1	4	0	-	36	7	4491	262	0	-	4760	10157
% Lights	99.3	-	97.6	-	-	98.4	98.4	98.1	100.0	-	-	98.2	100.0	100.0	100.0	-	-	100.0	100.0	97.9	100.0	-	-	98.0	98.1
Other Vehicles	2	0	8	0	-	10	10	78	0	0	-	88	0	0	0	0	-	0	0	96	0	0	-	96	194
% Other Vehicles	0.7	-	2.4	-	-	1.6	1.6	1.9	0.0	-	-	1.8	0.0	0.0	0.0	-	-	0.0	0.0	2.1	0.0	-	-	2.0	1.9
Pedestrians	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Cooper Foster Park Rd at N Leavitt Rd
Site Code:
Start Date: 12/02/2014

Turning Movement Data

Start Time	N Leavitt Rd Southbound						Cooper Foster Park Rd Westbound						N Leavitt Rd Northbound						Cooper Foster Park Rd Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	26	140	13	0	0	179	12	52	31	0	0	95	10	73	46	0	0	129	40	16	22	0	0	78	481
7:15 AM	11	146	21	0	0	178	14	31	30	0	0	75	20	88	42	0	0	150	52	42	41	0	0	135	538
7:30 AM	10	159	20	0	0	189	14	24	29	0	0	67	30	105	51	0	0	186	60	42	24	0	0	126	568
7:45 AM	7	109	16	0	0	132	12	22	26	0	0	60	24	123	59	0	0	206	56	37	28	0	0	121	519
Hourly Total	54	554	70	0	0	678	52	129	116	0	0	297	84	389	198	0	0	671	208	137	115	0	0	460	2106
8:00 AM	13	123	24	0	0	160	25	31	24	0	0	80	17	64	56	0	0	137	47	22	14	0	0	83	460
8:15 AM	12	111	18	0	0	141	23	37	34	0	0	94	29	89	48	0	0	166	55	36	26	0	0	117	518
8:30 AM	14	127	22	0	0	163	23	22	28	0	0	73	33	75	32	0	0	140	42	41	18	0	0	101	477
8:45 AM	12	122	23	0	0	157	24	27	28	0	0	79	38	87	49	0	0	174	42	41	16	0	0	99	509
Hourly Total	51	483	87	0	0	621	95	117	114	0	0	326	117	315	185	0	0	617	186	140	74	0	0	400	1964
9:00 AM	11	100	36	0	0	147	14	32	33	0	0	79	22	87	34	0	0	143	43	32	11	0	0	86	455
9:15 AM	5	107	15	0	0	127	33	23	25	0	0	81	29	98	53	0	0	180	45	37	16	0	0	98	486
9:30 AM	14	104	37	0	0	155	37	29	33	0	0	99	24	116	41	0	0	181	46	29	24	0	0	99	534
9:45 AM	13	102	42	0	0	157	32	35	27	0	0	94	26	111	59	0	0	196	37	47	22	0	0	106	553
Hourly Total	43	413	130	0	0	586	116	119	118	0	0	353	101	412	187	0	0	700	171	145	73	0	0	389	2028
10:00 AM	8	103	29	0	0	140	46	36	38	0	0	120	28	130	42	0	0	200	48	35	23	0	0	106	566
10:15 AM	12	102	39	0	0	153	38	32	43	0	0	113	36	141	42	0	0	219	35	41	22	0	0	98	583
10:30 AM	9	139	30	0	0	178	44	37	48	0	0	129	35	131	38	0	0	204	48	36	11	0	0	95	606
10:45 AM	14	129	56	0	0	199	50	43	36	0	0	129	30	161	51	0	0	242	44	47	28	0	0	119	689
Hourly Total	43	473	154	0	0	670	178	148	165	0	0	491	129	563	173	0	0	865	175	159	84	0	0	418	2444
11:00 AM	8	129	48	0	0	185	44	38	37	0	0	119	37	131	56	0	1	224	48	27	16	0	0	91	619
11:15 AM	20	111	43	0	0	174	29	38	34	0	0	101	24	116	41	0	0	181	59	55	18	0	0	132	588
11:30 AM	8	130	49	0	0	187	48	42	37	0	0	127	31	114	59	0	0	204	47	47	19	0	0	113	631
11:45 AM	14	123	54	0	0	191	36	48	39	0	0	123	34	120	41	0	0	195	42	49	31	0	0	122	631
Hourly Total	50	493	194	0	0	737	157	166	147	0	0	470	126	481	197	0	1	804	196	178	84	0	0	458	2469
12:00 PM	9	147	47	0	0	203	51	42	38	0	0	131	47	143	65	0	0	255	60	58	16	0	0	134	723
12:15 PM	12	126	54	0	0	192	44	45	53	0	0	142	31	117	54	0	0	202	55	47	22	0	0	124	660
12:30 PM	13	123	47	0	0	183	79	56	48	0	0	183	35	143	57	0	0	235	56	43	25	0	0	124	725
12:45 PM	13	139	48	0	0	200	54	44	31	0	1	129	42	155	64	0	0	261	56	40	22	0	0	118	708
Hourly Total	47	535	196	0	0	778	228	187	170	0	1	585	155	558	240	0	0	953	227	188	85	0	0	500	2816
1:00 PM	6	138	43	0	0	187	64	58	35	0	0	157	41	131	42	0	0	214	35	47	21	0	0	103	661
1:15 PM	21	151	46	0	0	218	38	33	54	0	0	125	36	133	54	0	0	223	46	40	18	0	0	104	670
1:30 PM	11	111	46	0	0	168	51	51	36	0	0	138	31	109	54	0	0	194	50	45	16	0	0	111	611
1:45 PM	21	149	53	0	0	223	47	49	29	0	0	125	31	152	60	0	0	243	35	35	20	0	0	90	681
Hourly Total	59	549	188	0	0	796	200	191	154	0	0	545	139	525	210	0	0	874	166	167	75	0	0	408	2623
2:00 PM	25	164	55	0	0	244	47	57	34	0	0	138	41	120	54	0	0	215	54	45	16	0	0	115	712
2:15 PM	21	160	47	0	0	228	49	75	41	0	0	165	30	157	46	0	0	233	45	49	28	0	0	122	748

2:30 PM	29	146	42	0	0	217	47	55	44	0	1	146	43	138	55	0	0	236	49	71	22	0	0	142	741
2:45 PM	16	117	41	0	0	174	60	53	45	0	1	158	51	158	40	0	0	249	56	94	55	0	0	205	786
Hourly Total	91	587	185	0	0	863	203	240	164	0	2	607	165	573	195	0	0	933	204	259	121	0	0	584	2987
3:00 PM	18	158	42	0	0	218	50	43	45	0	0	138	29	178	53	0	0	260	54	47	27	0	0	128	744
3:15 PM	16	128	52	0	0	196	65	47	46	0	0	158	39	134	56	0	0	229	69	52	28	0	0	149	732
3:30 PM	20	157	51	0	0	228	50	52	42	0	0	144	41	173	54	0	0	268	54	50	32	0	0	136	776
3:45 PM	21	148	60	0	0	229	46	55	41	0	0	142	44	144	56	0	0	244	54	37	23	0	0	114	729
Hourly Total	75	591	205	0	0	871	211	197	174	0	0	582	153	629	219	0	0	1001	231	186	110	0	0	527	2981
4:00 PM	20	170	40	0	0	230	48	58	45	0	0	151	55	172	58	0	0	285	49	61	21	0	0	131	797
4:15 PM	20	158	48	0	0	226	52	49	46	0	1	147	39	174	66	0	0	279	42	50	15	0	0	107	759
4:30 PM	15	163	44	0	0	222	64	67	35	0	0	166	38	177	43	0	0	258	66	53	19	0	0	138	784
4:45 PM	22	161	54	0	0	237	52	52	47	0	0	151	44	220	65	0	0	329	51	52	26	0	0	129	846
Hourly Total	77	652	186	0	0	915	216	226	173	0	1	615	176	743	232	0	0	1151	208	216	81	0	0	505	3186
5:00 PM	20	155	45	0	0	220	39	68	55	0	0	162	29	180	60	0	0	269	55	60	28	0	0	143	794
5:15 PM	17	143	36	0	0	196	52	56	39	0	0	147	41	187	66	0	0	294	44	35	24	0	0	103	740
5:30 PM	20	130	47	0	0	197	47	45	38	0	0	130	37	170	56	0	0	263	42	43	22	0	2	107	697
5:45 PM	13	128	42	0	0	183	41	53	44	0	0	138	38	172	42	0	0	252	53	35	25	0	0	113	686
Hourly Total	70	556	170	0	0	796	179	222	176	0	0	577	145	709	224	0	0	1078	194	173	99	0	2	466	2917
Grand Total	660	5886	1765	0	0	8311	1835	1942	1671	0	4	5448	1490	5897	2260	0	1	9647	2166	1948	1001	0	2	5115	28521
Approach %	7.9	70.8	21.2	0.0	-	-	33.7	35.6	30.7	0.0	-	-	15.4	61.1	23.4	0.0	-	-	42.3	38.1	19.6	0.0	-	-	-
Total %	2.3	20.6	6.2	0.0	-	29.1	6.4	6.8	5.9	0.0	-	19.1	5.2	20.7	7.9	0.0	-	33.8	7.6	6.8	3.5	0.0	-	17.9	-
Lights	649	5744	1753	0	-	8146	1818	1915	1604	0	-	5337	1439	5758	2204	0	-	9401	2108	1912	985	0	-	5005	27889
% Lights	98.3	97.6	99.3	-	-	98.0	99.1	98.6	96.0	-	-	98.0	96.6	97.6	97.5	-	-	97.4	97.3	98.2	98.4	-	-	97.8	97.8
Other Vehicles	11	142	12	0	-	165	17	27	67	0	-	111	51	139	56	0	-	246	58	36	16	0	-	110	632
% Other Vehicles	1.7	2.4	0.7	-	-	2.0	0.9	1.4	4.0	-	-	2.0	3.4	2.4	2.5	-	-	2.6	2.7	1.8	1.6	-	-	2.2	2.2
Pedestrians	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: N Leavitt Rd at Super K Entrance
Site Code:
Start Date: 12/02/2014

Turning Movement Data

Start Time	N Leavitt Rd Southbound						Super K Entrance Westbound						N Leavitt Rd Northbound						Walgreens Entrance Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	2	197	5	0	0	204	2	0	1	0	0	3	0	84	3	0	0	87	3	1	1	0	0	5	299
7:15 AM	0	169	2	0	0	171	5	0	2	0	0	7	0	133	4	0	0	137	4	0	2	0	0	6	321
7:30 AM	1	170	2	0	0	173	4	0	2	0	0	6	0	105	3	0	0	108	3	0	1	0	0	4	291
7:45 AM	4	139	6	0	0	149	6	0	3	0	0	9	0	148	3	0	0	151	2	0	5	0	0	7	316
Hourly Total	7	675	15	0	0	697	17	0	8	0	0	25	0	470	13	0	0	483	12	1	9	0	0	22	1227
8:00 AM	4	155	6	0	0	165	3	0	3	0	0	6	0	124	5	1	0	130	3	0	4	0	0	7	308
8:15 AM	3	139	5	0	0	147	5	0	2	0	0	7	0	102	3	0	0	105	5	0	3	0	0	8	267
8:30 AM	0	157	8	0	0	165	6	0	2	0	0	8	0	120	7	0	0	127	7	0	2	0	0	9	309
8:45 AM	4	146	1	0	0	151	5	0	2	0	0	7	1	117	10	0	0	128	2	0	2	0	0	4	290
Hourly Total	11	597	20	0	0	628	19	0	9	0	0	28	1	463	25	1	0	490	17	0	11	0	0	28	1174
9:00 AM	4	137	4	0	0	145	3	0	4	0	0	7	0	92	10	0	0	102	6	0	3	0	0	9	263
9:15 AM	4	144	4	0	0	152	3	1	0	0	0	4	0	135	5	0	0	140	12	0	3	0	0	15	311
9:30 AM	2	118	4	0	0	124	3	0	3	0	0	6	0	141	11	0	0	152	8	0	6	0	0	14	296
9:45 AM	6	156	5	0	0	167	10	1	1	0	0	12	1	147	10	0	0	158	17	0	10	0	0	27	364
Hourly Total	16	555	17	0	0	588	19	2	8	0	0	29	1	515	36	0	0	552	43	0	22	0	0	65	1234
10:00 AM	5	132	2	0	0	139	5	0	2	0	0	7	1	166	11	0	0	178	11	3	6	0	0	20	344
10:15 AM	4	128	4	0	0	136	8	0	6	0	0	14	1	147	17	0	0	165	11	0	4	0	0	15	330
10:30 AM	5	167	6	0	1	178	5	2	8	0	0	15	1	147	8	0	0	156	14	0	4	0	0	18	367
10:45 AM	6	172	9	0	0	187	6	2	8	0	0	16	0	164	10	0	1	174	19	0	9	0	0	28	405
Hourly Total	20	599	21	0	1	640	24	4	24	0	0	52	3	624	46	0	1	673	55	3	23	0	0	81	1446
11:00 AM	8	154	8	0	0	170	8	1	8	0	0	17	1	163	13	0	0	177	23	0	7	0	0	30	394
11:15 AM	11	160	4	0	0	175	7	2	10	0	0	19	0	169	10	0	0	179	15	1	13	0	0	29	402
11:30 AM	3	158	8	0	0	169	10	0	8	0	0	18	0	150	18	1	0	169	19	1	12	0	0	32	388
11:45 AM	12	172	5	0	0	189	9	0	6	0	0	15	0	165	14	0	0	179	17	0	14	0	0	31	414
Hourly Total	34	644	25	0	0	703	34	3	32	0	0	69	1	647	55	1	0	704	74	2	46	0	0	122	1598
12:00 PM	7	179	11	0	0	197	12	1	6	0	0	19	0	183	14	0	0	197	24	3	6	0	0	33	446
12:15 PM	13	179	8	0	0	200	9	2	6	0	0	17	0	178	18	0	0	196	20	1	14	0	0	35	448
12:30 PM	9	156	10	0	0	175	9	0	9	0	0	18	1	202	11	0	0	214	22	3	13	0	0	38	445
12:45 PM	9	172	9	0	0	190	17	0	11	0	0	28	1	225	12	0	0	238	23	0	13	0	0	36	492
Hourly Total	38	686	38	0	0	762	47	3	32	0	0	82	2	788	55	0	0	845	89	7	46	0	0	142	1831
1:00 PM	9	159	10	0	0	178	6	2	2	0	0	10	1	198	23	0	0	222	26	0	11	0	0	37	447
1:15 PM	9	172	5	0	0	186	8	2	8	0	0	18	1	163	11	0	0	175	23	0	16	0	0	39	418
1:30 PM	12	164	4	0	0	180	5	0	7	0	0	12	1	180	7	0	0	188	23	2	12	0	0	37	417
1:45 PM	4	176	8	0	0	188	17	0	10	0	0	27	0	180	12	0	0	192	18	4	10	0	0	32	439
Hourly Total	34	671	27	0	0	732	36	4	27	0	0	67	3	721	53	0	0	777	90	6	49	0	0	145	1721
2:00 PM	7	231	7	0	0	245	10	1	4	0	0	15	1	192	9	0	0	202	15	0	9	0	0	24	486
2:15 PM	7	218	4	0	0	229	13	0	7	0	0	20	2	178	16	0	0	196	13	2	15	0	0	30	475

2:30 PM	4	219	6	0	0	229	6	2	6	0	1	14	0	194	13	0	0	207	15	1	17	0	0	33	483
2:45 PM	8	156	10	0	0	174	10	1	8	0	1	19	0	232	13	0	1	245	19	1	8	0	0	28	466
Hourly Total	26	824	27	0	0	877	39	4	25	0	2	68	3	796	51	0	1	850	62	4	49	0	0	115	1910
3:00 PM	10	177	12	0	0	199	9	2	9	0	0	20	1	245	10	0	0	256	15	2	7	0	0	24	499
3:15 PM	6	182	11	0	0	199	9	1	14	0	0	24	0	204	16	0	0	220	17	1	8	0	0	26	469
3:30 PM	4	188	8	0	0	200	15	3	9	0	0	27	0	247	11	0	0	258	31	1	14	0	0	46	531
3:45 PM	10	220	6	0	0	236	14	0	12	0	0	26	1	211	9	0	0	221	18	2	6	0	0	26	509
Hourly Total	30	767	37	0	0	834	47	6	44	0	0	97	2	907	46	0	0	955	81	6	35	0	0	122	2008
4:00 PM	1	208	12	0	0	221	12	2	10	0	0	24	0	217	14	0	0	231	18	1	14	0	0	33	509
4:15 PM	6	188	13	0	0	207	10	1	15	0	0	26	2	202	14	0	0	218	13	3	7	0	0	23	474
4:30 PM	2	197	5	0	0	204	8	2	17	0	0	27	1	232	18	0	0	251	20	1	16	0	0	37	519
4:45 PM	6	182	11	0	0	199	14	3	15	0	0	32	0	277	14	0	0	291	24	2	14	0	0	40	562
Hourly Total	15	775	41	0	0	831	44	8	57	0	0	109	3	928	60	0	0	991	75	7	51	0	0	133	2064
5:00 PM	10	222	5	0	0	237	15	0	8	0	0	23	0	266	14	0	0	280	22	1	14	0	0	37	577
5:15 PM	8	186	8	0	0	202	15	1	8	0	0	24	0	227	15	0	0	242	18	1	14	0	0	33	501
5:30 PM	7	160	10	0	0	177	8	2	3	0	0	13	0	226	13	0	0	239	22	0	16	0	0	38	467
5:45 PM	2	178	3	0	0	183	16	1	7	0	0	24	0	221	21	0	0	242	19	1	14	0	0	34	483
Hourly Total	27	746	26	0	0	799	54	4	26	0	0	84	0	940	63	0	0	1003	81	3	58	0	0	142	2028
Grand Total	258	7539	294	0	1	8091	380	38	292	0	2	710	19	7799	503	2	2	8323	679	39	399	0	0	1117	18241
Approach %	3.2	93.2	3.6	0.0	-	-	53.5	5.4	41.1	0.0	-	-	0.2	93.7	6.0	0.0	-	-	60.8	3.5	35.7	0.0	-	-	-
Total %	1.4	41.3	1.6	0.0	-	44.4	2.1	0.2	1.6	0.0	-	3.9	0.1	42.8	2.8	0.0	-	45.6	3.7	0.2	2.2	0.0	-	6.1	-
Lights	255	7384	291	0	-	7930	377	38	288	0	-	703	19	7610	495	2	-	8126	675	39	393	0	-	1107	17866
% Lights	98.8	97.9	99.0	-	-	98.0	99.2	100.0	98.6	-	-	99.0	100.0	97.6	98.4	100.0	-	97.6	99.4	100.0	98.5	-	-	99.1	97.9
Other Vehicles	3	155	3	0	-	161	3	0	4	0	-	7	0	189	8	0	-	197	4	0	6	0	-	10	375
% Other Vehicles	1.2	2.1	1.0	-	-	2.0	0.8	0.0	1.4	-	-	1.0	0.0	2.4	1.6	0.0	-	2.4	0.6	0.0	1.5	-	-	0.9	2.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: N Leavitt Rd at Jaeger Rd/Nantucket Dr
Site Code:
Start Date: 12/02/2014

Turning Movement Data

Start Time	N Leavitt Rd Southbound						N Nantucket Dr Westbound						N Leavitt Rd Northbound						Jaeger Rd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	7	145	0	0	0	152	0	0	11	0	0	11	2	85	5	0	0	92	28	1	7	0	0	36	291
7:15 AM	8	157	1	0	0	166	4	0	5	0	0	9	7	113	18	0	0	138	17	0	9	0	0	26	339
7:30 AM	11	161	2	0	0	174	4	0	10	0	0	14	2	105	14	0	0	121	23	0	21	0	0	44	353
7:45 AM	10	111	3	0	0	124	5	2	5	0	0	12	5	120	25	0	0	150	20	0	21	0	0	41	327
Hourly Total	36	574	6	0	0	616	13	2	31	0	0	46	16	423	62	0	0	501	88	1	58	0	0	147	1310
8:00 AM	10	153	2	0	0	165	1	0	5	0	0	6	4	95	14	0	0	113	25	0	23	0	0	48	332
8:15 AM	8	135	1	0	0	144	1	1	1	0	0	3	3	85	28	0	0	116	15	0	6	0	0	21	284
8:30 AM	10	143	4	0	0	157	1	0	3	0	0	4	7	74	25	0	0	106	21	0	8	0	0	29	296
8:45 AM	12	134	4	0	0	150	2	0	8	0	0	10	8	101	17	0	0	126	18	2	8	0	1	28	314
Hourly Total	40	565	11	0	0	616	5	1	17	0	0	23	22	355	84	0	0	461	79	2	45	0	1	126	1226
9:00 AM	7	122	2	0	0	131	1	0	3	0	0	4	4	76	15	0	0	95	21	0	11	0	0	32	262
9:15 AM	12	103	3	0	0	118	1	0	5	0	0	6	2	105	26	0	0	133	19	1	14	0	0	34	291
9:30 AM	15	138	1	0	0	154	1	2	4	0	0	7	0	123	36	0	0	159	25	0	7	0	0	32	352
9:45 AM	9	134	4	0	0	147	5	0	2	0	0	7	2	115	38	0	0	155	14	0	14	0	0	28	337
Hourly Total	43	497	10	0	0	550	8	2	14	0	0	24	8	419	115	0	0	542	79	1	46	0	0	126	1242
10:00 AM	12	129	4	0	0	145	5	2	1	0	0	8	3	140	31	0	0	174	27	2	5	0	0	34	361
10:15 AM	12	131	6	0	0	149	3	1	4	0	0	8	1	123	35	0	0	159	21	0	23	0	0	44	360
10:30 AM	7	156	4	0	0	167	4	1	3	0	0	8	1	122	33	0	0	156	33	1	10	0	0	44	375
10:45 AM	13	162	1	0	0	176	2	2	5	0	0	9	2	141	36	0	0	179	34	0	14	0	0	48	412
Hourly Total	44	578	15	0	0	637	14	6	13	0	0	33	7	526	135	0	0	668	115	3	52	0	0	170	1508
11:00 AM	12	153	2	0	0	167	1	1	3	0	0	5	4	141	38	0	0	183	22	0	10	0	0	32	387
11:15 AM	10	135	1	0	0	146	3	1	2	0	0	6	3	142	35	0	0	180	33	0	6	0	0	39	371
11:30 AM	14	149	0	0	0	163	1	3	3	0	0	7	1	153	26	0	0	180	24	1	10	0	0	35	385
11:45 AM	13	163	3	0	0	179	1	0	7	0	0	8	3	160	37	0	0	200	35	0	13	0	0	48	435
Hourly Total	49	600	6	0	0	655	6	5	15	0	0	26	11	596	136	0	0	743	114	1	39	0	0	154	1578
12:00 PM	15	158	1	0	0	174	4	0	4	0	0	8	2	164	41	0	0	207	36	0	14	0	0	50	439
12:15 PM	14	168	2	0	0	184	5	0	6	0	0	11	5	137	48	0	0	190	26	0	12	0	0	38	423
12:30 PM	11	154	1	0	0	166	2	0	1	0	0	3	8	190	51	0	0	249	27	1	6	0	0	34	452
12:45 PM	15	164	4	0	0	183	1	0	2	0	0	3	7	176	55	0	0	238	23	0	13	0	1	36	460
Hourly Total	55	644	8	0	0	707	12	0	13	0	0	25	22	667	195	0	0	884	112	1	45	0	1	158	1774
1:00 PM	10	165	3	0	0	178	2	2	2	0	0	6	4	162	42	0	0	208	38	0	4	0	0	42	434
1:15 PM	19	155	1	0	0	175	0	0	4	0	0	4	4	166	29	0	0	199	29	1	14	0	0	44	422
1:30 PM	17	155	1	0	0	173	2	2	5	0	0	9	4	137	42	0	0	183	29	0	16	0	0	45	410
1:45 PM	22	173	3	0	0	198	4	3	3	0	0	10	3	173	37	0	0	213	36	1	14	0	0	51	472
Hourly Total	68	648	8	0	0	724	8	7	14	0	0	29	15	638	150	0	0	803	132	2	48	0	0	182	1738
2:00 PM	16	200	4	0	0	220	2	4	4	0	0	10	5	157	45	0	0	207	47	0	21	0	0	68	505
2:15 PM	16	187	4	0	0	207	1	0	7	0	0	8	3	180	36	0	0	219	41	1	18	0	0	60	494

2:30 PM	12	168	1	0	0	181	4	1	2	0	0	7	2	181	32	0	0	215	38	1	10	0	1	49	452
2:45 PM	15	152	2	0	0	169	2	1	2	0	0	5	13	186	49	0	0	248	34	3	22	0	0	59	481
Hourly Total	59	707	11	0	0	777	9	6	15	0	0	30	23	704	162	0	0	889	160	5	71	0	1	236	1932
3:00 PM	23	188	8	0	0	219	3	3	10	0	0	16	6	205	61	0	0	272	29	3	14	0	0	46	553
3:15 PM	13	157	2	0	0	172	4	0	5	0	0	9	8	177	39	0	0	224	39	0	11	0	0	50	455
3:30 PM	26	189	2	0	2	217	2	3	0	0	0	5	6	216	57	0	0	279	29	2	11	0	0	42	543
3:45 PM	23	189	6	0	0	218	3	1	8	0	0	12	4	163	50	0	0	217	42	3	12	0	0	57	504
Hourly Total	85	723	18	0	2	826	12	7	23	0	0	42	24	761	207	0	0	992	139	8	48	0	0	195	2055
4:00 PM	20	191	4	0	4	215	4	1	3	0	0	8	0	181	62	0	0	243	38	0	20	0	0	58	524
4:15 PM	18	167	4	0	0	189	4	1	8	0	0	13	4	174	55	0	0	233	38	2	28	0	0	68	503
4:30 PM	14	179	4	0	0	197	1	0	7	0	0	8	5	207	52	0	0	264	32	2	23	0	0	57	526
4:45 PM	26	167	1	0	0	194	2	1	4	0	1	7	5	263	54	0	0	322	31	0	18	0	0	49	572
Hourly Total	78	704	13	0	4	795	11	3	22	0	1	36	14	825	223	0	0	1062	139	4	89	0	0	232	2125
5:00 PM	15	171	1	0	0	187	6	1	8	0	0	15	3	223	56	0	0	282	56	1	21	0	0	78	562
5:15 PM	16	158	0	0	0	174	2	2	4	0	0	8	8	211	48	0	0	267	39	0	19	0	0	58	507
5:30 PM	23	170	3	0	0	196	3	3	7	0	0	13	6	186	57	0	0	249	32	1	8	0	0	41	499
5:45 PM	15	139	1	0	0	155	2	0	2	0	0	4	18	188	48	0	0	254	35	0	21	0	0	56	469
Hourly Total	69	638	5	0	0	712	13	6	21	0	0	40	35	808	209	0	0	1052	162	2	69	0	0	233	2037
Grand Total	626	6878	111	0	6	7615	111	45	198	0	1	354	197	6722	1678	0	0	8597	1319	30	610	0	3	1959	18525
Approach %	8.2	90.3	1.5	0.0	-	-	31.4	12.7	55.9	0.0	-	-	2.3	78.2	19.5	0.0	-	-	67.3	1.5	31.1	0.0	-	-	-
Total %	3.4	37.1	0.6	0.0	-	41.1	0.6	0.2	1.1	0.0	-	1.9	1.1	36.3	9.1	0.0	-	46.4	7.1	0.2	3.3	0.0	-	10.6	-
Lights	618	6731	109	0	-	7458	109	44	194	0	-	347	192	6573	1658	0	-	8423	1304	30	603	0	-	1937	18165
% Lights	98.7	97.9	98.2	-	-	97.9	98.2	97.8	98.0	-	-	98.0	97.5	97.8	98.8	-	-	98.0	98.9	100.0	98.9	-	-	98.9	98.1
Other Vehicles	8	147	2	0	-	157	2	1	4	0	-	7	5	149	20	0	-	174	15	0	7	0	-	22	360
% Other Vehicles	1.3	2.1	1.8	-	-	2.1	1.8	2.2	2.0	-	-	2.0	2.5	2.2	1.2	-	-	2.0	1.1	0.0	1.1	-	-	1.1	1.9
Pedestrians	-	-	-	-	6	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: N Leavitt Rd at Tower Blvd
Site Code:
Start Date: 11/13/2014

Turning Movement Data

Start Time	N Leavitt Rd Southbound						Tower Blvd Westbound						N Leavitt Rd Northbound						Tower Blvd Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	6	120	11	0	0	137	4	7	24	0	0	35	28	59	14	0	0	101	15	9	4	0	0	28	301
7:15 AM	2	115	20	0	0	137	8	8	22	0	0	38	25	74	20	0	0	119	16	8	6	0	0	30	324
7:30 AM	9	124	18	0	0	151	10	11	34	0	0	55	45	91	21	0	0	157	11	11	6	0	0	28	391
7:45 AM	11	89	23	0	0	123	15	12	38	0	0	65	41	86	17	0	0	144	17	7	6	0	0	30	362
Hourly Total	28	448	72	0	0	548	37	38	118	0	0	193	139	310	72	0	0	521	59	35	22	0	0	116	1378
8:00 AM	16	101	13	0	0	130	9	11	47	0	0	67	29	62	19	0	0	110	27	15	4	0	0	46	353
8:15 AM	5	106	9	0	0	120	5	14	40	0	0	59	28	52	19	0	0	99	17	7	11	0	0	35	313
8:30 AM	10	88	16	0	0	114	11	13	30	0	0	54	18	63	24	0	0	105	11	8	13	0	0	32	305
8:45 AM	12	109	10	0	0	131	7	25	29	0	0	61	21	66	26	0	0	113	20	8	9	0	0	37	342
Hourly Total	43	404	48	0	0	495	32	63	146	0	0	241	96	243	88	0	0	427	75	38	37	0	0	150	1313
9:00 AM	9	98	11	0	0	118	6	22	27	0	0	55	24	72	22	0	0	118	26	10	13	0	0	49	340
9:15 AM	10	113	6	0	0	129	8	13	27	0	0	48	28	79	25	0	0	132	26	8	8	0	0	42	351
9:30 AM	11	81	13	0	0	105	4	20	30	0	0	54	32	62	31	0	0	125	27	16	8	0	0	51	335
9:45 AM	9	92	13	0	0	114	5	25	35	0	0	65	28	64	48	0	0	140	28	19	4	0	0	51	370
Hourly Total	39	384	43	0	0	466	23	80	119	0	0	222	112	277	126	0	0	515	107	53	33	0	0	193	1396
10:00 AM	8	84	9	0	0	101	6	22	23	0	0	51	32	55	29	0	0	116	33	24	11	0	0	68	336
10:15 AM	12	89	9	0	0	110	9	18	29	0	0	56	33	83	42	0	0	158	25	21	8	0	1	54	378
10:30 AM	15	109	8	0	0	132	7	19	18	0	0	44	34	76	34	0	0	144	42	15	24	0	0	81	401
10:45 AM	18	90	8	0	0	116	6	29	40	0	0	75	34	77	49	0	0	160	35	10	20	0	0	65	416
Hourly Total	53	372	34	0	0	459	28	88	110	0	0	226	133	291	154	0	0	578	135	70	63	0	1	268	1531
11:00 AM	19	85	12	0	0	116	5	28	29	0	0	62	36	86	44	0	0	166	48	22	23	0	0	93	437
11:15 AM	23	87	8	0	0	118	4	22	30	0	0	56	35	90	45	0	0	170	50	24	23	0	0	97	441
11:30 AM	18	101	5	0	0	124	6	33	24	0	0	63	33	90	44	0	0	167	37	18	13	0	0	68	422
11:45 AM	15	101	10	0	0	126	4	24	18	0	0	46	43	80	38	0	0	161	42	20	25	0	0	87	420
Hourly Total	75	374	35	0	0	484	19	107	101	0	0	227	147	346	171	0	0	664	177	84	84	0	0	345	1720
12:00 PM	27	87	14	0	0	128	7	30	35	0	0	72	32	121	57	0	0	210	50	22	24	0	0	96	506
12:15 PM	20	93	8	0	0	121	8	22	23	0	0	53	42	104	64	0	0	210	56	12	19	0	0	87	471
12:30 PM	11	100	13	0	0	124	2	24	24	0	0	50	32	97	48	0	0	177	54	36	29	0	0	119	470
12:45 PM	26	113	11	0	0	150	6	24	36	0	0	66	33	87	50	0	0	170	55	28	28	0	1	111	497
Hourly Total	84	393	46	0	0	523	23	100	118	0	0	241	139	409	219	0	0	767	215	98	100	0	1	413	1944
1:00 PM	19	83	11	0	0	113	5	27	31	0	0	63	37	86	55	0	0	178	54	30	26	0	0	110	464
1:15 PM	21	81	5	0	0	107	6	39	31	0	0	76	51	76	48	0	0	175	52	24	34	0	0	110	468
1:30 PM	7	99	11	0	0	117	5	29	35	0	0	69	32	80	38	0	0	150	57	27	22	0	1	106	442
1:45 PM	16	104	14	0	0	134	8	26	32	0	0	66	43	107	49	0	0	199	40	26	23	0	0	89	488
Hourly Total	63	367	41	0	0	471	24	121	129	0	0	274	163	349	190	0	0	702	203	107	105	0	1	415	1862
2:00 PM	16	120	12	0	0	148	10	25	29	0	0	64	30	80	60	0	0	170	44	26	22	0	0	92	474
2:15 PM	9	85	14	0	0	108	6	19	24	0	0	49	52	98	45	0	0	195	59	29	29	0	0	117	469

2:30 PM	13	102	16	0	0	131	13	23	30	0	0	66	49	107	43	0	0	199	48	26	21	0	0	95	491
2:45 PM	19	102	11	0	0	132	12	39	39	0	0	90	38	125	30	0	0	193	44	27	25	0	0	96	511
Hourly Total	57	409	53	0	0	519	41	106	122	0	0	269	169	410	178	0	0	757	195	108	97	0	0	400	1945
3:00 PM	25	99	20	0	0	144	18	27	33	0	0	78	54	105	51	0	0	210	39	18	18	0	1	75	507
3:15 PM	22	107	16	0	0	145	15	20	26	0	0	61	40	121	56	0	0	217	60	30	25	0	0	115	538
3:30 PM	22	137	26	0	0	185	12	32	26	0	0	70	50	106	53	0	0	209	56	31	32	0	0	119	583
3:45 PM	31	113	16	0	0	160	19	40	47	0	0	106	51	122	50	0	0	223	44	20	31	0	0	95	584
Hourly Total	100	456	78	0	0	634	64	119	132	0	0	315	195	454	210	0	0	859	199	99	106	0	1	404	2212
4:00 PM	26	125	15	0	0	166	12	44	35	0	0	91	50	119	58	0	0	227	46	31	32	0	0	109	593
4:15 PM	20	98	14	0	0	132	12	32	49	0	0	93	60	128	55	0	0	243	50	43	41	0	0	134	602
4:30 PM	24	120	8	0	0	152	11	30	31	0	0	72	40	109	48	0	0	197	48	25	41	0	0	114	535
4:45 PM	22	93	10	0	0	125	12	37	36	0	0	85	50	133	48	0	0	231	41	36	33	0	0	110	551
Hourly Total	92	436	47	0	0	575	47	143	151	0	0	341	200	489	209	0	0	898	185	135	147	0	0	467	2281
5:00 PM	17	97	18	0	1	132	10	25	30	0	0	65	60	102	36	0	0	198	37	38	31	0	0	106	501
5:15 PM	31	77	18	0	0	126	14	29	39	0	0	82	54	127	38	0	0	219	33	28	38	0	0	99	526
5:30 PM	16	92	12	0	0	120	8	29	43	0	0	80	44	108	40	0	0	192	42	24	28	0	0	94	486
5:45 PM	25	83	13	0	0	121	14	27	29	0	0	70	35	131	37	0	0	203	28	16	12	0	0	56	450
Hourly Total	89	349	61	0	1	499	46	110	141	0	0	297	193	468	151	0	0	812	140	106	109	0	0	355	1963
Grand Total	723	4392	558	0	1	5673	384	1075	1387	0	0	2846	1686	4046	1768	0	0	7500	1690	933	903	0	4	3526	19545
Approach %	12.7	77.4	9.8	0.0	-	-	13.5	37.8	48.7	0.0	-	-	22.5	53.9	23.6	0.0	-	-	47.9	26.5	25.6	0.0	-	-	-
Total %	3.7	22.5	2.9	0.0	-	29.0	2.0	5.5	7.1	0.0	-	14.6	8.6	20.7	9.0	0.0	-	38.4	8.6	4.8	4.6	0.0	-	18.0	-
Lights	719	4278	529	0	-	5526	369	1068	1358	0	-	2795	1661	3914	1750	0	-	7325	1673	927	894	0	-	3494	19140
% Lights	99.4	97.4	94.8	-	-	97.4	96.1	99.3	97.9	-	-	98.2	98.5	96.7	99.0	-	-	97.7	99.0	99.4	99.0	-	-	99.1	97.9
Other Vehicles	4	114	29	0	-	147	15	7	29	0	-	51	25	132	18	0	-	175	17	6	9	0	-	32	405
% Other Vehicles	0.6	2.6	5.2	-	-	2.6	3.9	0.7	2.1	-	-	1.8	1.5	3.3	1.0	-	-	2.3	1.0	0.6	1.0	-	-	0.9	2.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: N Leavitt Rd at W 40th St
Site Code:
Start Date: 11/13/2014
Page No: 1

Turning Movement Data

Start Time	N Leavitt Rd Southbound						W 40th St Westbound						N Leavitt Rd Northbound						W 40th St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	4	112	1	0	0	117	1	1	6	0	0	8	0	56	0	0	0	56	25	4	3	0	0	32	213
7:15 AM	1	103	2	0	0	106	5	2	6	0	0	13	6	59	11	0	0	76	33	0	3	0	0	36	231
7:30 AM	2	123	3	0	2	128	4	1	7	0	0	12	4	86	13	0	0	103	28	6	4	0	0	38	281
7:45 AM	2	105	12	0	0	119	7	4	8	0	0	19	9	93	5	0	0	107	22	10	4	0	0	36	281
Hourly Total	9	443	18	0	2	470	17	8	27	0	0	52	19	294	29	0	0	342	108	20	14	0	0	142	1006
8:00 AM	3	101	11	0	0	115	10	4	18	0	0	32	3	86	5	0	0	94	19	4	4	0	0	27	268
8:15 AM	5	112	2	0	0	119	3	0	8	0	0	11	5	63	5	0	0	73	14	1	3	0	0	18	221
8:30 AM	2	97	6	0	0	105	3	2	7	0	0	12	5	67	11	0	0	83	17	0	0	0	0	17	217
8:45 AM	1	125	3	0	0	129	4	2	8	0	0	14	2	87	4	0	0	93	4	3	2	0	0	9	245
Hourly Total	11	435	22	0	0	468	20	8	41	0	0	69	15	303	25	0	0	343	54	8	9	0	0	71	951
9:00 AM	0	103	0	0	0	103	0	4	3	0	0	7	0	75	13	0	0	88	17	1	4	0	0	22	220
9:15 AM	2	121	1	0	0	124	1	0	4	0	0	5	4	88	10	0	0	102	19	2	4	0	0	25	256
9:30 AM	2	101	2	0	0	105	1	2	3	0	0	6	1	78	7	0	0	86	8	2	2	0	0	12	209
9:45 AM	3	106	1	0	0	110	5	0	4	0	0	9	1	65	5	0	0	71	12	2	1	0	0	15	205
Hourly Total	7	431	4	0	0	442	7	6	14	0	0	27	6	306	35	0	0	347	56	7	11	0	0	74	890
10:00 AM	4	98	0	0	0	102	1	3	7	0	0	11	5	68	12	0	0	85	4	0	3	0	0	7	205
10:15 AM	0	110	1	0	0	111	0	2	5	0	0	7	7	79	9	0	0	95	11	3	2	0	0	16	229
10:30 AM	1	114	1	0	0	116	0	1	3	0	0	4	6	97	11	0	0	114	14	2	2	0	0	18	252
10:45 AM	4	114	1	0	0	119	1	2	3	0	0	6	7	100	5	0	0	112	5	3	8	0	0	16	253
Hourly Total	9	436	3	0	0	448	2	8	18	0	0	28	25	344	37	0	0	406	34	8	15	0	0	57	939
11:00 AM	4	100	3	0	0	107	2	2	5	0	0	9	5	118	5	0	0	128	12	2	6	0	0	20	264
11:15 AM	4	118	5	0	0	127	3	1	3	0	0	7	6	107	3	0	0	116	10	2	0	0	0	12	262
11:30 AM	4	115	3	0	0	122	2	1	5	0	0	8	2	118	9	0	0	129	12	2	4	0	1	18	277
11:45 AM	2	123	1	0	0	126	1	5	1	0	0	7	2	105	7	0	0	114	10	1	2	0	0	13	260
Hourly Total	14	456	12	0	0	482	8	9	14	0	0	31	15	448	24	0	0	487	44	7	12	0	1	63	1063
12:00 PM	4	111	0	0	0	115	1	4	6	0	0	11	6	138	8	0	0	152	19	0	2	0	0	21	299
12:15 PM	0	115	0	0	0	115	3	1	5	0	0	9	4	123	15	0	0	142	10	3	2	0	0	15	281
12:30 PM	5	123	0	0	0	128	2	1	6	0	0	9	6	114	10	0	0	130	22	3	4	0	0	29	296
12:45 PM	3	132	1	0	0	136	3	2	4	0	0	9	2	120	11	0	0	133	8	2	4	0	0	14	292
Hourly Total	12	481	1	0	0	494	9	8	21	0	0	38	18	495	44	0	0	557	59	8	12	0	0	79	1168
1:00 PM	3	112	4	0	0	119	0	2	2	0	0	4	5	115	5	0	0	125	9	1	2	0	0	12	260
1:15 PM	2	115	0	0	0	117	2	2	4	0	0	8	5	106	10	0	0	121	9	5	3	0	0	17	263
1:30 PM	2	104	4	0	0	110	0	1	4	0	0	5	7	107	10	0	0	124	10	2	3	0	0	15	254
1:45 PM	3	127	2	0	0	132	2	5	3	0	0	10	1	125	16	0	0	142	9	3	0	0	0	12	296
Hourly Total	10	458	10	0	0	478	4	10	13	0	0	27	18	453	41	0	0	512	37	11	8	0	0	56	1073
2:00 PM	2	133	3	0	0	138	1	3	3	0	0	7	4	112	12	0	0	128	22	5	6	0	0	33	306
2:15 PM	3	116	1	0	0	120	0	1	2	0	0	3	7	127	11	0	0	145	6	3	6	0	0	15	283

2:30 PM	4	123	2	0	2	129	6	11	8	0	0	25	5	131	10	0	0	146	9	4	5	0	2	18	318
2:45 PM	3	131	4	0	2	138	7	6	7	0	0	20	6	129	25	0	0	160	12	2	7	0	0	21	339
Hourly Total	12	503	10	0	4	525	14	21	20	0	0	55	22	499	58	0	0	579	49	14	24	0	2	87	1246
3:00 PM	10	130	5	0	0	145	6	4	6	0	0	16	11	130	15	0	0	156	18	3	6	0	0	27	344
3:15 PM	7	133	4	0	0	144	5	11	5	0	0	21	7	131	22	0	0	160	12	2	5	0	0	19	344
3:30 PM	6	171	3	0	0	180	5	6	8	0	0	19	6	143	27	0	0	176	12	1	4	0	0	17	392
3:45 PM	5	153	3	0	0	161	4	4	6	0	0	14	4	157	16	0	0	177	15	0	3	0	1	18	370
Hourly Total	28	587	15	0	0	630	20	25	25	0	0	70	28	561	80	0	0	669	57	6	18	0	1	81	1450
4:00 PM	6	138	1	0	0	145	1	2	8	0	0	11	6	155	15	0	0	176	14	2	7	0	0	23	355
4:15 PM	9	125	2	0	0	136	4	6	10	0	0	20	3	168	20	0	0	191	11	3	5	0	1	19	366
4:30 PM	9	116	2	0	0	127	1	5	8	0	0	14	8	152	18	0	0	178	22	7	2	0	0	31	350
4:45 PM	1	122	3	0	0	126	2	5	7	0	0	14	5	157	24	0	0	186	9	3	3	0	1	15	341
Hourly Total	25	501	8	0	0	534	8	18	33	0	0	59	22	632	77	0	0	731	56	15	17	0	2	88	1412
5:00 PM	10	120	0	0	0	130	1	5	4	0	0	10	4	131	17	0	0	152	14	2	2	0	0	18	310
5:15 PM	4	116	1	0	0	121	1	5	2	0	0	8	5	157	17	0	0	179	17	4	3	0	0	24	332
5:30 PM	3	114	2	0	0	119	1	6	3	0	0	10	6	130	19	0	0	155	14	2	1	0	0	17	301
5:45 PM	3	112	1	0	0	116	2	3	4	0	1	9	6	131	23	0	0	160	9	4	0	0	0	13	298
Hourly Total	20	462	4	0	0	486	5	19	13	0	1	37	21	549	76	0	0	646	54	12	6	0	0	72	1241
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	157	5193	107	0	6	5457	114	140	239	0	1	493	209	4884	526	0	0	5619	608	116	146	0	6	870	12439
Approach %	2.9	95.2	2.0	0.0	-	-	23.1	28.4	48.5	0.0	-	-	3.7	86.9	9.4	0.0	-	-	69.9	13.3	16.8	0.0	-	-	-
Total %	1.3	41.7	0.9	0.0	-	43.9	0.9	1.1	1.9	0.0	-	4.0	1.7	39.3	4.2	0.0	-	45.2	4.9	0.9	1.2	0.0	-	7.0	-
Lights	149	5065	81	0	-	5295	104	135	235	0	-	474	199	4747	512	0	-	5458	596	113	135	0	-	844	12071
% Lights	94.9	97.5	75.7	-	-	97.0	91.2	96.4	98.3	-	-	96.1	95.2	97.2	97.3	-	-	97.1	98.0	97.4	92.5	-	-	97.0	97.0
Other Vehicles	8	128	26	0	-	162	10	5	4	0	-	19	10	137	14	0	-	161	12	3	11	0	-	26	368
% Other Vehicles	5.1	2.5	24.3	-	-	3.0	8.8	3.6	1.7	-	-	3.9	4.8	2.8	2.7	-	-	2.9	2.0	2.6	7.5	-	-	3.0	3.0
Pedestrians	-	-	-	-	6	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: N Leavitt Rd at Meister Rd
Site Code:
Start Date: 11/13/2014

Turning Movement Data

Start Time	N Leavitt Rd Southbound						Meister Rd Westbound						N Leavitt Rd Northbound						Meister Rd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	3	53	3	0	0	59	3	7	22	0	0	32	17	35	9	0	0	61	35	20	3	0	0	58	210
7:15 AM	1	57	6	0	0	64	6	15	23	0	0	44	20	39	11	0	0	70	29	11	6	0	0	46	224
7:30 AM	2	74	10	0	0	86	8	14	15	0	0	37	23	70	17	0	0	110	40	17	6	0	0	63	296
7:45 AM	4	69	9	0	0	82	12	24	36	0	0	72	26	72	18	0	0	116	32	18	4	0	0	54	324
Hourly Total	10	253	28	0	0	291	29	60	96	0	0	185	86	216	55	0	0	357	136	66	19	0	0	221	1054
8:00 AM	6	74	14	0	0	94	19	18	17	0	0	54	12	75	17	0	0	104	28	16	5	0	0	49	301
8:15 AM	7	62	9	0	0	78	7	18	25	0	0	50	19	49	19	0	0	87	32	10	3	0	0	45	260
8:30 AM	3	59	5	0	0	67	8	14	11	0	0	33	17	47	16	0	0	80	29	10	4	0	0	43	223
8:45 AM	3	84	6	0	1	93	6	22	26	0	0	54	11	61	13	0	0	85	26	14	5	0	0	45	277
Hourly Total	19	279	34	0	1	332	40	72	79	0	0	191	59	232	65	0	0	356	115	50	17	0	0	182	1061
9:00 AM	1	65	7	0	0	73	6	10	17	0	0	33	19	61	13	0	0	93	22	5	0	0	0	27	226
9:15 AM	5	69	5	0	0	79	7	9	16	0	0	32	12	51	21	0	0	84	30	13	3	0	0	46	241
9:30 AM	3	69	8	0	0	80	3	7	16	0	0	26	11	55	18	0	0	84	18	13	4	0	0	35	225
9:45 AM	4	64	12	0	0	80	11	13	16	0	0	40	20	42	16	0	0	78	25	18	1	0	0	44	242
Hourly Total	13	267	32	0	0	312	27	39	65	0	0	131	62	209	68	0	0	339	95	49	8	0	0	152	934
10:00 AM	5	69	6	0	0	80	9	13	9	0	0	31	17	46	13	0	0	76	23	12	3	0	0	38	225
10:15 AM	5	71	9	0	0	85	4	14	26	0	0	44	15	61	17	0	0	93	17	11	3	0	1	31	253
10:30 AM	2	75	8	0	0	85	7	13	30	0	0	50	22	58	18	0	0	98	21	11	2	0	0	34	267
10:45 AM	2	69	9	0	0	80	8	11	25	0	0	44	24	67	19	0	0	110	20	13	4	0	0	37	271
Hourly Total	14	284	32	0	0	330	28	51	90	0	0	169	78	232	67	0	0	377	81	47	12	0	1	140	1016
11:00 AM	3	74	7	0	0	84	12	11	18	0	0	41	27	87	9	0	0	123	13	15	3	0	0	31	279
11:15 AM	6	86	10	0	0	102	9	12	22	0	0	43	27	74	27	0	0	128	17	11	2	0	0	30	303
11:30 AM	8	84	13	0	0	105	12	14	21	0	0	47	16	73	14	0	0	103	28	11	4	0	1	43	298
11:45 AM	6	82	9	0	0	97	11	14	23	0	0	48	22	67	17	0	0	106	18	15	7	0	0	40	291
Hourly Total	23	326	39	0	0	388	44	51	84	0	0	179	92	301	67	0	0	460	76	52	16	0	1	144	1171
12:00 PM	2	82	13	0	0	97	15	19	21	0	0	55	18	97	28	0	0	143	25	12	5	0	0	42	337
12:15 PM	6	72	14	0	0	92	13	14	19	0	0	46	24	79	28	0	0	131	15	26	4	0	0	45	314
12:30 PM	3	78	7	0	0	88	15	10	25	0	0	50	25	88	12	0	0	125	28	13	2	0	0	43	306
12:45 PM	8	99	12	0	0	119	11	13	24	0	0	48	19	81	23	0	0	123	24	14	4	0	0	42	332
Hourly Total	19	331	46	0	0	396	54	56	89	0	0	199	86	345	91	0	0	522	92	65	15	0	0	172	1289
1:00 PM	4	76	9	0	0	89	20	12	15	0	0	47	29	73	17	0	0	119	18	11	5	0	0	34	289
1:15 PM	4	77	12	0	1	93	11	14	20	0	0	45	18	71	22	0	0	111	26	15	4	0	0	45	294
1:30 PM	2	65	13	0	0	80	9	16	26	0	0	51	19	64	26	0	0	109	26	10	4	0	0	40	280
1:45 PM	7	84	17	0	0	108	8	9	21	0	0	38	21	74	31	0	0	126	27	10	5	0	0	42	314
Hourly Total	17	302	51	0	1	370	48	51	82	0	0	181	87	282	96	0	0	465	97	46	18	0	0	161	1177
2:00 PM	7	82	15	0	0	104	10	12	27	0	0	49	28	67	17	0	0	112	28	14	5	0	0	47	312
2:15 PM	4	80	8	0	0	92	7	17	16	0	0	40	28	85	21	0	0	134	28	13	6	0	0	47	313

2:30 PM	9	91	23	0	0	123	16	14	33	0	0	63	29	82	23	0	0	134	21	26	2	0	0	49	369
2:45 PM	6	81	6	0	0	93	13	24	29	0	0	66	32	86	26	0	0	144	28	17	7	0	0	52	355
Hourly Total	26	334	52	0	0	412	46	67	105	0	0	218	117	320	87	0	0	524	105	70	20	0	0	195	1349
3:00 PM	5	96	18	0	0	119	21	20	25	0	0	66	23	97	36	0	0	156	28	17	11	0	0	56	397
3:15 PM	9	88	14	0	0	111	12	21	42	0	0	75	38	83	24	0	0	145	26	11	6	0	0	43	374
3:30 PM	8	121	18	0	0	147	10	22	44	0	0	76	28	95	26	0	0	149	29	7	8	0	0	44	416
3:45 PM	4	99	8	0	0	111	13	18	27	0	0	58	26	111	29	0	0	166	32	16	4	0	0	52	387
Hourly Total	26	404	58	0	0	488	56	81	138	0	0	275	115	386	115	0	0	616	115	51	29	0	0	195	1574
4:00 PM	10	99	13	0	0	122	16	18	34	0	0	68	22	108	32	0	0	162	26	16	2	0	0	44	396
4:15 PM	6	94	16	0	0	116	5	23	24	0	0	52	34	101	28	0	0	163	23	18	3	0	0	44	375
4:30 PM	6	72	16	0	0	94	10	18	34	0	0	62	33	96	36	0	0	165	30	14	5	0	0	49	370
4:45 PM	8	83	9	0	2	100	10	21	21	0	0	52	31	105	33	0	0	169	18	13	4	0	0	35	356
Hourly Total	30	348	54	0	2	432	41	80	113	0	0	234	120	410	129	0	0	659	97	61	14	0	0	172	1497
5:00 PM	6	84	12	0	0	102	9	22	19	0	0	50	26	59	27	0	0	112	34	21	8	0	0	63	327
5:15 PM	8	86	5	0	0	99	7	19	21	0	0	47	32	99	32	0	0	163	24	14	4	0	0	42	351
5:30 PM	4	74	19	0	0	97	11	14	23	0	0	48	27	63	39	0	0	129	26	18	3	0	0	47	321
5:45 PM	4	68	7	0	0	79	13	21	23	0	1	57	24	75	33	0	0	132	23	10	3	0	0	36	304
Hourly Total	22	312	43	0	0	377	40	76	86	0	1	202	109	296	131	0	0	536	107	63	18	0	0	188	1303
Grand Total	219	3440	469	0	4	4128	453	684	1027	0	1	2164	1011	3229	971	0	0	5211	1116	620	186	0	2	1922	13425
Approach %	5.3	83.3	11.4	0.0	-	-	20.9	31.6	47.5	0.0	-	-	19.4	62.0	18.6	0.0	-	-	58.1	32.3	9.7	0.0	-	-	-
Total %	1.6	25.6	3.5	0.0	-	30.7	3.4	5.1	7.6	0.0	-	16.1	7.5	24.1	7.2	0.0	-	38.8	8.3	4.6	1.4	0.0	-	14.3	-
Lights	212	3325	460	0	-	3997	441	657	995	0	-	2093	986	3099	943	0	-	5028	1086	603	179	0	-	1868	12986
% Lights	96.8	96.7	98.1	-	-	96.8	97.4	96.1	96.9	-	-	96.7	97.5	96.0	97.1	-	-	96.5	97.3	97.3	96.2	-	-	97.2	96.7
Other Vehicles	7	115	9	0	-	131	12	27	32	0	-	71	25	130	28	0	-	183	30	17	7	0	-	54	439
% Other Vehicles	3.2	3.3	1.9	-	-	3.2	2.6	3.9	3.1	-	-	3.3	2.5	4.0	2.9	-	-	3.5	2.7	2.7	3.8	-	-	2.8	3.3
Pedestrians	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
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Count Name: Meister Rd at Pole Ave
Site Code:
Start Date: 12/11/2014
Page No: 1

Turning Movement Data

Start Time	Meister Rd Westbound					Pole Ave Northbound					Meister Rd Eastbound					
	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	22	0	0	0	22	0	2	0	0	2	1	41	0	0	42	66
7:15 AM	25	0	0	0	25	0	0	0	0	0	3	37	0	0	40	65
7:30 AM	31	0	0	0	31	1	2	0	0	3	0	35	0	1	35	69
7:45 AM	52	0	0	0	52	0	1	0	0	1	2	46	0	0	48	101
Hourly Total	130	0	0	0	130	1	5	0	0	6	6	159	0	1	165	301
8:00 AM	49	0	0	0	49	0	4	0	0	4	1	54	0	0	55	108
8:15 AM	36	0	0	0	36	0	3	0	0	3	4	31	0	0	35	74
8:30 AM	25	0	0	0	25	1	1	0	0	2	1	40	0	0	41	68
8:45 AM	38	0	0	0	38	2	2	0	0	4	0	29	0	0	29	71
Hourly Total	148	0	0	0	148	3	10	0	0	13	6	154	0	0	160	321
9:00 AM	21	1	0	0	22	1	2	0	0	3	2	24	0	0	26	51
9:15 AM	27	0	0	0	27	0	1	0	0	1	2	28	0	0	30	58
9:30 AM	39	0	0	0	39	0	3	0	0	3	2	29	0	0	31	73
9:45 AM	30	0	0	0	30	0	1	0	0	1	0	25	0	0	25	56
Hourly Total	117	1	0	0	118	1	7	0	0	8	6	106	0	0	112	238
10:00 AM	20	0	0	0	20	0	1	0	0	1	0	21	0	0	21	42
10:15 AM	30	0	0	0	30	0	2	0	0	2	1	33	0	0	34	66
10:30 AM	29	0	0	0	29	0	2	0	0	2	0	37	0	0	37	68
10:45 AM	29	0	0	0	29	0	2	0	0	2	0	33	0	1	33	64
Hourly Total	108	0	0	0	108	0	7	0	0	7	1	124	0	1	125	240
11:00 AM	30	0	0	0	30	0	6	0	0	6	0	32	0	0	32	68
11:15 AM	27	1	0	0	28	0	0	0	0	0	1	39	0	0	40	68
11:30 AM	40	0	0	0	40	1	1	0	0	2	1	39	0	0	40	82
11:45 AM	35	0	0	0	35	1	2	0	0	3	4	33	0	0	37	75
Hourly Total	132	1	0	0	133	2	9	0	0	11	6	143	0	0	149	293
12:00 PM	32	0	0	0	32	0	2	0	0	2	1	49	0	0	50	84
12:15 PM	28	0	0	0	28	1	2	0	0	3	1	41	0	0	42	73
12:30 PM	44	1	0	0	45	1	2	0	0	3	1	51	0	0	52	100
12:45 PM	38	0	0	0	38	0	2	0	0	2	3	42	0	0	45	85
Hourly Total	142	1	0	0	143	2	8	0	0	10	6	183	0	0	189	342
1:00 PM	32	0	0	0	32	0	3	0	0	3	6	33	0	0	39	74
1:15 PM	33	0	0	0	33	0	1	0	0	1	2	35	0	0	37	71
1:30 PM	46	0	0	0	46	0	2	0	0	2	3	39	0	0	42	90
1:45 PM	41	0	0	0	41	2	4	0	0	6	0	50	0	0	50	97
Hourly Total	152	0	0	0	152	2	10	0	0	12	11	157	0	0	168	332
2:00 PM	31	0	0	0	31	0	1	0	0	1	2	53	0	0	55	87
2:15 PM	52	1	0	0	53	0	2	0	0	2	1	48	0	0	49	104
2:30 PM	43	0	0	0	43	0	1	0	0	1	4	56	0	0	60	104

2:45 PM	59	0	0	0	59	0	3	0	0	3	1	57	0	0	58	120
Hourly Total	185	1	0	0	186	0	7	0	0	7	8	214	0	0	222	415
3:00 PM	49	0	0	0	49	0	1	0	0	1	3	60	0	0	63	113
3:15 PM	81	0	0	0	81	0	4	0	0	4	1	50	0	0	51	136
3:30 PM	67	0	0	0	67	1	1	0	0	2	4	67	0	0	71	140
3:45 PM	58	0	0	0	58	0	1	0	0	1	1	52	0	0	53	112
Hourly Total	255	0	0	0	255	1	7	0	0	8	9	229	0	0	238	501
4:00 PM	56	0	0	0	56	0	2	0	0	2	0	60	0	0	60	118
4:15 PM	52	0	0	1	52	0	1	0	0	1	1	45	0	0	46	99
4:30 PM	53	2	0	0	55	2	4	0	0	6	3	62	0	0	65	126
4:45 PM	65	0	0	0	65	0	4	0	0	4	2	60	0	0	62	131
Hourly Total	226	2	0	1	228	2	11	0	0	13	6	227	0	0	233	474
5:00 PM	43	0	0	0	43	1	5	0	0	6	1	63	0	0	64	113
5:15 PM	75	1	0	0	76	0	2	0	0	2	1	65	0	0	66	144
5:30 PM	48	0	0	0	48	0	2	0	0	2	1	51	0	0	52	102
5:45 PM	50	0	0	0	50	0	1	0	0	1	1	50	0	0	51	102
Hourly Total	216	1	0	0	217	1	10	0	0	11	4	229	0	0	233	461
Grand Total	1811	7	0	1	1818	15	91	0	0	106	69	1925	0	2	1994	3918
Approach %	99.6	0.4	0.0	-	-	14.2	85.8	0.0	-	-	3.5	96.5	0.0	-	-	-
Total %	46.2	0.2	0.0	-	46.4	0.4	2.3	0.0	-	2.7	1.8	49.1	0.0	-	50.9	-
Lights	1774	7	0	-	1781	13	89	0	-	102	67	1890	0	-	1957	3840
% Lights	98.0	100.0	-	-	98.0	86.7	97.8	-	-	96.2	97.1	98.2	-	-	98.1	98.0
Other Vehicles	37	0	0	-	37	2	2	0	-	4	2	35	0	-	37	78
% Other Vehicles	2.0	0.0	-	-	2.0	13.3	2.2	-	-	3.8	2.9	1.8	-	-	1.9	2.0
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Meister Rd at Ashland Ave
Site Code:
Start Date: 11/13/2014

Turning Movement Data

Start Time	Ashland Ave Southbound						Meister Rd Westbound						Ashland Ave Northbound						Meister Rd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	1	1	0	0	0	2	0	12	2	0	0	14	2	1	2	0	0	5	2	28	1	0	0	31	52
7:15 AM	1	3	3	0	0	7	1	26	2	0	0	29	3	1	5	0	0	9	3	35	1	0	0	39	84
7:30 AM	1	1	1	0	0	3	1	24	2	0	0	27	8	3	0	0	0	11	2	40	1	0	0	43	84
7:45 AM	3	8	0	0	0	11	3	52	6	0	0	61	6	10	1	0	0	17	1	41	2	0	0	44	133
Hourly Total	6	13	4	0	0	23	5	114	12	0	0	131	19	15	8	0	0	42	8	144	5	0	0	157	353
8:00 AM	2	7	1	0	0	10	2	32	3	0	0	37	4	12	5	0	0	21	4	45	0	0	0	49	117
8:15 AM	5	1	1	0	0	7	1	28	2	0	0	31	9	8	4	0	0	21	1	43	2	0	0	46	105
8:30 AM	1	3	2	0	0	6	1	35	1	0	2	37	8	2	0	0	0	10	0	26	3	0	0	29	82
8:45 AM	5	4	2	0	0	11	0	30	0	0	0	30	3	8	4	0	0	15	4	24	6	0	3	34	90
Hourly Total	13	15	6	0	0	34	4	125	6	0	2	135	24	30	13	0	0	67	9	138	11	0	3	158	394
9:00 AM	2	7	0	0	0	9	1	17	0	0	0	18	5	3	5	0	0	13	2	21	3	0	0	26	66
9:15 AM	1	2	2	0	1	5	4	22	3	0	0	29	4	2	0	0	0	6	0	28	2	0	0	30	70
9:30 AM	1	0	2	0	0	3	1	15	1	0	0	17	4	3	2	0	0	9	2	28	1	0	0	31	60
9:45 AM	4	3	0	0	1	7	4	36	1	0	0	41	0	5	2	0	2	7	3	36	3	0	0	42	97
Hourly Total	8	12	4	0	2	24	10	90	5	0	0	105	13	13	9	0	2	35	7	113	9	0	0	129	293
10:00 AM	4	4	1	0	0	9	2	22	0	0	0	24	2	7	3	0	0	12	1	30	0	0	1	31	76
10:15 AM	3	4	3	0	0	10	1	33	1	0	0	35	2	2	1	0	0	5	1	34	4	0	0	39	89
10:30 AM	1	7	2	0	0	10	1	23	0	0	0	24	3	5	1	0	0	9	2	29	0	0	0	31	74
10:45 AM	2	5	2	0	0	9	3	30	1	0	0	34	3	2	3	0	0	8	2	36	3	0	0	41	92
Hourly Total	10	20	8	0	0	38	7	108	2	0	0	117	10	16	8	0	0	34	6	129	7	0	1	142	331
11:00 AM	2	2	3	0	0	7	2	29	0	0	0	31	5	7	2	0	0	14	1	37	3	0	0	41	93
11:15 AM	2	3	3	0	0	8	1	28	0	0	0	29	3	2	7	0	0	12	3	42	3	0	0	48	97
11:30 AM	3	3	1	0	0	7	0	33	2	0	0	35	7	5	5	0	0	17	6	29	0	0	0	35	94
11:45 AM	5	3	1	0	0	9	1	26	1	0	0	28	2	8	2	0	0	12	1	41	2	0	0	44	93
Hourly Total	12	11	8	0	0	31	4	116	3	0	0	123	17	22	16	0	0	55	11	149	8	0	0	168	377
12:00 PM	6	6	0	0	0	12	0	45	0	0	0	45	4	7	4	0	0	15	1	42	2	0	0	45	117
12:15 PM	6	3	4	0	0	13	3	32	1	0	1	36	2	4	4	0	0	10	0	44	5	0	0	49	108
12:30 PM	2	5	2	0	0	9	3	34	1	0	0	38	3	5	3	0	0	11	4	32	2	0	0	38	96
12:45 PM	3	3	2	0	0	8	4	38	1	0	0	43	4	2	3	0	0	9	6	34	5	0	0	45	105
Hourly Total	17	17	8	0	0	42	10	149	3	0	1	162	13	18	14	0	0	45	11	152	14	0	0	177	426
1:00 PM	4	5	1	0	0	10	1	33	1	0	0	35	6	2	2	0	0	10	2	44	0	0	0	46	101
1:15 PM	1	3	1	0	1	5	1	27	0	0	0	28	1	3	2	0	0	6	4	36	6	0	0	46	85
1:30 PM	4	1	4	0	0	9	4	37	2	0	0	43	4	10	3	0	0	17	2	43	3	0	0	48	117
1:45 PM	1	5	3	0	0	9	5	37	4	0	0	46	4	7	2	0	0	13	4	36	1	0	0	41	109
Hourly Total	10	14	9	0	1	33	11	134	7	0	0	152	15	22	9	0	0	46	12	159	10	0	0	181	412
2:00 PM	2	3	0	0	0	5	1	26	1	0	0	28	5	6	7	0	0	18	3	50	5	0	0	58	109
2:15 PM	0	6	4	0	0	10	1	40	8	0	0	49	3	7	4	0	0	14	3	39	4	0	0	46	119

2:30 PM	0	13	0	0	0	13	1	50	3	0	0	54	17	15	6	0	0	38	9	73	1	0	0	83	188
2:45 PM	2	10	2	0	0	14	2	47	3	0	2	52	6	16	9	0	0	31	1	48	4	0	0	53	150
Hourly Total	4	32	6	0	0	42	5	163	15	0	2	183	31	44	26	0	0	101	16	210	14	0	0	240	566
3:00 PM	6	5	1	0	0	12	7	52	2	0	0	61	11	13	2	0	0	26	9	49	0	0	0	58	157
3:15 PM	9	5	2	0	0	16	4	48	3	0	0	55	6	5	6	0	0	17	1	53	2	0	0	56	144
3:30 PM	5	7	1	0	0	13	3	44	4	0	0	51	3	4	4	0	0	11	3	46	4	0	0	53	128
3:45 PM	2	6	4	0	0	12	3	44	2	0	0	49	9	7	8	0	0	24	3	46	3	0	1	52	137
Hourly Total	22	23	8	0	0	53	17	188	11	0	0	216	29	29	20	0	0	78	16	194	9	0	1	219	566
4:00 PM	1	6	4	0	0	11	9	57	4	0	0	70	12	6	4	0	0	22	1	46	3	0	0	50	153
4:15 PM	1	8	6	0	0	15	1	40	3	0	0	44	7	4	4	0	0	15	3	47	2	0	0	52	126
4:30 PM	5	4	5	0	0	14	6	38	1	0	0	45	4	7	4	0	0	15	6	45	3	0	0	54	128
4:45 PM	0	3	2	0	0	5	4	40	3	0	0	47	7	8	5	0	0	20	3	44	4	0	0	51	123
Hourly Total	7	21	17	0	0	45	20	175	11	0	0	206	30	25	17	0	0	72	13	182	12	0	0	207	530
5:00 PM	0	2	2	0	0	4	7	46	2	0	1	55	3	11	1	0	0	15	2	48	5	0	0	55	129
5:15 PM	2	4	7	0	0	13	6	38	5	0	0	49	3	3	5	0	0	11	3	39	7	0	1	49	122
5:30 PM	3	6	3	0	0	12	3	39	2	0	0	44	4	6	5	0	0	15	5	50	2	0	0	57	128
5:45 PM	4	2	2	0	0	8	7	40	3	0	0	50	1	5	4	0	0	10	3	31	1	0	0	35	103
Hourly Total	9	14	14	0	0	37	23	163	12	0	1	198	11	25	15	0	0	51	13	168	15	0	1	196	482
Grand Total	118	192	92	0	3	402	116	1525	87	0	6	1728	212	259	155	0	2	626	122	1738	114	0	6	1974	4730
Approach %	29.4	47.8	22.9	0.0	-	-	6.7	88.3	5.0	0.0	-	-	33.9	41.4	24.8	0.0	-	-	6.2	88.0	5.8	0.0	-	-	-
Total %	2.5	4.1	1.9	0.0	-	8.5	2.5	32.2	1.8	0.0	-	36.5	4.5	5.5	3.3	0.0	-	13.2	2.6	36.7	2.4	0.0	-	41.7	-
Lights	112	187	92	0	-	391	116	1478	86	0	-	1680	210	249	153	0	-	612	120	1689	111	0	-	1920	4603
% Lights	94.9	97.4	100.0	-	-	97.3	100.0	96.9	98.9	-	-	97.2	99.1	96.1	98.7	-	-	97.8	98.4	97.2	97.4	-	-	97.3	97.3
Other Vehicles	6	5	0	0	-	11	0	47	1	0	-	48	2	10	2	0	-	14	2	49	3	0	-	54	127
% Other Vehicles	5.1	2.6	0.0	-	-	2.7	0.0	3.1	1.1	-	-	2.8	0.9	3.9	1.3	-	-	2.2	1.6	2.8	2.6	-	-	2.7	2.7
Pedestrians	-	-	-	-	3	-	-	-	-	-	6	-	-	-	-	-	2	-	-	-	-	-	6	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: Oberlin Ave at Meister Rd
Site Code:
Start Date: 11/13/2014

Turning Movement Data

Start Time	Oberlin Ave Southbound						Meister Rd Westbound						Oberlin Ave Northbound						Meister Rd Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	4	66	1	0	0	71	4	5	3	0	4	12	3	41	4	0	0	48	8	12	10	0	0	30	161
7:15 AM	11	92	2	0	0	105	3	10	10	0	0	23	4	41	9	0	0	54	16	15	9	0	0	40	222
7:30 AM	7	79	6	0	0	92	8	10	11	0	0	29	13	52	5	0	0	70	21	22	12	0	0	55	246
7:45 AM	11	82	11	0	0	104	22	32	14	0	0	68	9	65	14	0	0	88	24	12	12	0	0	48	308
Hourly Total	33	319	20	0	0	372	37	57	38	0	4	132	29	199	32	0	0	260	69	61	43	0	0	173	937
8:00 AM	6	94	4	0	0	104	13	17	20	0	0	50	13	89	12	0	0	114	18	20	14	0	0	52	320
8:15 AM	12	61	7	0	0	80	8	10	8	0	1	26	11	45	6	0	0	62	18	16	20	0	1	54	222
8:30 AM	8	84	4	0	0	96	8	18	16	0	0	42	10	61	7	0	0	78	8	15	16	0	0	39	255
8:45 AM	9	94	6	0	0	109	6	15	9	0	0	30	10	66	10	0	0	86	8	8	11	0	0	27	252
Hourly Total	35	333	21	0	0	389	35	60	53	0	1	148	44	261	35	0	0	340	52	59	61	0	1	172	1049
9:00 AM	8	59	3	0	0	70	7	9	14	0	0	30	6	53	3	0	1	62	10	12	12	0	0	34	196
9:15 AM	8	63	2	0	1	73	12	15	13	0	1	40	2	59	6	0	0	67	8	17	6	0	0	31	211
9:30 AM	11	79	7	0	0	97	4	8	7	0	0	19	10	41	4	0	0	55	14	16	7	0	0	37	208
9:45 AM	8	76	9	0	0	93	8	15	8	0	0	31	12	50	14	0	0	76	11	14	9	0	0	34	234
Hourly Total	35	277	21	0	1	333	31	47	42	0	1	120	30	203	27	0	1	260	43	59	34	0	0	136	849
10:00 AM	7	65	7	0	0	79	12	15	14	0	0	41	7	43	7	0	0	57	15	10	7	0	0	32	209
10:15 AM	9	76	4	0	0	89	5	14	10	0	0	29	11	46	7	0	0	64	15	17	7	0	0	39	221
10:30 AM	7	74	5	0	0	86	6	11	9	0	0	26	10	54	8	0	0	72	11	9	15	0	1	35	219
10:45 AM	8	78	6	0	0	92	3	21	15	0	0	39	9	62	8	0	0	79	17	15	15	0	0	47	257
Hourly Total	31	293	22	0	0	346	26	61	48	0	0	135	37	205	30	0	0	272	58	51	44	0	1	153	906
11:00 AM	7	60	9	0	0	76	4	15	16	0	1	35	9	61	13	0	0	83	16	14	14	0	0	44	238
11:15 AM	10	86	7	0	0	103	11	18	14	0	2	43	8	64	10	0	0	82	16	22	7	0	1	45	273
11:30 AM	9	84	11	0	0	104	13	15	16	0	0	44	10	75	10	0	0	95	16	16	9	0	0	41	284
11:45 AM	7	94	5	0	0	106	18	13	29	0	0	60	18	67	8	0	0	93	17	19	13	0	1	49	308
Hourly Total	33	324	32	0	0	389	46	61	75	0	3	182	45	267	41	0	0	353	65	71	43	0	2	179	1103
12:00 PM	9	97	5	0	0	111	13	20	26	0	0	59	13	72	14	0	0	99	23	16	6	0	1	45	314
12:15 PM	4	63	5	0	0	72	14	17	19	0	1	50	9	65	12	0	0	86	20	19	15	0	0	54	262
12:30 PM	7	76	10	0	0	93	7	22	24	0	0	53	12	84	10	0	0	106	14	14	13	0	0	41	293
12:45 PM	9	62	7	0	0	78	10	21	19	0	0	50	13	75	17	0	0	105	16	16	15	0	0	47	280
Hourly Total	29	298	27	0	0	354	44	80	88	0	1	212	47	296	53	0	0	396	73	65	49	0	1	187	1149
1:00 PM	6	81	9	0	0	96	20	16	13	0	0	49	10	58	12	0	0	80	19	7	27	0	0	53	278
1:15 PM	4	73	11	0	0	88	15	13	23	0	0	51	8	65	15	0	1	88	22	10	9	0	0	41	268
1:30 PM	7	63	5	0	0	75	5	22	13	0	0	40	17	83	14	0	0	114	15	19	13	0	2	47	276
1:45 PM	9	89	6	0	1	104	10	26	15	0	0	51	9	82	8	0	0	99	13	23	11	0	0	47	301
Hourly Total	26	306	31	0	1	363	50	77	64	0	0	191	44	288	49	0	1	381	69	59	60	0	2	188	1123
2:00 PM	7	111	8	0	0	126	12	17	26	0	0	55	11	53	11	0	0	75	12	30	16	0	0	58	314
2:15 PM	9	116	14	0	0	139	13	24	29	0	0	66	15	93	17	0	0	125	21	15	10	0	0	46	376

2:30 PM	14	123	13	0	0	150	7	22	44	0	0	73	18	117	16	0	0	151	26	26	30	0	3	82	456
2:45 PM	8	105	12	0	0	125	13	17	24	0	0	54	30	127	25	0	0	182	19	22	25	0	0	66	427
Hourly Total	38	455	47	0	0	540	45	80	123	0	0	248	74	390	69	0	0	533	78	93	81	0	3	252	1573
3:00 PM	11	108	9	0	0	128	17	30	27	0	0	74	23	120	19	0	0	162	11	22	24	0	1	57	421
3:15 PM	14	111	13	0	0	138	18	25	19	0	3	62	23	113	21	0	0	157	18	27	21	0	0	66	423
3:30 PM	18	140	16	0	0	174	23	26	31	0	1	80	15	110	8	0	0	133	20	22	15	0	0	57	444
3:45 PM	18	128	10	0	0	156	25	16	31	0	0	72	15	100	20	0	0	135	21	14	27	0	0	62	425
Hourly Total	61	487	48	0	0	596	83	97	108	0	4	288	76	443	68	0	0	587	70	85	87	0	1	242	1713
4:00 PM	13	91	13	0	0	117	17	40	26	0	1	83	34	105	18	0	0	157	21	23	24	0	0	68	425
4:15 PM	8	109	15	0	0	132	17	19	23	0	0	59	15	100	21	0	0	136	24	13	22	0	0	59	386
4:30 PM	11	119	9	0	0	139	10	27	15	0	1	52	15	95	13	0	0	123	31	25	15	0	1	71	385
4:45 PM	17	109	11	0	0	137	19	16	19	0	0	54	9	101	19	0	0	129	11	19	19	0	0	49	369
Hourly Total	49	428	48	0	0	525	63	102	83	0	2	248	73	401	71	0	0	545	87	80	80	0	1	247	1565
5:00 PM	9	90	22	0	0	121	19	29	16	0	0	64	20	111	17	0	0	148	17	30	25	0	0	72	405
5:15 PM	13	114	13	0	0	140	14	26	21	0	0	61	15	103	15	0	0	133	12	20	15	0	0	47	381
5:30 PM	14	85	18	0	0	117	22	15	16	0	0	53	16	93	20	0	0	129	26	19	13	0	1	58	357
5:45 PM	11	92	6	0	0	109	24	17	18	0	0	59	10	82	14	0	0	106	18	9	13	0	0	40	314
Hourly Total	47	381	59	0	0	487	79	87	71	0	0	237	61	389	66	0	0	516	73	78	66	0	1	217	1457
Grand Total	417	3901	376	0	2	4694	539	809	793	0	16	2141	560	3342	541	0	2	4443	737	761	648	0	13	2146	13424
Approach %	8.9	83.1	8.0	0.0	-	-	25.2	37.8	37.0	0.0	-	-	12.6	75.2	12.2	0.0	-	-	34.3	35.5	30.2	0.0	-	-	-
Total %	3.1	29.1	2.8	0.0	-	35.0	4.0	6.0	5.9	0.0	-	15.9	4.2	24.9	4.0	0.0	-	33.1	5.5	5.7	4.8	0.0	-	16.0	-
Lights	402	3818	372	0	-	4592	534	792	781	0	-	2107	551	3265	522	0	-	4338	728	732	637	0	-	2097	13134
% Lights	96.4	97.9	98.9	-	-	97.8	99.1	97.9	98.5	-	-	98.4	98.4	97.7	96.5	-	-	97.6	98.8	96.2	98.3	-	-	97.7	97.8
Other Vehicles	15	83	4	0	-	102	5	17	12	0	-	34	9	77	19	0	-	105	9	29	11	0	-	49	290
% Other Vehicles	3.6	2.1	1.1	-	-	2.2	0.9	2.1	1.5	-	-	1.6	1.6	2.3	3.5	-	-	2.4	1.2	3.8	1.7	-	-	2.3	2.2
Pedestrians	-	-	-	-	2	-	-	-	-	-	16	-	-	-	-	-	2	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: Oberlin Ave at W 26th St
Site Code:
Start Date: 11/13/2014
Page No: 1

Turning Movement Data

Start Time	Oberlin Ave Southbound					Oberlin Ave Northbound					W 26th St Eastbound					
	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	75	0	0	76	43	0	0	0	43	6	2	0	0	8	127
7:15 AM	0	81	0	0	81	63	2	0	2	65	6	2	0	0	8	154
7:30 AM	2	83	0	0	85	72	0	0	0	72	3	3	0	0	6	163
7:45 AM	0	94	0	1	94	102	2	0	0	104	4	4	0	0	8	206
Hourly Total	3	333	0	1	336	280	4	0	2	284	19	11	0	0	30	650
8:00 AM	4	103	0	1	107	112	5	0	0	117	3	2	0	0	5	229
8:15 AM	1	82	0	0	83	72	1	0	4	73	1	4	0	0	5	161
8:30 AM	3	82	0	0	85	71	2	0	0	73	6	1	0	0	7	165
8:45 AM	1	88	0	0	89	77	2	0	0	79	1	1	0	0	2	170
Hourly Total	9	355	0	1	364	332	10	0	4	342	11	8	0	0	19	725
9:00 AM	1	67	0	0	68	72	2	0	0	74	2	0	0	2	2	144
9:15 AM	0	59	0	0	59	75	2	0	0	77	5	0	0	4	5	141
9:30 AM	0	72	0	0	72	57	2	0	0	59	2	2	0	0	4	135
9:45 AM	0	79	0	0	79	69	1	0	0	70	2	1	0	0	3	152
Hourly Total	1	277	0	0	278	273	7	0	0	280	11	3	0	6	14	572
10:00 AM	1	68	0	0	69	59	0	0	0	59	0	0	0	0	0	128
10:15 AM	3	78	0	0	81	55	1	0	0	56	1	1	0	1	2	139
10:30 AM	1	77	0	0	78	58	4	0	0	62	0	1	0	1	1	141
10:45 AM	1	95	0	0	96	74	1	0	0	75	4	0	0	0	4	175
Hourly Total	6	318	0	0	324	246	6	0	0	252	5	2	0	2	7	583
11:00 AM	0	67	0	0	67	74	0	0	0	74	2	0	0	0	2	143
11:15 AM	1	94	0	0	95	84	3	0	0	87	2	0	0	1	2	184
11:30 AM	0	93	0	0	93	79	2	0	0	81	2	2	0	0	4	178
11:45 AM	2	100	0	0	102	89	1	0	1	90	1	1	0	1	2	194
Hourly Total	3	354	0	0	357	326	6	0	1	332	7	3	0	2	10	699
12:00 PM	0	92	0	0	92	79	5	0	0	84	3	0	0	2	3	179
12:15 PM	1	85	0	0	86	87	1	0	0	88	2	0	0	0	2	176
12:30 PM	2	84	0	0	86	84	2	0	0	86	1	2	0	0	3	175
12:45 PM	3	65	0	0	68	90	0	0	0	90	2	1	0	2	3	161
Hourly Total	6	326	0	0	332	340	8	0	0	348	8	3	0	4	11	691
1:00 PM	2	83	0	0	85	94	3	0	0	97	1	2	0	0	3	185
1:15 PM	1	92	0	0	93	80	5	0	0	85	2	4	0	0	6	184
1:30 PM	2	68	0	0	70	85	3	0	0	88	1	3	0	2	4	162
1:45 PM	1	105	0	0	106	95	3	0	0	98	1	0	0	0	1	205
Hourly Total	6	348	0	0	354	354	14	0	0	368	5	9	0	2	14	736
2:00 PM	0	119	0	0	119	79	3	0	0	82	2	2	0	0	4	205
2:15 PM	0	120	0	1	120	105	0	0	0	105	4	2	0	0	6	231
2:30 PM	2	124	0	1	126	139	3	0	5	142	4	3	0	1	7	275

2:45 PM	2	121	0	0	123	130	2	0	2	132	3	2	0	1	5	260
Hourly Total	4	484	0	2	488	453	8	0	7	461	13	9	0	2	22	971
3:00 PM	1	134	0	0	135	147	3	0	2	150	4	1	0	0	5	290
3:15 PM	4	140	0	0	144	125	2	0	0	127	4	1	0	0	5	276
3:30 PM	2	144	0	0	146	136	6	0	0	142	6	1	0	0	7	295
3:45 PM	1	130	0	0	131	127	3	0	0	130	1	1	0	0	2	263
Hourly Total	8	548	0	0	556	535	14	0	2	549	15	4	0	0	19	1124
4:00 PM	1	97	0	0	98	123	2	0	0	125	2	0	0	0	2	225
4:15 PM	2	119	0	0	121	115	3	0	0	118	0	1	0	0	1	240
4:30 PM	2	139	0	1	141	116	2	0	0	118	4	0	0	1	4	263
4:45 PM	0	125	0	0	125	129	2	0	0	131	1	1	0	0	2	258
Hourly Total	5	480	0	1	485	483	9	0	0	492	7	2	0	1	9	986
5:00 PM	1	119	0	0	120	120	1	0	0	121	3	0	0	1	3	244
5:15 PM	1	123	0	0	124	110	5	0	0	115	0	1	0	0	1	240
5:30 PM	0	99	0	0	99	117	4	0	0	121	1	1	0	0	2	222
5:45 PM	0	112	0	0	112	105	1	0	0	106	0	0	0	0	0	218
Hourly Total	2	453	0	0	455	452	11	0	0	463	4	2	0	1	6	924
Grand Total	53	4276	0	5	4329	4074	97	0	16	4171	105	56	0	20	161	8661
Approach %	1.2	98.8	0.0	-	-	97.7	2.3	0.0	-	-	65.2	34.8	0.0	-	-	-
Total %	0.6	49.4	0.0	-	50.0	47.0	1.1	0.0	-	48.2	1.2	0.6	0.0	-	1.9	-
Lights	50	4176	0	-	4226	3986	95	0	-	4081	100	54	0	-	154	8461
% Lights	94.3	97.7	-	-	97.6	97.8	97.9	-	-	97.8	95.2	96.4	-	-	95.7	97.7
Other Vehicles	3	100	0	-	103	88	2	0	-	90	5	2	0	-	7	200
% Other Vehicles	5.7	2.3	-	-	2.4	2.2	2.1	-	-	2.2	4.8	3.6	-	-	4.3	2.3
Pedestrians	-	-	-	5	-	-	-	-	16	-	-	-	-	20	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: Oberlin Ave at W 35th St
Site Code:
Start Date: 12/04/2014
Page No: 1

Turning Movement Data

Start Time	Oberlin Ave Southbound					Oberlin Ave Northbound					W 35th St Eastbound					
	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	59	0	0	60	48	0	0	0	48	3	2	0	0	5	113
7:15 AM	0	86	0	0	86	69	3	0	0	72	7	7	0	0	14	172
7:30 AM	2	101	0	0	103	69	1	0	0	70	4	5	0	0	9	182
7:45 AM	2	103	0	0	105	121	1	0	0	122	4	11	0	1	15	242
Hourly Total	5	349	0	0	354	307	5	0	0	312	18	25	0	1	43	709
8:00 AM	2	72	0	0	74	186	14	0	2	200	2	33	0	0	35	309
8:15 AM	2	95	0	0	97	104	3	0	0	107	3	7	0	1	10	214
8:30 AM	2	92	0	0	94	85	2	0	0	87	2	6	0	2	8	189
8:45 AM	5	115	0	0	120	95	0	0	0	95	2	9	0	0	11	226
Hourly Total	11	374	0	0	385	470	19	0	2	489	9	55	0	3	64	938
9:00 AM	5	116	0	0	121	62	0	0	0	62	3	5	0	1	8	191
9:15 AM	5	93	0	0	98	73	2	0	0	75	1	2	0	0	3	176
9:30 AM	5	84	0	0	89	68	4	0	0	72	4	1	0	0	5	166
9:45 AM	1	104	0	0	105	90	0	0	0	90	3	6	0	1	9	204
Hourly Total	16	397	0	0	413	293	6	0	0	299	11	14	0	2	25	737
10:00 AM	4	101	0	0	105	80	1	0	0	81	4	2	0	1	6	192
10:15 AM	1	100	0	0	101	79	5	0	0	84	4	3	0	0	7	192
10:30 AM	1	109	0	0	110	91	0	0	0	91	5	5	0	1	10	211
10:45 AM	4	94	0	0	98	104	3	0	2	107	4	5	0	0	9	214
Hourly Total	10	404	0	0	414	354	9	0	2	363	17	15	0	2	32	809
11:00 AM	3	87	0	0	90	93	1	0	0	94	5	5	0	0	10	194
11:15 AM	2	112	0	0	114	105	1	0	0	106	5	3	0	2	8	228
11:30 AM	2	83	0	0	85	122	4	0	0	126	6	6	0	0	12	223
11:45 AM	5	108	0	0	113	98	2	0	0	100	4	7	0	1	11	224
Hourly Total	12	390	0	0	402	418	8	0	0	426	20	21	0	3	41	869
12:00 PM	1	164	0	0	165	141	3	0	0	144	2	5	0	0	7	316
12:15 PM	6	134	0	0	140	156	1	0	0	157	3	6	0	0	9	306
12:30 PM	3	122	0	0	125	125	1	0	0	126	4	2	0	0	6	257
12:45 PM	1	122	0	0	123	123	2	0	1	125	0	7	0	3	7	255
Hourly Total	11	542	0	0	553	545	7	0	1	552	9	20	0	3	29	1134
1:00 PM	6	146	0	0	152	126	2	0	0	128	5	5	0	1	10	290
1:15 PM	1	131	0	0	132	112	3	0	0	115	2	5	0	0	7	254
1:30 PM	5	147	0	0	152	138	3	0	0	141	4	3	0	2	7	300
1:45 PM	2	143	0	0	145	132	1	0	1	133	1	2	0	0	3	281
Hourly Total	14	567	0	0	581	508	9	0	1	517	12	15	0	3	27	1125
2:00 PM	3	141	0	0	144	168	7	0	1	175	4	4	0	0	8	327
2:15 PM	5	159	0	0	164	172	2	0	2	174	4	18	0	1	22	360
2:30 PM	5	139	0	0	144	208	4	0	2	212	3	15	0	0	18	374

2:45 PM	5	160	0	0	165	261	16	0	6	277	4	3	0	3	7	449
Hourly Total	18	599	0	0	617	809	29	0	11	838	15	40	0	4	55	1510
3:00 PM	6	161	0	0	167	190	6	0	0	196	1	3	0	0	4	367
3:15 PM	6	164	0	0	170	178	9	0	0	187	4	12	0	1	16	373
3:30 PM	5	144	0	0	149	143	6	0	0	149	5	8	0	2	13	311
3:45 PM	6	164	0	0	170	160	3	0	0	163	2	6	0	1	8	341
Hourly Total	23	633	0	0	656	671	24	0	0	695	12	29	0	4	41	1392
4:00 PM	5	183	0	0	188	180	7	0	0	187	4	5	0	0	9	384
4:15 PM	5	151	0	0	156	157	4	0	0	161	6	4	0	0	10	327
4:30 PM	8	149	0	0	157	161	3	0	0	164	11	8	0	2	19	340
4:45 PM	5	148	0	0	153	196	1	0	0	197	6	1	0	3	7	357
Hourly Total	23	631	0	0	654	694	15	0	0	709	27	18	0	5	45	1408
5:00 PM	6	173	0	0	179	181	5	0	0	186	3	3	0	0	6	371
5:15 PM	5	154	0	0	159	175	4	0	0	179	2	3	0	0	5	343
5:30 PM	1	164	0	0	165	145	4	0	0	149	1	1	0	0	2	316
5:45 PM	3	134	0	0	137	174	7	0	0	181	1	5	0	0	6	324
Hourly Total	15	625	0	0	640	675	20	0	0	695	7	12	0	0	19	1354
Grand Total	158	5511	0	0	5669	5744	151	0	17	5895	157	264	0	30	421	11985
Approach %	2.8	97.2	0.0	-	-	97.4	2.6	0.0	-	-	37.3	62.7	0.0	-	-	-
Total %	1.3	46.0	0.0	-	47.3	47.9	1.3	0.0	-	49.2	1.3	2.2	0.0	-	3.5	-
Lights	155	5415	0	-	5570	5638	148	0	-	5786	154	258	0	-	412	11768
% Lights	98.1	98.3	-	-	98.3	98.2	98.0	-	-	98.2	98.1	97.7	-	-	97.9	98.2
Other Vehicles	3	96	0	-	99	106	3	0	-	109	3	6	0	-	9	217
% Other Vehicles	1.9	1.7	-	-	1.7	1.8	2.0	-	-	1.8	1.9	2.3	-	-	2.1	1.8
Pedestrians	-	-	-	0	-	-	-	-	17	-	-	-	-	30	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
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Count Name: Oberlin Ave at 37th St
Site Code:
Start Date: 12/04/2014

Turning Movement Data

Start Time	Oberlin Ave Southbound						37th St Westbound						Oberlin Ave Northbound						37th St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	3	57	8	0	0	68	2	0	1	0	0	3	2	57	0	0	0	59	2	1	0	0	0	3	133
7:15 AM	3	85	8	0	0	96	7	0	2	0	0	9	3	64	0	0	0	67	1	1	3	0	0	5	177
7:30 AM	2	106	6	0	0	114	7	0	3	0	0	10	0	67	0	0	0	67	3	1	1	0	0	5	196
7:45 AM	1	118	6	0	0	125	17	0	1	0	0	18	2	98	3	0	0	103	3	1	3	0	0	7	253
Hourly Total	9	366	28	0	0	403	33	0	7	0	0	40	7	286	3	0	0	296	9	4	7	0	0	20	759
8:00 AM	4	130	6	0	0	140	15	0	4	0	0	19	2	92	0	0	0	94	5	2	3	0	1	10	263
8:15 AM	1	95	5	0	0	101	5	1	1	0	1	7	1	73	0	0	0	74	3	0	7	0	0	10	192
8:30 AM	3	100	2	0	0	105	5	0	1	0	1	6	1	78	3	0	0	82	4	0	4	0	1	8	201
8:45 AM	3	112	4	0	0	119	4	0	2	0	1	6	2	77	1	0	0	80	4	2	3	0	0	9	214
Hourly Total	11	437	17	0	0	465	29	1	8	0	3	38	6	320	4	0	0	330	16	4	17	0	2	37	870
9:00 AM	4	89	6	0	0	99	12	0	5	0	1	17	1	57	2	0	1	60	8	0	4	0	1	12	188
9:15 AM	4	85	4	0	0	93	16	0	9	0	1	25	0	53	2	0	0	55	7	0	5	0	0	12	185
9:30 AM	0	80	6	0	0	86	8	1	6	0	1	15	2	65	0	0	0	67	9	0	5	0	1	14	182
9:45 AM	6	107	2	0	0	115	11	0	10	0	0	21	2	79	3	0	0	84	9	1	6	0	1	16	236
Hourly Total	14	361	18	0	0	393	47	1	30	0	3	78	5	254	7	0	1	266	33	1	20	0	3	54	791
10:00 AM	3	91	4	0	0	98	11	1	11	0	2	23	3	68	2	0	0	73	6	0	5	0	0	11	205
10:15 AM	3	94	3	0	0	100	8	1	8	0	0	17	1	72	1	0	0	74	7	0	6	0	0	13	204
10:30 AM	2	104	0	0	0	106	6	2	7	0	1	15	2	84	2	0	0	88	7	2	5	0	0	14	223
10:45 AM	4	80	4	0	0	88	13	2	13	0	5	28	3	96	2	0	0	101	13	0	6	0	0	19	236
Hourly Total	12	369	11	0	0	392	38	6	39	0	8	83	9	320	7	0	0	336	33	2	22	0	0	57	868
11:00 AM	0	97	8	0	1	105	7	1	5	0	0	13	3	81	2	0	0	86	2	0	4	0	1	6	210
11:15 AM	6	90	1	0	0	97	6	3	8	0	0	17	1	88	2	0	0	91	4	1	9	0	2	14	219
11:30 AM	3	76	4	0	0	83	11	0	10	0	1	21	5	108	2	0	0	115	12	0	7	0	1	19	238
11:45 AM	4	113	3	0	2	120	6	1	8	0	2	15	3	100	3	0	0	106	10	0	6	0	0	16	257
Hourly Total	13	376	16	0	3	405	30	5	31	0	3	66	12	377	9	0	0	398	28	1	26	0	4	55	924
12:00 PM	2	139	5	0	0	146	15	1	8	0	1	24	5	127	5	0	0	137	11	1	7	0	0	19	326
12:15 PM	5	136	3	0	0	144	11	0	10	0	1	21	5	111	5	0	0	121	9	1	6	0	0	16	302
12:30 PM	4	109	2	0	0	115	15	0	9	0	0	24	5	116	2	0	0	123	9	2	3	0	0	14	276
12:45 PM	1	110	7	0	0	118	16	1	15	0	0	32	8	93	4	0	0	105	14	0	6	0	1	20	275
Hourly Total	12	494	17	0	0	523	57	2	42	0	2	101	23	447	16	0	0	486	43	4	22	0	1	69	1179
1:00 PM	4	137	6	0	0	147	7	1	16	0	1	24	4	119	7	0	0	130	11	1	4	0	1	16	317
1:15 PM	3	123	2	0	0	128	10	0	15	0	1	25	5	90	5	0	0	100	13	2	12	0	0	27	280
1:30 PM	2	132	9	0	0	143	14	0	16	0	1	30	4	124	4	0	1	132	16	2	7	0	2	25	330
1:45 PM	3	124	4	0	0	131	8	1	20	0	2	29	6	127	4	0	0	137	7	0	5	0	1	12	309
Hourly Total	12	516	21	0	0	549	39	2	67	0	5	108	19	460	20	0	1	499	47	5	28	0	4	80	1236
2:00 PM	5	164	7	0	0	176	11	0	10	0	2	21	2	126	5	0	0	133	8	0	5	0	0	13	343
2:15 PM	4	126	6	0	0	136	15	2	7	0	0	24	3	164	6	0	0	173	2	2	14	0	0	18	351

2:30 PM	3	163	3	0	0	169	19	0	13	0	1	32	5	162	3	0	1	170	7	2	12	0	0	21	392
2:45 PM	5	188	5	0	1	198	22	0	11	0	0	33	6	180	4	0	1	190	4	2	6	0	0	12	433
Hourly Total	17	641	21	0	1	679	67	2	41	0	3	110	16	632	18	0	2	666	21	6	37	0	0	64	1519
3:00 PM	2	162	8	0	0	172	19	1	10	0	0	30	6	136	4	0	0	146	7	0	5	0	1	12	360
3:15 PM	2	161	9	0	0	172	12	0	14	0	2	26	6	156	1	0	1	163	12	2	5	0	0	19	380
3:30 PM	2	146	3	0	0	151	18	1	13	0	1	32	7	122	4	0	0	133	6	0	5	0	3	11	327
3:45 PM	4	158	5	0	0	167	8	3	12	0	1	23	4	143	5	0	0	152	7	0	8	0	1	15	357
Hourly Total	10	627	25	0	0	662	57	5	49	0	4	111	23	557	14	0	1	594	32	2	23	0	5	57	1424
4:00 PM	8	152	8	0	0	168	13	1	10	0	1	24	6	142	5	0	0	153	9	0	7	0	0	16	361
4:15 PM	2	143	5	0	0	150	13	0	16	0	3	29	5	137	2	0	0	144	12	0	10	0	2	22	345
4:30 PM	5	145	5	0	0	155	23	0	8	0	2	31	3	146	6	0	0	155	6	3	11	0	0	20	361
4:45 PM	5	138	6	0	0	149	15	1	12	0	0	28	2	179	2	0	0	183	6	2	2	0	3	10	370
Hourly Total	20	578	24	0	0	622	64	2	46	0	6	112	16	604	15	0	0	635	33	5	30	0	5	68	1437
5:00 PM	7	154	3	0	0	164	14	2	26	0	0	42	9	167	5	0	0	181	8	1	1	0	0	10	397
5:15 PM	2	140	7	0	0	149	11	3	17	0	1	31	4	141	3	0	0	148	6	0	5	0	0	11	339
5:30 PM	2	149	6	0	0	157	11	2	9	0	1	22	2	137	3	0	0	142	3	0	2	0	0	5	326
5:45 PM	5	125	5	0	0	135	9	0	7	0	4	16	4	147	4	0	0	155	7	0	9	0	0	16	322
Hourly Total	16	568	21	0	0	605	45	7	59	0	6	111	19	592	15	0	0	626	24	1	17	0	0	42	1384
Grand Total	146	5333	219	0	4	5698	506	33	419	0	43	958	155	4849	128	0	5	5132	319	35	249	0	24	603	12391
Approach %	2.6	93.6	3.8	0.0	-	-	52.8	3.4	43.7	0.0	-	-	3.0	94.5	2.5	0.0	-	-	52.9	5.8	41.3	0.0	-	-	-
Total %	1.2	43.0	1.8	0.0	-	46.0	4.1	0.3	3.4	0.0	-	7.7	1.3	39.1	1.0	0.0	-	41.4	2.6	0.3	2.0	0.0	-	4.9	-
Lights	140	5245	218	0	-	5603	498	33	418	0	-	949	154	4762	126	0	-	5042	317	35	246	0	-	598	12192
% Lights	95.9	98.3	99.5	-	-	98.3	98.4	100.0	99.8	-	-	99.1	99.4	98.2	98.4	-	-	98.2	99.4	100.0	98.8	-	-	99.2	98.4
Other Vehicles	6	88	1	0	-	95	8	0	1	0	-	9	1	87	2	0	-	90	2	0	3	0	-	5	199
% Other Vehicles	4.1	1.7	0.5	-	-	1.7	1.6	0.0	0.2	-	-	0.9	0.6	1.8	1.6	-	-	1.8	0.6	0.0	1.2	-	-	0.8	1.6
Pedestrians	-	-	-	-	4	-	-	-	-	-	43	-	-	-	-	-	5	-	-	-	-	-	24	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Tower Blvd at Edgewood Dr
Site Code:
Start Date: 11/13/2014

Turning Movement Data

Start Time	Edgewood Dr Southbound						Tower Blvd Westbound						Edgewood Dr Northbound						Tower Blvd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	3	2	0	0	5	0	24	1	0	0	25	1	0	3	0	0	4	2	54	0	0	0	56	90
7:15 AM	2	1	0	0	0	3	1	34	3	1	0	39	5	1	0	0	0	6	2	59	1	1	0	63	111
7:30 AM	2	2	6	0	4	10	0	42	0	0	0	42	1	2	4	0	0	7	6	64	0	0	0	70	129
7:45 AM	0	3	1	0	0	4	1	55	1	0	0	57	7	3	8	0	1	18	3	78	0	0	0	81	160
Hourly Total	4	9	9	0	4	22	2	155	5	1	0	163	14	6	15	0	1	35	13	255	1	1	0	270	490
8:00 AM	4	7	4	0	0	15	2	61	0	0	0	63	4	4	2	0	0	10	3	60	2	0	0	65	153
8:15 AM	3	0	2	0	0	5	1	41	2	0	0	44	0	0	3	0	1	3	3	42	0	0	0	45	97
8:30 AM	2	1	1	0	0	4	1	46	0	0	1	47	2	2	4	0	0	8	2	42	1	1	0	46	105
8:45 AM	5	2	1	0	0	8	1	47	2	1	1	51	0	0	3	0	0	3	4	35	3	0	0	42	104
Hourly Total	14	10	8	0	0	32	5	195	4	1	2	205	6	6	12	0	1	24	12	179	6	1	0	198	459
9:00 AM	1	0	0	0	0	1	0	43	2	0	0	45	0	1	5	0	0	6	6	41	1	0	1	48	100
9:15 AM	2	2	1	0	2	5	0	47	3	0	0	50	0	1	1	0	0	2	3	33	2	0	0	38	95
9:30 AM	0	1	1	0	0	2	0	40	1	0	0	41	1	1	2	0	0	4	5	47	1	0	0	53	100
9:45 AM	0	0	0	0	0	0	2	51	2	0	0	55	2	1	3	0	0	6	6	58	2	0	0	66	127
Hourly Total	3	3	2	0	2	8	2	181	8	0	0	191	3	4	11	0	0	18	20	179	6	0	1	205	422
10:00 AM	0	3	1	0	0	4	0	58	0	0	0	58	3	0	1	0	0	4	5	52	2	0	0	59	125
10:15 AM	2	1	0	0	0	3	1	40	2	0	0	43	5	1	1	0	0	7	6	54	1	0	0	61	114
10:30 AM	4	2	0	0	0	6	0	35	1	1	0	37	3	0	3	0	0	6	1	52	0	0	0	53	102
10:45 AM	3	3	2	0	0	8	3	66	1	0	0	70	3	2	3	0	0	8	8	39	2	0	0	49	135
Hourly Total	9	9	3	0	0	21	4	199	4	1	0	208	14	3	8	0	0	25	20	197	5	0	0	222	476
11:00 AM	0	2	2	0	0	4	0	49	1	0	0	50	4	0	2	0	0	6	11	55	3	0	0	69	129
11:15 AM	2	3	3	0	0	8	1	54	0	0	0	55	3	4	5	0	0	12	5	60	1	0	0	66	141
11:30 AM	3	0	0	0	0	3	1	53	2	1	0	57	2	1	5	0	0	8	3	55	5	0	0	63	131
11:45 AM	1	0	2	0	0	3	1	50	2	2	0	55	1	2	6	0	0	9	6	60	1	0	0	67	134
Hourly Total	6	5	7	0	0	18	3	206	5	3	0	217	10	7	18	0	0	35	25	230	10	0	0	265	535
12:00 PM	1	2	1	0	0	4	0	63	3	0	0	66	2	4	5	0	0	11	9	60	0	0	0	69	150
12:15 PM	0	1	0	0	0	1	1	49	0	0	0	50	4	2	3	0	0	9	10	61	0	0	0	71	131
12:30 PM	5	0	0	0	0	5	0	50	3	0	0	53	2	3	3	0	0	8	6	80	1	0	0	87	153
12:45 PM	1	2	1	0	0	4	1	61	1	0	0	63	1	0	5	0	0	6	5	65	1	0	0	71	144
Hourly Total	7	5	2	0	0	14	2	223	7	0	0	232	9	9	16	0	0	34	30	266	2	0	0	298	578
1:00 PM	2	5	1	0	0	8	2	42	1	0	0	45	2	2	7	0	0	11	4	72	0	0	0	76	140
1:15 PM	2	1	0	0	0	3	2	64	2	1	0	69	2	1	7	0	0	10	5	67	3	0	0	75	157
1:30 PM	2	4	1	0	0	7	1	67	3	0	1	71	3	2	2	0	0	7	5	59	1	0	0	65	150
1:45 PM	1	2	2	0	0	5	2	54	3	1	0	60	3	1	4	0	1	8	6	70	2	0	0	78	151
Hourly Total	7	12	4	0	0	23	7	227	9	2	1	245	10	6	20	0	1	36	20	268	6	0	0	294	598
2:00 PM	1	0	1	0	0	2	1	43	3	0	0	47	1	2	4	0	1	7	12	60	1	0	0	73	129
2:15 PM	0	2	1	0	0	3	1	49	2	1	0	53	0	5	3	0	0	8	5	86	0	0	0	91	155

2:30 PM	2	12	4	0	3	18	5	58	3	0	0	66	7	5	3	0	0	15	6	89	2	0	0	97	196
2:45 PM	2	2	1	0	0	5	1	106	4	0	0	111	8	5	5	0	0	18	1	67	3	0	0	71	205
Hourly Total	5	16	7	0	3	28	8	256	12	1	0	277	16	17	15	0	1	48	24	302	6	0	0	332	685
3:00 PM	0	3	4	0	0	7	3	54	3	1	0	61	3	8	7	0	0	18	11	77	0	0	0	88	174
3:15 PM	3	2	1	0	2	6	2	59	8	0	0	69	0	3	9	0	0	12	6	81	0	0	0	87	174
3:30 PM	2	2	1	0	1	5	2	71	1	0	0	74	3	1	4	0	0	8	11	80	4	1	0	96	183
3:45 PM	1	0	1	0	0	2	1	113	1	0	0	115	5	6	11	0	0	22	7	84	1	0	0	92	231
Hourly Total	6	7	7	0	3	20	8	297	13	1	0	319	11	18	31	0	0	60	35	322	5	1	0	363	762
4:00 PM	2	4	5	0	0	11	1	88	2	0	0	91	3	2	4	0	0	9	6	88	3	0	0	97	208
4:15 PM	1	1	1	0	0	3	1	80	0	0	0	81	3	2	3	0	0	8	7	100	2	1	0	110	202
4:30 PM	0	4	0	0	0	4	1	73	5	2	0	81	4	5	4	0	0	13	5	69	2	0	0	76	174
4:45 PM	2	2	2	0	1	6	1	72	3	2	0	78	5	3	6	0	0	14	10	79	1	0	0	90	188
Hourly Total	5	11	8	0	1	24	4	313	10	4	0	331	15	12	17	0	0	44	28	336	8	1	0	373	772
5:00 PM	2	0	0	0	0	2	2	69	2	0	0	73	7	3	2	0	0	12	6	100	1	0	0	107	194
5:15 PM	2	3	0	0	0	5	1	66	6	0	0	73	3	2	6	0	0	11	6	83	0	0	0	89	178
5:30 PM	2	1	0	0	0	3	0	77	4	0	0	81	2	1	7	0	0	10	5	55	2	0	0	62	156
5:45 PM	2	3	0	0	0	5	2	57	2	1	0	62	7	2	5	0	0	14	5	59	2	0	0	66	147
Hourly Total	8	7	0	0	0	15	5	269	14	1	0	289	19	8	20	0	0	47	22	297	5	0	0	324	675
Grand Total	74	94	57	0	13	225	50	2521	91	15	3	2677	127	96	183	0	4	406	249	2831	60	4	1	3144	6452
Approach %	32.9	41.8	25.3	0.0	-	-	1.9	94.2	3.4	0.6	-	-	31.3	23.6	45.1	0.0	-	-	7.9	90.0	1.9	0.1	-	-	-
Total %	1.1	1.5	0.9	0.0	-	3.5	0.8	39.1	1.4	0.2	-	41.5	2.0	1.5	2.8	0.0	-	6.3	3.9	43.9	0.9	0.1	-	48.7	-
Lights	74	91	52	0	-	217	49	2468	89	15	-	2621	125	95	183	0	-	403	239	2780	59	4	-	3082	6323
% Lights	100.0	96.8	91.2	-	-	96.4	98.0	97.9	97.8	100.0	-	97.9	98.4	99.0	100.0	-	-	99.3	96.0	98.2	98.3	100.0	-	98.0	98.0
Other Vehicles	0	3	5	0	-	8	1	53	2	0	-	56	2	1	0	0	-	3	10	51	1	0	-	62	129
% Other Vehicles	0.0	3.2	8.8	-	-	3.6	2.0	2.1	2.2	0.0	-	2.1	1.6	1.0	0.0	-	-	0.7	4.0	1.8	1.7	0.0	-	2.0	2.0
Pedestrians	-	-	-	-	13	-	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: Oberlin Ave at Tower Blvd
Site Code:
Start Date: 12/04/2014

Turning Movement Data

Start Time	Oberlin Ave Southbound						Tower Blvd Westbound						Oberlin Ave Northbound						Tower Blvd Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	5	49	9	0	0	63	13	15	3	0	0	31	2	43	2	0	0	47	10	28	14	0	0	52	193
7:15 AM	4	77	10	0	0	91	6	17	10	0	0	33	13	40	3	0	0	56	19	30	13	0	0	62	242
7:30 AM	8	100	5	0	0	113	8	23	12	0	0	43	7	42	12	0	0	61	15	20	31	0	0	66	283
7:45 AM	9	89	12	0	0	110	25	34	24	0	0	83	10	71	10	0	0	91	25	35	32	0	0	92	376
Hourly Total	26	315	36	0	0	377	52	89	49	0	0	190	32	196	27	0	0	255	69	113	90	0	0	272	1094
8:00 AM	39	79	9	0	0	127	32	33	22	0	0	87	10	55	6	0	0	71	14	28	21	0	0	63	348
8:15 AM	20	73	8	0	0	101	16	16	9	0	0	41	4	52	5	0	0	61	8	21	23	0	0	52	255
8:30 AM	17	71	10	0	0	98	9	18	6	0	0	33	4	53	5	0	0	62	12	13	21	0	0	46	239
8:45 AM	13	93	3	0	0	109	11	17	19	1	0	48	9	47	9	0	0	65	15	17	21	0	0	53	275
Hourly Total	89	316	30	0	0	435	68	84	56	1	0	209	27	207	25	0	0	259	49	79	86	0	0	214	1117
9:00 AM	21	74	4	0	0	99	9	20	17	0	0	46	7	46	11	0	0	64	14	19	19	1	0	53	262
9:15 AM	16	71	3	0	0	90	4	19	17	0	1	40	14	47	1	0	0	62	16	19	7	0	0	42	234
9:30 AM	15	65	9	0	0	89	15	35	14	0	0	64	9	55	6	0	0	70	13	23	20	1	0	57	280
9:45 AM	17	94	1	0	1	112	6	18	17	1	0	42	16	69	15	0	0	100	10	21	15	2	2	48	302
Hourly Total	69	304	17	0	1	390	34	92	65	1	1	192	46	217	33	0	0	296	53	82	61	4	2	200	1078
10:00 AM	17	79	4	0	0	100	4	17	17	0	0	38	17	56	4	0	0	77	12	19	22	3	0	56	271
10:15 AM	15	78	10	0	0	103	8	24	26	0	2	58	10	53	12	0	0	75	13	21	20	2	0	56	292
10:30 AM	13	90	10	0	0	113	6	20	24	0	0	50	16	60	7	0	0	83	15	26	36	2	0	79	325
10:45 AM	19	69	5	0	0	93	13	38	16	2	0	69	17	68	11	0	0	96	10	18	23	4	0	55	313
Hourly Total	64	316	29	0	0	409	31	99	83	2	2	215	60	237	34	0	0	331	50	84	101	11	0	246	1201
11:00 AM	15	77	9	0	0	101	9	24	22	0	0	55	11	63	10	0	0	84	11	27	24	4	1	66	306
11:15 AM	13	68	7	0	0	88	10	14	23	1	1	48	8	78	6	0	0	92	13	30	23	1	1	67	295
11:30 AM	10	72	7	0	3	89	15	25	25	1	0	66	12	68	6	0	1	86	17	22	21	0	1	60	301
11:45 AM	12	113	9	0	0	134	8	26	25	0	0	59	15	95	13	0	0	123	15	25	20	2	0	62	378
Hourly Total	50	330	32	0	3	412	42	89	95	2	1	228	46	304	35	0	1	385	56	104	88	7	3	255	1280
12:00 PM	23	111	10	0	2	144	17	31	19	1	2	68	18	100	13	0	0	131	18	37	23	0	1	78	421
12:15 PM	22	100	10	0	0	132	14	25	24	0	0	63	11	89	11	0	0	111	19	36	29	3	0	87	393
12:30 PM	22	89	10	0	2	121	13	22	19	0	1	54	17	92	6	0	0	115	19	25	26	0	0	70	360
12:45 PM	22	101	6	0	0	129	3	26	29	0	0	58	13	98	13	0	0	124	22	34	26	2	2	84	395
Hourly Total	89	401	36	0	4	526	47	104	91	1	3	243	59	379	43	0	0	481	78	132	104	5	3	319	1569
1:00 PM	20	119	4	0	0	143	10	20	14	1	0	45	18	98	12	0	0	128	15	30	17	0	0	62	378
1:15 PM	21	99	8	0	0	128	9	25	24	0	0	58	14	72	19	0	0	105	22	36	32	2	0	92	383
1:30 PM	27	108	15	0	0	150	11	27	24	0	1	62	17	100	15	0	0	132	15	27	40	0	1	82	426
1:45 PM	26	106	11	0	1	143	8	17	25	1	0	51	16	95	19	0	0	130	21	26	36	2	1	85	409
Hourly Total	94	432	38	0	1	564	38	89	87	2	1	216	65	365	65	0	0	495	73	119	125	4	2	321	1596
2:00 PM	25	125	15	0	0	165	12	28	20	0	0	60	18	108	17	0	0	143	20	35	39	1	0	95	463
2:15 PM	18	101	10	0	0	129	17	28	24	3	0	72	17	114	15	0	0	146	16	41	44	1	0	102	449

2:30 PM	23	132	26	0	0	181	30	33	43	0	1	106	26	119	24	0	4	169	18	37	47	1	1	103	559
2:45 PM	26	132	27	0	1	185	29	44	32	0	0	105	22	118	16	0	0	156	14	46	40	0	1	100	546
Hourly Total	92	490	78	0	1	660	88	133	119	3	1	343	83	459	72	0	4	614	68	159	170	3	2	400	2017
3:00 PM	35	140	13	0	0	188	17	44	28	1	2	90	18	132	12	0	0	162	21	32	32	1	0	86	526
3:15 PM	26	121	17	0	0	164	15	26	26	1	0	68	30	111	19	0	0	160	24	49	35	0	0	108	500
3:30 PM	28	120	8	0	0	156	19	40	41	1	0	101	26	116	18	0	0	160	11	51	34	2	3	98	515
3:45 PM	22	118	10	0	0	150	21	41	27	1	0	90	25	118	16	0	1	159	20	42	29	2	0	93	492
Hourly Total	111	499	48	0	0	658	72	151	122	4	2	349	99	477	65	0	1	641	76	174	130	5	3	385	2033
4:00 PM	22	131	15	0	0	168	15	35	27	1	1	78	21	115	22	0	0	158	21	55	25	2	1	103	507
4:15 PM	35	115	18	0	0	168	10	33	30	3	1	76	23	123	12	0	0	158	13	51	37	6	1	107	509
4:30 PM	22	108	13	0	0	143	20	40	17	1	1	78	34	105	28	0	0	167	22	36	44	6	0	108	496
4:45 PM	21	128	18	0	0	167	19	37	28	0	0	84	22	152	20	0	0	194	16	42	44	0	4	102	547
Hourly Total	100	482	64	0	0	646	64	145	102	5	3	316	100	495	82	0	0	677	72	184	150	14	6	420	2059
5:00 PM	39	124	12	0	0	175	14	30	36	3	0	83	22	136	20	0	0	178	14	42	40	0	0	96	532
5:15 PM	29	120	13	0	0	162	11	32	23	1	0	67	24	107	17	0	0	148	25	30	29	2	0	86	463
5:30 PM	32	104	14	0	0	150	12	34	20	0	0	66	31	113	17	0	0	161	16	33	26	0	0	75	452
5:45 PM	23	95	15	0	0	133	19	28	26	0	2	73	26	111	18	0	0	155	14	48	37	0	1	99	460
Hourly Total	123	443	54	0	0	620	56	124	105	4	2	289	103	467	72	0	0	642	69	153	132	2	1	356	1907
Grand Total	907	4328	462	0	10	5697	592	1199	974	25	16	2790	720	3803	553	0	6	5076	713	1383	1237	55	22	3388	16951
Approach %	15.9	76.0	8.1	0.0	-	-	21.2	43.0	34.9	0.9	-	-	14.2	74.9	10.9	0.0	-	-	21.0	40.8	36.5	1.6	-	-	-
Total %	5.4	25.5	2.7	0.0	-	33.6	3.5	7.1	5.7	0.1	-	16.5	4.2	22.4	3.3	0.0	-	29.9	4.2	8.2	7.3	0.3	-	20.0	-
Lights	891	4268	455	0	-	5614	580	1177	954	25	-	2736	703	3742	538	0	-	4983	697	1358	1217	55	-	3327	16660
% Lights	98.2	98.6	98.5	-	-	98.5	98.0	98.2	97.9	100.0	-	98.1	97.6	98.4	97.3	-	-	98.2	97.8	98.2	98.4	100.0	-	98.2	98.3
Other Vehicles	16	60	7	0	-	83	12	22	20	0	-	54	17	61	15	0	-	93	16	25	20	0	-	61	291
% Other Vehicles	1.8	1.4	1.5	-	-	1.5	2.0	1.8	2.1	0.0	-	1.9	2.4	1.6	2.7	-	-	1.8	2.2	1.8	1.6	0.0	-	1.8	1.7
Pedestrians	-	-	-	-	10	-	-	-	-	-	16	-	-	-	-	-	6	-	-	-	-	-	22	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: Oberlin Ave at Cooper Foster Park Rd
Site Code:
Start Date: 12/09/2014
Page No: 1

Turning Movement Data

Start Time	Oberlin Ave Southbound						Cooper Foster Park Rd Westbound						Oberlin Ave Northbound						Cooper Foster Park Rd Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	10	21	64	0	0	95	0	26	0	0	0	26	0	15	0	0	0	15	2	32	8	0	0	42	178
7:15 AM	10	19	71	0	0	100	0	36	0	0	0	36	0	18	0	0	0	18	1	27	11	0	0	39	193
7:30 AM	18	34	92	0	0	144	0	34	0	0	0	34	0	20	0	0	0	20	0	37	19	0	0	56	254
7:45 AM	16	28	79	0	0	123	0	57	0	0	0	57	0	31	0	0	0	31	1	35	17	0	0	53	264
Hourly Total	54	102	306	0	0	462	0	153	0	0	0	153	0	84	0	0	0	84	4	131	55	0	0	190	889
8:00 AM	17	22	49	0	0	88	0	32	0	0	0	32	0	21	0	0	0	21	0	22	9	0	0	31	172
8:15 AM	18	19	70	0	0	107	0	40	0	0	0	40	0	21	1	0	0	22	3	24	10	0	0	37	206
8:30 AM	21	17	54	0	1	92	0	42	0	0	0	42	0	17	1	0	0	18	1	47	17	0	0	65	217
8:45 AM	30	15	58	0	0	103	0	47	0	0	0	47	0	25	5	0	0	30	1	32	14	0	0	47	227
Hourly Total	86	73	231	0	1	390	0	161	0	0	0	161	0	84	7	0	0	91	5	125	50	0	0	180	822
9:00 AM	27	14	40	0	0	81	1	49	1	0	0	51	0	12	1	0	0	13	2	37	18	0	0	57	202
9:15 AM	16	14	40	0	0	70	0	41	1	0	0	42	0	13	1	0	0	14	1	48	18	0	0	67	193
9:30 AM	26	13	48	0	0	87	1	52	1	0	0	54	0	15	3	0	0	18	4	50	13	0	0	67	226
9:45 AM	20	20	49	0	0	89	0	42	0	0	0	42	0	12	2	0	0	14	4	56	21	0	0	81	226
Hourly Total	89	61	177	0	0	327	2	184	3	0	0	189	0	52	7	0	0	59	11	191	70	0	0	272	847
10:00 AM	32	14	48	0	0	94	0	57	0	0	0	57	0	11	0	0	0	11	5	51	23	0	0	79	241
10:15 AM	26	12	29	0	0	67	0	62	0	0	0	62	0	22	0	0	0	22	4	59	20	0	0	83	234
10:30 AM	28	17	53	0	0	98	0	73	0	0	0	73	0	13	1	0	0	14	6	43	20	0	0	69	254
10:45 AM	37	28	45	0	0	110	0	68	1	0	0	69	0	18	2	0	0	20	5	41	23	0	0	69	268
Hourly Total	123	71	175	0	0	369	0	260	1	0	0	261	0	64	3	0	0	67	20	194	86	0	0	300	997
11:00 AM	28	12	49	0	0	89	0	68	0	0	0	68	0	22	2	0	0	24	4	70	33	0	0	107	288
11:15 AM	36	18	55	0	0	109	0	69	0	0	0	69	0	21	0	0	0	21	3	60	17	0	0	80	279
11:30 AM	43	18	45	0	0	106	0	78	0	0	0	78	0	15	0	0	0	15	3	66	47	0	0	116	315
11:45 AM	45	24	45	0	0	114	0	58	1	0	0	59	0	14	4	0	0	18	8	62	43	0	0	113	304
Hourly Total	152	72	194	0	0	418	0	273	1	0	0	274	0	72	6	0	0	78	18	258	140	0	0	416	1186
12:00 PM	41	23	40	0	0	104	0	87	0	0	0	87	0	13	1	0	0	14	7	85	36	0	0	128	333
12:15 PM	41	19	55	0	0	115	0	76	0	0	0	76	0	26	3	0	0	29	2	81	38	0	0	121	341
12:30 PM	42	19	56	0	0	117	0	79	0	0	0	79	0	17	2	0	0	19	2	76	33	0	0	111	326
12:45 PM	37	21	45	0	0	103	0	68	0	0	0	68	0	27	2	0	0	29	4	77	27	0	0	108	308
Hourly Total	161	82	196	0	0	439	0	310	0	0	0	310	0	83	8	0	0	91	15	319	134	0	0	468	1308
1:00 PM	51	23	45	0	1	119	0	84	0	0	0	84	0	16	2	0	0	18	6	72	32	0	0	110	331
1:15 PM	28	21	53	0	0	102	0	70	1	0	0	71	0	19	4	0	0	23	4	79	25	0	0	108	304
1:30 PM	37	16	73	0	0	126	0	66	0	0	0	66	0	21	3	0	0	24	5	71	50	0	0	126	342
1:45 PM	53	29	75	0	0	157	0	80	1	0	0	81	0	26	1	0	0	27	5	69	33	0	0	107	372
Hourly Total	169	89	246	0	1	504	0	300	2	0	0	302	0	82	10	0	0	92	20	291	140	0	0	451	1349
2:00 PM	50	31	58	0	0	139	0	81	0	0	0	81	0	23	0	0	0	23	4	78	43	0	0	125	368
2:15 PM	52	26	61	0	0	139	0	68	0	0	0	68	0	23	5	0	0	28	5	70	36	0	0	111	346

2:30 PM	53	36	82	0	0	171	0	67	0	0	0	67	0	19	1	0	0	20	1	85	48	0	0	134	392
2:45 PM	68	40	75	0	0	183	0	74	0	0	0	74	0	25	1	0	0	26	5	76	44	0	0	125	408
Hourly Total	223	133	276	0	0	632	0	290	0	0	0	290	0	90	7	0	0	97	15	309	171	0	0	495	1514
3:00 PM	48	26	67	0	0	141	0	81	0	0	0	81	0	28	1	0	0	29	6	96	54	0	0	156	407
3:15 PM	36	28	64	0	0	128	0	82	1	0	0	83	0	20	0	0	0	20	1	68	41	0	0	110	341
3:30 PM	37	30	53	0	0	120	0	57	0	0	0	57	0	29	2	0	0	31	2	88	45	0	0	135	343
3:45 PM	47	37	44	0	0	128	0	91	0	0	0	91	0	23	2	0	0	25	3	76	44	0	0	123	367
Hourly Total	168	121	228	0	0	517	0	311	1	0	0	312	0	100	5	0	0	105	12	328	184	0	0	524	1458
4:00 PM	37	45	75	0	0	157	0	72	0	0	0	72	0	22	5	0	0	27	6	72	36	0	0	114	370
4:15 PM	42	31	42	0	0	115	0	90	0	0	0	90	0	25	0	0	0	25	1	65	34	0	0	100	330
4:30 PM	38	40	55	0	0	133	0	93	0	0	0	93	1	26	0	0	0	27	5	91	37	0	0	133	386
4:45 PM	37	27	72	0	0	136	0	87	0	0	0	87	0	21	2	0	0	23	5	69	42	0	0	116	362
Hourly Total	154	143	244	0	0	541	0	342	0	0	0	342	1	94	7	0	0	102	17	297	149	0	0	463	1448
5:00 PM	48	30	69	0	0	147	1	77	0	0	0	78	0	34	2	0	0	36	5	82	31	0	0	118	379
5:15 PM	40	33	58	0	0	131	0	70	0	0	0	70	1	20	3	0	0	24	3	68	30	0	0	101	326
5:30 PM	28	24	42	0	0	94	0	70	0	0	0	70	0	33	1	0	0	34	0	54	43	0	0	97	295
5:45 PM	25	12	66	0	0	103	0	59	0	0	0	59	0	17	1	0	0	18	0	63	37	0	0	100	280
Hourly Total	141	99	235	0	0	475	1	276	0	0	0	277	1	104	7	0	0	112	8	267	141	0	0	416	1280
Grand Total	1520	1046	2508	0	2	5074	3	2860	8	0	0	2871	2	909	67	0	0	978	145	2710	1320	0	0	4175	13098
Approach %	30.0	20.6	49.4	0.0	-	-	0.1	99.6	0.3	0.0	-	-	0.2	92.9	6.9	0.0	-	-	3.5	64.9	31.6	0.0	-	-	-
Total %	11.6	8.0	19.1	0.0	-	38.7	0.0	21.8	0.1	0.0	-	21.9	0.0	6.9	0.5	0.0	-	7.5	1.1	20.7	10.1	0.0	-	31.9	-
Lights	1495	1030	2463	0	-	4988	3	2828	8	0	-	2839	2	895	64	0	-	961	137	2668	1305	0	-	4110	12898
% Lights	98.4	98.5	98.2	-	-	98.3	100.0	98.9	100.0	-	-	98.9	100.0	98.5	95.5	-	-	98.3	94.5	98.5	98.9	-	-	98.4	98.5
Other Vehicles	25	16	45	0	-	86	0	32	0	0	-	32	0	14	3	0	-	17	8	42	15	0	-	65	200
% Other Vehicles	1.6	1.5	1.8	-	-	1.7	0.0	1.1	0.0	-	-	1.1	0.0	1.5	4.5	-	-	1.7	5.5	1.5	1.1	-	-	1.6	1.5
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : Cooper_Foster_Park_Rd_at_N_Ridge_Rd_204701_12-04-2014(1)
Site Code :
Start Date : 12/4/2014
Page No : 1

Groups Printed- Lights - Other Vehicles - Pedestrians

	N Ridge Rd From Northeast				Cooper Foster Park Rd From East				N Ridge Rd From Southwest				Cooper Foster Park Rd From West				
Start Time	Bear Right	Thru	Hard Left	Peds	Hard Right	Thru	Bear Left	Peds	Bear Right	Thru	Hard Left	Peds	Hard Right	Thru	Bear Left	Peds	Int. Total
07:00 AM	16	4	3	0	1	35	18	0	17	10	0	0	0	77	9	0	190
07:15 AM	15	6	1	0	2	60	11	0	25	15	0	0	0	105	13	0	253
07:30 AM	23	6	4	0	0	65	8	0	28	9	0	0	0	127	14	0	284
07:45 AM	31	8	5	0	2	78	4	0	27	7	0	0	0	112	18	0	292
Total	85	24	13	0	5	238	41	0	97	41	0	0	0	421	54	0	1019
08:00 AM	8	5	5	0	2	79	11	0	16	3	0	0	0	82	7	0	218
08:15 AM	15	2	1	0	1	74	12	0	15	5	0	0	0	103	8	0	236
08:30 AM	18	3	2	0	1	53	8	0	17	3	0	0	0	84	7	0	196
08:45 AM	19	9	1	0	0	89	9	0	12	6	0	0	0	88	10	0	243
Total	60	19	9	0	4	295	40	0	60	17	0	0	0	357	32	0	893
09:00 AM	17	3	0	0	1	77	8	0	7	6	0	0	0	90	7	0	216
09:15 AM	11	2	0	2	0	58	5	0	11	7	0	0	0	104	14	0	214
09:30 AM	16	10	3	0	0	82	9	0	17	4	0	0	0	101	9	0	251
09:45 AM	19	3	1	0	1	92	6	0	17	4	0	0	0	90	9	0	242
Total	63	18	4	2	2	309	28	0	52	21	0	0	0	385	39	0	923
10:00 AM	18	2	2	2	0	70	10	0	8	7	0	0	0	80	10	0	209
10:15 AM	18	7	1	0	2	88	9	0	11	5	0	0	0	77	9	0	227
10:30 AM	22	5	1	0	1	89	12	0	14	11	0	0	0	118	13	0	286
10:45 AM	28	8	3	0	3	95	10	0	10	9	0	0	1	86	9	0	262
Total	86	22	7	2	6	342	41	0	43	32	0	0	1	361	41	0	984
11:00 AM	24	5	0	0	0	105	9	0	6	6	1	0	0	113	15	0	284
11:15 AM	19	9	1	2	2	88	10	0	9	6	0	0	1	102	11	0	260
11:30 AM	15	8	1	0	3	96	13	0	20	10	0	0	0	105	14	0	285
11:45 AM	25	7	0	0	1	113	14	0	18	6	1	0	0	94	18	0	297
Total	83	29	2	2	6	402	46	0	53	28	2	0	1	414	58	0	1126
12:00 PM	27	7	2	0	3	104	9	0	13	11	0	0	0	98	16	0	290
12:15 PM	29	8	0	0	1	89	5	0	23	5	1	0	3	111	13	0	288
12:30 PM	22	7	1	0	1	116	9	0	11	7	1	0	0	117	11	0	303
12:45 PM	23	11	2	2	1	106	8	0	14	5	0	0	0	112	12	0	296
Total	101	33	5	2	6	415	31	0	61	28	2	0	3	438	52	0	1177
01:00 PM	20	4	3	2	4	134	11	0	12	15	0	0	0	119	7	0	331
01:15 PM	25	9	3	0	2	112	9	0	7	6	0	0	0	134	14	0	321
01:30 PM	17	3	2	2	1	119	7	0	19	9	0	0	0	140	22	0	341
01:45 PM	30	7	1	2	3	103	13	0	17	8	0	0	0	141	13	0	338
Total	92	23	9	6	10	468	40	0	55	38	0	0	0	534	56	0	1331
02:00 PM	33	12	0	0	1	105	11	0	19	9	1	0	0	120	18	0	329
02:15 PM	25	9	2	0	0	136	14	0	15	11	0	0	0	142	16	0	370
02:30 PM	25	9	1	2	1	146	20	0	31	7	0	0	0	132	27	0	401
02:45 PM	38	6	1	0	1	137	10	0	23	15	0	0	1	131	21	0	384
Total	121	36	4	2	3	524	55	0	88	42	1	0	1	525	82	0	1484
03:00 PM	38	15	4	0	2	149	14	0	22	7	0	0	0	149	27	0	427
03:15 PM	30	11	2	0	1	145	15	0	16	8	0	0	0	155	18	0	401

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : Cooper_Foster_Park_Rd_at_N_Ridge_Rd_204701_12-04-2014(1)
Site Code :
Start Date : 12/4/2014
Page No : 2

Groups Printed- Lights - Other Vehicles - Pedestrians

	N Ridge Rd From Northeast				Cooper Foster Park Rd From East				N Ridge Rd From Southwest				Cooper Foster Park Rd From West				
Start Time	Bear Right	Thru	Hard Left	Peds	Hard Right	Thru	Bear Left	Peds	Bear Right	Thru	Hard Left	Peds	Hard Right	Thru	Bear Left	Peds	Int. Total
03:30 PM	24	6	6	0	2	156	9	0	21	12	0	0	1	161	20	0	418
03:45 PM	39	13	2	0	0	154	20	0	19	11	0	0	0	105	17	0	380
Total	131	45	14	0	5	604	58	0	78	38	0	0	1	570	82	0	1626
04:00 PM	31	14	2	0	2	152	15	0	17	6	0	0	0	145	21	0	405
04:15 PM	24	6	1	0	2	143	15	0	16	7	0	0	0	137	22	0	373
04:30 PM	17	11	0	0	1	143	18	0	17	7	0	0	1	129	19	0	363
04:45 PM	30	14	1	0	2	158	16	0	14	13	0	0	0	131	22	0	401
Total	102	45	4	0	7	596	64	0	64	33	0	0	1	542	84	0	1542
05:00 PM	26	10	1	0	0	168	10	0	13	9	1	0	0	152	22	0	412
05:15 PM	23	10	0	0	2	163	9	0	20	8	0	0	1	119	17	0	372
05:30 PM	25	5	1	0	0	177	13	0	15	10	0	0	0	132	18	0	396
05:45 PM	27	6	0	0	4	167	18	0	14	5	0	0	1	96	28	0	366
Total	101	31	2	0	6	675	50	0	62	32	1	0	2	499	85	0	1546
Grand Total	1025	325	73	16	60	4868	494	0	713	350	6	0	10	5046	665	0	13651
Apprch %	71.2	22.6	5.1	1.1	1.1	89.8	9.1	0	66.7	32.7	0.6	0	0.2	88.2	11.6	0	
Total %	7.5	2.4	0.5	0.1	0.4	35.7	3.6	0	5.2	2.6	0	0	0.1	37	4.9	0	
Lights	1012	321	72	8	54	4767	485	0	698	344	6	0	10	4948	662	0	13387
% Lights	98.7	98.8	98.6	50	90	97.9	98.2	0	97.9	98.3	100	0	100	98.1	99.5	0	98.1
Other Vehicles	13	4	1	0	6	101	9	0	15	6	0	0	0	98	3	0	256
% Other Vehicles	1.3	1.2	1.4	0	10	2.1	1.8	0	2.1	1.7	0	0	0	1.9	0.5	0	1.9
Pedestrians	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
% Pedestrians	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0.1

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: Elyria Ave at E 25th St
Site Code:
Start Date: 12/04/2014
Page No: 1

Turning Movement Data

Start Time	Elyria Ave Southbound					E 25th St Westbound					Elyria Ave Northbound					
	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	50	0	0	0	50	3	0	0	0	3	1	33	0	0	34	87
7:15 AM	55	2	0	0	57	3	1	0	0	4	0	43	0	1	43	104
7:30 AM	59	1	0	0	60	5	2	0	0	7	0	51	0	0	51	118
7:45 AM	68	1	0	0	69	3	3	0	1	6	0	75	0	0	75	150
Hourly Total	232	4	0	0	236	14	6	0	1	20	1	202	0	1	203	459
8:00 AM	60	3	0	0	63	5	3	0	0	8	2	38	0	0	40	111
8:15 AM	58	3	0	0	61	1	2	0	0	3	0	76	0	0	76	140
8:30 AM	72	1	0	0	73	1	3	0	1	4	0	57	0	0	57	134
8:45 AM	68	1	0	0	69	1	2	0	0	3	1	63	0	1	64	136
Hourly Total	258	8	0	0	266	8	10	0	1	18	3	234	0	1	237	521
9:00 AM	50	0	0	0	50	3	0	0	0	3	1	53	0	0	54	107
9:15 AM	51	1	0	0	52	6	0	0	0	6	1	50	0	0	51	109
9:30 AM	44	0	0	0	44	3	5	0	0	8	0	46	0	0	46	98
9:45 AM	48	1	0	0	49	4	2	0	0	6	0	46	0	0	46	101
Hourly Total	193	2	0	0	195	16	7	0	0	23	2	195	0	0	197	415
10:00 AM	46	1	0	0	47	1	0	0	0	1	1	46	0	0	47	95
10:15 AM	42	0	0	0	42	1	1	0	0	2	0	53	0	0	53	97
10:30 AM	50	2	0	0	52	2	2	0	0	4	0	47	0	0	47	103
10:45 AM	69	5	0	0	74	3	2	0	0	5	1	54	0	0	55	134
Hourly Total	207	8	0	0	215	7	5	0	0	12	2	200	0	0	202	429
11:00 AM	62	3	0	0	65	4	1	0	0	5	1	32	0	0	33	103
11:15 AM	57	2	0	0	59	2	4	0	0	6	1	46	0	0	47	112
11:30 AM	69	0	0	0	69	4	2	0	1	6	1	57	0	0	58	133
11:45 AM	55	2	0	0	57	4	3	0	0	7	2	62	0	0	64	128
Hourly Total	243	7	0	0	250	14	10	0	1	24	5	197	0	0	202	476
12:00 PM	53	2	0	0	55	4	2	0	0	6	2	67	0	0	69	130
12:15 PM	49	2	0	0	51	4	1	0	0	5	1	63	0	0	64	120
12:30 PM	68	0	0	0	68	5	3	0	0	8	0	68	0	0	68	144
12:45 PM	65	3	0	0	68	4	3	0	0	7	0	68	0	0	68	143
Hourly Total	235	7	0	0	242	17	9	0	0	26	3	266	0	0	269	537
1:00 PM	66	3	0	0	69	4	3	0	0	7	1	87	0	0	88	164
1:15 PM	70	2	0	0	72	5	3	0	0	8	2	79	0	0	81	161
1:30 PM	74	1	0	0	75	4	6	0	0	10	0	60	0	0	60	145
1:45 PM	61	4	0	0	65	8	3	0	0	11	1	51	0	1	52	128
Hourly Total	271	10	0	0	281	21	15	0	0	36	4	277	0	1	281	598
2:00 PM	93	0	0	0	93	1	6	0	0	7	0	66	0	0	66	166
2:15 PM	75	2	0	0	77	2	1	0	0	3	0	74	0	0	74	154
2:30 PM	90	5	0	0	95	9	6	0	0	15	6	85	1	0	92	202

2:45 PM	72	1	0	1	73	9	5	0	0	14	1	69	0	0	70	157
Hourly Total	330	8	0	1	338	21	18	0	0	39	7	294	1	0	302	679
3:00 PM	81	1	0	0	82	5	2	0	1	7	1	86	0	1	87	176
3:15 PM	66	1	0	0	67	8	1	0	0	9	1	75	0	0	76	152
3:30 PM	102	2	0	0	104	3	5	0	0	8	1	83	0	0	84	196
3:45 PM	89	3	0	0	92	8	4	0	0	12	1	89	0	0	90	194
Hourly Total	338	7	0	0	345	24	12	0	1	36	4	333	0	1	337	718
4:00 PM	106	1	0	0	107	4	1	0	0	5	4	97	0	0	101	213
4:15 PM	73	5	0	0	78	1	3	0	0	4	0	99	0	0	99	181
4:30 PM	96	6	0	0	102	0	1	0	1	1	1	76	0	0	77	180
4:45 PM	98	3	0	0	101	3	1	0	0	4	3	77	0	0	80	185
Hourly Total	373	15	0	0	388	8	6	0	1	14	8	349	0	0	357	759
5:00 PM	103	2	0	0	105	2	2	0	0	4	0	60	0	0	60	169
5:15 PM	67	2	0	0	69	2	2	0	0	4	4	64	0	0	68	141
5:30 PM	57	1	0	0	58	6	2	0	0	8	1	48	0	0	49	115
5:45 PM	50	2	0	0	52	4	6	0	0	10	2	51	0	0	53	115
Hourly Total	277	7	0	0	284	14	12	0	0	26	7	223	0	0	230	540
Grand Total	2957	83	0	1	3040	164	110	0	5	274	46	2770	1	4	2817	6131
Approach %	97.3	2.7	0.0	-	-	59.9	40.1	0.0	-	-	1.6	98.3	0.0	-	-	-
Total %	48.2	1.4	0.0	-	49.6	2.7	1.8	0.0	-	4.5	0.8	45.2	0.0	-	45.9	-
Lights	2866	81	0	-	2947	162	110	0	-	272	46	2677	1	-	2724	5943
% Lights	96.9	97.6	-	-	96.9	98.8	100.0	-	-	99.3	100.0	96.6	100.0	-	96.7	96.9
Other Vehicles	91	2	0	-	93	2	0	0	-	2	0	93	0	-	93	188
% Other Vehicles	3.1	2.4	-	-	3.1	1.2	0.0	-	-	0.7	0.0	3.4	0.0	-	3.3	3.1
Pedestrians	-	-	-	1	-	-	-	-	5	-	-	-	-	4	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: Elyria Ave at E 30th St
Site Code:
Start Date: 12/09/2014

Turning Movement Data

Start Time	Elyria Ave Southbound						E 30th St Westbound						Elyria Ave Northbound						E 30th St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	29	0	0	0	30	0	1	2	0	0	3	0	20	1	0	0	21	4	5	0	0	0	9	63
7:15 AM	0	34	1	0	1	35	0	2	1	0	0	3	0	35	5	0	0	40	5	2	0	0	1	7	85
7:30 AM	0	40	0	0	0	40	0	2	1	0	0	3	1	32	7	0	0	40	5	1	2	0	0	8	91
7:45 AM	2	44	0	0	0	46	0	2	0	0	0	2	0	46	5	0	0	51	6	1	1	0	0	8	107
Hourly Total	3	147	1	0	1	151	0	7	4	0	0	11	1	133	18	0	0	152	20	9	3	0	1	32	346
8:00 AM	0	27	0	0	0	27	1	3	0	0	0	4	1	33	4	0	1	38	2	2	2	0	0	6	75
8:15 AM	1	38	0	0	0	39	1	2	1	0	0	4	4	40	2	0	0	46	9	2	2	0	1	13	102
8:30 AM	0	44	0	0	0	44	4	1	1	0	0	6	0	35	3	0	0	38	6	3	2	0	0	11	99
8:45 AM	0	50	0	0	0	50	0	3	0	0	0	3	0	47	3	0	1	50	8	2	3	0	0	13	116
Hourly Total	1	159	0	0	0	160	6	9	2	0	0	17	5	155	12	0	2	172	25	9	9	0	1	43	392
9:00 AM	0	30	1	0	0	31	1	2	0	0	0	3	4	34	3	0	0	41	2	4	2	0	0	8	83
9:15 AM	2	50	0	0	0	52	0	1	0	0	0	1	2	23	2	0	0	27	2	2	0	0	0	4	84
9:30 AM	0	38	0	0	0	38	0	1	0	0	0	1	0	25	4	0	0	29	5	1	0	0	0	6	74
9:45 AM	0	33	1	0	0	34	0	3	3	0	0	6	2	32	2	0	0	36	6	7	3	0	0	16	92
Hourly Total	2	151	2	0	0	155	1	7	3	0	0	11	8	114	11	0	0	133	15	14	5	0	0	34	333
10:00 AM	0	27	0	0	0	27	0	0	2	0	1	2	2	29	7	0	0	38	4	2	1	0	0	7	74
10:15 AM	0	22	1	0	0	23	0	2	0	0	0	2	1	26	2	0	0	29	2	1	1	0	0	4	58
10:30 AM	1	28	0	0	0	29	1	0	1	0	0	2	2	36	5	0	0	43	2	1	1	0	0	4	78
10:45 AM	0	28	0	0	0	28	1	4	3	0	1	8	2	35	8	0	0	45	1	1	1	0	1	3	84
Hourly Total	1	105	1	0	0	107	2	6	6	0	2	14	7	126	22	0	0	155	9	5	4	0	1	18	294
11:00 AM	0	42	5	0	0	47	0	1	1	0	0	2	2	44	4	0	0	50	5	1	3	0	0	9	108
11:15 AM	1	24	0	0	0	25	0	4	1	0	1	5	0	36	4	0	0	40	5	1	1	0	0	7	77
11:30 AM	1	32	0	0	0	33	1	2	0	0	0	3	0	33	3	0	1	36	1	3	1	0	1	5	77
11:45 AM	1	38	0	0	0	39	0	1	4	0	0	5	3	35	7	0	0	45	3	5	3	0	0	11	100
Hourly Total	3	136	5	0	0	144	1	8	6	0	1	15	5	148	18	0	1	171	14	10	8	0	1	32	362
12:00 PM	0	41	0	0	0	41	1	6	2	0	0	9	0	40	3	0	0	43	4	4	0	0	0	8	101
12:15 PM	2	38	1	0	0	41	2	3	1	0	1	6	5	39	4	0	0	48	4	1	3	0	0	8	103
12:30 PM	0	32	0	0	0	32	1	6	2	0	0	9	1	52	7	0	0	60	7	0	3	0	0	10	111
12:45 PM	4	28	0	0	0	32	0	1	2	0	0	3	2	41	7	0	0	50	9	3	0	0	0	12	97
Hourly Total	6	139	1	0	0	146	4	16	7	0	1	27	8	172	21	0	0	201	24	8	6	0	0	38	412
1:00 PM	1	40	1	0	1	42	2	2	1	0	0	5	0	38	5	0	0	43	6	6	3	0	0	15	105
1:15 PM	3	40	0	0	1	43	0	3	0	0	0	3	0	34	7	0	0	41	7	4	2	0	0	13	100
1:30 PM	2	35	0	0	0	37	0	0	3	0	0	3	1	45	6	0	0	52	3	1	1	0	0	5	97
1:45 PM	1	42	2	0	0	45	0	2	1	0	1	3	4	57	5	0	0	66	7	5	2	0	0	14	128
Hourly Total	7	157	3	0	2	167	2	7	5	0	1	14	5	174	23	0	0	202	23	16	8	0	0	47	430
2:00 PM	1	52	0	0	0	53	0	6	2	0	0	8	3	45	7	0	0	55	3	2	2	0	1	7	123
2:15 PM	0	43	0	0	0	43	0	3	2	0	0	5	3	42	7	0	0	52	7	4	3	0	0	14	114

2:30 PM	2	51	1	0	2	54	3	3	3	0	2	9	4	41	9	0	1	54	6	7	10	0	0	23	140
2:45 PM	3	46	2	0	1	51	1	3	2	0	1	6	7	54	8	0	0	69	6	3	5	0	1	14	140
Hourly Total	6	192	3	0	3	201	4	15	9	0	3	28	17	182	31	0	1	230	22	16	20	0	2	58	517
3:00 PM	1	48	0	0	0	49	2	4	6	0	0	12	2	58	6	0	0	66	12	6	2	0	0	20	147
3:15 PM	0	45	1	0	0	46	1	3	2	0	1	6	4	54	9	0	0	67	5	1	0	0	0	6	125
3:30 PM	2	50	0	0	0	52	0	6	6	0	0	12	5	58	10	0	0	73	5	8	2	0	0	15	152
3:45 PM	0	57	1	0	0	58	0	4	1	0	0	5	3	50	11	0	1	64	6	5	0	0	0	11	138
Hourly Total	3	200	2	0	0	205	3	17	15	0	1	35	14	220	36	0	1	270	28	20	4	0	0	52	562
4:00 PM	0	47	1	0	0	48	2	1	2	0	1	5	0	59	3	0	0	62	6	5	2	0	1	13	128
4:15 PM	0	56	0	0	0	56	1	1	3	0	0	5	5	58	6	0	1	69	7	2	2	0	1	11	141
4:30 PM	1	58	0	0	0	59	0	8	2	0	4	10	5	51	9	0	2	65	4	4	2	0	0	10	144
4:45 PM	0	58	1	0	1	59	0	6	4	0	0	10	1	57	9	0	0	67	4	5	2	0	0	11	147
Hourly Total	1	219	2	0	1	222	3	16	11	0	5	30	11	225	27	0	3	263	21	16	8	0	2	45	560
5:00 PM	2	59	0	0	0	61	1	6	2	0	0	9	2	55	10	0	1	67	6	6	5	0	0	17	154
5:15 PM	0	44	1	0	0	45	0	2	2	0	0	4	1	45	7	0	0	53	9	2	1	0	0	12	114
5:30 PM	1	26	0	0	0	27	0	3	0	0	0	3	1	40	6	0	0	47	8	6	1	0	0	15	92
5:45 PM	1	29	0	0	1	30	0	3	1	0	0	4	2	33	10	0	0	45	4	2	1	0	0	7	86
Hourly Total	4	158	1	0	1	163	1	14	5	0	0	20	6	173	33	0	1	212	27	16	8	0	0	51	446
Grand Total	37	1763	21	0	8	1821	27	122	73	0	14	222	87	1822	252	0	9	2161	228	139	83	0	8	450	4654
Approach %	2.0	96.8	1.2	0.0	-	-	12.2	55.0	32.9	0.0	-	-	4.0	84.3	11.7	0.0	-	-	50.7	30.9	18.4	0.0	-	-	-
Total %	0.8	37.9	0.5	0.0	-	39.1	0.6	2.6	1.6	0.0	-	4.8	1.9	39.1	5.4	0.0	-	46.4	4.9	3.0	1.8	0.0	-	9.7	-
Lights	37	1702	19	0	-	1758	26	119	67	0	-	212	84	1759	249	0	-	2092	221	135	80	0	-	436	4498
% Lights	100.0	96.5	90.5	-	-	96.5	96.3	97.5	91.8	-	-	95.5	96.6	96.5	98.8	-	-	96.8	96.9	97.1	96.4	-	-	96.9	96.6
Other Vehicles	0	61	2	0	-	63	1	3	6	0	-	10	3	63	3	0	-	69	7	4	3	0	-	14	156
% Other Vehicles	0.0	3.5	9.5	-	-	3.5	3.7	2.5	8.2	-	-	4.5	3.4	3.5	1.2	-	-	3.2	3.1	2.9	3.6	-	-	3.1	3.4
Pedestrians	-	-	-	-	8	-	-	-	-	-	14	-	-	-	-	-	9	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: Elyria Ave at E 36th St
Site Code:
Start Date: 12/09/2014

Turning Movement Data

Start Time	Elyria Ave Southbound						E 36th St Westbound						Elyria Ave Northbound						Electric Substation Entrance Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	45	19	0	0	64	5	0	17	0	0	22	3	17	0	0	0	20	0	0	0	0	0	0	106
7:15 AM	0	47	16	0	0	63	16	0	13	0	0	29	16	42	0	0	0	58	0	0	0	0	0	0	150
7:30 AM	0	49	13	0	0	62	29	0	15	0	0	44	8	38	0	0	0	46	0	0	0	0	0	0	152
7:45 AM	0	47	26	0	0	73	29	0	14	0	0	43	5	44	0	0	0	49	0	0	0	0	0	0	165
Hourly Total	0	188	74	0	0	262	79	0	59	0	0	138	32	141	0	0	0	173	0	0	0	0	0	0	573
8:00 AM	0	38	21	0	0	59	15	0	8	0	0	23	6	33	0	0	0	39	0	0	0	0	0	0	121
8:15 AM	0	46	18	0	0	64	15	0	2	0	0	17	3	39	0	0	0	42	0	0	0	0	0	0	123
8:30 AM	0	49	18	0	0	67	17	0	10	0	0	27	2	34	0	0	0	36	0	0	0	0	0	0	130
8:45 AM	0	50	17	0	0	67	23	0	10	0	0	33	6	46	0	0	0	52	0	0	0	0	0	0	152
Hourly Total	0	183	74	0	0	257	70	0	30	0	0	100	17	152	0	0	0	169	0	0	0	0	0	0	526
9:00 AM	0	31	6	0	0	37	12	0	4	0	1	16	2	32	0	0	0	34	0	0	0	0	0	0	87
9:15 AM	0	49	15	0	0	64	13	0	11	0	0	24	6	24	0	0	0	30	0	0	0	0	0	0	118
9:30 AM	0	36	15	0	0	51	16	0	8	0	1	24	10	23	0	0	0	33	0	0	0	0	0	0	108
9:45 AM	0	34	12	0	0	46	17	0	7	0	0	24	7	28	0	0	0	35	0	0	0	0	0	0	105
Hourly Total	0	150	48	0	0	198	58	0	30	0	2	88	25	107	0	0	0	132	0	0	0	0	0	0	418
10:00 AM	0	38	10	0	0	48	14	0	5	0	0	19	5	37	0	0	0	42	0	0	0	0	0	0	109
10:15 AM	0	28	11	0	0	39	18	0	8	0	0	26	9	21	0	0	0	30	0	0	0	0	0	0	95
10:30 AM	0	30	12	0	0	42	15	0	10	0	0	25	6	39	0	0	0	45	0	0	0	0	0	0	112
10:45 AM	0	36	20	0	0	56	18	0	9	0	0	27	5	38	0	0	0	43	0	0	0	0	0	0	126
Hourly Total	0	132	53	0	0	185	65	0	32	0	0	97	25	135	0	0	0	160	0	0	0	0	0	0	442
11:00 AM	0	39	10	0	0	49	11	0	8	0	1	19	7	44	0	0	0	51	0	0	0	0	0	0	119
11:15 AM	0	28	20	0	0	48	18	0	7	0	0	25	6	37	0	0	0	43	0	0	0	0	0	0	116
11:30 AM	0	36	11	0	0	47	15	0	9	0	0	24	3	40	0	0	0	43	0	0	0	0	0	0	114
11:45 AM	0	50	11	0	0	61	19	0	5	0	1	24	6	40	0	0	0	46	0	0	0	0	0	0	131
Hourly Total	0	153	52	0	0	205	63	0	29	0	2	92	22	161	0	0	0	183	0	0	0	0	0	0	480
12:00 PM	0	46	18	0	0	64	13	0	10	0	0	23	10	41	0	0	0	51	0	0	0	0	0	0	138
12:15 PM	0	41	21	0	0	62	21	0	9	0	0	30	7	42	0	0	0	49	0	0	0	0	0	0	141
12:30 PM	0	45	14	0	0	59	21	0	16	0	2	37	13	50	0	0	0	63	0	0	0	0	0	0	159
12:45 PM	0	40	18	0	0	58	16	0	9	0	0	25	12	46	0	0	0	58	0	0	0	0	0	0	141
Hourly Total	0	172	71	0	0	243	71	0	44	0	2	115	42	179	0	0	0	221	0	0	0	0	0	0	579
1:00 PM	0	49	15	0	0	64	16	0	10	0	0	26	11	38	0	0	0	49	0	0	0	0	0	0	139
1:15 PM	0	47	23	0	0	70	15	0	10	0	0	25	7	48	0	0	0	55	0	0	0	0	0	0	150
1:30 PM	0	42	18	0	0	60	19	0	12	0	0	31	8	45	0	0	0	53	0	0	0	0	0	0	144
1:45 PM	0	48	28	0	0	76	26	0	12	0	0	38	7	58	0	0	0	65	0	0	0	0	0	0	179
Hourly Total	0	186	84	0	0	270	76	0	44	0	0	120	33	189	0	0	0	222	0	0	0	0	0	0	612
2:00 PM	0	63	34	0	0	97	32	0	17	0	1	49	12	55	0	0	0	67	0	0	0	0	0	0	213
2:15 PM	0	48	29	0	0	77	42	0	8	0	0	50	9	54	0	0	0	63	0	0	0	0	0	0	190

2:30 PM	0	57	32	0	0	89	33	0	18	0	0	51	10	42	0	0	0	52	0	0	0	0	0	0	192
2:45 PM	0	63	28	0	0	91	22	0	9	0	0	31	19	59	0	0	0	78	0	0	0	0	0	0	200
Hourly Total	0	231	123	0	0	354	129	0	52	0	1	181	50	210	0	0	0	260	0	0	0	0	0	0	795
3:00 PM	0	57	27	0	0	84	28	0	10	0	2	38	16	54	0	0	0	70	0	0	0	0	1	0	192
3:15 PM	0	54	21	0	0	75	36	0	17	0	0	53	10	60	0	0	0	70	0	0	0	0	1	0	198
3:30 PM	1	60	31	0	0	92	33	0	10	0	0	43	9	59	0	0	0	68	0	0	0	0	0	0	203
3:45 PM	0	52	38	0	0	90	30	0	12	0	0	42	15	65	0	0	0	80	0	0	0	0	0	0	212
Hourly Total	1	223	117	0	0	341	127	0	49	0	2	176	50	238	0	0	0	288	0	0	0	0	2	0	805
4:00 PM	0	53	24	0	0	77	27	0	18	0	0	45	10	62	0	0	0	72	0	0	0	0	0	0	194
4:15 PM	0	61	34	0	0	95	30	0	10	0	0	40	12	67	0	0	0	79	0	0	0	0	0	0	214
4:30 PM	0	71	23	0	0	94	26	0	16	0	0	42	16	64	0	0	0	80	0	0	0	0	0	0	216
4:45 PM	0	62	24	0	0	86	28	0	13	0	0	41	12	61	0	0	0	73	0	0	0	0	0	0	200
Hourly Total	0	247	105	0	0	352	111	0	57	0	0	168	50	254	0	0	0	304	0	0	0	0	0	0	824
5:00 PM	0	64	27	0	0	91	26	0	11	0	0	37	11	63	0	0	0	74	0	0	0	0	0	0	202
5:15 PM	0	44	29	0	0	73	22	0	14	0	0	36	13	61	0	0	0	74	0	0	0	0	0	0	183
5:30 PM	0	35	40	0	0	75	14	0	10	0	0	24	9	43	0	0	0	52	0	0	0	0	0	0	151
5:45 PM	0	34	24	0	0	58	25	0	8	0	0	33	15	41	0	0	0	56	0	0	0	0	0	0	147
Hourly Total	0	177	120	0	0	297	87	0	43	0	0	130	48	208	0	0	0	256	0	0	0	0	0	0	683
Grand Total	1	2042	921	0	0	2964	936	0	469	0	9	1405	394	1974	0	0	0	2368	0	0	0	0	2	0	6737
Approach %	0.0	68.9	31.1	0.0	-	-	66.6	0.0	33.4	0.0	-	-	16.6	83.4	0.0	0.0	-	-	NaN	NaN	NaN	NaN	-	-	-
Total %	0.0	30.3	13.7	0.0	-	44.0	13.9	0.0	7.0	0.0	-	20.9	5.8	29.3	0.0	0.0	-	35.1	0.0	0.0	0.0	0.0	-	0.0	-
Lights	1	1983	909	0	-	2893	916	0	460	0	-	1376	387	1919	0	0	-	2306	0	0	0	0	-	0	6575
% Lights	100.0	97.1	98.7	-	-	97.6	97.9	-	98.1	-	-	97.9	98.2	97.2	-	-	-	97.4	-	-	-	-	-	-	97.6
Other Vehicles	0	59	12	0	-	71	20	0	9	0	-	29	7	55	0	0	-	62	0	0	0	0	-	0	162
% Other Vehicles	0.0	2.9	1.3	-	-	2.4	2.1	-	1.9	-	-	2.1	1.8	2.8	-	-	-	2.6	-	-	-	-	-	-	2.4
Pedestrians	-	-	-	-	0	-	-	-	-	-	9	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: E 31st St at Vine Ave
Site Code:
Start Date: 12/09/2014

Turning Movement Data

Start Time	Vine Ave Southbound						E 31st St Westbound						Vine Ave Northbound						E 31st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	1	0	0	2	1	0	1	2	0	0	3	3	5	0	0	0	8	12
7:15 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	3	2	0	0	0	5	7
7:30 AM	0	0	1	0	0	1	0	6	1	0	0	7	0	2	2	0	0	4	2	7	0	0	0	9	21
7:45 AM	0	0	0	0	0	0	0	12	0	0	0	12	0	1	3	0	0	4	7	6	1	0	1	14	30
Hourly Total	1	0	1	0	0	2	0	19	1	0	2	20	0	4	8	0	0	12	15	20	1	0	1	36	70
8:00 AM	0	2	0	0	0	2	3	3	1	0	0	7	0	0	2	0	0	2	7	2	0	0	0	9	20
8:15 AM	0	1	1	0	0	2	0	3	3	0	4	6	0	0	3	0	0	3	9	8	4	0	0	21	32
8:30 AM	1	7	8	0	11	16	3	9	4	0	38	16	13	12	15	0	12	40	10	9	0	0	7	19	91
8:45 AM	0	5	1	0	7	6	1	5	3	0	7	9	3	11	7	0	2	21	7	5	0	0	2	12	48
Hourly Total	1	15	10	0	18	26	7	20	11	0	49	38	16	23	27	0	14	66	33	24	4	0	9	61	191
9:00 AM	1	2	0	0	0	3	2	6	0	0	0	8	0	1	3	0	0	4	3	0	0	0	0	3	18
9:15 AM	0	2	0	0	0	2	0	2	0	0	0	2	0	3	5	0	0	8	0	2	1	0	0	3	15
9:30 AM	0	0	0	0	0	0	0	7	2	0	0	9	0	0	2	0	0	2	0	3	0	0	0	3	14
9:45 AM	2	2	0	0	1	4	0	4	0	0	0	4	0	2	2	0	0	4	1	5	0	0	0	6	18
Hourly Total	3	6	0	0	1	9	2	19	2	0	0	23	0	6	12	0	0	18	4	10	1	0	0	15	65
10:00 AM	0	0	0	0	0	0	1	4	0	0	0	5	0	0	5	0	0	5	3	3	0	0	0	6	16
10:15 AM	0	1	0	0	0	1	1	3	1	0	0	5	0	0	2	0	0	2	1	2	0	0	0	3	11
10:30 AM	0	1	0	0	0	1	0	6	0	0	0	6	0	1	3	0	0	4	1	2	1	0	0	4	15
10:45 AM	0	0	0	0	0	0	0	5	1	0	0	6	0	2	1	0	0	3	2	1	0	0	0	3	12
Hourly Total	0	2	0	0	0	2	2	18	2	0	0	22	0	3	11	0	0	14	7	8	1	0	0	16	54
11:00 AM	3	2	1	0	1	6	1	6	0	0	0	7	0	0	3	0	0	3	2	2	2	0	0	6	22
11:15 AM	0	1	1	0	1	2	0	7	0	0	0	7	2	0	2	0	0	4	4	3	0	0	0	7	20
11:30 AM	1	2	0	0	1	3	0	4	2	0	0	6	0	2	3	0	0	5	1	4	1	0	0	6	20
11:45 AM	2	4	0	0	0	6	3	6	0	0	0	9	0	0	3	0	0	3	2	2	0	0	0	4	22
Hourly Total	6	9	2	0	3	17	4	23	2	0	0	29	2	2	11	0	0	15	9	11	3	0	0	23	84
12:00 PM	0	0	0	0	0	0	1	4	0	0	0	5	0	0	5	0	0	5	5	6	0	0	0	11	21
12:15 PM	0	1	0	0	1	1	0	6	2	0	0	8	1	1	5	0	0	7	3	3	0	0	0	6	22
12:30 PM	0	3	0	0	0	3	0	6	2	0	0	8	0	1	2	0	0	3	1	3	0	0	0	4	18
12:45 PM	0	3	1	0	1	4	0	6	0	0	0	6	0	0	4	0	0	4	2	4	1	0	0	7	21
Hourly Total	0	7	1	0	2	8	1	22	4	0	0	27	1	2	16	0	0	19	11	16	1	0	0	28	82
1:00 PM	1	3	0	0	0	4	2	12	0	0	0	14	0	0	4	0	0	4	1	6	1	0	0	8	30
1:15 PM	0	1	2	0	0	3	2	6	1	0	0	9	0	3	2	0	2	5	3	5	2	0	1	10	27
1:30 PM	0	0	0	0	0	0	0	7	0	0	0	7	0	0	3	0	0	3	3	5	1	0	1	9	19
1:45 PM	0	1	0	0	0	1	2	8	1	0	0	11	0	3	3	0	0	6	5	3	0	0	1	8	26
Hourly Total	1	5	2	0	0	8	6	33	2	0	0	41	0	6	12	0	2	18	12	19	4	0	3	35	102
2:00 PM	1	1	2	0	0	4	1	7	0	0	0	8	0	0	8	0	0	8	4	10	1	0	0	15	35
2:15 PM	0	2	1	0	0	3	3	8	1	0	0	12	0	1	5	0	0	6	2	9	2	0	0	13	34

2:30 PM	2	1	2	0	6	5	0	11	0	0	9	11	3	0	3	0	1	6	8	5	3	0	0	16	38
2:45 PM	1	2	2	0	1	5	2	11	0	0	0	13	0	2	5	0	0	7	3	10	1	0	1	14	39
Hourly Total	4	6	7	0	7	17	6	37	1	0	9	44	3	3	21	0	1	27	17	34	7	0	1	58	146
3:00 PM	0	7	6	0	18	13	3	8	3	0	25	14	9	6	6	0	25	21	10	6	0	0	6	16	64
3:15 PM	1	1	0	0	46	2	5	19	0	0	62	24	7	9	13	0	3	29	9	8	1	0	5	18	73
3:30 PM	1	0	1	0	0	2	3	11	1	0	0	15	0	3	5	0	0	8	5	8	1	0	3	14	39
3:45 PM	0	2	0	0	0	2	1	9	2	0	1	12	0	1	8	0	6	9	9	6	2	0	0	17	40
Hourly Total	2	10	7	0	64	19	12	47	6	0	88	65	16	19	32	0	34	67	33	28	4	0	14	65	216
4:00 PM	1	4	0	0	0	5	2	9	0	0	0	11	1	1	3	0	0	5	4	4	2	0	0	10	31
4:15 PM	1	0	1	0	0	2	3	10	0	0	0	13	0	1	6	0	0	7	2	8	2	0	0	12	34
4:30 PM	0	0	2	0	6	2	3	6	0	0	10	9	1	3	3	0	0	7	5	3	3	0	1	11	29
4:45 PM	3	0	0	0	6	3	0	8	1	0	0	9	0	0	6	0	0	6	6	9	2	0	0	17	35
Hourly Total	5	4	3	0	12	12	8	33	1	0	10	42	2	5	18	0	0	25	17	24	9	0	1	50	129
5:00 PM	0	2	2	0	1	4	3	3	2	0	1	8	2	3	4	0	0	9	3	7	0	0	0	10	31
5:15 PM	1	2	1	0	0	4	0	17	0	0	1	17	0	3	8	0	0	11	4	7	1	0	0	12	44
5:30 PM	0	1	1	0	0	2	0	10	0	0	0	10	0	1	4	0	0	5	3	8	0	0	0	11	28
5:45 PM	1	0	0	0	0	1	0	10	0	0	0	10	1	1	3	0	1	5	1	7	0	0	1	8	24
Hourly Total	2	5	4	0	1	11	3	40	2	0	2	45	3	8	19	0	1	30	11	29	1	0	1	41	127
Grand Total	25	69	37	0	108	131	51	311	34	0	160	396	43	81	187	0	52	311	169	223	36	0	30	428	1266
Approach %	19.1	52.7	28.2	0.0	-	-	12.9	78.5	8.6	0.0	-	-	13.8	26.0	60.1	0.0	-	-	39.5	52.1	8.4	0.0	-	-	-
Total %	2.0	5.5	2.9	0.0	-	10.3	4.0	24.6	2.7	0.0	-	31.3	3.4	6.4	14.8	0.0	-	24.6	13.3	17.6	2.8	0.0	-	33.8	-
Lights	25	67	35	0	-	127	50	297	33	0	-	380	39	77	180	0	-	296	163	216	34	0	-	413	1216
% Lights	100.0	97.1	94.6	-	-	96.9	98.0	95.5	97.1	-	-	96.0	90.7	95.1	96.3	-	-	95.2	96.4	96.9	94.4	-	-	96.5	96.1
Other Vehicles	0	2	2	0	-	4	1	14	1	0	-	16	4	4	7	0	-	15	6	7	2	0	-	15	50
% Other Vehicles	0.0	2.9	5.4	-	-	3.1	2.0	4.5	2.9	-	-	4.0	9.3	4.9	3.7	-	-	4.8	3.6	3.1	5.6	-	-	3.5	3.9
Pedestrians	-	-	-	-	108	-	-	-	-	-	160	-	-	-	-	-	52	-	-	-	-	-	30	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: E 31st St at Globe Ave
Site Code:
Start Date: 12/09/2014

Turning Movement Data

Start Time	Globe Ave Southbound						E 31st St Westbound						Globe Ave Northbound						E 31st St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	2	3	0	0	5	0	5	0	0	0	5	0	1	0	0	0	1	0	3	0	0	0	3	14
7:15 AM	1	1	0	0	0	2	0	4	0	0	0	4	0	1	0	0	0	1	0	2	0	0	0	2	9
7:30 AM	1	3	0	0	1	4	0	5	0	0	0	5	0	1	0	0	0	1	0	8	0	0	0	8	18
7:45 AM	0	0	1	0	1	1	1	10	1	0	0	12	1	0	1	0	0	2	0	5	1	0	0	6	21
Hourly Total	2	6	4	0	2	12	1	24	1	0	0	26	1	3	1	0	0	5	0	18	1	0	0	19	62
8:00 AM	1	0	1	0	0	2	1	7	1	0	0	9	0	0	0	0	0	0	0	2	0	0	0	2	13
8:15 AM	1	1	0	0	0	2	0	5	2	0	0	7	3	2	0	0	0	5	0	8	0	0	0	8	22
8:30 AM	4	6	0	0	1	10	1	11	3	0	1	15	1	2	2	0	4	5	5	18	7	0	1	30	60
8:45 AM	1	1	4	0	0	6	2	6	2	0	0	10	1	4	1	0	0	6	0	7	2	0	0	9	31
Hourly Total	7	8	5	0	1	20	4	29	8	0	1	41	5	8	3	0	4	16	5	35	9	0	1	49	126
9:00 AM	0	2	1	0	0	3	0	8	1	0	0	9	0	2	0	0	0	2	0	2	0	0	0	2	16
9:15 AM	0	0	1	0	0	1	1	1	1	0	1	3	0	0	1	0	0	1	0	3	0	0	0	3	8
9:30 AM	0	2	2	0	0	4	1	7	1	0	0	9	0	0	0	0	0	0	0	3	0	0	0	3	16
9:45 AM	0	1	0	0	1	1	1	4	1	0	0	6	1	2	0	0	1	3	0	5	0	0	1	5	15
Hourly Total	0	5	4	0	1	9	3	20	4	0	1	27	1	4	1	0	1	6	0	13	0	0	1	13	55
10:00 AM	0	0	0	0	0	0	1	6	1	0	0	8	0	1	0	0	0	1	0	3	0	0	0	3	12
10:15 AM	1	2	0	0	0	3	0	6	1	0	0	7	0	2	0	0	0	2	1	3	0	0	0	4	16
10:30 AM	0	0	0	0	0	0	0	7	0	0	0	7	0	2	0	0	0	2	0	3	1	0	0	4	13
10:45 AM	1	3	1	0	0	5	2	6	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	1	14
Hourly Total	2	5	1	0	0	8	3	25	2	0	0	30	0	5	0	0	0	5	1	10	1	0	0	12	55
11:00 AM	0	0	1	0	0	1	0	4	1	0	0	5	0	2	0	0	1	2	0	2	1	0	0	3	11
11:15 AM	1	1	2	0	1	4	1	5	2	0	0	8	1	5	0	0	0	6	1	4	0	0	0	5	23
11:30 AM	1	1	1	0	1	3	1	5	0	0	2	6	0	0	0	0	0	0	0	3	1	0	0	4	13
11:45 AM	0	3	0	0	0	3	3	11	0	0	0	14	1	3	0	0	0	4	0	2	1	0	0	3	24
Hourly Total	2	5	4	0	2	11	5	25	3	0	2	33	2	10	0	0	1	12	1	11	3	0	0	15	71
12:00 PM	1	3	0	0	1	4	0	6	2	0	0	8	2	1	0	0	0	3	1	6	0	0	0	7	22
12:15 PM	1	4	2	0	0	7	1	7	0	0	0	8	0	0	0	0	0	0	0	4	1	0	0	5	20
12:30 PM	1	4	3	1	0	9	1	7	0	0	0	8	2	3	0	0	0	5	0	4	0	0	0	4	26
12:45 PM	1	3	2	0	0	6	2	5	3	0	0	10	1	2	0	0	0	3	0	4	0	0	0	4	23
Hourly Total	4	14	7	1	1	26	4	25	5	0	0	34	5	6	0	0	0	11	1	18	1	0	0	20	91
1:00 PM	0	3	1	0	0	4	0	13	2	0	0	15	0	2	0	0	0	2	1	5	1	0	0	7	28
1:15 PM	3	2	1	0	0	6	1	8	0	0	0	9	0	4	0	0	0	4	0	5	0	0	0	5	24
1:30 PM	1	2	1	0	0	4	1	5	0	0	1	6	2	3	1	0	0	6	0	5	2	0	0	7	23
1:45 PM	3	3	1	0	0	7	0	10	0	0	0	10	1	1	0	0	0	2	2	4	0	0	0	6	25
Hourly Total	7	10	4	0	0	21	2	36	2	0	1	40	3	10	1	0	0	14	3	19	3	0	0	25	100
2:00 PM	1	1	1	0	0	3	3	8	0	0	0	11	0	4	0	0	0	4	0	13	0	0	2	13	31
2:15 PM	1	2	0	0	0	3	0	12	1	0	1	13	1	7	0	0	0	8	0	10	0	0	0	10	34

2:30 PM	2	3	0	0	1	5	1	15	1	0	0	17	2	6	0	0	1	8	1	6	3	0	0	10	40
2:45 PM	3	6	0	0	0	9	2	9	1	0	0	12	2	3	0	0	0	5	1	8	1	0	0	10	36
Hourly Total	7	12	1	0	1	20	6	44	3	0	1	53	5	20	0	0	1	25	2	37	4	0	2	43	141
3:00 PM	4	6	1	0	0	11	2	6	1	0	0	9	1	6	2	0	0	9	2	13	3	0	0	18	47
3:15 PM	3	7	0	0	2	10	3	11	5	0	0	19	2	4	3	0	3	9	3	8	7	0	2	18	56
3:30 PM	3	3	1	0	0	7	2	12	3	0	4	17	3	2	0	0	1	5	0	9	0	0	0	9	38
3:45 PM	2	4	3	0	0	9	2	11	1	0	1	14	2	5	0	0	0	7	0	6	2	0	1	8	38
Hourly Total	12	20	5	0	2	37	9	40	10	0	5	59	8	17	5	0	4	30	5	36	12	0	3	53	179
4:00 PM	1	3	0	0	0	4	2	14	0	0	0	16	2	3	0	0	0	5	1	4	0	0	0	5	30
4:15 PM	2	5	1	0	0	8	1	9	0	0	0	10	2	3	1	0	0	6	1	7	0	0	0	8	32
4:30 PM	1	6	1	0	0	8	0	8	0	0	0	8	1	3	1	0	0	5	0	5	0	0	0	5	26
4:45 PM	1	0	2	0	0	3	0	8	1	0	0	9	1	2	0	0	0	3	0	8	0	0	0	8	23
Hourly Total	5	14	4	0	0	23	3	39	1	0	0	43	6	11	2	0	0	19	2	24	0	0	0	26	111
5:00 PM	1	5	2	0	2	8	2	8	0	0	0	10	0	4	0	0	0	4	1	9	1	0	0	11	33
5:15 PM	0	1	2	0	0	3	3	12	0	0	0	15	0	0	1	0	0	1	0	6	1	0	0	7	26
5:30 PM	0	4	3	0	0	7	1	13	1	0	0	15	0	7	0	0	0	7	0	11	0	0	1	11	40
5:45 PM	0	2	1	0	0	3	3	13	3	0	0	19	1	2	0	0	0	3	0	5	0	0	0	5	30
Hourly Total	1	12	8	0	2	21	9	46	4	0	0	59	1	13	1	0	0	15	1	31	2	0	1	34	129
Grand Total	49	111	47	1	12	208	49	353	43	0	11	445	37	107	14	0	11	158	21	252	36	0	8	309	1120
Approach %	23.6	53.4	22.6	0.5	-	-	11.0	79.3	9.7	0.0	-	-	23.4	67.7	8.9	0.0	-	-	6.8	81.6	11.7	0.0	-	-	-
Total %	4.4	9.9	4.2	0.1	-	18.6	4.4	31.5	3.8	0.0	-	39.7	3.3	9.6	1.3	0.0	-	14.1	1.9	22.5	3.2	0.0	-	27.6	-
Lights	47	103	44	0	-	194	48	340	41	0	-	429	35	102	14	0	-	151	21	243	34	0	-	298	1072
% Lights	95.9	92.8	93.6	0.0	-	93.3	98.0	96.3	95.3	-	-	96.4	94.6	95.3	100.0	-	-	95.6	100.0	96.4	94.4	-	-	96.4	95.7
Other Vehicles	2	8	3	1	-	14	1	13	2	0	-	16	2	5	0	0	-	7	0	9	2	0	-	11	48
% Other Vehicles	4.1	7.2	6.4	100.0	-	6.7	2.0	3.7	4.7	-	-	3.6	5.4	4.7	0.0	-	-	4.4	0.0	3.6	5.6	-	-	3.6	4.3
Pedestrians	-	-	-	-	12	-	-	-	-	-	11	-	-	-	-	-	11	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: E 31st St at Pearl Ave
Site Code:
Start Date: 12/09/2014

Turning Movement Data

Start Time	Pearl Ave Southbound						E 31st St Westbound						Pearl Ave Northbound						E 31st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	24	6	0	0	30	3	5	4	0	0	12	4	11	0	0	0	15	1	8	0	0	0	9	66
7:15 AM	0	16	10	0	5	26	6	4	2	0	0	12	4	16	0	0	0	20	1	3	0	0	0	4	62
7:30 AM	0	13	3	0	6	16	5	3	5	0	0	13	3	23	3	0	0	29	0	5	1	0	0	6	64
7:45 AM	0	18	3	0	1	21	1	10	4	0	0	15	3	17	1	0	0	21	1	6	0	0	1	7	64
Hourly Total	0	71	22	0	12	93	15	22	15	0	0	52	14	67	4	0	0	85	3	22	1	0	1	26	256
8:00 AM	2	14	2	0	0	18	0	6	2	0	2	8	0	14	0	0	0	14	3	1	0	0	0	4	44
8:15 AM	1	23	6	0	0	30	8	5	3	0	1	16	8	8	1	0	0	17	5	7	0	0	0	12	75
8:30 AM	1	16	4	0	1	21	5	12	6	0	0	23	5	18	2	0	1	25	4	10	3	0	0	17	86
8:45 AM	0	22	8	0	1	30	4	5	3	0	0	12	3	19	2	0	0	24	3	8	5	0	0	16	82
Hourly Total	4	75	20	0	2	99	17	28	14	0	3	59	16	59	5	0	1	80	15	26	8	0	0	49	287
9:00 AM	5	23	8	0	0	36	5	4	3	0	2	12	3	20	1	0	0	24	0	2	2	0	0	4	76
9:15 AM	2	22	3	0	0	27	3	2	2	0	0	7	2	12	1	0	0	15	2	3	1	0	0	6	55
9:30 AM	0	19	2	0	0	21	5	7	2	0	0	14	2	20	1	0	0	23	1	6	0	0	0	7	65
9:45 AM	0	19	1	0	0	20	5	7	4	0	0	16	2	17	1	0	0	20	1	4	0	0	0	5	61
Hourly Total	7	83	14	0	0	104	18	20	11	0	2	49	9	69	4	0	0	82	4	15	3	0	0	22	257
10:00 AM	0	25	5	0	0	30	2	4	3	0	0	9	1	25	1	0	0	27	0	3	2	0	0	5	71
10:15 AM	0	27	2	0	1	29	8	5	1	0	0	14	0	21	2	0	1	23	0	3	0	0	0	3	69
10:30 AM	3	24	3	0	0	30	7	5	8	0	0	20	7	28	0	0	0	35	1	3	0	0	0	4	89
10:45 AM	0	26	2	0	0	28	6	8	1	0	0	15	3	31	1	0	0	35	1	0	0	0	0	1	79
Hourly Total	3	102	12	0	1	117	23	22	13	0	0	58	11	105	4	0	1	120	2	9	2	0	0	13	308
11:00 AM	0	18	3	0	0	21	2	5	6	0	0	13	1	23	1	0	0	25	3	1	0	0	0	4	63
11:15 AM	1	19	4	0	1	24	6	5	5	0	0	16	8	22	2	0	0	32	0	3	2	0	0	5	77
11:30 AM	2	24	10	0	0	36	6	7	4	0	0	17	3	16	0	0	0	19	1	3	1	0	0	5	77
11:45 AM	1	30	4	0	0	35	9	9	6	0	0	24	7	32	2	0	0	41	1	4	0	0	0	5	105
Hourly Total	4	91	21	0	1	116	23	26	21	0	0	70	19	93	5	0	0	117	5	11	3	0	0	19	322
12:00 PM	1	30	6	0	0	37	10	7	6	0	0	23	6	39	0	0	0	45	2	5	1	0	2	8	113
12:15 PM	3	17	5	0	0	25	6	3	5	0	0	14	4	26	1	0	0	31	0	2	1	0	0	3	73
12:30 PM	0	32	3	0	0	35	3	6	7	0	1	16	3	20	1	0	1	24	4	1	2	0	0	7	82
12:45 PM	2	25	2	0	0	29	8	7	1	0	1	16	5	23	0	0	0	28	0	4	2	0	0	6	79
Hourly Total	6	104	16	0	0	126	27	23	19	0	2	69	18	108	2	0	1	128	6	12	6	0	2	24	347
1:00 PM	0	24	7	0	0	31	10	11	9	0	1	30	9	35	4	0	0	48	2	4	1	0	0	7	116
1:15 PM	2	30	2	0	0	34	6	8	6	0	0	20	6	29	0	0	0	35	1	5	2	0	1	8	97
1:30 PM	0	18	9	0	0	27	6	6	8	0	1	20	6	34	3	0	0	43	2	5	0	0	0	7	97
1:45 PM	3	24	3	0	0	30	7	6	8	0	2	21	4	26	2	0	0	32	1	5	2	0	0	8	91
Hourly Total	5	96	21	0	0	122	29	31	31	0	4	91	25	124	9	0	0	158	6	19	5	0	1	30	401
2:00 PM	1	37	7	0	0	45	9	10	4	0	2	23	7	24	3	0	2	34	2	8	3	0	0	13	115
2:15 PM	0	29	6	0	0	35	13	9	8	0	0	30	6	40	2	0	0	48	5	7	1	0	0	13	126

2:30 PM	1	27	9	0	1	37	8	10	7	0	1	25	10	34	2	0	0	46	1	5	2	0	0	8	116
2:45 PM	0	40	6	0	2	46	6	9	8	0	0	23	4	34	5	0	0	43	1	7	2	0	1	10	122
Hourly Total	2	133	28	0	3	163	36	38	27	0	3	101	27	132	12	0	2	171	9	27	8	0	1	44	479
3:00 PM	1	40	8	0	0	49	5	8	7	0	1	20	6	39	4	0	0	49	2	6	2	0	0	10	128
3:15 PM	4	46	9	0	2	59	9	13	7	0	0	29	3	40	0	0	0	43	8	10	3	0	1	21	152
3:30 PM	1	28	11	0	0	40	5	11	9	0	1	25	5	21	3	0	2	29	2	3	2	0	0	7	101
3:45 PM	1	33	6	0	0	40	13	12	6	0	0	31	7	45	1	0	2	53	2	6	2	0	0	10	134
Hourly Total	7	147	34	0	2	188	32	44	29	0	2	105	21	145	8	0	4	174	14	25	9	0	1	48	515
4:00 PM	4	38	4	0	0	46	9	10	4	0	1	23	7	25	3	0	1	35	3	3	1	0	0	7	111
4:15 PM	2	31	8	0	0	41	9	8	8	0	5	25	6	37	3	0	0	46	1	6	1	0	0	8	120
4:30 PM	3	36	9	0	0	48	12	7	7	0	0	26	7	26	4	0	0	37	2	8	0	0	0	10	121
4:45 PM	1	42	11	0	0	54	12	7	14	0	0	33	7	28	3	0	0	38	3	7	1	0	0	11	136
Hourly Total	10	147	32	0	0	189	42	32	33	0	6	107	27	116	13	0	1	156	9	24	3	0	0	36	488
5:00 PM	2	41	6	0	0	49	9	8	9	0	3	26	4	36	2	0	1	42	0	10	0	0	1	10	127
5:15 PM	1	24	3	0	0	28	7	13	10	0	4	30	2	21	3	0	1	26	4	4	0	0	1	8	92
5:30 PM	1	23	8	0	0	32	7	7	6	0	0	20	9	31	1	0	0	41	4	5	2	0	0	11	104
5:45 PM	4	32	7	0	0	43	9	13	8	0	1	30	5	38	6	0	1	49	4	5	1	0	0	10	132
Hourly Total	8	120	24	0	0	152	32	41	33	0	8	106	20	126	12	0	3	158	12	24	3	0	2	39	455
Grand Total	56	1169	244	0	21	1469	294	327	246	0	30	867	207	1144	78	0	13	1429	85	214	51	0	8	350	4115
Approach %	3.8	79.6	16.6	0.0	-	-	33.9	37.7	28.4	0.0	-	-	14.5	80.1	5.5	0.0	-	-	24.3	61.1	14.6	0.0	-	-	-
Total %	1.4	28.4	5.9	0.0	-	35.7	7.1	7.9	6.0	0.0	-	21.1	5.0	27.8	1.9	0.0	-	34.7	2.1	5.2	1.2	0.0	-	8.5	-
Lights	55	1084	242	0	-	1381	284	318	240	0	-	842	203	1058	71	0	-	1332	79	208	48	0	-	335	3890
% Lights	98.2	92.7	99.2	-	-	94.0	96.6	97.2	97.6	-	-	97.1	98.1	92.5	91.0	-	-	93.2	92.9	97.2	94.1	-	-	95.7	94.5
Other Vehicles	1	85	2	0	-	88	10	9	6	0	-	25	4	86	7	0	-	97	6	6	3	0	-	15	225
% Other Vehicles	1.8	7.3	0.8	-	-	6.0	3.4	2.8	2.4	-	-	2.9	1.9	7.5	9.0	-	-	6.8	7.1	2.8	5.9	-	-	4.3	5.5
Pedestrians	-	-	-	-	21	-	-	-	-	-	30	-	-	-	-	-	13	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: E 31st St at Seneca Ave
Site Code:
Start Date: 12/09/2014
Page No: 1

Turning Movement Data

Start Time	Seneca Ave Southbound						E 31st St Westbound						Seneca Ave Northbound						E 31st St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	1	2	0	0	3	0	12	1	0	0	13	1	0	0	0	0	1	1	18	0	0	3	19	36
7:15 AM	0	1	0	0	0	1	1	12	0	0	0	13	1	0	1	0	0	2	0	18	0	0	0	18	34
7:30 AM	0	0	3	0	0	3	0	15	1	0	0	16	0	1	1	0	0	2	0	10	0	0	0	10	31
7:45 AM	0	5	0	0	0	5	0	10	1	0	0	11	2	2	0	0	0	4	1	11	1	0	3	13	33
Hourly Total	0	7	5	0	0	12	1	49	3	0	0	53	4	3	2	0	0	9	2	57	1	0	6	60	134
8:00 AM	0	0	0	0	1	0	1	8	1	0	0	10	1	3	1	0	0	5	0	2	0	0	0	2	17
8:15 AM	0	2	0	0	3	2	1	14	0	0	0	15	4	2	1	0	0	7	0	18	0	0	2	18	42
8:30 AM	0	0	1	0	0	1	1	20	0	0	0	21	1	1	1	0	0	3	0	17	0	0	2	17	42
8:45 AM	0	0	3	0	0	3	0	10	3	0	0	13	1	2	0	0	0	3	2	20	0	0	0	22	41
Hourly Total	0	2	4	0	4	6	3	52	4	0	0	59	7	8	3	0	0	18	2	57	0	0	4	59	142
9:00 AM	0	4	1	0	0	5	2	12	1	0	0	15	0	2	0	0	0	2	0	10	1	0	0	11	33
9:15 AM	0	2	1	0	1	3	3	5	0	0	0	8	1	0	0	0	0	1	0	6	0	0	0	6	18
9:30 AM	0	1	1	0	0	2	1	16	1	0	0	18	0	2	0	0	0	2	0	9	0	0	0	9	31
9:45 AM	1	2	1	0	0	4	1	9	0	0	0	10	3	1	0	0	0	4	0	8	0	0	0	8	26
Hourly Total	1	9	4	0	1	14	7	42	2	0	0	51	4	5	0	0	0	9	0	33	1	0	0	34	108
10:00 AM	1	0	1	0	0	2	0	8	1	0	0	9	0	3	0	0	0	3	0	7	0	0	0	7	21
10:15 AM	0	0	1	0	0	1	0	16	0	0	0	16	1	2	1	0	0	4	1	5	0	0	0	6	27
10:30 AM	0	3	2	0	0	5	3	18	0	0	0	21	1	1	1	0	1	3	0	14	0	0	0	14	43
10:45 AM	1	3	1	0	0	5	3	11	1	0	0	15	1	2	2	0	0	5	1	3	0	0	0	4	29
Hourly Total	2	6	5	0	0	13	6	53	2	0	0	61	3	8	4	0	1	15	2	29	0	0	0	31	120
11:00 AM	2	4	2	0	0	8	1	10	0	0	0	11	1	2	1	0	0	4	0	5	1	0	0	6	29
11:15 AM	0	2	1	0	1	3	2	15	1	0	0	18	1	2	1	0	0	4	0	13	1	0	0	14	39
11:30 AM	0	3	1	0	0	4	0	16	0	0	0	16	0	0	0	0	0	0	0	14	1	0	0	15	35
11:45 AM	1	1	0	0	1	2	1	19	0	0	1	20	1	2	1	0	0	4	0	14	1	0	0	15	41
Hourly Total	3	10	4	0	2	17	4	60	1	0	1	65	3	6	3	0	0	12	0	46	4	0	0	50	144
12:00 PM	1	1	2	0	1	4	1	22	2	0	0	25	0	0	1	0	0	1	1	15	0	1	0	17	47
12:15 PM	0	2	2	0	0	4	0	14	3	0	0	17	1	2	0	0	0	3	0	9	1	0	2	10	34
12:30 PM	0	2	3	0	0	5	1	14	4	0	0	19	0	0	0	0	0	0	0	8	0	0	0	8	32
12:45 PM	0	5	0	0	0	5	0	14	2	0	0	16	1	0	0	0	0	1	2	6	1	0	0	9	31
Hourly Total	1	10	7	0	1	18	2	64	11	0	0	77	2	2	1	0	0	5	3	38	2	1	2	44	144
1:00 PM	2	3	1	0	0	6	0	22	1	0	0	23	2	3	2	0	0	7	2	12	1	0	0	15	51
1:15 PM	0	1	2	0	0	3	3	17	0	0	0	20	2	6	2	1	0	11	4	11	1	0	0	16	50
1:30 PM	2	2	4	0	0	8	0	15	2	0	0	17	0	2	1	0	0	3	2	17	0	0	0	19	47
1:45 PM	1	2	1	0	0	4	1	19	3	0	0	23	5	3	0	0	0	8	0	11	0	0	0	11	46
Hourly Total	5	8	8	0	0	21	4	73	6	0	0	83	9	14	5	1	0	29	8	51	2	0	0	61	194
2:00 PM	1	4	2	1	0	8	3	16	2	0	0	21	2	0	1	0	0	3	0	19	2	0	0	21	53
2:15 PM	2	1	1	0	0	4	0	22	1	0	1	23	2	2	5	0	1	9	2	18	0	0	0	20	56

2:30 PM	1	2	0	0	0	3	4	21	1	0	0	26	3	2	0	0	0	5	0	21	1	0	3	22	56
2:45 PM	1	4	1	0	1	6	3	19	2	0	0	24	2	0	2	0	0	4	2	13	0	0	0	15	49
Hourly Total	5	11	4	1	1	21	10	78	6	0	1	94	9	4	8	0	1	21	4	71	3	0	3	78	214
3:00 PM	1	1	0	0	2	2	1	20	1	0	0	22	4	2	1	0	0	7	1	17	0	0	1	18	49
3:15 PM	1	3	2	0	0	6	1	29	3	0	1	33	6	6	1	0	0	13	2	22	1	0	2	25	77
3:30 PM	3	4	3	0	0	10	0	15	1	0	1	16	0	3	0	0	0	3	0	15	1	0	0	16	45
3:45 PM	1	3	1	0	0	5	3	30	1	0	0	34	0	1	0	0	0	1	4	14	1	0	0	19	59
Hourly Total	6	11	6	0	2	23	5	94	6	0	2	105	10	12	2	0	0	24	7	68	3	0	3	78	230
4:00 PM	0	2	3	0	0	5	2	23	2	0	0	27	2	3	2	0	0	7	0	13	1	0	0	14	53
4:15 PM	0	1	0	0	0	1	2	21	4	0	0	27	2	1	1	0	0	4	0	19	1	0	2	20	52
4:30 PM	1	3	3	0	1	7	2	29	2	0	0	33	3	2	3	0	0	8	2	19	0	0	0	21	69
4:45 PM	1	1	0	0	0	2	3	32	5	0	0	40	1	2	0	0	0	3	0	23	0	0	0	23	68
Hourly Total	2	7	6	0	1	15	9	105	13	0	0	127	8	8	6	0	0	22	2	74	2	0	2	78	242
5:00 PM	0	1	4	0	0	5	6	22	0	0	0	28	2	1	4	0	0	7	1	18	0	0	0	19	59
5:15 PM	1	1	2	0	0	4	0	24	1	0	0	25	1	2	0	0	0	3	1	9	0	0	0	10	42
5:30 PM	0	2	1	0	0	3	1	22	0	0	0	23	0	1	0	0	0	1	0	19	0	0	0	19	46
5:45 PM	0	4	1	0	0	5	4	24	3	0	0	31	1	2	1	0	0	4	0	13	0	0	0	13	53
Hourly Total	1	8	8	0	0	17	11	92	4	0	0	107	4	6	5	0	0	15	2	59	0	0	0	61	200
Grand Total	26	89	61	1	12	177	62	762	58	0	4	882	63	76	39	1	2	179	32	583	18	1	20	634	1872
Approach %	14.7	50.3	34.5	0.6	-	-	7.0	86.4	6.6	0.0	-	-	35.2	42.5	21.8	0.6	-	-	5.0	92.0	2.8	0.2	-	-	-
Total %	1.4	4.8	3.3	0.1	-	9.5	3.3	40.7	3.1	0.0	-	47.1	3.4	4.1	2.1	0.1	-	9.6	1.7	31.1	1.0	0.1	-	33.9	-
Lights	26	84	59	1	-	170	59	744	57	0	-	860	59	63	34	1	-	157	31	573	17	1	-	622	1809
% Lights	100.0	94.4	96.7	100.0	-	96.0	95.2	97.6	98.3	-	-	97.5	93.7	82.9	87.2	100.0	-	87.7	96.9	98.3	94.4	100.0	-	98.1	96.6
Other Vehicles	0	5	2	0	-	7	3	18	1	0	-	22	4	13	5	0	-	22	1	10	1	0	-	12	63
% Other Vehicles	0.0	5.6	3.3	0.0	-	4.0	4.8	2.4	1.7	-	-	2.5	6.3	17.1	12.8	0.0	-	12.3	3.1	1.7	5.6	0.0	-	1.9	3.4
Pedestrians	-	-	-	-	12	-	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	20	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: E 31st St at Clinton Ave
Site Code:
Start Date: 12/09/2014

Turning Movement Data

Start Time	Clinton Ave Southbound						E 31st St Westbound						Clinton Ave Northbound						E 31st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	1	7	0	0	0	8	0	11	5	0	1	16	15	7	2	0	0	24	2	19	0	0	0	21	69
7:15 AM	0	6	2	0	0	8	3	14	5	0	0	22	4	5	1	0	0	10	1	20	0	0	1	21	61
7:30 AM	2	3	4	0	0	9	0	9	3	0	0	12	7	5	1	0	0	13	0	16	1	0	0	17	51
7:45 AM	2	3	1	0	0	6	3	12	5	0	0	20	5	11	0	0	0	16	1	10	0	0	0	11	53
Hourly Total	5	19	7	0	0	31	6	46	18	0	1	70	31	28	4	0	0	63	4	65	1	0	1	70	234
8:00 AM	0	2	1	0	0	3	2	10	2	0	0	14	8	8	0	0	0	16	0	8	0	0	0	8	41
8:15 AM	2	2	2	0	0	6	0	9	3	0	0	12	3	4	0	0	0	7	0	21	0	0	0	21	46
8:30 AM	0	3	2	0	0	5	2	22	5	0	0	29	13	3	1	0	0	17	2	24	0	0	0	26	77
8:45 AM	2	10	0	0	0	12	4	13	4	0	0	21	8	4	0	0	0	12	1	21	0	0	0	22	67
Hourly Total	4	17	5	0	0	26	8	54	14	0	0	76	32	19	1	0	0	52	3	74	0	0	0	77	231
9:00 AM	2	2	2	0	0	6	4	12	4	0	0	20	2	3	1	0	0	6	0	13	0	0	1	13	45
9:15 AM	2	1	1	0	0	4	1	6	2	0	0	9	5	6	0	0	0	11	0	10	0	0	0	10	34
9:30 AM	0	1	1	0	0	2	1	12	3	0	0	16	5	4	2	0	2	11	0	10	0	0	0	10	39
9:45 AM	2	4	0	0	0	6	2	12	1	0	0	15	4	1	0	0	0	5	0	9	1	0	0	10	36
Hourly Total	6	8	4	0	0	18	8	42	10	0	0	60	16	14	3	0	2	33	0	42	1	0	1	43	154
10:00 AM	0	2	5	0	0	7	3	8	3	0	1	14	7	2	0	0	0	9	1	10	0	0	0	11	41
10:15 AM	0	1	1	0	0	2	1	13	4	0	0	18	5	6	1	0	2	12	0	7	0	0	0	7	39
10:30 AM	0	3	2	0	0	5	0	18	4	0	0	22	4	5	3	0	1	12	2	14	0	0	0	16	55
10:45 AM	2	6	1	0	0	9	1	14	2	0	0	17	11	4	2	0	0	17	0	4	2	0	0	6	49
Hourly Total	2	12	9	0	0	23	5	53	13	0	1	71	27	17	6	0	3	50	3	35	2	0	0	40	184
11:00 AM	1	3	1	0	1	5	1	10	7	0	1	18	2	11	0	0	0	13	0	6	0	0	0	6	42
11:15 AM	0	6	3	0	0	9	2	12	5	0	0	19	6	6	0	0	0	12	2	10	0	0	0	12	52
11:30 AM	0	8	2	0	0	10	1	16	8	0	0	25	7	4	2	0	0	13	3	17	0	0	0	20	68
11:45 AM	0	6	2	0	0	8	2	19	3	0	0	24	3	6	2	0	0	11	0	10	2	0	0	12	55
Hourly Total	1	23	8	0	1	32	6	57	23	0	1	86	18	27	4	0	0	49	5	43	2	0	0	50	217
12:00 PM	1	3	2	0	0	6	2	24	2	0	0	28	5	10	2	0	0	17	0	21	0	0	0	21	72
12:15 PM	1	8	2	0	0	11	1	16	7	0	0	24	2	8	0	0	0	10	1	10	0	0	0	11	56
12:30 PM	1	6	0	0	0	7	1	18	2	0	0	21	5	7	2	0	0	14	0	10	0	0	0	10	52
12:45 PM	0	6	1	0	0	7	4	16	9	0	1	29	6	7	2	0	0	15	2	7	1	0	0	10	61
Hourly Total	3	23	5	0	0	31	8	74	20	0	1	102	18	32	6	0	0	56	3	48	1	0	0	52	241
1:00 PM	1	4	2	0	0	7	2	26	3	0	1	31	8	5	1	0	0	14	1	11	3	0	0	15	67
1:15 PM	0	1	1	0	0	2	5	18	8	0	1	31	3	4	2	0	1	9	0	16	1	0	0	17	59
1:30 PM	2	5	1	0	0	8	4	13	5	0	0	22	2	9	3	0	0	14	1	20	1	0	0	22	66
1:45 PM	2	5	0	0	0	7	0	15	4	0	1	19	14	4	2	0	0	20	0	18	1	0	0	19	65
Hourly Total	5	15	4	0	0	24	11	72	20	0	3	103	27	22	8	0	1	57	2	65	6	0	0	73	257
2:00 PM	0	5	5	0	0	10	4	23	8	0	0	35	8	7	2	0	0	17	2	19	2	0	0	23	85
2:15 PM	0	10	5	0	0	15	7	25	18	0	1	50	6	7	3	0	0	16	2	20	2	0	0	24	105

2:30 PM	0	6	6	0	0	12	3	27	10	0	1	40	8	14	2	0	1	24	2	15	3	0	0	20	96
2:45 PM	3	8	7	0	0	18	4	22	12	0	0	38	9	5	1	0	0	15	1	22	1	0	0	24	95
Hourly Total	3	29	23	0	0	55	18	97	48	0	2	163	31	33	8	0	1	72	7	76	8	0	0	91	381
3:00 PM	1	11	2	0	0	14	1	17	8	0	1	26	11	10	4	0	1	25	3	19	0	0	0	22	87
3:15 PM	2	5	1	0	0	8	6	25	14	0	0	45	5	7	7	0	0	19	5	20	0	0	1	25	97
3:30 PM	1	5	2	0	0	8	6	20	7	0	1	33	7	11	1	0	1	19	2	20	2	0	0	24	84
3:45 PM	2	13	3	0	0	18	6	25	7	0	0	38	9	4	3	0	0	16	3	11	3	0	0	17	89
Hourly Total	6	34	8	0	0	48	19	87	36	0	2	142	32	32	15	0	2	79	13	70	5	0	1	88	357
4:00 PM	1	15	2	0	0	18	4	24	8	0	0	36	13	5	1	0	0	19	2	15	0	0	0	17	90
4:15 PM	0	5	3	0	0	8	3	28	4	0	1	35	7	7	2	0	0	16	1	16	1	0	0	18	77
4:30 PM	2	9	8	0	0	19	3	30	9	0	1	42	9	7	1	0	0	17	3	23	4	0	0	30	108
4:45 PM	3	1	0	0	0	4	4	38	13	0	1	55	5	5	1	0	0	11	6	13	1	0	2	20	90
Hourly Total	6	30	13	0	0	49	14	120	34	0	3	168	34	24	5	0	0	63	12	67	6	0	2	85	365
5:00 PM	2	9	2	0	0	13	2	21	6	0	0	29	10	8	2	0	0	20	1	23	0	0	0	24	86
5:15 PM	0	7	0	0	0	7	1	29	7	0	0	37	9	8	4	0	0	21	2	16	0	0	0	18	83
5:30 PM	0	10	1	0	0	11	3	25	8	0	0	36	9	5	4	0	0	18	1	14	1	0	0	16	81
5:45 PM	1	9	4	0	0	14	2	29	7	0	0	38	4	11	1	0	0	16	2	12	0	0	0	14	82
Hourly Total	3	35	7	0	0	45	8	104	28	0	0	140	32	32	11	0	0	75	6	65	1	0	0	72	332
Grand Total	44	245	93	0	1	382	111	806	264	0	14	1181	298	280	71	0	9	649	58	650	33	0	5	741	2953
Approach %	11.5	64.1	24.3	0.0	-	-	9.4	68.2	22.4	0.0	-	-	45.9	43.1	10.9	0.0	-	-	7.8	87.7	4.5	0.0	-	-	-
Total %	1.5	8.3	3.1	0.0	-	12.9	3.8	27.3	8.9	0.0	-	40.0	10.1	9.5	2.4	0.0	-	22.0	2.0	22.0	1.1	0.0	-	25.1	-
Lights	38	233	91	0	-	362	106	792	244	0	-	1142	290	270	68	0	-	628	58	635	31	0	-	724	2856
% Lights	86.4	95.1	97.8	-	-	94.8	95.5	98.3	92.4	-	-	96.7	97.3	96.4	95.8	-	-	96.8	100.0	97.7	93.9	-	-	97.7	96.7
Other Vehicles	6	12	2	0	-	20	5	14	20	0	-	39	8	10	3	0	-	21	0	15	2	0	-	17	97
% Other Vehicles	13.6	4.9	2.2	-	-	5.2	4.5	1.7	7.6	-	-	3.3	2.7	3.6	4.2	-	-	3.2	0.0	2.3	6.1	-	-	2.3	3.3
Pedestrians	-	-	-	-	1	-	-	-	-	-	14	-	-	-	-	-	9	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: E 31st St at Grove Ave
Site Code:
Start Date: 12/09/2014
Page No: 1

Turning Movement Data

Start Time	Grove Ave Southbound						E 31st St Westbound						Grove Ave Northbound						E 31st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	12	7	20	0	0	39	16	57	4	0	2	77	11	20	6	0	1	37	3	104	21	0	0	128	281
7:15 AM	9	10	17	0	0	36	16	98	14	0	0	128	23	12	2	0	0	37	2	110	8	0	0	120	321
7:30 AM	7	6	25	0	0	38	13	85	5	0	0	103	9	18	3	0	0	30	0	57	10	0	0	67	238
7:45 AM	16	18	34	0	0	68	13	76	5	0	0	94	2	16	2	0	0	20	2	29	8	0	0	39	221
Hourly Total	44	41	96	0	0	181	58	316	28	0	2	402	45	66	13	0	1	124	7	300	47	0	0	354	1061
8:00 AM	16	9	13	0	0	38	12	57	2	0	0	71	8	9	2	0	0	19	2	43	6	0	0	51	179
8:15 AM	7	3	27	0	0	37	14	64	9	0	0	87	8	11	0	0	0	19	1	64	9	0	0	74	217
8:30 AM	8	8	14	0	0	30	11	62	15	0	0	88	24	21	3	0	0	48	3	68	6	0	0	77	243
8:45 AM	12	8	18	0	0	38	10	75	7	0	0	92	16	16	3	0	0	35	5	46	8	0	0	59	224
Hourly Total	43	28	72	0	0	143	47	258	33	0	0	338	56	57	8	0	0	121	11	221	29	0	0	261	863
9:00 AM	8	12	14	0	0	34	13	48	11	0	0	72	7	6	3	0	0	16	1	43	8	0	0	52	174
9:15 AM	9	3	8	0	1	20	8	52	2	0	0	62	7	9	1	0	0	17	1	35	9	0	0	45	144
9:30 AM	4	9	19	0	0	32	10	37	3	0	0	50	7	10	2	0	0	19	2	36	9	0	0	47	148
9:45 AM	7	4	14	0	0	25	6	54	8	0	0	68	5	6	1	0	2	12	0	44	7	0	0	51	156
Hourly Total	28	28	55	0	1	111	37	191	24	0	0	252	26	31	7	0	2	64	4	158	33	0	0	195	622
10:00 AM	12	7	13	0	1	32	7	54	3	0	0	64	11	13	2	0	0	26	2	44	7	0	0	53	175
10:15 AM	8	5	10	0	0	23	10	51	5	0	0	66	3	4	2	0	0	9	3	44	9	0	0	56	154
10:30 AM	5	6	9	0	0	20	8	54	8	0	0	70	11	6	4	0	0	21	4	43	5	0	0	52	163
10:45 AM	10	10	9	0	0	29	14	60	5	0	0	79	1	15	4	0	1	20	1	31	3	0	1	35	163
Hourly Total	35	28	41	0	1	104	39	219	21	0	0	279	26	38	12	0	1	76	10	162	24	0	1	196	655
11:00 AM	8	9	16	0	0	33	11	64	9	0	0	84	5	3	1	0	0	9	1	65	5	0	1	71	197
11:15 AM	5	11	22	0	1	38	9	55	7	0	0	71	8	8	2	0	0	18	2	63	10	0	1	75	202
11:30 AM	6	11	15	0	0	32	9	50	5	0	0	64	9	18	4	0	0	31	6	56	12	0	0	74	201
11:45 AM	9	10	16	0	0	35	16	49	11	0	0	76	3	8	4	0	0	15	1	64	8	0	0	73	199
Hourly Total	28	41	69	0	1	138	45	218	32	0	0	295	25	37	11	0	0	73	10	248	35	0	2	293	799
12:00 PM	9	15	14	0	0	38	15	59	14	0	0	88	11	7	3	0	0	21	1	73	8	0	0	82	229
12:15 PM	7	7	13	0	0	27	12	65	11	0	1	88	6	8	1	0	0	15	6	66	9	0	0	81	211
12:30 PM	15	8	12	0	1	35	16	81	7	0	0	104	8	6	2	0	0	16	2	54	7	0	0	63	218
12:45 PM	11	13	17	0	1	41	12	79	9	0	1	100	2	11	1	0	0	14	3	66	8	0	0	77	232
Hourly Total	42	43	56	0	2	141	55	284	41	0	2	380	27	32	7	0	0	66	12	259	32	0	0	303	890
1:00 PM	15	17	18	0	0	50	5	63	6	0	0	74	8	5	2	0	0	15	2	75	3	0	0	80	219
1:15 PM	14	16	12	0	0	42	8	72	14	0	0	94	10	10	3	0	0	23	5	75	8	0	0	88	247
1:30 PM	8	8	15	0	0	31	10	77	7	0	0	94	13	5	6	0	0	24	6	89	7	0	0	102	251
1:45 PM	9	8	15	0	0	32	14	62	6	0	0	82	12	13	5	0	0	30	1	82	3	0	0	86	230
Hourly Total	46	49	60	0	0	155	37	274	33	0	0	344	43	33	16	0	0	92	14	321	21	0	0	356	947
2:00 PM	9	18	16	0	0	43	14	66	13	0	0	93	12	14	7	0	0	33	3	93	9	0	0	105	274
2:15 PM	14	17	17	0	0	48	16	120	30	0	0	166	17	15	1	0	0	33	5	70	8	0	0	83	330

2:30 PM	11	18	25	0	0	54	15	87	21	0	0	123	8	13	2	0	0	23	3	70	15	0	0	88	288
2:45 PM	17	18	19	0	0	54	20	87	12	0	0	119	23	16	4	0	0	43	6	98	15	0	0	119	335
Hourly Total	51	71	77	0	0	199	65	360	76	0	0	501	60	58	14	0	0	132	17	331	47	0	0	395	1227
3:00 PM	14	11	16	0	1	41	21	63	9	0	1	93	22	12	0	0	0	34	3	124	10	0	0	137	305
3:15 PM	25	20	18	0	0	63	19	120	19	0	0	158	14	11	2	0	0	27	7	88	10	0	0	105	353
3:30 PM	19	17	29	0	1	65	16	86	15	0	2	117	10	15	7	0	0	32	5	91	15	0	0	111	325
3:45 PM	11	21	19	0	0	51	22	71	15	0	0	108	12	11	4	0	0	27	2	71	23	0	0	96	282
Hourly Total	69	69	82	0	2	220	78	340	58	0	3	476	58	49	13	0	0	120	17	374	58	0	0	449	1265
4:00 PM	14	21	18	0	0	53	19	50	18	0	0	87	11	14	4	0	0	29	4	113	15	0	0	132	301
4:15 PM	14	25	23	0	0	62	23	55	11	0	0	89	9	13	2	0	0	24	6	104	17	0	0	127	302
4:30 PM	11	21	27	0	0	59	17	70	14	0	0	101	13	22	1	0	0	36	3	63	11	0	0	77	273
4:45 PM	15	20	17	0	0	52	18	63	15	0	0	96	11	8	6	0	0	25	12	84	15	0	0	111	284
Hourly Total	54	87	85	0	0	226	77	238	58	0	0	373	44	57	13	0	0	114	25	364	58	0	0	447	1160
5:00 PM	20	17	25	0	0	62	24	76	16	0	0	116	10	22	2	0	0	34	8	78	25	0	0	111	323
5:15 PM	14	22	20	0	0	56	28	70	15	0	0	113	7	14	3	0	0	24	1	78	12	0	0	91	284
5:30 PM	25	30	24	0	0	79	27	101	22	0	0	150	3	14	2	0	0	19	6	72	9	0	0	87	335
5:45 PM	17	19	16	0	0	52	17	82	14	0	0	113	16	8	5	0	0	29	6	52	8	0	0	66	260
Hourly Total	76	88	85	0	0	249	96	329	67	0	0	492	36	58	12	0	0	106	21	280	54	0	0	355	1202
Grand Total	516	573	778	0	7	1867	634	3027	471	0	7	4132	446	516	126	0	4	1088	148	3018	438	0	3	3604	10691
Approach %	27.6	30.7	41.7	0.0	-	-	15.3	73.3	11.4	0.0	-	-	41.0	47.4	11.6	0.0	-	-	4.1	83.7	12.2	0.0	-	-	-
Total %	4.8	5.4	7.3	0.0	-	17.5	5.9	28.3	4.4	0.0	-	38.6	4.2	4.8	1.2	0.0	-	10.2	1.4	28.2	4.1	0.0	-	33.7	-
Lights	506	560	764	0	-	1830	614	2779	455	0	-	3848	428	510	122	0	-	1060	147	2800	431	0	-	3378	10116
% Lights	98.1	97.7	98.2	-	-	98.0	96.8	91.8	96.6	-	-	93.1	96.0	98.8	96.8	-	-	97.4	99.3	92.8	98.4	-	-	93.7	94.6
Other Vehicles	10	13	14	0	-	37	20	248	16	0	-	284	18	6	4	0	-	28	1	218	7	0	-	226	575
% Other Vehicles	1.9	2.3	1.8	-	-	2.0	3.2	8.2	3.4	-	-	6.9	4.0	1.2	3.2	-	-	2.6	0.7	7.2	1.6	-	-	6.3	5.4
Pedestrians	-	-	-	-	7	-	-	-	-	-	7	-	-	-	-	-	4	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: E 31st St at Palm Ave
Site Code:
Start Date: 12/11/2014
Page No: 1

Turning Movement Data

Start Time	Palm Ave Southbound						E 31st St Westbound						Palm Ave Northbound						E 31st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	3	0	0	0	3	0	28	0	0	0	28	6	2	3	0	0	11	1	38	1	0	0	40	82
7:15 AM	0	1	0	0	0	1	0	37	3	0	0	40	4	4	3	0	0	11	3	39	0	0	1	42	94
7:30 AM	0	2	0	0	0	2	2	49	1	0	0	52	3	2	2	0	0	7	0	47	1	0	0	48	109
7:45 AM	0	0	2	0	0	2	0	65	1	0	0	66	1	0	0	0	0	1	3	35	0	0	0	38	107
Hourly Total	0	6	2	0	0	8	2	179	5	0	0	186	14	8	8	0	0	30	7	159	2	0	1	168	392
8:00 AM	1	0	0	0	0	1	1	30	1	0	0	32	0	0	0	0	0	0	0	27	0	0	5	27	60
8:15 AM	0	7	1	0	1	8	0	30	2	0	0	32	3	2	2	0	0	7	3	31	0	0	1	34	81
8:30 AM	0	2	0	0	1	2	0	39	4	0	0	43	8	5	3	0	0	16	6	40	0	0	0	46	107
8:45 AM	2	2	1	0	0	5	0	33	5	0	0	38	1	0	0	0	0	1	2	21	0	0	0	23	67
Hourly Total	3	11	2	0	2	16	1	132	12	0	0	145	12	7	5	0	0	24	11	119	0	0	6	130	315
9:00 AM	0	0	0	0	1	0	0	29	0	0	0	29	1	0	1	0	0	2	0	27	2	0	0	29	60
9:15 AM	0	1	0	0	0	1	1	27	1	0	0	29	1	0	1	0	0	2	1	20	0	0	0	21	53
9:30 AM	2	1	0	0	2	3	0	27	0	0	1	27	0	0	1	0	0	1	0	32	1	0	0	33	64
9:45 AM	0	0	0	0	1	0	0	22	1	0	0	23	1	2	0	0	0	3	3	20	2	0	2	25	51
Hourly Total	2	2	0	0	4	4	1	105	2	0	1	108	3	2	3	0	0	8	4	99	5	0	2	108	228
10:00 AM	0	0	2	0	0	2	0	35	2	0	0	37	0	1	0	0	0	1	0	32	0	0	0	32	72
10:15 AM	0	3	1	0	0	4	1	25	0	0	0	26	2	2	0	0	0	4	0	22	1	0	1	23	57
10:30 AM	0	0	1	0	0	1	0	19	1	0	0	20	0	1	1	0	0	2	1	27	0	0	0	28	51
10:45 AM	0	3	1	0	0	4	1	35	2	0	0	38	0	2	2	0	0	4	0	19	2	0	0	21	67
Hourly Total	0	6	5	0	0	11	2	114	5	0	0	121	2	6	3	0	0	11	1	100	3	0	1	104	247
11:00 AM	3	0	0	0	0	3	1	18	2	0	0	21	1	2	3	0	0	6	2	25	0	0	0	27	57
11:15 AM	1	4	1	0	0	6	0	20	0	0	0	20	3	0	0	0	0	3	0	24	0	0	0	24	53
11:30 AM	0	0	0	0	0	0	0	30	1	0	0	31	0	0	0	0	0	0	1	28	0	0	0	29	60
11:45 AM	0	1	2	0	0	3	0	33	0	0	0	33	0	1	1	0	0	2	1	29	1	0	0	31	69
Hourly Total	4	5	3	0	0	12	1	101	3	0	0	105	4	3	4	0	0	11	4	106	1	0	0	111	239
12:00 PM	2	3	0	0	0	5	0	34	4	0	0	38	1	2	2	0	0	5	1	28	0	0	0	29	77
12:15 PM	0	4	0	0	0	4	0	25	0	0	0	25	2	0	2	0	0	4	5	24	2	0	0	31	64
12:30 PM	1	1	1	0	0	3	2	46	0	0	0	48	1	1	3	0	0	5	0	30	1	0	1	31	87
12:45 PM	1	1	2	0	0	4	0	22	1	0	0	23	4	1	0	0	0	5	1	23	1	0	0	25	57
Hourly Total	4	9	3	0	0	16	2	127	5	0	0	134	8	4	7	0	0	19	7	105	4	0	1	116	285
1:00 PM	1	1	1	0	0	3	0	32	0	0	0	32	4	1	3	0	0	8	0	34	0	0	0	34	77
1:15 PM	0	0	1	0	0	1	1	32	2	0	0	35	2	1	3	0	0	6	0	30	1	0	0	31	73
1:30 PM	0	0	0	0	0	0	0	45	2	0	0	47	1	2	2	0	0	5	2	40	0	0	0	42	94
1:45 PM	0	1	2	0	0	3	1	38	1	0	0	40	0	2	2	0	0	4	0	28	1	0	0	29	76
Hourly Total	1	2	4	0	0	7	2	147	5	0	0	154	7	6	10	0	0	23	2	132	2	0	0	136	320
2:00 PM	0	5	2	0	0	7	0	46	4	0	1	50	3	1	0	0	0	4	2	38	0	0	0	40	101
2:15 PM	1	3	0	0	0	4	1	45	1	0	1	47	3	6	1	0	0	10	1	36	1	0	1	38	99

2:30 PM	0	1	2	0	0	3	0	44	3	0	0	47	0	1	2	0	0	3	3	42	2	0	4	47	100
2:45 PM	1	4	2	0	0	7	2	51	7	0	0	60	1	3	4	0	0	8	2	37	1	0	1	40	115
Hourly Total	2	13	6	0	0	21	3	186	15	0	2	204	7	11	7	0	0	25	8	153	4	0	6	165	415
3:00 PM	1	7	3	0	1	11	1	36	3	0	2	40	4	1	6	0	0	11	8	51	1	0	0	60	122
Grand Total	17	61	28	0	7	106	15	1127	55	0	5	1197	61	48	53	0	0	162	52	1024	22	0	17	1098	2563
Approach %	16.0	57.5	26.4	0.0	-	-	1.3	94.2	4.6	0.0	-	-	37.7	29.6	32.7	0.0	-	-	4.7	93.3	2.0	0.0	-	-	-
Total %	0.7	2.4	1.1	0.0	-	4.1	0.6	44.0	2.1	0.0	-	46.7	2.4	1.9	2.1	0.0	-	6.3	2.0	40.0	0.9	0.0	-	42.8	-
Lights	17	57	27	0	-	101	14	1102	55	0	-	1171	60	48	52	0	-	160	51	998	22	0	-	1071	2503
% Lights	100.0	93.4	96.4	-	-	95.3	93.3	97.8	100.0	-	-	97.8	98.4	100.0	98.1	-	-	98.8	98.1	97.5	100.0	-	-	97.5	97.7
Other Vehicles	0	4	1	0	-	5	1	25	0	0	-	26	1	0	1	0	-	2	1	26	0	0	-	27	60
% Other Vehicles	0.0	6.6	3.6	-	-	4.7	6.7	2.2	0.0	-	-	2.2	1.6	0.0	1.9	-	-	1.2	1.9	2.5	0.0	-	-	2.5	2.3
Pedestrians	-	-	-	-	7	-	-	-	-	-	5	-	-	-	-	-	0	-	-	-	-	-	17	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: E 31st St at Tacoma Ave
Site Code:
Start Date: 12/18/2014

Turning Movement Data

Start Time	Tacoma Ave Southbound						E 31st St Westbound						Tacoma Ave Northbound						E 31st St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	0	2	8	0	0	10	4	24	19	0	0	47	22	2	2	0	0	26	1	47	0	0	0	48	131
7:15 AM	0	2	4	0	0	6	2	38	16	0	0	56	24	4	2	0	0	30	3	37	0	0	0	40	132
7:30 AM	1	0	6	0	0	7	3	36	18	0	0	57	27	1	5	0	0	33	1	40	0	0	0	41	138
7:45 AM	0	0	8	0	0	8	5	46	9	0	0	60	19	0	5	0	0	24	2	27	3	0	0	32	124
Hourly Total	1	4	26	0	0	31	14	144	62	0	0	220	92	7	14	0	0	113	7	151	3	0	0	161	525
8:00 AM	0	0	8	0	0	8	6	37	6	0	0	49	12	0	3	0	0	15	4	25	0	0	0	29	101
8:15 AM	1	2	1	0	0	4	9	30	14	0	0	53	14	0	2	0	0	16	4	23	1	0	0	28	101
8:30 AM	0	4	5	0	0	9	2	35	9	0	0	46	28	3	6	0	0	37	5	34	2	0	0	41	133
8:45 AM	0	1	6	0	0	7	3	24	12	0	0	39	9	1	4	0	0	14	2	34	0	0	0	36	96
Hourly Total	1	7	20	0	0	28	20	126	41	0	0	187	63	4	15	0	0	82	15	116	3	0	0	134	431
9:00 AM	0	1	6	0	0	7	4	33	11	0	0	48	13	3	3	0	0	19	3	21	1	0	1	25	99
9:15 AM	1	1	3	0	0	5	5	18	4	0	0	27	9	1	3	0	0	13	3	23	2	0	0	28	73
9:30 AM	0	1	7	0	1	8	4	27	10	0	0	41	16	1	0	0	0	17	2	25	0	0	0	27	93
9:45 AM	1	2	3	0	0	6	2	30	2	0	0	34	7	1	4	0	0	12	3	22	1	0	0	26	78
Hourly Total	2	5	19	0	1	26	15	108	27	0	0	150	45	6	10	0	0	61	11	91	4	0	1	106	343
10:00 AM	1	0	4	0	0	5	3	17	9	0	0	29	17	0	3	0	0	20	4	15	1	0	0	20	74
10:15 AM	0	0	9	0	0	9	2	23	3	0	0	28	11	1	1	0	0	13	1	15	1	0	0	17	67
10:30 AM	0	0	9	0	0	9	4	33	7	0	0	44	14	2	3	0	0	19	0	23	0	0	0	23	95
10:45 AM	0	0	2	0	0	2	3	24	11	0	0	38	6	2	0	0	0	8	4	28	0	0	0	32	80
Hourly Total	1	0	24	0	0	25	12	97	30	0	0	139	48	5	7	0	0	60	9	81	2	0	0	92	316
11:00 AM	0	1	3	0	0	4	5	27	8	0	0	40	3	1	3	0	0	7	0	23	0	0	0	23	74
11:15 AM	0	1	7	0	1	8	5	24	8	0	0	37	9	0	2	0	0	11	3	19	2	0	0	24	80
11:30 AM	0	1	6	0	0	7	1	24	10	0	0	35	5	1	2	0	0	8	1	29	0	0	0	30	80
11:45 AM	1	2	5	0	0	8	5	35	7	0	0	47	10	3	2	0	0	15	2	36	0	0	0	38	108
Hourly Total	1	5	21	0	1	27	16	110	33	0	0	159	27	5	9	0	0	41	6	107	2	0	0	115	342
12:00 PM	0	0	6	0	0	6	6	33	6	0	0	45	8	2	2	0	0	12	2	27	0	0	0	29	92
12:15 PM	1	3	11	0	0	15	3	24	10	0	0	37	9	2	3	0	0	14	4	27	1	0	0	32	98
12:30 PM	1	0	2	0	0	3	3	32	13	0	0	48	11	5	3	0	0	19	6	26	0	0	0	32	102
12:45 PM	0	2	8	0	0	10	7	36	8	0	0	51	6	3	1	0	1	10	3	34	0	0	0	37	108
Hourly Total	2	5	27	0	0	34	19	125	37	0	0	181	34	12	9	0	1	55	15	114	1	0	0	130	400
1:00 PM	1	1	4	0	0	6	4	34	14	0	0	52	14	1	3	0	0	18	1	32	1	0	0	34	110
1:15 PM	0	6	3	0	0	9	9	38	13	0	0	60	5	1	3	0	2	9	3	27	0	0	0	30	108
1:30 PM	0	3	6	0	0	9	2	35	14	0	0	51	12	1	0	0	0	13	1	30	0	0	0	31	104
1:45 PM	1	1	6	0	0	8	2	36	24	0	0	62	14	3	2	0	1	19	0	33	0	0	0	33	122
Hourly Total	2	11	19	0	0	32	17	143	65	0	0	225	45	6	8	0	3	59	5	122	1	0	0	128	444
2:00 PM	0	8	6	0	1	14	2	43	21	0	0	66	15	2	0	0	2	17	3	47	0	0	0	50	147
2:15 PM	0	4	9	0	0	13	5	39	16	0	0	60	33	4	5	0	1	42	2	32	1	0	0	35	150

2:30 PM	0	2	8	0	0	10	8	52	11	0	0	71	26	3	2	0	0	31	3	30	1	0	1	34	146
2:45 PM	2	7	7	0	0	16	6	37	29	0	0	72	15	2	3	0	0	20	3	37	1	0	0	41	149
Hourly Total	2	21	30	0	1	53	21	171	77	0	0	269	89	11	10	0	3	110	11	146	3	0	1	160	592
3:00 PM	1	4	6	0	0	11	9	45	13	0	0	67	22	2	3	0	0	27	3	49	0	0	0	52	157
3:15 PM	0	3	8	0	0	11	6	49	17	0	0	72	24	4	10	0	0	38	1	60	1	0	0	62	183
3:30 PM	0	5	9	0	0	14	10	61	18	0	0	89	21	2	3	0	0	26	5	32	0	0	0	37	166
3:45 PM	0	0	9	0	0	9	4	49	36	0	0	89	16	3	0	0	0	19	9	43	1	0	0	53	170
Hourly Total	1	12	32	0	0	45	29	204	84	0	0	317	83	11	16	0	0	110	18	184	2	0	0	204	676
4:00 PM	2	4	12	0	0	18	8	59	22	0	0	89	16	4	5	0	0	25	3	49	0	0	0	52	184
4:15 PM	0	2	12	0	0	14	3	45	28	0	0	76	19	4	2	0	0	25	4	45	0	0	0	49	164
4:30 PM	1	3	7	0	0	11	6	58	38	0	0	102	20	2	3	0	0	25	4	51	0	0	0	55	193
4:45 PM	0	3	8	0	0	11	10	65	23	0	0	98	12	3	6	0	0	21	1	36	0	0	0	37	167
Hourly Total	3	12	39	0	0	54	27	227	111	0	0	365	67	13	16	0	0	96	12	181	0	0	0	193	708
5:00 PM	0	7	17	0	0	24	3	53	23	0	0	79	13	4	2	0	0	19	1	44	1	0	0	46	168
5:15 PM	1	2	4	0	0	7	6	46	20	0	0	72	12	7	2	0	0	21	1	47	0	0	0	48	148
5:30 PM	0	2	6	0	0	8	13	40	23	0	0	76	16	6	5	0	0	27	4	41	0	0	0	45	156
5:45 PM	1	4	5	0	0	10	3	43	14	0	0	60	16	2	2	0	0	20	2	41	1	0	0	44	134
Hourly Total	2	15	32	0	0	49	25	182	80	0	0	287	57	19	11	0	0	87	8	173	2	0	0	183	606
Grand Total	18	97	289	0	3	404	215	1637	647	0	0	2499	650	99	125	0	7	874	117	1466	23	0	2	1606	5383
Approach %	4.5	24.0	71.5	0.0	-	-	8.6	65.5	25.9	0.0	-	-	74.4	11.3	14.3	0.0	-	-	7.3	91.3	1.4	0.0	-	-	-
Total %	0.3	1.8	5.4	0.0	-	7.5	4.0	30.4	12.0	0.0	-	46.4	12.1	1.8	2.3	0.0	-	16.2	2.2	27.2	0.4	0.0	-	29.8	-
Lights	18	95	270	0	-	383	205	1601	623	0	-	2429	628	93	121	0	-	842	113	1441	23	0	-	1577	5231
% Lights	100.0	97.9	93.4	-	-	94.8	95.3	97.8	96.3	-	-	97.2	96.6	93.9	96.8	-	-	96.3	96.6	98.3	100.0	-	-	98.2	97.2
Other Vehicles	0	2	19	0	-	21	10	36	24	0	-	70	22	6	4	0	-	32	4	25	0	0	-	29	152
% Other Vehicles	0.0	2.1	6.6	-	-	5.2	4.7	2.2	3.7	-	-	2.8	3.4	6.1	3.2	-	-	3.7	3.4	1.7	0.0	-	-	1.8	2.8
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	7	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : E_31st_St_at_Metro_Park_Bike_Trail_204720_12-11-2014
Site Code :
Start Date : 12/11/2014
Page No : 1

Groups Printed- Lights - Other Vehicles

	Metro Park Bike Trail From North					E 31st St From East					Metro Park Bike Trail From Southeast					Norfolk Ave From South					E 31st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	57	0	0	104
07:15 AM	0	0	0	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	80	0	0	136
07:30 AM	0	0	0	0	0	0	56	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	78	0	0	137
07:45 AM	0	0	0	0	0	0	89	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	56	0	0	147
Total	0	0	0	0	0	0	243	0	0	0	1	0	0	0	0	0	4	0	4	0	1	0	271	0	0	524
08:00 AM	0	0	0	0	0	0	44	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	48	0	0	94
08:15 AM	0	0	0	0	0	0	53	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	46	0	0	102
08:30 AM	0	0	0	0	0	0	48	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	71	0	0	122
08:45 AM	0	0	0	0	0	0	42	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	39	0	0	82
Total	0	0	0	0	0	0	187	1	0	0	0	0	1	0	0	0	2	0	4	0	1	0	204	0	0	400
09:00 AM	0	0	0	0	0	0	31	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	44	0	0	77
09:15 AM	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	28	0	0	67
09:30 AM	0	0	0	0	0	0	35	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	50	0	0	87
09:45 AM	0	0	0	0	0	0	18	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	40	0	0	60
Total	0	0	0	0	0	0	121	3	0	0	0	0	0	0	0	0	4	0	0	0	1	0	162	0	0	291
10:00 AM	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	51	0	0	97
10:15 AM	0	0	1	0	0	0	29	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	38	0	0	69
10:30 AM	0	0	0	0	0	0	35	1	1	0	0	0	0	0	0	0	0	0	2	0	0	0	37	0	0	76
10:45 AM	0	0	0	0	0	0	36	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	44	0	0	82
Total	0	0	1	0	0	0	143	1	1	0	0	0	0	0	0	0	2	0	4	0	2	0	170	0	0	324
11:00 AM	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	35	0	0	67
11:15 AM	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	0	0	56
11:30 AM	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	0	0	89
11:45 AM	0	0	0	0	0	0	46	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	45	0	0	93
Total	0	0	0	0	0	0	143	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	158	0	0	305
12:00 PM	0	0	0	0	0	0	53	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	39	0	0	94
12:15 PM	0	0	0	0	0	0	36	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	41	0	0	78
12:30 PM	0	0	0	0	0	0	56	1	0	0	0	0	0	0	0	0	0	0	3	0	1	0	48	0	0	109
12:45 PM	0	0	0	0	0	0	37	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	43	0	0	82
Total	0	0	0	0	0	0	182	3	0	0	0	0	0	0	0	0	2	0	4	0	1	0	171	0	0	363
01:00 PM	0	0	0	0	0	0	45	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	53	0	0	101
01:15 PM	0	0	0	0	0	0	50	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	48	0	0	100
01:30 PM	0	0	0	0	0	0	65	0	0	0	0	0	0	0	0	0	2	0	1	0	3	0	58	0	0	129
01:45 PM	0	0	0	0	0	0	65	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	49	0	0	116
Total	0	0	0	0	0	0	225	1	0	0	0	0	0	0	0	0	5	0	2	0	5	0	208	0	0	446
02:00 PM	0	0	0	0	0	0	74	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	66	0	0	143
02:15 PM	0	0	0	0	0	0	62	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	63	0	0	128
02:30 PM	0	0	0	0	0	0	65	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	71	0	0	138
02:45 PM	0	0	0	0	0	0	89	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	65	0	0	155
Total	0	0	0	0	0	0	290	1	0	0	0	0	0	0	0	0	3	0	1	0	4	0	265	0	0	564
03:00 PM	0	0	0	0	0	0	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	0	0	153
03:15 PM	0	0	0	0	0	0	95	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72	0	0	169

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : E_31st_St_at_Metro_Park_Bike_Trail_204720_12-11-2014
Site Code :
Start Date : 12/11/2014
Page No : 2

Groups Printed- Lights - Other Vehicles

	Metro Park Bike Trail From North					E 31st St From East					Metro Park Bike Trail From Southeast					Norfolk Ave From South					E 31st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
03:30 PM	0	0	0	1	0	0	107	3	0	0	0	0	0	0	0	0	1	0	0	0	2	0	72	0	0	186
03:45 PM	0	0	0	0	0	0	100	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83	0	0	184
Total	0	0	0	1	0	0	367	6	0	0	0	0	0	0	0	0	1	0	0	0	2	0	315	0	0	692
04:00 PM	0	0	0	0	0	0	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	0	0	167
04:15 PM	0	0	0	0	0	0	96	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	61	0	0	160
04:30 PM	0	0	0	0	0	0	90	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	76	0	0	169
04:45 PM	0	0	0	0	0	0	97	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	82	0	0	182
Total	0	0	0	0	0	0	375	4	0	0	0	0	0	0	0	0	1	0	2	0	2	0	294	0	0	678
05:00 PM	0	0	0	0	0	0	95	0	0	0	1	0	0	0	0	0	0	0	3	0	4	0	93	0	0	196
05:15 PM	0	0	0	1	0	0	74	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	81	0	0	157
05:30 PM	0	0	0	0	0	0	86	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	65	0	0	153
05:45 PM	0	0	0	0	0	0	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	0	0	122
Total	0	0	0	1	0	0	322	0	0	0	1	0	0	0	0	0	2	0	3	0	5	0	294	0	0	628
Grand Total	0	0	1	2	0	0	2598	20	1	0	2	0	1	0	0	0	27	0	24	0	27	0	2512	0	0	5215
Apprch %	0	0	33.3	66.7	0	0	99.2	0.8	0	0	66.7	0	33.3	0	0	0	52.9	0	47.1	0	1.1	0	98.9	0	0	
Total %	0	0	0	0	0	0	49.8	0.4	0	0	0	0	0	0	0	0	0.5	0	0.5	0	0.5	0	48.2	0	0	
Lights	0	0	1	2	0	0	2532	20	1	0	2	0	1	0	0	0	27	0	24	0	26	0	2459	0	0	5095
% Lights	0	0	100	100	0	0	97.5	100	100	0	100	0	100	0	0	0	100	0	100	0	96.3	0	97.9	0	0	97.7
Other Vehicles	0	0	0	0	0	0	66	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	53	0	0	120
% Other Vehicles	0	0	0	0	0	0	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	3.7	0	2.1	0	0	2.3

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : E_31st_St_at_Metro_Park_Bike_Trail_204720_12-11-2014
Site Code :
Start Date : 12/11/2014
Page No : 1

Groups Printed- Pedestrians

	Metro Park Bike Trail From North					E 31st St From East					Metro Park Bike Trail From Southeast					Norfolk Ave From South					E 31st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
09:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : E_31st_St_at_Metro_Park_Bike_Trail_204720_12-11-2014
Site Code :
Start Date : 12/11/2014
Page No : 2

Groups Printed- Pedestrians

	Metro Park Bike Trail From North					E 31st St From East					Metro Park Bike Trail From Southeast					Norfolk Ave From South					E 31st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	1	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7
Apprch %	0	0	0	0	100	0	0	0	0	100	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	14.3	0	0	0	0	42.9	0	0	0	0	42.9	0	0	0	0	0	0	0	0	0	0	

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : E_31st_St_at_Metro_Park_Bike_Trail_204720_12-11-2014
Site Code :
Start Date : 12/11/2014
Page No : 1

Groups Printed- Bicycles on Crosswalk

	Metro Park Bike Trail From North					E 31st St From East					Metro Park Bike Trail From Southeast					Norfolk Ave From South					E 31st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : E_31st_St_at_Metro_Park_Bike_Trail_204720_12-11-2014
Site Code :
Start Date : 12/11/2014
Page No : 2

Groups Printed- Bicycles on Crosswalk

	Metro Park Bike Trail From North					E 31st St From East					Metro Park Bike Trail From Southeast					Norfolk Ave From South					E 31st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
Apprch %	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	66.7	0	0	0	0	0	0	0	0	0	33.3	0	0	0	0	0	

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : E_31st_St_at_Metro_Park_Bike_Trail_204720_12-11-2014
Site Code :
Start Date : 12/11/2014
Page No : 1

Groups Printed- Bicycles on Road

	Metro Park Bike Trail From North					E 31st St From East					Metro Park Bike Trail From Southeast					Norfolk Ave From South					E 31st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
01:00 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
01:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	5
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AECOM
564 White Pond Dr
Arkon, OH 44320

File Name : E_31st_St_at_Metro_Park_Bike_Trail_204720_12-11-2014
Site Code :
Start Date : 12/11/2014
Page No : 2

Groups Printed- Bicycles on Road

	Metro Park Bike Trail From North					E 31st St From East					Metro Park Bike Trail From Southeast					Norfolk Ave From South					E 31st St From West					
Start Time	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	Right	Bear Right	Thru	Left	Peds	Int. Total
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	2	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	8
Apprch %	0	0	100	0	0	0	100	0	0	0	0	100	0	0	0	0	0	0	0	0	0	50	0	50	0	
Total %	0	0	25	0	0	0	25	0	0	0	0	25	0	0	0	0	0	0	0	0	0	12.5	0	12.5	0	

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: SR 2 EB ramp at Middle Ridge Rd
Site Code:
Start Date: 12/04/2014

Turning Movement Data

Start Time	Middle Ridge Rd Southbound					SR 2 EB on-ramp Westbound		Middle Ridge Rd Northbound					SR 2 EB off-ramp Eastbound					
	Thru	Left	U-Turn	Peds	App. Total	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
7:00 AM	71	114	0	0	185	0	0	74	52	0	0	126	24	0	36	0	60	371
7:15 AM	71	115	0	0	186	0	0	73	84	0	0	157	39	0	35	0	74	417
7:30 AM	96	131	0	0	227	0	0	110	89	0	0	199	49	0	33	0	82	508
7:45 AM	94	105	0	0	199	0	0	85	95	0	0	180	35	0	49	0	84	463
Hourly Total	332	465	0	0	797	0	0	342	320	0	0	662	147	0	153	0	300	1759
8:00 AM	79	95	0	0	174	0	0	66	83	0	0	149	17	0	39	0	56	379
8:15 AM	80	88	0	0	168	0	0	63	74	0	0	137	19	0	30	0	49	354
8:30 AM	48	101	0	0	149	0	0	60	67	0	0	127	17	0	26	0	43	319
8:45 AM	48	88	0	0	136	0	0	46	57	0	0	103	13	0	36	0	49	288
Hourly Total	255	372	0	0	627	0	0	235	281	0	0	516	66	0	131	0	197	1340
9:00 AM	40	81	0	0	121	0	0	57	48	0	0	105	8	0	30	0	38	264
9:15 AM	51	71	0	0	122	0	0	40	45	0	0	85	15	0	28	0	43	250
9:30 AM	67	57	0	0	124	0	0	43	55	0	0	98	24	0	28	0	52	274
9:45 AM	45	77	0	0	122	0	0	47	75	0	0	122	9	0	31	0	40	284
Hourly Total	203	286	0	0	489	0	0	187	223	0	0	410	56	0	117	0	173	1072
10:00 AM	69	74	0	0	143	0	0	26	65	0	0	91	12	0	28	0	40	274
10:15 AM	59	70	0	0	129	0	0	42	50	0	0	92	10	0	28	0	38	259
10:30 AM	46	73	0	0	119	0	0	42	55	0	0	97	15	0	22	0	37	253
10:45 AM	53	69	0	0	122	0	0	39	56	0	0	95	10	0	31	0	41	258
Hourly Total	227	286	0	0	513	0	0	149	226	0	0	375	47	0	109	0	156	1044
11:00 AM	70	76	0	0	146	0	0	43	45	0	0	88	5	0	20	0	25	259
11:15 AM	71	63	0	0	134	0	0	32	46	0	0	78	11	0	15	0	26	238
11:30 AM	71	54	0	0	125	0	0	31	61	0	0	92	9	0	32	0	41	258
11:45 AM	60	63	0	0	123	0	0	28	46	0	0	74	15	0	27	0	42	239
Hourly Total	272	256	0	0	528	0	0	134	198	0	0	332	40	0	94	0	134	994
12:00 PM	78	70	0	0	148	0	0	35	41	0	0	76	19	0	32	0	51	275
12:15 PM	70	83	0	0	153	0	0	33	56	0	0	89	16	0	28	0	44	286
12:30 PM	95	87	0	0	182	0	0	54	64	0	0	118	13	0	34	0	47	347
12:45 PM	63	64	0	0	127	0	0	29	72	0	0	101	11	0	27	0	38	266
Hourly Total	306	304	0	0	610	0	0	151	233	0	0	384	59	0	121	0	180	1174
1:00 PM	79	59	0	0	138	0	0	20	54	0	0	74	18	0	24	0	42	254
1:15 PM	75	58	0	0	133	0	0	31	57	0	0	88	18	0	23	0	41	262
1:30 PM	72	83	0	0	155	0	0	39	58	0	0	97	23	0	28	1	51	303
1:45 PM	86	84	0	0	170	0	0	29	48	0	0	77	20	0	25	0	45	292
Hourly Total	312	284	0	0	596	0	0	119	217	0	0	336	79	0	100	1	179	1111
2:00 PM	100	91	0	0	191	0	0	25	61	0	0	86	21	0	32	0	53	330
2:15 PM	103	98	0	1	201	0	0	32	75	0	0	107	28	0	25	1	53	361
2:30 PM	118	74	0	0	192	0	0	34	62	0	0	96	23	0	17	0	40	328

2:45 PM	117	68	0	0	185	0	0	42	89	0	0	131	23	0	29	0	52	368
Hourly Total	438	331	0	1	769	0	0	133	287	0	0	420	95	0	103	1	198	1387
3:00 PM	108	86	0	1	194	0	0	42	104	0	0	146	23	0	21	0	44	384
3:15 PM	124	85	0	0	209	0	0	48	100	0	0	148	22	0	18	0	40	397
3:30 PM	128	89	0	0	217	0	0	47	78	0	0	125	16	0	22	0	38	380
3:45 PM	151	100	0	0	251	0	0	49	66	0	0	115	13	0	37	0	50	416
Hourly Total	511	360	0	1	871	0	0	186	348	0	0	534	74	0	98	0	172	1577
4:00 PM	153	105	0	0	258	0	0	51	80	0	0	131	19	0	21	0	40	429
4:15 PM	147	89	0	0	236	0	0	47	89	0	0	136	38	0	27	0	65	437
4:30 PM	178	115	0	0	293	0	0	64	83	0	0	147	32	0	28	0	60	500
4:45 PM	147	103	0	0	250	0	0	61	113	0	0	174	22	0	23	0	45	469
Hourly Total	625	412	0	0	1037	0	0	223	365	0	0	588	111	0	99	0	210	1835
5:00 PM	152	95	0	0	247	0	0	53	106	0	0	159	34	0	40	0	74	480
5:15 PM	169	81	0	0	250	0	0	47	95	0	0	142	31	0	41	0	72	464
5:30 PM	123	97	0	0	220	0	0	51	74	0	0	125	21	0	29	0	50	395
5:45 PM	104	92	0	0	196	0	0	54	58	0	0	112	19	0	20	0	39	347
Hourly Total	548	365	0	0	913	0	0	205	333	0	0	538	105	0	130	0	235	1686
Grand Total	4029	3721	0	2	7750	0	0	2064	3031	0	0	5095	879	0	1255	2	2134	14979
Approach %	52.0	48.0	0.0	-	-	-	-	40.5	59.5	0.0	-	-	41.2	0.0	58.8	-	-	-
Total %	26.9	24.8	0.0	-	51.7	-	0.0	13.8	20.2	0.0	-	34.0	5.9	0.0	8.4	-	14.2	-
Lights	3864	3636	0	-	7500	-	0	2018	2885	0	-	4903	846	0	1207	-	2053	14456
% Lights	95.9	97.7	-	-	96.8	-	-	97.8	95.2	-	-	96.2	96.2	-	96.2	-	96.2	96.5
Other Vehicles	165	85	0	-	250	-	0	46	146	0	-	192	33	0	48	-	81	523
% Other Vehicles	4.1	2.3	-	-	3.2	-	-	2.2	4.8	-	-	3.8	3.8	-	3.8	-	3.8	3.5
Pedestrians	-	-	-	2	-	0	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: SR 2 WB ramp at Middle Ridge Rd
Site Code:
Start Date: 12/04/2014

Turning Movement Data

Start Time	Middle Ridge Rd Southbound					SR 2 WB off-ramp Westbound					Middle Ridge Rd Northbound					SR 2 WB on-ramp Eastbound		
	Right	Thru	U-Turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Peds	App. Total	Int. Total
7:00 AM	16	157	0	0	173	54	0	22	0	76	68	21	0	0	89	0	0	338
7:15 AM	29	170	0	0	199	76	0	34	0	110	98	24	0	0	122	0	0	431
7:30 AM	28	196	0	0	224	67	0	35	0	102	100	22	0	0	122	0	0	448
7:45 AM	38	141	0	0	179	79	1	33	0	113	110	23	0	0	133	0	0	425
Hourly Total	111	664	0	0	775	276	1	124	0	401	376	90	0	0	466	0	0	1642
8:00 AM	23	131	0	0	154	70	0	34	0	104	103	15	0	0	118	0	0	376
8:15 AM	22	130	0	0	152	46	1	26	0	73	87	19	0	0	106	0	0	331
8:30 AM	26	114	0	0	140	65	0	15	0	80	65	24	0	0	89	0	0	309
8:45 AM	33	124	0	0	157	56	0	21	0	77	80	20	0	0	100	0	0	334
Hourly Total	104	499	0	0	603	237	1	96	0	334	335	78	0	0	413	0	0	1350
9:00 AM	16	98	0	0	114	45	0	13	0	58	65	13	0	0	78	0	0	250
9:15 AM	13	98	0	0	111	46	1	13	0	60	61	18	0	0	79	0	0	250
9:30 AM	20	109	0	0	129	43	0	23	0	66	54	19	0	0	73	0	0	268
9:45 AM	23	106	0	0	129	55	0	17	0	72	93	17	0	0	110	0	0	311
Hourly Total	72	411	0	0	483	189	1	66	0	256	273	67	0	0	340	0	0	1079
10:00 AM	26	115	0	0	141	38	1	25	0	64	67	23	0	0	90	0	0	295
10:15 AM	22	92	0	0	114	38	2	35	0	75	62	19	0	0	81	0	0	270
10:30 AM	29	93	0	0	122	55	1	24	0	80	57	15	0	0	72	0	0	274
10:45 AM	18	107	0	0	125	49	0	28	0	77	70	18	0	0	88	0	0	290
Hourly Total	95	407	0	0	502	180	4	112	0	296	256	75	0	0	331	0	0	1129
11:00 AM	30	104	0	0	134	42	0	36	0	78	52	13	0	0	65	0	0	277
11:15 AM	28	92	0	0	120	62	0	26	0	88	48	16	0	0	64	0	0	272
11:30 AM	40	99	0	0	139	53	2	38	0	93	69	23	0	0	92	0	0	324
11:45 AM	41	112	0	0	153	59	0	23	0	82	62	18	0	0	80	0	0	315
Hourly Total	139	407	0	0	546	216	2	123	0	341	231	70	0	0	301	0	0	1188
12:00 PM	40	113	0	0	153	56	1	27	0	84	47	23	0	0	70	0	0	307
12:15 PM	46	126	0	0	172	52	0	41	0	93	68	17	0	0	85	0	0	350
12:30 PM	34	133	0	0	167	59	0	30	0	89	80	16	0	0	96	0	0	352
12:45 PM	29	100	0	0	129	70	0	26	0	96	78	22	0	0	100	0	0	325
Hourly Total	149	472	0	0	621	237	1	124	0	362	273	78	0	0	351	0	0	1334
1:00 PM	31	109	0	0	140	47	0	31	0	78	53	14	0	0	67	0	0	285
1:15 PM	34	98	0	0	132	44	1	36	0	81	71	18	0	0	89	0	0	302
1:30 PM	29	112	0	0	141	75	1	40	0	116	60	21	0	0	81	1	0	338
1:45 PM	22	134	0	0	156	72	0	30	0	102	67	19	0	0	86	0	0	344
Hourly Total	116	453	0	0	569	238	2	137	0	377	251	72	0	0	323	1	0	1269
2:00 PM	36	149	0	0	185	64	2	53	0	119	81	17	0	0	98	0	0	402
2:15 PM	36	151	0	0	187	87	0	47	0	134	70	20	0	0	90	0	0	411
2:30 PM	33	129	0	0	162	94	0	55	0	149	69	13	0	0	82	0	0	393

2:45 PM	37	130	0	0	167	87	0	57	0	144	92	29	0	0	121	0	0	432
Hourly Total	142	559	0	0	701	332	2	212	0	546	312	79	0	0	391	0	0	1638
3:00 PM	55	151	0	0	206	74	1	54	0	129	82	37	0	0	119	0	0	454
3:15 PM	56	135	0	1	191	108	0	66	2	174	78	35	0	0	113	0	0	478
3:30 PM	52	156	0	0	208	99	0	57	0	156	78	32	0	0	110	0	0	474
3:45 PM	47	165	0	0	212	113	1	73	0	187	70	29	0	0	99	0	0	498
Hourly Total	210	607	0	1	817	394	2	250	2	646	308	133	0	0	441	0	0	1904
4:00 PM	60	198	0	0	258	98	0	62	1	160	82	26	0	0	108	0	0	526
4:15 PM	44	155	0	0	199	100	0	81	0	181	64	38	0	0	102	0	0	482
4:30 PM	49	169	0	0	218	110	0	109	0	219	82	37	0	0	119	0	0	556
4:45 PM	42	149	0	0	191	140	0	90	0	230	90	44	0	0	134	0	0	555
Hourly Total	195	671	0	0	866	448	0	342	1	790	318	145	0	0	463	0	0	2119
5:00 PM	54	159	0	0	213	137	1	82	0	220	101	42	0	0	143	0	0	576
5:15 PM	43	160	0	0	203	139	1	89	0	229	96	33	0	0	129	0	0	561
5:30 PM	38	147	0	0	185	115	2	80	0	197	69	31	0	0	100	0	0	482
5:45 PM	32	119	0	0	151	111	1	61	0	173	62	21	0	0	83	0	0	407
Hourly Total	167	585	0	0	752	502	5	312	0	819	328	127	0	0	455	0	0	2026
Grand Total	1500	5735	0	1	7235	3249	21	1898	3	5168	3261	1014	0	0	4275	1	0	16678
Approach %	20.7	79.3	0.0	-	-	62.9	0.4	36.7	-	-	76.3	23.7	0.0	-	-	-	-	-
Total %	9.0	34.4	0.0	-	43.4	19.5	0.1	11.4	-	31.0	19.6	6.1	0.0	-	25.6	-	0.0	-
Lights	1445	5539	0	-	6984	3171	18	1830	-	5019	3106	970	0	-	4076	-	0	16079
% Lights	96.3	96.6	-	-	96.5	97.6	85.7	96.4	-	97.1	95.2	95.7	-	-	95.3	-	-	96.4
Other Vehicles	55	196	0	-	251	78	3	68	-	149	155	44	0	-	199	-	0	599
% Other Vehicles	3.7	3.4	-	-	3.5	2.4	14.3	3.6	-	2.9	4.8	4.3	-	-	4.7	-	-	3.6
Pedestrians	-	-	-	1	-	-	-	-	3	-	-	-	-	0	-	1	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Pearl Ave at E 34th St
Site Code:
Start Date: 12/09/2014

Turning Movement Data

Start Time	Pearl Ave Southbound						E 34th St Westbound						Pearl Ave Northbound						E 34th St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	5	23	5	0	0	33	1	4	2	0	0	7	0	10	1	0	0	11	2	8	4	0	2	14	65
7:15 AM	3	20	3	0	0	26	4	5	1	0	0	10	0	13	0	0	0	13	3	8	1	0	0	12	61
7:30 AM	3	19	0	0	0	22	5	7	3	0	0	15	0	18	3	0	0	21	5	4	2	0	0	11	69
7:45 AM	2	15	2	0	0	19	5	6	1	0	1	12	0	18	1	0	0	19	2	4	3	0	0	9	59
Hourly Total	13	77	10	0	0	100	15	22	7	0	1	44	0	59	5	0	0	64	12	24	10	0	2	46	254
8:00 AM	2	18	3	0	0	23	2	0	4	0	0	6	1	9	2	0	0	12	3	3	2	0	0	8	49
8:15 AM	4	19	3	0	0	26	0	3	1	0	0	4	1	15	0	0	1	16	1	2	3	0	0	6	52
8:30 AM	1	24	5	0	0	30	6	3	0	0	2	9	0	20	1	1	0	22	2	3	3	0	0	8	69
8:45 AM	0	29	3	0	0	32	4	2	0	0	0	6	0	25	1	0	0	26	6	5	2	0	0	13	77
Hourly Total	7	90	14	0	0	111	12	8	5	0	2	25	2	69	4	1	1	76	12	13	10	0	0	35	247
9:00 AM	1	21	1	0	0	23	5	3	1	0	2	9	1	12	0	0	0	13	1	5	2	0	0	8	53
9:15 AM	5	24	1	0	1	30	3	2	0	0	3	5	0	16	1	0	0	17	3	2	2	0	0	7	59
9:30 AM	1	27	0	0	0	28	4	1	0	0	0	5	0	15	0	0	0	15	1	7	2	0	0	10	58
9:45 AM	0	23	3	0	0	26	1	4	1	0	0	6	0	21	2	0	0	23	0	5	3	0	0	8	63
Hourly Total	7	95	5	0	1	107	13	10	2	0	5	25	1	64	3	0	0	68	5	19	9	0	0	33	233
10:00 AM	4	21	1	0	0	26	0	1	1	0	1	2	2	21	0	0	0	23	0	2	4	0	0	6	57
10:15 AM	6	24	3	0	0	33	2	2	0	0	1	4	0	22	1	0	0	23	0	3	4	0	0	7	67
10:30 AM	4	21	4	0	0	29	4	0	1	0	1	5	1	23	4	0	0	28	1	2	5	0	0	8	70
10:45 AM	0	22	3	0	0	25	1	2	0	0	4	3	2	33	2	0	0	37	2	4	3	0	0	9	74
Hourly Total	14	88	11	0	0	113	7	5	2	0	7	14	5	99	7	0	0	111	3	11	16	0	0	30	268
11:00 AM	2	21	3	0	0	26	1	2	1	0	0	4	0	14	1	0	0	15	0	3	6	0	1	9	54
11:15 AM	2	19	5	0	0	26	3	2	0	0	0	5	1	16	1	0	0	18	2	3	4	0	0	9	58
11:30 AM	3	27	0	0	0	30	2	2	2	0	0	6	1	20	1	0	0	22	0	3	3	0	0	6	64
11:45 AM	3	36	3	0	0	42	4	2	3	0	0	9	1	33	0	0	0	34	2	4	2	0	0	8	93
Hourly Total	10	103	11	0	0	124	10	8	6	0	0	24	3	83	3	0	0	89	4	13	15	0	1	32	269
12:00 PM	7	33	0	0	0	40	3	4	0	0	0	7	0	30	2	0	0	32	0	4	3	0	0	7	86
12:15 PM	4	24	1	0	0	29	2	0	0	0	1	2	0	25	1	0	0	26	1	4	3	0	1	8	65
12:30 PM	0	31	4	0	0	35	4	2	0	0	0	6	1	18	2	0	0	21	3	3	2	0	0	8	70
12:45 PM	0	25	3	0	0	28	4	2	2	0	0	8	0	17	0	0	0	17	1	5	4	0	0	10	63
Hourly Total	11	113	8	0	0	132	13	8	2	0	1	23	1	90	5	0	0	96	5	16	12	0	1	33	284
1:00 PM	3	29	0	0	0	32	6	1	2	0	0	9	1	32	1	0	0	34	2	2	3	0	0	7	82
1:15 PM	2	27	3	0	0	32	4	3	0	0	0	7	0	25	4	0	0	29	3	4	2	0	2	9	77
1:30 PM	5	27	2	0	0	34	4	0	0	0	1	4	0	45	2	0	0	47	2	5	4	0	0	11	96
1:45 PM	4	28	1	0	0	33	5	3	2	0	2	10	0	20	1	0	0	21	0	6	0	0	0	6	70
Hourly Total	14	111	6	0	0	131	19	7	4	0	3	30	1	122	8	0	0	131	7	17	9	0	2	33	325
2:00 PM	7	29	3	0	0	39	2	6	1	0	0	9	0	26	1	0	0	27	5	5	4	0	0	14	89
2:15 PM	6	28	1	0	0	35	5	6	1	0	1	12	1	33	2	0	0	36	2	1	7	0	0	10	93

2:30 PM	6	27	3	0	0	36	3	1	1	0	1	5	2	32	2	0	0	36	0	1	5	0	1	6	83
2:45 PM	5	42	1	0	1	48	2	1	2	0	2	5	4	40	2	0	0	46	3	6	3	0	0	12	111
Hourly Total	24	126	8	0	1	158	12	14	5	0	4	31	7	131	7	0	0	145	10	13	19	0	1	42	376
3:00 PM	6	43	2	0	0	51	5	2	1	0	1	8	2	36	5	0	0	43	1	9	5	0	0	15	117
3:15 PM	5	45	11	0	0	61	2	9	1	0	2	12	2	38	3	0	0	43	4	10	2	0	0	16	132
3:30 PM	4	35	4	0	0	43	7	4	2	0	0	13	1	34	1	0	0	36	3	8	2	0	0	13	105
3:45 PM	4	34	4	0	2	42	4	3	1	0	1	8	3	41	0	0	0	44	3	5	4	0	0	12	106
Hourly Total	19	157	21	0	2	197	18	18	5	0	4	41	8	149	9	0	0	166	11	32	13	0	0	56	460
4:00 PM	3	35	6	0	0	44	4	4	1	0	0	9	4	37	0	0	0	41	3	3	3	0	0	9	103
4:15 PM	3	39	3	0	0	45	4	2	0	0	0	6	0	34	4	0	1	38	0	8	6	0	1	14	103
4:30 PM	7	38	5	0	0	50	6	3	3	0	0	12	2	33	5	0	0	40	0	3	2	0	0	5	107
4:45 PM	5	49	7	0	0	61	3	5	2	0	0	10	2	27	0	0	0	29	1	8	4	0	3	13	113
Hourly Total	18	161	21	0	0	200	17	14	6	0	0	37	8	131	9	0	1	148	4	22	15	0	4	41	426
5:00 PM	3	46	3	0	0	52	5	3	3	0	1	11	3	37	1	0	0	41	1	5	2	0	0	8	112
5:15 PM	5	30	4	0	0	39	0	0	2	0	0	2	4	32	0	0	0	36	2	7	5	0	0	14	91
5:30 PM	1	29	1	0	0	31	4	2	1	0	0	7	1	39	1	0	0	41	3	4	5	0	0	12	91
5:45 PM	4	39	4	0	0	47	4	4	0	0	1	8	1	46	5	0	0	52	2	4	3	0	0	9	116
Hourly Total	13	144	12	0	0	169	13	9	6	0	2	28	9	154	7	0	0	170	8	20	15	0	0	43	410
Grand Total	150	1265	127	0	4	1542	149	123	50	0	29	322	45	1151	67	1	2	1264	81	200	143	0	11	424	3552
Approach %	9.7	82.0	8.2	0.0	-	-	46.3	38.2	15.5	0.0	-	-	3.6	91.1	5.3	0.1	-	-	19.1	47.2	33.7	0.0	-	-	-
Total %	4.2	35.6	3.6	0.0	-	43.4	4.2	3.5	1.4	0.0	-	9.1	1.3	32.4	1.9	0.0	-	35.6	2.3	5.6	4.0	0.0	-	11.9	-
Lights	144	1180	125	0	-	1449	118	118	40	0	-	276	41	1088	65	1	-	1195	79	198	139	0	-	416	3336
% Lights	96.0	93.3	98.4	-	-	94.0	79.2	95.9	80.0	-	-	85.7	91.1	94.5	97.0	100.0	-	94.5	97.5	99.0	97.2	-	-	98.1	93.9
Other Vehicles	6	85	2	0	-	93	31	5	10	0	-	46	4	63	2	0	-	69	2	2	4	0	-	8	216
% Other Vehicles	4.0	6.7	1.6	-	-	6.0	20.8	4.1	20.0	-	-	14.3	8.9	5.5	3.0	0.0	-	5.5	2.5	1.0	2.8	-	-	1.9	6.1
Pedestrians	-	-	-	-	4	-	-	-	-	-	29	-	-	-	-	-	2	-	-	-	-	-	11	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: N Ridge Rd at Pearl Ave
Site Code:
Start Date: 12/11/2014
Page No: 1

Turning Movement Data

Start Time	Pearl Ave Southbound					N Ridge Rd Westbound					N Ridge Rd Eastbound					
	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	21	16	0	0	37	9	94	0	0	103	70	7	0	0	77	217
7:15 AM	17	21	0	0	38	6	111	0	0	117	98	8	0	0	106	261
7:30 AM	23	18	0	0	41	6	109	0	0	115	99	8	0	0	107	263
7:45 AM	13	11	0	0	24	6	132	0	0	138	103	10	0	0	113	275
Hourly Total	74	66	0	0	140	27	446	0	0	473	370	33	0	0	403	1016
8:00 AM	10	10	0	0	20	10	65	0	0	75	112	10	0	0	122	217
8:15 AM	9	12	0	0	21	9	90	0	0	99	106	8	0	0	114	234
8:30 AM	10	28	0	0	38	9	117	0	0	126	114	11	0	0	125	289
8:45 AM	8	19	0	0	27	5	111	0	0	116	106	10	0	0	116	259
Hourly Total	37	69	0	0	106	33	383	0	0	416	438	39	0	0	477	999
9:00 AM	15	12	0	0	27	5	89	0	0	94	94	14	0	0	108	229
9:15 AM	12	17	0	0	29	9	77	0	0	86	90	10	0	0	100	215
9:30 AM	10	13	0	0	23	3	82	0	0	85	131	7	0	0	138	246
9:45 AM	12	11	0	1	23	6	98	0	0	104	121	9	0	0	130	257
Hourly Total	49	53	0	1	102	23	346	0	0	369	436	40	0	0	476	947
10:00 AM	12	9	0	0	21	6	93	0	0	99	77	8	0	0	85	205
10:15 AM	13	12	0	0	25	20	80	0	0	100	118	14	0	0	132	257
10:30 AM	20	12	0	0	32	7	115	0	0	122	98	11	0	0	109	263
10:45 AM	16	15	0	0	31	12	107	0	0	119	116	10	0	0	126	276
Hourly Total	61	48	0	0	109	45	395	0	0	440	409	43	0	0	452	1001
11:00 AM	13	18	0	0	31	12	105	0	0	117	87	18	0	0	105	253
11:15 AM	10	14	0	0	24	9	114	0	0	123	120	13	0	0	133	280
11:30 AM	15	16	0	0	31	13	125	0	0	138	122	11	0	0	133	302
11:45 AM	16	23	0	0	39	17	111	0	0	128	106	19	0	0	125	292
Hourly Total	54	71	0	0	125	51	455	0	0	506	435	61	0	0	496	1127
12:00 PM	20	15	0	0	35	17	145	0	0	162	122	17	0	0	139	336
12:15 PM	11	19	0	0	30	17	119	0	0	136	130	10	0	0	140	306
12:30 PM	15	17	0	0	32	14	124	0	0	138	128	19	0	0	147	317
12:45 PM	17	17	0	0	34	17	143	0	0	160	129	19	0	0	148	342
Hourly Total	63	68	0	0	131	65	531	0	0	596	509	65	0	0	574	1301
1:00 PM	16	14	0	0	30	14	136	0	0	150	120	15	0	0	135	315
1:15 PM	12	22	0	0	34	16	117	0	0	133	144	13	0	0	157	324
1:30 PM	28	28	0	0	56	12	124	0	0	136	189	15	0	0	204	396
1:45 PM	18	16	0	0	34	11	141	0	0	152	143	16	0	0	159	345
Hourly Total	74	80	0	0	154	53	518	0	0	571	596	59	0	0	655	1380
2:00 PM	16	25	0	0	41	10	172	0	0	182	132	16	0	0	148	371
2:15 PM	20	13	0	0	33	18	206	0	0	224	145	16	0	0	161	418
2:30 PM	31	15	0	0	46	18	243	0	0	261	127	14	0	0	141	448

2:45 PM	19	26	0	0	45	17	262	0	0	279	160	25	0	0	185	509
Hourly Total	86	79	0	0	165	63	883	0	0	946	564	71	0	0	635	1746
3:00 PM	36	17	0	0	53	22	247	0	1	269	187	24	0	0	211	533
3:15 PM	21	26	0	1	47	26	284	0	0	310	130	24	1	0	155	512
3:30 PM	17	19	0	0	36	22	290	0	0	312	145	18	0	0	163	511
3:45 PM	24	24	0	0	48	24	276	0	0	300	133	23	0	0	156	504
Hourly Total	98	86	0	1	184	94	1097	0	1	1191	595	89	1	0	685	2060
4:00 PM	28	21	0	0	49	24	239	0	0	263	184	24	0	0	208	520
4:15 PM	26	14	0	0	40	25	243	0	0	268	156	32	0	0	188	496
4:30 PM	17	31	0	0	48	24	284	0	0	308	177	28	0	0	205	561
4:45 PM	25	26	0	0	51	22	195	0	0	217	166	25	0	0	191	459
Hourly Total	96	92	0	0	188	95	961	0	0	1056	683	109	0	0	792	2036
5:00 PM	27	29	0	0	56	25	181	0	0	206	130	17	0	0	147	409
5:15 PM	17	21	0	0	38	27	160	0	0	187	167	19	0	0	186	411
5:30 PM	18	26	0	0	44	27	153	0	0	180	133	15	0	1	148	372
5:45 PM	8	15	0	0	23	14	150	0	0	164	120	22	0	0	142	329
Hourly Total	70	91	0	0	161	93	644	0	0	737	550	73	0	1	623	1521
Grand Total	762	803	0	2	1565	642	6659	0	1	7301	5585	682	1	1	6268	15134
Approach %	48.7	51.3	0.0	-	-	8.8	91.2	0.0	-	-	89.1	10.9	0.0	-	-	-
Total %	5.0	5.3	0.0	-	10.3	4.2	44.0	0.0	-	48.2	36.9	4.5	0.0	-	41.4	-
Lights	749	775	0	-	1524	609	6506	0	-	7115	5465	662	1	-	6128	14767
% Lights	98.3	96.5	-	-	97.4	94.9	97.7	-	-	97.5	97.9	97.1	100.0	-	97.8	97.6
Other Vehicles	13	28	0	-	41	33	153	0	-	186	120	20	0	-	140	367
% Other Vehicles	1.7	3.5	-	-	2.6	5.1	2.3	-	-	2.5	2.1	2.9	0.0	-	2.2	2.4
Pedestrians	-	-	-	2	-	-	-	-	1	-	-	-	-	1	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: Grove Ave at E 36th St
Site Code:
Start Date: 12/11/2014

Turning Movement Data

Start Time	Grove Ave Southbound					Grove Ave Northbound					E 36th St Eastbound					
	Right	Thru	U-Turn	Peds	App. Total	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Int. Total
7:00 AM	6	130	0	0	136	85	23	0	0	108	45	1	0	1	46	290
7:15 AM	4	132	0	0	136	127	40	0	0	167	44	5	0	1	49	352
7:30 AM	5	83	0	0	88	98	29	0	0	127	23	3	0	0	26	241
7:45 AM	13	61	0	0	74	77	17	0	1	94	14	2	0	1	16	184
Hourly Total	28	406	0	0	434	387	109	0	1	496	126	11	0	3	137	1067
8:00 AM	4	85	0	0	89	68	16	0	0	84	17	1	0	0	18	191
8:15 AM	3	84	0	0	87	65	15	0	0	80	21	3	0	0	24	191
8:30 AM	13	79	0	0	92	86	24	0	0	110	22	10	0	0	32	234
8:45 AM	10	84	0	0	94	71	13	0	0	84	23	2	0	0	25	203
Hourly Total	30	332	0	0	362	290	68	0	0	358	83	16	0	0	99	819
9:00 AM	3	65	0	0	68	73	22	0	0	95	11	0	0	0	11	174
9:15 AM	2	52	0	0	54	64	22	0	0	86	9	0	0	0	9	149
9:30 AM	4	56	0	0	60	56	12	0	0	68	6	1	0	0	7	135
9:45 AM	4	53	0	0	57	68	11	0	0	79	2	0	0	0	2	138
Hourly Total	13	226	0	0	239	261	67	0	0	328	28	1	0	0	29	596
10:00 AM	3	69	0	0	72	67	6	0	0	73	9	2	0	0	11	156
10:15 AM	1	76	0	0	77	69	8	0	0	77	7	2	0	0	9	163
10:30 AM	4	58	0	0	62	69	15	0	0	84	5	2	0	0	7	153
10:45 AM	4	68	0	0	72	70	7	0	0	77	10	4	0	0	14	163
Hourly Total	12	271	0	0	283	275	36	0	0	311	31	10	0	0	41	635
11:00 AM	4	81	0	0	85	72	17	0	0	89	10	0	0	0	10	184
11:15 AM	5	60	0	0	65	69	15	0	0	84	15	0	0	0	15	164
11:30 AM	6	69	0	0	75	73	13	0	0	86	17	1	0	0	18	179
11:45 AM	1	92	0	0	93	68	10	0	0	78	17	0	0	0	17	188
Hourly Total	16	302	0	0	318	282	55	0	0	337	59	1	0	0	60	715
12:00 PM	3	103	0	0	106	96	8	0	0	104	17	1	0	0	18	228
12:15 PM	3	77	0	0	80	94	16	0	0	110	21	0	0	0	21	211
12:30 PM	5	102	0	0	107	90	16	0	0	106	11	0	0	0	11	224
12:45 PM	4	81	0	0	85	86	11	0	0	97	21	2	0	0	23	205
Hourly Total	15	363	0	0	378	366	51	0	0	417	70	3	0	0	73	868
1:00 PM	7	70	0	0	77	102	13	0	0	115	23	6	0	0	29	221
1:15 PM	5	68	0	0	73	84	19	0	0	103	17	5	0	0	22	198
1:30 PM	4	99	0	0	103	76	8	0	0	84	19	5	0	0	24	211
1:45 PM	1	98	0	0	99	86	17	0	0	103	18	4	0	0	22	224
Hourly Total	17	335	0	0	352	348	57	0	0	405	77	20	0	0	97	854
2:00 PM	4	135	0	0	139	100	24	0	0	124	31	2	0	0	33	296
2:15 PM	13	82	0	2	95	187	50	0	0	237	26	3	0	0	29	361
2:30 PM	7	95	0	0	102	115	23	0	0	138	29	5	0	1	34	274

2:45 PM	10	100	0	0	110	104	32	0	0	136	14	5	0	0	19	265
Hourly Total	34	412	0	2	446	506	129	0	0	635	100	15	0	1	115	1196
3:00 PM	9	158	0	0	167	119	22	0	0	141	20	15	0	0	35	343
3:15 PM	16	134	0	0	150	149	28	0	0	177	34	5	0	0	39	366
3:30 PM	11	126	0	0	137	117	36	0	0	153	22	6	0	0	28	318
3:45 PM	9	129	0	0	138	134	23	0	0	157	22	7	0	0	29	324
Hourly Total	45	547	0	0	592	519	109	0	0	628	98	33	0	0	131	1351
4:00 PM	4	160	0	0	164	101	18	0	0	119	23	5	0	0	28	311
4:15 PM	10	118	0	0	128	94	13	0	0	107	21	5	0	0	26	261
4:30 PM	4	130	0	0	134	118	14	0	0	132	20	5	0	0	25	291
4:45 PM	8	118	0	0	126	118	11	0	0	129	29	7	0	0	36	291
Hourly Total	26	526	0	0	552	431	56	0	0	487	93	22	0	0	115	1154
5:00 PM	10	133	0	0	143	137	21	0	0	158	14	6	0	0	20	321
5:15 PM	5	109	0	0	114	146	30	0	0	176	11	8	0	0	19	309
5:30 PM	5	95	0	0	100	124	20	0	0	144	1	2	0	0	3	247
5:45 PM	6	122	0	0	128	113	30	0	0	143	7	5	0	0	12	283
Hourly Total	26	459	0	0	485	520	101	0	0	621	33	21	0	0	54	1160
Grand Total	262	4179	0	2	4441	4185	838	0	1	5023	798	153	0	4	951	10415
Approach %	5.9	94.1	0.0	-	-	83.3	16.7	0.0	-	-	83.9	16.1	0.0	-	-	-
Total %	2.5	40.1	0.0	-	42.6	40.2	8.0	0.0	-	48.2	7.7	1.5	0.0	-	9.1	-
Lights	255	3964	0	-	4219	3946	811	0	-	4757	784	150	0	-	934	9910
% Lights	97.3	94.9	-	-	95.0	94.3	96.8	-	-	94.7	98.2	98.0	-	-	98.2	95.2
Other Vehicles	7	215	0	-	222	239	27	0	-	266	14	3	0	-	17	505
% Other Vehicles	2.7	5.1	-	-	5.0	5.7	3.2	-	-	5.3	1.8	2.0	-	-	1.8	4.8
Pedestrians	-	-	-	2	-	-	-	-	1	-	-	-	-	4	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
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Count Name: Grove Ave at Homewood Dr
Site Code:
Start Date: 12/18/2014

Turning Movement Data

Start Time	Grove Ave Southbound						Homewood Dr Westbound						Grove Ave Northbound						Homewood Dr Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	2	144	11	0	0	157	8	2	8	0	2	18	2	71	9	0	1	82	33	7	4	0	0	44	301
7:15 AM	3	158	24	0	0	185	14	5	8	0	0	27	6	139	22	0	0	167	34	9	4	0	0	47	426
7:30 AM	3	93	6	0	0	102	12	4	7	0	2	23	5	106	9	0	1	120	18	3	3	0	0	24	269
7:45 AM	4	63	2	0	0	69	10	2	7	0	0	19	4	86	8	1	1	99	18	7	8	0	0	33	220
Hourly Total	12	458	43	0	0	513	44	13	30	0	4	87	17	402	48	1	3	468	103	26	19	0	0	148	1216
8:00 AM	1	98	6	0	0	105	7	0	8	0	0	15	5	65	7	0	1	77	10	1	4	0	0	15	212
8:15 AM	7	78	9	0	0	94	10	3	3	0	0	16	3	76	2	0	0	81	14	5	5	0	0	24	215
8:30 AM	8	99	11	0	0	118	15	8	9	0	0	32	7	88	8	0	1	103	10	13	10	0	0	33	286
8:45 AM	8	95	11	0	0	114	9	10	8	0	0	27	8	84	4	0	0	96	16	8	4	0	0	28	265
Hourly Total	24	370	37	0	0	431	41	21	28	0	0	90	23	313	21	0	2	357	50	27	23	0	0	100	978
9:00 AM	2	85	5	0	0	92	8	0	9	0	0	17	5	82	6	0	0	93	16	1	3	0	0	20	222
9:15 AM	1	74	7	0	0	82	6	0	4	0	0	10	7	83	7	0	0	97	13	3	0	0	0	16	205
9:30 AM	1	70	9	0	0	80	15	2	13	0	0	30	4	53	4	0	0	61	16	2	2	0	0	20	191
9:45 AM	2	74	10	0	0	86	13	1	7	0	0	21	9	94	9	0	0	112	5	3	2	0	1	10	229
Hourly Total	6	303	31	0	0	340	42	3	33	0	0	78	25	312	26	0	0	363	50	9	7	0	1	66	847
10:00 AM	3	68	7	0	0	78	5	2	9	0	0	16	5	64	8	0	0	77	12	1	1	0	0	14	185
10:15 AM	1	74	3	0	0	78	5	1	6	0	0	12	3	106	9	0	0	118	6	4	1	0	0	11	219
10:30 AM	2	67	6	0	0	75	5	1	7	0	0	13	6	72	6	0	0	84	6	4	2	0	0	12	184
10:45 AM	3	80	9	0	0	92	14	5	7	0	1	26	10	67	7	0	1	84	11	1	5	0	0	17	219
Hourly Total	9	289	25	0	0	323	29	9	29	0	1	67	24	309	30	0	1	363	35	10	9	0	0	54	807
11:00 AM	3	69	6	0	0	78	3	2	7	0	0	12	6	75	6	0	0	87	10	4	2	0	0	16	193
11:15 AM	5	81	6	0	0	92	0	1	6	0	0	7	1	74	7	0	0	82	7	1	1	0	0	9	190
11:30 AM	1	91	9	0	0	101	6	3	13	0	0	22	5	89	14	0	0	108	8	3	0	0	0	11	242
11:45 AM	2	109	9	0	0	120	1	3	6	0	0	10	5	80	7	1	0	93	14	0	1	0	0	15	238
Hourly Total	11	350	30	0	0	391	10	9	32	0	0	51	17	318	34	1	0	370	39	8	4	0	0	51	863
12:00 PM	1	84	13	0	0	98	9	2	7	0	0	18	5	98	11	0	0	114	8	1	4	0	0	13	243
12:15 PM	4	92	12	0	0	108	7	3	8	0	0	18	5	97	6	0	0	108	8	3	5	0	1	16	250
12:30 PM	8	101	9	0	0	118	7	7	10	0	0	24	8	110	14	0	2	132	15	4	1	0	0	20	294
12:45 PM	1	115	4	0	0	120	7	2	11	0	0	20	9	85	15	0	0	109	14	3	5	0	0	22	271
Hourly Total	14	392	38	0	0	444	30	14	36	0	0	80	27	390	46	0	2	463	45	11	15	0	1	71	1058
1:00 PM	3	92	6	0	0	101	11	3	8	0	0	22	7	92	11	0	0	110	15	4	2	0	0	21	254
1:15 PM	2	100	4	0	0	106	9	2	12	0	0	23	5	113	14	0	2	132	16	2	2	0	0	20	281
1:30 PM	3	112	6	0	1	121	9	4	9	0	0	22	10	90	12	0	0	112	12	6	2	0	0	20	275
1:45 PM	4	111	8	0	0	123	12	0	13	0	0	25	7	102	11	0	1	120	19	3	1	0	0	23	291
Hourly Total	12	415	24	0	1	451	41	9	42	0	0	92	29	397	48	0	3	474	62	15	7	0	0	84	1101
2:00 PM	4	164	13	0	0	181	22	4	8	0	0	34	11	130	11	0	1	152	21	5	2	0	1	28	395
2:15 PM	5	107	14	0	0	126	39	10	12	0	8	61	14	190	31	0	1	235	12	9	3	0	3	24	446

2:30 PM	7	109	15	0	0	131	16	5	9	0	2	30	8	140	19	0	1	167	18	5	5	0	0	28	356
2:45 PM	8	106	3	0	0	117	8	3	6	0	0	17	6	130	12	0	0	148	0	3	3	0	0	6	288
Hourly Total	24	486	45	0	0	555	85	22	35	0	10	142	39	590	73	0	3	702	51	22	13	0	4	86	1485
3:00 PM	15	177	17	0	0	209	10	3	10	0	0	23	12	114	13	0	3	139	24	10	12	0	0	46	417
3:15 PM	8	140	8	0	0	156	14	7	6	0	0	27	10	133	23	1	2	167	12	1	9	0	0	22	372
3:30 PM	6	138	11	0	0	155	8	8	6	0	0	22	11	101	23	0	2	135	16	5	5	0	0	26	338
3:45 PM	7	126	8	0	0	141	6	4	7	0	0	17	11	121	17	0	0	149	5	6	2	0	1	13	320
Hourly Total	36	581	44	0	0	661	38	22	29	0	0	89	44	469	76	1	7	590	57	22	28	0	1	107	1447
4:00 PM	5	150	12	0	0	167	10	3	8	0	0	21	9	118	18	0	0	145	33	8	11	0	0	52	385
4:15 PM	7	126	13	0	0	146	10	2	6	0	0	18	7	126	13	0	12	146	11	4	2	0	11	17	327
4:30 PM	11	117	9	0	0	137	9	2	9	0	0	20	20	107	17	0	0	144	31	7	5	0	0	43	344
4:45 PM	10	114	21	0	0	145	12	2	12	0	0	26	14	131	15	0	0	160	13	5	2	0	0	20	351
Hourly Total	33	507	55	0	0	595	41	9	35	0	0	85	50	482	63	0	12	595	88	24	20	0	11	132	1407
5:00 PM	3	124	7	0	0	134	13	3	7	0	0	23	10	146	12	0	6	168	17	2	2	0	1	21	346
5:15 PM	8	132	15	0	0	155	21	5	8	0	0	34	8	140	20	0	0	168	9	4	5	0	0	18	375
5:30 PM	12	118	10	0	0	140	18	2	8	0	0	28	14	157	16	0	0	187	17	13	4	0	0	34	389
5:45 PM	8	95	12	0	0	115	13	7	6	0	0	26	10	145	11	0	0	166	7	4	5	0	0	16	323
Hourly Total	31	469	44	0	0	544	65	17	29	0	0	111	42	588	59	0	6	689	50	23	16	0	1	89	1433
Grand Total	212	4620	416	0	1	5248	466	148	358	0	15	972	337	4570	524	3	39	5434	630	197	161	0	19	988	12642
Approach %	4.0	88.0	7.9	0.0	-	-	47.9	15.2	36.8	0.0	-	-	6.2	84.1	9.6	0.1	-	-	63.8	19.9	16.3	0.0	-	-	-
Total %	1.7	36.5	3.3	0.0	-	41.5	3.7	1.2	2.8	0.0	-	7.7	2.7	36.1	4.1	0.0	-	43.0	5.0	1.6	1.3	0.0	-	7.8	-
Lights	204	4378	409	0	-	4991	458	132	353	0	-	943	331	4286	512	3	-	5132	614	185	153	0	-	952	12018
% Lights	96.2	94.8	98.3	-	-	95.1	98.3	89.2	98.6	-	-	97.0	98.2	93.8	97.7	100.0	-	94.4	97.5	93.9	95.0	-	-	96.4	95.1
Other Vehicles	8	242	7	0	-	257	8	16	5	0	-	29	6	284	12	0	-	302	16	12	8	0	-	36	624
% Other Vehicles	3.8	5.2	1.7	-	-	4.9	1.7	10.8	1.4	-	-	3.0	1.8	6.2	2.3	0.0	-	5.6	2.5	6.1	5.0	-	-	3.6	4.9
Pedestrians	-	-	-	-	1	-	-	-	-	-	15	-	-	-	-	-	39	-	-	-	-	-	19	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

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Count Name: Grove Ave at E 42nd St
Site Code:
Start Date: 12/11/2014
Page No: 1

Turning Movement Data

Start Time	Grove Ave Southbound					E 42nd St Westbound					Grove Ave Northbound					
	Thru	Left	U-Turn	Peds	App. Total	Right	Left	U-Turn	Peds	App. Total	Right	Thru	U-Turn	Peds	App. Total	Int. Total
7:00 AM	123	39	0	1	162	23	15	0	0	38	12	77	0	0	89	289
7:15 AM	118	108	0	0	226	65	35	0	0	100	9	103	0	0	112	438
7:30 AM	106	42	0	0	148	37	31	0	0	68	16	109	0	0	125	341
7:45 AM	85	10	0	0	95	10	27	0	0	37	3	77	0	0	80	212
Hourly Total	432	199	0	1	631	135	108	0	0	243	40	366	0	0	406	1280
8:00 AM	90	7	0	0	97	5	4	0	0	9	6	74	0	0	80	186
8:15 AM	98	15	0	0	113	1	7	0	0	8	4	65	0	0	69	190
8:30 AM	92	10	0	0	102	3	12	0	0	15	14	97	0	0	111	228
8:45 AM	101	21	0	0	122	8	14	0	0	22	8	72	0	0	80	224
Hourly Total	381	53	0	0	434	17	37	0	0	54	32	308	0	0	340	828
9:00 AM	84	14	0	0	98	20	13	0	0	33	7	79	0	0	86	217
9:15 AM	57	9	0	0	66	11	10	0	0	21	13	71	0	0	84	171
9:30 AM	82	7	1	0	90	11	9	0	0	20	13	61	1	0	75	185
9:45 AM	56	10	0	0	66	9	16	0	0	25	9	65	0	0	74	165
Hourly Total	279	40	1	0	320	51	48	0	0	99	42	276	1	0	319	738
10:00 AM	61	9	0	0	70	8	12	0	0	20	12	71	0	0	83	173
10:15 AM	75	7	0	0	82	7	14	0	0	21	15	74	1	0	90	193
10:30 AM	68	16	0	0	84	16	19	0	0	35	9	71	0	0	80	199
10:45 AM	72	10	0	0	82	13	7	0	0	20	18	74	0	0	92	194
Hourly Total	276	42	0	0	318	44	52	0	0	96	54	290	1	0	345	759
11:00 AM	86	15	0	0	101	12	9	0	0	21	18	96	0	0	114	236
11:15 AM	85	12	0	0	97	9	16	0	0	25	16	73	0	0	89	211
11:30 AM	84	11	0	0	95	12	5	0	0	17	10	74	0	0	84	196
11:45 AM	85	16	0	0	101	13	3	0	0	16	13	67	0	0	80	197
Hourly Total	340	54	0	0	394	46	33	0	0	79	57	310	0	0	367	840
12:00 PM	101	9	0	0	110	5	18	0	0	23	13	96	0	0	109	242
12:15 PM	92	17	0	0	109	19	19	0	0	38	19	78	0	0	97	244
12:30 PM	109	19	0	0	128	30	19	0	0	49	16	90	0	0	106	283
12:45 PM	101	17	0	0	118	18	18	0	0	36	12	85	0	0	97	251
Hourly Total	403	62	0	0	465	72	74	0	0	146	60	349	0	0	409	1020
1:00 PM	98	12	0	0	110	15	11	0	0	26	22	99	0	0	121	257
1:15 PM	96	13	0	0	109	18	16	0	0	34	18	117	0	0	135	278
1:30 PM	94	12	0	0	106	12	14	0	0	26	22	83	0	0	105	237
1:45 PM	101	29	0	0	130	14	14	0	0	28	23	101	0	0	124	282
Hourly Total	389	66	0	0	455	59	55	0	0	114	85	400	0	0	485	1054
2:00 PM	111	55	0	0	166	15	18	0	0	33	26	76	0	0	102	301
2:15 PM	104	33	0	0	137	103	40	0	0	143	25	144	0	0	169	449
2:30 PM	106	12	0	0	118	31	21	0	1	52	23	159	1	0	183	353

2:45 PM	104	21	0	0	125	17	13	0	0	30	16	113	0	0	129	284
Hourly Total	425	121	0	0	546	166	92	0	1	258	90	492	1	0	583	1387
3:00 PM	161	11	0	0	172	30	21	0	1	51	20	132	0	0	152	375
3:15 PM	161	18	0	0	179	27	17	0	0	44	22	168	0	0	190	413
3:30 PM	134	19	1	0	154	22	22	0	1	44	18	161	1	0	180	378
3:45 PM	140	12	0	0	152	12	15	0	0	27	19	159	0	0	178	357
Hourly Total	596	60	1	0	657	91	75	0	2	166	79	620	1	0	700	1523
4:00 PM	177	21	0	0	198	14	17	0	0	31	28	138	0	0	166	395
4:15 PM	131	15	0	0	146	13	18	0	0	31	22	121	0	0	143	320
4:30 PM	125	14	0	0	139	6	17	0	0	23	36	116	0	0	152	314
4:45 PM	123	25	0	0	148	21	20	0	0	41	36	132	0	0	168	357
Hourly Total	556	75	0	0	631	54	72	0	0	126	122	507	0	0	629	1386
5:00 PM	114	24	0	0	138	18	20	0	0	38	33	169	0	0	202	378
5:15 PM	126	20	0	0	146	19	26	0	0	45	29	157	0	0	186	377
5:30 PM	118	13	0	0	131	28	13	0	0	41	36	156	0	0	192	364
5:45 PM	84	18	0	0	102	14	17	0	0	31	23	146	0	0	169	302
Hourly Total	442	75	0	0	517	79	76	0	0	155	121	628	0	0	749	1421
Grand Total	4519	847	2	1	5368	814	722	0	3	1536	782	4546	4	0	5332	12236
Approach %	84.2	15.8	0.0	-	-	53.0	47.0	0.0	-	-	14.7	85.3	0.1	-	-	-
Total %	36.9	6.9	0.0	-	43.9	6.7	5.9	0.0	-	12.6	6.4	37.2	0.0	-	43.6	-
Lights	4287	832	1	-	5120	783	710	0	-	1493	762	4296	3	-	5061	11674
% Lights	94.9	98.2	50.0	-	95.4	96.2	98.3	-	-	97.2	97.4	94.5	75.0	-	94.9	95.4
Other Vehicles	232	15	1	-	248	31	12	0	-	43	20	250	1	-	271	562
% Other Vehicles	5.1	1.8	50.0	-	4.6	3.8	1.7	-	-	2.8	2.6	5.5	25.0	-	5.1	4.6
Pedestrians	-	-	-	1	-	-	-	-	3	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-

URS Corp. : Akron (OH)
URS Corporation 564 White Pond Dr.

Akron, Ohio, United States 44320
(330) 836-9111 steve.schindler@urs.com

Count Name: Grove Ave at Fairless Dr
Site Code:
Start Date: 12/11/2014

Turning Movement Data

Start Time	Grove Ave Southbound						Fairless Dr Westbound						Grove Ave Northbound						Chevrolet Dealer Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
7:00 AM	0	105	28	0	0	133	25	1	35	0	0	61	61	60	0	1	0	122	1	0	0	0	0	1	317
7:15 AM	0	117	48	0	0	165	46	1	56	0	0	103	32	78	0	0	0	110	0	0	0	0	0	0	378
7:30 AM	0	104	23	0	0	127	29	0	50	0	0	79	24	67	1	0	0	92	0	0	0	0	0	0	298
7:45 AM	0	92	10	0	0	102	11	4	45	0	0	60	26	79	3	0	0	108	1	0	0	0	0	1	271
Hourly Total	0	418	109	0	0	527	111	6	186	0	0	303	143	284	4	1	0	432	2	0	0	0	0	2	1264
8:00 AM	2	93	17	0	0	112	14	3	22	0	0	39	20	57	0	0	0	77	0	1	1	0	0	2	230
8:15 AM	3	82	13	0	0	98	13	0	27	0	0	40	16	59	2	0	0	77	2	2	1	0	0	5	220
8:30 AM	0	92	17	0	0	109	22	3	39	0	0	64	21	97	3	0	0	121	1	0	2	0	0	3	297
8:45 AM	6	86	25	0	1	117	11	0	49	0	0	60	21	59	1	0	1	81	3	0	5	0	1	8	266
Hourly Total	11	353	72	0	1	436	60	6	137	0	0	203	78	272	6	0	1	356	6	3	9	0	1	18	1013
9:00 AM	3	70	22	0	0	95	28	0	31	0	0	59	15	61	3	0	0	79	3	2	1	0	0	6	239
9:15 AM	1	53	10	0	1	64	19	3	24	0	1	46	19	60	1	1	0	81	1	2	2	0	0	5	196
9:30 AM	2	83	10	0	0	95	6	3	27	0	0	36	20	74	2	0	0	96	1	1	2	0	0	4	231
9:45 AM	5	53	9	0	0	67	14	1	30	0	0	45	20	59	6	0	0	85	2	2	5	0	0	9	206
Hourly Total	11	259	51	0	1	321	67	7	112	0	1	186	74	254	12	1	0	341	7	7	10	0	0	24	872
10:00 AM	1	65	9	0	0	75	7	2	23	0	0	32	30	68	2	0	0	100	4	1	3	0	0	8	215
10:15 AM	3	83	12	0	0	98	11	4	29	0	0	44	31	74	3	0	0	108	3	1	4	0	0	8	258
10:30 AM	4	71	12	0	0	87	9	2	19	0	0	30	14	72	1	1	0	88	3	1	4	0	0	8	213
10:45 AM	1	63	15	0	0	79	10	1	20	0	0	31	24	76	1	0	0	101	2	0	3	0	0	5	216
Hourly Total	9	282	48	0	0	339	37	9	91	0	0	137	99	290	7	1	0	397	12	3	14	0	0	29	902
11:00 AM	2	88	15	1	0	106	13	1	26	0	0	40	21	82	4	0	1	107	1	0	2	0	0	3	256
11:15 AM	1	82	8	0	0	91	12	0	32	0	0	44	24	71	1	1	1	97	2	0	0	0	0	2	234
11:30 AM	2	76	17	0	0	95	12	3	24	0	0	39	30	77	2	0	0	109	2	1	3	0	0	6	249
11:45 AM	2	72	22	1	0	97	18	2	19	0	0	39	36	56	6	1	0	99	7	0	2	0	0	9	244
Hourly Total	7	318	62	2	0	389	55	6	101	0	0	162	111	286	13	2	2	412	12	1	7	0	0	20	983
12:00 PM	1	105	16	0	0	122	18	1	29	0	0	48	43	84	4	0	0	131	2	3	4	0	0	9	310
12:15 PM	9	87	17	0	0	113	15	4	28	0	0	47	26	81	5	0	0	112	6	1	3	0	0	10	282
12:30 PM	5	106	15	0	0	126	22	2	39	0	0	63	35	84	2	0	0	121	6	2	5	0	0	13	323
12:45 PM	5	85	27	0	0	117	19	4	33	0	0	56	35	75	3	0	0	113	5	3	5	0	0	13	299
Hourly Total	20	383	75	0	0	478	74	11	129	0	0	214	139	324	14	0	0	477	19	9	17	0	0	45	1214
1:00 PM	5	85	15	0	0	105	26	3	31	0	0	60	42	85	5	0	0	132	2	2	9	0	0	13	310
1:15 PM	6	89	13	0	0	108	14	4	19	0	0	37	37	91	4	0	0	132	3	6	5	0	0	14	291
1:30 PM	5	103	20	0	0	128	20	4	38	0	0	62	33	75	4	0	0	112	1	4	5	0	0	10	312
1:45 PM	3	85	19	0	0	107	23	3	33	0	0	59	32	92	4	0	0	128	4	4	5	0	0	13	307
Hourly Total	19	362	67	0	0	448	83	14	121	0	0	218	144	343	17	0	0	504	10	16	24	0	0	50	1220
2:00 PM	4	100	27	0	0	131	27	7	41	0	0	75	44	78	4	1	0	127	2	4	2	0	0	8	341
2:15 PM	4	106	36	0	0	146	48	2	54	0	0	104	41	124	6	0	0	171	6	3	5	0	0	14	435

2:30 PM	5	93	21	0	0	119	31	2	59	0	2	92	46	121	4	0	0	171	1	3	5	0	0	9	391
2:45 PM	2	104	19	0	0	125	20	3	56	0	0	79	46	112	4	0	0	162	2	2	5	0	0	9	375
Hourly Total	15	403	103	0	0	521	126	14	210	0	2	350	177	435	18	1	0	631	11	12	17	0	0	40	1542
3:00 PM	4	150	22	0	0	176	27	4	39	0	0	70	42	116	4	0	0	162	8	2	1	0	0	11	419
3:15 PM	8	158	18	0	0	184	24	3	46	0	0	73	50	169	4	0	0	223	7	2	7	0	0	16	496
3:30 PM	4	140	17	0	0	161	17	4	61	0	1	82	46	144	7	0	0	197	5	3	6	0	0	14	454
3:45 PM	8	137	22	0	0	167	22	1	44	0	0	67	57	159	7	2	0	225	4	2	9	0	0	15	474
Hourly Total	24	585	79	0	0	688	90	12	190	0	1	292	195	588	22	2	0	807	24	9	23	0	0	56	1843
4:00 PM	5	160	19	1	0	185	24	2	32	0	0	58	57	132	5	1	1	195	2	2	9	0	0	13	451
4:15 PM	7	136	14	0	0	157	20	1	28	1	0	50	45	123	7	0	0	175	5	3	1	0	0	9	391
4:30 PM	2	120	20	0	1	142	27	3	36	0	1	66	62	120	4	0	0	186	4	5	11	0	0	20	414
4:45 PM	6	100	30	0	0	136	28	5	39	0	0	72	57	124	5	0	0	186	5	5	4	0	0	14	408
Hourly Total	20	516	83	1	1	620	99	11	135	1	1	246	221	499	21	1	1	742	16	15	25	0	0	56	1664
5:00 PM	9	128	22	0	2	159	34	2	41	0	0	77	59	170	4	0	0	233	5	3	6	0	0	14	483
5:15 PM	7	135	13	0	0	155	24	4	34	0	0	62	57	152	5	0	0	214	7	4	8	0	0	19	450
5:30 PM	3	114	22	1	1	140	33	6	38	0	0	77	70	128	1	0	0	199	2	4	8	0	0	14	430
5:45 PM	3	101	25	0	0	129	35	2	34	0	0	71	49	131	2	0	0	182	1	3	5	0	0	9	391
Hourly Total	22	478	82	1	3	583	126	14	147	0	0	287	235	581	12	0	0	828	15	14	27	0	0	56	1754
Grand Total	158	4357	831	4	6	5350	928	110	1559	1	5	2598	1616	4156	146	9	4	5927	134	89	173	0	1	396	14271
Approach %	3.0	81.4	15.5	0.1	-	-	35.7	4.2	60.0	0.0	-	-	27.3	70.1	2.5	0.2	-	-	33.8	22.5	43.7	0.0	-	-	-
Total %	1.1	30.5	5.8	0.0	-	37.5	6.5	0.8	10.9	0.0	-	18.2	11.3	29.1	1.0	0.1	-	41.5	0.9	0.6	1.2	0.0	-	2.8	-
Lights	156	4137	816	4	-	5113	901	109	1532	1	-	2543	1573	3931	142	9	-	5655	130	89	171	0	-	390	13701
% Lights	98.7	95.0	98.2	100.0	-	95.6	97.1	99.1	98.3	100.0	-	97.9	97.3	94.6	97.3	100.0	-	95.4	97.0	100.0	98.8	-	-	98.5	96.0
Other Vehicles	2	220	15	0	-	237	27	1	27	0	-	55	43	225	4	0	-	272	4	0	2	0	-	6	570
% Other Vehicles	1.3	5.0	1.8	0.0	-	4.4	2.9	0.9	1.7	0.0	-	2.1	2.7	5.4	2.7	0.0	-	4.6	3.0	0.0	1.2	-	-	1.5	4.0
Pedestrians	-	-	-	-	6	-	-	-	-	-	5	-	-	-	-	-	4	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Appendix B.1

Traffic Signal Warrant Analysis Results

Intersection 1
E Erie Ave (US 6) and Colorado Ave

SIGNAL WARRANT

INTERSECTION: Private Entrance and Colorado Ave and E Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		650	168	17	X	X	X	X		X	X	X						
8AM-9AM		700	160	18	X	X	X	X		X	X	X						
9AM-10AM		472	149	30			X	X		X		X						
10AM-11AM		524	155	15	X	X	X	X		X		X						
11AM-NOON		590	200	40	X	X	X	X		X		X						
NOON-1PM		612	203	34	X	X	X	X		X	X	X						
1PM-2PM		611	190	38	X	X	X	X		X	X	X						
2PM-3PM		749	223	33	X	X	X	X		X	X	X					X	
3PM-4PM		824	265	32	X	X	X	X	X	X	X	X					X	
4PM-5PM		834	242	26	X	X	X	X	X	X	X	X					X	
5PM-6PM		732	262	26	X	X	X	X		X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					10		11		2		8						4	0
WARRANT SATISFIED?					YES		YES		NO		YES						YES	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Private Entrance and Colorado Ave and E Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

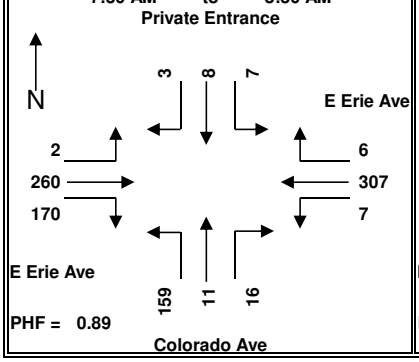
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

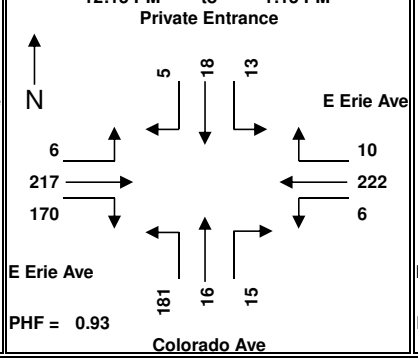
ADT Factor: 1.41
Intersection ID: 1

Start Time	Colorado Ave Northbound				Private Entrance Southbound				Total North South	E Erie Ave Eastbound				E Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	1928	132	157	84	117	159	33	29	2526	21	2659	1737	134	98	2701	82	81	7298	9824
	Percent Trucks =			4%	Percent Trucks =			9%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	2682	184	218	117	163	221	46	40	3514	29	3699	2417	186	136	3758	114	113	10153	13668
7:00 AM	28	2	3	6	2	2	1	1	38	0	49	41	4	1	42	3	2	136	174
7:15 AM	24	3	1	3	5	1	0	0	34	0	49	44	1	2	62	1	3	158	192
7:30 AM	42	4	5	4	0	2	2	2	55	1	51	43	5	0	69	2	1	166	221
7:45 AM	47	5	4	1	1	1	0	1	58	0	75	41	6	1	71	2	2	190	248
8:00 AM	33	2	3	2	3	3	0	0	44	1	76	49	6	2	96	0	4	224	268
8:15 AM	37	0	4	4	3	2	1	1	47	0	58	37	1	4	71	2	1	172	219
8:30 AM	39	1	3	2	1	0	0	1	44	0	34	63	3	0	64	3	3	164	208
8:45 AM	30	5	3	4	2	0	3	0	43	0	47	28	4	2	62	1	1	140	183
9:00 AM	36	5	1	1	3	6	2	0	53	0	31	31	1	2	48	1	0	113	166
9:15 AM	23	2	3	4	1	3	0	0	32	1	30	31	1	2	46	1	3	111	143
9:30 AM	31	1	2	3	2	6	0	1	42	0	33	30	1	4	52	2	2	121	163
9:45 AM	40	2	3	3	2	2	3	2	52	0	42	34	1	0	51	0	0	127	179
10:00 AM	30	4	2	2	1	3	0	0	40	0	46	27	4	3	38	3	2	117	157
10:15 AM	31	2	4	0	2	1	1	0	41	0	33	38	6	0	46	2	1	119	160
10:30 AM	40	5	2	2	2	2	0	0	51	1	54	36	3	4	59	0	1	154	205
10:45 AM	30	4	1	1	3	0	0	0	38	3	40	36	6	6	48	1	2	134	172
11:00 AM	33	5	2	3	4	4	0	0	48	1	44	35	4	4	62	0	4	146	194
11:15 AM	41	1	3	2	3	4	0	0	52	0	55	33	2	2	53	0	1	143	195
11:30 AM	48	5	6	2	3	6	1	1	69	0	54	31	0	3	46	4	3	138	207
11:45 AM	48	4	4	1	4	9	2	0	71	0	74	41	7	2	44	2	0	163	234
12:00 PM	42	1	2	3	3	4	0	2	52	0	47	39	3	1	51	5	10	143	195
12:15 PM	45	1	4	1	3	6	3	1	62	0	66	41	4	0	65	3	5	175	237
12:30 PM	40	5	5	3	4	3	2	1	59	4	43	41	4	1	55	3	0	147	206
12:45 PM	49	5	4	2	3	3	0	0	64	1	48	46	2	2	48	2	2	147	211
1:00 PM	47	5	2	3	3	6	0	2	63	1	60	42	1	3	54	2	1	162	225
1:15 PM	41	5	5	1	4	8	1	2	64	0	62	30	1	3	49	3	1	147	211
1:30 PM	39	2	6	3	3	5	0	0	55	0	60	46	3	3	46	5	0	160	215
1:45 PM	33	4	1	1	4	3	1	1	46	1	51	38	1	1	49	2	0	142	188
2:00 PM	40	5	3	2	4	6	3	1	61	1	70	35	2	3	63	3	3	175	236
2:15 PM	40	1	6	1	2	6	1	0	56	0	58	40	4	2	63	2	1	165	221
2:30 PM	58	2	11	1	1	3	0	0	75	0	94	40	5	0	62	2	1	198	273
2:45 PM	53	2	2	2	3	4	0	2	64	0	63	39	7	5	102	2	5	211	275
3:00 PM	65	1	4	3	3	7	1	0	81	1	80	39	4	2	59	3	4	184	265
3:15 PM	61	1	4	1	4	5	1	3	76	0	81	49	5	4	58	1	3	193	269
3:30 PM	61	3	3	1	3	3	0	2	73	1	87	47	4	2	89	5	1	231	304
3:45 PM	55	3	4	2	2	3	0	0	67	1	91	43	3	6	75	0	3	216	283
4:00 PM	62	5	4	0	2	4	1	0	78	0	105	54	8	4	75	1	1	239	317
4:15 PM	52	2	6	0	2	3	1	0	66	0	85	42	1	0	78	2	1	207	273
4:30 PM	49	2	3	1	3	4	0	1	61	0	86	54	0	1	66	1	0	208	269
4:45 PM	53	2	2	2	1	5	0	1	63	0	65	31	1	2	81	1	0	180	243
5:00 PM	79	4	9	0	5	5	2	0	104	0	74	45	1	3	73	2	1	197	301
5:15 PM	50	2	4	0	2	2	0	0	60	2	90	41	1	2	70	0	1	205	265
5:30 PM	60	4	2	1	6	2	0	0	74	0	64	31	2	4	93	0	1	192	266
5:45 PM	43	3	2	0	0	2	0	0	50	0	54	35	1	0	47	2	0	138	188

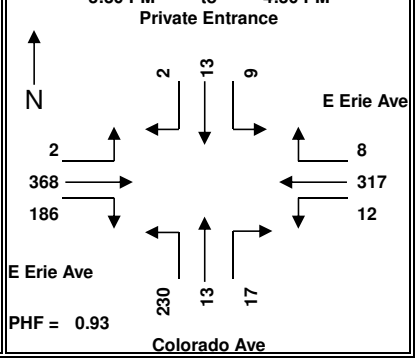
AM Peak Hour
7:30 AM to 8:30 AM



Midday Peak Hour
12:15 PM to 1:15 PM

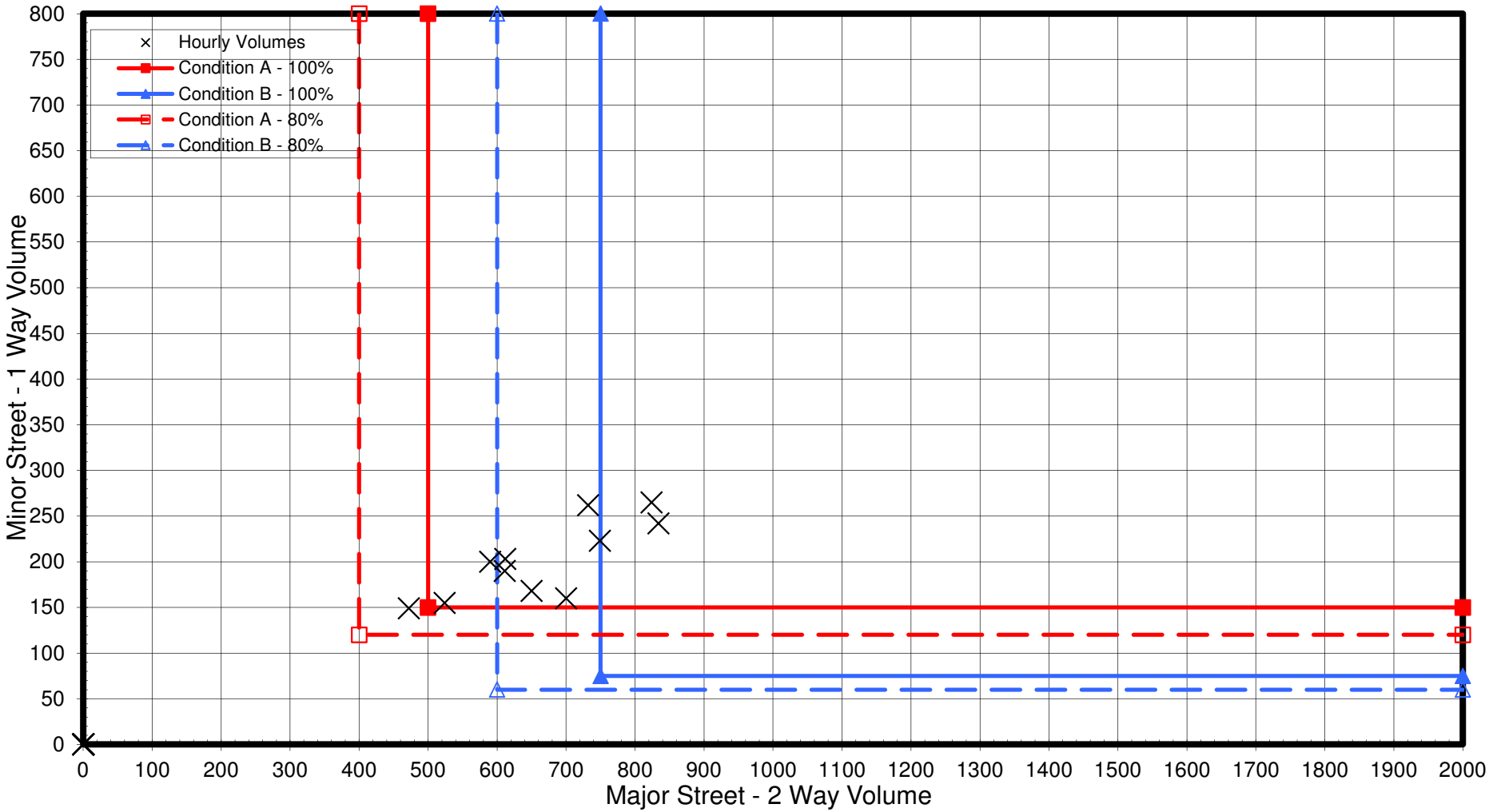


PM Peak Hour
3:30 PM to 4:30 PM



Notes:

WARRANT 1 - Conditions A & B



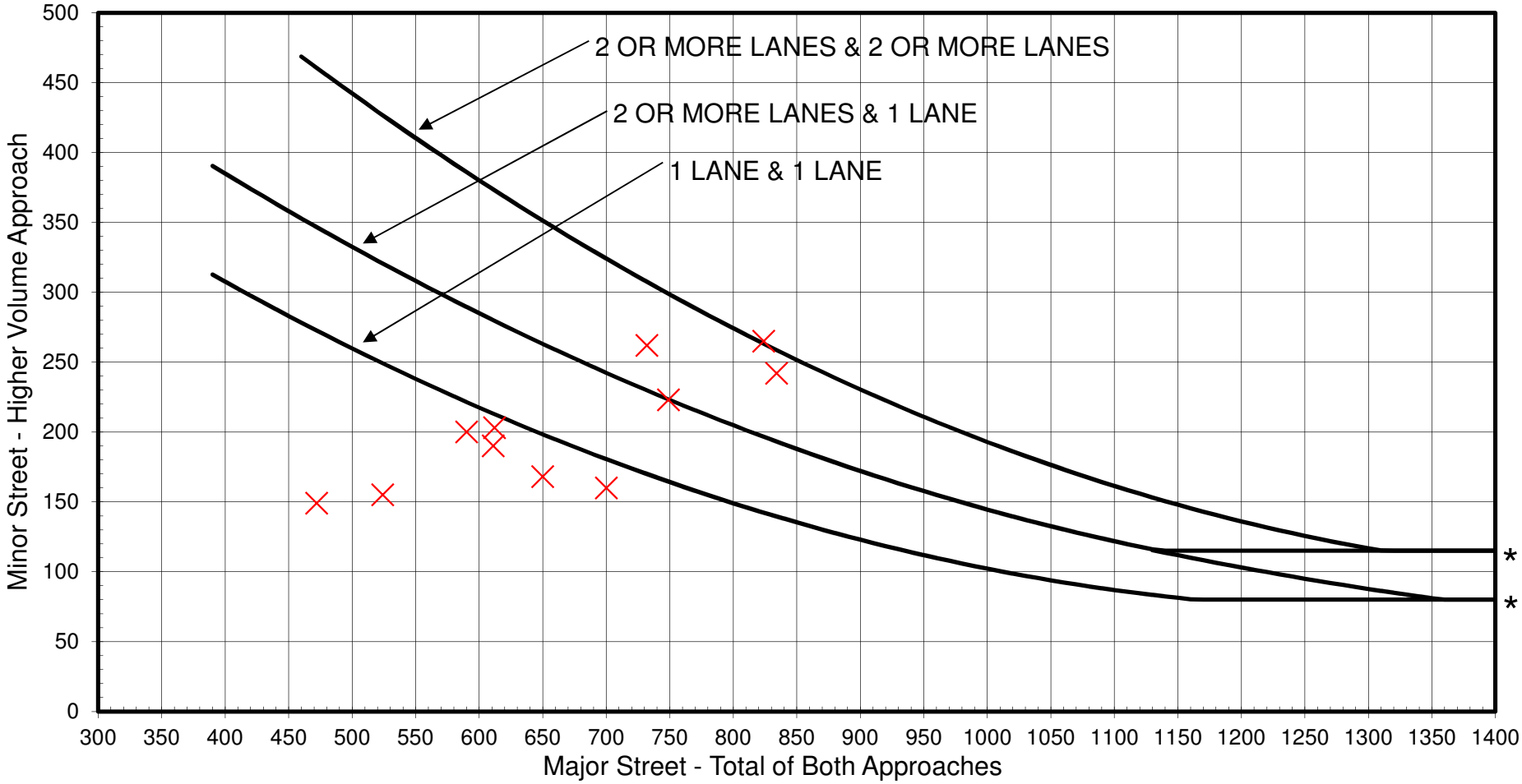
		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Private Entrance and Colora	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	10 Hours Meet	Yes
Condition B (100%) =	2 Hours Meet	No
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	8 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Private Entrance and Colora	1
Road Location =	Urban	

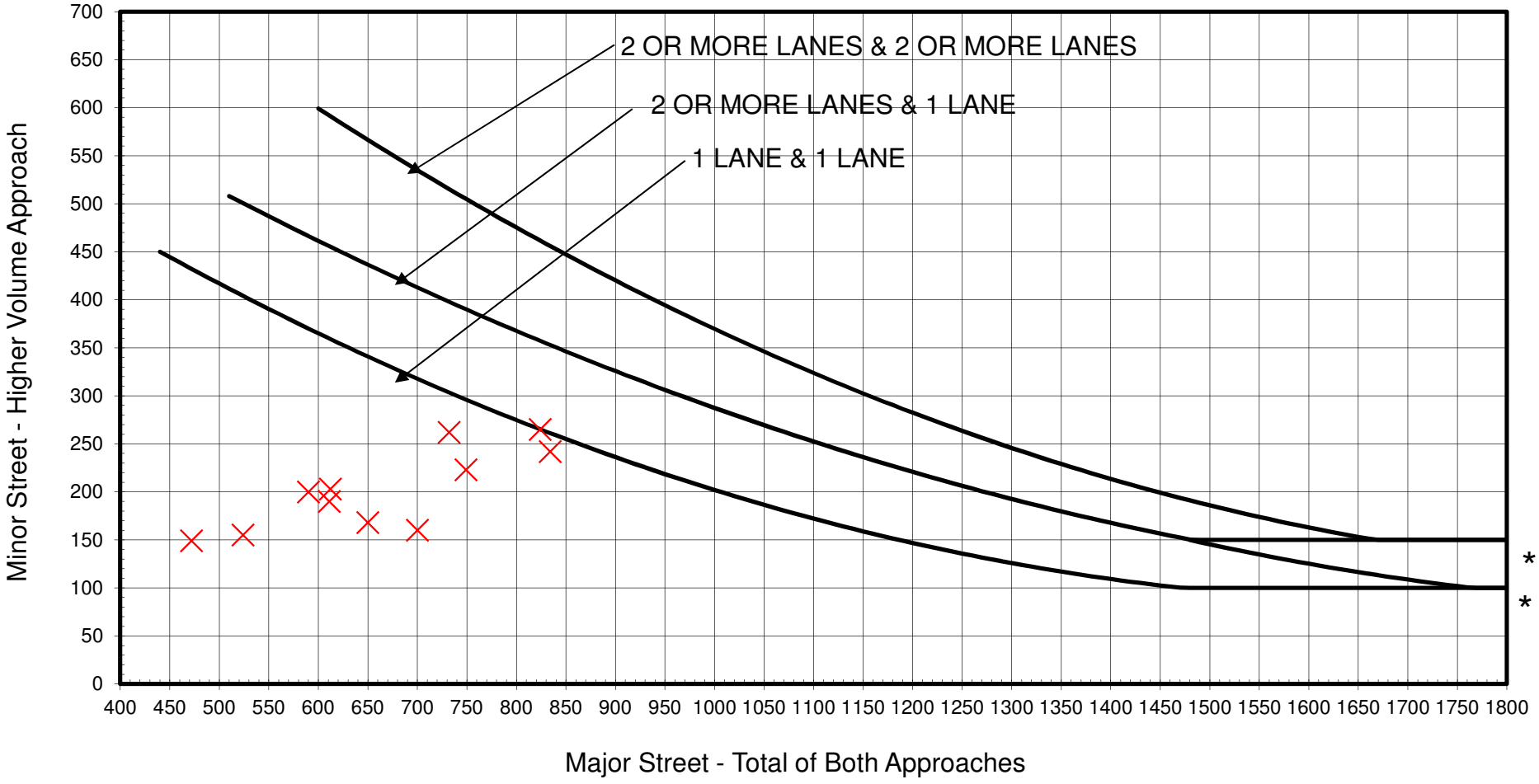
		Warrant Met?
Warrant 2 (Urban) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Private Entrance and Colora	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.2

Traffic Signal Warrant Analysis Results

Intersection 2
E Erie Ave (US 6) and Idaho Ave

SIGNAL WARRANT

INTERSECTION: Private Entrance and Idaho Ave and E Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1	X	X	X	500	150	400	120	750	75	600	60						
NORM	2+				600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		499	14	4			X											
8AM-9AM		529	13	0	X		X											
9AM-10AM		336	1	0														
10AM-11AM		364	8	0														
11AM-NOON		447	6	1			X											
NOON-1PM		419	16	1			X											
1PM-2PM		465	4	0			X											
2PM-3PM		580	18	0	X		X											
3PM-4PM		644	16	1	X		X				X							
4PM-5PM		656	11	0	X		X				X							
5PM-6PM		579	11	0	X		X											
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH
ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Private Entrance and Idaho Ave and E Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

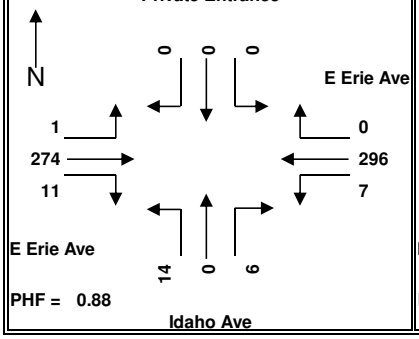
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 2

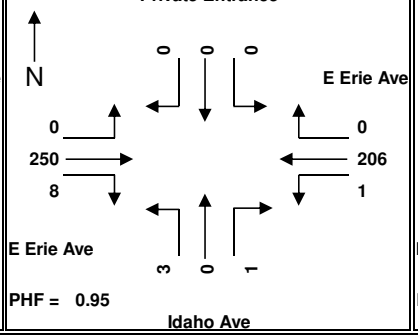
Start	Idaho Ave Northbound				Private Entrance Southbound				Total North	E Erie Ave Eastbound				E Erie Ave Westbound				Total East	Total All
Time	LT	THRU	RT	Truck	LT	THRU	RT	Truck	South	LT	THRU	RT	Truck	LT	THRU	RT	Truck	West	Dir.
Totals	89	0	29	13	4	0	3	0	125	3	2691	96	93	31	2695	2	70	5518	5643
	Percent Trucks =			11%	Percent Trucks =			0%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	124	0	40	18	6	0	4	0	174	4	3744	134	129	43	3749	3	97	7677	7851
7:00 AM	0	0	1	0	2	0	1	0	4	0	53	2	1	0	45	0	1	100	104
7:15 AM	1	0	0	0	1	0	0	0	2	0	50	6	0	1	57	0	4	114	116
7:30 AM	3	0	2	1	0	0	0	0	5	0	58	2	4	1	69	0	2	130	135
7:45 AM	6	0	1	1	0	0	0	0	7	0	82	1	6	6	66	0	1	155	162
8:00 AM	4	0	1	0	0	0	0	0	5	0	76	5	5	0	88	0	3	169	174
8:15 AM	1	0	2	0	0	0	0	0	3	1	58	3	3	0	73	0	1	135	138
8:30 AM	2	0	1	2	0	0	0	0	3	0	49	1	3	0	63	0	1	113	116
8:45 AM	2	0	0	0	0	0	0	0	2	0	45	0	2	0	67	0	2	112	114
9:00 AM	0	0	0	0	0	0	0	0	0	0	30	1	0	1	49	0	0	81	81
9:15 AM	0	0	0	0	0	0	0	0	0	0	35	0	0	1	44	0	3	80	80
9:30 AM	0	0	0	0	0	0	0	0	0	0	27	0	0	0	52	0	2	79	79
9:45 AM	1	0	0	0	0	0	0	0	1	0	43	1	2	0	52	0	0	96	97
10:00 AM	1	0	0	0	0	0	0	0	1	0	42	0	3	0	38	0	2	80	81
10:15 AM	0	0	0	0	0	0	0	0	0	0	34	3	0	0	42	0	1	79	79
10:30 AM	3	0	0	0	0	0	0	0	3	0	51	4	1	2	52	0	0	109	112
10:45 AM	3	0	1	0	0	0	0	0	4	0	41	1	2	0	54	0	2	96	100
11:00 AM	2	0	0	1	0	0	0	0	2	0	43	2	2	1	64	0	3	110	112
11:15 AM	1	0	0	0	0	0	0	0	1	0	61	1	0	0	50	0	3	112	113
11:30 AM	2	0	1	0	0	0	0	0	3	0	52	2	1	1	53	1	3	109	112
11:45 AM	0	0	0	0	0	0	1	0	1	0	68	1	5	1	46	0	1	116	117
12:00 PM	3	0	2	3	1	0	0	0	6	0	50	1	4	0	46	0	6	97	103
12:15 PM	4	0	0	0	0	0	0	0	4	0	58	4	1	1	51	0	3	114	118
12:30 PM	4	0	0	0	0	0	0	0	4	0	51	1	5	0	51	0	0	103	107
12:45 PM	3	0	0	0	0	0	0	0	3	1	51	6	0	0	47	0	1	105	108
1:00 PM	2	0	0	0	0	0	0	0	2	0	58	2	2	1	57	0	1	118	120
1:15 PM	0	0	0	0	0	0	0	0	0	0	76	1	0	0	46	0	0	123	123
1:30 PM	0	0	1	0	0	0	0	0	1	0	61	2	1	0	49	0	1	112	113
1:45 PM	1	0	0	0	0	0	0	0	1	0	55	3	1	0	54	0	1	112	113
2:00 PM	3	0	0	0	0	0	0	0	3	0	69	1	2	0	64	0	3	134	137
2:15 PM	1	0	1	1	0	0	0	0	2	0	61	3	3	0	57	0	1	121	123
2:30 PM	6	0	2	2	0	0	0	0	8	0	87	9	4	2	66	0	0	164	172
2:45 PM	5	0	0	1	0	0	0	0	5	0	66	3	3	1	91	0	3	161	166
3:00 PM	1	0	1	1	0	0	1	0	3	0	72	4	5	0	53	0	2	129	132
3:15 PM	2	0	0	0	0	0	0	0	2	0	84	4	6	0	70	0	3	158	160
3:30 PM	6	0	2	0	0	0	0	0	8	0	89	4	6	1	94	0	2	188	196
3:45 PM	4	0	0	0	0	0	0	0	4	0	86	2	3	0	80	1	2	169	173
4:00 PM	1	0	1	0	0	0	0	0	2	0	99	2	4	0	74	0	3	175	177
4:15 PM	2	0	3	0	0	0	0	0	5	1	86	0	1	0	82	0	1	169	174
4:30 PM	0	0	0	0	0	0	0	0	0	0	91	1	1	0	69	0	0	161	161
4:45 PM	3	0	1	0	0	0	0	0	4	0	61	0	1	2	88	0	1	151	155
5:00 PM	0	0	1	0	0	0	0	0	1	0	79	1	0	2	70	0	1	152	153
5:15 PM	3	0	2	0	0	0	0	0	5	0	94	2	0	2	75	0	0	173	178
5:30 PM	2	0	0	0	0	0	0	0	2	0	57	3	0	1	90	0	0	151	153
5:45 PM	1	0	2	0	0	0	0	0	3	0	52	1	0	3	47	0	0	103	106

AM Peak Hour
7:30 AM to 8:30 AM
Private Entrance



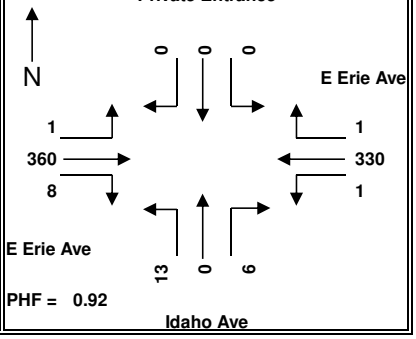
PHF = 0.88

Midday Peak Hour
1:00 PM to 2:00 PM
Private Entrance



PHF = 0.95

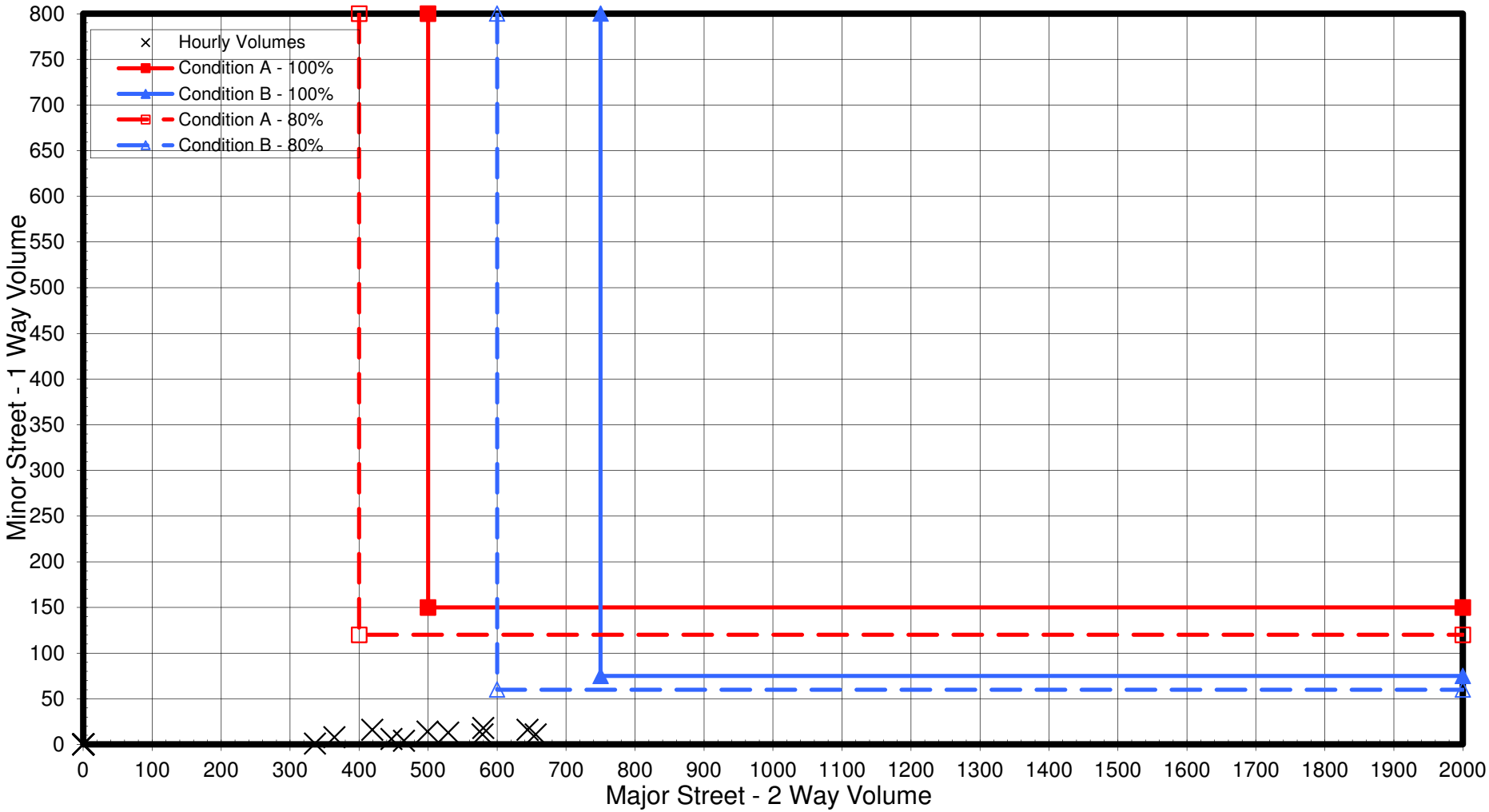
PM Peak Hour
3:30 PM to 4:30 PM
Private Entrance



PHF = 0.92

Notes:

WARRANT 1 - Conditions A & B



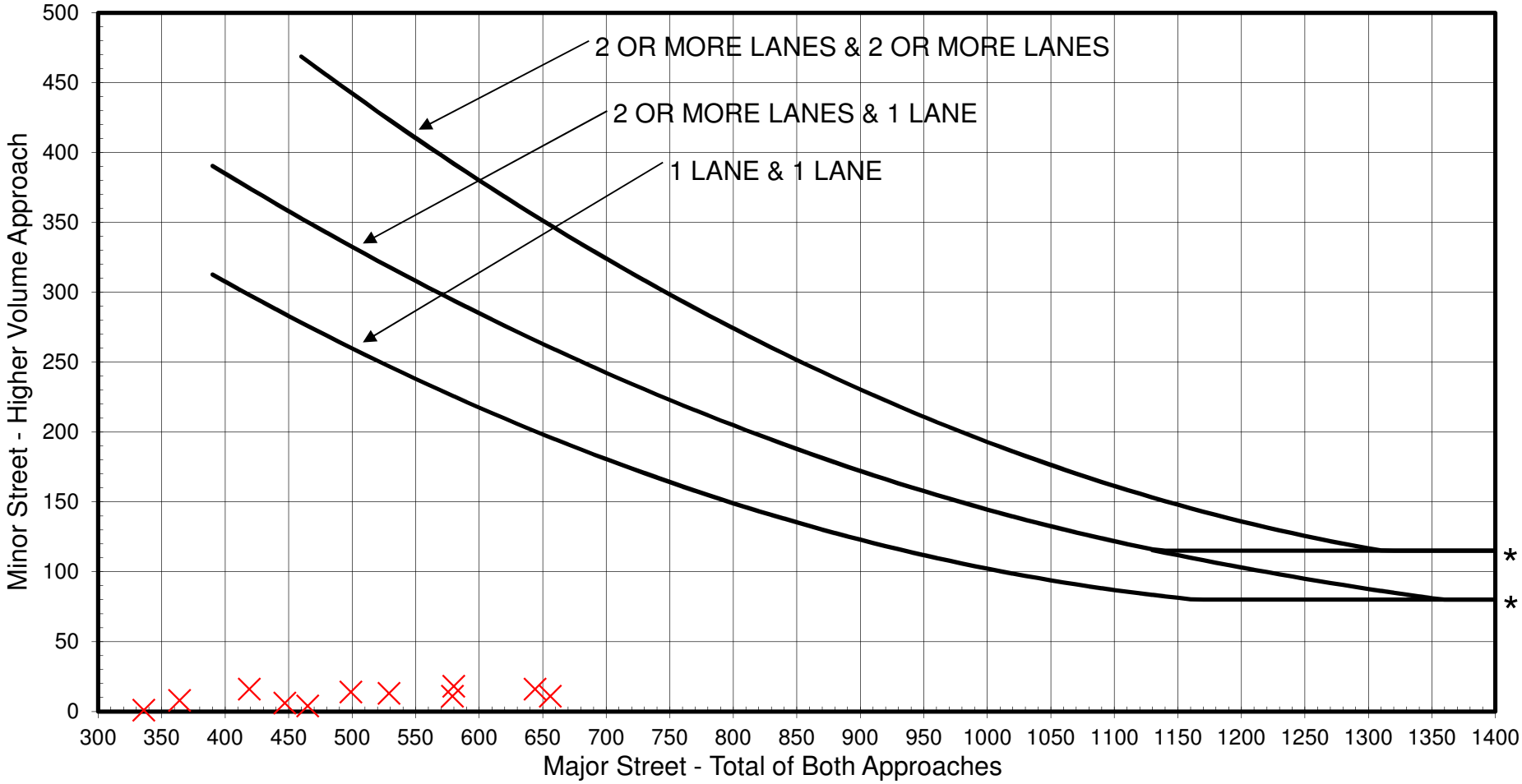
		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Private Entrance and Idaho A	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Private Entrance and Idaho A	1
Road Location =	Urban	

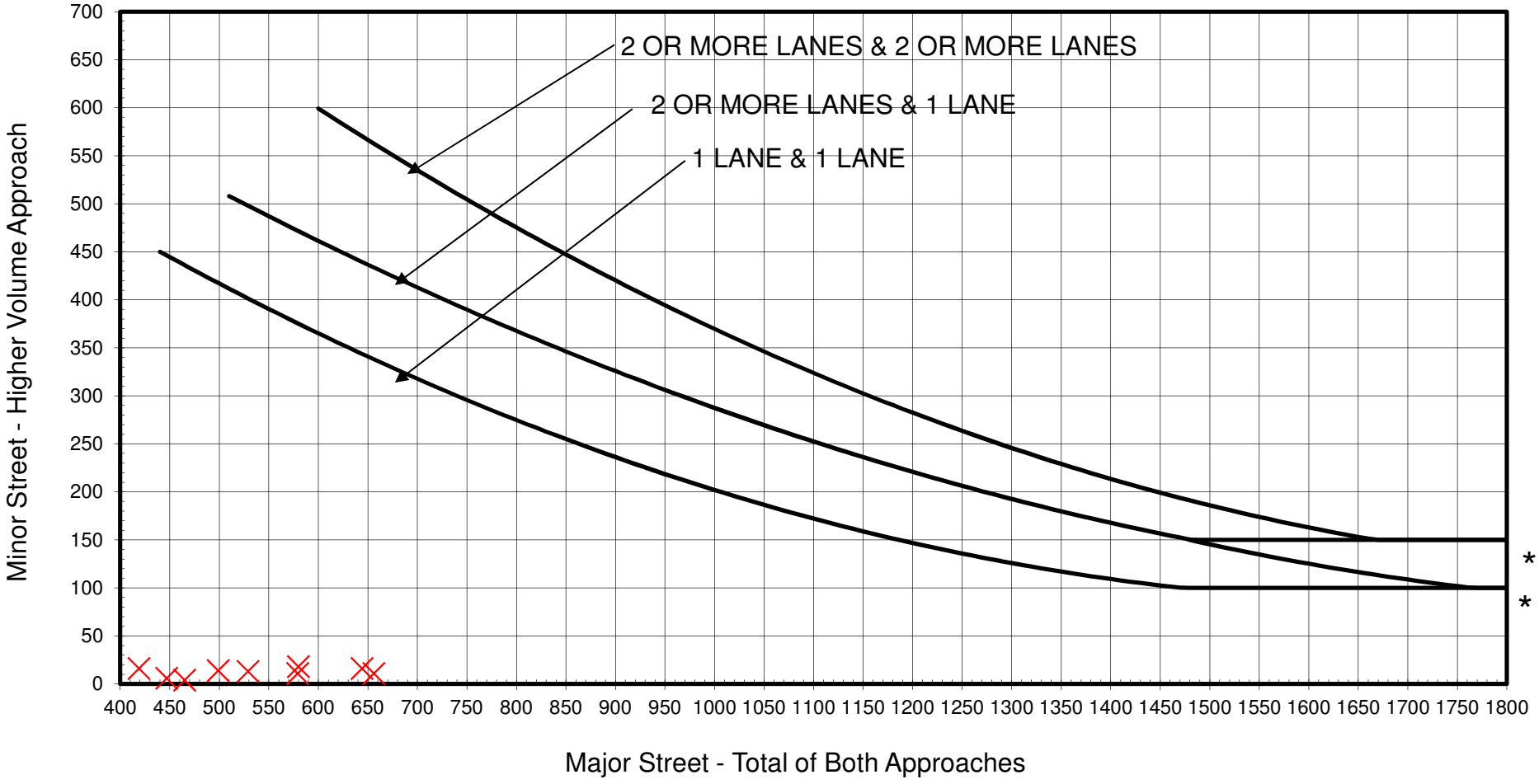
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Private Entrance and Idaho A	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
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Appendix B.3

Traffic Signal Warrant Analysis Results

Intersection 3
E Erie Ave (US 6) and Kansas Ave

SIGNAL WARRANT

INTERSECTION: School Exit and Kansas Ave and E Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1	X	X	X	500	150	400	120	750	75	600	60						
NORM	2+				600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		517	70	53	X		X					X						
8AM-9AM		478	80	106			X			X		X						
9AM-10AM		321	46	7														
10AM-11AM		350	37	9														
11AM-NOON		409	61	18			X					X						
NOON-1PM		386	55	6														
1PM-2PM		444	40	7			X											
2PM-3PM		515	88	102	X		X			X		X						
3PM-4PM		610	97	47	X		X			X	X	X						
4PM-5PM		642	77	15	X		X			X	X	X						
5PM-6PM		555	92	11	X		X			X		X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		2						0	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
School Exit and Kansas Ave and E Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

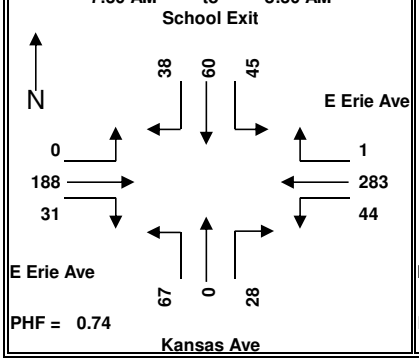
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 3

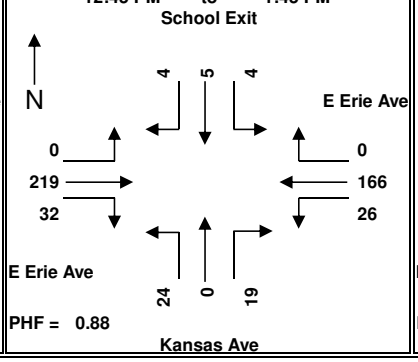
Start Time	Kansas Ave Northbound				School Exit Southbound				Total North South	E Erie Ave Eastbound				E Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	432	3	308	22	140	132	109	7	1124	0	2190	339	64	327	2368	3	65	5227	6351
	Percent Trucks =			3%	Percent Trucks =			2%		Percent Trucks =			3%	Percent Trucks =			2%		
ADT	601	4	429	31	195	184	152	10	1564	0	3047	472	89	455	3294	4	90	7272	8836
7:00 AM	5	0	6	0	2	1	1	0	15	0	46	6	1	16	49	0	2	117	132
7:15 AM	7	0	5	0	5	6	0	0	23	0	44	2	0	16	57	0	3	119	142
7:30 AM	10	0	8	0	4	7	2	0	31	0	57	5	3	15	74	0	1	151	182
7:45 AM	23	0	6	1	9	13	3	2	54	0	43	11	1	13	62	1	1	130	184
8:00 AM	28	0	7	1	30	34	29	0	128	0	44	6	4	5	84	0	2	139	267
8:15 AM	6	0	7	0	2	6	4	0	25	0	44	9	1	11	63	0	1	127	152
8:30 AM	14	0	5	2	0	0	0	0	19	0	41	8	2	11	54	0	0	114	133
8:45 AM	6	0	7	3	0	0	1	0	14	0	36	6	3	8	48	0	1	98	112
9:00 AM	6	0	10	0	0	0	0	0	16	0	25	4	0	5	41	0	0	75	91
9:15 AM	7	0	3	0	1	0	0	0	11	0	24	8	0	10	36	0	2	78	89
9:30 AM	7	0	3	0	1	2	2	0	15	0	25	3	1	4	50	0	2	82	97
9:45 AM	5	0	5	0	1	0	0	0	11	0	29	12	1	3	42	0	1	86	97
10:00 AM	3	0	6	0	0	1	0	0	10	0	35	5	2	6	29	0	0	75	85
10:15 AM	3	0	1	0	1	0	0	0	5	0	24	7	0	5	42	0	1	78	83
10:30 AM	7	0	4	0	1	1	0	0	13	0	43	5	0	6	44	0	0	98	111
10:45 AM	9	0	4	0	1	2	2	0	18	0	35	7	2	9	48	0	2	99	117
11:00 AM	10	2	8	0	0	1	1	0	22	0	35	3	1	6	57	0	6	101	123
11:15 AM	5	0	7	0	5	1	7	0	25	0	47	9	0	3	38	0	1	97	122
11:30 AM	8	0	3	1	1	0	2	0	14	0	46	9	0	4	48	0	3	107	121
11:45 AM	11	1	6	0	0	0	0	0	18	0	51	9	4	5	39	0	0	104	122
12:00 PM	7	0	10	2	0	0	0	0	17	0	36	5	1	3	40	0	8	84	101
12:15 PM	8	0	5	1	0	0	0	0	13	0	50	9	2	4	40	1	1	104	117
12:30 PM	7	0	5	0	0	0	0	0	12	0	37	8	3	6	48	0	1	99	111
12:45 PM	7	0	6	1	2	2	2	0	19	0	45	9	0	8	37	0	0	99	118
1:00 PM	7	0	1	0	1	2	1	0	12	0	50	11	2	8	45	0	1	114	126
1:15 PM	7	0	8	3	0	0	0	0	15	0	70	7	0	4	46	0	1	127	142
1:30 PM	3	0	4	0	1	1	1	0	10	0	54	5	1	6	38	0	1	103	113
1:45 PM	6	0	4	0	0	0	0	0	10	0	48	5	1	7	40	0	0	100	110
2:00 PM	12	0	6	0	0	2	1	0	21	0	49	14	1	7	58	0	3	128	149
2:15 PM	12	0	8	0	0	2	0	0	22	0	43	5	1	4	63	0	2	115	137
2:30 PM	21	0	6	4	3	3	3	2	36	0	62	8	3	12	71	0	1	153	189
2:45 PM	15	0	8	2	41	26	21	3	111	0	48	6	2	5	60	0	2	119	230
3:00 PM	9	0	11	0	1	3	2	0	26	0	67	12	4	6	45	0	1	130	156
3:15 PM	15	0	11	0	6	1	1	0	34	0	63	9	5	5	59	0	2	136	170
3:30 PM	17	0	11	1	3	4	5	0	40	0	79	10	3	11	89	0	1	189	229
3:45 PM	13	0	10	0	8	6	7	0	44	0	70	12	3	9	64	0	5	155	199
4:00 PM	10	0	4	0	4	1	0	0	19	0	92	11	3	12	67	0	1	182	201
4:15 PM	10	0	17	0	2	3	2	0	34	0	69	13	0	3	72	0	1	157	191
4:30 PM	12	0	7	0	0	0	1	0	20	0	77	11	0	7	58	0	3	153	173
4:45 PM	10	0	7	0	2	0	0	0	19	0	56	7	2	12	75	0	0	150	169
5:00 PM	15	0	16	0	1	0	1	0	33	0	75	3	1	5	61	0	1	144	177
5:15 PM	11	0	11	0	0	1	5	0	28	0	74	11	0	8	66	1	0	160	188
5:30 PM	11	0	11	0	1	0	1	0	24	0	54	6	0	7	81	0	0	148	172
5:45 PM	7	0	10	0	0	0	1	0	18	0	48	8	0	7	40	0	0	103	121

AM Peak Hour
7:30 AM to 8:30 AM



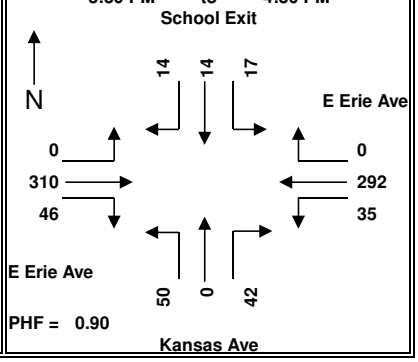
PHF = 0.74

Midday Peak Hour
12:45 PM to 1:45 PM



PHF = 0.88

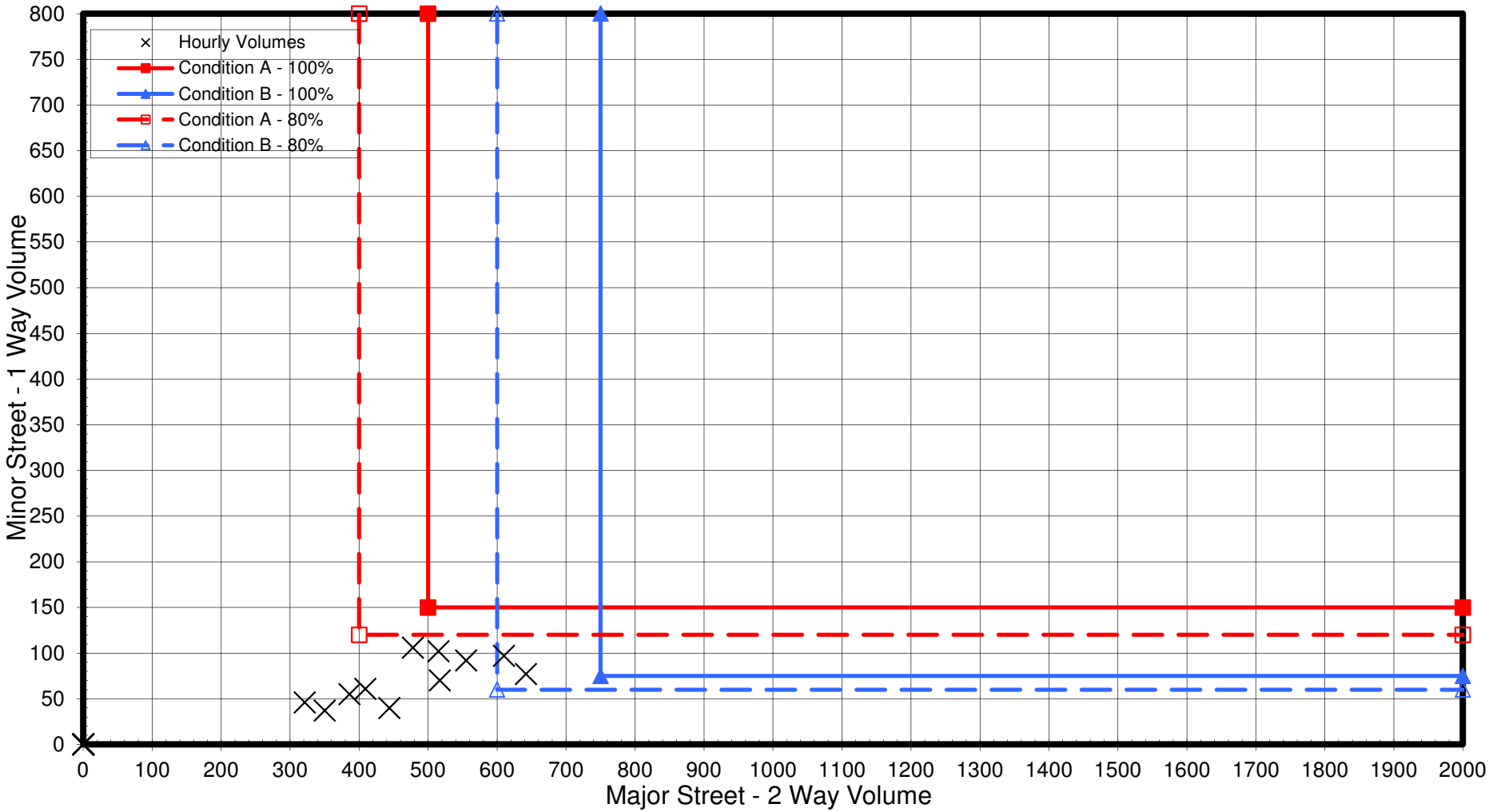
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.90

Notes:

WARRANT 1 - Conditions A & B



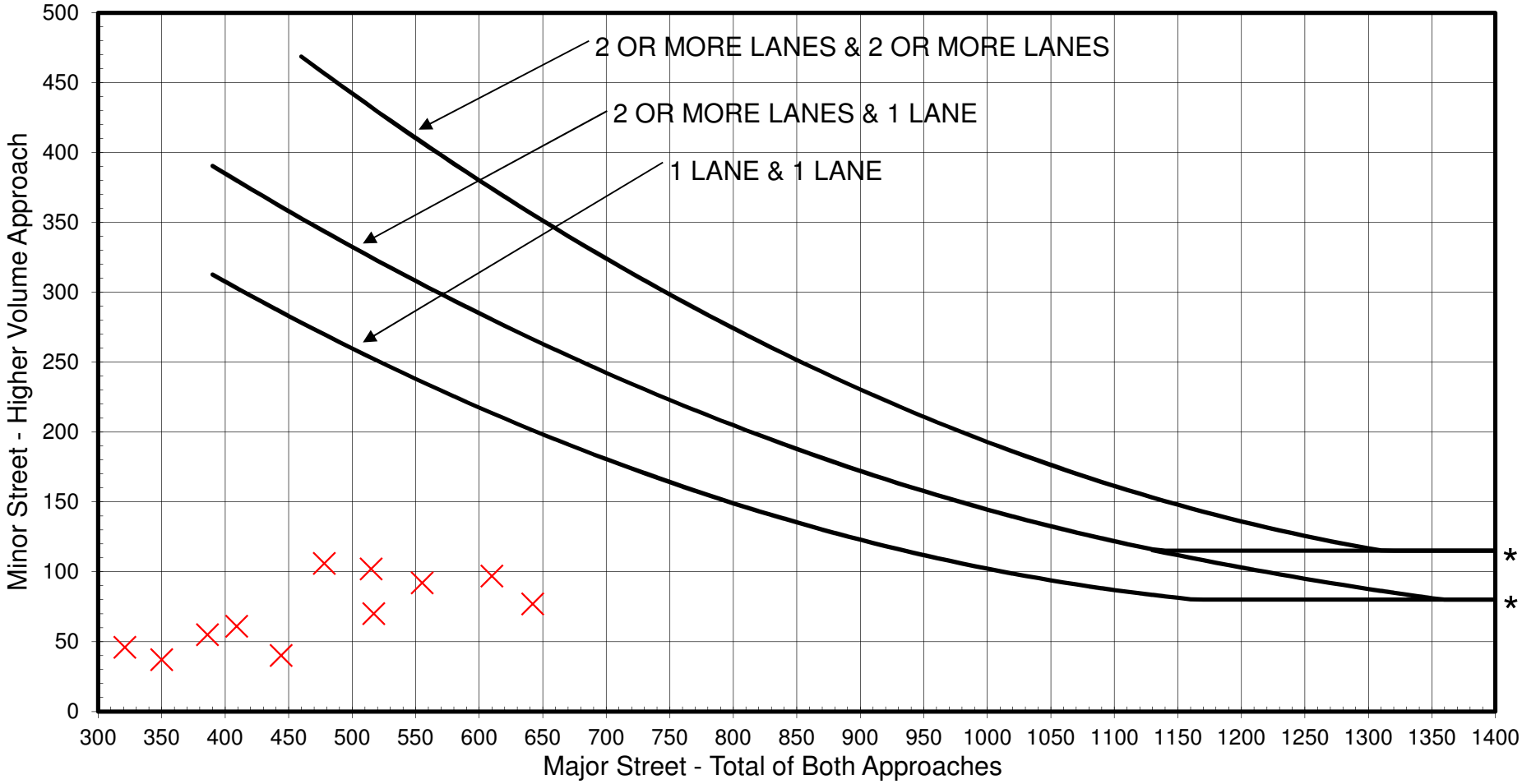
		Lanes
Major Road =	E Erie Ave	1
Minor Road =	School Exit and Kansas Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	2 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	School Exit and Kansas Ave	1
Road Location =	Urban	

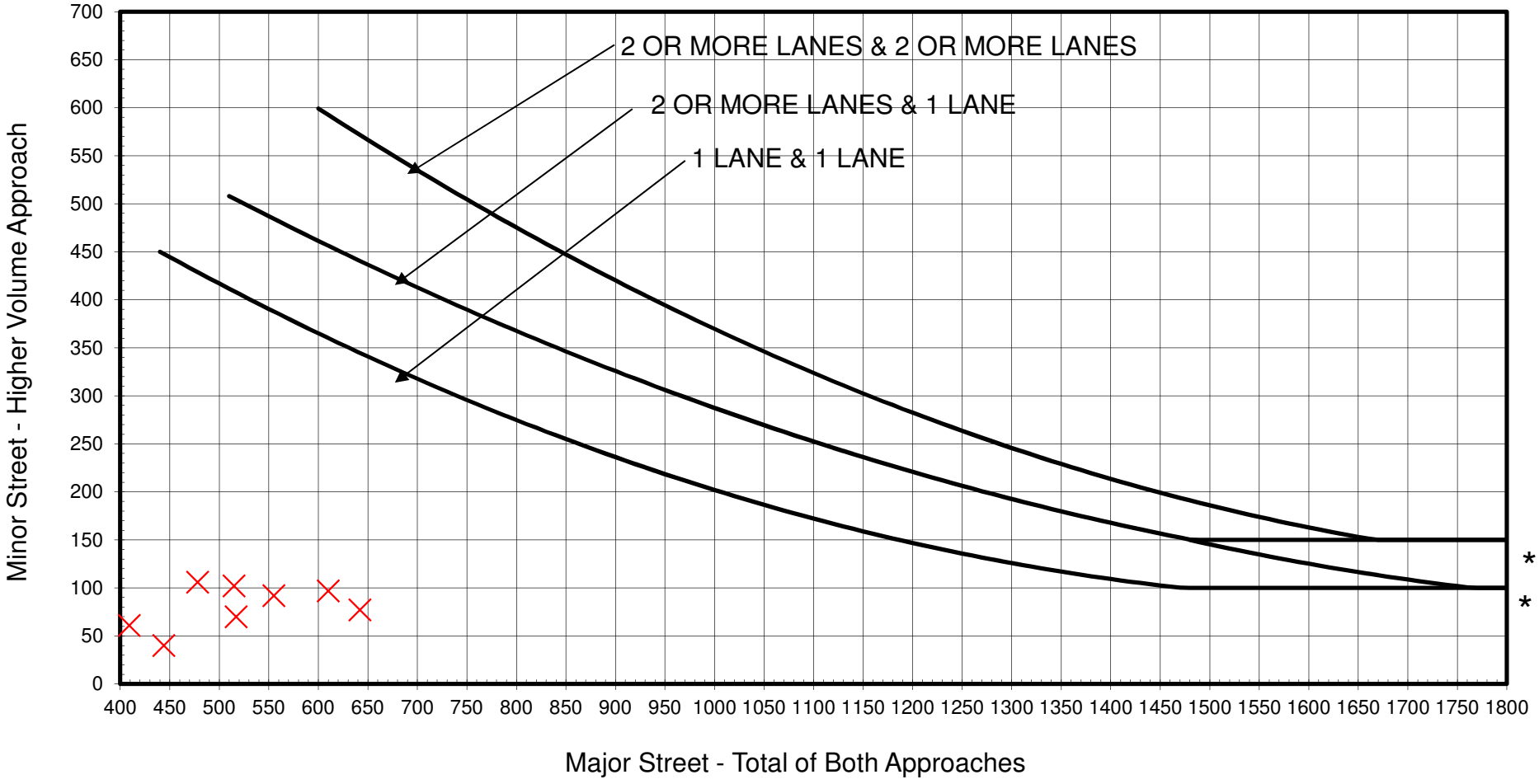
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	School Exit and Kansas Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.4

Traffic Signal Warrant Analysis Results

Intersection 4
E Erie Ave (US 6) and Maine Ave

SIGNAL WARRANT

INTERSECTION: Maine Ave and E Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 0 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X		X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		514	15	0	X		X											
8AM-9AM		487	38	0			X											
9AM-10AM		313	19	0														
10AM-11AM		334	12	0														
11AM-NOON		388	17	0														
NOON-1PM		387	13	0														
1PM-2PM		432	17	0			X											
2PM-3PM		535	19	0	X		X											
3PM-4PM		608	33	0	X		X				X							
4PM-5PM		622	21	0	X		X				X							
5PM-6PM		580	15	0	X		X											
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Maine Ave and E Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

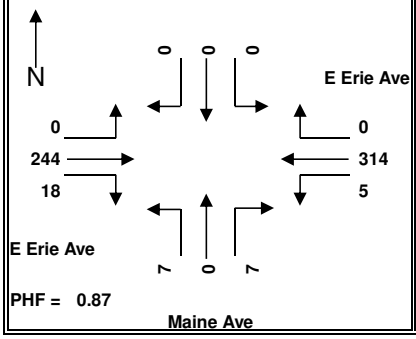
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 4

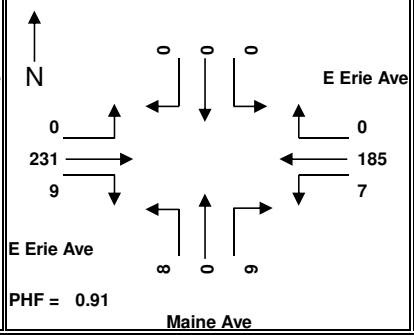
Start Time	Maine Ave Northbound LT	THRU	RT	Truck	Southbound LT	THRU	RT	Truck	Total North South	E Erie Ave Eastbound LT	THRU	RT	Truck	E Erie Ave Westbound LT	THRU	RT	Truck	Total East West	Total All Dir.
Totals	146	0	73	6	0	0	0	0	219	0	2490	131	72	56	2523	0	70	5200	5419
	Percent Trucks =			3%	Percent Trucks =			0%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	203	0	102	8	0	0	0	0	305	0	3464	182	100	78	3510	0	97	7234	7539
7:00 AM	3	0	2	0	0	0	0	0	5	0	39	6	0	0	55	0	2	100	105
7:15 AM	1	0	3	0	0	0	0	0	4	0	60	4	0	0	73	0	2	137	141
7:30 AM	3	0	1	0	0	0	0	0	4	0	58	7	2	1	79	0	2	145	149
7:45 AM	1	0	1	0	0	0	0	0	2	0	57	4	3	1	70	0	1	132	134
8:00 AM	2	0	2	0	0	0	0	0	4	0	69	3	4	3	92	0	4	167	171
8:15 AM	2	0	3	0	0	0	0	0	5	0	53	6	2	2	65	0	1	126	131
8:30 AM	9	0	5	0	0	0	0	0	14	0	32	15	1	3	49	0	1	99	113
8:45 AM	9	0	6	0	0	0	0	0	15	0	37	5	6	3	50	0	1	95	110
9:00 AM	5	0	2	0	0	0	0	0	7	0	39	3	1	1	44	0	1	87	94
9:15 AM	4	0	2	0	0	0	0	0	6	0	27	2	0	0	37	0	2	66	72
9:30 AM	2	0	0	0	0	0	0	0	2	0	32	0	0	0	46	0	2	78	80
9:45 AM	4	0	0	0	0	0	0	0	4	0	31	2	1	0	49	0	1	82	86
10:00 AM	1	0	1	0	0	0	0	0	2	0	39	1	2	3	35	0	0	78	80
10:15 AM	2	0	1	0	0	0	0	0	3	0	27	2	0	0	38	0	1	67	70
10:30 AM	5	0	1	0	0	0	0	0	6	0	44	0	0	1	47	0	0	92	98
10:45 AM	0	0	1	0	0	0	0	0	1	0	34	1	1	1	61	0	2	97	98
11:00 AM	3	0	1	0	0	0	0	0	4	0	44	1	1	1	53	0	4	99	103
11:15 AM	3	0	2	0	0	0	0	0	5	0	58	2	1	2	42	0	1	104	109
11:30 AM	1	0	0	0	0	0	0	0	1	0	42	4	2	0	47	0	3	93	94
11:45 AM	4	0	3	1	0	0	0	0	7	0	50	2	1	0	40	0	0	92	99
12:00 PM	3	0	2	0	0	0	0	0	5	0	56	0	3	0	41	0	5	97	102
12:15 PM	2	0	0	1	0	0	0	0	2	0	52	0	0	2	40	0	1	94	96
12:30 PM	0	0	3	1	0	0	0	0	3	0	46	2	5	2	52	0	0	102	105
12:45 PM	1	0	2	0	0	0	0	0	3	0	44	2	1	2	46	0	1	94	97
1:00 PM	3	0	1	0	0	0	0	0	4	0	54	4	1	0	52	0	1	110	114
1:15 PM	3	0	3	1	0	0	0	0	6	0	74	1	1	1	42	0	1	118	124
1:30 PM	0	0	2	0	0	0	0	0	2	0	51	1	3	4	49	0	1	105	107
1:45 PM	2	0	3	0	0	0	0	0	5	0	52	3	1	2	42	0	2	99	104
2:00 PM	3	0	0	0	0	0	0	0	3	0	53	2	1	2	64	0	5	121	124
2:15 PM	2	0	0	0	0	0	0	0	2	0	48	2	1	0	62	0	2	112	114
2:30 PM	6	0	2	1	0	0	0	0	8	0	60	8	6	1	68	0	2	137	145
2:45 PM	3	0	3	1	0	0	0	0	6	0	93	2	3	0	70	0	3	165	171
3:00 PM	1	0	2	0	0	0	0	0	3	0	67	5	2	0	52	0	1	124	127
3:15 PM	2	0	0	0	0	0	0	0	2	0	84	7	2	2	63	0	2	156	158
3:30 PM	14	0	4	0	0	0	0	0	18	0	68	7	3	3	83	0	1	161	179
3:45 PM	8	0	2	0	0	0	0	0	10	0	96	1	1	1	69	0	6	167	177
4:00 PM	8	0	2	0	0	0	0	0	10	0	84	6	3	2	64	0	0	156	166
4:15 PM	7	0	0	0	0	0	0	0	7	0	99	2	1	1	71	0	1	173	180
4:30 PM	3	0	0	0	0	0	0	0	3	0	72	1	2	0	65	0	3	138	141
4:45 PM	1	0	0	0	0	0	0	0	1	0	68	1	2	3	83	0	0	155	156
5:00 PM	1	0	1	0	0	0	0	0	2	0	90	0	2	0	73	0	1	163	165
5:15 PM	5	0	1	0	0	0	0	0	6	0	88	1	0	4	67	0	0	160	166
5:30 PM	3	0	2	0	0	0	0	0	5	0	64	1	0	1	87	0	0	153	158
5:45 PM	1	0	1	0	0	0	0	0	2	0	55	2	0	1	46	0	0	104	106

AM Peak Hour
7:15 AM to 8:15 AM



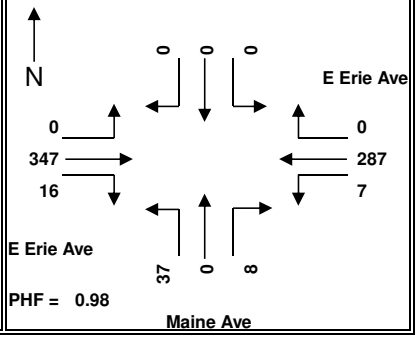
PHF = 0.87

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.91

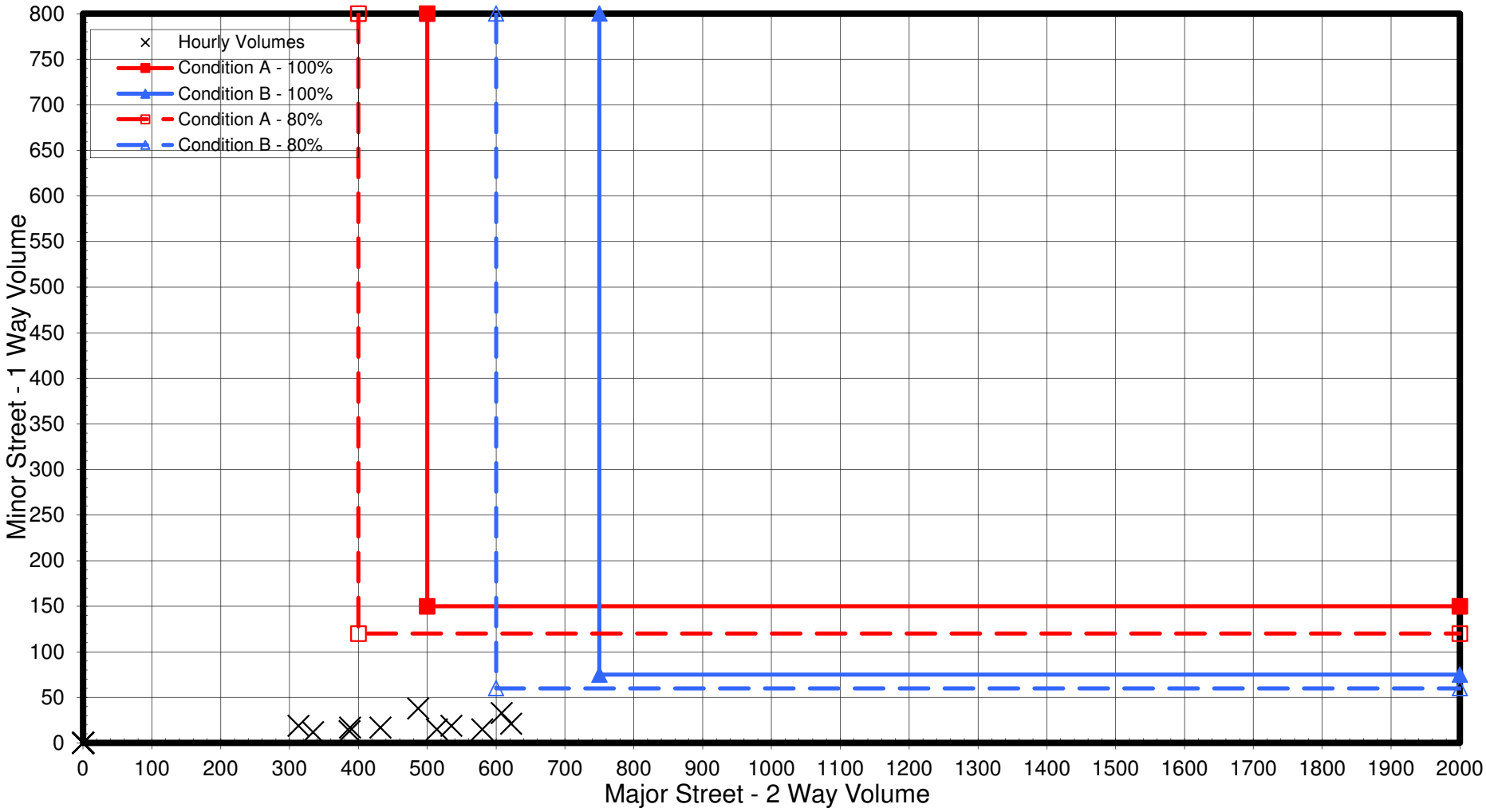
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.98

Notes:

WARRANT 1 - Conditions A & B



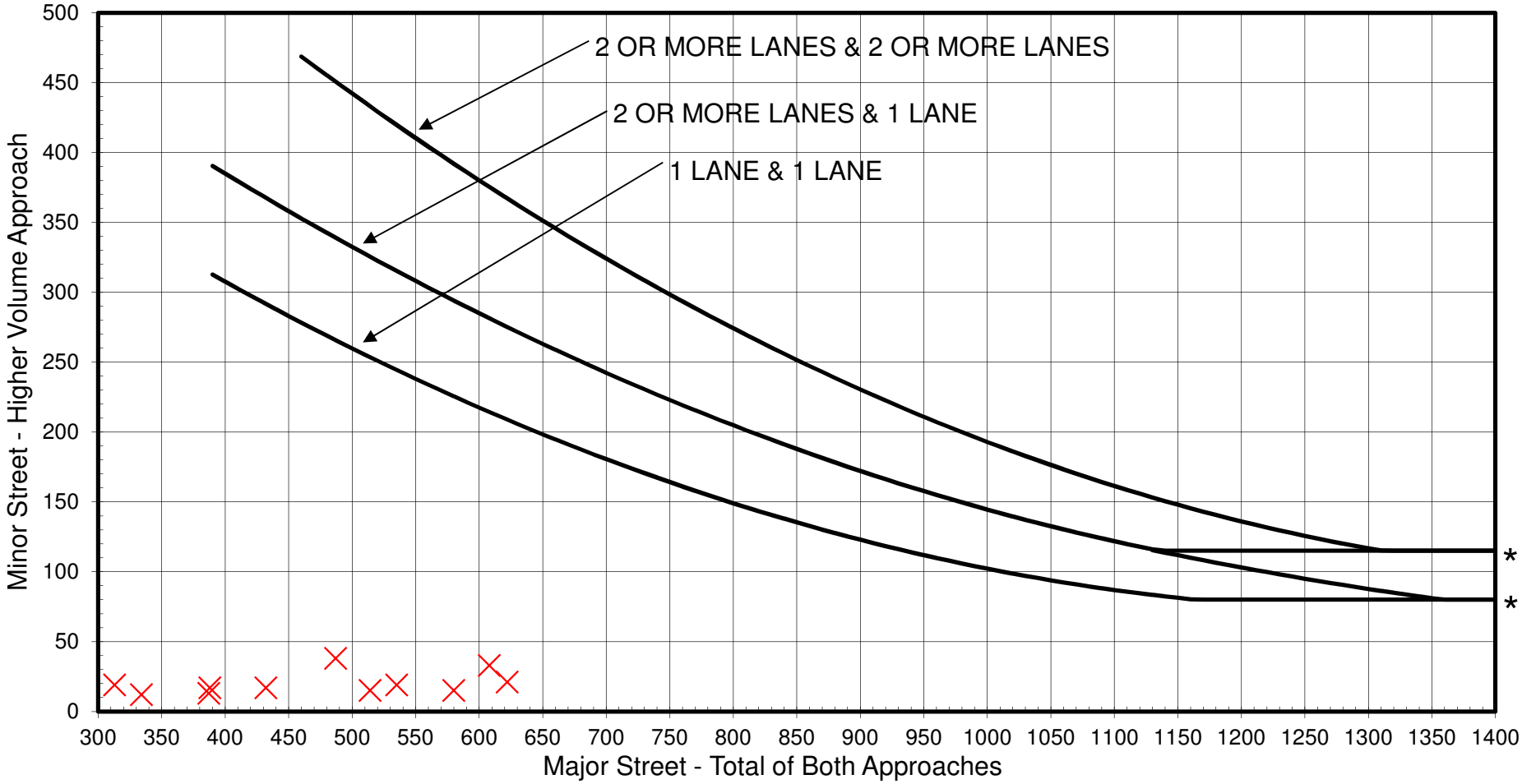
		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Maine Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Maine Ave	1
Road Location =	Urban	

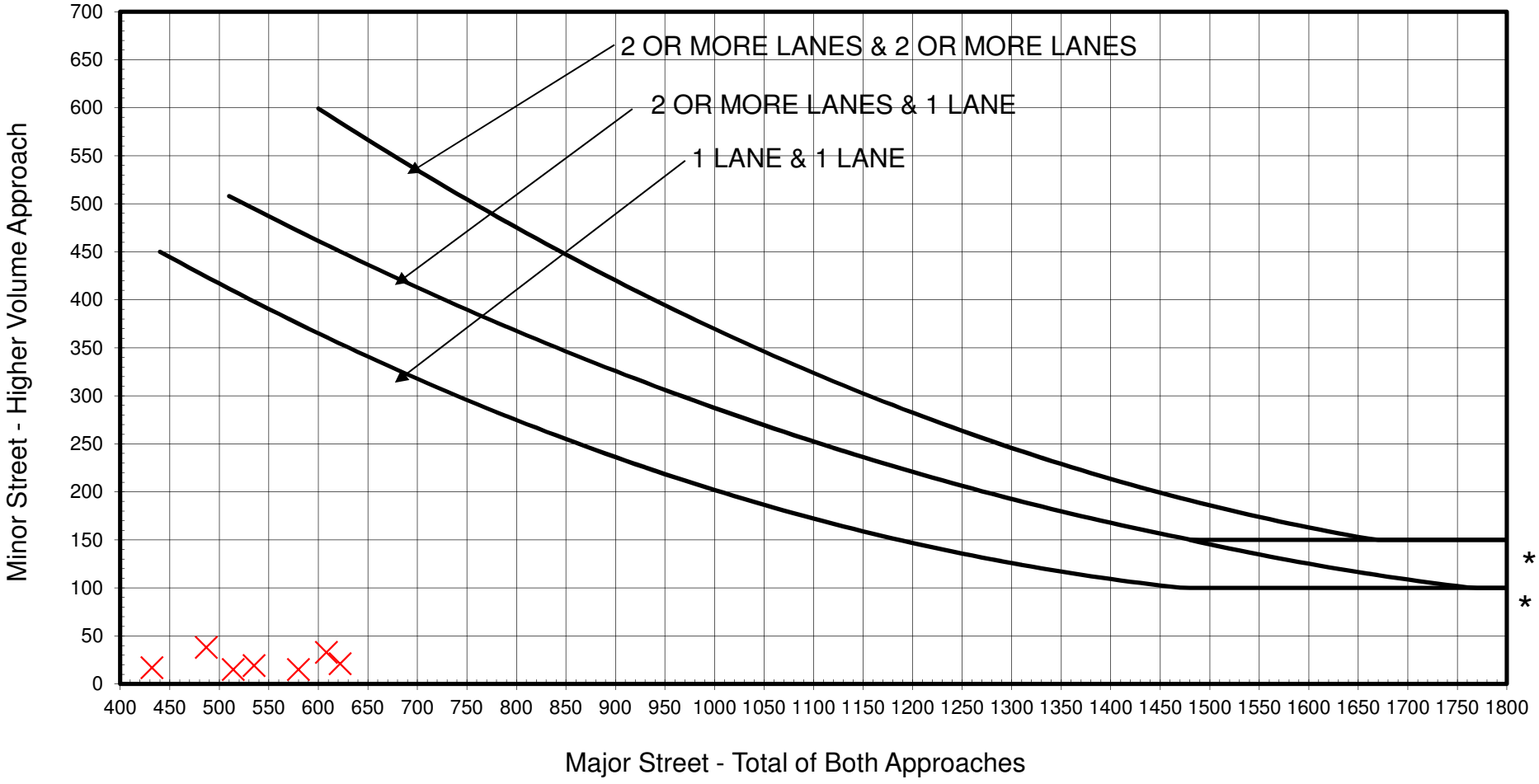
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Maine Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.5

Traffic Signal Warrant Analysis Results

Intersection 5
E Erie Ave (US 6) and Missouri Ave

SIGNAL WARRANT

INTERSECTION: Missouri Ave and E Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 0 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X		X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		475	41	0			X											
8AM-9AM		433	44	0			X											
9AM-10AM		293	40	0														
10AM-11AM		313	35	0														
11AM-NOON		359	36	0														
NOON-1PM		362	32	0														
1PM-2PM		432	30	0			X											
2PM-3PM		483	62	0			X					X						
3PM-4PM		582	47	0	X		X											
4PM-5PM		595	47	0	X		X											
5PM-6PM		575	48	0	X		X											
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Missouri Ave and E Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

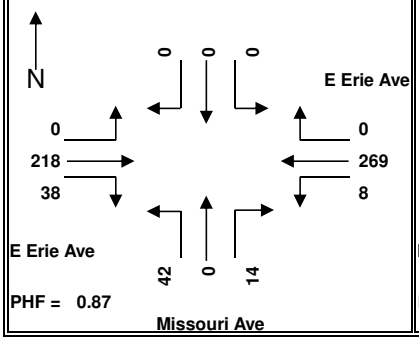
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 5

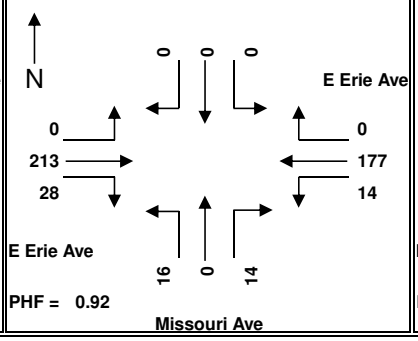
Start Time	Missouri Ave Northbound LT	THRU	RT	Truck	Southbound LT	THRU	RT	Truck	Total North South	E Erie Ave Eastbound LT	THRU	RT	Truck	E Erie Ave Westbound LT	THRU	RT	Truck	Total East West	Total All Dir.
Totals	314	0	148	18	0	0	0	0	462	0	2216	300	72	151	2235	0	58	4902	5364
	Percent Trucks =			4%	Percent Trucks =			0%		Percent Trucks =			3%	Percent Trucks =			2%		
ADT	437	0	206	25	0	0	0	0	643	0	3083	417	100	210	3109	0	81	6820	7463
7:00 AM	8	0	0	1	0	0	0	0	8	0	35	5	1	1	47	0	1	88	96
7:15 AM	9	0	4	2	0	0	0	0	13	0	63	5	0	2	62	0	1	132	145
7:30 AM	8	0	4	0	0	0	0	0	12	0	54	4	1	2	72	0	2	132	144
7:45 AM	6	0	2	0	0	0	0	0	8	0	45	13	3	2	63	0	0	123	131
8:00 AM	19	0	4	1	0	0	0	0	23	0	56	16	4	2	72	0	2	146	169
8:15 AM	7	0	1	0	0	0	0	0	8	0	45	6	3	1	58	0	1	110	118
8:30 AM	4	0	3	0	0	0	0	0	7	0	38	3	1	1	44	0	0	86	93
8:45 AM	3	0	3	1	0	0	0	0	6	0	35	5	4	3	48	0	0	91	97
9:00 AM	12	0	7	3	0	0	0	0	19	0	35	2	1	2	35	0	1	74	93
9:15 AM	5	0	2	0	0	0	0	0	7	0	27	3	2	4	33	0	2	67	74
9:30 AM	3	0	4	0	0	0	0	0	7	0	31	3	0	1	40	0	2	75	82
9:45 AM	7	0	0	0	0	0	0	0	7	0	28	1	1	7	41	0	1	77	84
10:00 AM	6	0	0	0	0	0	0	0	6	0	35	4	2	1	29	0	0	69	75
10:15 AM	5	0	3	0	0	0	0	0	8	0	25	5	0	2	38	0	1	70	78
10:30 AM	9	0	3	0	0	0	0	0	12	0	41	4	0	1	37	0	0	83	95
10:45 AM	2	0	7	0	0	0	0	0	9	0	29	6	2	0	56	0	2	91	100
11:00 AM	10	0	2	0	0	0	0	0	12	0	36	1	1	0	46	0	5	83	95
11:15 AM	8	0	0	0	0	0	0	0	8	0	57	8	0	2	33	0	1	100	108
11:30 AM	5	0	3	0	0	0	0	0	8	0	33	10	2	2	42	0	3	87	95
11:45 AM	4	0	4	0	0	0	0	0	8	0	47	7	1	1	34	0	0	89	97
12:00 PM	6	0	2	2	0	0	0	0	8	0	45	7	4	1	35	0	5	88	96
12:15 PM	6	0	0	0	0	0	0	0	6	0	46	2	0	3	36	0	2	87	93
12:30 PM	4	0	4	0	0	0	0	0	8	0	47	6	5	3	49	0	0	105	113
12:45 PM	6	0	4	0	0	0	0	0	10	0	40	3	2	1	38	0	0	82	92
1:00 PM	4	0	0	0	0	0	0	0	4	0	54	7	2	1	46	0	1	108	112
1:15 PM	5	0	3	1	0	0	0	0	8	0	61	10	0	6	40	0	3	117	125
1:30 PM	4	0	6	0	0	0	0	0	10	0	53	3	2	4	50	0	0	110	120
1:45 PM	3	0	5	1	0	0	0	0	8	0	45	8	2	3	41	0	0	97	105
2:00 PM	12	0	2	0	0	0	0	0	14	0	48	1	1	5	51	0	3	105	119
2:15 PM	3	0	3	0	0	0	0	0	6	0	42	6	1	8	59	0	3	115	121
2:30 PM	22	0	4	1	0	0	0	0	26	0	49	8	4	7	47	0	0	111	137
2:45 PM	11	0	5	2	0	0	0	0	16	0	73	15	3	6	58	0	2	152	168
3:00 PM	6	0	2	0	0	0	0	0	8	0	65	8	3	5	43	0	2	121	129
3:15 PM	15	0	7	1	0	0	0	0	22	0	59	12	1	9	46	0	1	126	148
3:30 PM	5	0	2	0	0	0	0	0	7	0	59	11	2	6	95	0	2	171	178
3:45 PM	6	0	4	1	0	0	0	0	10	0	85	12	1	3	64	0	4	164	174
4:00 PM	10	0	2	0	0	0	0	0	12	0	67	11	2	7	54	0	0	139	151
4:15 PM	12	0	4	0	0	0	0	0	16	0	92	11	1	3	59	0	1	165	181
4:30 PM	6	0	6	0	0	0	0	0	12	0	60	11	2	3	59	0	3	133	145
4:45 PM	3	0	4	0	0	0	0	0	7	0	63	6	3	6	83	0	0	158	165
5:00 PM	11	0	8	0	0	0	0	0	19	0	76	11	2	13	62	0	1	162	181
5:15 PM	6	0	5	1	0	0	0	0	11	0	75	8	0	5	68	0	0	156	167
5:30 PM	3	0	4	0	0	0	0	0	7	0	61	7	0	2	81	0	0	151	158
5:45 PM	5	0	6	0	0	0	0	0	11	0	56	5	0	4	41	0	0	106	117

AM Peak Hour
7:15 AM to 8:15 AM



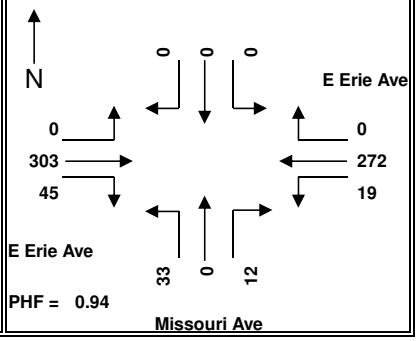
PHF = 0.87

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.92

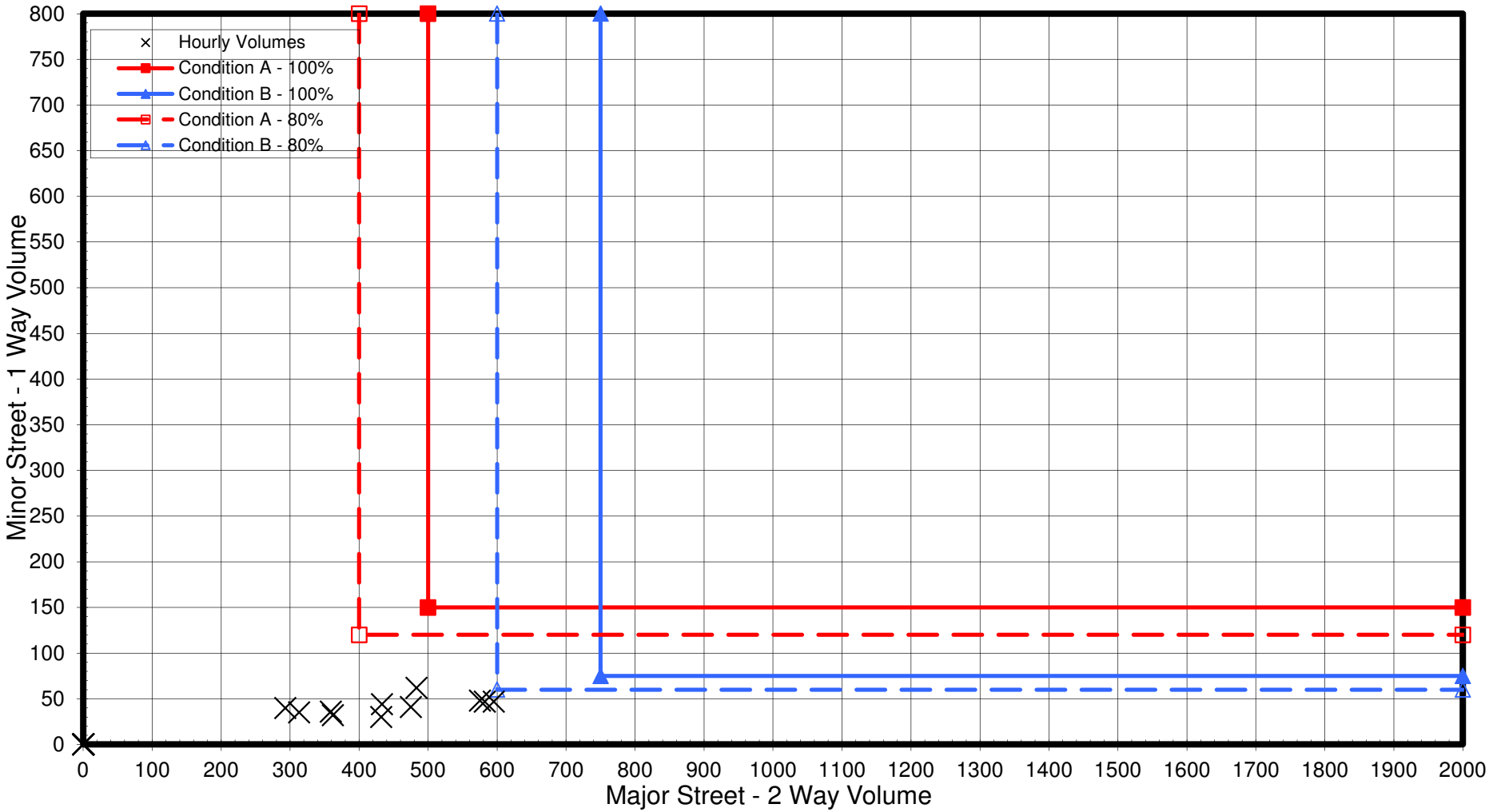
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.94

Notes:

WARRANT 1 - Conditions A & B



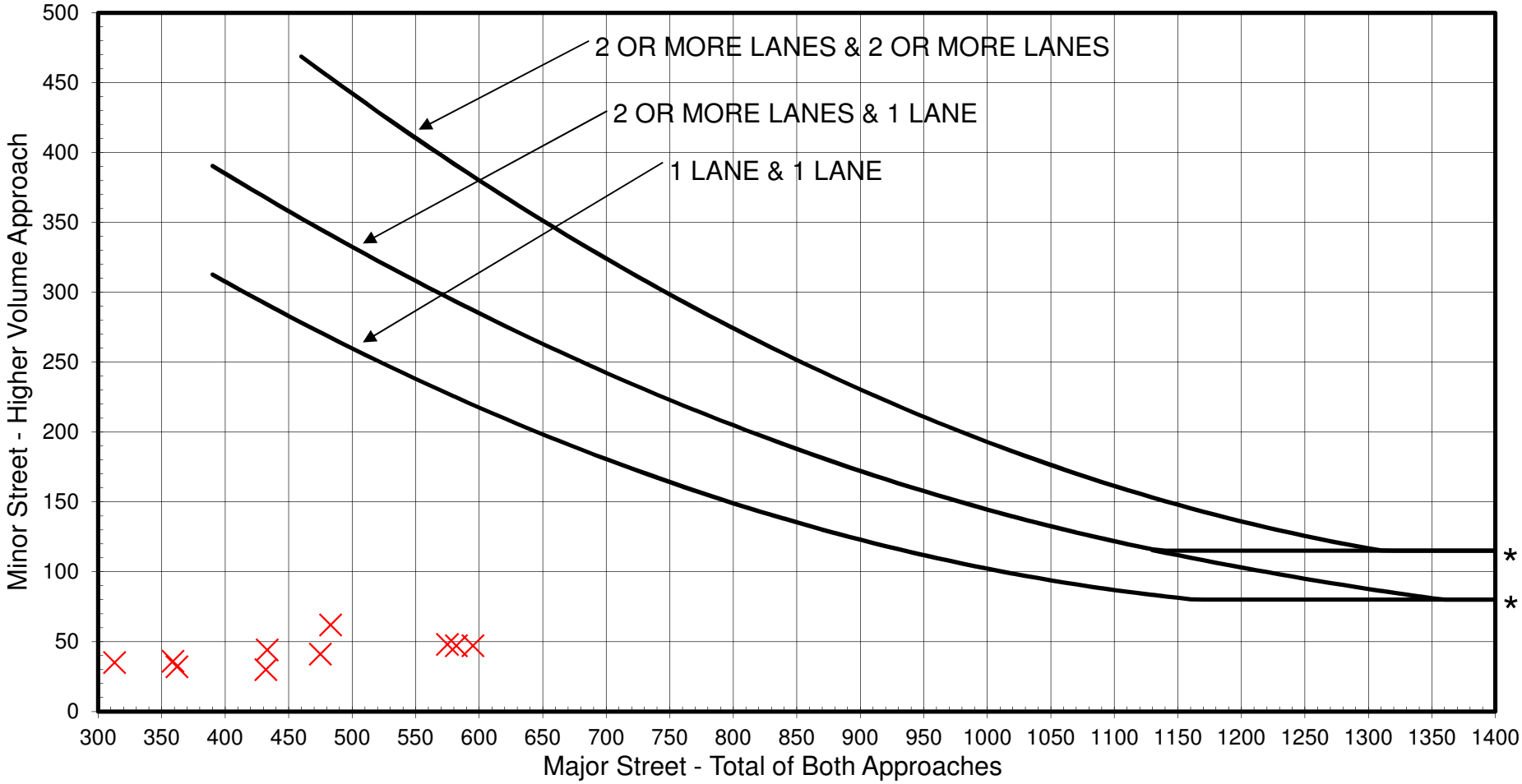
		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Missouri Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Missouri Ave	1
Road Location =	Urban	

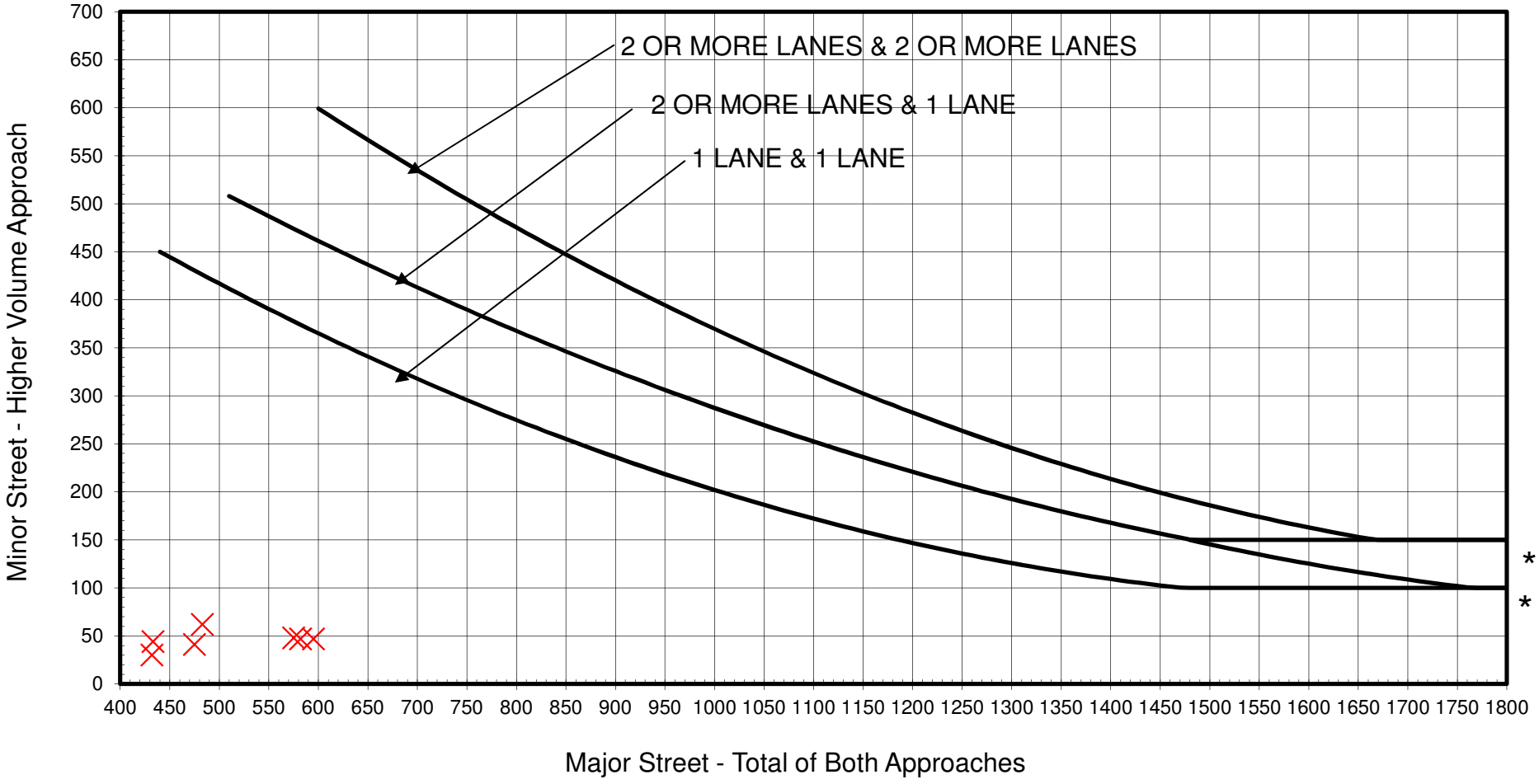
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Missouri Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.6

Traffic Signal Warrant Analysis Results

Intersection 6
E Erie Ave (US 6) and Root Rd

SIGNAL WARRANT

INTERSECTION: Private Entrance and Root Rd and E Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR					FOUR HOUR	PEAK HOUR
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		510	49	1	X		X											
8AM-9AM		399	68	1								X						
9AM-10AM		330	67	2								X						
10AM-11AM		312	76	1						X		X						
11AM-NOON		357	76	1						X		X						
NOON-1PM		417	62	0			X					X						
1PM-2PM		448	80	1			X			X		X						
2PM-3PM		467	89	0			X			X		X						
3PM-4PM		596	121	0	X		X	X		X		X						
4PM-5PM		651	124	0	X		X	X		X	X	X						
5PM-6PM		624	113	1	X		X			X	X	X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		2		0		2						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Private Entrance and Root Rd and E Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

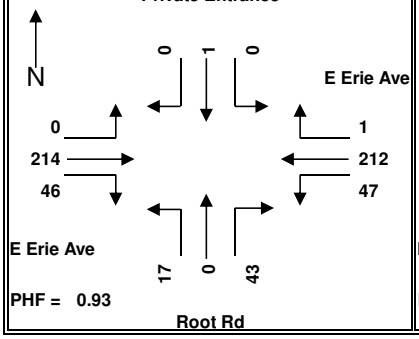
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 6

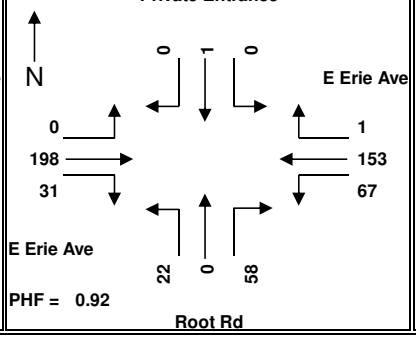
Start Time	Root Rd Northbound				Private Entrance Southbound				Total North South	E Erie Ave Eastbound				E Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	247	0	678	10	1	5	2	0	933	2	2039	336	57	613	2118	3	59	5111	6044
	Percent Trucks =			1%	Percent Trucks =			0%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	344	0	943	14	1	7	3	0	1298	3	2837	467	79	853	2947	4	82	7111	8409
7:00 AM	2	0	6	0	0	0	0	0	8	0	33	8	1	10	47	0	1	98	106
7:15 AM	3	0	10	0	0	0	0	0	13	0	63	9	0	13	53	0	2	138	151
7:30 AM	1	0	10	1	0	1	0	0	12	0	61	13	1	10	61	0	2	145	157
7:45 AM	6	0	11	1	0	0	0	0	17	0	50	10	2	12	57	0	0	129	146
8:00 AM	7	0	12	0	0	0	0	0	19	0	40	14	3	12	41	1	3	108	127
8:15 AM	5	0	13	0	0	0	1	0	19	0	37	10	1	13	50	0	2	110	129
8:30 AM	3	0	11	0	0	0	0	0	14	0	39	12	1	12	41	0	1	104	118
8:45 AM	4	0	13	2	0	0	0	0	17	0	27	8	4	6	36	0	1	77	94
9:00 AM	3	0	11	0	0	0	0	0	14	0	34	5	1	9	28	0	0	76	90
9:15 AM	6	0	12	0	0	0	0	0	18	0	25	8	0	15	38	0	3	86	104
9:30 AM	3	0	16	0	0	1	1	0	21	1	32	10	0	9	29	0	1	81	102
9:45 AM	1	0	15	0	0	0	0	0	16	1	21	9	2	11	45	0	1	87	103
10:00 AM	5	0	15	1	0	0	0	0	20	0	32	4	3	13	22	0	0	71	91
10:15 AM	5	0	14	0	0	0	0	0	19	0	20	6	0	12	30	0	2	68	87
10:30 AM	5	0	17	0	0	0	0	0	22	0	33	9	0	11	33	0	0	86	108
10:45 AM	8	0	7	0	0	1	0	0	16	0	30	4	2	9	44	0	2	87	103
11:00 AM	7	0	11	0	0	0	0	0	18	0	30	5	1	11	36	0	4	82	100
11:15 AM	5	0	19	0	0	0	0	0	24	0	47	5	1	13	33	0	3	98	122
11:30 AM	5	0	9	0	0	1	0	0	15	0	29	5	2	11	36	0	2	81	96
11:45 AM	4	0	16	0	0	0	0	0	20	0	37	7	1	15	37	0	1	96	116
12:00 PM	6	0	15	0	0	0	0	0	21	0	47	4	2	13	32	0	6	96	117
12:15 PM	6	0	12	0	0	0	0	0	18	0	36	10	0	15	38	0	1	99	117
12:30 PM	3	0	7	0	0	0	0	0	10	0	49	6	2	14	43	0	1	112	122
12:45 PM	3	0	10	0	0	0	0	0	13	0	48	5	1	21	36	0	1	110	123
1:00 PM	3	0	19	0	0	1	0	0	23	0	41	11	0	17	31	1	1	101	124
1:15 PM	8	0	13	1	0	0	0	0	21	0	60	8	1	12	43	0	1	123	144
1:30 PM	8	0	16	0	0	0	0	0	24	0	49	7	2	17	43	0	1	116	140
1:45 PM	4	0	9	1	0	0	0	0	13	0	43	2	0	20	43	0	1	108	121
2:00 PM	8	0	12	0	0	0	0	0	20	0	41	3	1	9	55	0	1	108	128
2:15 PM	11	0	11	1	0	0	0	0	22	0	42	4	0	17	46	0	1	109	131
2:30 PM	6	0	14	0	0	0	0	0	20	0	44	9	3	15	52	0	0	120	140
2:45 PM	6	0	21	0	0	0	0	0	27	0	55	13	3	14	48	0	3	130	157
3:00 PM	5	0	23	0	0	0	0	0	28	0	60	7	4	11	46	0	2	124	152
3:15 PM	5	0	21	0	0	0	0	0	26	0	56	5	1	21	71	0	2	153	179
3:30 PM	12	0	21	0	0	0	0	0	33	0	60	6	4	14	74	0	1	154	187
3:45 PM	10	0	24	2	0	0	0	0	34	0	72	12	2	17	64	0	1	165	199
4:00 PM	5	0	16	0	0	0	0	0	21	0	55	9	1	21	68	0	0	153	174
4:15 PM	4	0	27	0	0	0	0	0	31	0	90	9	0	13	53	0	1	165	196
4:30 PM	9	0	29	0	0	0	0	0	38	0	57	9	1	19	58	1	1	144	182
4:45 PM	8	0	26	0	0	0	0	0	34	0	71	6	2	14	98	0	0	189	223
5:00 PM	4	0	17	0	1	0	0	0	22	0	69	8	0	24	77	0	1	178	200
5:15 PM	11	0	26	0	0	0	0	0	37	0	69	9	1	20	76	0	0	174	211
5:30 PM	8	0	17	0	0	0	0	0	25	0	49	4	0	14	80	0	0	147	172
5:45 PM	6	0	24	0	0	0	0	0	30	0	56	9	0	14	46	0	1	125	155

AM Peak Hour
7:15 AM to 8:15 AM
Private Entrance



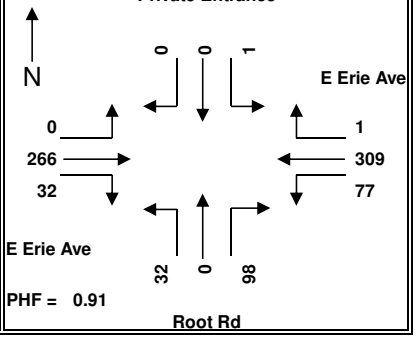
PHF = 0.93

Midday Peak Hour
12:45 PM to 1:45 PM
Private Entrance



PHF = 0.92

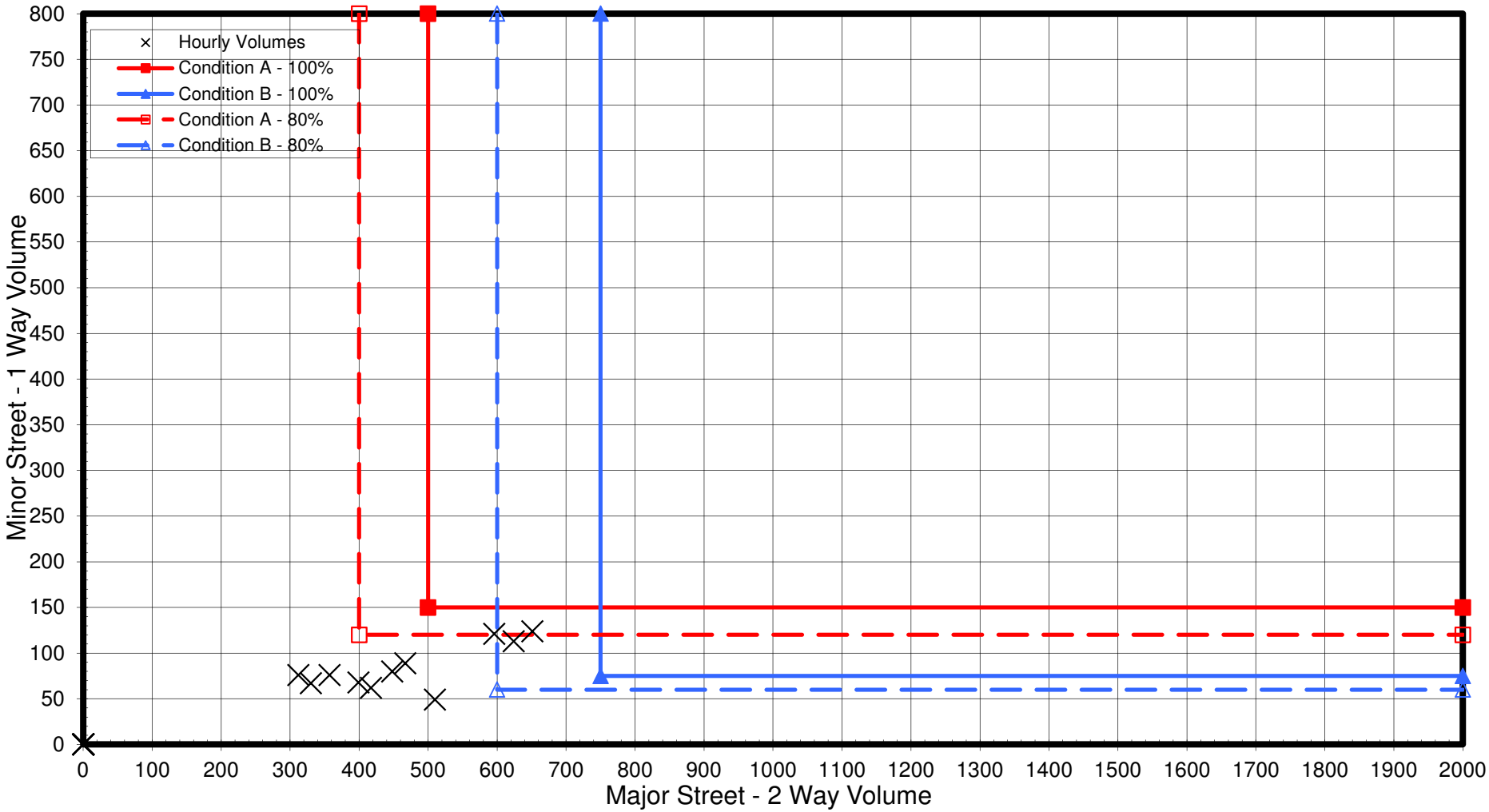
PM Peak Hour
4:30 PM to 5:30 PM
Private Entrance



PHF = 0.91

Notes:

WARRANT 1 - Conditions A & B



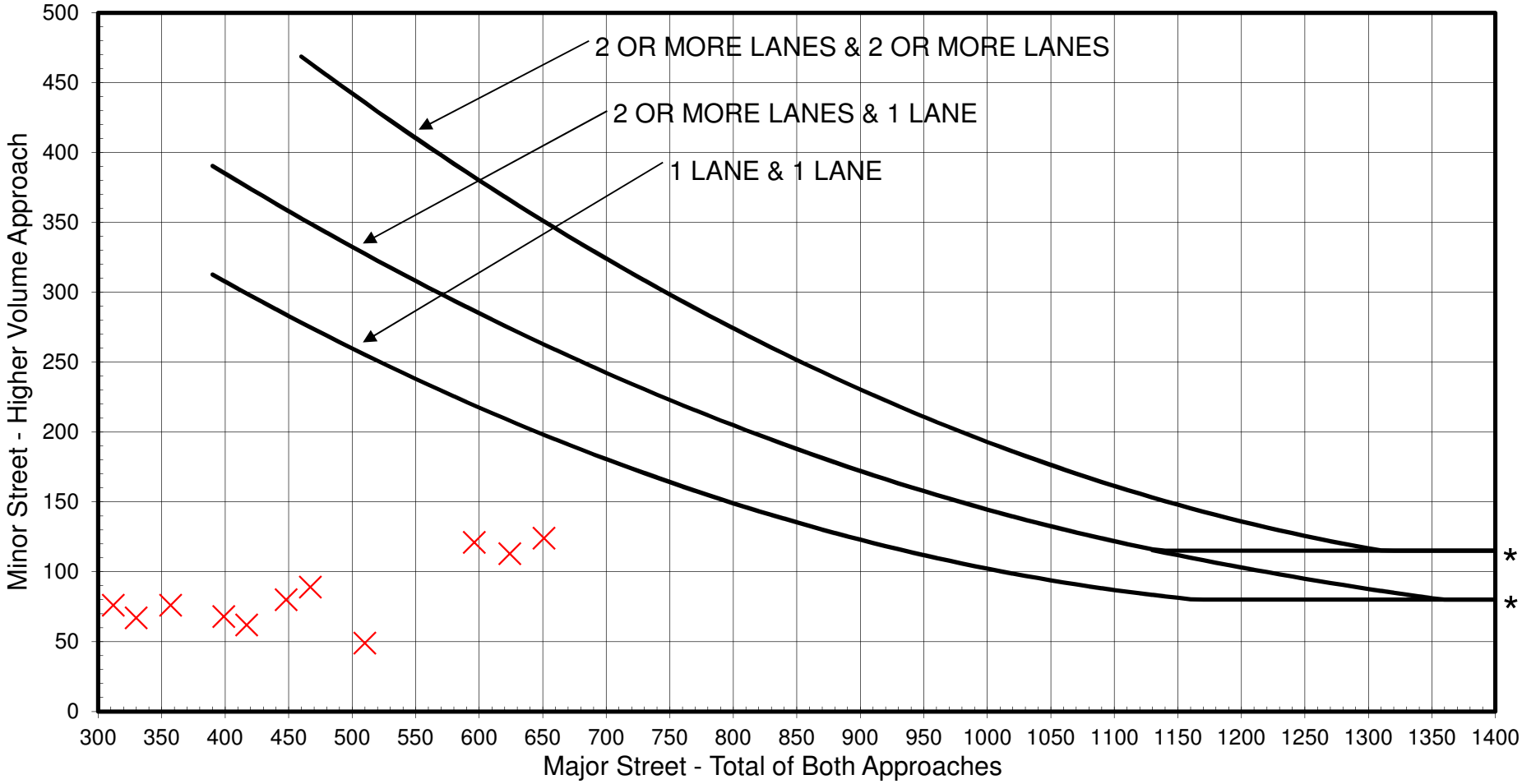
		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Private Entrance and Root R	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	2 Hours Meet	No
Condition B (80%) =	2 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Private Entrance and Root R	1
Road Location =	Urban	

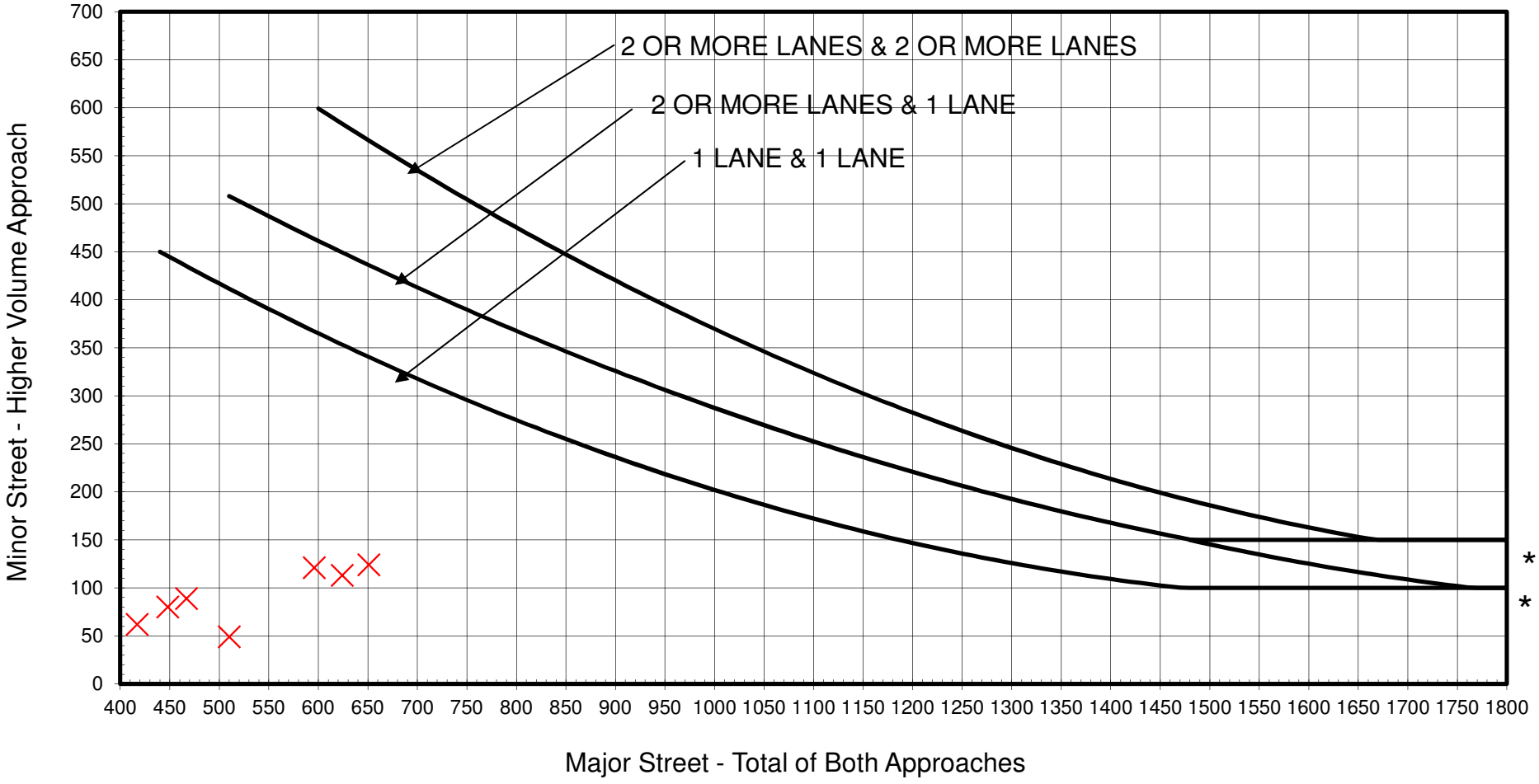
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E Erie Ave	1
Minor Road =	Private Entrance and Root R	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.7

Traffic Signal Warrant Analysis Results

Intersection 7
Colorado Ave (SR 611) and Kansas Ave and Henderson Dr (SR 611)

SIGNAL WARRANT

INTERSECTION: Kansas Ave and Henderson Dr and Colorado Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1	X	X		500	150	400	120	750	75	600	60						
NORM	2+			X	600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		727	464	224	X	X	X	X		X	X	X					X	X
8AM-9AM		621	519	240	X	X	X	X		X	X	X					X	X
9AM-10AM		609	402	131	X	X	X	X		X	X	X					X	
10AM-11AM		596	390	140	X	X	X	X		X		X					X	
11AM-NOON		674	445	144	X	X	X	X		X	X	X					X	X
NOON-1PM		705	488	159	X	X	X	X		X	X	X					X	X
1PM-2PM		693	542	186	X	X	X	X		X	X	X					X	X
2PM-3PM		875	599	236	X	X	X	X	X	X	X	X					X	X
3PM-4PM		989	724	238	X	X	X	X	X	X	X	X					X	X
4PM-5PM		878	703	271	X	X	X	X	X	X	X	X					X	X
5PM-6PM		834	575	187	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					11		11		4		10						11	9
WARRANT SATISFIED?					YES		YES		NO		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH
ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data

Kansas Ave and Henderson Dr and Colorado Ave

Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

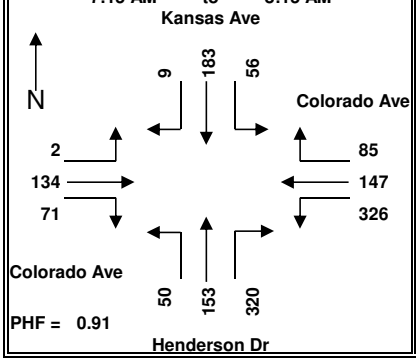
Roadway Classification:

ADT Factor: 1.41
Intersection ID: 7

Start Time	Henderson Dr Northbound				Kansas Ave Southbound				Total North South	Colorado Ave Eastbound				Colorado Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	645	1327	3879	414	544	1470	142	61	8007	86	1612	721	114	3469	1810	503	357	8201	16208
	Percent Trucks =			7%	Percent Trucks =			3%		Percent Trucks =			5%	Percent Trucks =			6%		
ADT	897	1846	5397	576	757	2045	198	85	11140	120	2243	1003	159	4826	2518	700	497	11410	22549
7:00 AM	4	23	51	8	7	37	0	1	122	0	40	12	3	71	14	10	9	147	269
7:15 AM	12	19	80	11	18	46	2	0	177	0	28	13	3	66	31	23	9	161	338
7:30 AM	15	30	61	6	12	43	2	2	163	0	35	18	8	102	42	26	6	223	386
7:45 AM	15	59	95	4	10	43	4	0	226	1	32	24	6	77	46	16	16	196	422
8:00 AM	8	45	84	8	16	51	1	3	205	1	39	16	4	81	28	20	11	185	390
8:15 AM	14	33	76	18	9	43	2	2	177	1	31	10	2	60	38	9	15	149	326
8:30 AM	11	51	64	23	7	36	6	4	175	0	36	16	1	57	24	12	6	145	320
8:45 AM	14	46	73	17	17	49	3	6	202	0	25	6	3	78	27	6	9	142	344
9:00 AM	11	17	64	7	5	14	3	1	114	0	35	21	3	45	27	11	5	139	253
9:15 AM	12	15	63	13	10	31	1	0	132	0	27	16	2	67	24	7	5	141	273
9:30 AM	11	14	83	20	2	28	2	0	140	2	36	16	3	77	34	5	10	170	310
9:45 AM	12	24	76	14	7	25	3	2	147	2	33	7	3	82	28	7	9	159	306
10:00 AM	14	19	77	21	4	30	3	1	147	2	29	15	2	72	34	8	8	160	307
10:15 AM	10	19	67	11	12	19	3	0	130	2	31	10	6	55	32	5	10	135	265
10:30 AM	17	26	52	6	2	19	4	0	120	3	33	15	2	53	31	6	4	141	261
10:45 AM	16	15	58	6	8	30	6	1	133	4	25	19	5	69	36	7	6	160	293
11:00 AM	15	24	71	9	10	25	4	0	149	3	42	14	5	64	32	12	17	167	316
11:15 AM	11	19	66	9	9	17	1	1	123	0	36	17	6	79	44	5	16	181	304
11:30 AM	13	23	86	12	13	22	3	0	160	2	31	20	2	76	45	6	3	180	340
11:45 AM	24	23	70	12	12	26	2	0	157	0	33	18	4	48	37	10	8	146	303
12:00 PM	21	31	82	12	15	24	4	1	177	3	32	27	2	79	36	8	13	185	362
12:15 PM	19	22	75	8	14	16	3	0	149	5	33	16	2	69	38	9	9	170	319
12:30 PM	17	30	74	9	11	27	3	0	162	3	27	18	2	76	40	14	8	178	340
12:45 PM	17	26	74	5	4	33	5	1	159	5	38	12	3	72	36	9	13	172	331
1:00 PM	19	27	78	14	10	40	5	0	179	2	39	13	1	56	30	8	6	148	327
1:15 PM	14	28	97	9	14	30	3	4	186	1	35	17	6	72	45	8	12	178	364
1:30 PM	21	21	94	7	9	32	3	0	180	2	46	19	2	81	33	8	7	189	369
1:45 PM	11	27	105	6	7	28	5	1	183	5	35	25	2	73	34	6	7	178	361
2:00 PM	13	27	83	5	17	22	1	0	163	0	44	15	0	87	35	10	14	191	354
2:15 PM	14	27	101	6	8	37	4	4	191	0	40	14	1	112	37	14	19	217	408
2:30 PM	8	44	107	6	16	34	5	1	214	0	33	22	1	125	59	17	15	256	470
2:45 PM	14	33	128	8	24	64	4	6	267	0	27	13	0	105	50	16	14	211	478
3:00 PM	16	50	130	10	13	38	3	2	250	5	34	22	0	78	39	14	5	192	442
3:15 PM	26	40	124	7	2	28	5	1	225	3	46	19	1	107	70	15	7	260	485
3:30 PM	18	44	120	9	11	64	2	8	259	5	61	18	1	113	65	12	7	274	533
3:45 PM	15	36	105	12	30	36	6	3	228	2	46	18	3	106	74	17	7	263	491
4:00 PM	19	38	116	13	14	56	4	1	247	0	53	17	5	81	51	10	1	212	459
4:15 PM	21	40	121	10	26	41	3	1	252	2	37	21	1	106	49	9	2	224	476
4:30 PM	10	37	124	11	19	42	3	2	235	3	56	16	1	86	55	11	3	227	462
4:45 PM	12	31	134	3	31	30	2	0	240	2	39	18	3	89	51	16	3	215	455
5:00 PM	19	33	101	2	20	30	4	1	207	3	48	15	1	96	66	19	1	247	454
5:15 PM	18	28	108	3	13	39	3	0	209	2	34	16	0	75	58	17	1	202	411
5:30 PM	11	31	95	1	15	26	2	0	180	7	35	16	2	69	64	14	1	205	385
5:45 PM	13	32	86	3	11	19	5	0	166	3	37	11	1	77	41	11	0	180	346

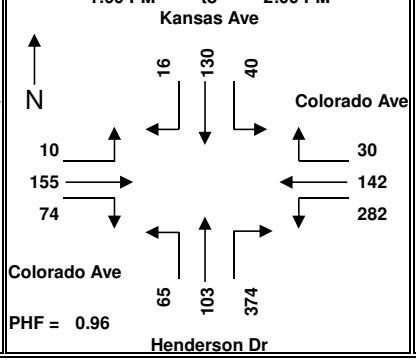
AM Peak Hour

7:15 AM to 8:15 AM



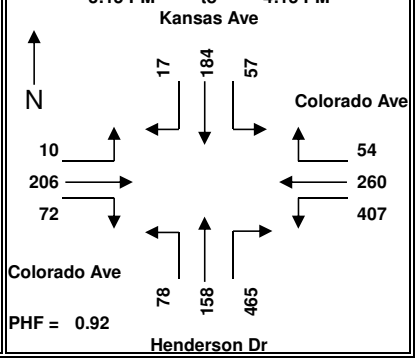
Midday Peak Hour

1:00 PM to 2:00 PM



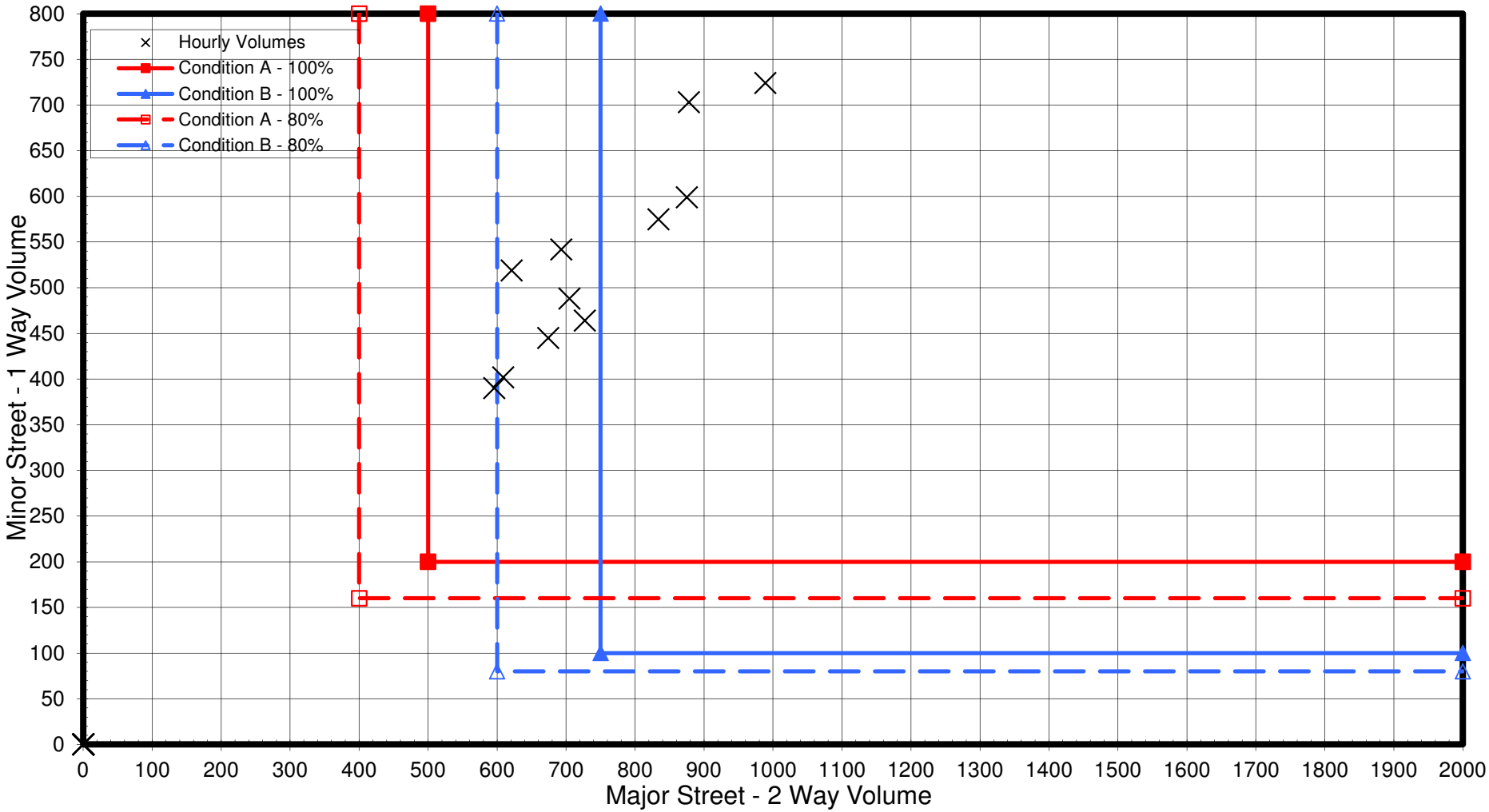
PM Peak Hour

3:15 PM to 4:15 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Kansas Ave and Henderson	2
Road Location =	Urban	

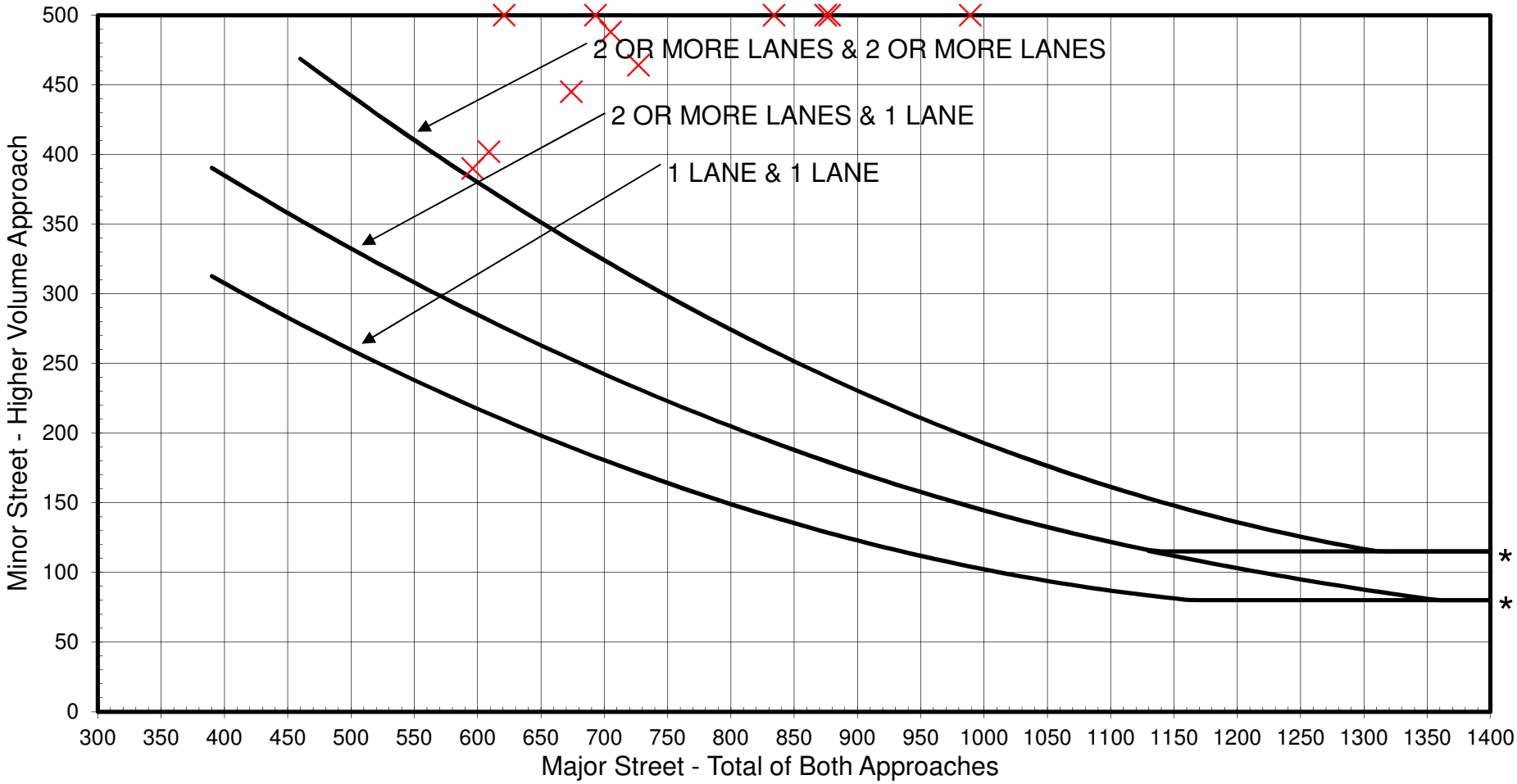
		Warrant Met?
Condition A (100%) =	11 Hours Meet	Yes
Condition B (100%) =	4 Hours Meet	No
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	10 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS

564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Kansas Ave and Henderson	2
Road Location =	Urban	

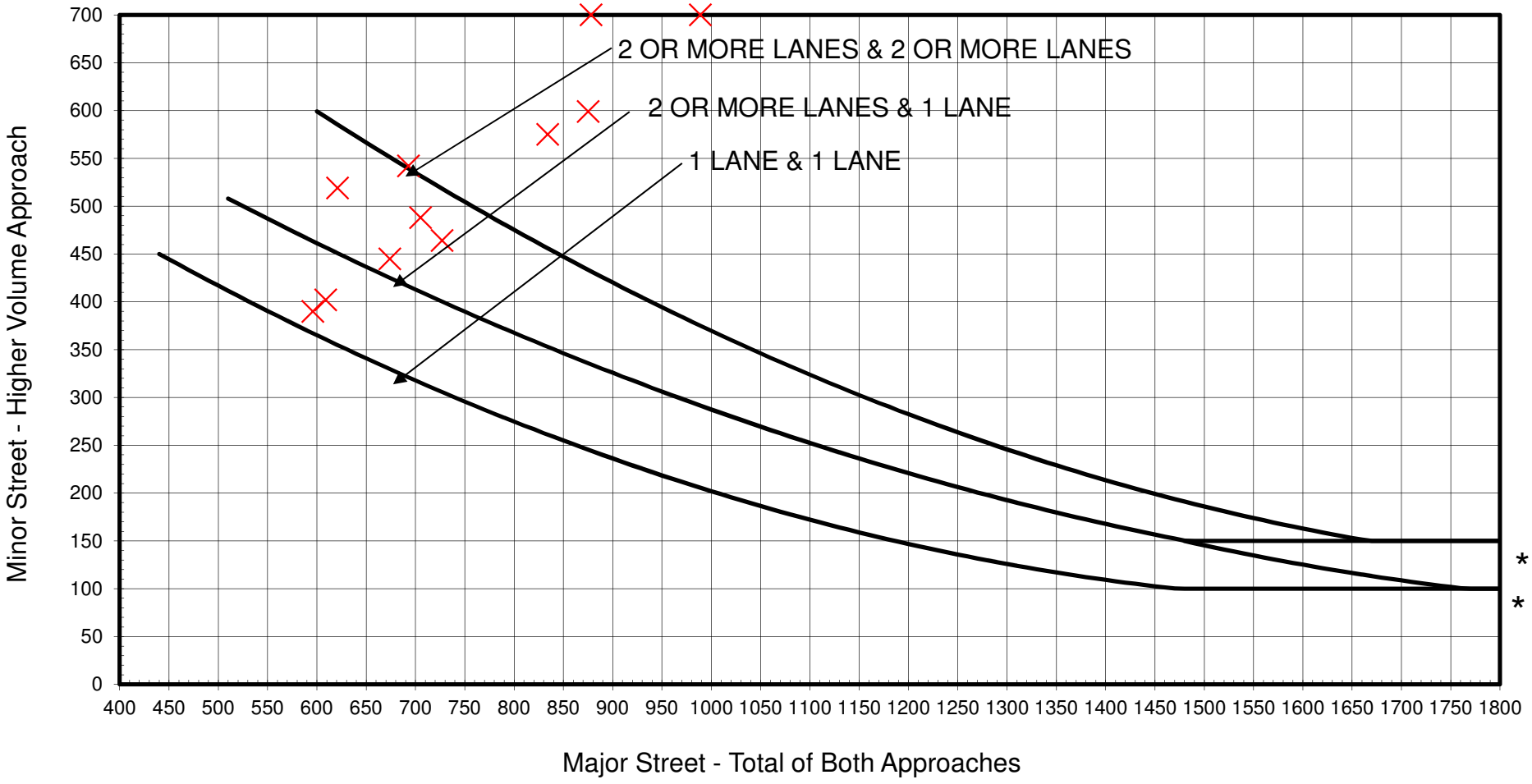
		Warrant Met?
Warrant 2 (Urban) =	11 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Kansas Ave and Henderson	2
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	9 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
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Fax: 330.836.9115

Appendix B.8

Traffic Signal Warrant Analysis Results

Intersection 8
Colorado Ave (SR 611) and Missouri Ave

SIGNAL WARRANT

INTERSECTION: Missouri Ave and Closed to traffic and Colorado Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		965	1	171	X	X	X	X	X	X	X	X					X	
8AM-9AM		859	0	166	X	X	X	X	X	X	X	X					X	
9AM-10AM		788	1	131	X		X	X	X	X	X	X						
10AM-11AM		772	0	111	X		X		X	X	X	X						
11AM-NOON		916	0	136	X		X	X	X	X	X	X					X	
NOON-1PM		913	1	130	X		X	X	X	X	X	X					X	
1PM-2PM		984	0	173	X	X	X	X	X	X	X	X					X	
2PM-3PM		1121	3	199	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1321	1	180	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1328	0	174	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1190	0	168	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					7		10		11		11						9	4
WARRANT SATISFIED?					NO		YES		YES		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Missouri Ave and Closed to traffic and Colorado Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

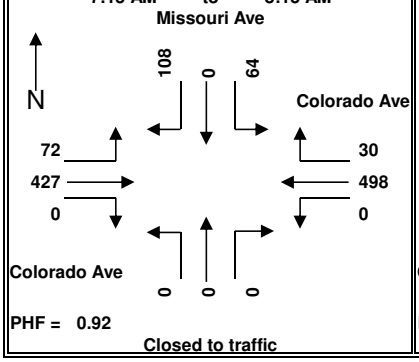
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

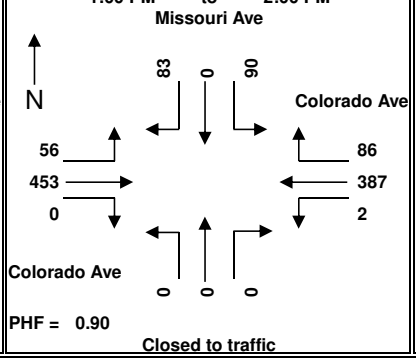
ADT Factor: 1.41
Intersection ID: 8

Start Time	Closed to traffic Northbound				Missouri Ave Southbound				Total North South	Colorado Ave Eastbound				Colorado Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	1	2	4	2	908	2	829	62	1746	777	4728	2	358	2	4709	939	327	11157	12903
	Percent Trucks =			29%	Percent Trucks =			4%		Percent Trucks =			7%	Percent Trucks =			6%		
ADT	1	3	6	3	1263	3	1153	86	2429	1081	6578	3	498	3	6551	1306	455	15522	17951
7:00 AM	1	0	0	0	22	1	17	3	41	15	92	0	13	0	89	6	4	202	243
7:15 AM	0	0	0	0	17	0	14	1	31	11	116	0	18	0	126	4	8	257	288
7:30 AM	0	0	0	0	20	0	31	0	51	10	107	0	17	0	148	9	8	274	325
7:45 AM	0	0	0	0	13	0	36	3	49	26	87	0	6	0	110	9	11	232	281
8:00 AM	0	0	0	0	14	0	27	0	41	25	117	0	9	0	114	8	8	264	305
8:15 AM	0	0	0	0	22	0	20	2	42	18	102	0	18	0	71	15	7	206	248
8:30 AM	0	0	0	0	29	0	15	1	44	9	97	0	10	0	82	11	5	199	243
8:45 AM	0	0	0	0	22	0	17	2	39	13	81	0	7	0	85	11	15	190	229
9:00 AM	0	0	1	0	21	0	10	1	32	13	98	0	5	0	67	10	9	188	220
9:15 AM	0	0	0	0	19	0	8	2	27	8	81	0	7	0	74	15	6	178	205
9:30 AM	0	0	0	0	23	0	23	0	46	16	95	0	11	0	102	10	15	223	269
9:45 AM	0	0	0	0	11	0	16	2	27	16	84	0	10	0	88	11	6	199	226
10:00 AM	0	0	0	0	19	0	13	1	32	12	98	0	11	0	82	23	5	215	247
10:15 AM	0	0	0	0	17	0	12	1	29	8	95	0	8	0	73	10	6	186	215
10:30 AM	0	0	0	0	18	0	8	1	26	7	76	0	6	0	83	16	3	182	208
10:45 AM	0	0	0	0	12	0	12	1	24	8	74	0	8	0	89	18	9	189	213
11:00 AM	0	0	0	0	20	0	11	0	31	11	97	0	13	0	86	21	16	215	246
11:15 AM	0	0	0	0	22	0	17	1	39	15	100	0	8	0	118	21	18	254	293
11:30 AM	0	0	0	0	25	0	13	1	38	14	103	0	10	0	99	21	3	237	275
11:45 AM	0	0	0	0	19	0	9	2	28	18	89	0	10	0	79	24	8	210	238
12:00 PM	0	0	1	0	19	0	15	2	35	10	120	1	12	0	99	21	11	251	286
12:15 PM	0	0	0	0	20	0	13	1	33	12	99	0	6	0	105	20	9	236	269
12:30 PM	0	0	0	0	17	0	16	2	33	24	92	0	7	0	100	19	9	235	268
12:45 PM	0	0	0	0	16	0	14	1	30	10	77	0	7	0	91	13	13	191	221
1:00 PM	0	0	0	0	23	0	17	3	40	11	102	0	12	0	84	15	4	212	252
1:15 PM	0	0	0	0	16	0	18	1	34	13	117	0	13	0	97	24	13	251	285
1:30 PM	0	0	0	0	19	0	18	2	37	11	113	0	17	0	116	20	6	260	297
1:45 PM	0	0	0	0	32	0	30	2	62	21	121	0	16	2	90	27	9	261	323
2:00 PM	0	2	0	2	19	0	28	0	49	17	114	1	13	0	109	25	5	266	315
2:15 PM	0	0	1	0	15	0	23	0	39	37	94	0	3	0	101	25	2	257	296
2:30 PM	0	0	0	0	30	0	48	3	78	24	107	0	2	0	150	14	8	295	373
2:45 PM	0	0	0	0	17	0	19	0	36	21	129	0	3	0	130	23	6	303	339
3:00 PM	0	0	0	0	20	0	17	4	37	24	140	0	8	0	120	32	7	316	353
3:15 PM	0	0	0	0	22	1	24	4	47	21	114	0	5	0	153	20	3	308	355
3:30 PM	0	0	1	0	29	0	24	5	54	22	137	0	8	0	158	30	10	347	401
3:45 PM	0	0	0	0	19	0	24	1	43	32	133	0	5	0	156	29	7	350	393
4:00 PM	0	0	0	0	29	0	17	3	46	17	146	0	5	0	109	44	7	316	362
4:15 PM	0	0	0	0	25	0	25	1	50	25	120	0	2	0	134	39	10	318	368
4:30 PM	0	0	0	0	23	0	16	0	39	21	166	0	0	0	110	29	5	326	365
4:45 PM	0	0	0	0	20	0	19	1	39	30	147	0	0	0	148	43	5	368	407
5:00 PM	0	0	0	0	26	0	14	1	40	28	123	0	5	0	146	56	4	353	393
5:15 PM	0	0	0	0	23	0	22	0	45	28	123	0	2	0	125	40	3	316	361
5:30 PM	0	0	0	0	24	0	22	0	46	25	109	0	1	0	112	34	1	280	326
5:45 PM	0	0	0	0	20	0	17	0	37	20	96	0	1	0	101	24	0	241	278

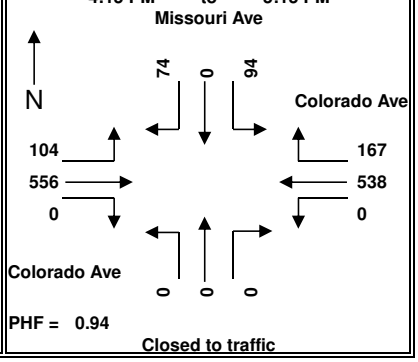
AM Peak Hour
7:15 AM to 8:15 AM



Midday Peak Hour
1:00 PM to 2:00 PM

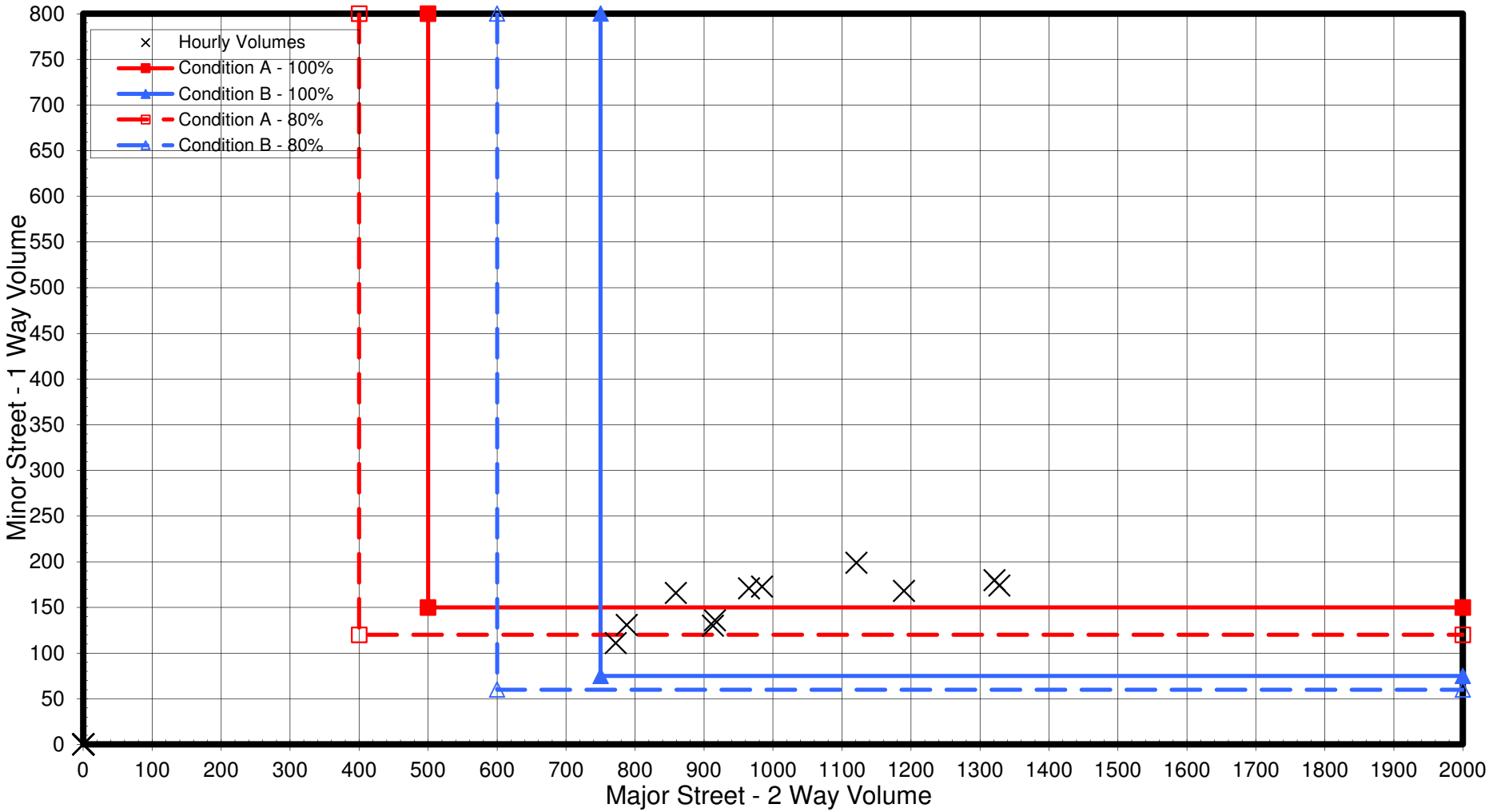


PM Peak Hour
4:15 PM to 5:15 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Missouri Ave and Closed to t	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	7 Hours Meet	No
Condition B (100%) =	11 Hours Meet	Yes
Condition A (80%) =	10 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
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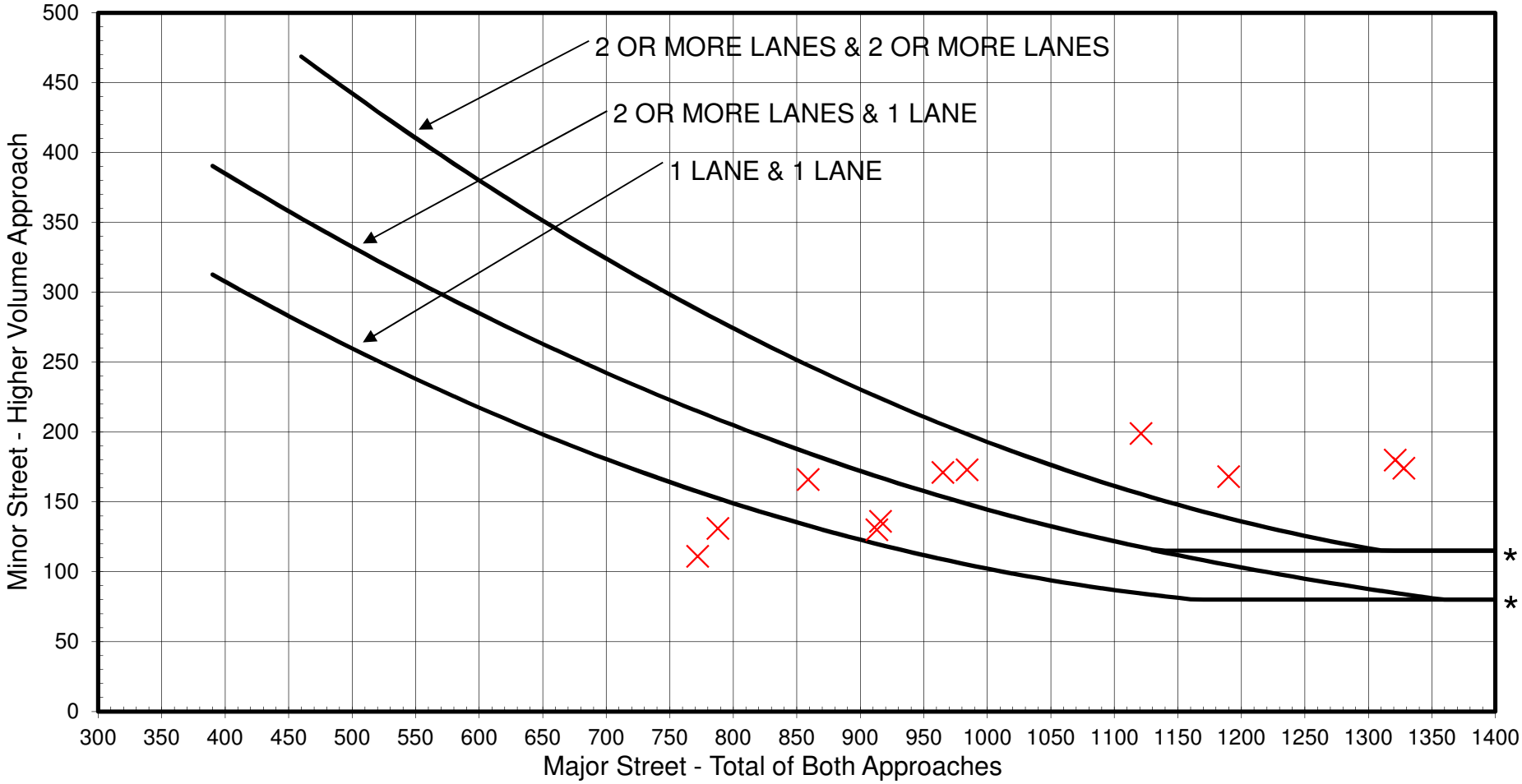
FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Missouri Ave and Closed to 1	1
Road Location =	Urban	

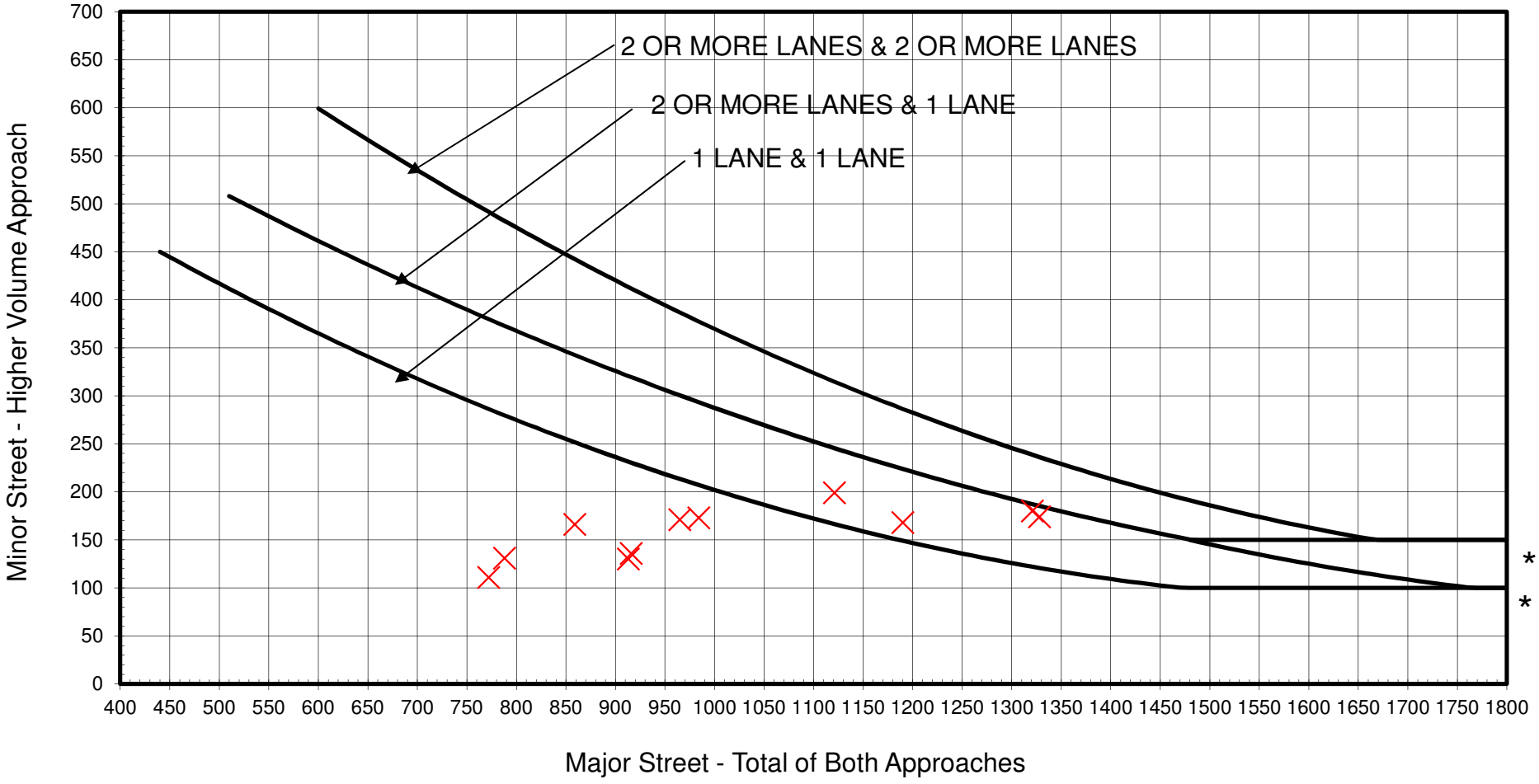
		Warrant Met?
Warrant 2 (Urban) =	9 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Missouri Ave and Closed to t	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.9

Traffic Signal Warrant Analysis Results

Intersection 9
Colorado Ave (SR 611) and Root Rd

SIGNAL WARRANT

INTERSECTION: Root Rd and Colorado Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1	X	X	X	500	150	400	120	750	75	600	60						
NORM	2+				600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		860	80	283	X	X	X	X	X	X	X	X					X	X
8AM-9AM		763	11	223	X	X	X	X	X	X	X	X					X	
9AM-10AM		655	27	160	X	X	X	X		X	X	X						
10AM-11AM		690	24	165	X	X	X	X		X	X	X						
11AM-NOON		737	84	163	X	X	X	X		X	X	X						
NOON-1PM		810	36	173	X	X	X	X	X	X	X	X					X	
1PM-2PM		881	37	177	X	X	X	X	X	X	X	X					X	
2PM-3PM		986	101	184	X	X	X	X	X	X	X	X					X	
3PM-4PM		1142	104	158	X	X	X	X	X	X	X	X					X	
4PM-5PM		1249	44	167	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1098	26	178	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					11		11		8		11						8	3
WARRANT SATISFIED?					**YES**		**YES**		**YES**		**YES**						**YES**	**YES**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Root Rd and Colorado Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

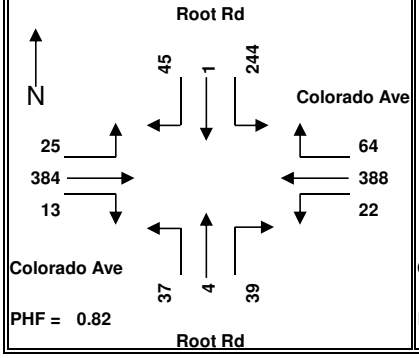
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 9

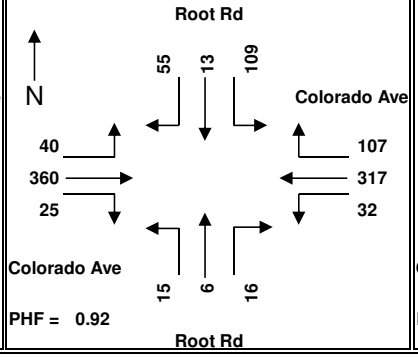
Start Time	Root Rd Northbound				Root Rd Southbound				Total North South	Colorado Ave Eastbound				Colorado Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	275	93	206	37	1483	111	437	31	2605	472	3903	211	318	168	3847	1270	312	9871	12476
	Percent Trucks =			6%	Percent Trucks =			2%		Percent Trucks =			7%	Percent Trucks =			6%		
ADT	383	129	287	51	2063	154	608	43	3624	657	5430	294	442	234	5352	1767	434	13733	17357
7:00 AM	1	0	4	0	44	1	10	2	60	2	97	6	9	2	59	15	8	181	241
7:15 AM	4	0	1	1	62	0	15	6	82	8	102	6	26	7	104	18	7	245	327
7:30 AM	30	3	31	0	72	0	14	1	150	4	112	3	15	6	95	15	9	235	385
7:45 AM	2	1	3	0	57	0	8	1	71	7	66	2	3	6	105	13	14	199	270
8:00 AM	1	0	4	2	53	1	8	0	67	6	104	2	6	3	84	18	7	217	284
8:15 AM	0	0	1	0	66	0	9	1	76	8	97	5	16	0	40	11	2	161	237
8:30 AM	2	0	2	1	47	0	9	0	60	9	93	7	8	2	76	9	8	196	256
8:45 AM	1	0	0	0	26	1	3	0	31	5	85	3	6	3	80	13	18	189	220
9:00 AM	1	3	2	1	26	0	4	0	36	9	92	2	5	0	53	13	7	169	205
9:15 AM	2	1	2	2	35	3	7	3	50	11	72	2	9	1	54	15	5	155	205
9:30 AM	2	2	3	0	38	3	10	0	58	10	84	3	11	3	59	9	13	168	226
9:45 AM	2	2	5	1	24	2	8	1	43	11	67	2	8	2	66	15	6	163	206
10:00 AM	2	1	1	0	32	1	11	1	48	14	89	4	14	5	53	16	9	181	229
10:15 AM	4	2	2	2	31	2	11	2	52	11	75	0	4	3	48	14	4	151	203
10:30 AM	3	0	0	2	36	3	4	0	46	10	80	3	6	3	64	27	3	187	233
10:45 AM	4	3	2	0	28	2	4	0	43	3	77	4	8	2	64	21	15	171	214
11:00 AM	8	1	6	2	22	4	6	1	47	5	67	3	8	1	59	27	7	162	209
11:15 AM	13	5	2	1	24	1	11	0	56	13	85	7	8	1	82	16	13	204	260
11:30 AM	10	8	6	1	27	3	10	0	64	7	85	5	11	3	75	19	3	194	258
11:45 AM	13	6	6	2	43	5	7	1	80	10	76	5	11	2	67	17	8	177	257
12:00 PM	10	5	5	1	26	10	13	1	69	12	99	8	11	6	87	28	16	240	309
12:15 PM	3	1	1	0	27	6	8	0	46	10	92	5	4	1	79	29	5	216	262
12:30 PM	3	2	0	1	28	3	10	1	46	6	66	4	5	2	76	29	8	183	229
12:45 PM	0	2	4	1	28	6	8	1	48	6	66	4	5	4	66	25	13	171	219
1:00 PM	2	2	1	2	22	2	21	0	50	10	99	2	10	8	73	21	9	213	263
1:15 PM	3	0	3	1	23	1	8	1	38	10	73	4	7	5	83	30	7	205	243
1:30 PM	9	3	7	2	40	5	12	0	76	10	76	11	15	6	80	34	8	217	293
1:45 PM	1	1	5	1	24	5	14	0	50	10	112	8	19	13	81	22	6	246	296
2:00 PM	7	2	5	2	35	1	14	0	64	12	97	11	12	7	85	29	4	241	305
2:15 PM	5	0	4	1	25	5	12	0	51	9	66	9	3	6	84	30	1	204	255
2:30 PM	25	6	20	1	26	10	14	0	101	12	82	19	3	13	103	37	13	266	367
2:45 PM	15	4	8	0	24	10	8	1	69	12	62	24	3	12	123	42	7	275	344
3:00 PM	5	1	3	0	23	1	5	0	38	16	97	3	6	0	106	39	5	261	299
3:15 PM	6	1	5	0	19	3	15	0	49	15	90	11	5	6	141	37	3	300	349
3:30 PM	43	9	20	0	35	0	6	0	113	15	111	3	4	2	115	36	8	282	395
3:45 PM	6	0	5	0	34	1	16	1	62	13	99	2	3	4	135	46	8	299	361
4:00 PM	3	1	7	2	30	0	9	4	50	17	109	1	4	1	101	45	6	274	324
4:15 PM	3	4	4	0	29	1	14	0	55	16	106	1	1	2	146	54	8	325	380
4:30 PM	2	2	3	0	39	2	12	0	60	17	127	4	0	1	104	54	4	307	367
4:45 PM	6	3	6	1	20	1	10	0	46	28	106	2	0	2	154	51	2	343	389
5:00 PM	6	2	3	0	35	0	17	0	63	14	101	0	2	4	135	58	4	312	375
5:15 PM	1	2	1	1	35	3	9	0	51	14	97	0	1	1	115	60	1	287	338
5:30 PM	3	0	2	1	31	0	7	0	43	14	90	0	1	5	98	68	0	275	318
5:45 PM	3	2	1	1	32	3	6	1	47	11	75	1	2	2	90	45	0	224	271

AM Peak Hour
7:15 AM to 8:15 AM



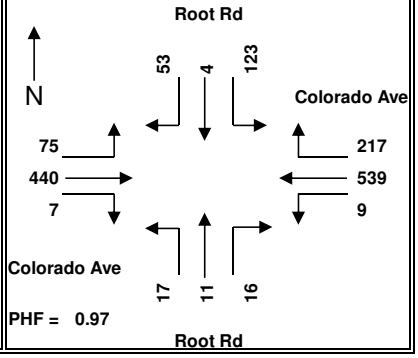
PHF = 0.82

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.92

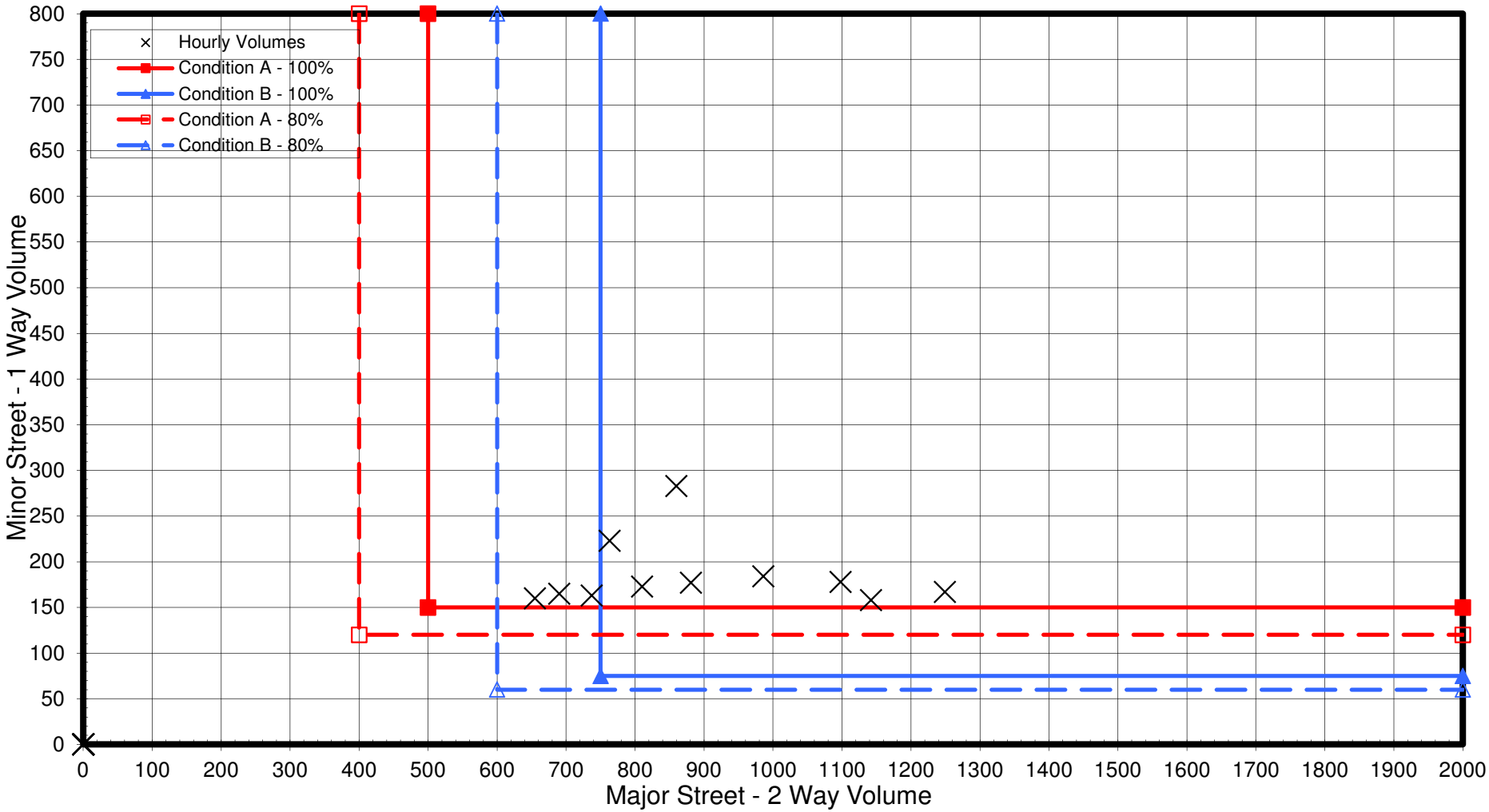
PM Peak Hour
4:15 PM to 5:15 PM



PHF = 0.97

Notes:

WARRANT 1 - Conditions A & B



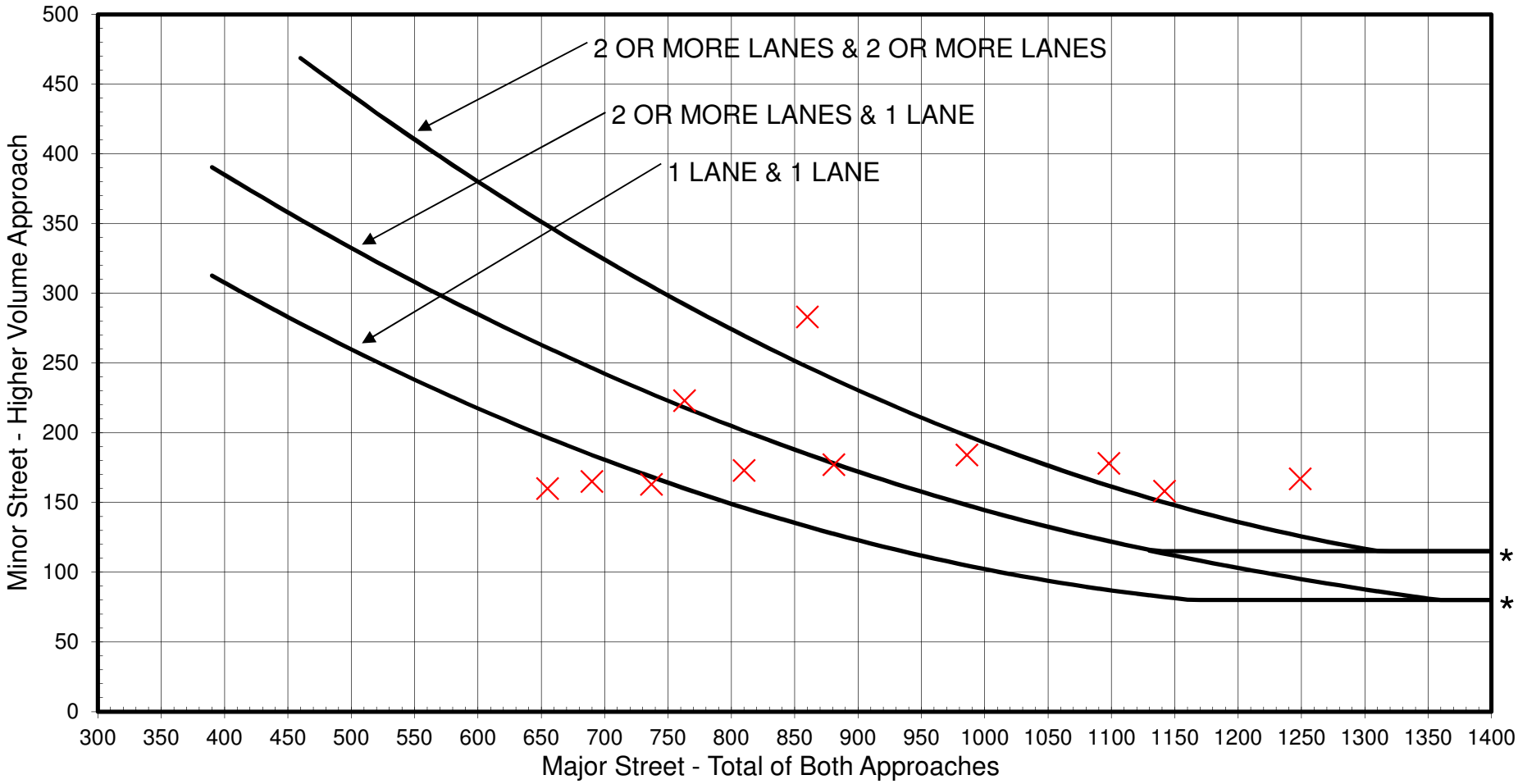
		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Root Rd	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	11 Hours Meet	Yes
Condition B (100%) =	8 Hours Meet	Yes
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Root Rd	1
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Urban) =	8 Hours Meet	YES

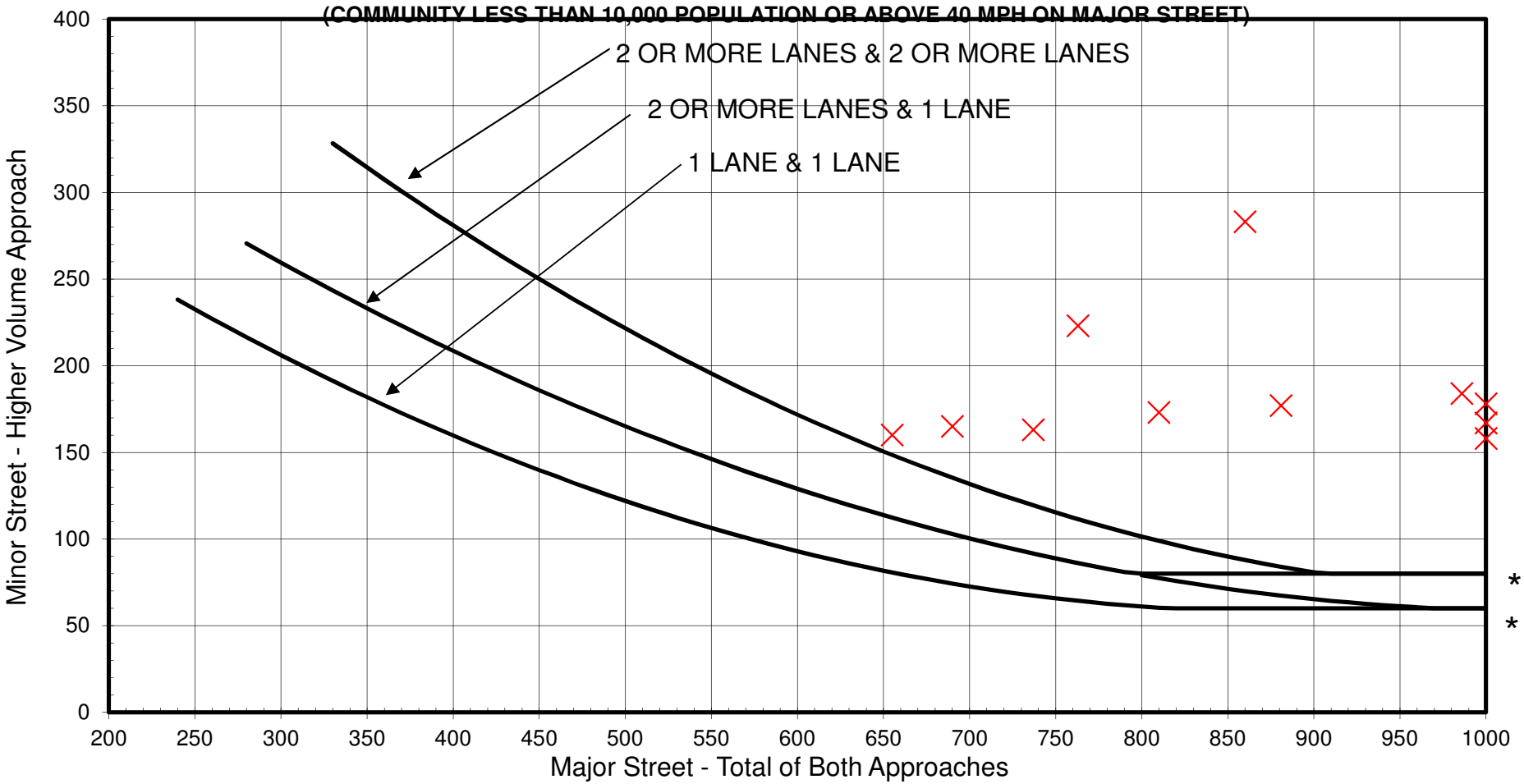
Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)

FOUR HOUR VOLUME WARRANT (WARRANT 2)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

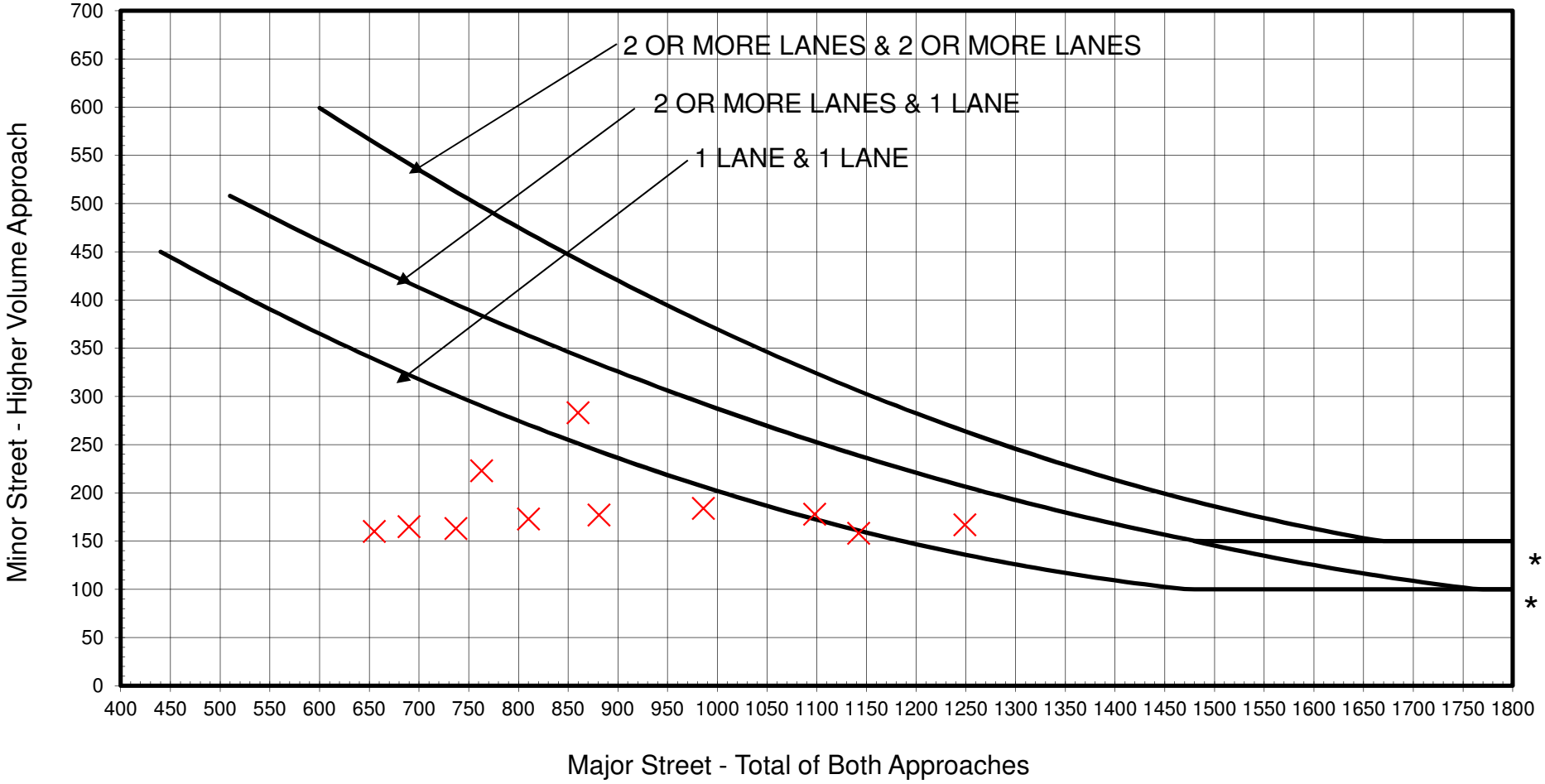
		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Root Rd	1
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Rural) =	11 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Root Rd	1
Road Location =	Urban	

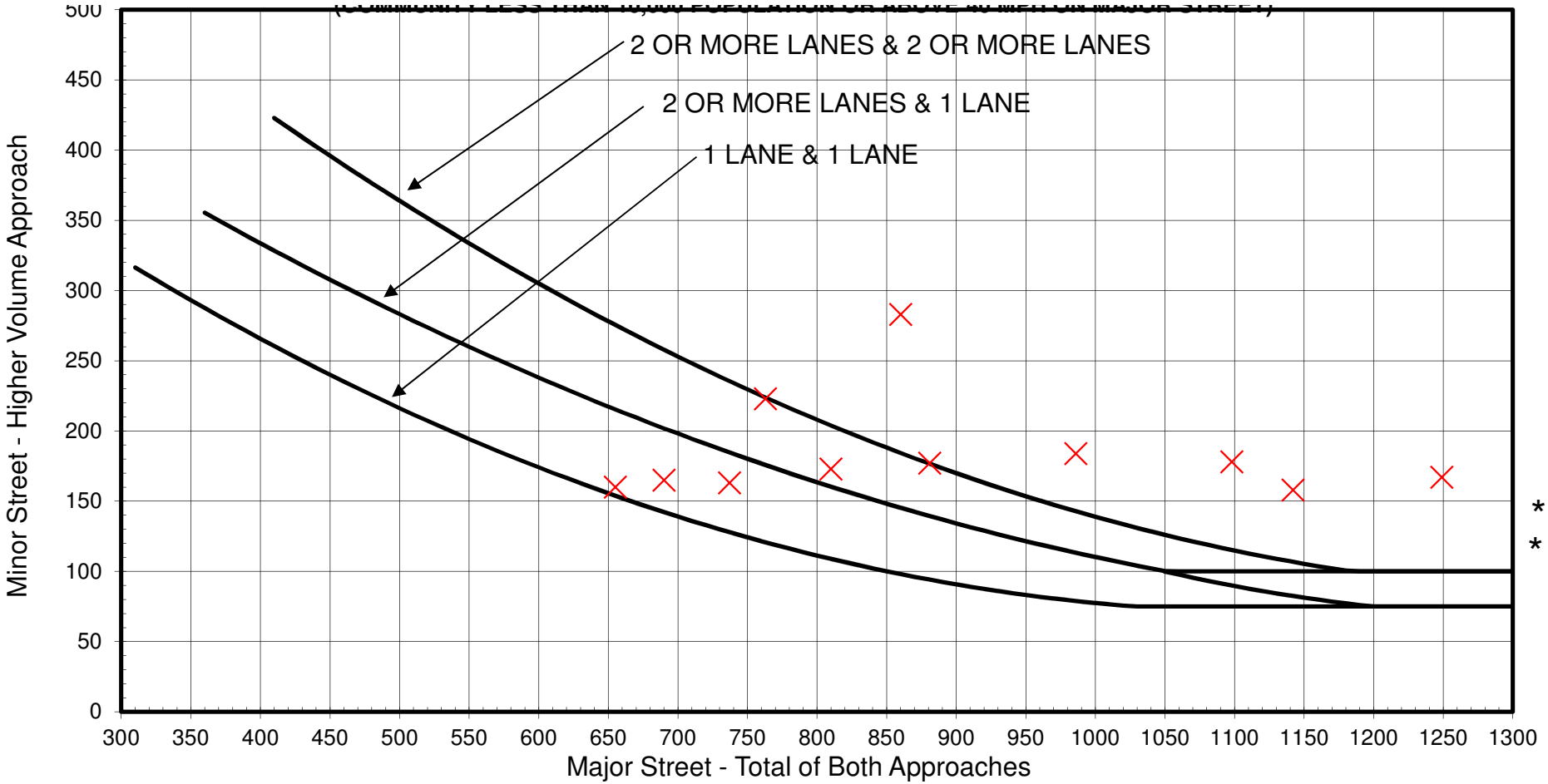
		Warrant Met?
Warrant 3 (Urban) =	3 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	Colorado Ave	1
Minor Road =	Root Rd	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Rural) =	11 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS

Appendix B.10

Traffic Signal Warrant Analysis Results

Intersection 10
W Erie Ave (US 6) and N Leavitt Rd (SR 58)

SIGNAL WARRANT

INTERSECTION: Private Dr and N Leavitt Rd and W Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1		X	X	500	150	400	120	750	75	600	60						
	2+	X			600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		578	110	6			X			X		X						
8AM-9AM		539	129	7			X	X		X		X						
9AM-10AM		449	119	8						X		X						
10AM-11AM		464	159	8		X		X		X		X						
11AM-NOON		513	161	7		X	X	X		X		X						
NOON-1PM		532	217	11		X	X	X		X		X						
1PM-2PM		592	189	6		X	X	X		X		X						
2PM-3PM		649	182	4	X	X	X	X		X		X						
3PM-4PM		701	211	9	X	X	X	X		X		X						
4PM-5PM		776	232	6	X	X	X	X		X	X	X					X	
5PM-6PM		726	214	9	X	X	X	X		X	X	X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					4		8		0		2						1	0
WARRANT SATISFIED?					**NO**		**YES**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Private Dr and N Leavitt Rd and W Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

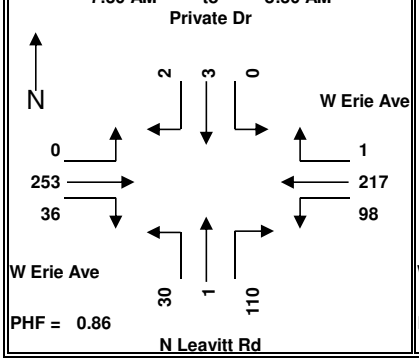
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 10

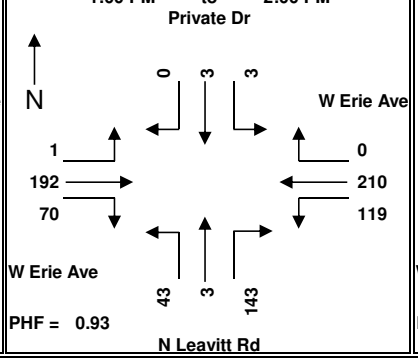
Start Time	N Leavitt Rd Northbound				Private Dr Southbound				Total North South	W Erie Ave Eastbound				W Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	529	30	1364	55	13	45	23	3	2004	13	2277	577	69	1219	2419	14	95	6519	8523
	Percent Trucks =			3%	Percent Trucks =			4%		Percent Trucks =			2%	Percent Trucks =			3%		
ADT	736	42	1898	77	18	63	32	4	2788	18	3168	803	96	1696	3365	19	132	9070	11858
7:00 AM	6	0	9	2	0	0	1	0	16	0	40	7	2	22	53	0	3	122	138
7:15 AM	5	0	22	1	0	1	1	0	29	0	46	9	0	26	39	0	1	120	149
7:30 AM	3	0	27	1	0	2	1	0	33	0	74	11	4	18	52	0	2	155	188
7:45 AM	11	0	27	4	0	0	0	0	38	0	88	6	2	27	60	0	1	181	219
8:00 AM	10	0	28	4	0	0	0	0	38	0	42	13	4	29	50	0	3	134	172
8:15 AM	6	1	28	2	0	1	1	0	37	0	49	6	3	24	55	1	3	135	172
8:30 AM	13	0	11	1	1	1	0	1	26	0	62	11	1	28	43	0	3	144	170
8:45 AM	8	0	24	1	0	3	0	0	35	0	48	6	2	24	48	0	2	126	161
9:00 AM	9	1	21	1	0	2	0	1	33	0	38	12	3	19	35	0	1	104	137
9:15 AM	6	1	20	1	2	0	0	0	29	0	36	9	1	18	40	0	3	103	132
9:30 AM	10	3	17	1	1	2	0	0	33	0	36	18	0	21	50	1	2	126	159
9:45 AM	9	0	22	1	0	0	1	0	32	1	46	12	0	15	41	1	2	116	148
10:00 AM	11	1	27	2	0	0	0	0	39	2	39	20	3	33	47	0	0	141	180
10:15 AM	7	2	30	1	2	1	1	0	43	0	40	11	4	24	34	0	0	109	152
10:30 AM	12	0	34	6	0	1	1	0	48	1	33	12	0	22	36	0	2	104	152
10:45 AM	10	0	25	1	1	1	0	0	37	0	36	16	2	23	35	0	2	110	147
11:00 AM	10	0	34	0	0	0	0	0	44	0	35	20	1	33	49	0	2	137	181
11:15 AM	12	0	30	0	0	0	2	0	44	0	27	7	1	26	34	0	0	94	138
11:30 AM	12	1	25	2	1	0	2	0	41	0	60	10	3	30	52	2	3	154	195
11:45 AM	12	0	25	2	1	1	0	0	39	0	39	17	2	22	49	1	6	128	167
12:00 PM	11	0	30	2	0	1	0	0	42	1	43	15	3	23	46	0	1	128	170
12:15 PM	9	3	37	0	1	0	2	0	52	0	50	9	4	24	56	0	1	139	191
12:30 PM	26	1	39	0	0	3	0	0	69	0	33	12	1	29	45	0	3	119	188
12:45 PM	18	0	43	2	0	4	0	0	65	0	54	13	2	26	51	2	1	146	211
1:00 PM	13	0	32	0	2	1	0	0	48	0	51	18	1	24	44	0	1	137	185
1:15 PM	6	0	39	2	0	1	0	0	46	0	46	18	2	30	50	0	3	144	190
1:30 PM	14	1	38	1	0	0	0	0	53	0	54	11	1	30	53	0	1	148	201
1:45 PM	10	2	34	1	1	1	0	0	48	1	41	23	0	35	63	0	5	163	211
2:00 PM	19	1	24	0	0	1	0	0	45	0	57	24	4	29	67	0	2	177	222
2:15 PM	10	1	24	2	0	1	0	0	36	0	50	23	2	29	48	1	2	151	187
2:30 PM	12	0	35	1	0	1	0	0	48	0	63	16	1	30	59	0	6	168	216
2:45 PM	14	0	42	2	0	1	0	0	57	0	61	9	2	29	53	1	2	153	210
3:00 PM	8	2	46	1	0	3	1	0	60	1	59	11	1	32	70	0	4	173	233
3:15 PM	18	1	34	2	0	2	1	1	56	0	55	1	0	26	63	0	2	145	201
3:30 PM	10	0	41	1	0	0	1	0	52	0	70	11	0	50	76	1	4	208	260
3:45 PM	11	1	39	1	0	0	1	0	52	0	66	9	4	32	68	0	3	175	227
4:00 PM	9	0	47	0	0	1	1	0	58	0	82	15	2	34	59	1	4	191	249
4:15 PM	21	0	37	0	0	0	1	0	59	0	59	15	0	33	80	1	4	188	247
4:30 PM	24	1	42	0	0	1	1	0	69	2	74	11	0	33	94	0	2	214	283
4:45 PM	12	2	37	0	0	1	0	0	52	1	57	13	0	43	69	0	0	183	235
5:00 PM	19	0	28	0	0	2	0	0	49	1	69	23	0	27	79	1	0	200	249
5:15 PM	13	1	40	2	0	2	0	0	56	1	70	8	0	26	79	0	2	184	240
5:30 PM	18	1	29	0	0	1	1	0	50	1	52	17	0	36	73	0	1	179	229
5:45 PM	22	2	41	1	0	1	2	0	68	0	47	19	1	25	72	0	0	163	231

AM Peak Hour
7:30 AM to 8:30 AM



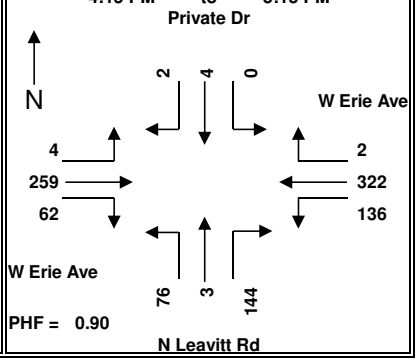
PHF = 0.86

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.93

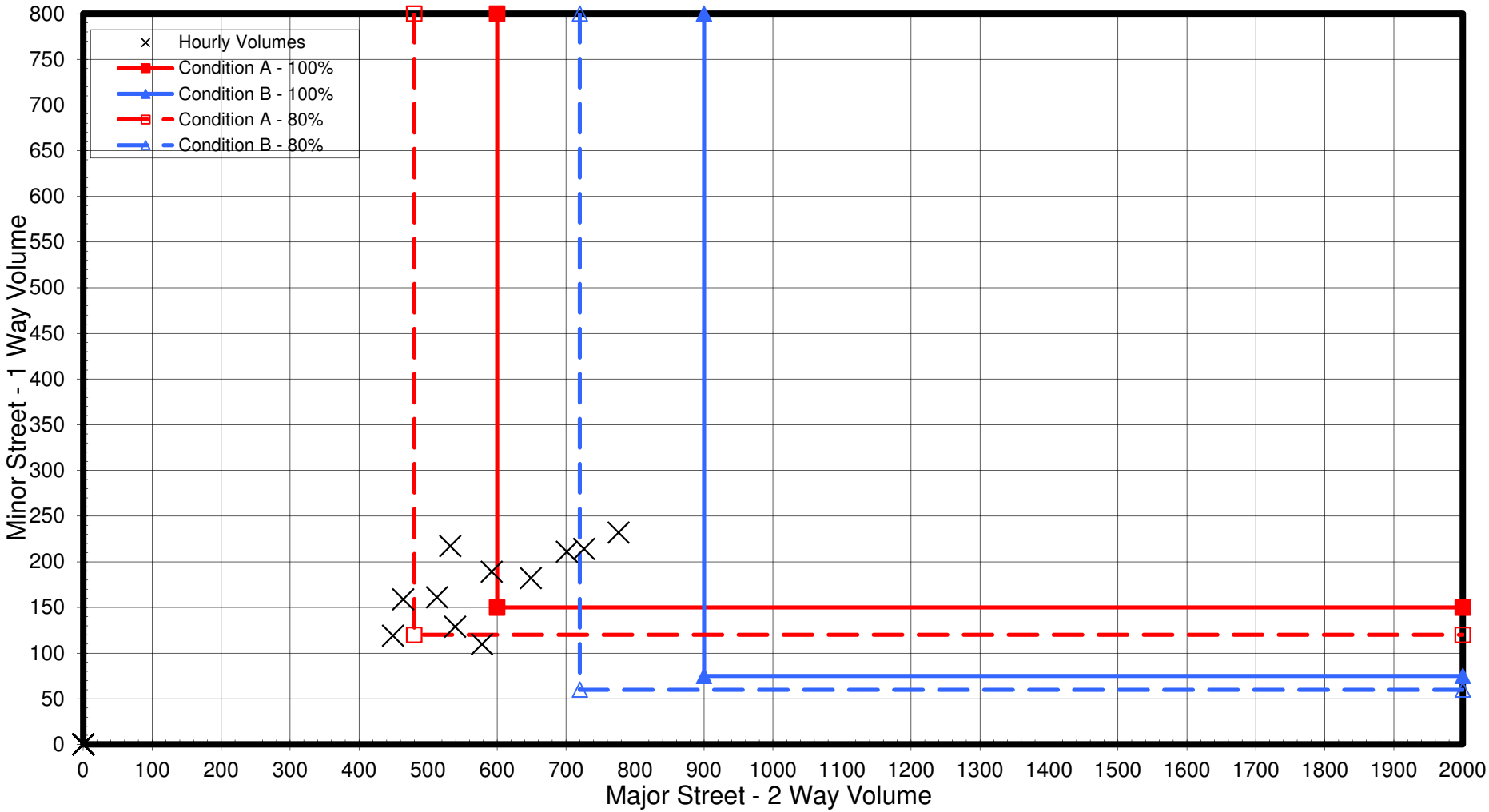
PM Peak Hour
4:15 PM to 5:15 PM



PHF = 0.90

Notes:

WARRANT 1 - Conditions A & B



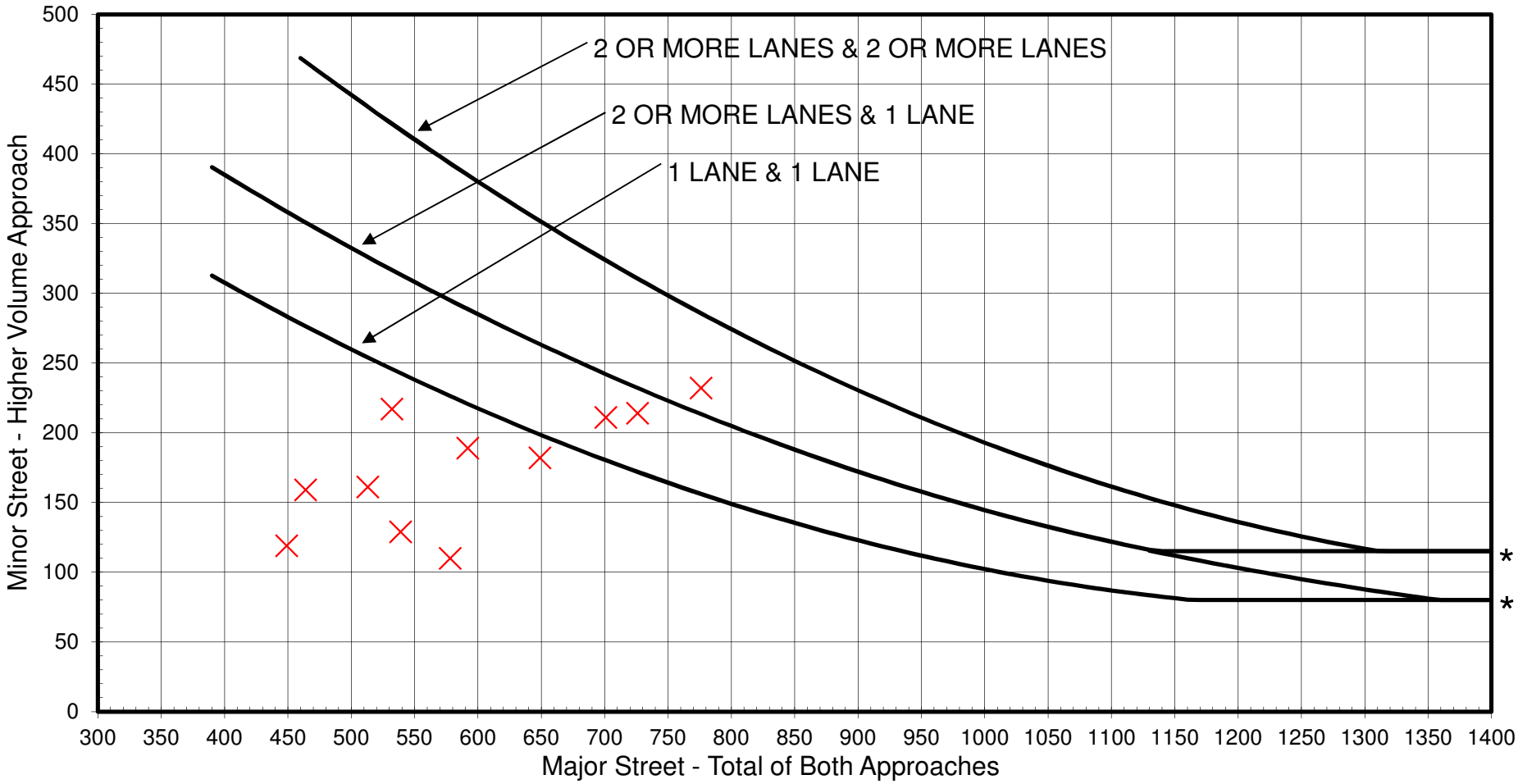
		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Private Dr and N Leavitt Rd	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	4 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	8 Hours Meet	Yes
Condition B (80%) =	2 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Private Dr and N Leavitt Rd	1
Road Location =	Urban	

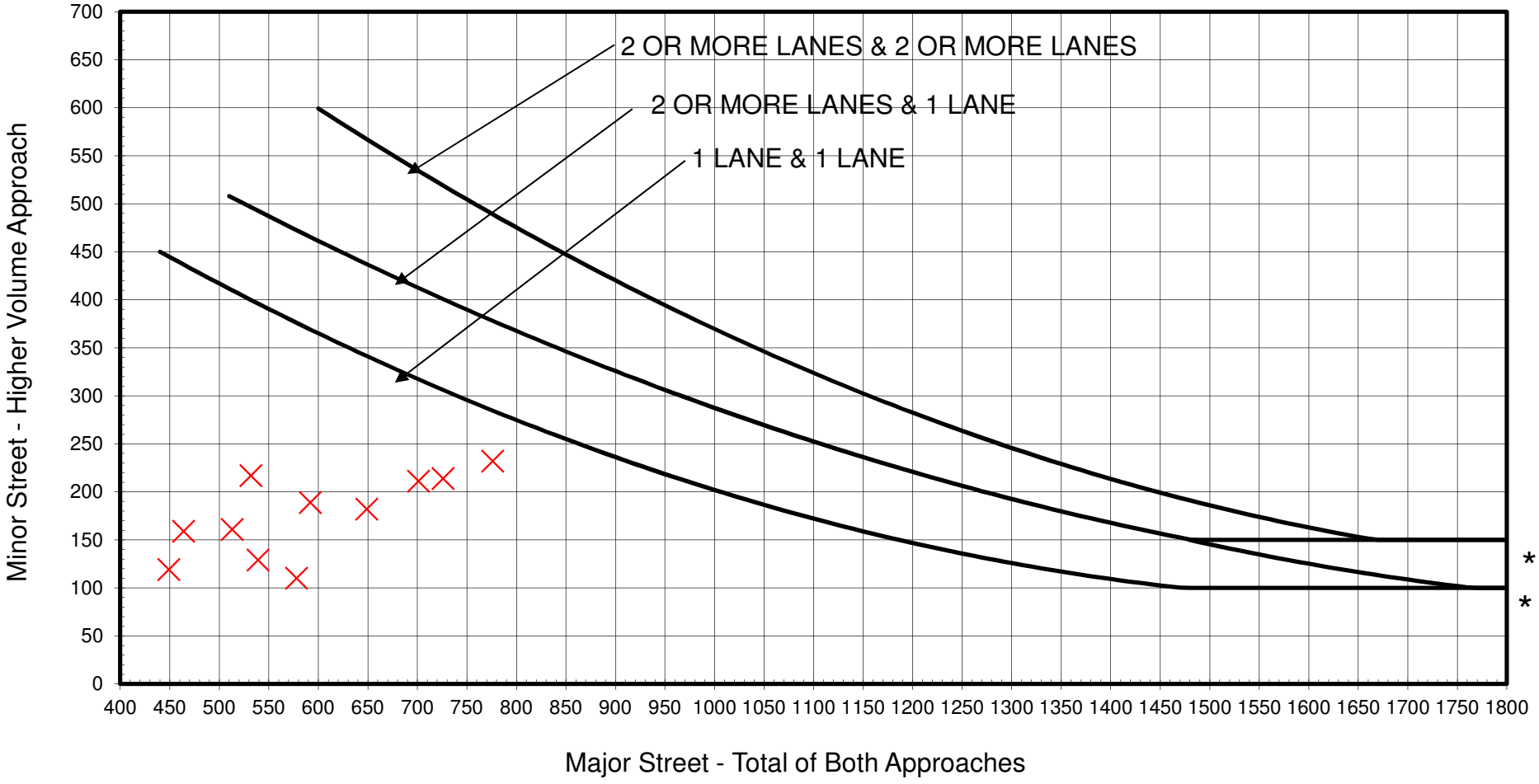
		Warrant Met?
Warrant 2 (Urban) =	1 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Private Dr and N Leavitt Rd	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.11

Traffic Signal Warrant Analysis Results

Intersection 11
W Erie Ave (US 6) and Archwood Ave/ Lakewood Park Exit

SIGNAL WARRANT

INTERSECTION: Park Exit and Archwood Ave and W Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		623	8	10	X		X				X							
8AM-9AM		581	8	14	X		X											
9AM-10AM		480	5	23			X											
10AM-11AM		508	5	36	X		X											
11AM-NOON		554	4	52	X		X											
NOON-1PM		592	3	77	X		X			X		X						
1PM-2PM		631	10	89	X		X			X	X	X						
2PM-3PM		657	4	71	X		X				X	X						
3PM-4PM		804	9	65	X		X		X		X	X						
4PM-5PM		867	5	42	X		X		X		X							
5PM-6PM		780	12	34	X		X		X		X							
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		3						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Park Exit and Archwood Ave and W Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

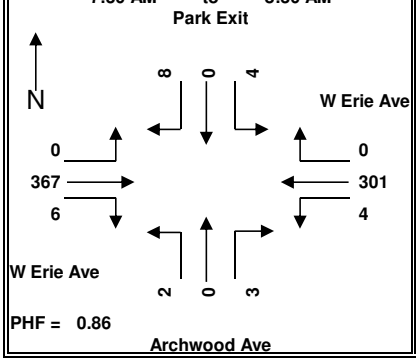
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 11

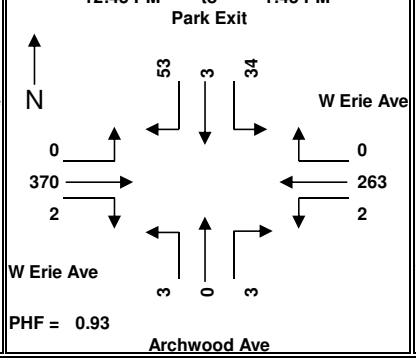
Start Time	Archwood Ave Northbound				Park Exit Southbound				Total North South	W Erie Ave Eastbound				W Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	34	0	39	1	239	15	259	4	586	0	3640	36	104	33	3368	0	96	7077	7663
	Percent Trucks =			1%	Percent Trucks =			1%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	47	0	54	1	333	21	360	6	815	0	5064	50	145	46	4686	0	134	9846	10661
7:00 AM	0	0	0	0	2	0	0	0	2	0	50	0	2	0	69	0	2	119	121
7:15 AM	4	0	2	0	0	0	3	0	9	0	66	1	0	0	58	0	0	125	134
7:30 AM	0	0	1	0	1	0	1	0	3	0	109	1	3	0	70	0	5	180	183
7:45 AM	1	0	0	0	0	0	3	0	4	0	113	2	6	2	82	0	1	199	203
8:00 AM	1	0	2	0	1	0	3	0	7	0	69	1	5	1	74	0	3	145	152
8:15 AM	0	0	0	0	2	0	1	0	3	0	76	2	2	1	75	0	3	154	157
8:30 AM	0	0	3	0	1	0	3	0	7	0	79	2	0	1	64	0	2	146	153
8:45 AM	2	0	0	0	1	0	2	0	5	0	70	0	3	1	65	0	3	136	141
9:00 AM	0	0	0	0	9	0	2	0	11	0	63	1	3	0	50	0	1	114	125
9:15 AM	1	0	1	0	0	0	1	0	3	0	58	2	3	1	61	0	6	122	125
9:30 AM	0	0	3	0	3	0	3	0	9	0	58	0	1	2	65	0	2	125	134
9:45 AM	0	0	0	0	2	0	3	0	5	0	68	0	1	0	51	0	2	119	124
10:00 AM	3	0	0	0	3	0	6	0	12	0	66	1	1	0	67	0	0	134	146
10:15 AM	0	0	1	0	4	0	5	0	10	0	75	1	6	0	55	0	0	131	141
10:30 AM	0	0	0	0	11	1	2	1	14	0	64	0	6	0	57	0	1	121	135
10:45 AM	0	0	1	0	2	1	1	0	5	0	65	2	3	0	55	0	2	122	127
11:00 AM	1	0	1	0	8	0	9	0	19	0	69	0	1	0	68	0	2	137	156
11:15 AM	0	0	0	0	6	0	3	0	9	0	63	0	1	0	61	0	0	124	133
11:30 AM	0	0	0	0	7	0	10	0	17	0	77	1	4	2	72	0	3	152	169
11:45 AM	1	0	1	0	4	0	5	0	11	0	70	2	3	1	68	0	5	141	152
12:00 PM	2	0	0	0	10	0	7	0	19	0	67	0	2	0	58	0	1	125	144
12:15 PM	0	0	1	0	10	0	12	0	23	0	84	0	2	0	69	0	0	153	176
12:30 PM	0	0	0	0	5	0	10	0	15	0	76	0	3	3	68	0	3	147	162
12:45 PM	0	0	0	0	11	2	10	1	23	0	98	1	6	0	68	0	1	167	190
1:00 PM	0	0	1	0	7	1	16	0	25	0	90	0	2	1	53	0	1	144	169
1:15 PM	1	0	1	0	8	0	10	0	20	0	84	0	4	0	73	0	3	157	177
1:30 PM	2	0	1	0	8	0	17	0	28	0	98	1	0	1	69	0	1	169	197
1:45 PM	0	0	4	0	6	2	14	0	26	0	72	3	0	2	84	0	5	161	187
2:00 PM	1	0	0	0	11	0	9	0	21	0	77	0	3	0	84	0	2	161	182
2:15 PM	0	0	0	0	9	0	9	0	18	0	86	0	6	0	62	0	2	148	166
2:30 PM	1	0	1	0	3	3	11	0	19	0	92	0	1	1	79	0	6	172	191
2:45 PM	1	0	0	0	9	0	7	0	17	0	96	0	2	0	80	0	1	176	193
3:00 PM	1	0	1	0	14	1	5	1	22	0	103	0	4	0	95	0	3	198	220
3:15 PM	1	0	2	0	7	0	7	0	17	0	91	1	3	1	84	0	3	177	194
3:30 PM	1	0	1	0	11	0	6	0	19	0	109	3	1	2	120	0	5	234	253
3:45 PM	1	0	1	1	8	1	5	0	16	0	98	1	4	0	96	0	3	195	211
4:00 PM	0	0	2	0	6	1	6	0	15	0	126	2	3	0	92	0	4	220	235
4:15 PM	0	0	1	0	2	1	7	0	11	0	97	0	0	1	107	0	3	205	216
4:30 PM	0	0	0	0	6	0	6	0	12	0	104	0	0	4	125	0	2	233	245
4:45 PM	1	0	1	0	2	1	4	0	9	0	101	2	0	1	105	0	0	209	218
5:00 PM	1	0	0	0	5	0	6	0	12	0	102	0	0	0	105	0	1	207	219
5:15 PM	1	0	2	0	9	0	3	1	15	0	100	3	2	1	109	0	2	213	228
5:30 PM	3	0	1	0	4	0	4	0	12	0	78	0	0	1	102	0	1	181	193
5:45 PM	2	0	2	0	1	0	2	0	7	0	83	0	2	2	94	0	0	179	186

AM Peak Hour
7:30 AM to 8:30 AM



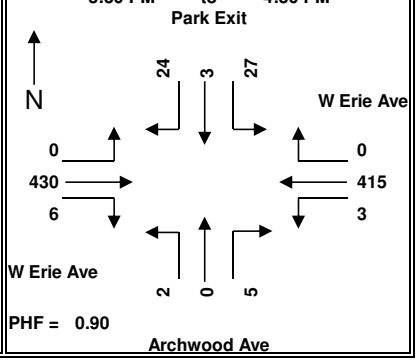
PHF = 0.86

Midday Peak Hour
12:45 PM to 1:45 PM



PHF = 0.93

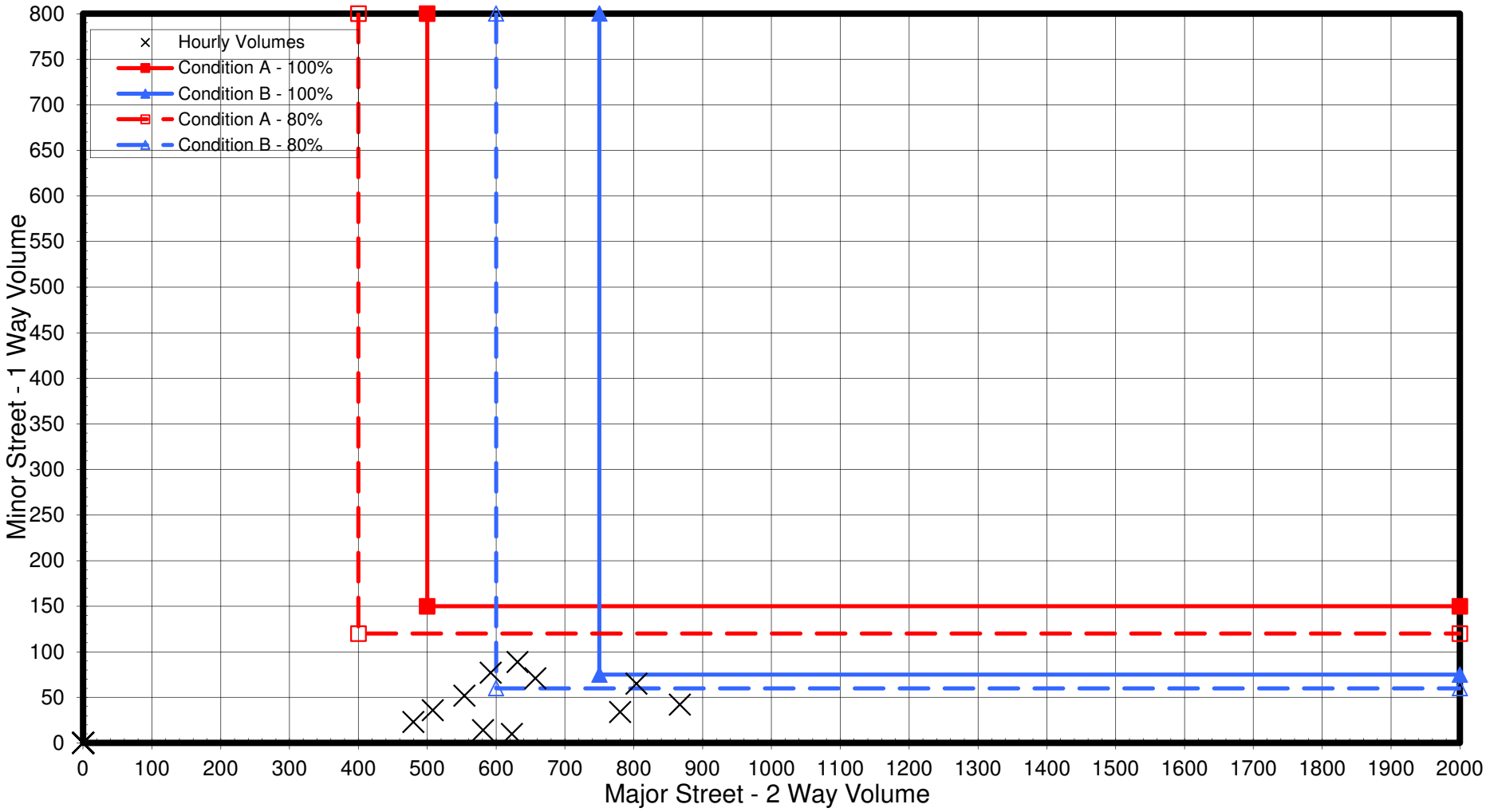
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.90

Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	W Erie Ave	1
Minor Road =	Park Exit and Archwood Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	3 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
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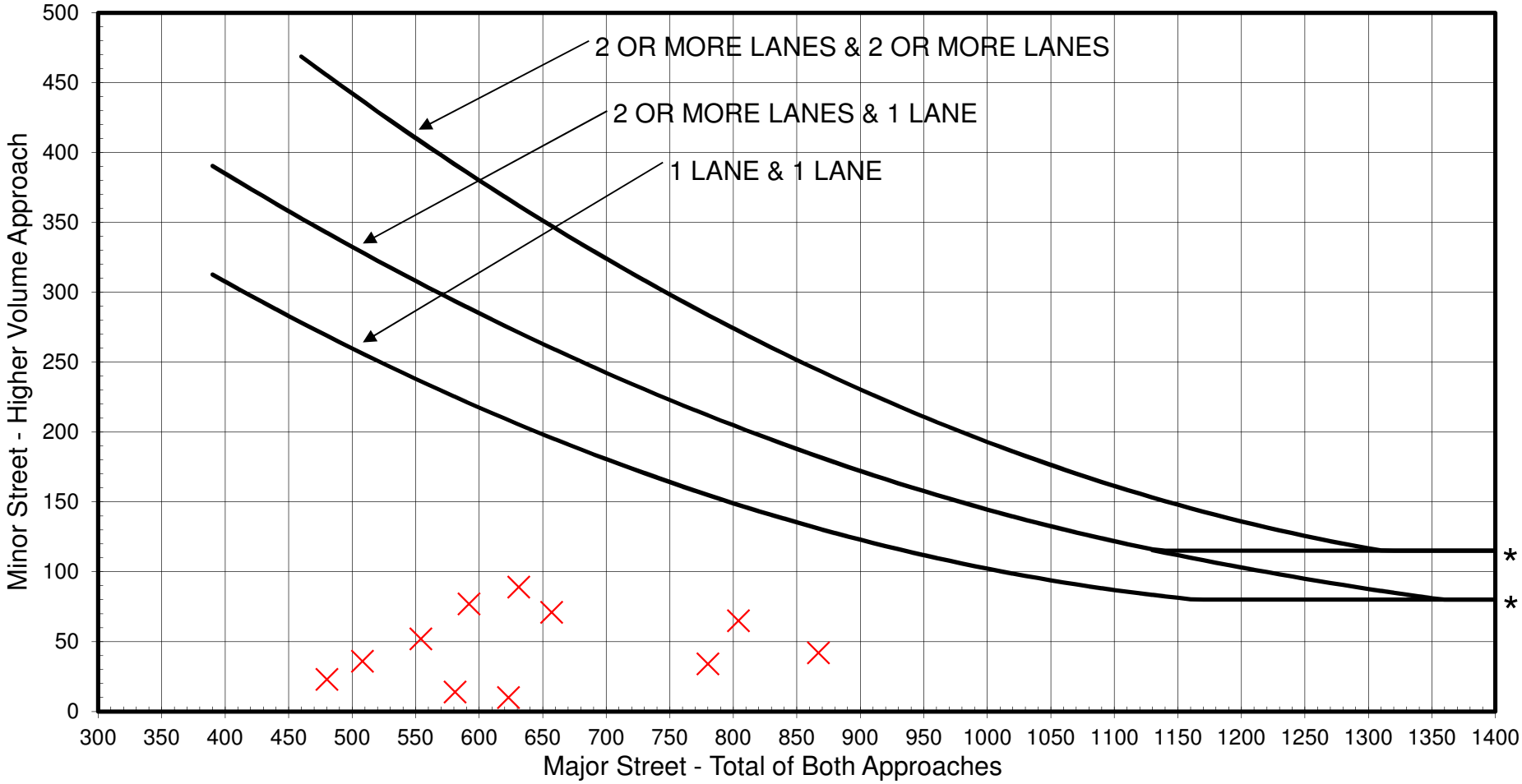
FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W Erie Ave	1
Minor Road =	Park Exit and Archwood Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
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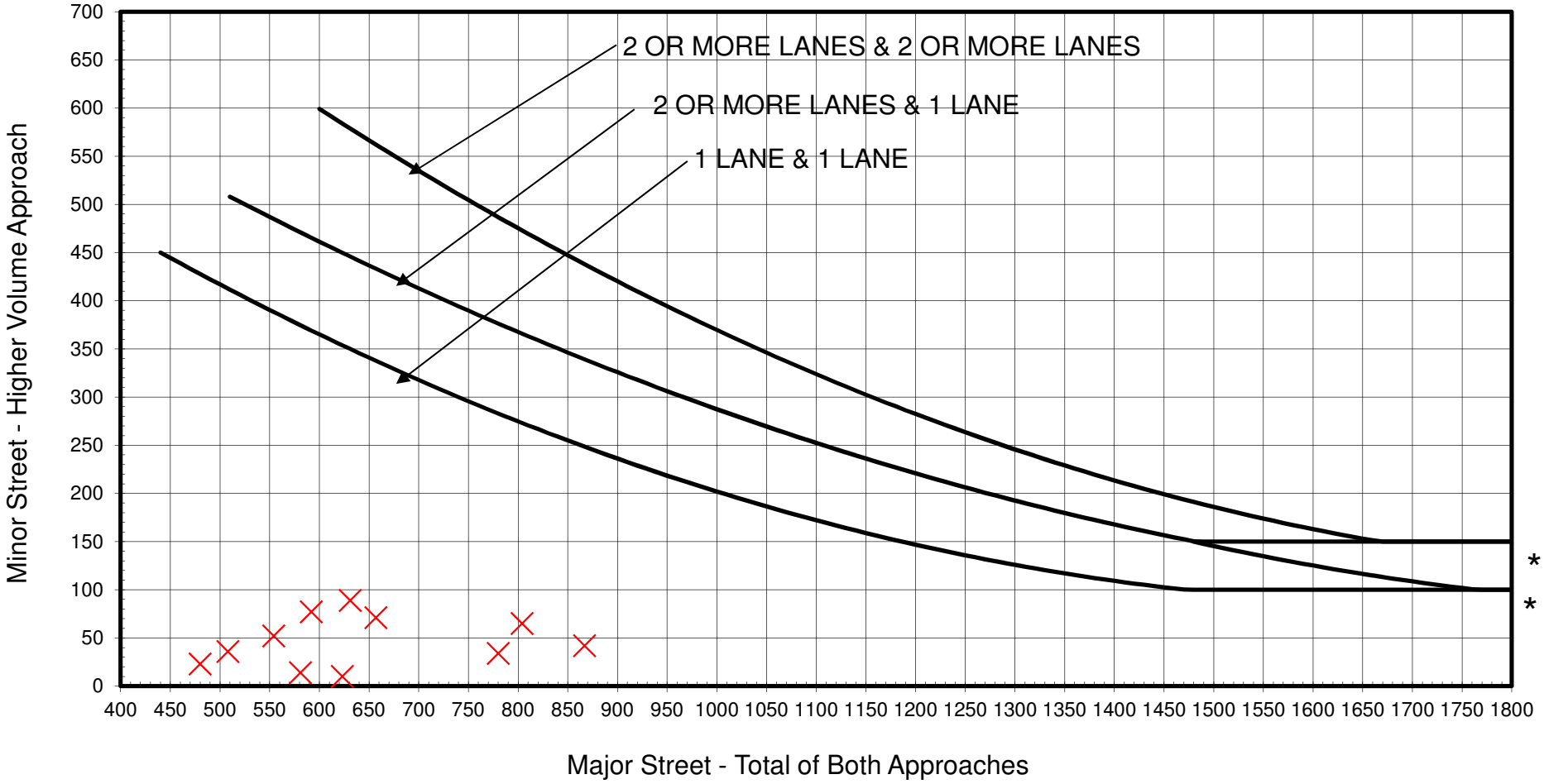
PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W Erie Ave	1
Minor Road =	Park Exit and Archwood Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

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Appendix B.12

Traffic Signal Warrant Analysis Results

Intersection 12
W Erie Ave (US 6) and Mildred Ave/
Lakeview Park Entrance

SIGNAL WARRANT

INTERSECTION: Park Entrance and Mildred Ave and W Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR					FOUR HOUR	PEAK HOUR
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		596	21	0	X		X											
8AM-9AM		576	16	0	X		X											
9AM-10AM		490	11	0			X											
10AM-11AM		535	12	0	X		X											
11AM-NOON		583	10	0	X		X											
NOON-1PM		636	8	0	X		X				X							
1PM-2PM		674	12	0	X		X				X							
2PM-3PM		664	13	0	X		X				X							
3PM-4PM		834	20	0	X		X		X		X							
4PM-5PM		881	17	0	X		X		X		X							
5PM-6PM		810	10	0	X		X		X		X							
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Park Entrance and Mildred Ave and W Erie Ave
Lorain, OH

URS
564 White Pond Drive
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Tel: 330.836.9111

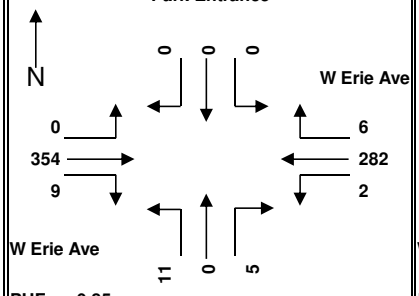
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 12

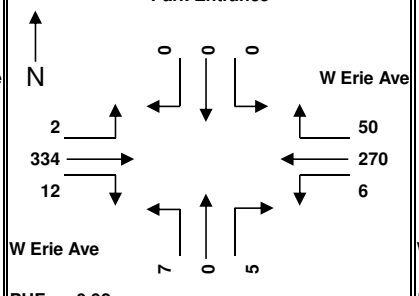
Start Time	Mildred Ave Northbound				Park Entrance Southbound				Total North South	W Erie Ave Eastbound				W Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	83	8	59	3	0	0	0	0	150	6	3542	114	95	42	3289	286	107	7279	7429
	Percent Trucks =			2%	Percent Trucks =			0%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	115	11	82	4	0	0	0	0	209	8	4928	159	132	58	4576	398	149	10127	10336
7:00 AM	3	0	4	0	0	0	0	0	7	0	50	1	2	2	62	2	3	117	124
7:15 AM	3	0	3	0	0	0	0	0	6	0	63	2	0	0	54	2	0	121	127
7:30 AM	2	0	2	0	0	0	0	0	4	0	96	4	3	0	63	2	5	165	169
7:45 AM	4	0	0	0	0	0	0	0	4	0	113	3	4	0	75	2	1	193	197
8:00 AM	1	0	1	0	0	0	0	0	2	0	71	1	5	1	73	2	4	148	150
8:15 AM	4	0	2	0	0	0	0	0	6	0	74	1	3	1	71	0	3	147	153
8:30 AM	3	0	0	0	0	0	0	0	3	0	74	0	1	0	66	2	2	142	145
8:45 AM	4	0	1	1	0	0	0	0	5	0	64	5	5	0	66	4	3	139	144
9:00 AM	1	0	1	0	0	0	0	0	2	0	64	5	2	1	47	4	0	121	123
9:15 AM	2	0	0	1	0	0	0	0	2	0	65	0	4	0	59	3	7	127	129
9:30 AM	4	0	2	0	0	0	0	0	6	0	57	0	1	0	60	4	3	121	127
9:45 AM	0	0	1	0	0	0	0	0	1	0	62	0	0	1	51	7	2	121	122
10:00 AM	0	1	2	0	0	0	0	0	3	1	58	2	0	1	70	2	0	134	137
10:15 AM	2	0	0	0	0	0	0	0	2	0	78	0	4	0	55	5	1	138	140
10:30 AM	1	0	2	1	0	0	0	0	3	0	71	2	4	0	55	9	1	137	140
10:45 AM	2	0	2	0	0	0	0	0	4	0	64	4	4	0	52	6	2	126	130
11:00 AM	3	1	1	0	0	0	0	0	5	0	68	1	1	1	69	6	2	145	150
11:15 AM	1	0	0	0	0	0	0	0	1	0	63	2	1	0	63	6	0	134	135
11:30 AM	0	0	0	0	0	0	0	0	0	0	68	1	3	2	80	10	3	161	161
11:45 AM	2	1	1	0	0	0	0	0	4	0	65	3	2	1	67	7	4	143	147
12:00 PM	1	0	1	0	0	0	0	0	2	0	71	2	4	0	60	13	2	146	148
12:15 PM	0	0	1	0	0	0	0	0	1	0	81	2	2	0	63	17	2	163	164
12:30 PM	3	1	0	0	0	0	0	0	4	0	75	4	1	0	66	13	2	158	162
12:45 PM	0	0	1	0	0	0	0	0	1	0	92	2	4	0	67	8	5	169	170
1:00 PM	0	0	0	0	0	0	0	0	0	0	94	2	4	0	52	14	1	162	162
1:15 PM	2	0	1	0	0	0	0	0	3	0	82	1	4	2	68	10	3	163	166
1:30 PM	1	0	4	0	0	0	0	0	5	0	80	4	0	0	68	15	1	167	172
1:45 PM	4	0	0	0	0	0	0	0	4	2	78	5	0	4	82	11	6	182	186
2:00 PM	3	0	0	0	0	0	0	0	3	0	78	1	3	0	65	9	2	153	156
2:15 PM	2	0	2	0	0	0	0	0	4	0	90	2	6	1	57	11	2	161	165
2:30 PM	2	0	0	0	0	0	0	0	2	0	84	1	0	2	68	7	5	162	164
2:45 PM	0	2	2	0	0	0	0	0	4	1	93	3	2	2	76	13	1	188	192
3:00 PM	3	1	4	0	0	0	0	0	8	0	110	4	5	1	93	10	3	218	226
3:15 PM	1	0	1	0	0	0	0	0	2	0	91	6	2	0	82	6	3	185	187
3:30 PM	5	0	1	0	0	0	0	0	6	1	94	4	0	0	124	6	6	229	235
3:45 PM	2	0	2	0	0	0	0	0	4	0	98	3	3	2	92	7	3	202	206
4:00 PM	4	0	3	0	0	0	0	0	7	0	121	6	3	2	95	2	3	226	233
4:15 PM	0	0	4	0	0	0	0	0	4	0	90	6	0	3	106	7	2	212	216
4:30 PM	2	0	1	0	0	0	0	0	3	0	99	2	0	2	130	4	1	237	240
4:45 PM	3	0	0	0	0	0	0	0	3	0	91	4	0	1	108	2	0	206	209
5:00 PM	2	0	1	0	0	0	0	0	3	0	94	2	1	2	104	10	2	212	215
5:15 PM	1	0	4	0	0	0	0	0	5	0	108	6	1	0	111	4	1	229	234
5:30 PM	0	1	0	0	0	0	0	0	1	0	82	2	0	3	97	1	2	185	186
5:45 PM	0	0	1	0	0	0	0	0	1	1	78	3	1	4	97	1	3	184	185

AM Peak Hour
7:30 AM to 8:30 AM
Park Entrance



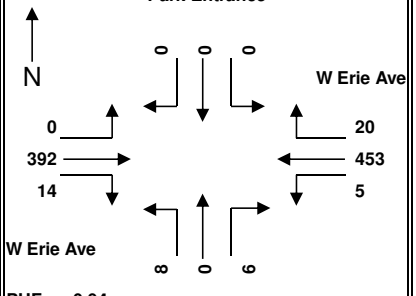
PHF = 0.85
Mildred Ave

Midday Peak Hour
1:00 PM to 2:00 PM
Park Entrance



PHF = 0.92
Mildred Ave

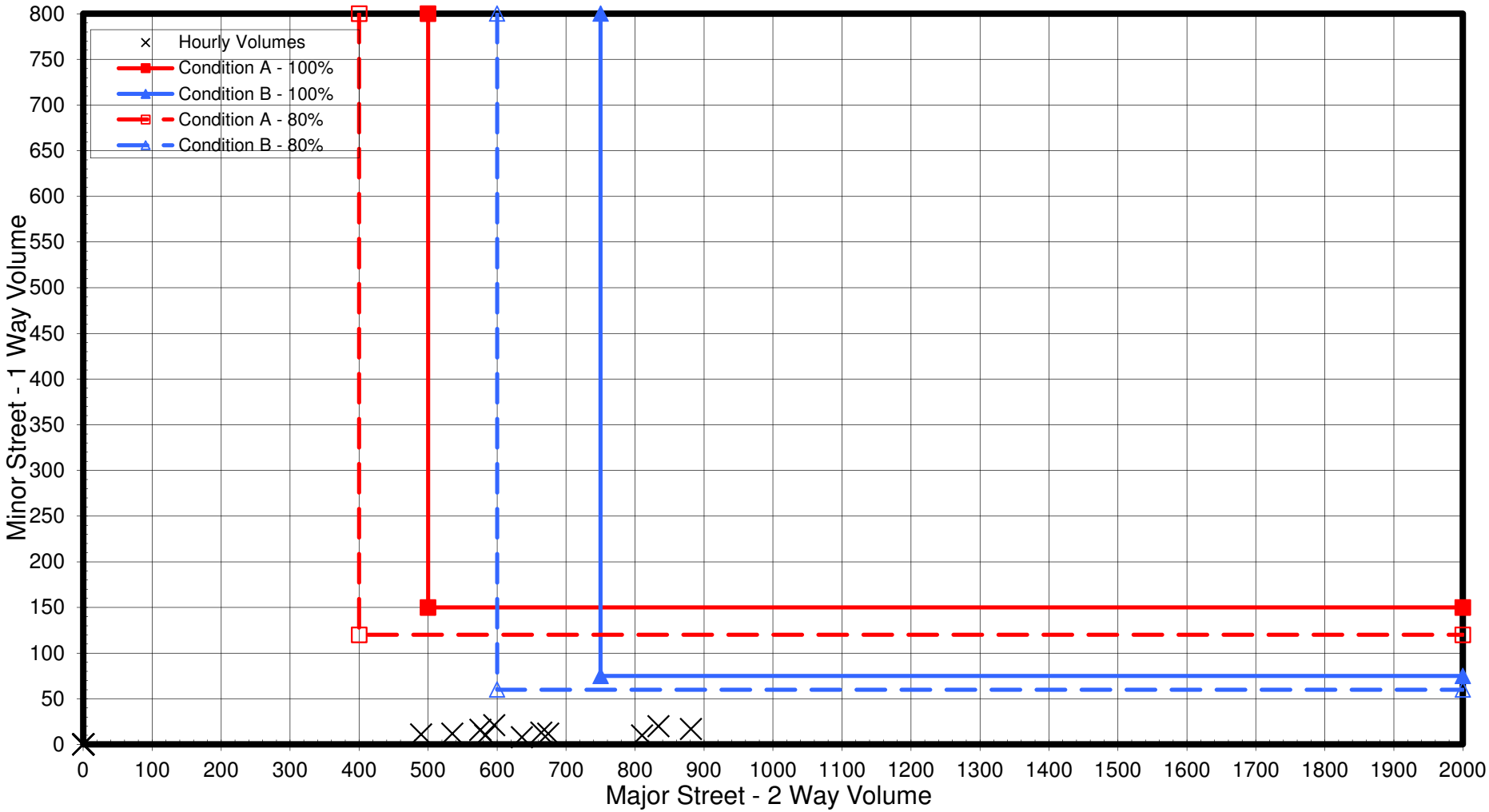
PM Peak Hour
4:30 PM to 5:30 PM
Park Entrance



PHF = 0.94
Mildred Ave

Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	W Erie Ave	1
Minor Road =	Park Entrance and Mildred A	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

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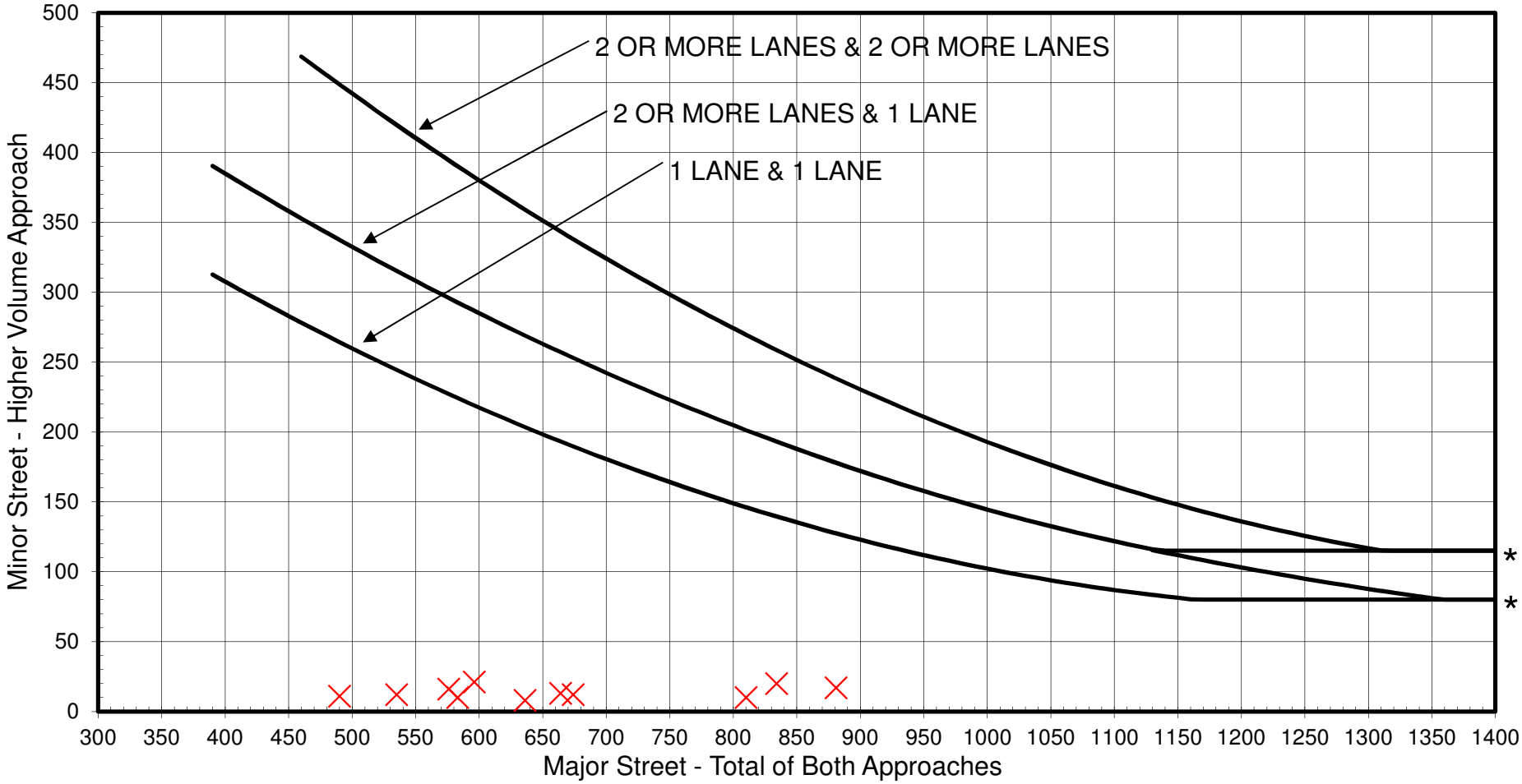
FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W Erie Ave	1
Minor Road =	Park Entrance and Mildred A	1
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

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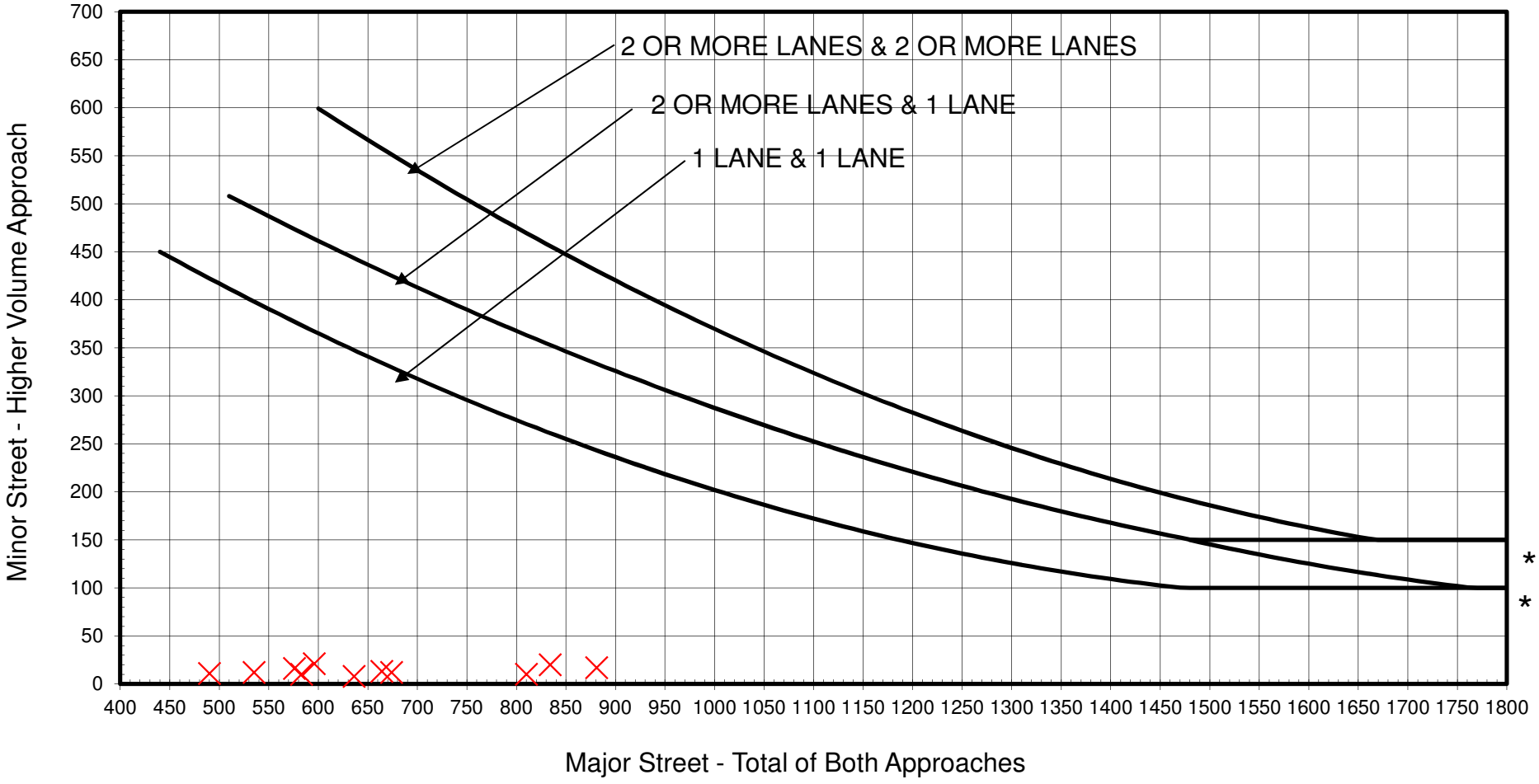
PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W Erie Ave	1
Minor Road =	Park Entrance and Mildred A	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

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Appendix B.13

Traffic Signal Warrant Analysis Results

Intersection 13
W Erie Ave (US 6) and W 5th St/Ashland Ave

SIGNAL WARRANT

INTERSECTION: Ashland Ave and W 5th St and W Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		574	16	8			X											
8AM-9AM		551	21	9			X											
9AM-10AM		478	19	3														
10AM-11AM		482	25	2			X											
11AM-NOON		551	19	2			X											
NOON-1PM		583	26	5			X											
1PM-2PM		620	36	3	X		X											
2PM-3PM		658	33	5	X		X											
3PM-4PM		795	33	8	X		X				X							
4PM-5PM		785	48	4	X		X				X							
5PM-6PM		767	32	5	X		X				X							
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Ashland Ave and W 5th St and W Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

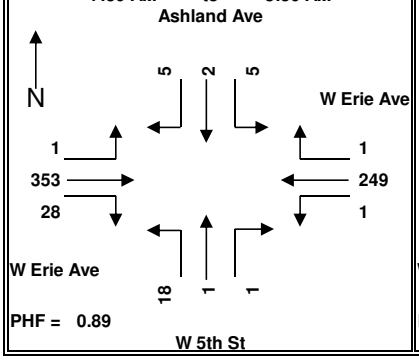
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 13

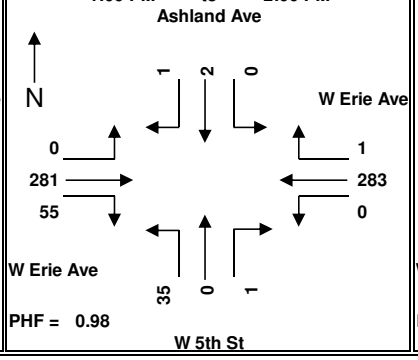
Start Time	W 5th St Northbound				Ashland Ave Southbound				Total North South	W Erie Ave Eastbound				W Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	294	5	9	10	18	10	26	5	362	4	3118	435	104	9	3265	13	83	6844	7206
	Percent Trucks =			3%	Percent Trucks =			9%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	409	7	13	14	25	14	36	7	504	6	4338	605	145	13	4542	18	115	9522	10025
7:00 AM	5	0	0	0	0	0	0	0	5	0	53	4	2	0	57	0	3	114	119
7:15 AM	1	0	0	0	1	0	1	0	3	0	66	4	0	0	48	0	1	118	121
7:30 AM	3	1	0	2	1	1	3	2	9	0	96	8	3	0	58	1	2	163	172
7:45 AM	6	0	0	0	1	0	0	0	7	1	105	9	4	1	63	0	1	179	186
8:00 AM	8	0	1	1	0	0	1	0	10	0	76	6	5	0	68	0	2	150	160
8:15 AM	1	0	0	0	3	1	1	1	6	0	76	5	3	0	60	0	3	141	147
8:30 AM	6	0	0	0	0	0	0	0	6	0	73	6	1	1	61	0	3	141	147
8:45 AM	5	0	0	0	0	0	3	0	8	0	56	7	4	0	55	1	3	119	127
9:00 AM	4	0	0	0	0	0	0	0	4	0	48	15	2	0	49	0	2	112	116
9:15 AM	6	0	0	0	1	0	1	0	8	0	65	4	4	0	61	0	6	130	138
9:30 AM	3	0	0	0	0	0	0	0	3	0	51	9	1	0	54	0	2	114	117
9:45 AM	6	0	0	0	1	0	0	0	7	0	55	12	0	1	54	0	2	122	129
10:00 AM	6	0	0	0	0	0	0	0	6	0	50	10	1	0	59	0	0	119	125
10:15 AM	4	0	1	0	1	0	0	0	6	0	65	5	6	0	56	0	0	126	132
10:30 AM	7	0	0	1	1	0	0	0	8	0	66	6	5	0	53	0	1	125	133
10:45 AM	7	0	0	0	0	0	0	0	7	0	58	6	5	0	48	0	2	112	119
11:00 AM	1	0	0	0	0	0	0	0	1	0	63	10	1	0	76	0	1	149	150
11:15 AM	3	0	0	0	0	0	0	0	3	0	50	10	1	1	70	0	0	131	134
11:30 AM	5	0	0	0	0	0	0	0	5	0	54	13	2	1	77	1	3	146	151
11:45 AM	9	0	1	0	2	0	0	0	12	0	57	7	3	0	61	0	5	125	137
12:00 PM	4	0	0	0	0	0	2	0	6	0	59	10	3	0	74	0	1	143	149
12:15 PM	7	0	0	0	0	0	0	0	7	0	69	7	2	0	62	0	0	138	145
12:30 PM	6	2	0	0	0	0	2	1	10	0	67	11	3	1	70	0	3	149	159
12:45 PM	7	0	0	0	0	0	1	0	8	0	81	11	5	0	61	0	2	153	161
1:00 PM	9	0	0	0	0	0	0	0	9	0	81	16	5	0	55	0	0	152	161
1:15 PM	5	0	1	0	0	0	0	0	6	0	69	18	4	0	71	0	2	158	164
1:30 PM	10	0	0	0	0	0	0	0	10	0	70	13	0	0	72	1	1	156	166
1:45 PM	11	0	0	1	0	2	1	0	14	0	61	8	0	0	85	0	5	154	168
2:00 PM	8	0	0	0	1	0	1	0	10	0	71	9	3	1	70	1	2	152	162
2:15 PM	6	0	0	0	0	1	0	0	7	1	77	13	6	0	63	0	1	154	161
2:30 PM	6	1	0	1	0	0	0	0	7	0	76	9	0	0	83	0	4	168	175
2:45 PM	10	1	1	1	0	2	0	0	14	0	79	14	2	0	91	0	0	184	198
3:00 PM	4	0	0	0	0	0	1	0	5	0	94	19	4	0	102	0	4	215	220
3:15 PM	8	0	0	1	1	1	2	0	12	0	82	10	3	0	82	1	2	175	187
3:30 PM	5	0	1	0	0	0	0	0	6	0	85	11	1	0	124	0	3	220	226
3:45 PM	15	0	0	1	1	1	1	1	18	0	89	10	5	0	86	0	2	185	203
4:00 PM	8	0	0	0	0	0	0	0	8	0	93	19	2	0	95	1	3	208	216
4:15 PM	15	0	0	1	0	0	1	0	16	0	80	8	0	0	105	2	0	195	211
4:30 PM	16	0	0	0	1	0	1	0	18	1	75	17	0	0	110	1	2	204	222
4:45 PM	8	0	1	0	0	0	1	0	10	0	70	8	0	0	100	0	0	178	188
5:00 PM	7	0	1	0	0	0	0	0	8	1	77	13	0	2	117	1	2	211	219
5:15 PM	10	0	1	0	2	0	1	0	14	0	97	9	2	0	106	0	1	212	226
5:30 PM	9	0	0	0	0	0	0	0	9	0	64	8	0	0	90	1	1	163	172
5:45 PM	4	0	0	0	0	1	1	0	6	0	69	8	1	0	103	1	0	181	187

AM Peak Hour
7:30 AM to 8:30 AM



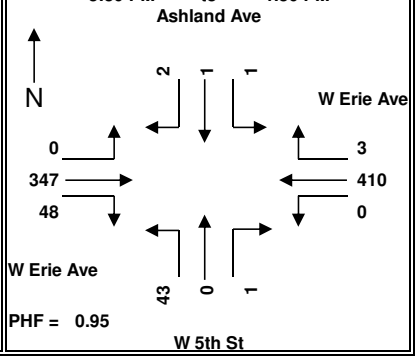
PHF = 0.89

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.98

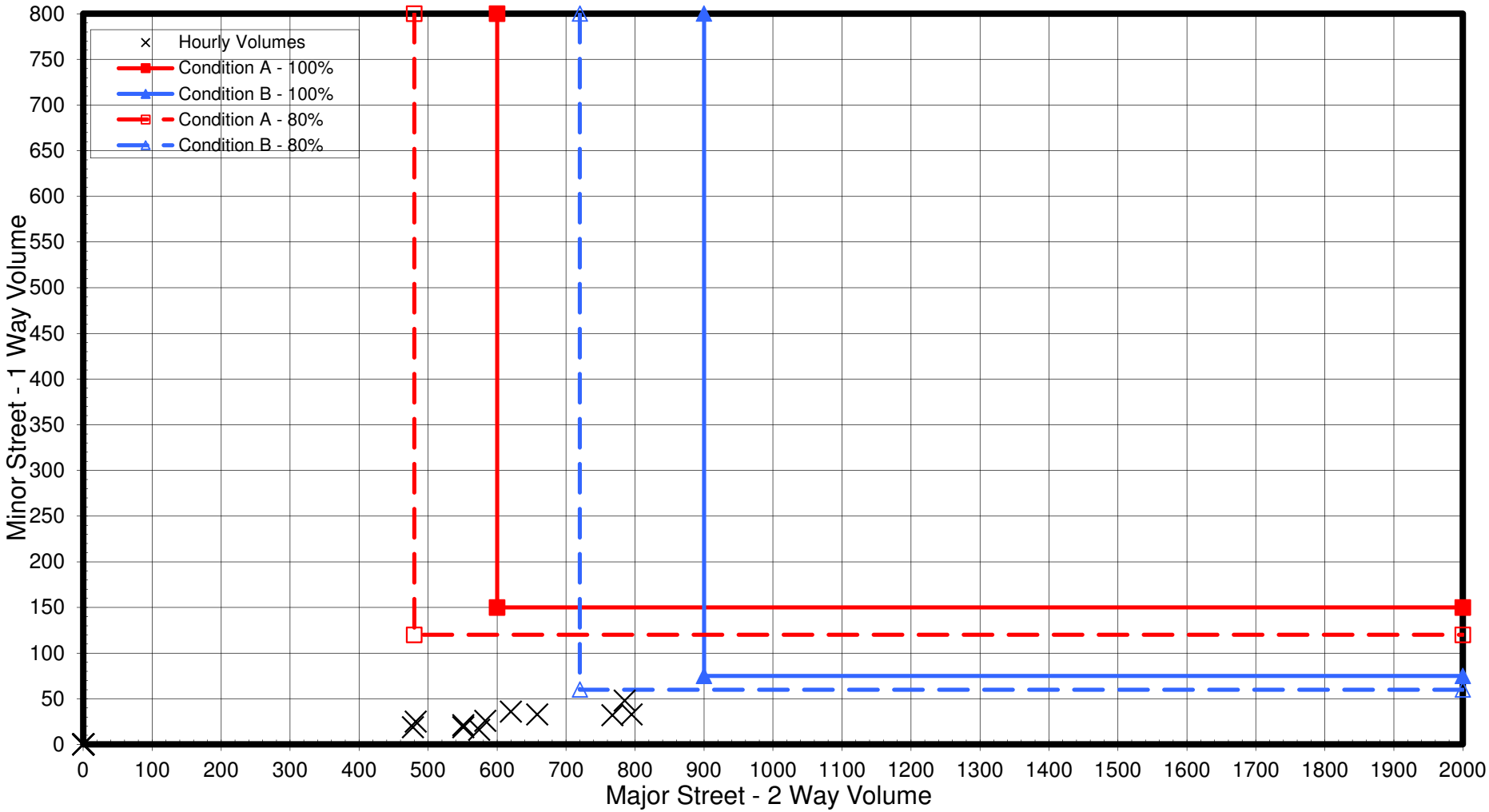
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.95

Notes:

WARRANT 1 - Conditions A & B



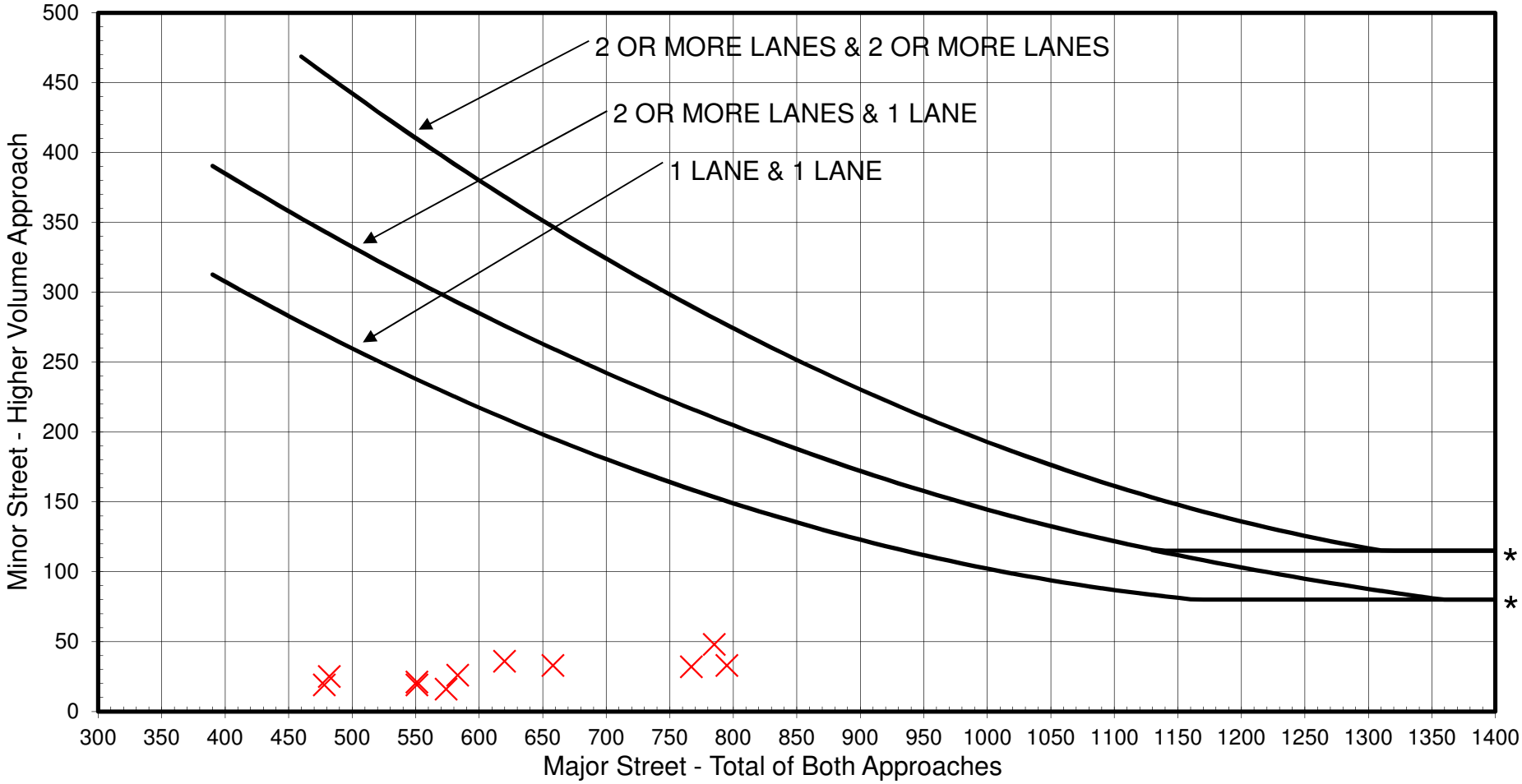
		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Ashland Ave and W 5th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Ashland Ave and W 5th St	1
Road Location =	Urban	

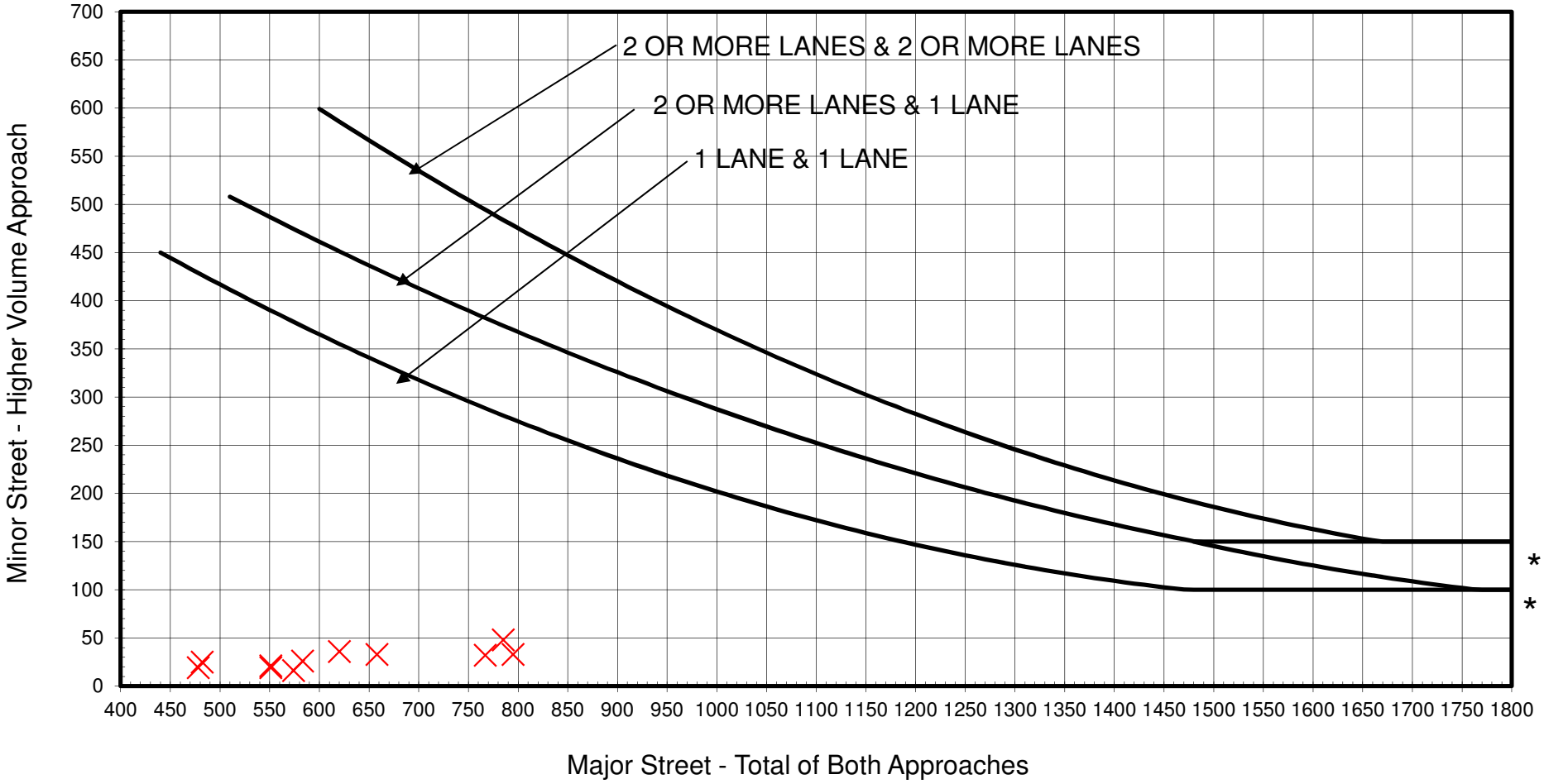
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Ashland Ave and W 5th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.14

Traffic Signal Warrant Analysis Results

Intersection 14
W Erie Ave (US 6) and Oberlin Ave

SIGNAL WARRANT

INTERSECTION: Oberlin Ave and W Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 2 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		629	88	12	X		X			X		X						
8AM-9AM		693	125	25	X		X	X		X		X						
9AM-10AM		463	61	59								X						
10AM-11AM		485	78	46			X			X		X						
11AM-NOON		502	69	77			X			X		X						
NOON-1PM		615	117	70	X		X			X		X						
1PM-2PM		639	107	46	X		X			X		X						
2PM-3PM		689	103	48	X		X			X		X						
3PM-4PM		741	130	70	X		X	X		X	X	X						
4PM-5PM		763	97	65	X		X			X	X	X						
5PM-6PM		758	90	20	X		X			X	X	X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		2		0		3						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Oberlin Ave and W Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

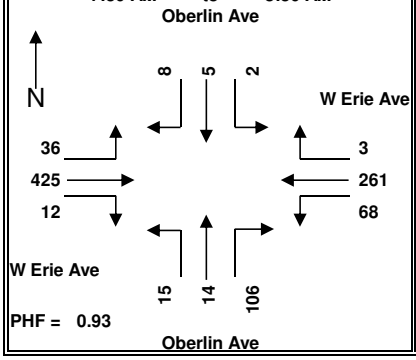
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.055	Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

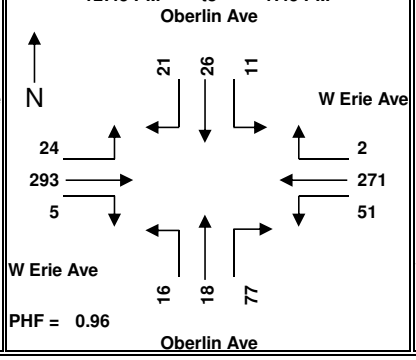
ADT Factor: 1.41
Intersection ID: 14

Start Time	Oberlin Ave Northbound				Oberlin Ave Southbound				Total North South	W Erie Ave Eastbound				W Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	173	147	745	41	92	237	209	9	1603	221	2963	98	75	671	2992	32	99	6977	8580
	Percent Trucks =			4%	Percent Trucks =			2%		Percent Trucks =			2%	Percent Trucks =			3%		
ADT	258	219	1110	61	137	353	311	13	2389	329	4415	146	112	1000	4458	48	148	10397	12785
7:00 AM	2	4	9	1	0	1	1	1	17	1	71	1	1	5	48	0	1	126	143
7:15 AM	3	2	19	0	0	1	3	1	28	5	63	0	1	6	38	0	1	112	140
7:30 AM	1	4	18	0	0	1	2	0	26	5	93	1	2	14	57	0	5	170	196
7:45 AM	4	1	21	2	1	0	2	1	29	11	123	3	1	21	62	1	5	221	250
8:00 AM	4	2	27	2	0	3	1	0	37	12	102	5	1	21	75	0	8	215	252
8:15 AM	6	7	40	4	1	1	3	0	58	8	107	3	2	12	67	2	5	199	257
8:30 AM	1	6	10	0	3	5	3	0	28	5	68	1	1	10	52	0	3	136	164
8:45 AM	3	2	17	0	0	3	2	0	27	5	64	0	2	14	60	0	1	143	170
9:00 AM	1	3	12	0	5	6	2	0	29	6	55	1	2	13	46	0	2	121	150
9:15 AM	4	2	10	0	7	4	4	1	31	6	49	2	0	9	54	1	3	121	152
9:30 AM	3	3	6	1	2	10	6	0	30	3	42	3	2	7	42	1	3	98	128
9:45 AM	0	3	14	0	4	5	4	0	30	5	53	1	3	8	53	3	2	123	153
10:00 AM	4	2	13	1	3	5	4	0	31	2	46	1	4	6	57	1	1	113	144
10:15 AM	1	6	9	0	1	4	1	0	22	7	43	4	3	10	49	0	1	113	135
10:30 AM	2	2	11	3	2	5	5	0	27	7	53	3	4	18	42	1	2	124	151
10:45 AM	5	7	16	1	4	6	6	0	44	7	68	2	2	9	48	1	1	135	179
11:00 AM	3	1	10	1	1	10	7	0	32	6	54	1	1	10	54	0	1	125	157
11:15 AM	4	5	8	0	2	7	11	1	37	9	45	2	1	12	58	0	0	126	163
11:30 AM	8	4	7	0	2	9	7	0	37	11	44	3	2	12	46	1	4	117	154
11:45 AM	3	3	13	2	3	7	11	0	40	6	48	2	1	15	63	0	5	134	174
12:00 PM	4	7	19	1	2	10	7	0	49	6	48	2	2	16	75	1	0	148	197
12:15 PM	5	7	12	1	5	6	12	0	47	9	55	1	0	11	73	0	4	149	196
12:30 PM	4	5	23	1	4	3	4	1	43	6	82	3	4	9	67	2	4	169	212
12:45 PM	5	4	22	1	5	7	5	0	48	9	74	4	3	12	50	0	2	149	197
1:00 PM	2	6	21	1	2	8	3	0	42	6	70	0	2	16	68	0	1	160	202
1:15 PM	4	2	13	0	1	3	5	0	28	3	85	1	4	15	72	0	2	176	204
1:30 PM	5	6	21	1	3	8	8	0	51	6	64	0	2	8	81	2	5	161	212
1:45 PM	5	6	16	0	2	2	1	0	32	1	68	4	1	12	56	1	0	142	174
2:00 PM	7	3	22	1	2	9	3	0	46	4	56	5	1	23	66	0	5	154	200
2:15 PM	3	2	17	1	2	2	4	1	30	3	74	0	0	14	69	1	3	161	191
2:30 PM	4	4	16	0	3	6	5	1	38	6	75	8	2	21	74	4	4	188	226
2:45 PM	1	2	22	1	6	3	3	0	37	6	69	3	2	25	82	1	1	186	223
3:00 PM	2	7	16	3	0	17	7	0	49	7	80	5	3	16	90	0	3	198	247
3:15 PM	7	3	17	0	5	8	1	0	41	5	65	1	3	21	75	4	3	171	212
3:30 PM	12	4	36	5	3	7	11	1	73	1	73	2	2	18	77	0	2	171	244
3:45 PM	2	2	22	4	2	6	3	0	37	3	81	1	4	36	80	0	3	201	238
4:00 PM	8	2	19	0	1	2	13	0	45	1	70	3	2	25	109	1	0	209	254
4:15 PM	3	1	14	0	0	6	5	0	29	3	69	2	0	17	79	0	1	170	199
4:30 PM	7	0	16	1	2	17	11	0	53	2	81	1	0	19	109	0	0	212	265
4:45 PM	3	1	23	0	0	3	5	0	35	3	66	4	1	12	87	0	0	172	207
5:00 PM	6	0	24	1	1	4	1	0	36	0	89	0	0	16	110	1	1	216	252
5:15 PM	4	2	14	0	0	1	5	0	26	0	53	3	1	29	93	1	0	179	205
5:30 PM	3	1	14	0	0	3	1	0	22	2	59	3	0	23	100	1	1	188	210
5:45 PM	5	1	16	0	0	3	1	0	26	2	66	3	0	25	79	0	0	175	201

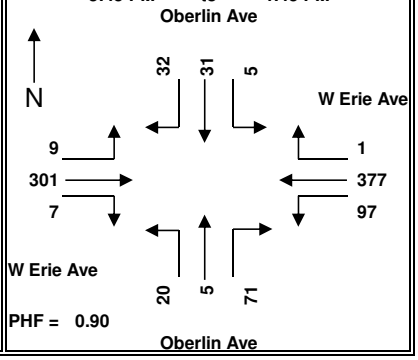
AM Peak Hour
7:30 AM to 8:30 AM



Midday Peak Hour
12:45 PM to 1:45 PM

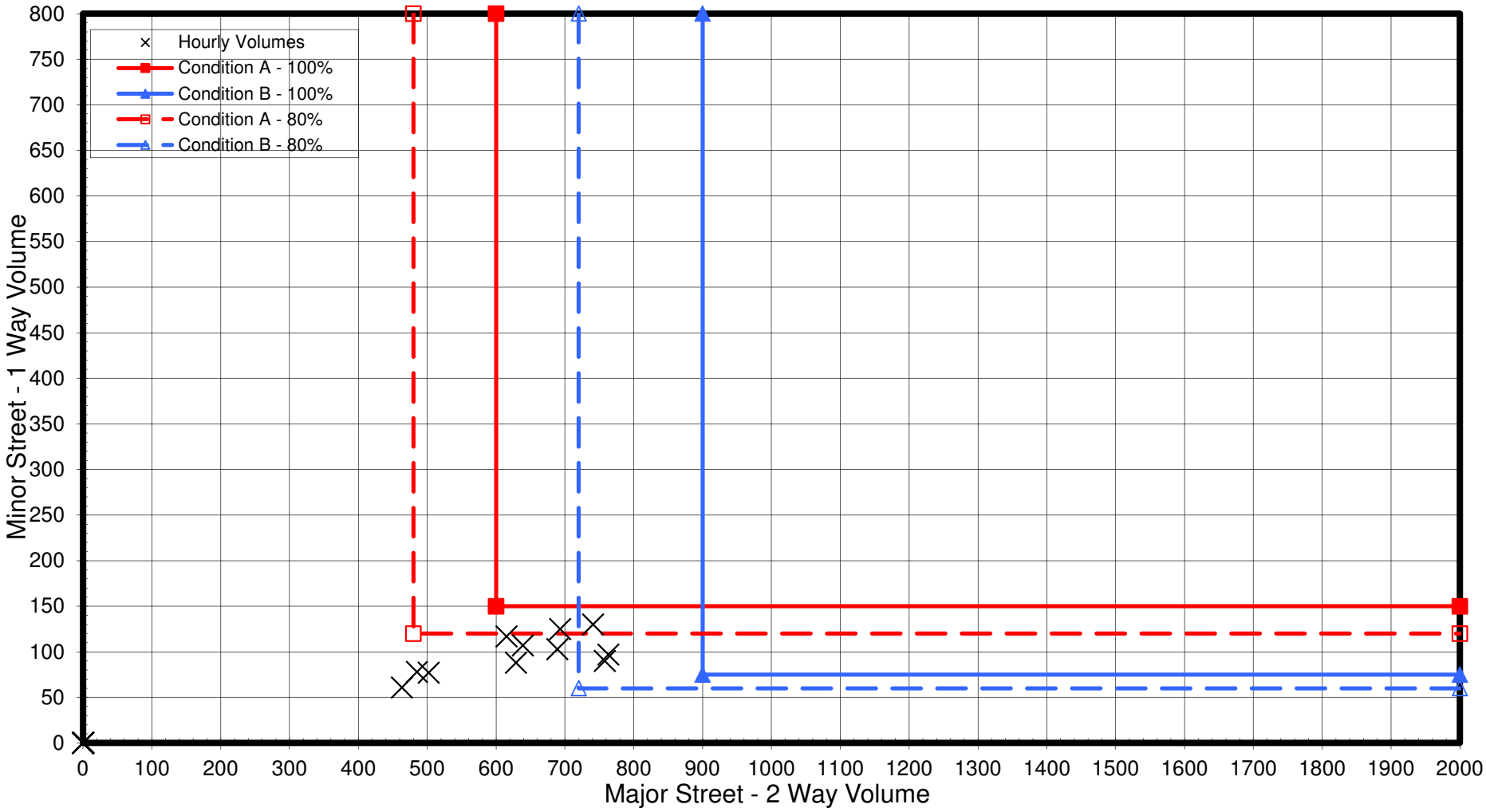


PM Peak Hour
3:45 PM to 4:45 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Oberlin Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	2 Hours Meet	No
Condition B (80%) =	3 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

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Akron, OH 44320-1100
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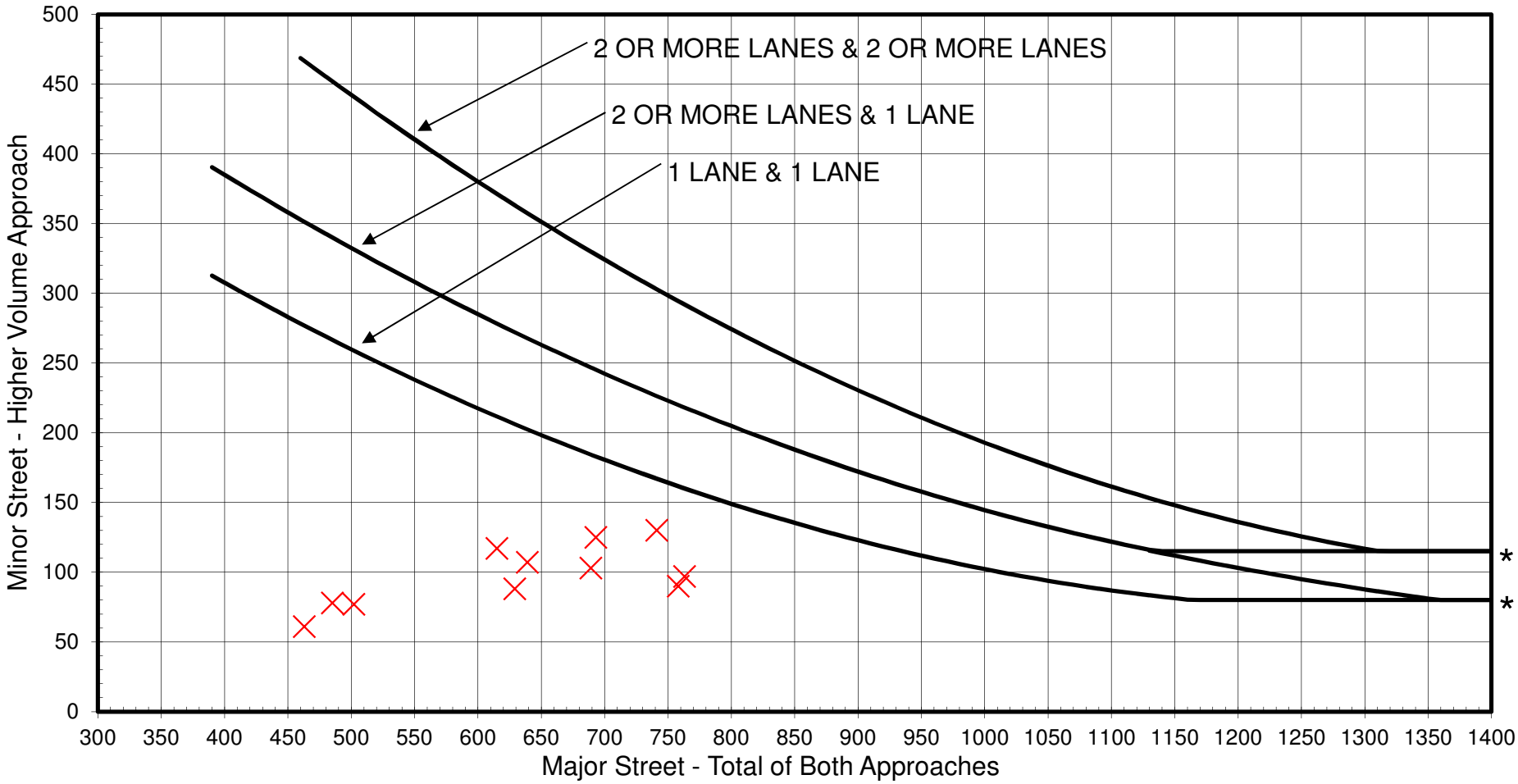
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Oberlin Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

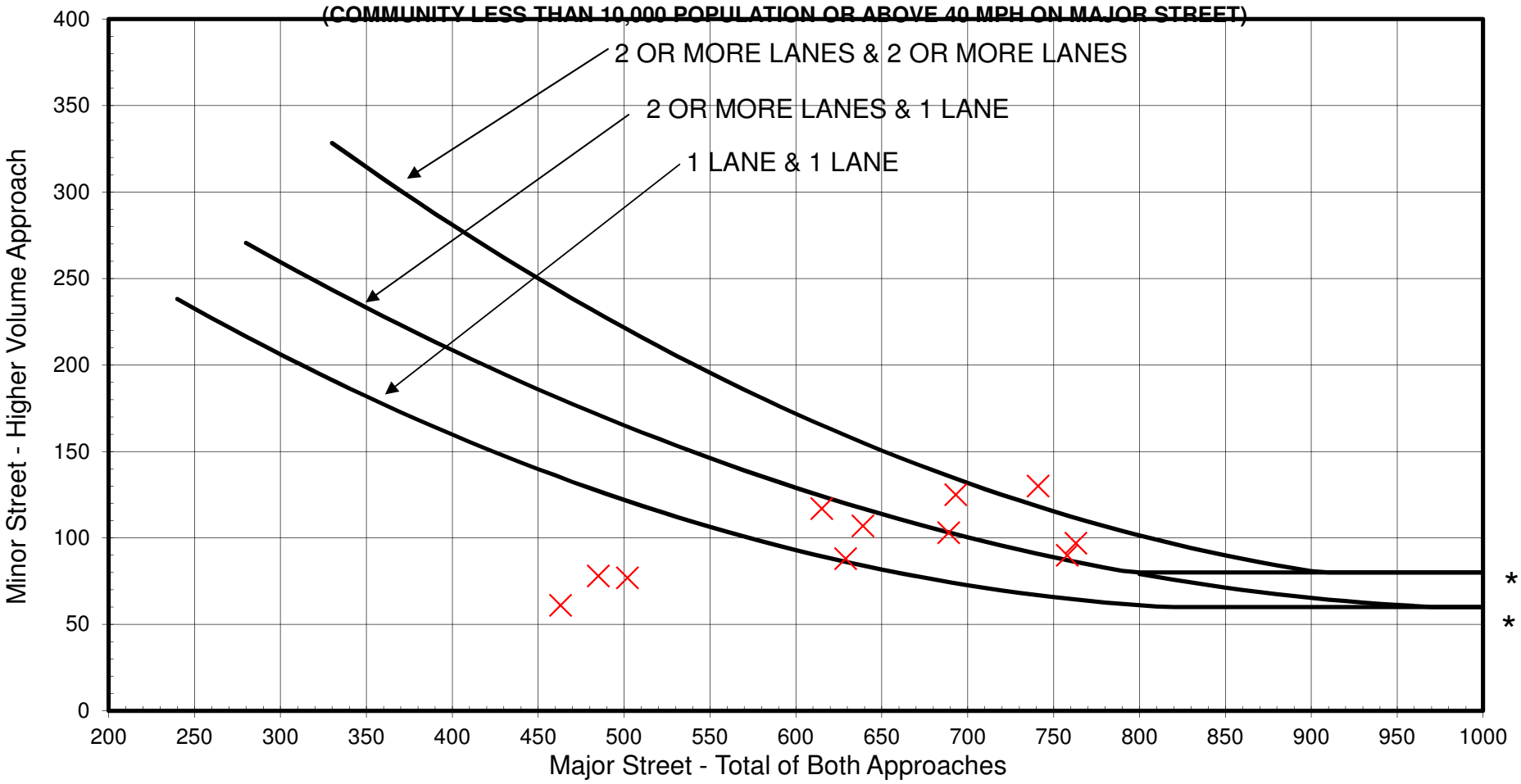
Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)

FOUR HOUR VOLUME WARRANT (WARRANT 2)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

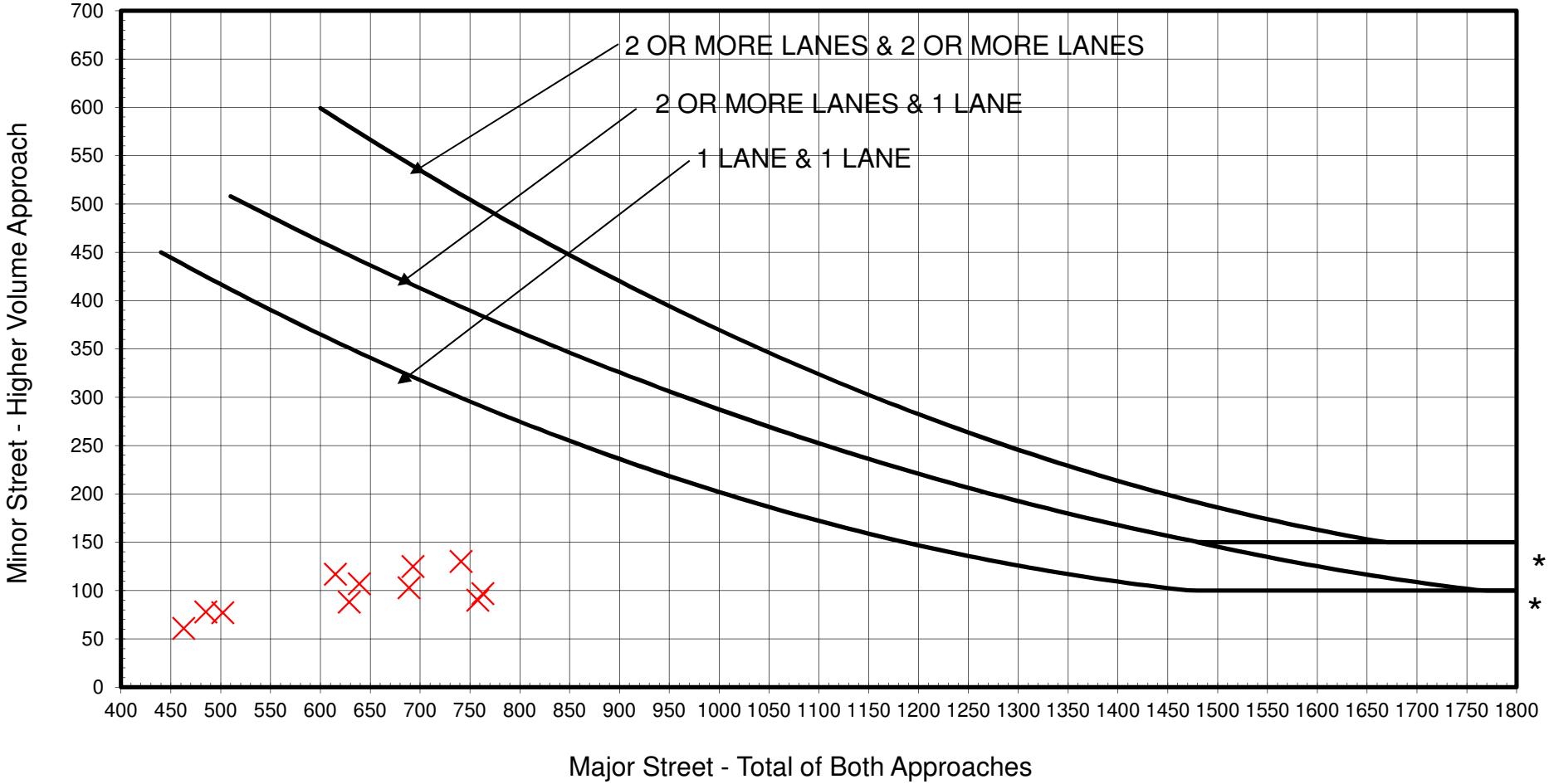
		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Oberlin Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Rural) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Oberlin Ave	1
Road Location =	Urban	

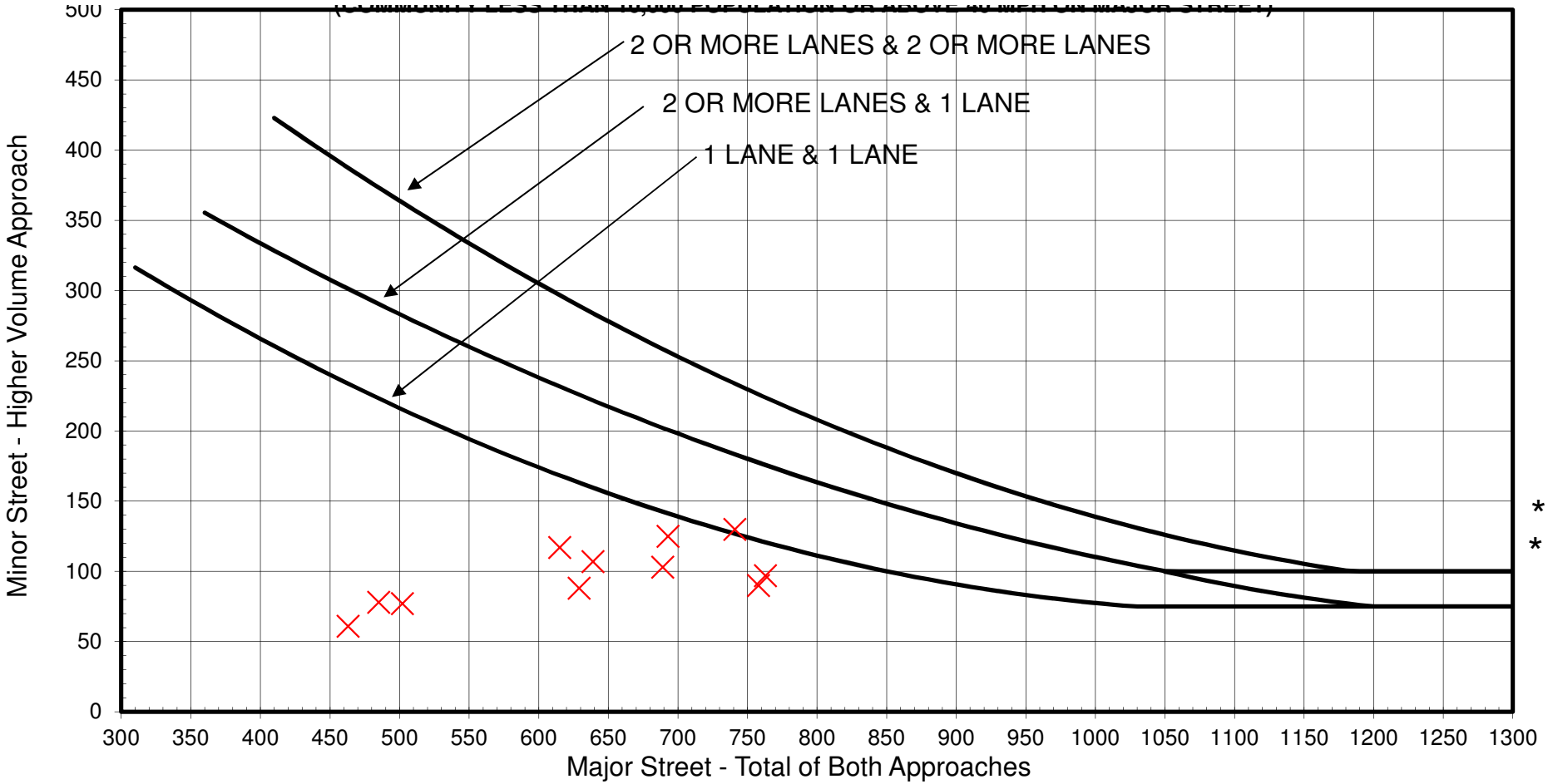
		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Oberlin Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Rural) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS

Appendix B.15

Traffic Signal Warrant Analysis Results

Intersection 15
W Erie Ave (US 6) and Washington Ave

SIGNAL WARRANT

INTERSECTION: Washington Ave and W Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		698	29	13	X		X											
8AM-9AM		794	50	20	X		X				X							
9AM-10AM		487	34	10			X											
10AM-11AM		522	43	21			X											
11AM-NOON		515	57	12			X											
NOON-1PM		654	62	24	X		X					X						
1PM-2PM		701	63	26	X		X					X						
2PM-3PM		760	68	24	X		X				X	X						
3PM-4PM		867	102	17	X		X			X	X	X						
4PM-5PM		813	90	15	X		X			X	X	X						
5PM-6PM		865	64	9	X		X				X	X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		4						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Washington Ave and W Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

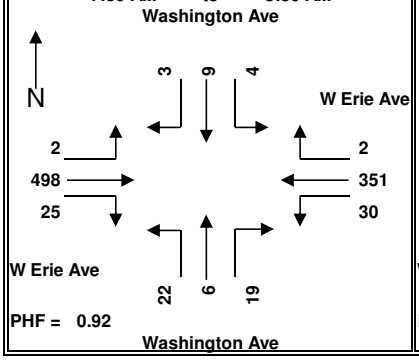
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.055	Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 15

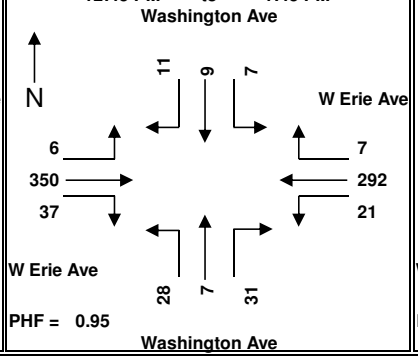
Start Time	Washington Ave Northbound				Washington Ave Southbound				Total North South	W Erie Ave Eastbound				W Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	331	94	237	39	46	91	54	8	853	41	3535	264	107	319	3460	57	114	7676	8529
	Percent Trucks =			6%	Percent Trucks =			4%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	493	140	353	58	69	136	80	12	1271	61	5268	393	159	475	5156	85	170	11438	12709
7:00 AM	0	1	2	0	1	2	0	1	6	1	74	5	1	5	52	0	1	137	143
7:15 AM	0	0	1	0	0	1	2	0	4	1	84	2	1	7	50	2	3	146	150
7:30 AM	2	2	0	0	1	2	0	0	7	0	107	3	2	4	71	0	6	185	192
7:45 AM	11	3	7	2	2	1	1	1	25	1	124	11	3	7	86	1	7	230	255
8:00 AM	4	0	4	1	0	3	0	0	11	0	128	2	5	10	110	0	11	250	261
8:15 AM	5	1	8	3	1	3	2	0	20	1	139	9	6	9	84	1	3	243	263
8:30 AM	8	1	8	2	1	3	1	0	22	0	78	6	1	5	50	2	4	141	163
8:45 AM	4	1	6	1	2	3	1	0	17	3	71	10	2	6	69	1	2	160	177
9:00 AM	7	3	3	0	1	3	1	1	18	3	55	10	2	3	53	2	2	126	144
9:15 AM	4	4	2	1	1	2	0	0	13	2	53	4	0	3	58	2	4	122	135
9:30 AM	3	1	2	0	1	0	0	0	7	1	46	2	2	4	53	1	4	107	114
9:45 AM	2	2	1	0	0	1	0	0	6	3	50	8	3	2	67	2	1	132	138
10:00 AM	3	1	4	0	3	6	1	0	18	1	56	6	6	5	63	1	1	132	150
10:15 AM	4	3	3	2	3	1	2	1	16	1	50	1	2	4	48	0	0	104	120
10:30 AM	9	2	3	1	0	2	1	0	17	1	61	9	6	8	56	0	4	135	152
10:45 AM	2	3	6	1	0	0	2	0	13	1	78	11	3	3	58	0	1	151	164
11:00 AM	9	2	7	0	0	1	0	0	19	0	66	2	2	6	53	0	1	127	146
11:15 AM	9	2	5	0	1	1	0	1	18	2	51	1	0	3	60	1	0	118	136
11:30 AM	6	1	3	0	1	4	1	0	16	0	55	3	2	8	56	0	6	122	138
11:45 AM	10	0	3	0	1	2	0	0	16	1	56	7	3	7	77	0	3	148	164
12:00 PM	8	4	6	1	0	1	1	0	20	0	65	9	3	2	76	1	0	153	173
12:15 PM	8	4	3	0	3	3	5	0	26	0	65	9	1	4	76	2	6	156	182
12:30 PM	10	1	2	1	0	2	3	0	18	2	105	3	4	9	66	1	3	186	204
12:45 PM	5	1	10	1	3	1	2	0	22	2	90	7	3	6	54	0	2	159	181
1:00 PM	9	2	13	0	1	2	4	0	31	2	82	12	2	2	71	1	3	170	201
1:15 PM	5	1	2	0	3	0	1	0	12	2	92	12	6	7	83	3	2	199	211
1:30 PM	9	3	6	0	0	6	4	0	28	0	86	6	4	6	84	3	6	185	213
1:45 PM	5	4	4	1	2	2	1	0	18	1	75	9	1	3	58	1	0	147	165
2:00 PM	12	0	6	1	5	1	2	0	26	1	79	1	1	10	78	2	2	171	197
2:15 PM	10	3	6	2	0	2	0	1	21	0	89	5	2	9	81	3	5	187	208
2:30 PM	11	2	2	1	1	6	2	1	24	1	85	8	3	8	91	3	2	196	220
2:45 PM	5	2	9	2	1	3	1	0	21	1	82	9	4	13	99	2	3	206	227
3:00 PM	6	3	9	3	0	2	3	0	23	1	88	8	4	5	102	4	4	208	231
3:15 PM	17	4	10	4	0	0	1	0	32	1	73	10	1	13	97	4	3	198	230
3:30 PM	12	5	14	1	2	2	4	0	39	1	109	8	7	15	89	2	3	224	263
3:45 PM	5	4	13	4	1	2	0	1	25	0	100	8	4	15	114	0	2	237	262
4:00 PM	17	0	9	2	0	0	0	0	26	0	81	3	2	6	122	1	0	213	239
4:15 PM	13	8	9	1	0	6	5	0	41	1	81	4	0	8	80	2	0	176	217
4:30 PM	9	1	5	0	0	1	0	0	16	1	95	3	1	8	113	1	0	221	237
4:45 PM	15	1	3	0	0	3	0	0	22	0	92	4	1	14	93	0	0	203	225
5:00 PM	16	2	6	0	1	3	0	0	28	0	115	3	0	12	116	1	1	247	275
5:15 PM	2	4	3	0	1	0	0	0	10	0	68	5	1	10	121	1	0	205	215
5:30 PM	11	0	4	0	0	0	0	0	15	1	68	5	0	13	128	1	2	216	231
5:45 PM	9	2	5	0	2	2	0	0	20	0	88	1	0	12	94	2	1	197	217

AM Peak Hour
7:30 AM to 8:30 AM



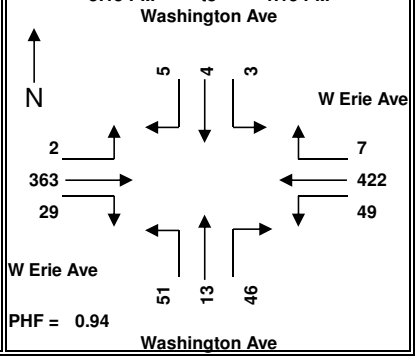
PHF = 0.92

Midday Peak Hour
12:45 PM to 1:45 PM



PHF = 0.95

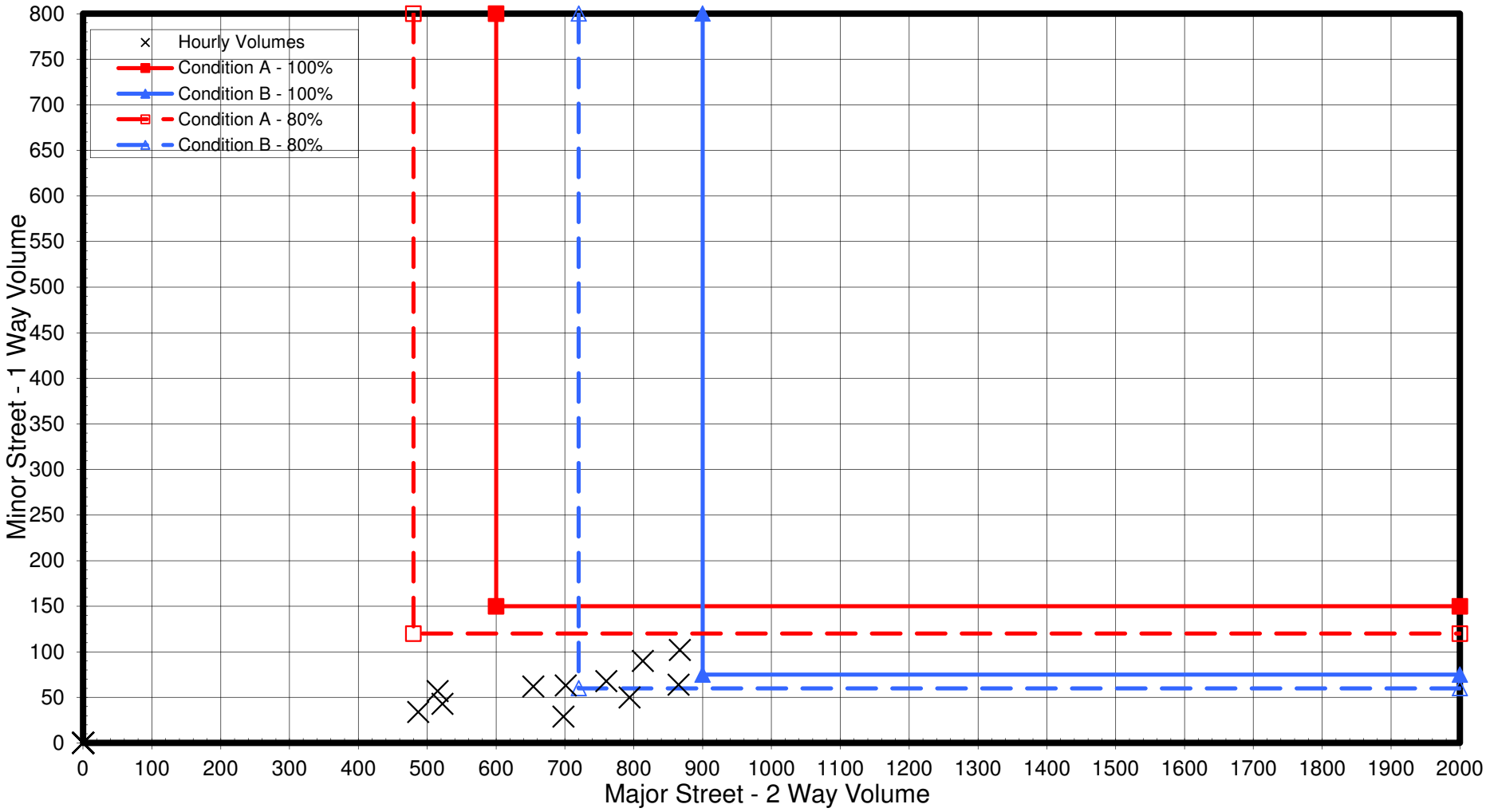
PM Peak Hour
3:15 PM to 4:15 PM



PHF = 0.94

Notes:

WARRANT 1 - Conditions A & B



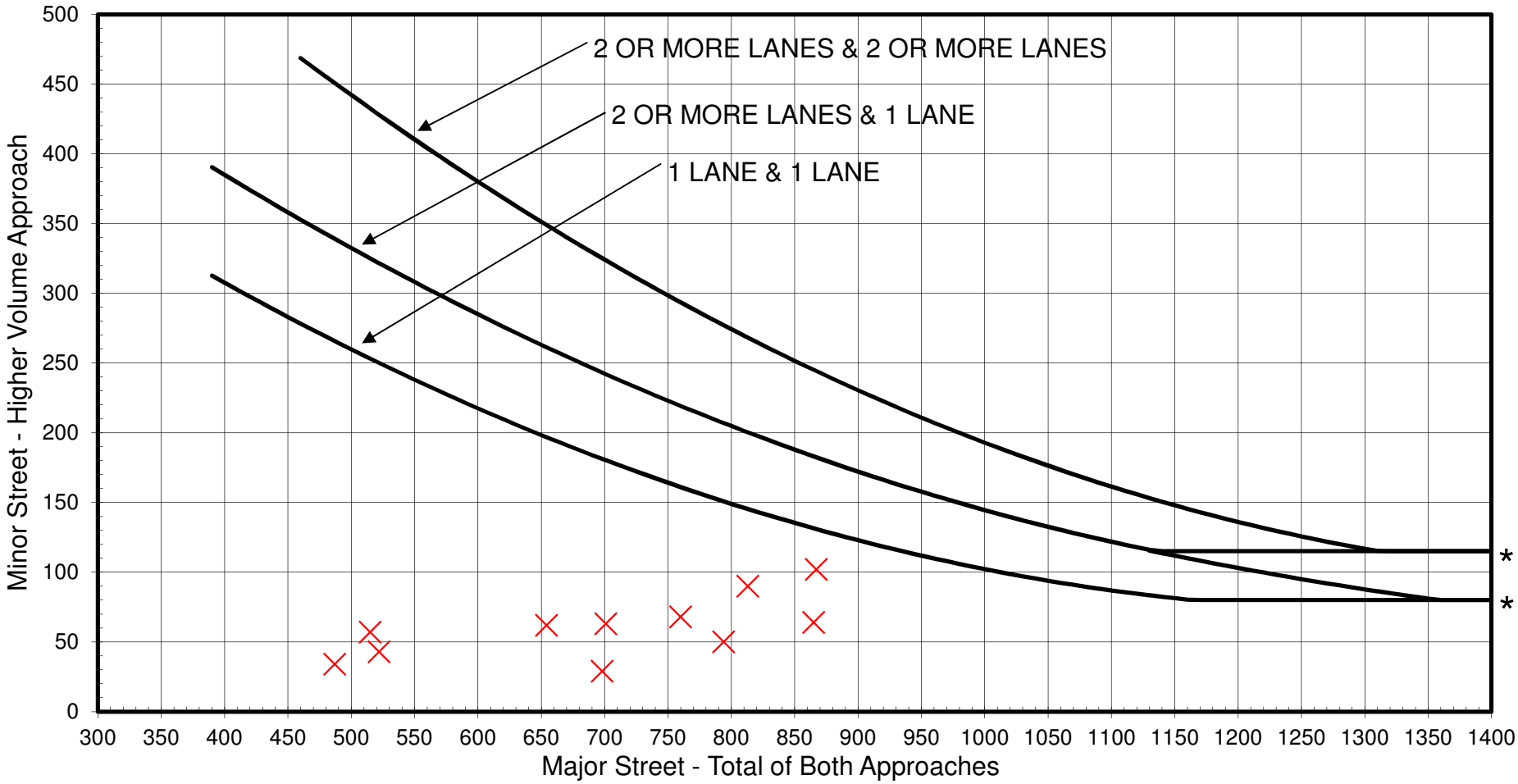
		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Washington Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	4 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Washington Ave	1
Road Location =	Urban	

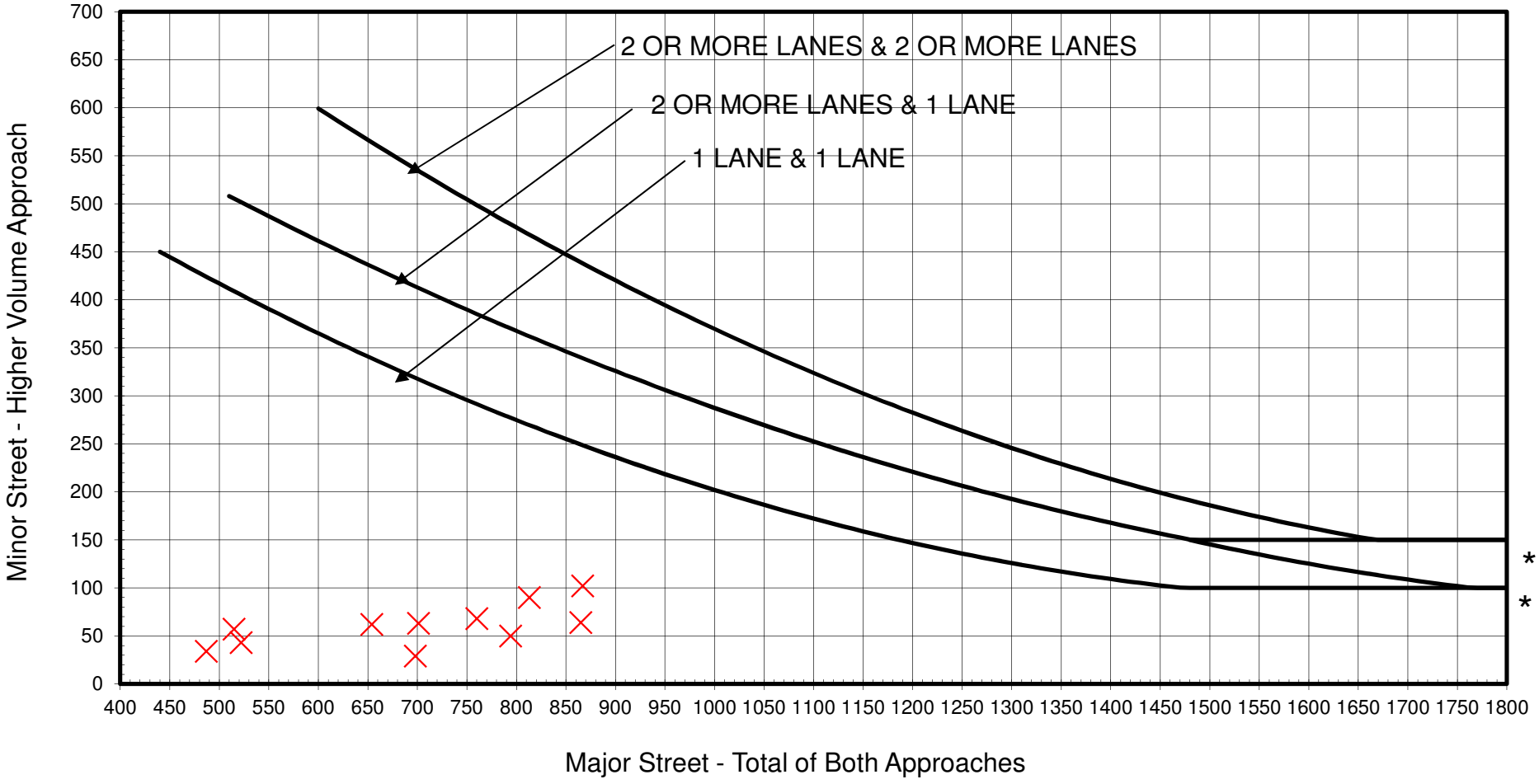
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Washington Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.16

Traffic Signal Warrant Analysis Results

Intersection 16
Oberlin Ave and W 5th St

SIGNAL WARRANT

INTERSECTION: Oberlin Ave and W 5th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1	X	X	X	500	150	400	120	750	75	600	60						
NORM	2+				600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		158	25	12														
8AM-9AM		275	45	40														
9AM-10AM		175	33	32														
10AM-11AM		174	36	25														
11AM-NOON		198	45	49														
NOON-1PM		248	49	45														
1PM-2PM		217	38	47														
2PM-3PM		267	59	41														
3PM-4PM		353	48	67								X						
4PM-5PM		312	58	55														
5PM-6PM		241	50	47														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH
ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Oberlin Ave and W 5th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

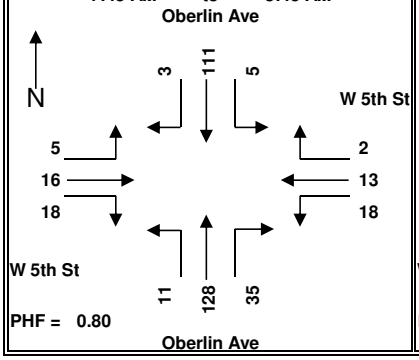
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.018	Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

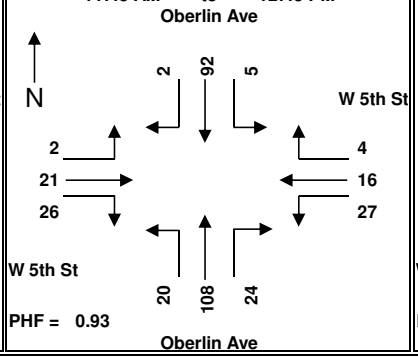
ADT Factor: 1.41
Intersection ID: 16

Start Time	Oberlin Ave Northbound				Oberlin Ave Southbound				Total North South	W 5th St Eastbound				W 5th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	163	1037	284	41	29	1074	31	27	2618	27	223	236	14	252	171	37	15	946	3564
	Percent Trucks =			3%	Percent Trucks =			2%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	234	1491	408	59	42	1544	45	39	3764	39	321	339	20	362	246	53	22	1360	5125
7:00 AM	1	23	0	0	0	10	0	0	34	0	1	2	0	1	0	0	0	4	38
7:15 AM	3	18	1	0	0	6	0	0	28	1	3	3	0	0	0	0	0	7	35
7:30 AM	3	22	2	2	0	10	0	0	37	0	2	5	1	1	4	2	3	14	51
7:45 AM	2	27	6	3	0	24	0	3	59	0	3	5	0	3	0	1	0	12	71
8:00 AM	3	38	16	3	0	35	1	2	93	3	6	4	0	3	3	1	1	20	113
8:15 AM	3	41	8	1	3	37	2	1	94	2	2	5	0	9	2	0	0	20	114
8:30 AM	3	22	5	1	2	15	0	1	47	0	5	4	0	3	8	0	0	20	67
8:45 AM	2	13	8	2	0	17	1	1	41	1	8	5	1	4	3	4	1	25	66
9:00 AM	2	24	6	2	0	15	1	0	48	1	8	2	0	6	4	0	1	21	69
9:15 AM	2	19	9	1	3	19	0	2	52	0	6	4	0	3	5	0	0	18	70
9:30 AM	1	13	5	0	0	13	0	0	32	0	2	2	0	5	1	0	0	10	42
9:45 AM	3	17	4	0	0	19	0	0	43	1	6	1	1	5	1	2	0	16	59
10:00 AM	0	15	5	2	2	18	0	0	40	0	4	4	0	4	1	0	0	13	53
10:15 AM	4	19	10	0	0	23	0	0	56	0	6	6	0	6	2	1	0	21	77
10:30 AM	1	13	2	0	3	17	3	2	39	0	9	1	0	6	1	0	0	17	56
10:45 AM	4	17	3	1	0	15	0	0	39	1	0	5	0	3	1	0	0	10	49
11:00 AM	3	24	7	0	0	20	1	2	55	2	6	8	1	7	3	0	0	26	81
11:15 AM	3	14	7	1	0	11	0	0	35	0	4	2	0	5	7	2	0	20	55
11:30 AM	1	17	8	0	0	26	0	1	52	1	4	4	1	6	6	0	0	21	73
11:45 AM	7	20	7	1	1	21	0	1	56	1	6	7	0	7	5	1	0	27	83
12:00 PM	4	35	6	1	1	28	1	0	75	1	2	3	0	8	2	1	2	17	92
12:15 PM	3	28	2	1	1	30	0	0	64	0	11	8	1	5	4	1	0	29	93
12:30 PM	6	25	9	1	2	13	1	1	56	0	2	8	0	7	5	1	0	23	79
12:45 PM	3	24	4	1	0	22	0	1	53	0	6	8	0	8	2	1	0	25	78
1:00 PM	5	21	6	1	0	24	0	0	56	0	5	8	0	10	4	1	0	28	84
1:15 PM	2	17	5	1	1	27	0	1	52	1	6	3	0	6	4	1	0	21	73
1:30 PM	3	19	4	0	0	25	1	0	52	0	2	6	0	6	5	1	0	20	72
1:45 PM	6	22	8	1	0	20	1	1	57	0	4	3	0	3	4	2	0	16	73
2:00 PM	3	19	9	2	0	25	0	0	56	0	8	7	1	7	3	1	0	26	82
2:15 PM	3	27	12	0	1	21	0	1	64	2	7	8	0	6	4	0	0	27	91
2:30 PM	4	26	10	0	0	22	0	0	62	0	8	4	0	3	5	2	2	22	84
2:45 PM	5	30	9	2	1	38	2	0	85	0	6	9	0	7	2	1	0	25	110
3:00 PM	10	30	8	1	0	41	1	4	90	0	6	5	2	7	8	1	1	27	117
3:15 PM	4	36	11	1	2	27	0	1	80	1	7	8	2	9	3	3	1	31	111
3:30 PM	4	36	7	1	2	56	0	0	105	0	2	6	0	16	7	1	2	32	137
3:45 PM	5	26	4	4	1	41	1	0	78	2	7	4	3	10	1	1	0	25	103
4:00 PM	4	29	9	1	1	37	1	1	81	1	5	5	0	5	8	0	0	24	105
4:15 PM	10	32	1	0	1	34	1	0	79	0	6	8	0	4	10	1	0	29	108
4:30 PM	5	28	7	0	0	31	1	0	72	0	6	12	0	2	8	0	1	28	100
4:45 PM	4	29	10	0	1	35	1	0	80	1	6	8	0	11	4	2	0	32	112
5:00 PM	5	14	7	0	0	27	4	0	57	1	7	5	0	5	8	0	0	26	83
5:15 PM	9	26	9	1	0	30	3	0	77	0	1	9	0	10	4	0	0	24	101
5:30 PM	4	22	0	0	0	24	2	0	52	1	7	6	0	8	5	1	0	28	80
5:45 PM	1	20	8	1	0	25	1	0	55	2	5	6	0	2	4	0	0	19	74

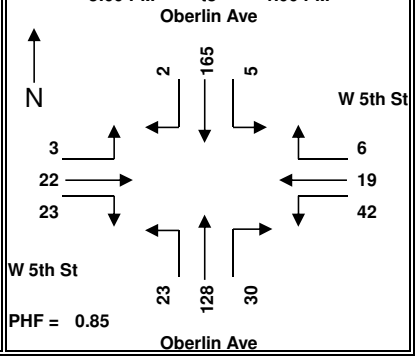
AM Peak Hour
7:45 AM to 8:45 AM



Midday Peak Hour
11:45 AM to 12:45 PM

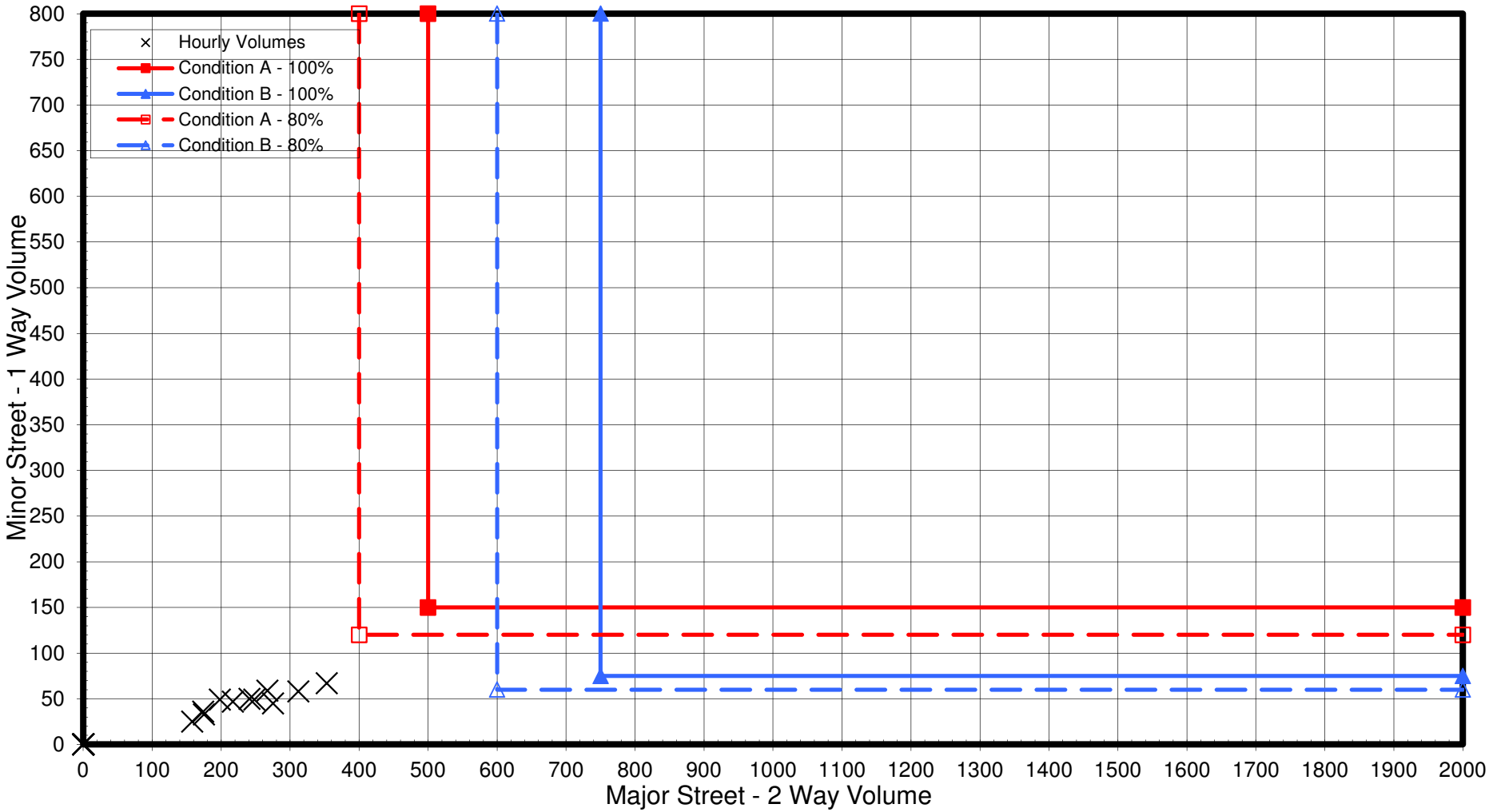


PM Peak Hour
3:00 PM to 4:00 PM



Notes:

WARRANT 1 - Conditions A & B



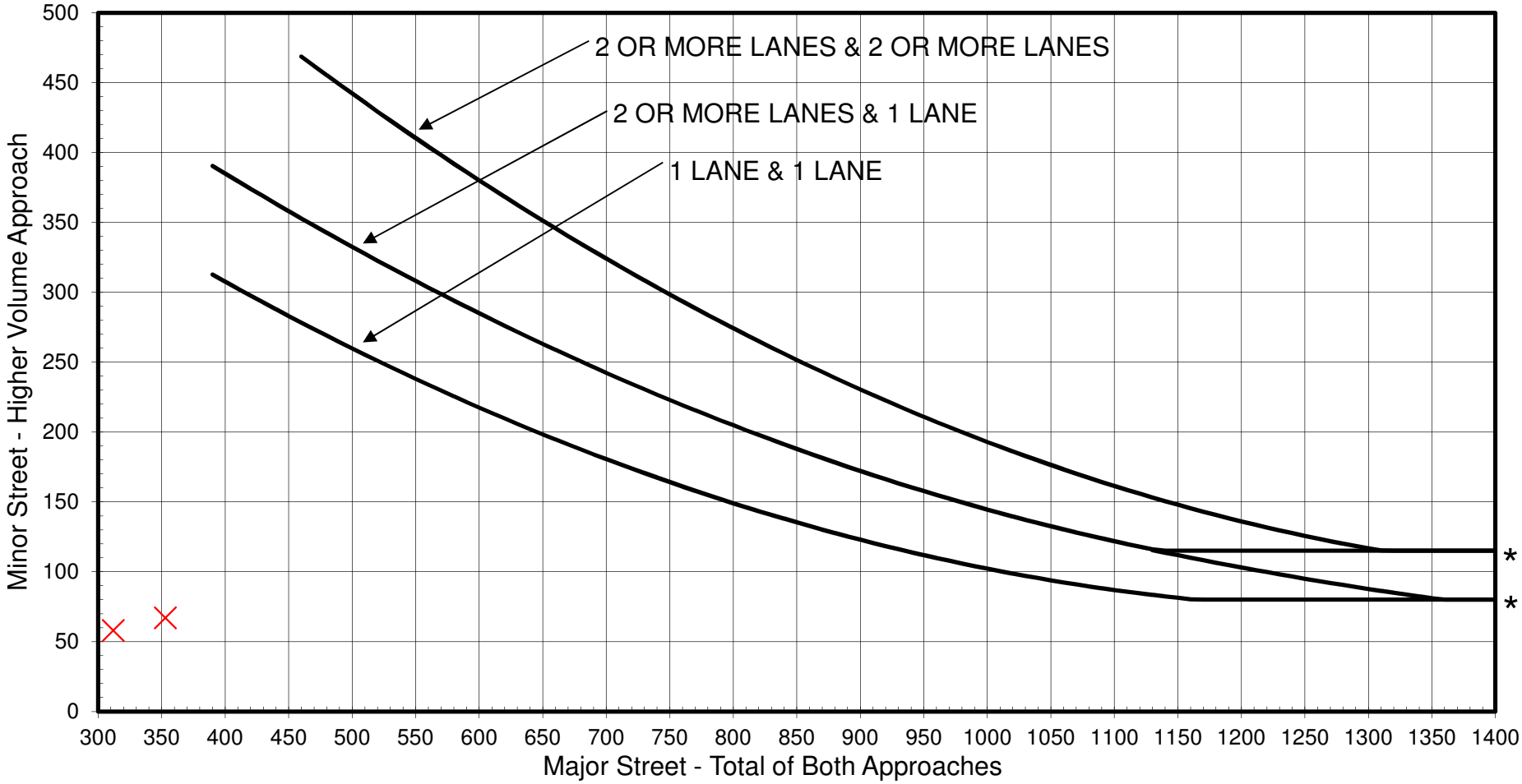
		Lanes
Major Road =	Oberlin Ave	1
Minor Road =	W 5th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Oberlin Ave	1
Minor Road =	W 5th St	1
Road Location =	Urban	

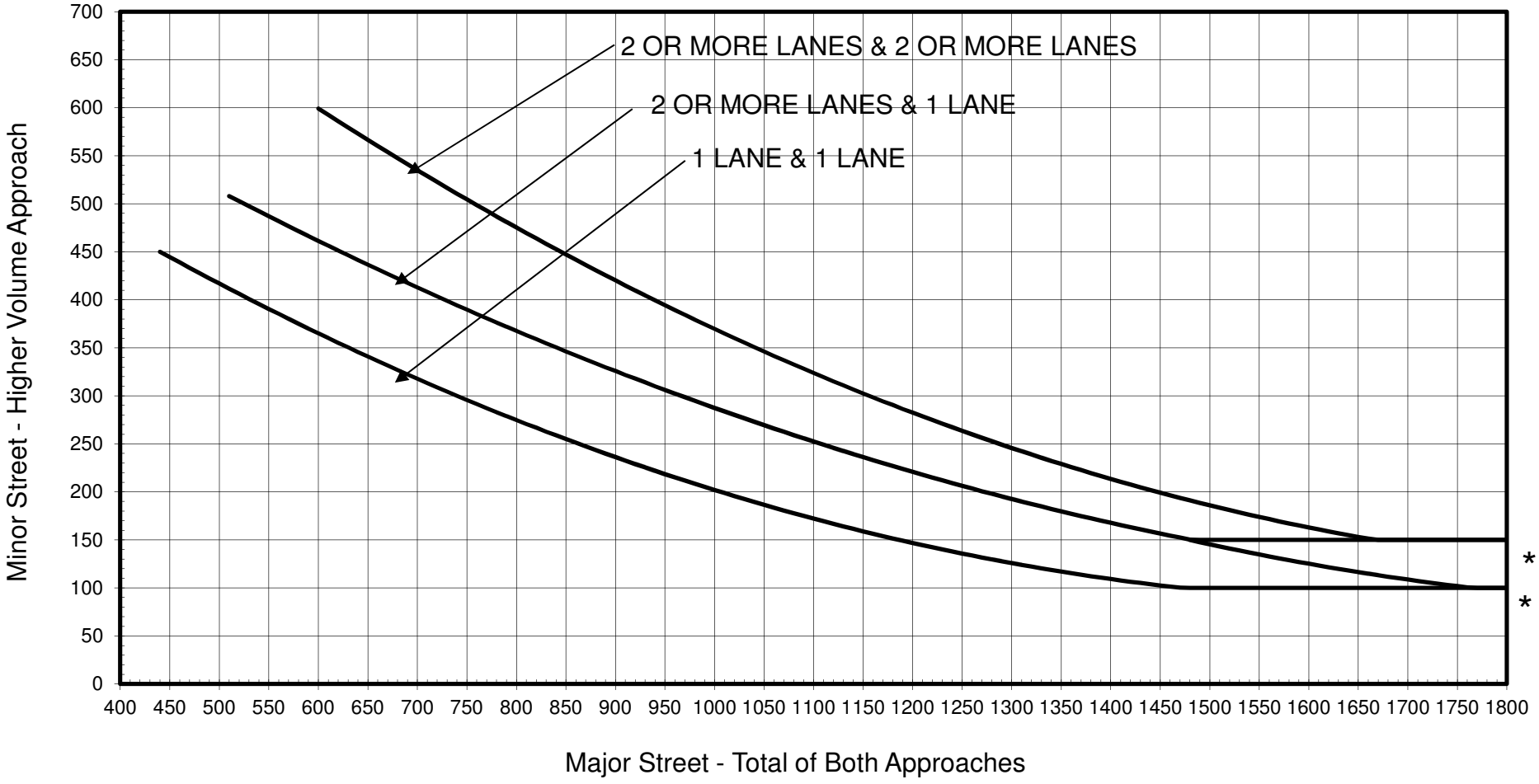
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Oberlin Ave	1
Minor Road =	W 5th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.17

Traffic Signal Warrant Analysis Results

Intersection 17
Washington Ave and W 4th St

SIGNAL WARRANT

INTERSECTION: Washington Ave and W 4th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		91	18	19														
8AM-9AM		149	28	39														
9AM-10AM		100	14	39														
10AM-11AM		119	8	26														
11AM-NOON		109	17	45														
NOON-1PM		112	19	52														
1PM-2PM		129	15	57														
2PM-3PM		157	21	49														
3PM-4PM		184	30	96						X		X						
4PM-5PM		145	27	76						X		X						
5PM-6PM		129	14	57														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH
ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Washington Ave and W 4th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

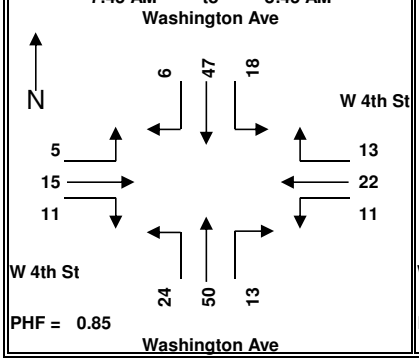
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.969	Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.42
Intersection ID: 17

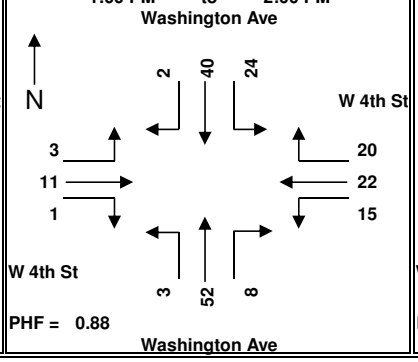
Start Time	Washington Ave Northbound				Washington Ave Southbound				Total North South	W 4th St Eastbound				W 4th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	79	559	109	32	156	480	41	25	1424	27	141	43	5	158	200	197	17	766	2190
	Percent Trucks =			4%	Percent Trucks =			4%		Percent Trucks =			2%	Percent Trucks =			3%		
ADT	109	768	150	44	214	660	56	34	1957	37	194	59	7	217	275	271	23	1053	3010
7:00 AM	0	4	3	0	1	9	0	1	17	1	2	0	0	1	0	0	0	4	21
7:15 AM	0	2	2	0	2	12	0	3	18	0	3	1	0	1	2	0	0	7	25
7:30 AM	0	6	3	0	1	4	0	0	14	1	3	0	0	0	0	2	0	6	20
7:45 AM	4	13	5	0	7	9	4	0	42	2	4	1	0	3	3	7	2	20	62
8:00 AM	12	8	1	1	3	14	1	2	39	2	5	2	1	3	8	1	0	21	60
8:15 AM	7	17	4	2	5	12	1	1	46	1	3	5	1	3	9	2	0	23	69
8:30 AM	1	12	3	1	3	12	0	0	31	0	3	3	0	2	2	3	0	13	44
8:45 AM	1	12	2	1	5	13	0	3	33	0	4	0	0	1	1	4	0	10	43
9:00 AM	0	14	2	0	5	10	1	0	32	0	1	0	0	4	2	2	0	9	41
9:15 AM	0	11	2	2	3	7	1	0	24	0	2	0	0	4	6	5	0	17	41
9:30 AM	0	6	2	0	2	4	0	1	14	0	2	3	0	2	2	4	0	13	27
9:45 AM	0	14	1	0	2	12	1	0	30	1	4	1	0	6	0	2	0	14	44
10:00 AM	1	7	2	0	3	13	0	0	26	0	2	0	0	1	1	1	0	5	31
10:15 AM	3	17	3	2	1	8	0	1	32	0	4	0	0	4	2	0	0	10	42
10:30 AM	0	15	2	1	4	11	1	2	33	0	0	0	0	6	2	3	0	11	44
10:45 AM	2	8	5	1	5	8	0	0	28	0	2	0	0	3	2	1	0	8	36
11:00 AM	1	15	3	1	3	6	1	0	29	1	1	0	0	0	7	4	0	13	42
11:15 AM	0	11	1	0	1	3	0	0	16	0	2	0	0	3	1	5	0	11	27
11:30 AM	2	13	2	0	4	11	1	0	33	1	5	1	0	3	3	5	0	18	51
11:45 AM	1	13	1	1	2	14	0	0	31	0	6	0	0	3	8	3	0	20	51
12:00 PM	1	10	1	0	1	9	1	0	23	1	2	0	0	5	5	8	0	21	44
12:15 PM	2	13	4	0	6	12	1	0	38	1	3	0	0	3	3	2	0	12	50
12:30 PM	0	9	1	0	3	11	0	1	24	0	0	3	1	4	2	7	1	16	40
12:45 PM	0	12	2	1	4	7	2	0	27	1	5	3	0	4	4	5	0	22	49
1:00 PM	1	14	2	0	7	9	0	0	33	0	2	0	0	4	4	8	2	18	51
1:15 PM	0	11	1	0	6	13	1	0	32	0	2	0	0	2	6	2	0	12	44
1:30 PM	2	15	1	0	8	10	0	0	36	1	4	0	0	7	3	6	0	21	57
1:45 PM	0	12	4	0	3	8	1	0	28	2	3	1	0	2	9	4	1	21	49
2:00 PM	1	16	4	2	2	10	1	0	34	0	2	2	0	1	7	5	0	17	51
2:15 PM	1	19	4	3	2	12	1	0	39	1	4	2	1	3	4	2	0	16	55
2:30 PM	2	10	0	0	7	14	0	1	33	0	5	1	0	4	4	5	0	19	52
2:45 PM	4	15	5	2	8	18	1	2	51	2	1	1	0	6	2	6	2	18	69
3:00 PM	2	7	2	1	4	10	1	1	26	0	4	0	0	6	7	13	5	30	56
3:15 PM	5	19	3	2	2	16	3	0	48	1	1	1	0	6	15	8	0	32	80
3:30 PM	8	28	5	1	4	15	5	2	65	2	9	5	0	6	10	7	0	39	104
3:45 PM	2	17	1	2	5	18	2	3	45	2	5	0	1	7	5	6	1	25	70
4:00 PM	0	16	1	2	1	7	2	0	27	1	8	3	0	5	8	7	1	32	59
4:15 PM	1	29	3	1	4	17	0	0	54	0	4	1	0	4	5	6	0	20	74
4:30 PM	1	10	1	0	3	7	0	0	22	0	4	1	0	7	7	7	0	26	48
4:45 PM	4	13	6	1	2	16	1	0	42	1	3	1	0	6	6	8	1	25	67
5:00 PM	1	16	1	1	4	12	2	0	36	0	4	0	0	6	11	10	0	31	67
5:15 PM	1	7	4	0	3	12	1	0	28	0	4	1	0	3	5	2	1	15	43
5:30 PM	2	12	4	0	2	14	0	1	34	1	2	0	0	4	2	5	0	14	48
5:45 PM	3	11	0	0	3	11	3	0	31	0	2	0	0	0	5	4	0	11	42

AM Peak Hour
7:45 AM to 8:45 AM



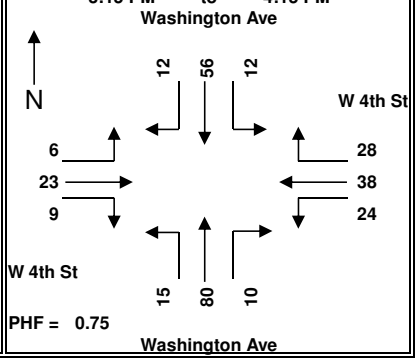
PHF = 0.85

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.88

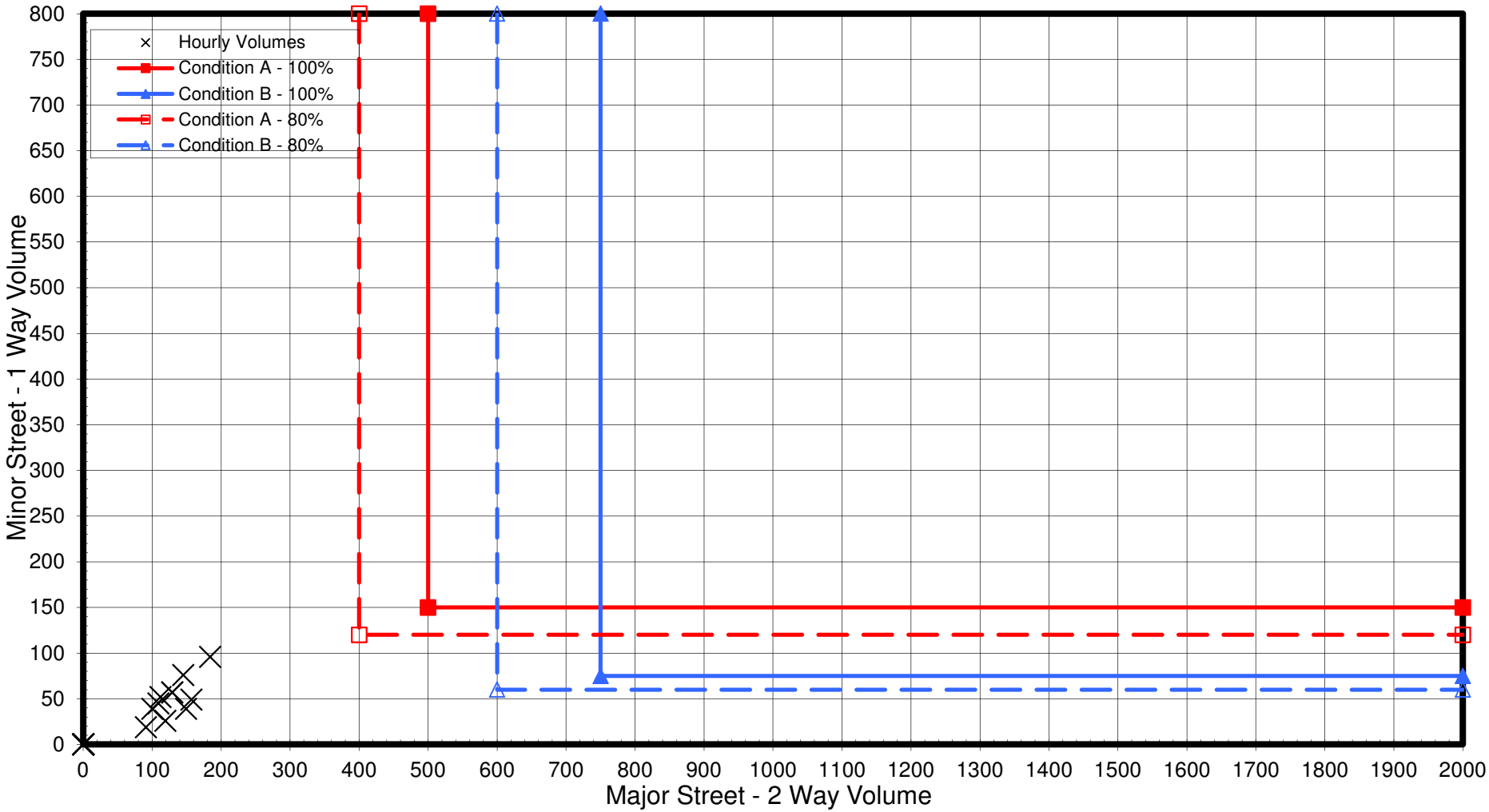
PM Peak Hour
3:15 PM to 4:15 PM



PHF = 0.75

Notes:

WARRANT 1 - Conditions A & B



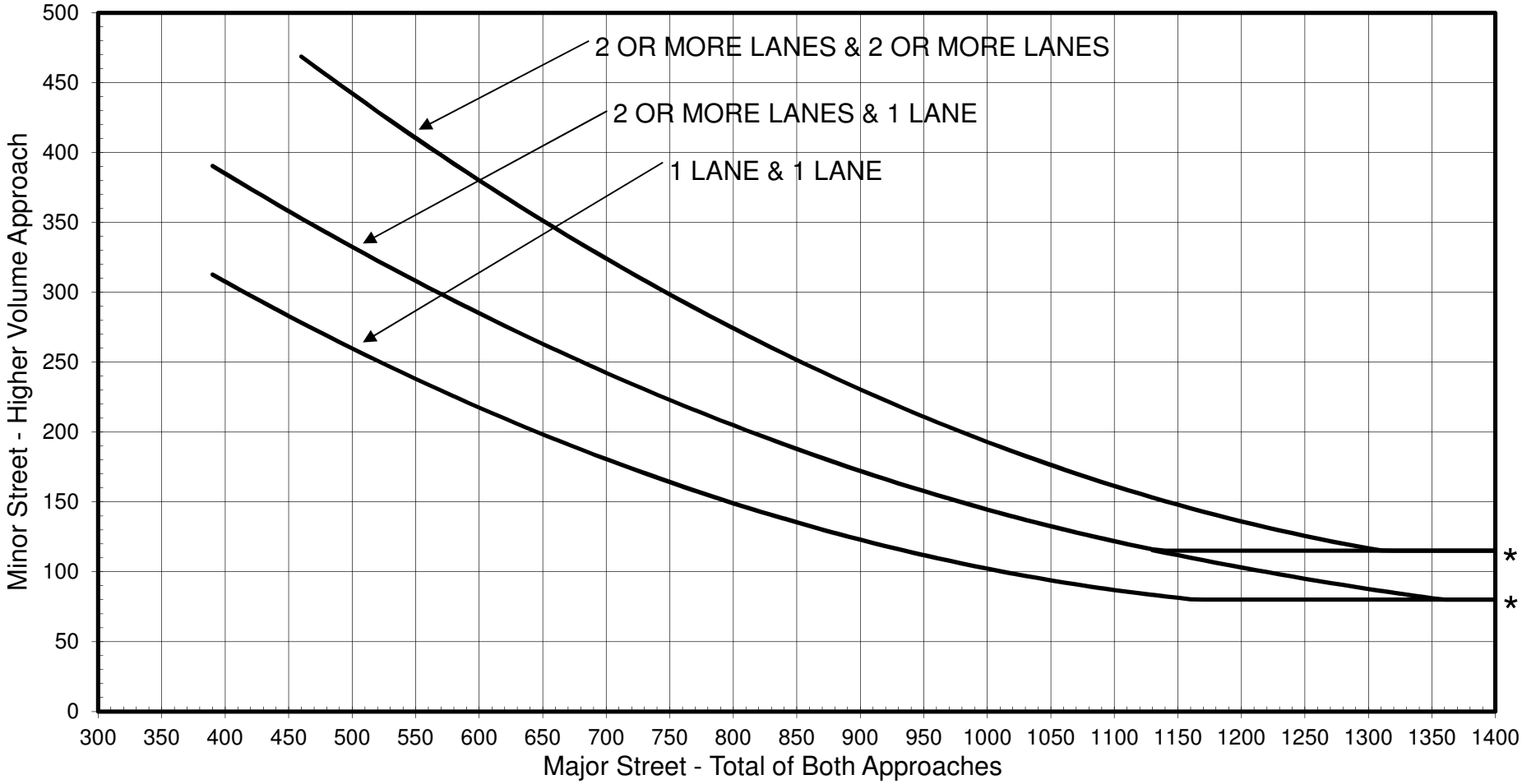
		Lanes
Major Road =	Washington Ave	1
Minor Road =	W 4th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Washington Ave	1
Minor Road =	W 4th St	1
Road Location =	Urban	

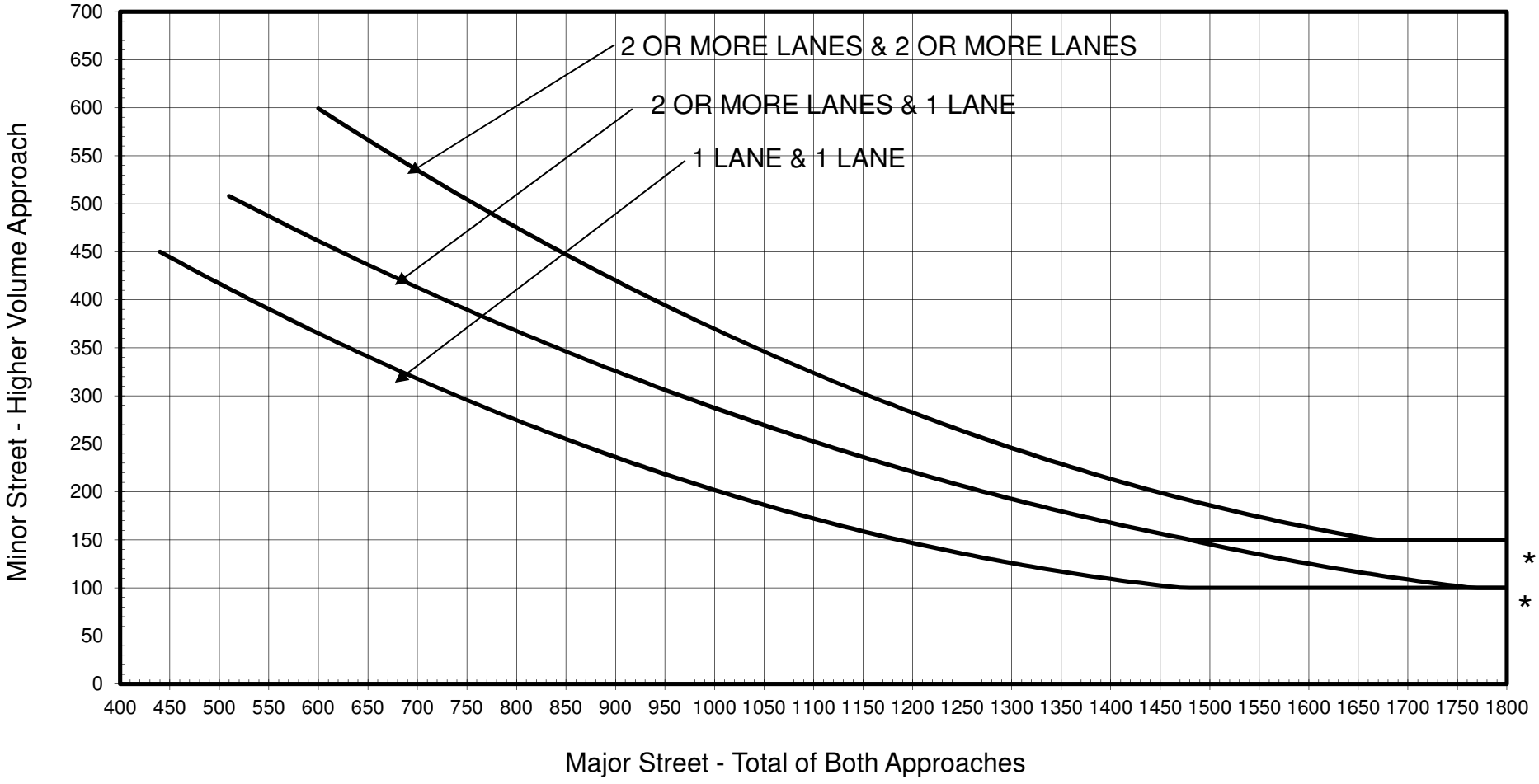
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Washington Ave	1
Minor Road =	W 4th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.18

Traffic Signal Warrant Analysis Results

Intersection 18
Washington Ave and W 5th St

SIGNAL WARRANT

INTERSECTION: Washington Ave and W 5th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		82	26	9														
8AM-9AM		150	56	42														
9AM-10AM		91	38	53														
10AM-11AM		111	44	58														
11AM-NOON		110	47	63								X						
NOON-1PM		120	48	55														
1PM-2PM		117	33	64								X						
2PM-3PM		150	54	77						X		X						
3PM-4PM		190	63	90						X		X						
4PM-5PM		163	48	77						X		X						
5PM-6PM		126	39	63								X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Washington Ave and W 5th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

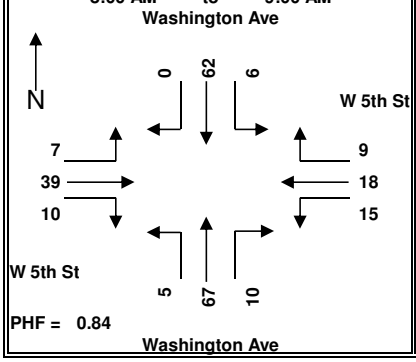
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.969	Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.42
Intersection ID: 18

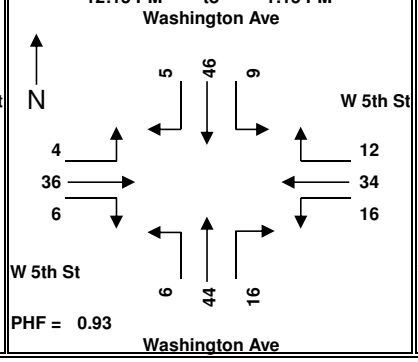
Start Time	Washington Ave Northbound				Washington Ave Southbound				Total North South	W 5th St Eastbound				W 5th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	59	537	131	36	73	554	56	33	1410	52	358	86	3	180	321	150	14	1147	2557
	Percent Trucks =			5%	Percent Trucks =			5%		Percent Trucks =			1%	Percent Trucks =			2%		
ADT	81	738	180	49	100	761	77	45	1938	71	492	118	4	247	441	206	19	1577	3515
7:00 AM	0	5	1	0	1	5	2	1	14	1	5	0	0	3	0	0	0	9	23
7:15 AM	2	4	0	2	2	13	1	3	22	0	5	1	1	0	0	0	0	6	28
7:30 AM	1	6	4	0	0	4	0	0	15	1	3	0	0	0	1	1	0	6	21
7:45 AM	1	18	0	0	2	10	0	0	31	2	7	1	0	1	1	2	0	14	45
8:00 AM	1	20	2	1	0	18	0	2	41	0	9	5	0	2	4	0	0	20	61
8:15 AM	1	23	1	3	2	17	0	2	44	5	10	4	0	2	6	3	2	30	74
8:30 AM	2	13	5	1	1	15	0	0	36	2	6	0	0	3	3	3	0	17	53
8:45 AM	1	11	2	1	3	12	0	3	29	0	14	1	0	8	5	3	1	31	60
9:00 AM	0	9	2	0	0	14	0	0	25	1	2	0	0	4	8	7	0	22	47
9:15 AM	1	11	2	1	2	7	1	0	24	0	6	2	0	2	5	3	1	18	42
9:30 AM	0	4	0	0	1	7	2	1	14	2	10	2	0	3	4	1	0	22	36
9:45 AM	1	9	0	0	5	13	0	0	28	0	9	4	0	4	6	6	0	29	57
10:00 AM	0	6	1	0	1	13	1	0	22	1	8	1	0	1	4	3	1	18	40
10:15 AM	0	19	3	1	2	7	1	1	32	0	11	3	0	1	7	4	0	26	58
10:30 AM	1	10	4	1	4	15	0	2	34	1	7	3	0	6	11	6	1	34	68
10:45 AM	1	9	2	1	0	9	2	0	23	1	6	2	1	4	7	4	0	24	47
11:00 AM	0	10	0	1	2	4	0	0	16	3	8	3	0	6	10	5	1	35	51
11:15 AM	1	9	4	0	0	5	1	0	20	0	11	5	0	3	6	3	0	28	48
11:30 AM	1	15	5	0	4	11	0	0	36	0	8	0	1	2	8	4	0	22	58
11:45 AM	2	13	5	1	2	15	1	0	38	0	8	1	0	4	9	3	1	25	63
12:00 PM	2	6	1	1	5	9	1	0	24	0	9	2	0	2	4	5	0	22	46
12:15 PM	2	12	5	1	3	11	0	0	33	2	10	4	0	4	6	4	0	30	63
12:30 PM	1	5	5	0	3	14	1	2	29	0	10	1	0	3	8	6	2	28	57
12:45 PM	3	12	4	1	1	11	3	0	34	1	9	0	0	4	8	1	0	23	57
1:00 PM	0	15	2	0	2	10	1	1	30	1	7	1	0	5	12	1	0	27	57
1:15 PM	0	8	2	0	5	9	1	0	25	2	6	1	0	6	3	4	0	22	47
1:30 PM	1	12	4	0	0	13	1	0	31	0	4	2	0	6	12	3	0	27	58
1:45 PM	2	12	7	0	3	7	0	0	31	0	7	2	0	0	8	4	0	21	52
2:00 PM	0	14	1	1	0	13	1	0	29	3	12	0	0	5	13	6	1	39	68
2:15 PM	4	15	6	3	3	14	1	2	43	2	9	4	0	5	5	8	0	33	76
2:30 PM	3	8	4	1	2	17	2	1	36	0	7	1	0	5	12	4	0	29	65
2:45 PM	3	15	2	2	1	15	6	2	42	4	9	3	0	2	8	4	0	30	72
3:00 PM	3	11	1	2	1	15	2	3	33	0	13	4	0	4	9	2	0	32	65
3:15 PM	0	18	5	2	1	18	3	0	45	2	3	0	0	7	11	4	2	27	72
3:30 PM	3	30	4	0	0	23	3	2	63	6	16	6	0	6	14	4	1	52	115
3:45 PM	2	16	5	2	3	20	3	2	49	0	12	1	0	11	15	3	0	42	91
4:00 PM	3	12	5	2	0	14	1	1	35	0	11	5	0	3	12	4	0	35	70
4:15 PM	0	24	4	1	1	15	4	0	48	2	6	4	0	9	15	4	0	40	88
4:30 PM	1	10	4	0	2	16	1	0	34	1	9	0	0	7	7	1	0	25	59
4:45 PM	1	17	5	1	1	20	2	1	46	0	10	0	0	4	6	5	0	25	71
5:00 PM	2	12	2	1	0	19	0	0	35	2	8	1	0	4	13	3	0	31	66
5:15 PM	3	7	3	0	1	14	1	1	29	2	6	3	0	8	6	4	0	29	58
5:30 PM	2	10	4	1	1	16	2	0	35	2	6	2	0	4	5	4	0	23	58
5:45 PM	1	12	3	0	0	7	4	0	27	0	6	1	0	7	4	1	0	19	46

AM Peak Hour
8:00 AM to 9:00 AM



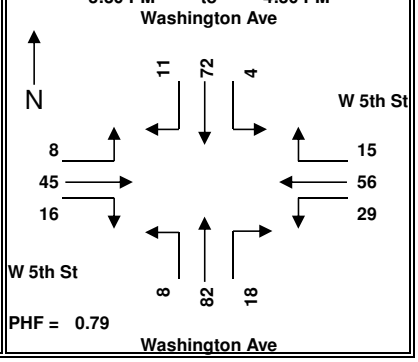
PHF = 0.84

Midday Peak Hour
12:15 PM to 1:15 PM



PHF = 0.93

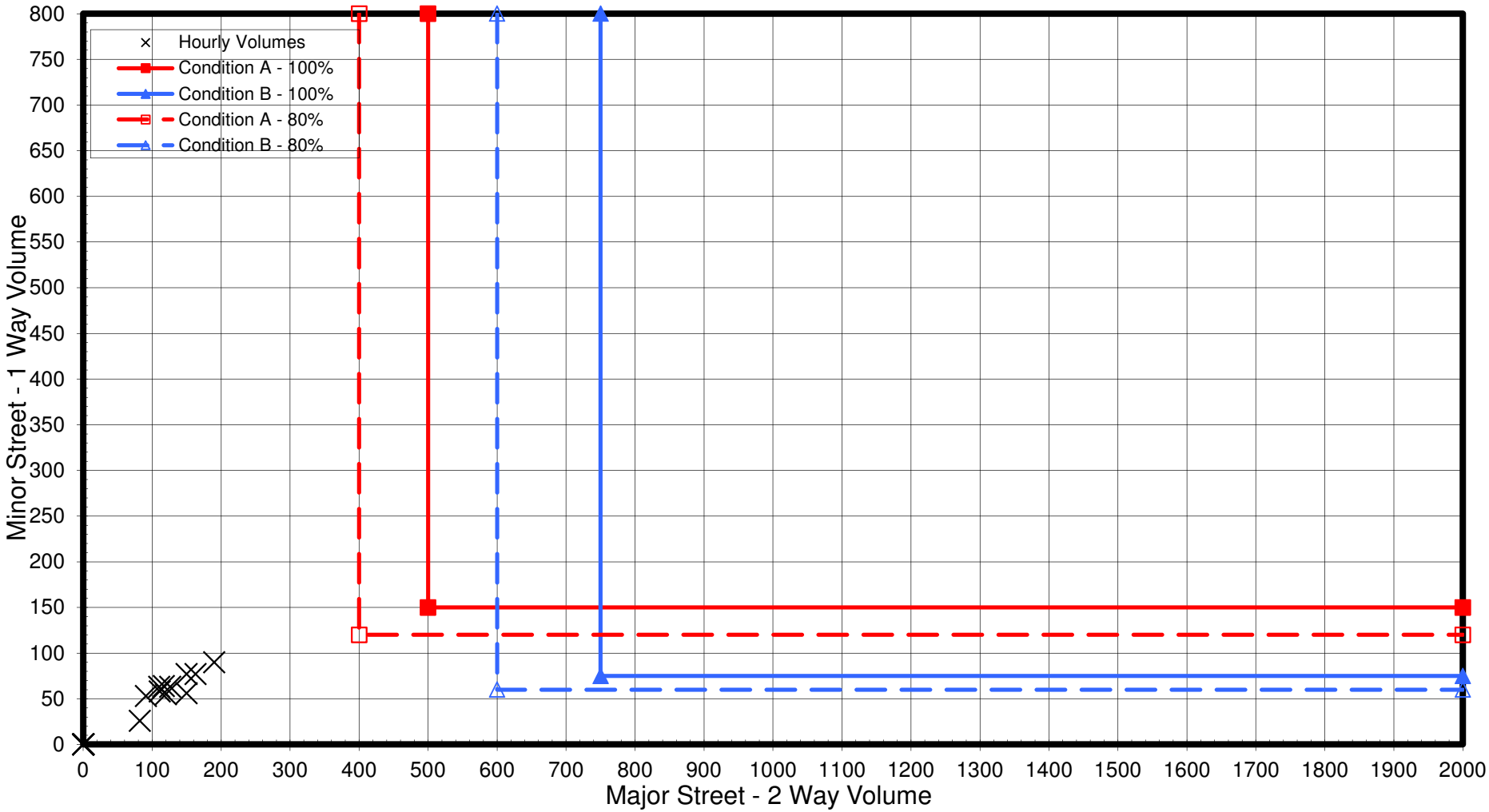
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.79

Notes:

WARRANT 1 - Conditions A & B



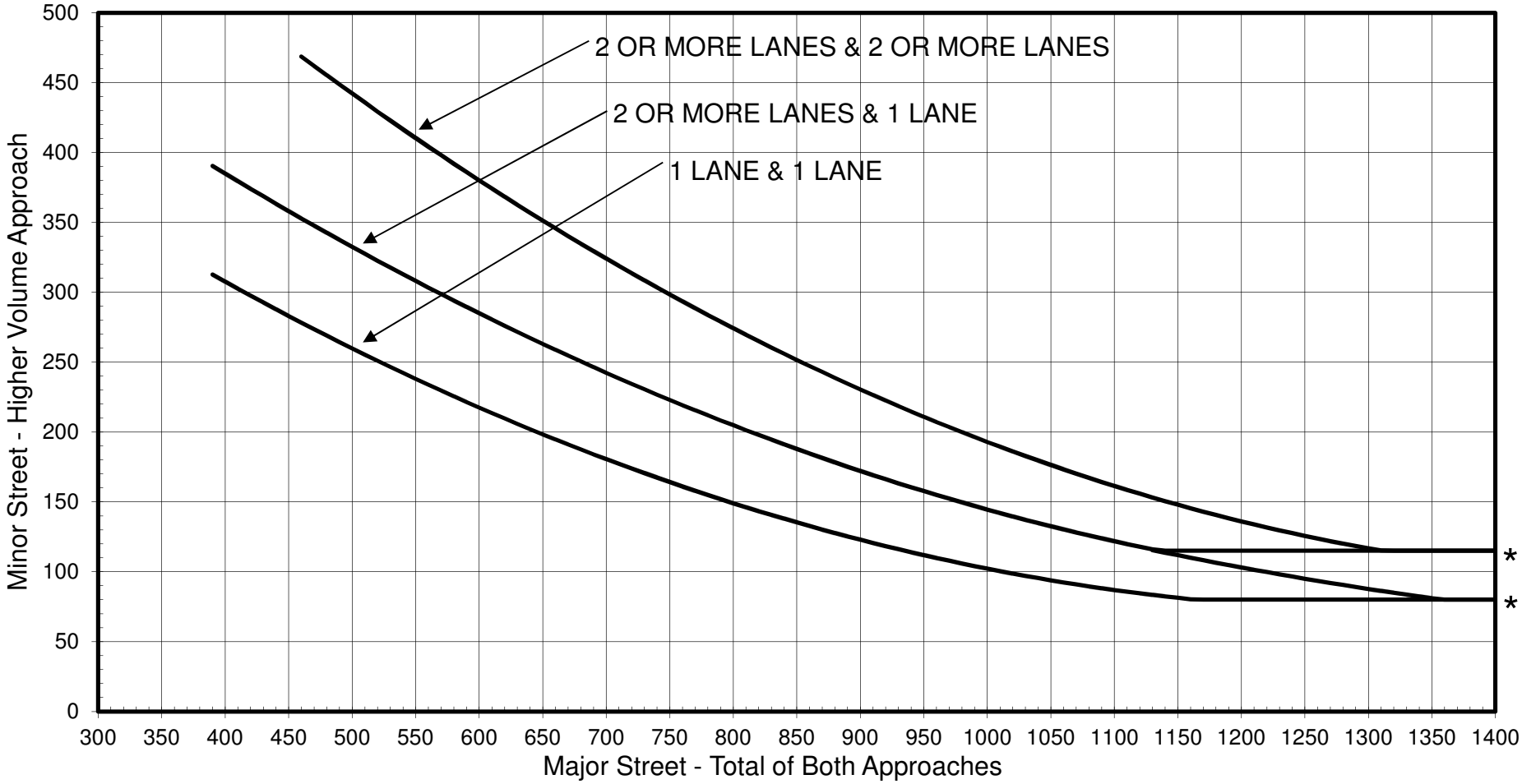
		Lanes
Major Road =	Washington Ave	1
Minor Road =	W 5th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Washington Ave	1
Minor Road =	W 5th St	1
Road Location =	Urban	

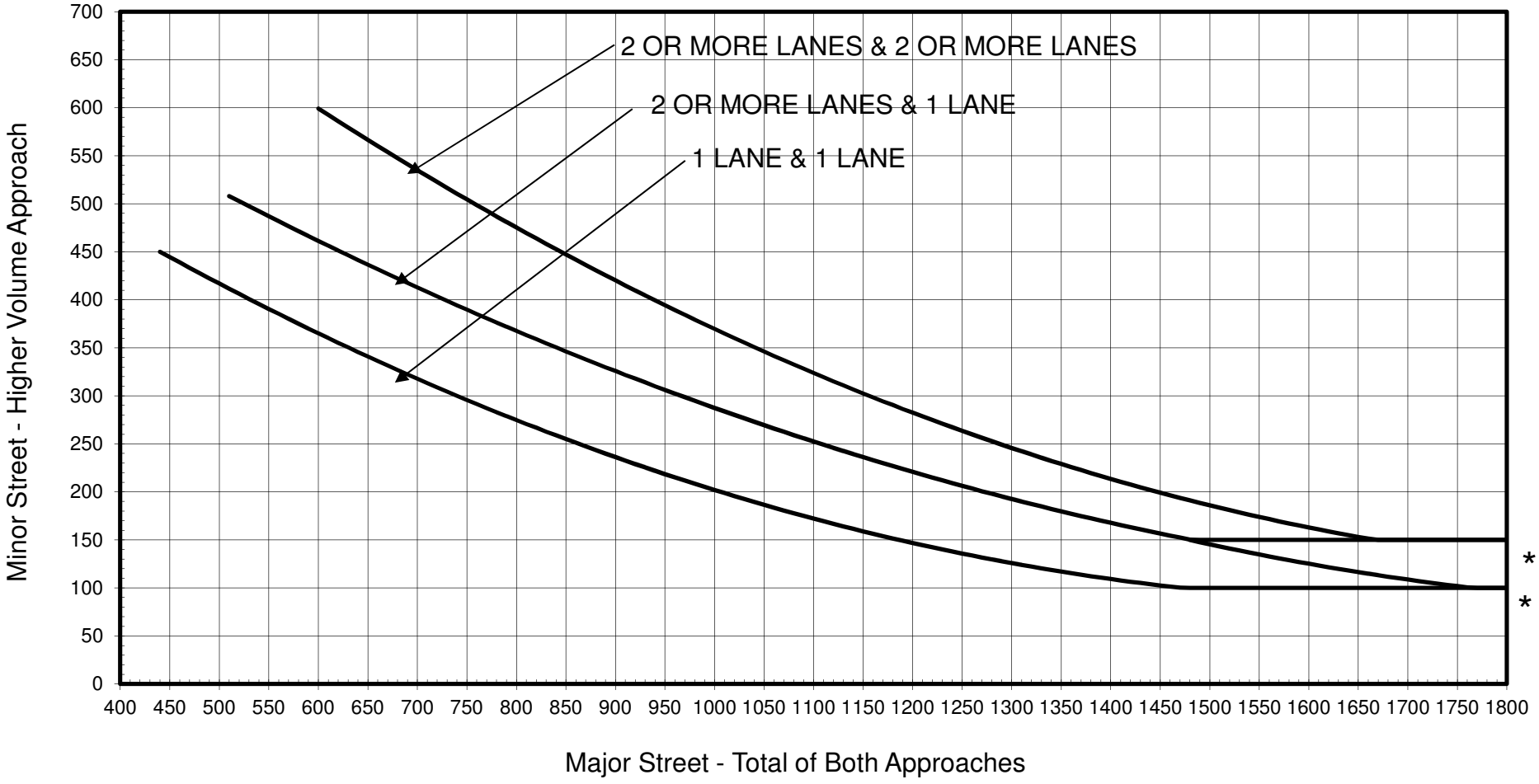
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Washington Ave	1
Minor Road =	W 5th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.19

Traffic Signal Warrant Analysis Results

Intersection 19
Washington Ave and W 6th St

SIGNAL WARRANT

INTERSECTION: Washington Ave and W 6th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		87	12	6														
8AM-9AM		187	39	50														
9AM-10AM		112	27	20														
10AM-11AM		122	35	33														
11AM-NOON		123	28	44														
NOON-1PM		133	30	42														
1PM-2PM		131	38	33														
2PM-3PM		175	39	35														
3PM-4PM		225	54	63								X						
4PM-5PM		203	25	37														
5PM-6PM		149	16	44														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Washington Ave and W 6th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

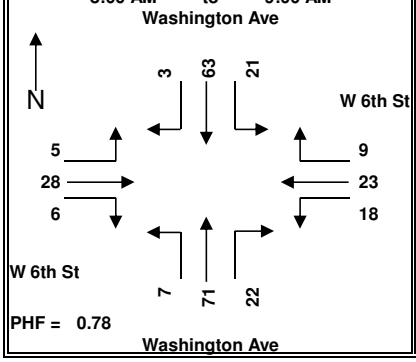
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.969	Thursday	November 6, 2014	7:00 AM	6:00 PM	Cloudy

Roadway Classification:

ADT Factor: 1.42
Intersection ID: 19

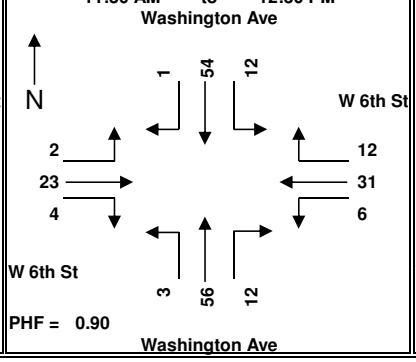
Start Time	Washington Ave Northbound				Washington Ave Southbound				Total North South	W 6th St Eastbound				W 6th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	46	618	150	38	127	651	55	37	1647	43	246	54	10	95	221	91	6	750	2397
	Percent Trucks =			5%	Percent Trucks =			4%		Percent Trucks =			3%	Percent Trucks =			1%		
ADT	63	849	206	52	175	895	76	51	2264	59	338	74	14	131	304	125	8	1031	3295
7:00 AM	1	6	1	0	2	4	1	1	15	0	1	1	0	0	1	0	0	3	18
7:15 AM	1	6	0	1	2	11	1	2	21	0	1	0	0	0	0	0	0	1	22
7:30 AM	0	9	0	0	0	5	1	1	15	1	1	1	1	0	1	0	0	4	19
7:45 AM	0	18	5	0	3	9	1	0	36	0	5	1	0	3	0	1	0	10	46
8:00 AM	2	22	10	1	10	14	0	3	58	2	14	3	0	6	4	2	1	31	89
8:15 AM	1	19	7	5	6	17	0	2	50	3	6	1	0	11	13	4	0	38	88
8:30 AM	1	18	2	1	2	15	2	0	40	0	4	1	0	1	3	0	0	9	49
8:45 AM	3	12	3	1	3	17	1	5	39	0	4	1	1	0	3	3	0	11	50
9:00 AM	1	12	2	0	0	12	6	0	33	0	6	0	0	1	3	0	0	10	43
9:15 AM	1	11	3	2	0	12	0	0	27	3	3	1	0	2	2	2	0	13	40
9:30 AM	0	3	3	0	3	8	0	1	17	0	2	4	0	0	1	0	0	7	24
9:45 AM	0	10	3	0	6	15	1	0	35	2	6	0	0	4	3	2	0	17	52
10:00 AM	0	6	1	0	3	11	0	0	21	0	7	1	0	1	4	1	0	14	35
10:15 AM	0	16	4	1	1	11	0	1	32	2	10	0	0	0	6	4	0	22	54
10:30 AM	1	13	1	1	5	17	2	2	39	1	5	1	0	1	5	1	0	14	53
10:45 AM	3	9	3	2	2	12	1	1	30	0	7	1	0	2	7	1	0	18	48
11:00 AM	1	8	1	1	2	12	0	1	24	2	5	0	0	1	5	5	0	18	42
11:15 AM	1	11	3	0	4	7	1	0	27	1	5	1	0	1	4	2	0	14	41
11:30 AM	0	17	2	0	3	12	0	0	34	0	6	1	0	2	9	5	0	23	57
11:45 AM	1	16	2	1	4	15	0	0	38	2	4	1	0	1	7	2	0	17	55
12:00 PM	1	8	6	1	3	10	1	0	29	0	5	1	0	1	5	3	0	15	44
12:15 PM	1	15	2	1	2	17	0	0	37	0	8	1	0	2	10	2	0	23	60
12:30 PM	1	11	0	0	2	16	0	3	30	0	6	1	0	2	9	0	0	18	48
12:45 PM	3	17	1	1	1	15	0	0	37	0	7	1	0	2	4	2	0	16	53
1:00 PM	2	14	3	0	4	13	0	2	36	2	4	0	0	3	5	1	0	15	51
1:15 PM	0	7	3	0	2	12	1	0	25	1	5	1	0	4	6	1	0	18	43
1:30 PM	2	14	5	0	5	15	2	0	43	2	8	3	3	0	2	2	1	17	60
1:45 PM	1	16	0	0	4	5	1	0	27	4	6	2	0	4	4	1	0	21	48
2:00 PM	2	12	4	1	0	17	1	0	36	2	6	0	0	4	5	2	1	19	55
2:15 PM	1	16	3	2	5	18	2	1	45	2	8	1	1	0	4	5	0	20	65
2:30 PM	0	16	6	1	1	20	1	1	44	1	7	2	0	2	3	1	1	16	60
2:45 PM	5	19	6	2	3	16	1	2	50	0	7	3	0	2	5	2	0	19	69
3:00 PM	2	12	7	1	5	17	2	1	45	2	11	4	2	1	9	1	0	28	73
3:15 PM	0	20	13	4	6	17	2	2	58	0	11	1	1	12	5	3	0	32	90
3:30 PM	2	29	3	0	3	29	4	1	70	1	9	4	0	4	11	9	1	38	108
3:45 PM	0	19	1	1	3	24	5	1	52	3	6	2	1	0	6	2	0	19	71
4:00 PM	2	17	0	2	3	17	2	1	41	0	3	0	0	2	7	2	0	14	55
4:15 PM	0	25	3	1	6	23	1	0	58	2	6	0	0	1	4	4	0	17	75
4:30 PM	1	15	9	0	3	19	0	0	47	1	6	2	0	1	7	2	1	19	66
4:45 PM	1	23	7	1	0	21	5	1	57	1	3	1	0	3	2	2	0	12	69
5:00 PM	0	10	3	1	1	21	0	0	35	0	2	0	0	2	7	5	0	16	51
5:15 PM	0	10	5	0	2	22	2	1	41	0	4	2	0	3	7	1	0	17	58
5:30 PM	1	16	1	1	2	18	2	0	40	0	3	1	0	2	7	2	0	15	55
5:45 PM	0	15	3	0	0	13	2	0	33	0	3	1	0	1	6	1	0	12	45

AM Peak Hour
8:00 AM to 9:00 AM



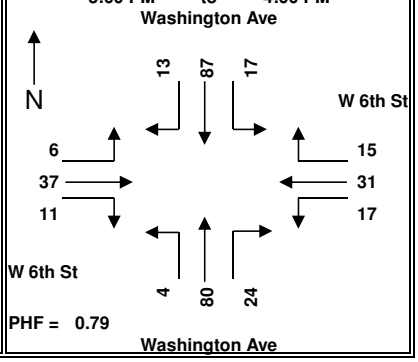
PHF = 0.78

Midday Peak Hour
11:30 AM to 12:30 PM



PHF = 0.90

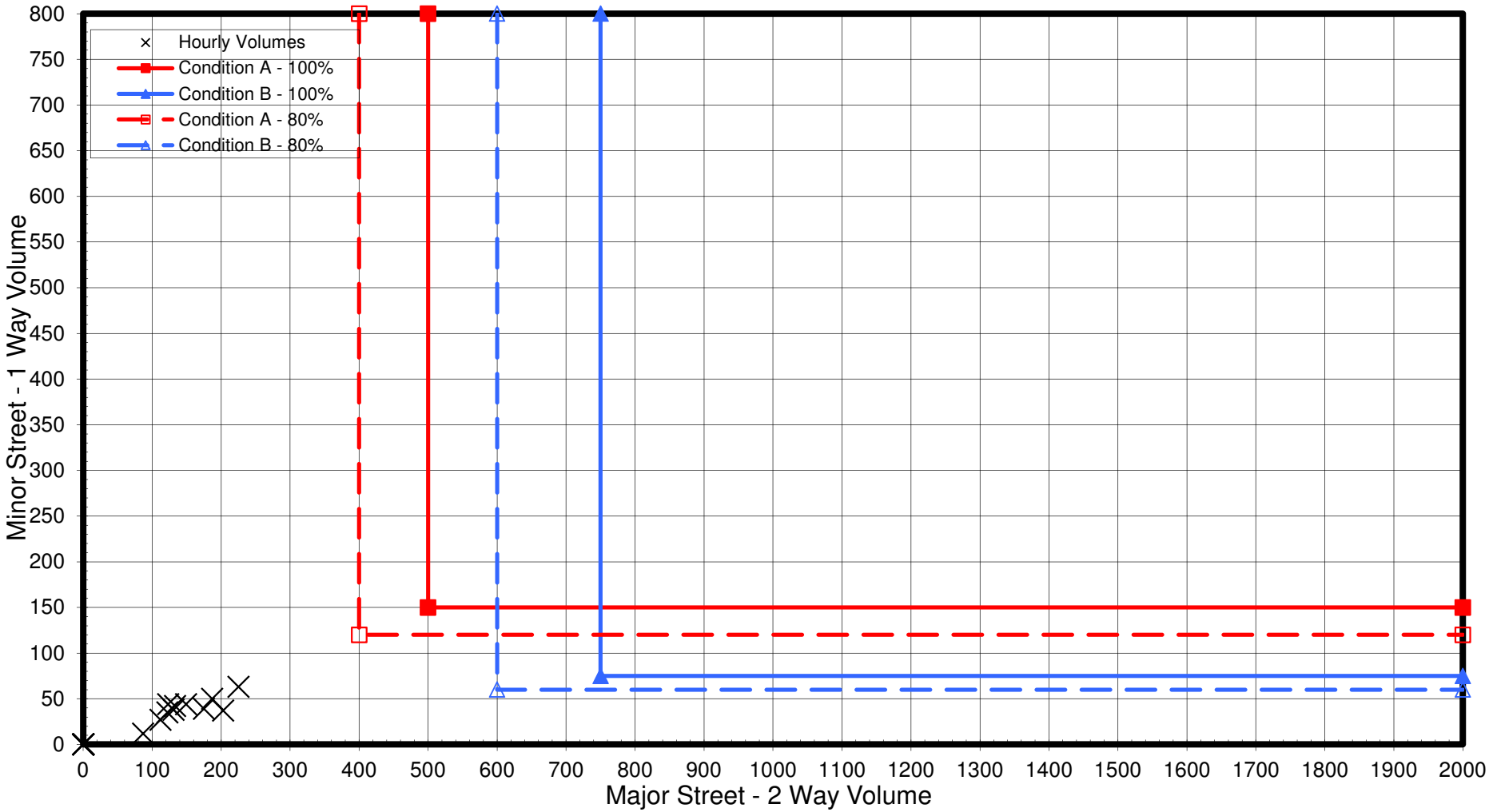
PM Peak Hour
3:00 PM to 4:00 PM



PHF = 0.79

Notes:

WARRANT 1 - Conditions A & B



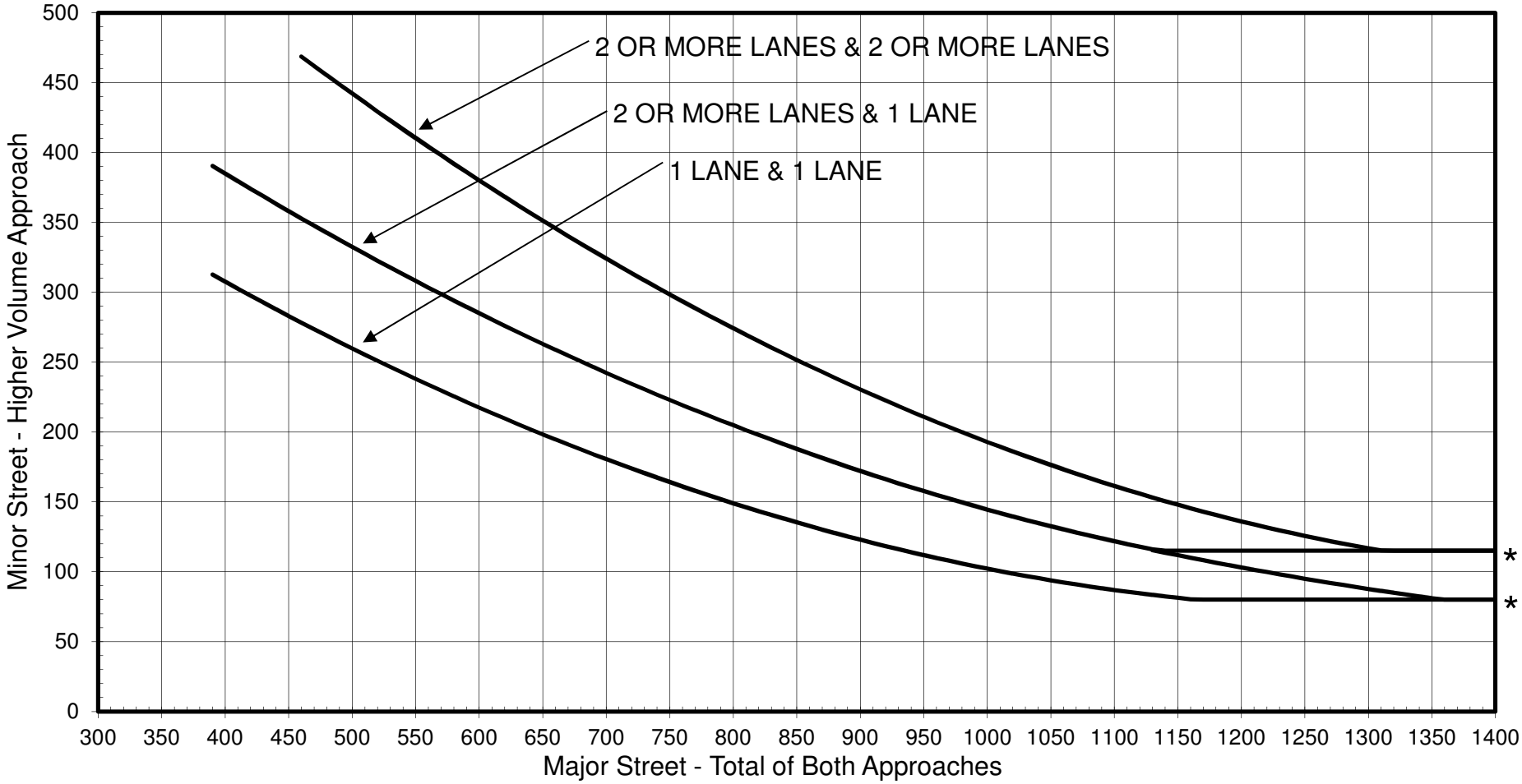
		Lanes
Major Road =	Washington Ave	1
Minor Road =	W 6th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Cloudy

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Washington Ave	1
Minor Road =	W 6th St	1
Road Location =	Urban	

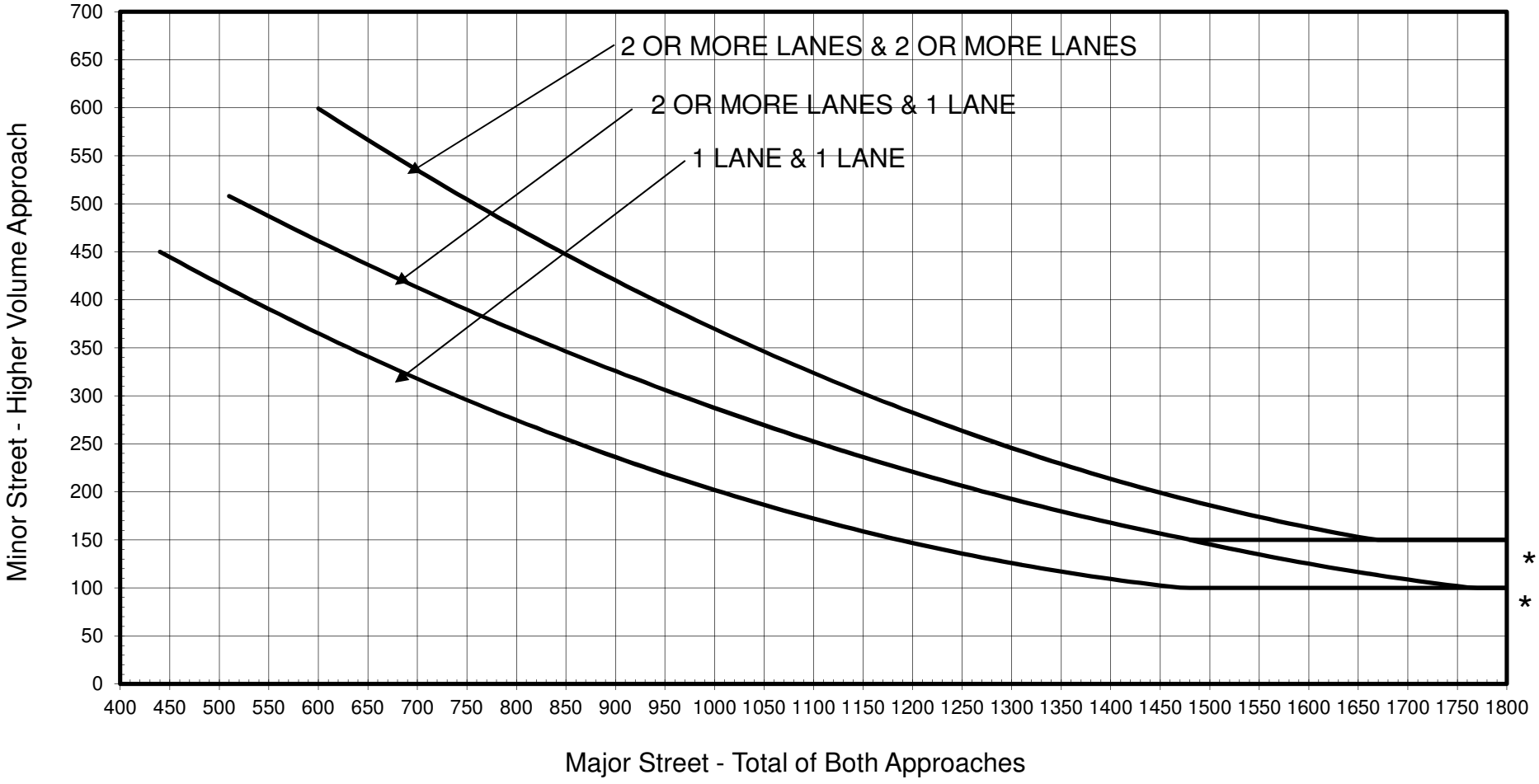
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Cloudy

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Washington Ave	1
Minor Road =	W 6th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Cloudy

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.20

Traffic Signal Warrant Analysis Results

Intersection 20
Reid Ave and W 6th St

SIGNAL WARRANT

INTERSECTION: Reid Ave and W 6th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1	X	X	X	500	150	400	120	750	75	600	60						
NORM	2+				600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		39	15	9														
8AM-9AM		80	48	29														
9AM-10AM		104	36	47														
10AM-11AM		129	56	52														
11AM-NOON		135	48	55														
NOON-1PM		135	66	53								X						
1PM-2PM		116	48	47														
2PM-3PM		117	62	40								X						
3PM-4PM		138	84	47						X		X						
4PM-5PM		144	54	42														
5PM-6PM		94	41	41														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH
ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Reid Ave and W 6th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

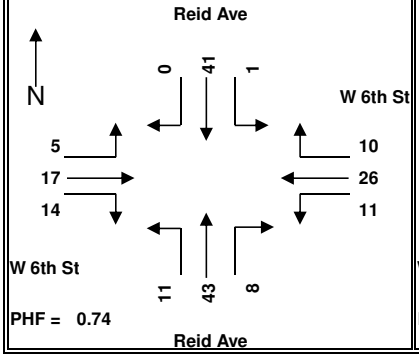
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.969	Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.43
Intersection ID: 20

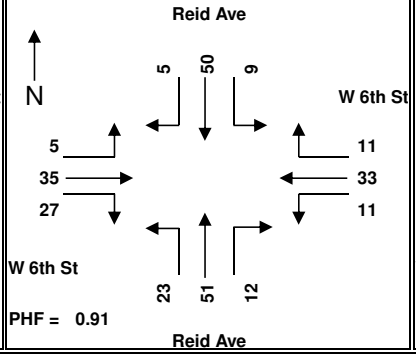
Start Time	Reid Ave Northbound				Reid Ave Southbound				Total North South	W 6th St Eastbound				W 6th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	145	484	98	15	33	424	47	9	1231	55	285	218	20	98	268	96	6	1020	2251
	Percent Trucks =			2%	Percent Trucks =			2%		Percent Trucks =			4%	Percent Trucks =			1%		
ADT	202	673	136	21	46	589	65	13	1711	76	396	303	28	136	373	133	8	1418	3129
7:00 AM	0	2	1	0	0	5	0	1	8	0	3	3	0	0	2	1	0	9	17
7:15 AM	0	5	0	0	0	3	0	0	8	0	3	0	0	1	0	1	0	5	13
7:30 AM	1	3	0	1	0	2	0	0	6	0	0	0	0	0	2	0	0	2	8
7:45 AM	3	5	0	1	2	5	2	1	17	1	4	1	0	1	1	0	0	8	25
8:00 AM	6	4	1	1	0	6	0	0	17	1	6	9	0	2	6	1	1	25	42
8:15 AM	1	6	1	0	0	8	1	0	17	1	6	12	4	2	2	1	0	24	41
8:30 AM	1	10	0	0	0	1	1	0	13	1	3	3	0	1	4	1	0	13	26
8:45 AM	5	18	2	0	0	6	2	0	33	1	3	2	1	3	5	1	0	15	48
9:00 AM	1	17	1	1	0	10	0	0	29	1	6	3	1	4	4	3	0	21	50
9:15 AM	6	10	4	0	0	7	0	0	27	1	4	3	0	4	5	1	0	18	45
9:30 AM	2	7	0	0	0	8	0	0	17	1	2	3	0	0	3	3	1	12	29
9:45 AM	2	9	3	0	1	16	0	0	31	2	5	5	0	3	14	3	1	32	63
10:00 AM	1	8	5	1	2	9	2	1	27	0	6	3	0	3	5	1	0	18	45
10:15 AM	5	16	1	0	1	9	0	0	32	1	7	7	0	4	9	2	0	30	62
10:30 AM	2	18	2	1	1	13	4	0	40	2	5	4	0	5	6	1	0	23	63
10:45 AM	4	17	3	1	0	5	1	0	30	1	13	7	1	4	11	1	0	37	67
11:00 AM	3	13	4	1	0	13	0	0	33	1	5	5	0	2	9	4	1	26	59
11:15 AM	4	9	3	0	1	14	0	0	31	0	5	4	0	4	8	4	0	25	56
11:30 AM	6	9	2	0	1	12	2	1	32	2	6	7	0	5	7	1	1	28	60
11:45 AM	9	12	2	0	2	13	1	1	39	2	3	8	0	3	7	1	0	24	63
12:00 PM	4	12	6	0	2	17	2	0	43	1	11	7	0	4	7	1	0	31	74
12:15 PM	5	7	2	0	1	9	0	0	24	2	12	8	1	2	8	4	0	36	60
12:30 PM	5	20	2	2	4	11	2	1	44	0	9	4	0	2	11	5	0	31	75
12:45 PM	0	9	3	0	0	11	1	0	24	1	10	1	1	1	6	2	0	21	45
1:00 PM	5	12	1	0	0	7	0	0	25	1	6	6	1	3	9	1	0	26	51
1:15 PM	4	9	2	0	1	11	1	0	28	3	8	1	0	3	5	5	0	25	53
1:30 PM	1	13	0	0	0	7	2	1	23	0	6	7	0	1	4	4	0	22	45
1:45 PM	2	12	6	0	1	19	0	0	40	0	4	6	0	0	7	5	0	22	62
2:00 PM	5	12	1	1	0	5	2	0	25	0	8	11	1	2	7	3	0	31	56
2:15 PM	7	10	2	0	1	11	1	0	32	0	9	4	0	3	3	5	0	24	56
2:30 PM	1	17	4	0	0	7	2	0	31	2	8	3	0	1	7	0	1	21	52
2:45 PM	0	11	3	0	1	11	3	0	29	2	11	4	0	1	5	3	0	26	55
3:00 PM	7	13	1	1	1	15	1	0	38	3	7	7	1	1	7	0	0	25	63
3:15 PM	5	18	2	0	1	8	1	0	35	3	11	9	4	4	7	6	0	40	75
3:30 PM	6	13	3	0	0	18	1	1	41	7	10	11	1	3	4	2	0	37	78
3:45 PM	2	7	2	0	2	10	1	0	24	4	5	7	2	2	9	2	0	29	53
4:00 PM	2	15	1	1	1	19	0	1	38	0	6	4	0	2	9	2	0	23	61
4:15 PM	3	18	4	0	1	8	2	0	36	0	9	6	0	1	8	2	0	26	62
4:30 PM	6	15	3	1	1	10	2	0	37	2	6	5	0	2	5	3	0	23	60
4:45 PM	1	13	2	1	1	12	4	0	33	2	10	4	0	1	5	2	0	24	57
5:00 PM	3	9	5	0	0	6	2	0	25	0	4	2	0	3	9	2	0	20	45
5:15 PM	0	5	2	0	1	14	0	0	22	0	7	2	1	1	4	1	0	15	37
5:30 PM	7	8	5	0	1	6	1	0	28	2	5	5	0	4	6	2	0	24	52
5:45 PM	2	8	1	0	1	7	0	0	19	1	8	5	0	0	6	3	0	23	42

AM Peak Hour
9:00 AM to 10:00 AM



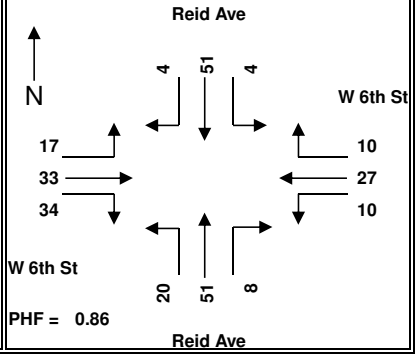
PHF = 0.74

Midday Peak Hour
11:45 AM to 12:45 PM



PHF = 0.91

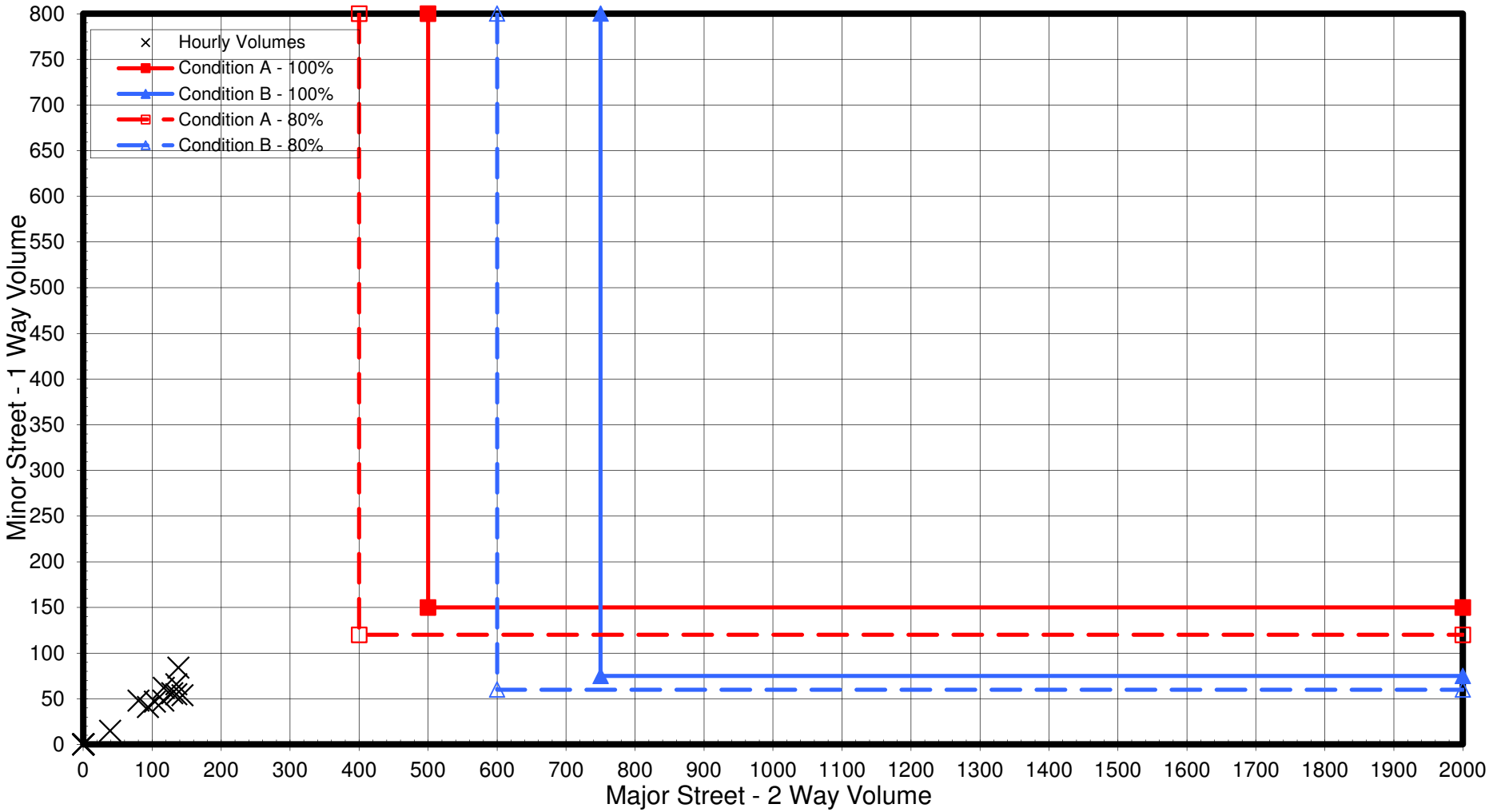
PM Peak Hour
3:00 PM to 4:00 PM



PHF = 0.86

Notes:

WARRANT 1 - Conditions A & B



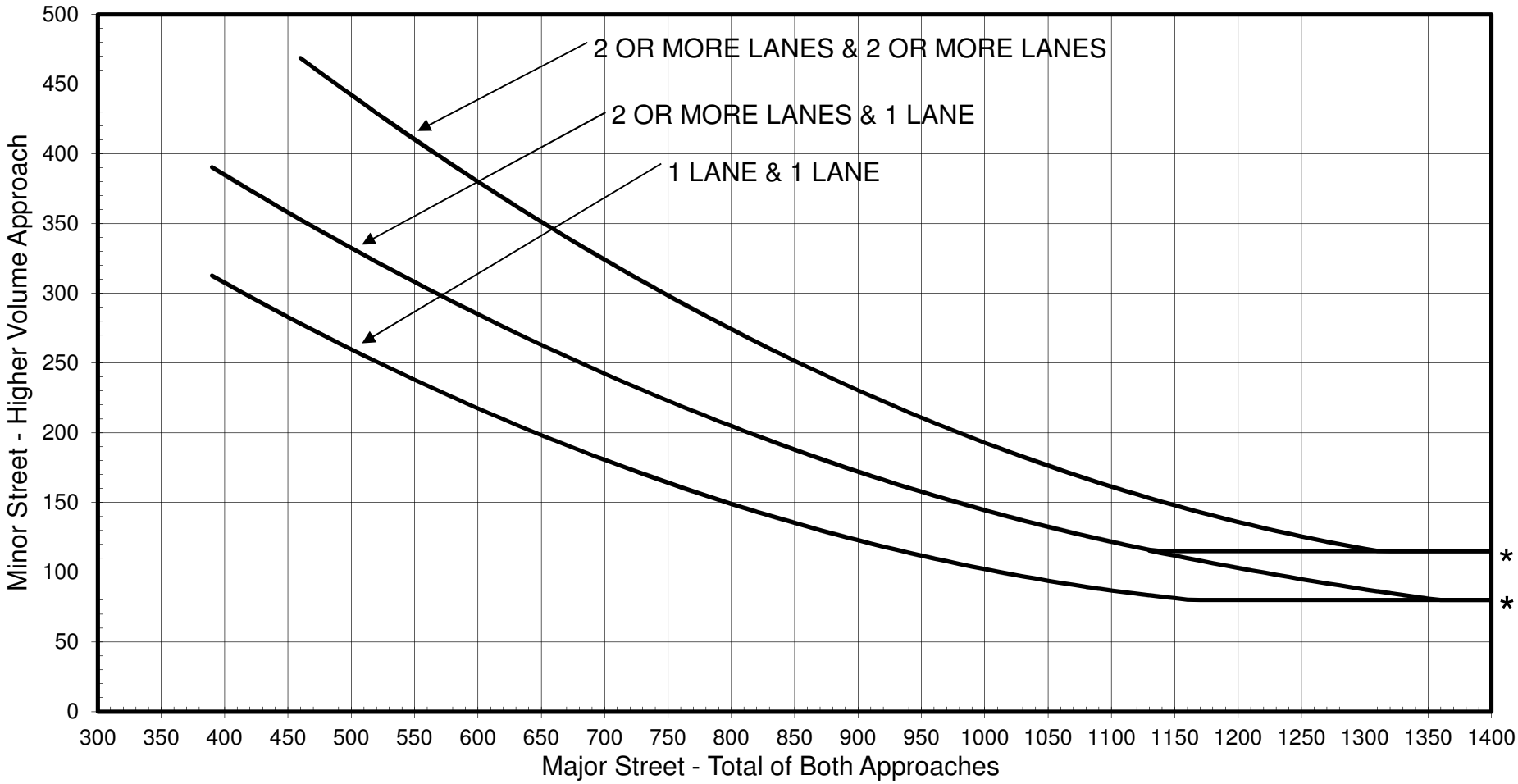
		Lanes
Major Road =	Reid Ave	1
Minor Road =	W 6th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Reid Ave	1
Minor Road =	W 6th St	1
Road Location =	Urban	

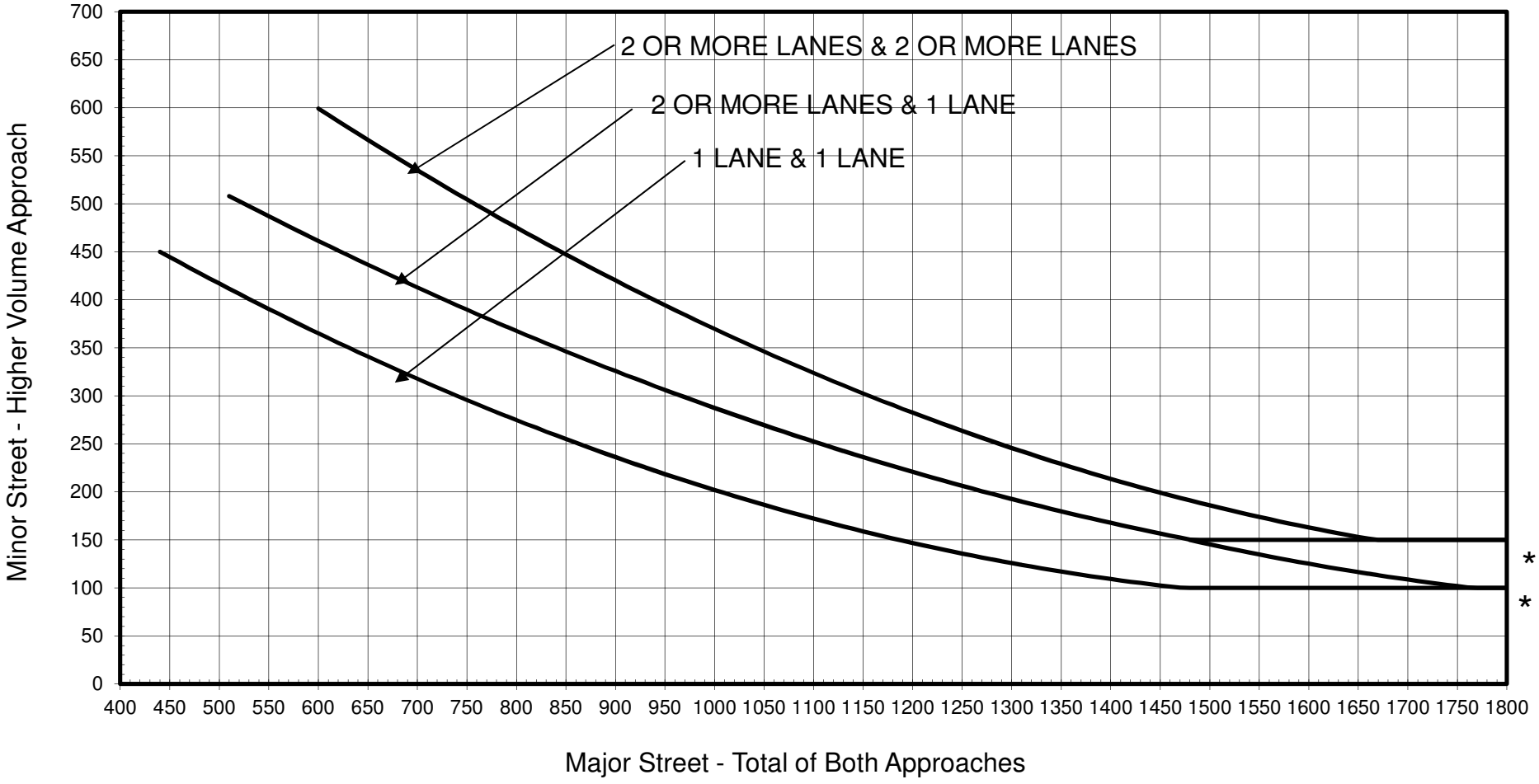
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Reid Ave	1
Minor Road =	W 6th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.21

Traffic Signal Warrant Analysis Results

Intersection 21
Reid Ave and W 7th St

SIGNAL WARRANT

INTERSECTION: Reid Ave and W 7th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		43	2	5														
8AM-9AM		111	7	6														
9AM-10AM		129	12	17														
10AM-11AM		153	13	21														
11AM-NOON		161	9	21														
NOON-1PM		157	25	21														
1PM-2PM		136	20	16														
2PM-3PM		133	11	14														
3PM-4PM		175	22	24														
4PM-5PM		158	20	22														
5PM-6PM		111	11	16														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Reid Ave and W 7th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

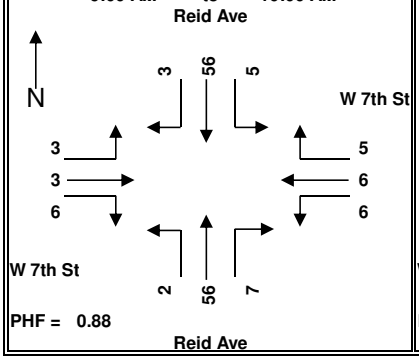
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.969	Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.43
Intersection ID: 21

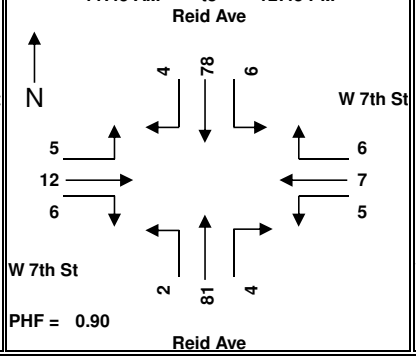
Start Time	Reid Ave Northbound				Reid Ave Southbound				Total North South	W 7th St Eastbound				W 7th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	43	664	59	12	40	636	25	20	1467	24	56	72	5	60	58	65	9	335	1802
	Percent Trucks =			2%	Percent Trucks =			3%		Percent Trucks =			3%	Percent Trucks =			5%		
ADT	60	923	82	17	56	884	35	28	2039	33	78	100	7	83	81	90	13	466	2505
7:00 AM	0	4	0	0	0	8	0	1	12	0	1	0	0	1	1	0	0	3	15
7:15 AM	0	5	0	0	0	4	0	0	9	0	0	0	0	0	0	0	0	0	9
7:30 AM	1	3	1	0	0	2	0	0	7	0	0	1	0	1	0	0	0	2	9
7:45 AM	1	7	1	1	0	6	0	0	15	0	0	0	0	0	2	0	0	2	17
8:00 AM	0	11	1	0	1	12	0	0	25	0	0	0	0	0	0	1	0	1	26
8:15 AM	0	8	0	1	0	23	0	4	31	0	1	1	0	1	0	0	0	3	34
8:30 AM	0	12	2	0	0	3	0	0	17	0	1	1	0	1	0	1	0	4	21
8:45 AM	2	23	2	1	1	8	2	1	38	0	1	2	0	1	1	0	0	5	43
9:00 AM	0	18	1	0	0	16	1	1	36	2	1	1	0	2	0	0	0	6	42
9:15 AM	1	16	2	0	3	10	0	0	32	0	1	1	0	1	4	2	0	9	41
9:30 AM	0	8	3	0	1	9	1	0	22	0	1	2	1	1	1	3	1	8	30
9:45 AM	1	14	1	0	1	21	1	1	39	1	0	2	0	2	1	0	0	6	45
10:00 AM	1	10	4	1	1	14	1	0	31	0	1	0	0	2	2	5	1	10	41
10:15 AM	2	19	0	0	0	17	1	0	39	1	4	2	0	4	2	1	0	14	53
10:30 AM	1	19	0	1	2	21	0	0	43	1	1	1	1	1	1	1	0	6	49
10:45 AM	1	25	1	0	0	13	0	1	40	0	2	0	0	0	0	2	1	4	44
11:00 AM	0	17	2	0	2	18	0	0	39	0	0	2	0	2	1	1	0	6	45
11:15 AM	1	15	1	0	1	22	0	0	40	1	1	2	0	1	1	2	0	8	48
11:30 AM	1	11	1	0	1	22	0	2	36	1	0	0	0	3	2	4	1	10	46
11:45 AM	1	21	2	0	4	18	0	0	46	1	0	1	0	0	1	3	0	6	52
12:00 PM	0	22	1	0	1	26	1	0	51	1	3	2	0	2	1	0	0	9	60
12:15 PM	0	15	1	0	0	19	2	0	37	1	5	1	0	1	2	0	0	10	47
12:30 PM	1	23	0	2	1	15	1	2	41	2	4	2	1	2	3	3	1	16	57
12:45 PM	3	12	1	0	1	10	1	0	28	0	2	2	0	1	2	4	0	11	39
1:00 PM	1	21	2	0	0	15	0	0	39	0	2	2	0	0	1	1	1	6	45
1:15 PM	1	12	1	0	2	9	2	0	27	1	0	5	1	1	1	6	0	14	41
1:30 PM	2	11	0	0	1	14	0	1	28	2	1	2	0	1	1	0	0	7	35
1:45 PM	3	16	0	0	2	20	1	0	42	3	1	1	0	2	0	2	0	9	51
2:00 PM	0	18	0	1	0	11	1	0	30	0	2	1	0	2	2	0	0	7	37
2:15 PM	2	13	6	0	2	15	2	0	40	0	1	4	0	2	0	1	0	8	48
2:30 PM	1	21	1	0	0	11	0	0	34	0	2	0	0	2	1	0	0	5	39
2:45 PM	1	13	0	0	0	15	0	0	29	0	0	1	0	1	3	0	0	5	34
3:00 PM	1	19	2	2	1	18	2	1	43	0	0	3	0	0	1	0	0	4	47
3:15 PM	1	21	3	0	0	19	1	2	45	0	2	4	0	2	1	4	0	13	58
3:30 PM	1	24	4	0	3	26	0	0	58	1	2	4	0	1	6	1	0	15	73
3:45 PM	4	9	0	0	0	16	0	2	29	0	2	4	0	2	2	4	1	14	43
4:00 PM	0	19	1	1	1	21	2	0	44	1	3	3	0	1	2	1	0	11	55
4:15 PM	2	21	2	0	0	18	0	0	43	1	2	3	0	1	2	1	1	10	53
4:30 PM	2	22	2	1	0	13	0	0	39	2	2	0	0	3	1	2	0	10	49
4:45 PM	1	14	1	0	0	16	0	0	32	0	1	2	0	2	1	5	1	11	43
5:00 PM	0	16	2	0	0	12	1	0	31	0	1	0	0	2	4	0	0	7	38
5:15 PM	1	7	3	0	2	12	1	0	26	0	2	3	1	3	0	2	0	10	36
5:30 PM	1	17	1	0	4	10	0	0	33	0	0	1	0	1	0	2	0	4	37
5:45 PM	0	12	0	0	1	8	0	1	21	1	0	3	0	1	1	0	0	6	27

AM Peak Hour
9:00 AM to 10:00 AM



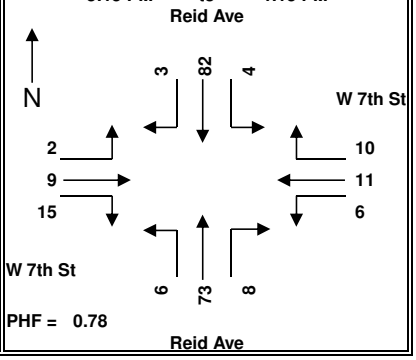
PHF = 0.88

Midday Peak Hour
11:45 AM to 12:45 PM



PHF = 0.90

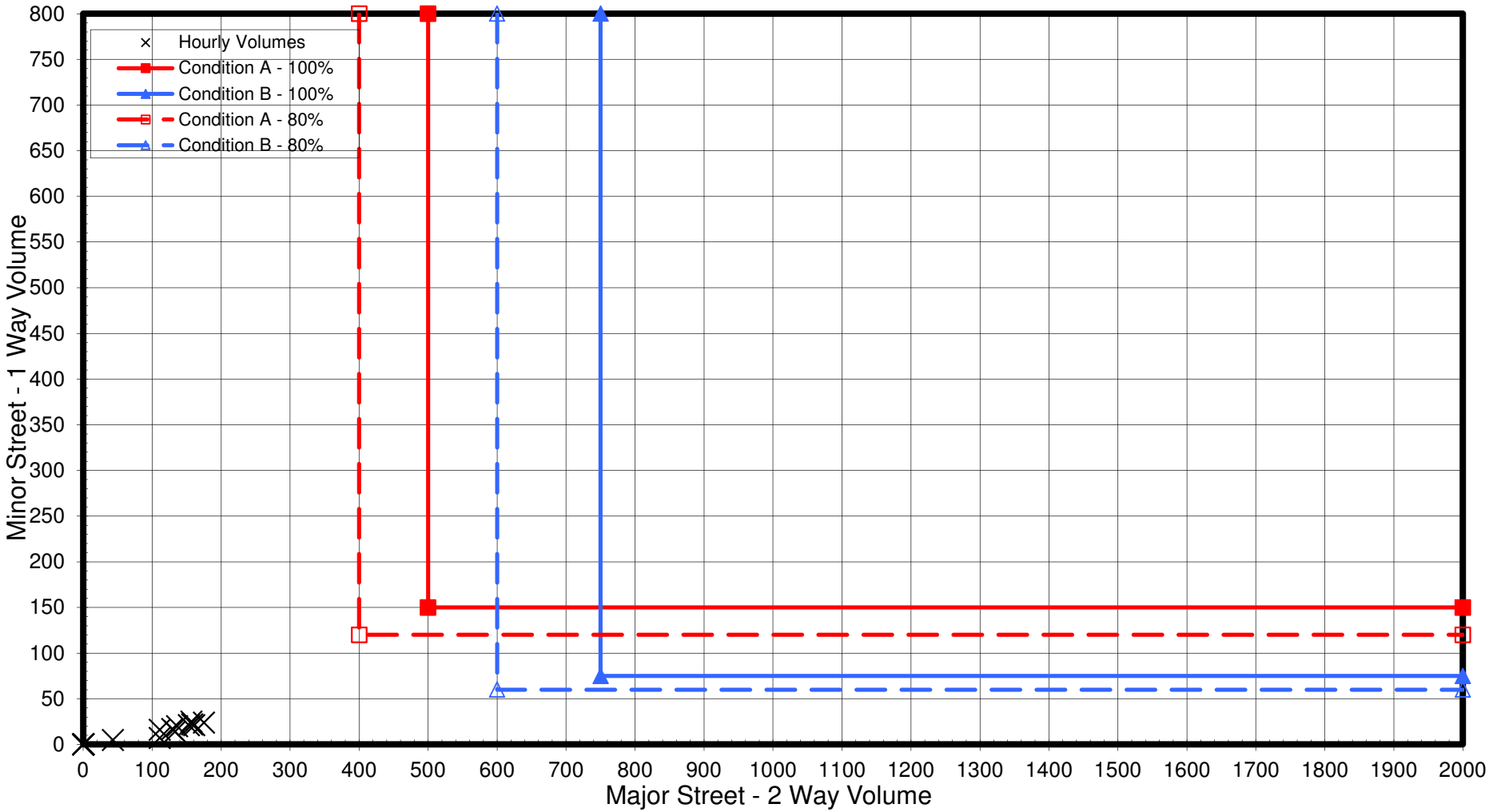
PM Peak Hour
3:15 PM to 4:15 PM



PHF = 0.78

Notes:

WARRANT 1 - Conditions A & B



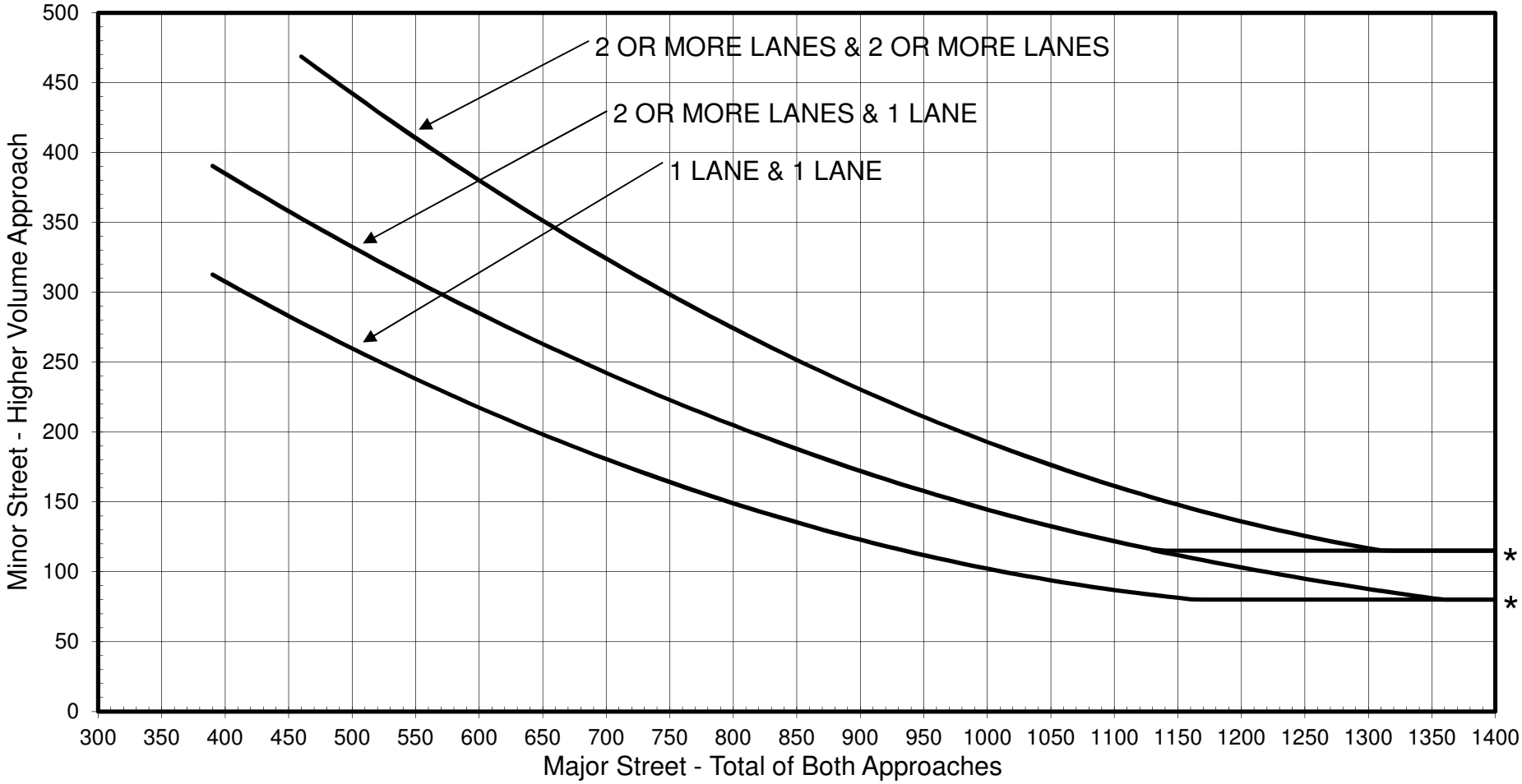
		Lanes
Major Road =	Reid Ave	1
Minor Road =	W 7th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Reid Ave	1
Minor Road =	W 7th St	1
Road Location =	Urban	

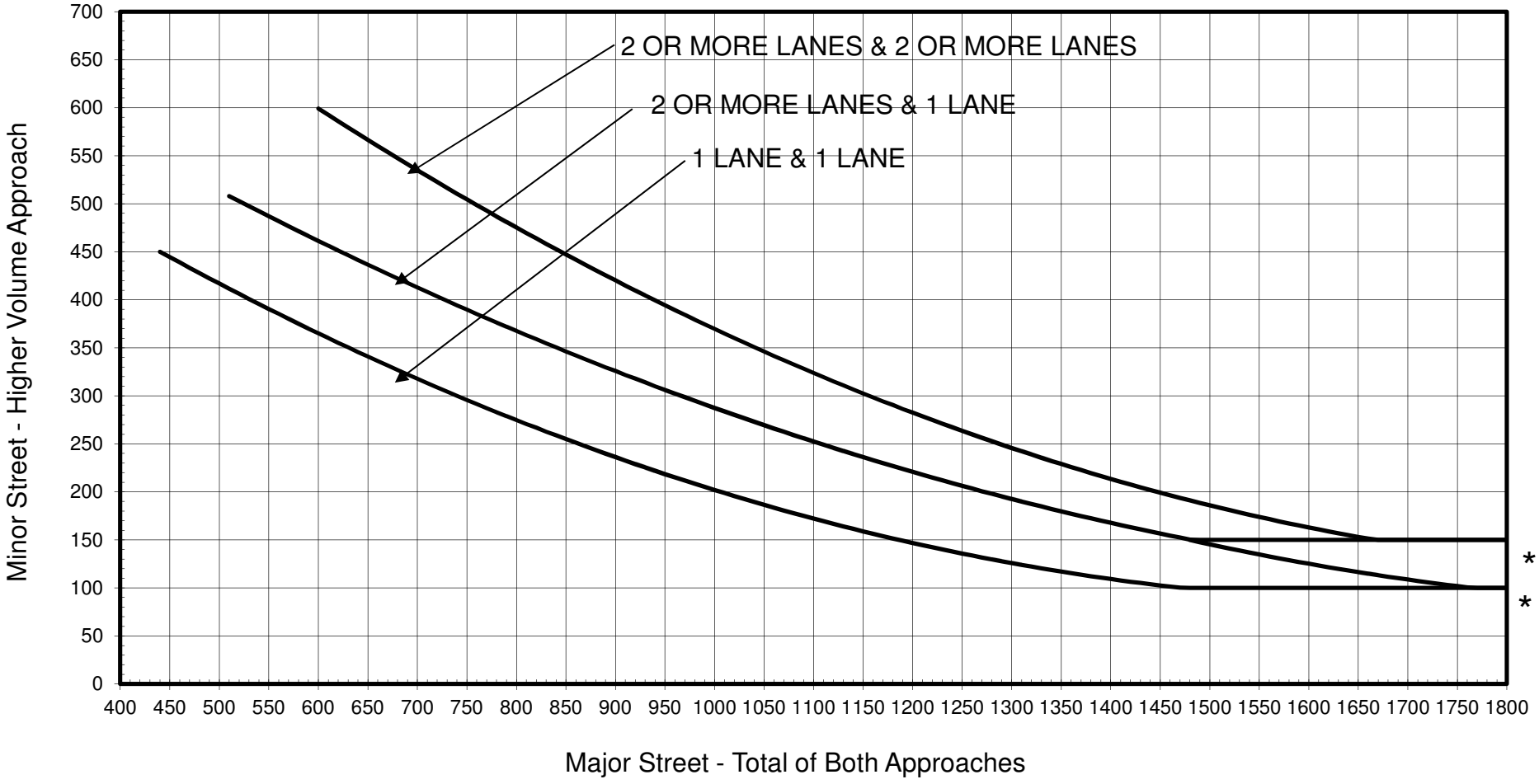
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Reid Ave	1
Minor Road =	W 7th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.22

Traffic Signal Warrant Analysis Results

Intersection 22
Reid Ave and W 8th St

SIGNAL WARRANT

INTERSECTION: Reid Ave and W 8th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		50	26	10														
8AM-9AM		120	30	24														
9AM-10AM		140	25	17														
10AM-11AM		166	26	29														
11AM-NOON		156	23	37														
NOON-1PM		171	25	27														
1PM-2PM		157	23	26														
2PM-3PM		149	30	38														
3PM-4PM		194	29	22														
4PM-5PM		178	33	36														
5PM-6PM		120	16	29														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Reid Ave and W 8th St
Lorain, OH

URS
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Akron, OH 44320-1100
Tel: 330.836.9111

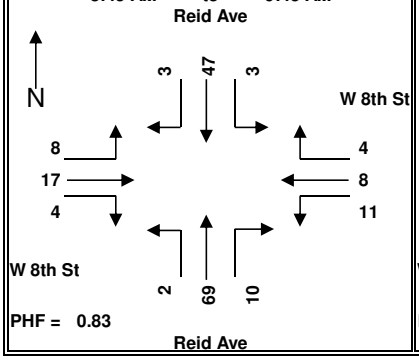
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.969	Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.43
Intersection ID: 22

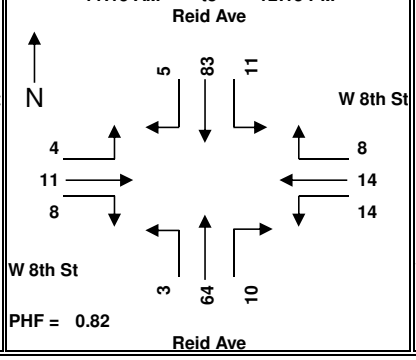
Start Time	Reid Ave Northbound				Reid Ave Southbound				Total North South	W 8th St Eastbound				W 8th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	61	668	94	9	53	669	56	20	1601	61	159	66	5	92	149	54	8	581	2182
	Percent Trucks =			1%	Percent Trucks =			3%		Percent Trucks =			2%	Percent Trucks =			3%		
ADT	85	929	131	13	74	930	78	28	2226	85	221	92	7	128	207	75	11	808	3034
7:00 AM	1	3	2	0	0	7	1	1	14	0	6	1	0	1	0	1	0	9	23
7:15 AM	0	4	0	0	0	4	0	0	8	0	5	0	0	0	2	0	0	7	15
7:30 AM	3	4	0	0	0	4	0	0	11	0	4	2	0	1	1	1	0	9	20
7:45 AM	2	8	1	0	0	6	0	0	17	3	5	0	0	0	3	0	0	11	28
8:00 AM	1	11	1	0	0	11	1	1	25	1	5	2	0	3	1	0	1	12	37
8:15 AM	0	7	2	0	2	21	3	4	35	0	4	0	0	4	2	0	1	10	45
8:30 AM	1	14	3	0	0	5	0	0	23	0	6	4	0	2	1	0	0	13	36
8:45 AM	0	23	3	0	2	8	1	1	37	2	6	0	0	4	5	2	0	19	56
9:00 AM	2	19	3	1	0	18	0	1	42	0	1	0	0	1	2	1	0	5	47
9:15 AM	0	17	1	0	1	10	1	0	30	2	4	1	0	4	1	1	0	13	43
9:30 AM	0	10	3	0	0	11	1	0	25	4	6	3	0	2	0	0	0	15	40
9:45 AM	1	15	2	0	4	20	1	0	43	1	1	2	0	5	0	0	0	9	52
10:00 AM	2	10	3	0	1	13	2	0	31	4	3	3	0	5	1	3	1	19	50
10:15 AM	1	20	4	0	0	22	1	0	48	1	2	1	0	1	2	1	0	8	56
10:30 AM	3	17	6	2	2	18	0	0	46	3	2	2	0	6	0	2	0	15	61
10:45 AM	0	22	3	0	1	13	2	1	41	0	4	1	0	2	3	3	0	13	54
11:00 AM	0	15	1	0	4	17	1	0	38	0	4	0	0	4	3	4	0	15	53
11:15 AM	1	15	2	0	3	21	1	0	43	1	5	2	0	3	4	2	0	17	60
11:30 AM	0	8	3	0	4	20	2	2	37	1	2	1	0	4	1	3	0	12	49
11:45 AM	1	19	0	0	1	16	1	0	38	2	3	2	1	3	4	2	0	16	54
12:00 PM	1	22	5	0	3	26	1	0	58	0	1	3	1	4	5	1	0	14	72
12:15 PM	1	15	2	0	2	20	0	0	40	2	3	2	0	1	3	1	0	12	52
12:30 PM	0	19	3	1	2	18	1	2	43	3	1	2	0	0	2	1	0	9	52
12:45 PM	2	14	1	0	2	9	2	0	30	2	4	2	1	3	5	1	0	17	47
1:00 PM	4	22	2	0	0	17	1	0	46	0	1	1	0	0	0	1	0	3	49
1:15 PM	1	11	2	0	1	11	2	1	28	2	5	0	0	5	4	1	0	17	45
1:30 PM	0	14	5	0	2	15	2	1	38	0	8	1	0	4	3	0	0	16	54
1:45 PM	0	19	2	0	1	22	1	0	45	0	4	1	0	1	7	0	0	13	58
2:00 PM	4	15	4	1	2	11	1	0	37	3	6	1	0	0	13	1	0	24	61
2:15 PM	1	17	1	0	2	15	3	0	39	1	4	4	0	0	4	4	1	17	56
2:30 PM	3	23	1	1	1	12	1	0	41	1	4	1	0	3	6	0	0	15	56
2:45 PM	4	9	2	0	1	16	0	0	32	1	2	2	0	3	3	1	1	12	44
3:00 PM	3	21	1	2	2	19	1	1	47	3	4	3	2	0	1	0	0	11	58
3:15 PM	2	23	1	0	0	23	2	2	51	1	1	1	0	0	4	3	0	10	61
3:30 PM	1	21	4	0	0	28	5	0	59	6	2	2	0	2	7	1	0	20	79
3:45 PM	1	11	3	0	2	19	1	2	37	2	3	1	0	1	3	0	2	10	47
4:00 PM	1	20	1	1	0	26	1	0	49	0	4	3	0	2	4	0	0	13	62
4:15 PM	1	23	6	0	1	18	2	0	51	2	6	3	0	3	6	0	0	20	71
4:30 PM	5	23	1	0	0	13	2	0	44	2	4	1	0	1	4	6	1	18	62
4:45 PM	0	13	0	0	1	19	1	0	34	3	4	1	0	0	8	2	0	18	52
5:00 PM	4	17	1	0	1	10	3	0	36	0	5	2	0	1	9	1	0	18	54
5:15 PM	2	7	2	0	1	15	2	0	29	1	2	1	0	3	7	2	0	16	45
5:30 PM	0	18	1	0	1	11	0	0	31	1	1	0	0	0	4	0	0	6	37
5:45 PM	1	10	0	0	0	11	2	0	24	0	2	1	0	0	1	1	0	5	29

AM Peak Hour
8:45 AM to 9:45 AM



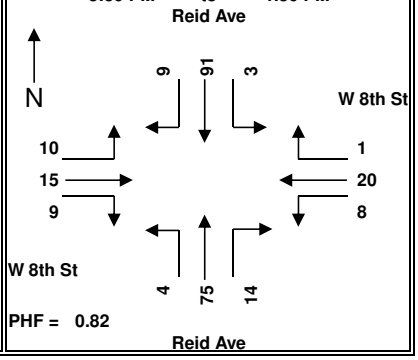
PHF = 0.83

Midday Peak Hour
11:15 AM to 12:15 PM



PHF = 0.82

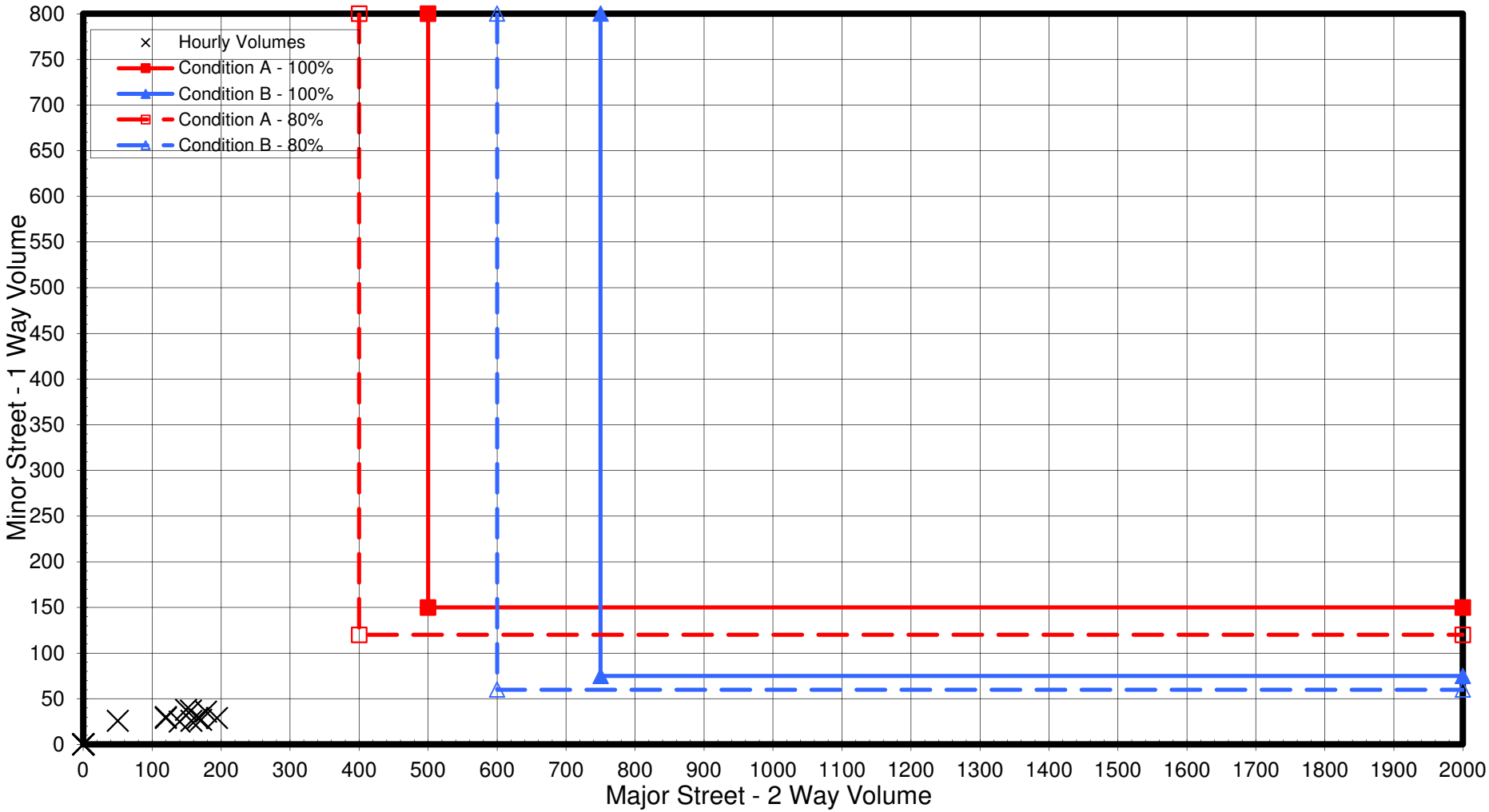
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.82

Notes:

WARRANT 1 - Conditions A & B



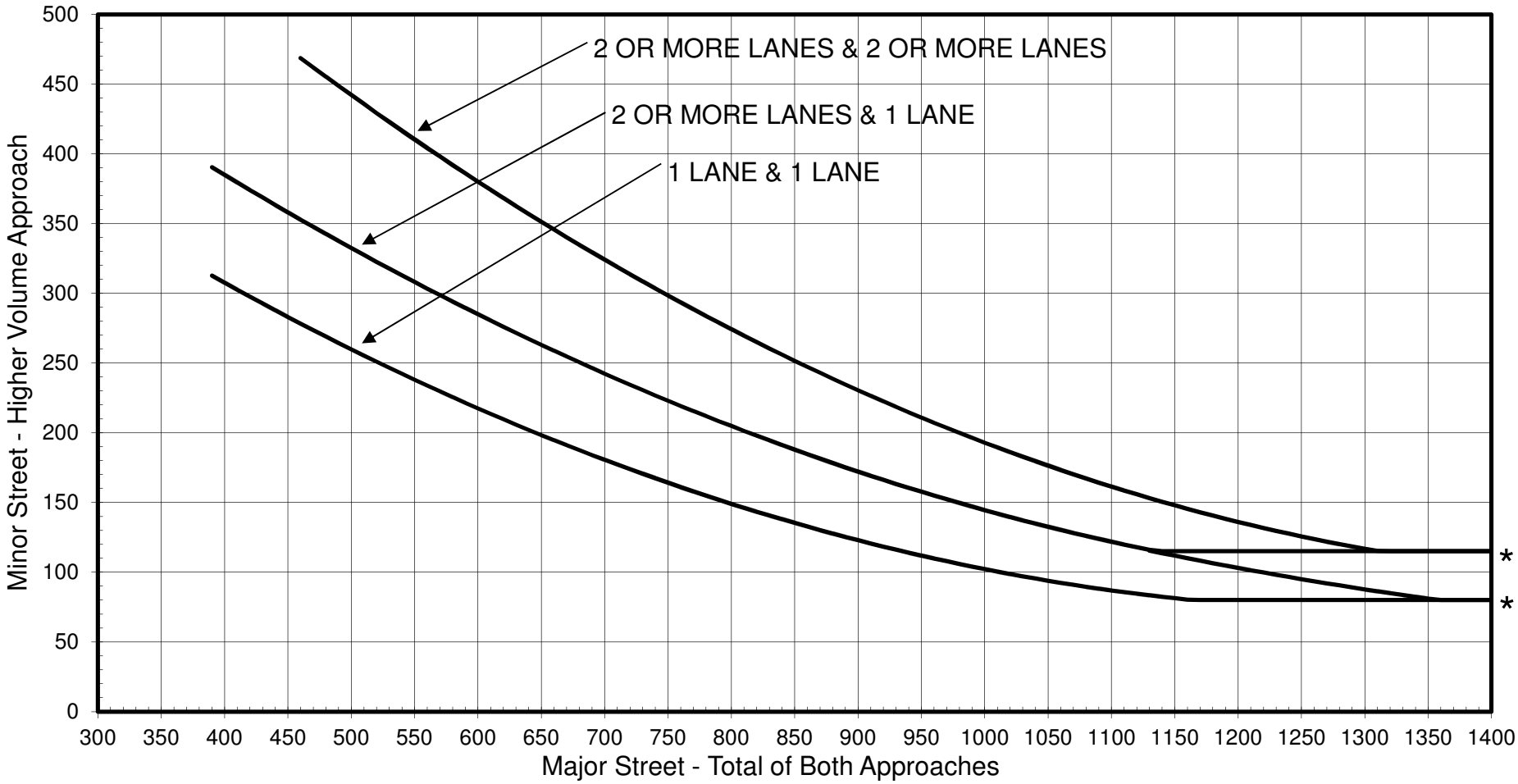
		Lanes
Major Road =	Reid Ave	1
Minor Road =	W 8th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Reid Ave	1
Minor Road =	W 8th St	1
Road Location =	Urban	

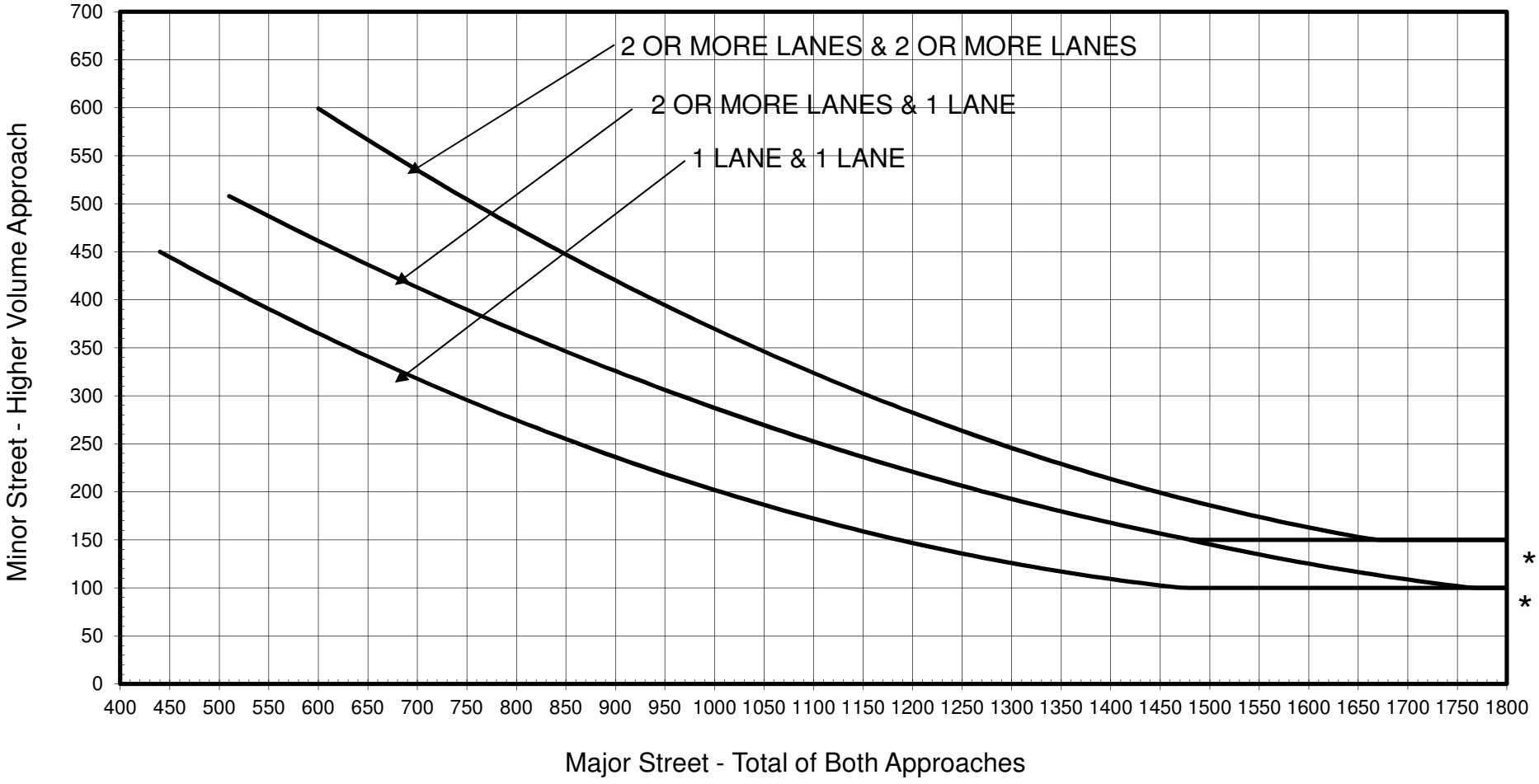
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Reid Ave	1
Minor Road =	W 8th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 6, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.23

Traffic Signal Warrant Analysis Results

Intersection 23
W 21st St (SR 611) and N Leavitt Rd (SR 58)

SIGNAL WARRANT

INTERSECTION: N Leavitt Rd and W 21st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :2 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1				500	150	400	120	750	75	600	60						
NORM	2+	X	X	X	600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		439	180	197				X		X		X						
8AM-9AM		516	139	237		X	X	X		X		X						
9AM-10AM		494	146	212		X	X	X		X		X						
10AM-11AM		550	167	236		X	X	X		X		X						
11AM-NOON		603	195	262	X	X	X	X		X		X						
NOON-1PM		687	208	322	X	X	X	X		X		X						
1PM-2PM		625	201	273	X	X	X	X		X		X						
2PM-3PM		725	210	319	X	X	X	X		X	X	X					X	
3PM-4PM		776	287	401	X	X	X	X		X	X	X					X	
4PM-5PM		766	288	348	X	X	X	X		X	X	X					X	
5PM-6PM		727	245	356	X	X	X	X		X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					7		10		0		4						4	0
WARRANT SATISFIED?					**NO**		**YES**		**NO**		**NO**						**YES**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
N Leavitt Rd and W 21st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

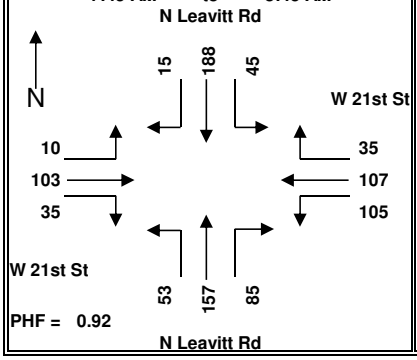
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 23

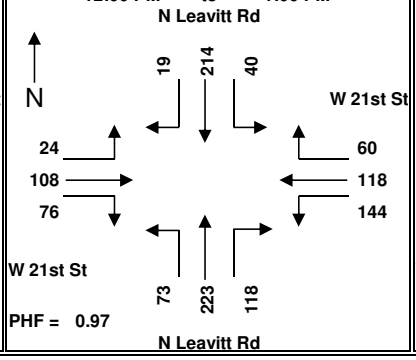
Start Time	N Leavitt Rd Northbound				N Leavitt Rd Southbound				Total North South	W 21st St Eastbound				W 21st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	571	2217	1135	126	463	2332	190	48	6908	189	1432	645	103	1278	1322	563	110	5429	12337
	Percent Trucks =			3%	Percent Trucks =			2%		Percent Trucks =			5%	Percent Trucks =			3%		
ADT	794	3084	1579	175	644	3244	264	67	9611	263	1992	897	143	1778	1839	783	153	7553	17164
7:00 AM	8	14	9	1	10	42	3	2	86	1	28	8	4	17	28	5	2	87	173
7:15 AM	10	25	8	1	6	48	4	1	101	1	34	12	3	18	22	5	3	92	193
7:30 AM	7	24	21	3	9	48	0	2	109	6	36	12	4	13	24	4	1	95	204
7:45 AM	10	53	24	10	10	44	2	0	143	3	33	6	3	28	28	5	5	103	246
8:00 AM	19	47	27	8	13	40	5	2	151	3	22	7	3	31	30	12	5	105	256
8:15 AM	12	34	12	3	13	42	5	2	118	2	21	12	4	27	23	6	0	91	209
8:30 AM	12	23	22	3	9	62	3	2	131	2	27	10	1	19	26	12	1	96	227
8:45 AM	6	39	21	4	7	40	3	0	116	3	23	7	4	20	24	7	2	84	200
9:00 AM	10	38	14	5	11	48	9	2	130	4	20	12	1	16	21	5	2	78	208
9:15 AM	11	34	19	4	6	34	4	3	108	2	29	5	1	16	31	9	2	92	200
9:30 AM	10	38	23	3	5	53	5	0	134	2	25	9	1	28	16	8	1	88	222
9:45 AM	9	27	28	2	4	50	4	0	122	5	21	12	1	19	32	11	3	100	222
10:00 AM	8	49	24	2	9	49	4	0	143	5	21	13	2	16	16	5	0	76	219
10:15 AM	6	38	16	2	11	56	3	3	130	5	23	17	3	27	25	9	1	106	236
10:30 AM	16	49	16	6	10	43	3	1	137	3	29	11	1	27	29	16	3	115	252
10:45 AM	9	42	25	1	10	47	7	1	140	3	27	10	4	31	23	12	4	106	246
11:00 AM	14	44	33	5	11	53	3	1	158	2	34	12	1	23	16	17	3	104	262
11:15 AM	12	53	24	0	9	47	3	0	148	0	29	14	3	35	36	10	4	124	272
11:30 AM	15	50	22	7	7	57	5	1	156	3	22	17	1	28	20	7	3	97	253
11:45 AM	9	47	33	4	9	40	3	2	141	3	35	24	2	33	29	8	1	132	273
12:00 PM	23	44	29	6	13	52	5	4	166	5	25	22	2	41	30	24	5	147	313
12:15 PM	12	56	32	1	9	52	5	3	166	2	30	18	4	28	28	13	4	119	285
12:30 PM	20	68	30	3	7	52	2	1	179	7	34	14	1	44	27	10	1	136	315
12:45 PM	18	55	27	3	11	58	7	0	176	10	19	22	5	31	33	13	6	128	304
1:00 PM	14	46	28	0	10	45	4	0	147	7	19	12	4	27	19	11	3	95	242
1:15 PM	10	54	22	4	9	57	0	1	152	5	36	15	5	18	26	15	5	115	267
1:30 PM	14	56	19	3	9	51	0	2	149	3	30	21	2	31	32	15	2	132	281
1:45 PM	12	56	26	3	8	72	3	1	177	3	29	21	1	30	30	19	0	132	309
2:00 PM	15	47	35	2	17	83	3	0	200	3	39	16	2	32	29	16	3	135	335
2:15 PM	17	46	23	3	9	63	2	1	160	2	31	16	1	19	35	11	3	114	274
2:30 PM	11	58	37	1	13	56	4	0	179	6	35	9	3	43	35	20	4	148	327
2:45 PM	18	78	26	3	11	48	5	0	186	5	33	15	3	36	31	12	5	132	318
3:00 PM	11	59	39	3	17	65	5	1	196	10	46	18	6	39	34	14	5	161	357
3:15 PM	14	69	39	6	12	54	8	2	196	3	39	20	4	38	60	19	3	179	375
3:30 PM	18	57	31	4	19	65	6	3	196	5	56	21	3	33	49	17	3	181	377
3:45 PM	18	63	36	0	10	54	7	2	188	6	50	13	1	37	45	16	3	167	355
4:00 PM	19	66	35	2	8	54	8	0	190	9	57	19	1	37	41	17	3	180	370
4:15 PM	7	73	25	0	15	66	5	2	191	5	46	15	3	23	36	23	1	148	339
4:30 PM	22	69	36	0	14	51	2	0	194	8	50	23	1	39	39	14	2	173	367
4:45 PM	13	61	30	0	12	69	6	0	191	7	36	13	0	37	26	16	0	135	326
5:00 PM	14	63	34	1	10	51	5	0	177	7	62	20	1	32	38	21	1	180	357
5:15 PM	12	69	29	3	13	55	9	0	187	5	34	17	2	38	26	14	1	134	321
5:30 PM	12	56	21	0	15	64	7	0	175	3	31	19	1	36	31	23	0	143	318
5:45 PM	14	80	25	1	13	52	4	0	188	5	26	16	0	37	43	17	1	144	332

AM Peak Hour
7:45 AM to 8:45 AM



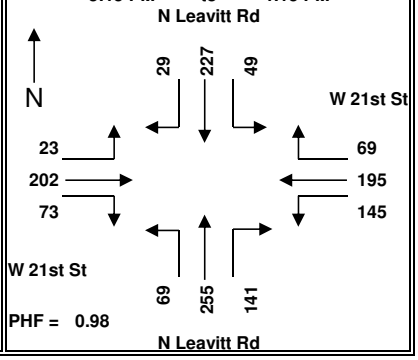
PHF = 0.92

Midday Peak Hour
12:00 PM to 1:00 PM



PHF = 0.97

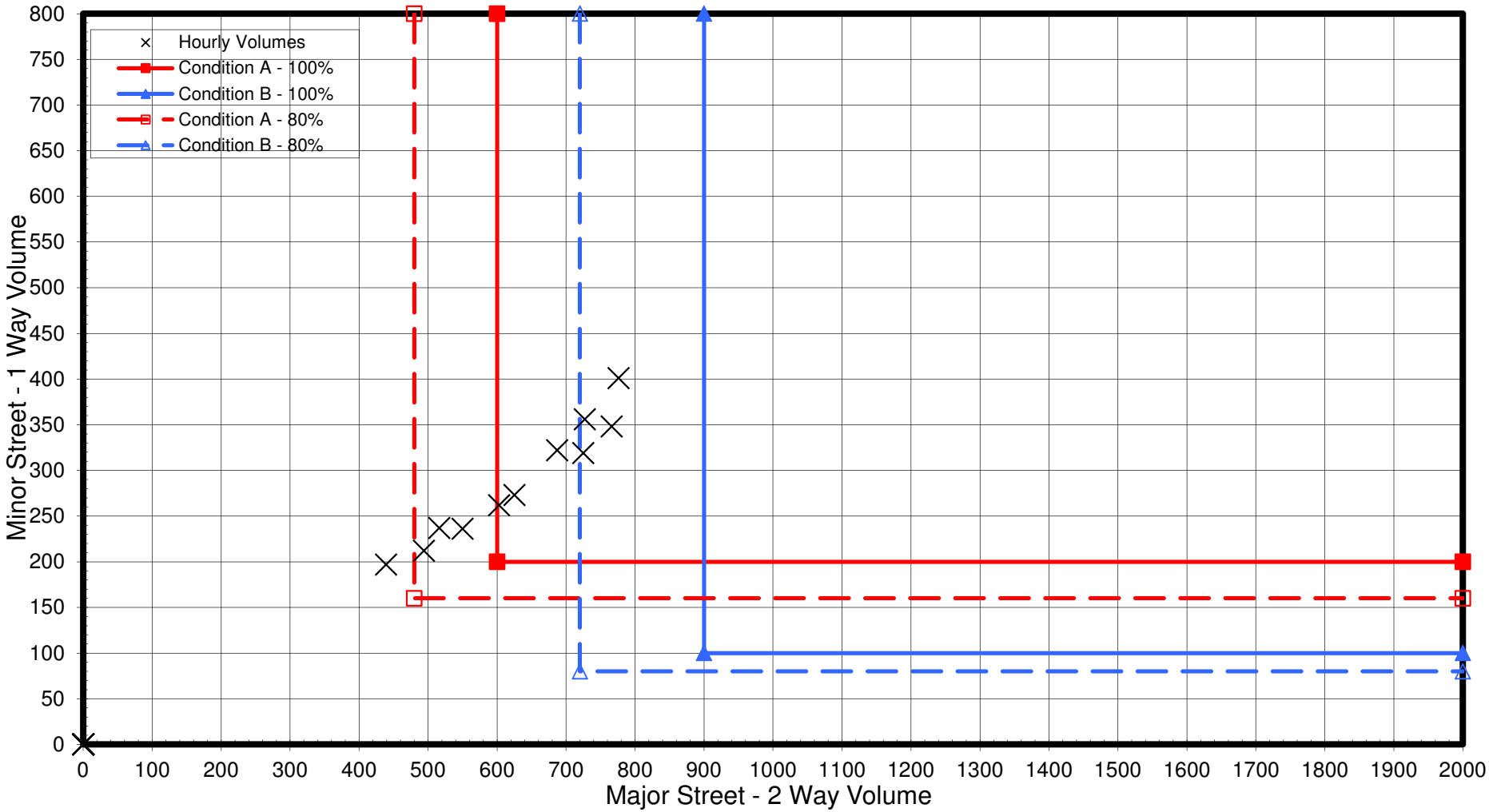
PM Peak Hour
3:15 PM to 4:15 PM



PHF = 0.98

Notes:

WARRANT 1 - Conditions A & B



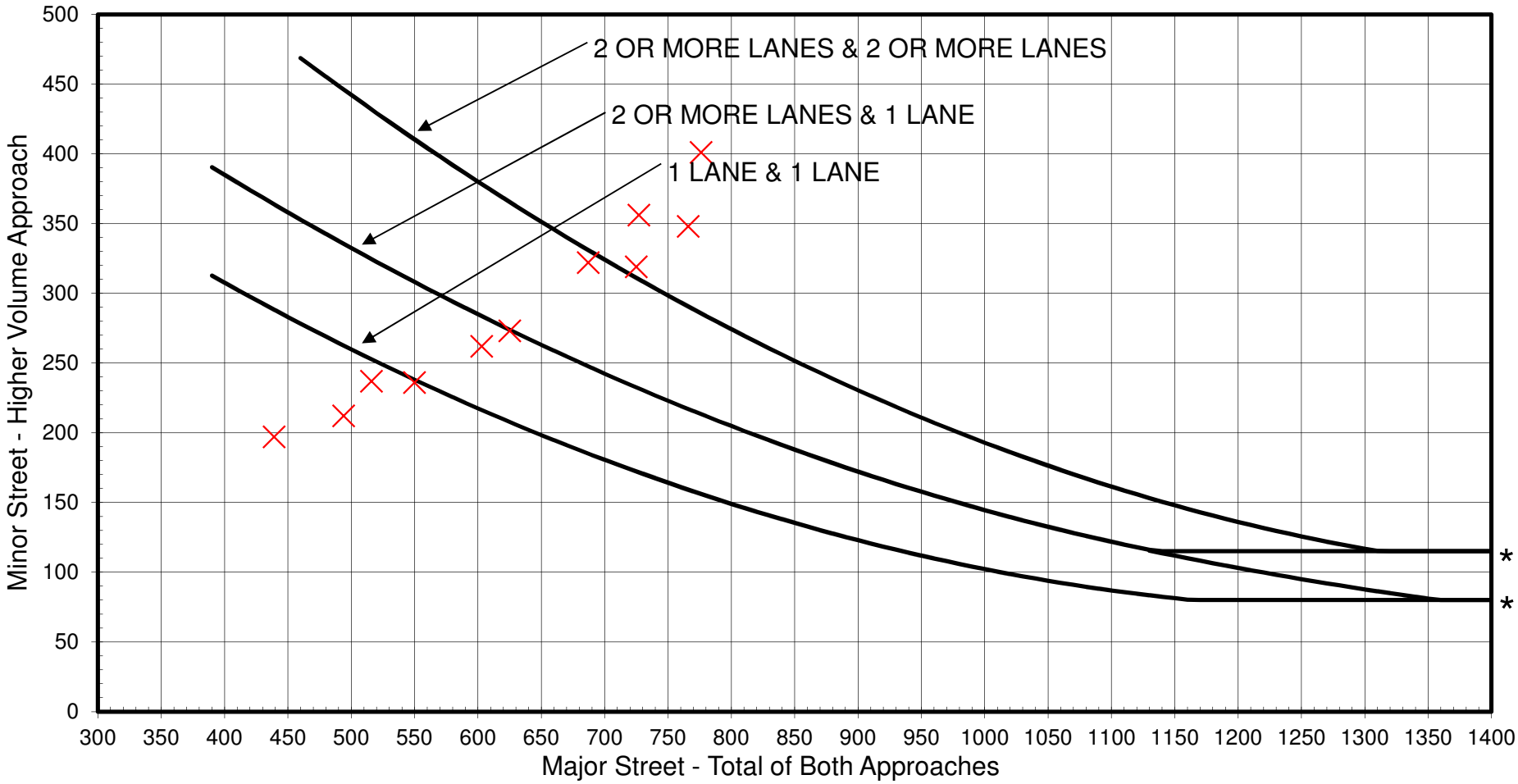
		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	W 21st St	2
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	7 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	10 Hours Meet	Yes
Condition B (80%) =	4 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	W 21st St	2
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Urban) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

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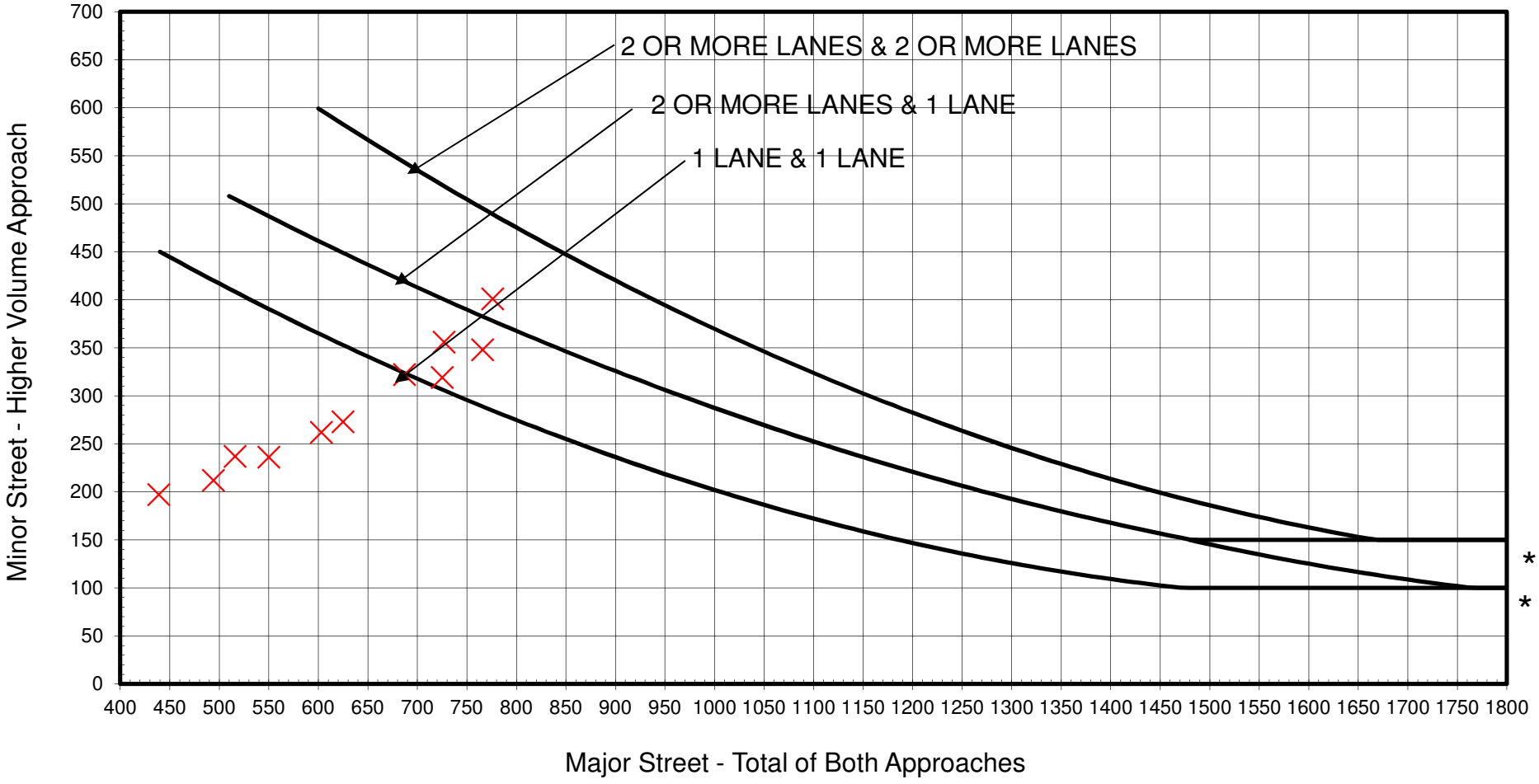
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	W 21st St	2
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
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Fax: 330.836.9115

Appendix B.24

Traffic Signal Warrant Analysis Results

Intersection 24
W 21st St (SR 611) and Reeves Ave

SIGNAL WARRANT

INTERSECTION: Reeves Ave and W 21st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		457	35	23														
8AM-9AM		484	40	28			X											
9AM-10AM		421	27	29														
10AM-11AM		490	41	29			X											
11AM-NOON		553	33	30			X											
NOON-1PM		590	40	37			X											
1PM-2PM		575	44	28			X											
2PM-3PM		666	59	35	X		X											
3PM-4PM		810	70	62	X		X				X	X						
4PM-5PM		754	72	45	X		X				X	X						
5PM-6PM		721	55	27	X		X				X							
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		2						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Reeves Ave and W 21st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

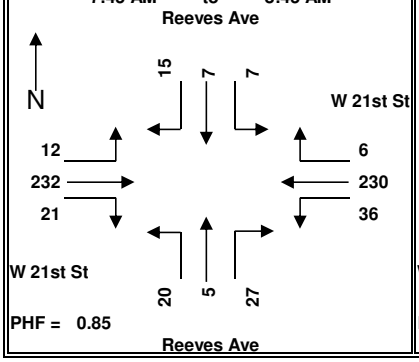
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 24

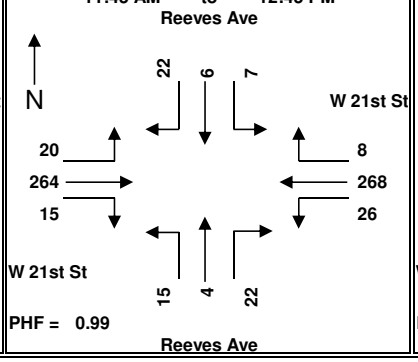
Start Time	Reeves Ave Northbound				Reeves Ave Southbound				Total North South	W 21st St Eastbound				W 21st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	170	69	277	14	75	93	205	15	889	157	2897	150	119	309	2915	93	103	6521	7410
	Percent Trucks =			3%	Percent Trucks =			4%		Percent Trucks =			4%	Percent Trucks =			3%		
ADT	237	96	385	19	104	129	285	21	1237	218	4030	209	166	430	4055	129	143	9072	10309
7:00 AM	0	1	8	1	2	0	1	0	12	2	33	3	2	3	46	1	2	88	100
7:15 AM	0	0	3	0	0	3	1	2	7	1	53	3	3	4	41	1	2	103	110
7:30 AM	1	0	6	0	3	2	1	0	13	1	57	7	3	5	40	1	0	111	124
7:45 AM	6	1	9	0	2	1	7	2	26	0	70	9	8	13	60	3	4	155	181
8:00 AM	10	0	6	1	2	0	4	1	22	5	56	7	8	7	59	3	5	137	159
8:15 AM	0	0	6	0	1	2	2	0	11	3	49	1	3	10	52	0	0	115	126
8:30 AM	4	4	6	1	2	4	2	1	22	4	57	4	4	6	59	0	1	130	152
8:45 AM	3	1	0	0	2	2	5	0	13	2	49	2	5	4	44	1	2	102	115
9:00 AM	3	0	3	2	0	3	2	1	11	3	36	4	1	3	51	0	2	97	108
9:15 AM	4	1	7	0	0	0	6	0	18	3	48	0	1	2	43	0	2	96	114
9:30 AM	1	4	3	0	2	1	5	0	16	3	57	3	2	4	44	1	1	112	128
9:45 AM	1	0	0	0	3	2	5	1	11	3	50	2	0	2	59	0	3	116	127
10:00 AM	3	0	6	0	2	0	4	0	15	2	53	1	1	2	43	1	2	102	117
10:15 AM	3	0	9	0	0	1	3	0	16	3	49	1	1	3	60	2	0	118	134
10:30 AM	0	0	6	0	2	3	2	0	13	5	55	1	3	12	68	1	5	142	155
10:45 AM	4	3	7	0	4	2	6	0	26	2	61	2	2	1	61	1	4	128	154
11:00 AM	2	1	3	0	1	1	6	0	14	2	73	1	0	4	57	2	3	139	153
11:15 AM	2	1	7	0	0	0	3	1	13	2	56	3	2	9	69	3	3	142	155
11:30 AM	2	2	3	0	0	5	4	0	16	3	50	0	3	7	62	0	2	122	138
11:45 AM	6	2	2	1	1	4	5	0	20	6	72	3	3	8	59	2	2	150	170
12:00 PM	2	0	10	0	2	1	5	0	20	4	69	2	1	5	69	2	5	151	171
12:15 PM	4	2	4	0	4	0	9	0	23	3	65	5	4	8	61	3	3	145	168
12:30 PM	3	0	6	0	0	1	3	0	13	7	58	5	1	5	79	1	2	155	168
12:45 PM	4	3	2	0	3	2	7	0	21	2	58	1	3	6	70	2	7	139	160
1:00 PM	2	2	10	0	1	4	7	0	26	2	52	5	2	5	49	1	1	114	140
1:15 PM	4	2	2	0	2	1	1	0	12	2	65	3	6	5	56	3	4	134	146
1:30 PM	3	5	4	0	2	0	4	0	18	2	67	5	1	5	82	2	2	163	181
1:45 PM	4	1	5	0	0	4	2	0	16	3	71	4	2	9	75	2	0	164	180
2:00 PM	6	1	10	0	2	0	5	0	24	2	81	5	4	6	68	5	5	167	191
2:15 PM	1	0	10	0	0	5	2	0	18	4	59	6	3	11	66	0	3	146	164
2:30 PM	9	4	8	3	3	0	3	0	27	4	87	4	3	7	83	6	4	191	218
2:45 PM	3	1	6	0	2	4	9	0	25	5	60	5	4	10	76	6	5	162	187
3:00 PM	8	4	4	1	1	7	7	1	31	5	94	3	5	6	74	2	2	184	215
3:15 PM	8	3	11	1	4	1	10	2	37	7	89	2	5	8	111	3	1	220	257
3:30 PM	3	1	6	2	4	4	8	1	26	2	99	4	6	8	92	3	1	208	234
3:45 PM	7	5	10	0	1	6	9	0	38	4	87	2	2	4	89	12	5	198	236
4:00 PM	8	4	7	1	0	4	7	1	30	7	99	5	3	15	82	2	2	210	240
4:15 PM	9	2	9	0	3	3	4	1	30	4	88	3	2	13	77	2	1	187	217
4:30 PM	2	1	11	0	5	2	9	0	30	6	88	5	2	9	77	4	2	189	219
4:45 PM	3	2	14	0	3	2	3	0	27	7	76	5	0	6	74	0	0	168	195
5:00 PM	8	1	15	0	0	1	8	0	33	5	92	4	1	8	84	2	1	195	228
5:15 PM	6	3	8	0	1	2	3	0	23	4	78	5	2	16	72	1	1	176	199
5:30 PM	7	1	2	0	2	3	3	0	18	7	61	1	1	14	87	1	1	171	189
5:45 PM	1	0	3	0	1	0	3	0	8	4	70	4	1	11	85	5	0	179	187

AM Peak Hour
7:45 AM to 8:45 AM



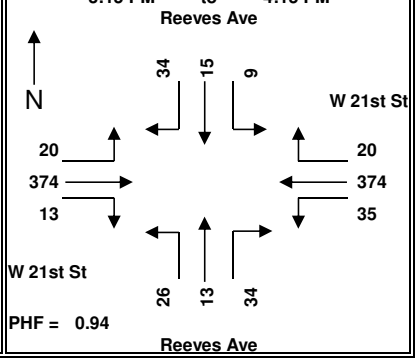
PHF = 0.85

Midday Peak Hour
11:45 AM to 12:45 PM



PHF = 0.99

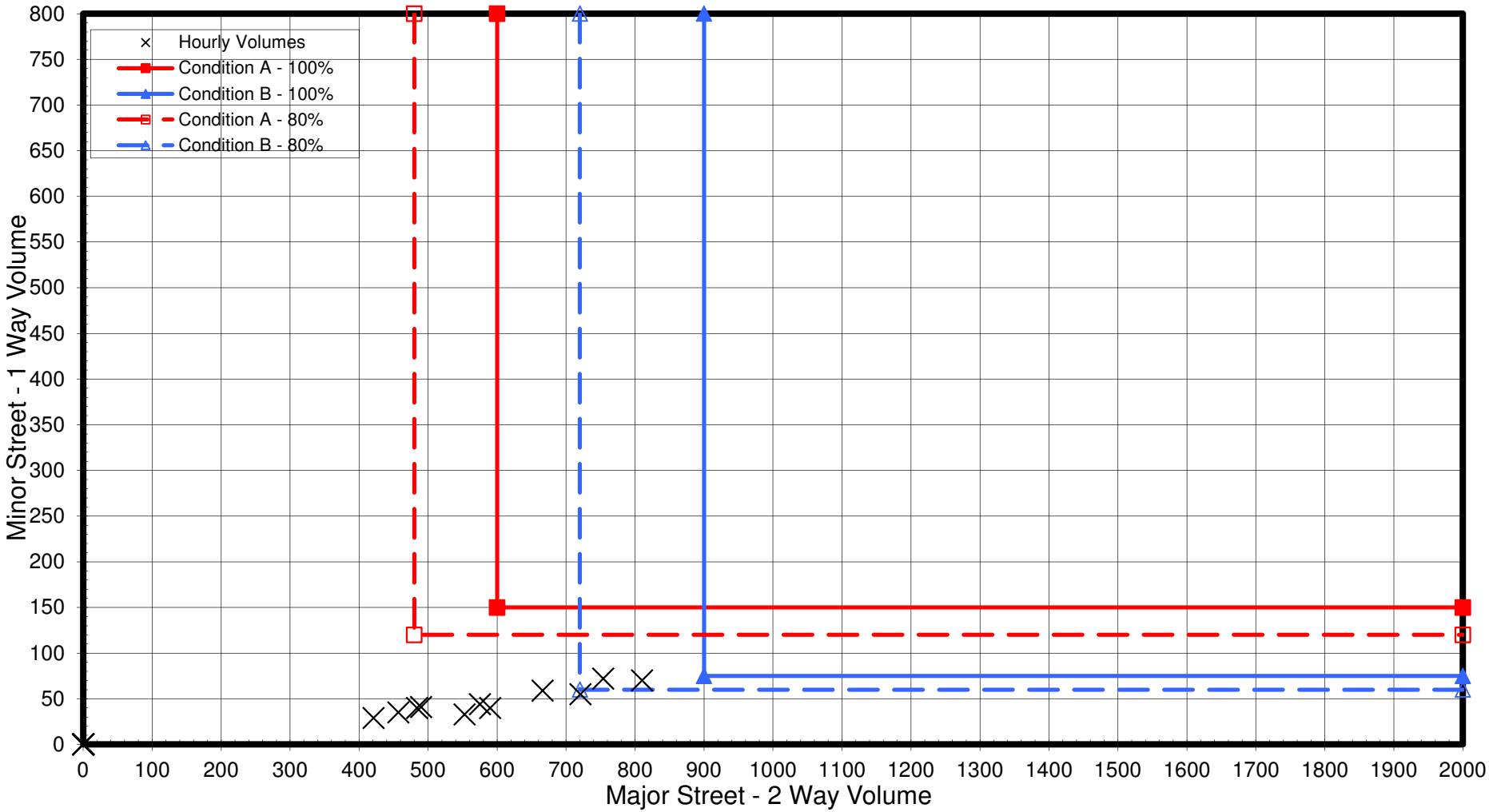
PM Peak Hour
3:15 PM to 4:15 PM



PHF = 0.94

Notes:

WARRANT 1 - Conditions A & B



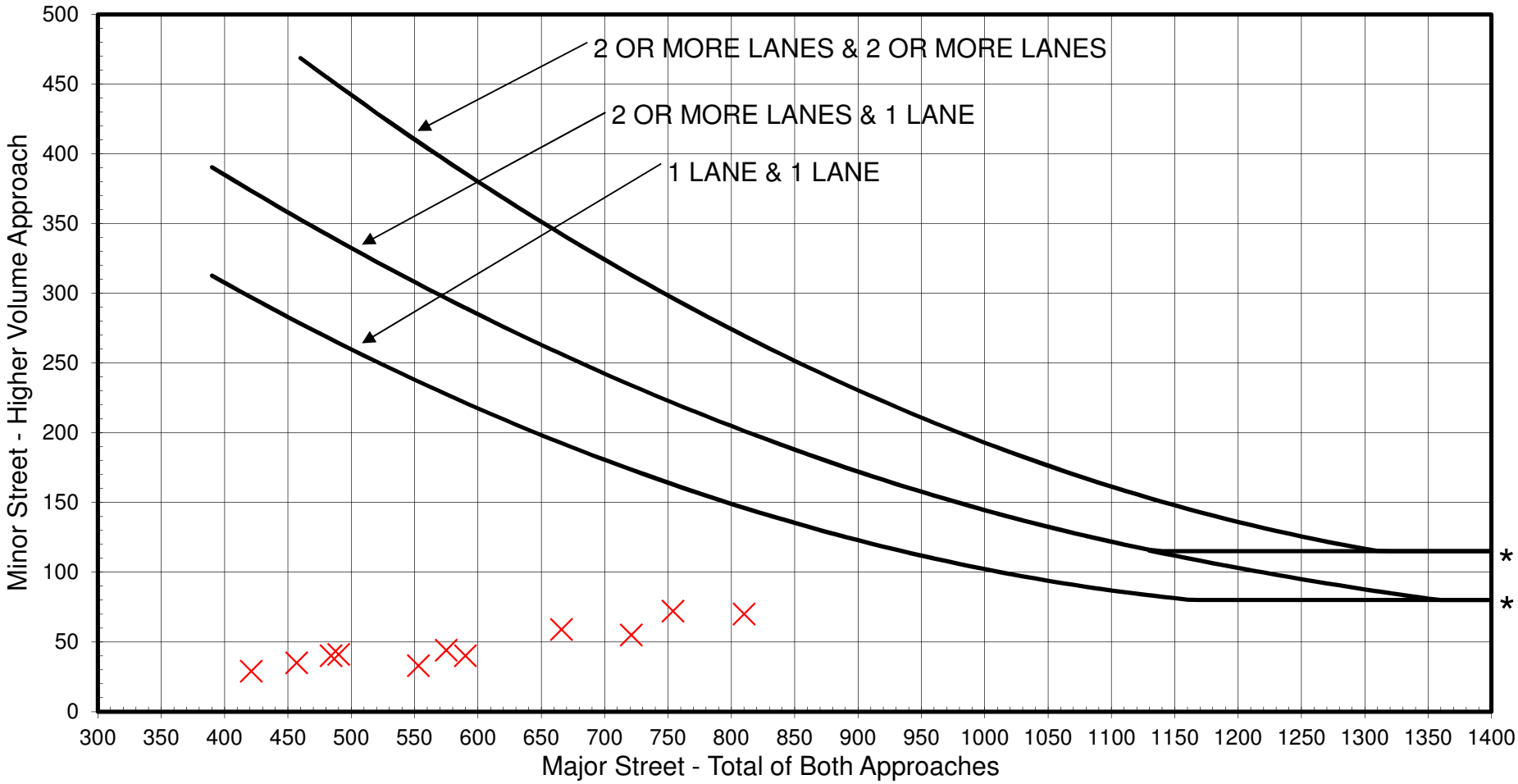
		Lanes
Major Road =	W 21st St	2
Minor Road =	Reeves Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	2 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W 21st St	2
Minor Road =	Reeves Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
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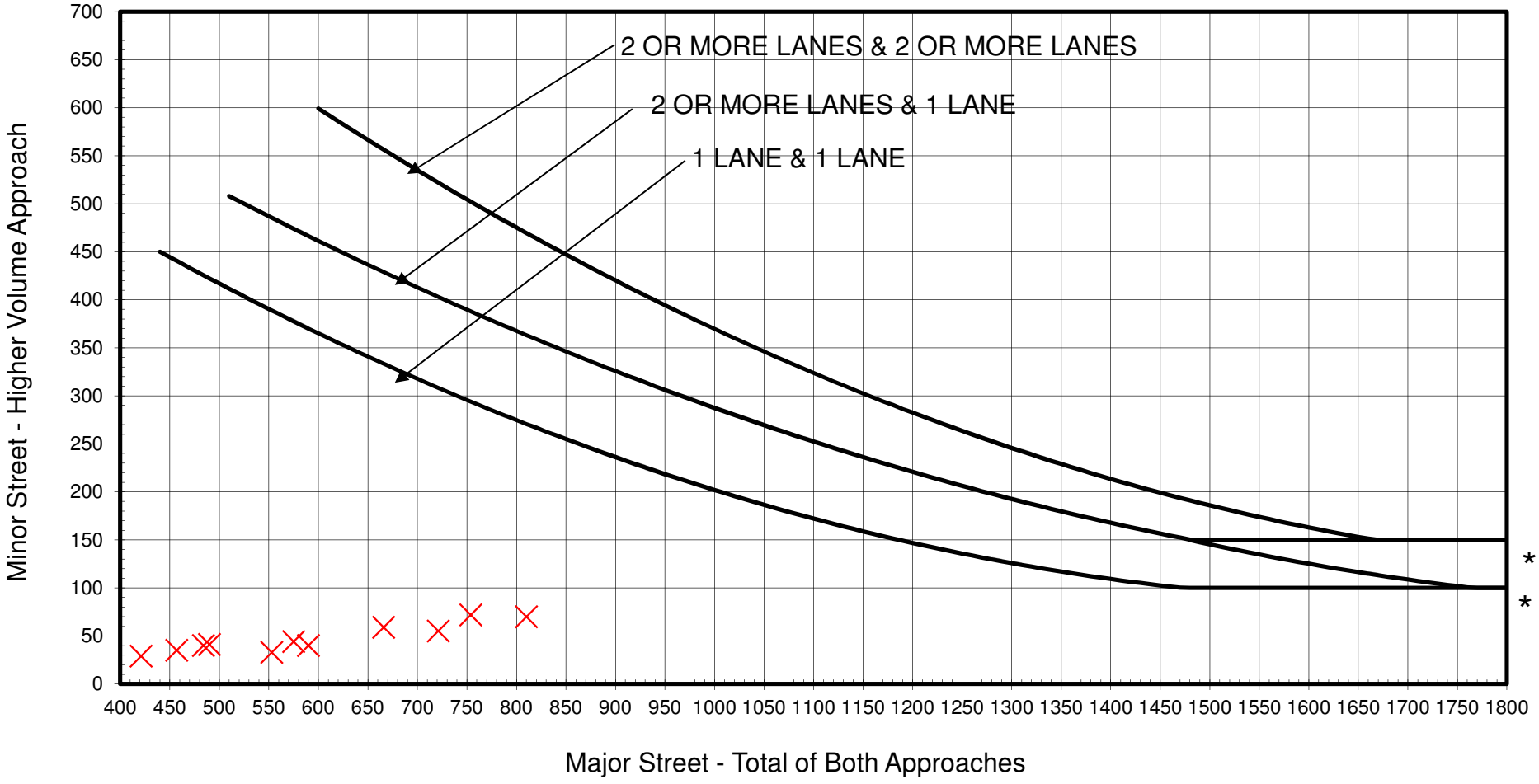
PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W 21st St	2
Minor Road =	Reeves Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.25

Traffic Signal Warrant Analysis Results

Intersection 25
W 21st St (SR 611) and Pole Ave

SIGNAL WARRANT

INTERSECTION: Pole Ave and W 21st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		476	18	16														
8AM-9AM		496	28	12			X											
9AM-10AM		412	16	17														
10AM-11AM		499	23	16			X											
11AM-NOON		566	20	25			X											
NOON-1PM		573	24	25			X											
1PM-2PM		594	22	21			X											
2PM-3PM		696	48	29	X		X											
3PM-4PM		830	29	27	X		X				X							
4PM-5PM		768	44	29	X		X				X							
5PM-6PM		716	24	21	X		X											
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH
ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Pole Ave and W 21st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

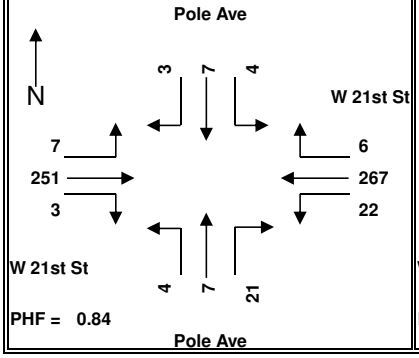
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 25

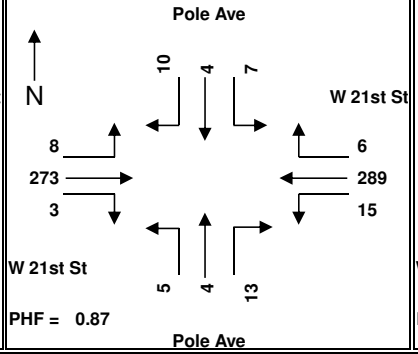
Start Time	Pole Ave Northbound				Pole Ave Southbound				Total North South	W 21st St Eastbound				W 21st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	70	53	173	9	62	50	126	3	534	93	3102	64	111	144	3148	75	118	6626	7160
	Percent Trucks =			3%	Percent Trucks =			1%		Percent Trucks =			3%	Percent Trucks =			4%		
ADT	97	74	241	13	86	70	175	4	743	129	4316	89	154	200	4380	104	164	9218	9961
7:00 AM	1	0	1	0	4	0	2	0	8	0	39	1	2	0	46	0	4	86	94
7:15 AM	0	1	1	0	0	0	4	0	6	0	52	2	1	4	46	1	3	105	111
7:30 AM	1	2	3	0	0	0	0	0	6	1	65	2	2	6	46	0	1	120	126
7:45 AM	0	3	5	2	1	5	0	0	14	3	73	0	6	11	78	0	6	165	179
8:00 AM	2	3	9	0	1	2	2	0	19	2	66	0	8	10	65	2	7	145	164
8:15 AM	1	0	4	0	1	0	0	0	6	0	53	2	2	0	60	2	0	117	123
8:30 AM	1	1	3	0	1	0	1	1	7	2	59	1	5	1	64	2	1	129	136
8:45 AM	0	1	3	0	2	1	1	0	8	1	53	1	5	1	48	1	2	105	113
9:00 AM	0	0	5	0	2	0	2	0	9	1	39	0	1	3	51	0	2	94	103
9:15 AM	1	2	1	0	0	2	2	0	8	1	52	0	0	1	41	0	2	95	103
9:30 AM	2	0	2	0	2	0	1	0	7	1	61	2	2	3	46	3	1	116	123
9:45 AM	1	2	0	0	0	2	4	0	9	2	49	0	0	1	54	1	2	107	116
10:00 AM	1	1	5	0	1	1	2	0	11	1	54	1	0	1	45	0	3	102	113
10:15 AM	0	0	4	0	1	0	2	0	7	2	58	2	1	2	62	0	0	126	133
10:30 AM	2	0	4	1	2	0	5	0	13	0	59	2	3	1	70	5	4	137	150
10:45 AM	3	0	3	0	0	1	1	0	8	2	64	2	1	3	62	1	4	134	142
11:00 AM	1	1	2	0	2	1	4	0	11	3	76	2	1	1	59	1	3	142	153
11:15 AM	0	2	2	0	0	1	3	0	8	1	67	0	3	2	78	1	4	149	157
11:30 AM	3	0	5	1	2	2	4	0	16	5	52	3	4	0	64	0	3	124	140
11:45 AM	1	1	2	0	1	3	2	0	10	2	72	0	2	5	67	5	2	151	161
12:00 PM	0	1	4	0	0	0	8	0	13	5	67	2	2	0	71	3	4	148	161
12:15 PM	3	1	0	0	2	0	1	0	7	2	75	0	4	1	67	0	3	145	152
12:30 PM	2	1	7	0	2	0	3	0	15	2	62	1	1	1	77	1	2	144	159
12:45 PM	1	1	3	0	2	0	7	0	14	3	56	2	3	1	69	5	8	136	150
1:00 PM	1	1	2	0	0	1	3	0	8	2	61	1	2	3	56	1	2	124	132
1:15 PM	0	1	5	0	0	0	2	0	8	2	68	0	5	5	63	3	5	141	149
1:30 PM	3	1	3	2	1	1	1	0	10	2	70	1	1	2	87	0	2	162	172
1:45 PM	1	1	3	0	6	2	4	0	17	2	74	1	2	5	83	2	2	167	184
2:00 PM	3	0	9	0	0	3	0	0	15	1	86	3	3	5	74	2	4	171	186
2:15 PM	2	1	3	0	2	2	3	1	13	0	64	3	3	11	71	3	2	152	165
2:30 PM	1	7	13	1	2	3	4	0	30	1	98	1	4	6	93	3	5	202	232
2:45 PM	2	0	7	1	4	3	3	1	19	0	69	2	4	8	90	2	4	171	190
3:00 PM	2	1	1	0	3	3	4	0	14	3	91	1	4	4	78	0	3	177	191
3:15 PM	8	1	1	0	3	1	3	0	17	6	96	4	4	2	117	0	2	225	242
3:30 PM	5	4	2	0	2	2	4	0	19	1	112	2	8	1	95	2	1	213	232
3:45 PM	0	0	4	0	0	1	1	0	6	3	95	1	2	5	107	4	5	215	221
4:00 PM	0	3	7	1	1	1	5	0	17	4	94	1	2	6	92	2	2	199	216
4:15 PM	3	1	4	0	2	2	6	0	18	3	96	5	3	6	83	5	2	198	216
4:30 PM	2	1	14	0	0	1	2	0	20	6	96	4	2	1	89	2	2	198	218
4:45 PM	4	0	5	0	4	2	3	0	18	4	89	3	0	2	73	2	0	173	191
5:00 PM	1	1	1	0	0	0	2	0	5	1	107	0	1	3	91	2	1	204	209
5:15 PM	1	0	6	0	2	1	6	0	16	5	81	1	2	2	80	3	2	172	188
5:30 PM	2	3	5	0	0	0	5	0	15	2	63	0	0	2	96	0	1	163	178
5:45 PM	2	2	0	0	1	0	4	0	9	3	69	2	0	6	94	3	0	177	186

AM Peak Hour
7:45 AM to 8:45 AM



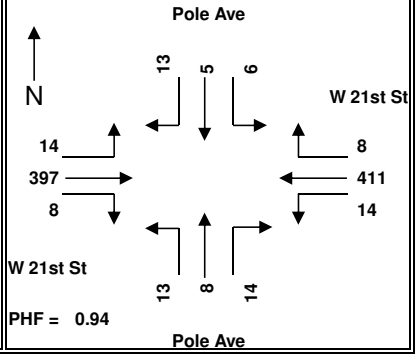
PHF = 0.84

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.87

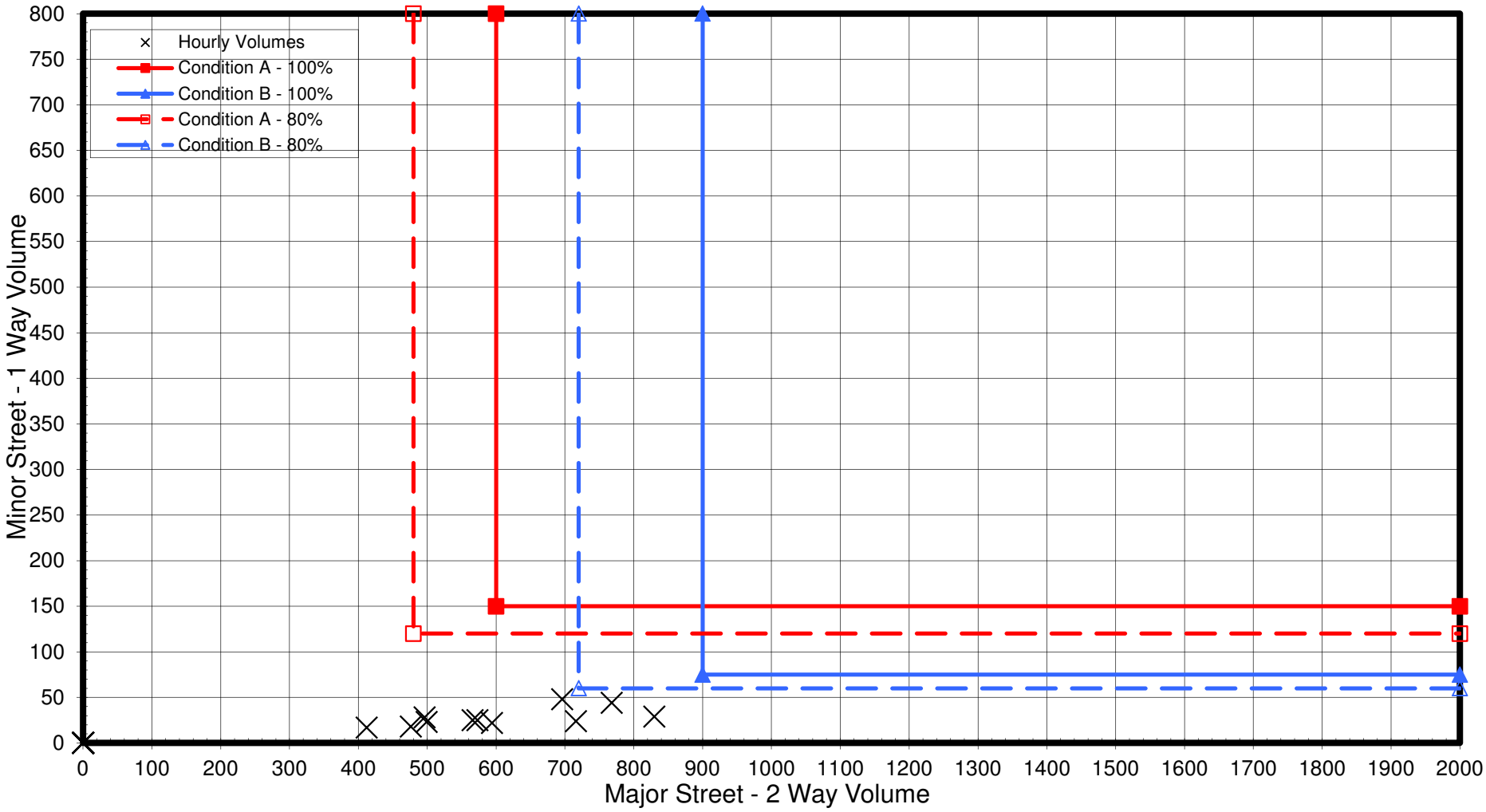
PM Peak Hour
3:15 PM to 4:15 PM



PHF = 0.94

Notes:

WARRANT 1 - Conditions A & B



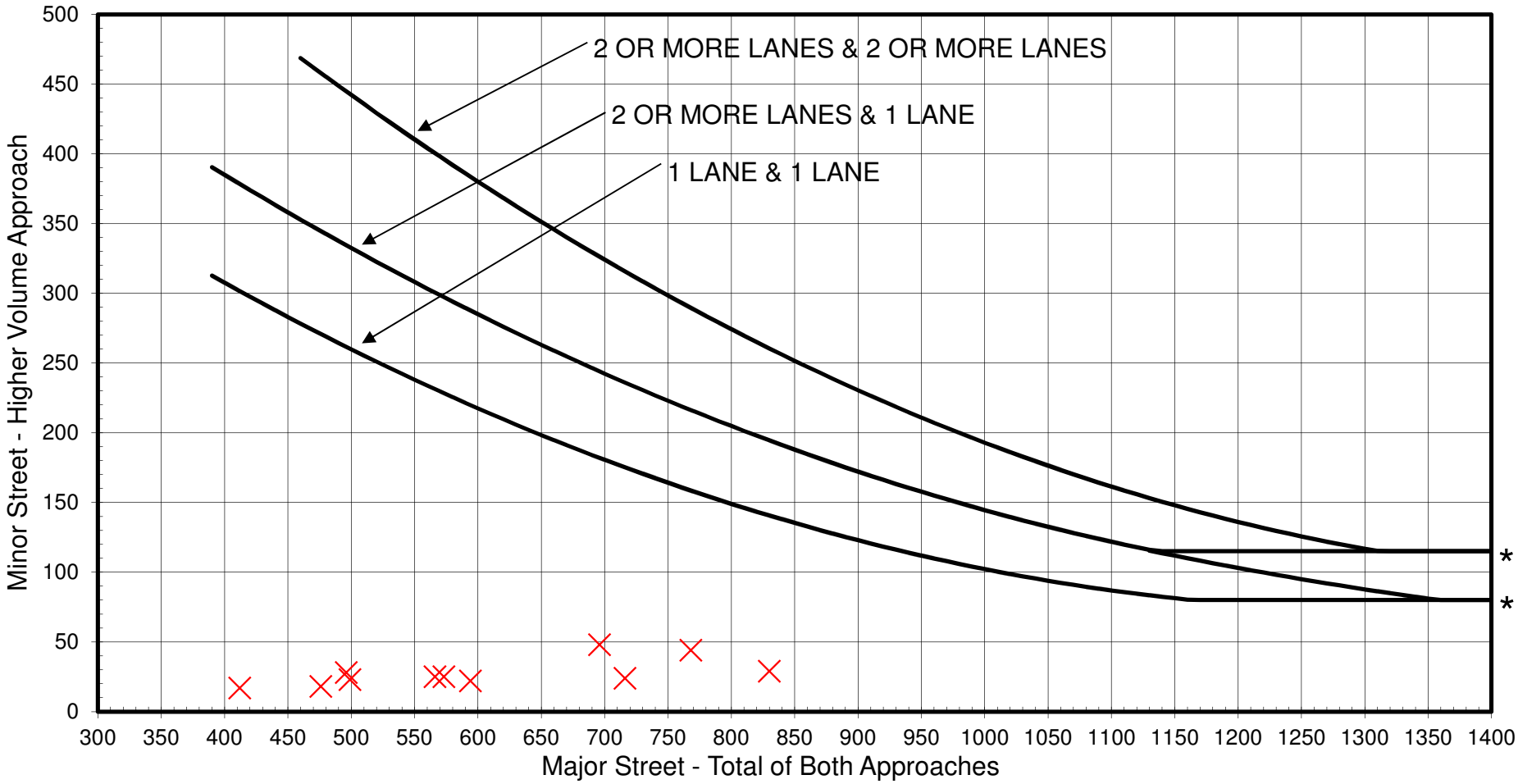
		Lanes
Major Road =	W 21st St	2
Minor Road =	Pole Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W 21st St	2
Minor Road =	Pole Ave	1
Road Location =	Urban	

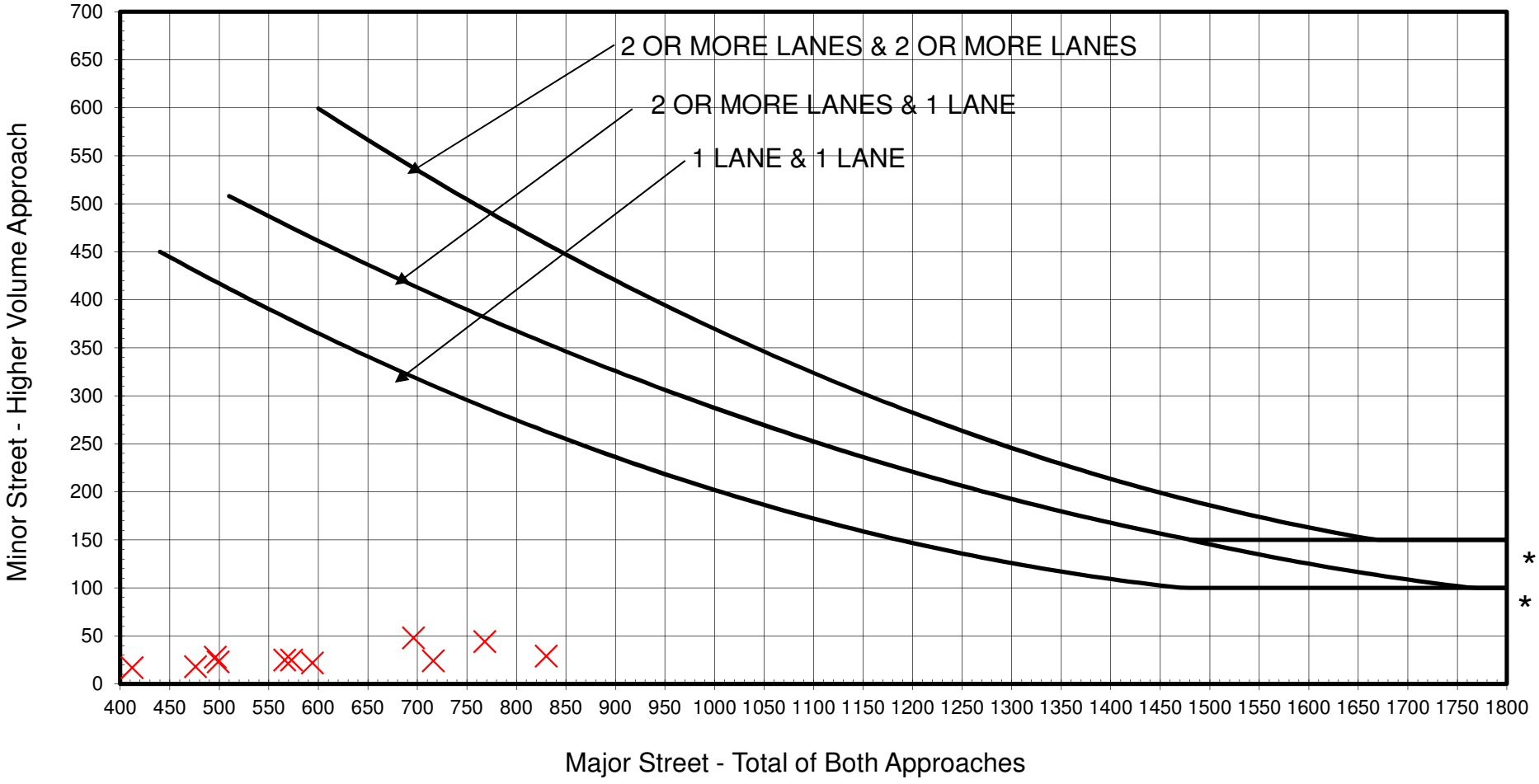
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W 21st St	2
Minor Road =	Pole Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
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Fax: 330.836.9115

Appendix B.26

Traffic Signal Warrant Analysis Results

Intersection 26
W 21st St (SR 611) and Oberlin Ave

SIGNAL WARRANT

INTERSECTION: Oberlin Ave and W 21st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1		X	X	500	150	400	120	750	75	600	60						
	2+	X			600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		510	194	248		X	X	X		X		X						
8AM-9AM		527	288	277		X	X	X		X		X					X	
9AM-10AM		469	201	202		X		X		X		X						
10AM-11AM		544	227	187		X	X	X		X		X						
11AM-NOON		592	279	253		X	X	X		X		X					X	
NOON-1PM		645	313	260	X	X	X	X		X		X					X	
1PM-2PM		658	306	279	X	X	X	X		X		X					X	
2PM-3PM		749	395	302	X	X	X	X		X	X	X					X	X
3PM-4PM		884	467	380	X	X	X	X		X	X	X					X	X
4PM-5PM		826	406	345	X	X	X	X		X	X	X					X	X
5PM-6PM		769	383	296	X	X	X	X		X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					6		10		0		4						8	4
WARRANT SATISFIED?					NO		YES		NO		NO						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Oberlin Ave and W 21st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

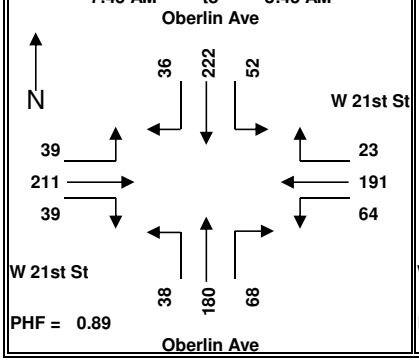
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

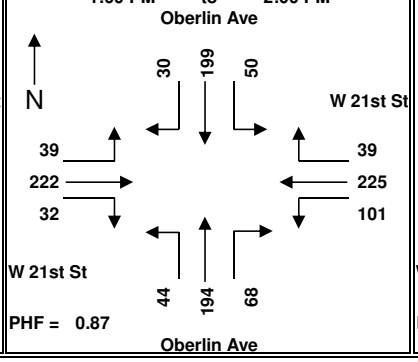
ADT Factor: 1.41
Intersection ID: 26

Start Time	Oberlin Ave Northbound				Oberlin Ave Southbound				Total North South	W 21st St Eastbound				W 21st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	476	2186	797	80	514	2151	364	44	6488	523	2377	401	107	1010	2454	408	142	7173	13661
	Percent Trucks =			2%	Percent Trucks =			1%		Percent Trucks =			3%	Percent Trucks =			4%		
ADT	662	3041	1109	111	715	2993	506	61	9026	728	3307	558	149	1405	3414	568	198	9979	19006
7:00 AM	6	17	9	1	8	32	6	1	78	6	34	7	2	9	40	1	4	97	175
7:15 AM	7	20	15	2	6	37	3	2	88	7	39	7	2	10	40	3	3	106	194
7:30 AM	3	29	15	3	10	50	7	0	114	2	58	10	2	21	44	8	3	143	257
7:45 AM	11	48	14	2	9	66	14	3	162	17	55	8	6	22	52	10	5	164	326
8:00 AM	16	57	18	4	14	52	6	1	163	13	51	14	9	13	48	6	9	145	308
8:15 AM	5	39	15	1	13	52	9	1	133	5	45	10	3	16	42	4	1	122	255
8:30 AM	6	36	21	4	16	52	7	3	138	4	60	7	4	13	49	3	3	136	274
8:45 AM	11	45	19	5	9	43	4	1	131	5	42	9	4	19	42	7	3	124	255
9:00 AM	2	32	13	1	9	38	9	0	103	4	34	5	1	19	34	7	5	103	206
9:15 AM	9	34	7	0	12	36	3	1	101	7	41	4	0	20	35	4	1	111	212
9:30 AM	4	34	17	1	9	30	3	1	97	7	52	4	2	15	41	7	4	126	223
9:45 AM	8	29	12	1	10	37	6	0	102	8	43	7	0	28	36	7	5	129	231
10:00 AM	5	29	10	2	4	30	2	1	80	12	47	5	0	21	40	8	1	133	213
10:15 AM	6	35	12	2	12	35	4	0	104	9	46	4	3	16	51	1	3	127	231
10:30 AM	10	40	21	4	8	36	8	0	123	15	44	10	2	21	46	3	4	139	262
10:45 AM	6	32	21	2	4	38	6	1	107	8	46	12	3	16	57	6	6	145	252
11:00 AM	7	44	25	4	12	47	7	2	142	7	54	9	0	19	43	6	1	138	280
11:15 AM	7	45	20	1	8	39	10	3	129	8	55	5	3	28	58	9	5	163	292
11:30 AM	8	53	15	1	9	53	8	1	146	9	32	2	2	21	57	5	2	126	272
11:45 AM	8	31	16	0	12	42	6	1	115	15	64	4	1	25	54	3	3	165	280
12:00 PM	9	47	22	4	13	48	11	2	150	11	54	10	1	25	58	13	2	171	321
12:15 PM	11	49	22	2	8	54	7	1	151	8	55	9	4	24	65	9	3	170	321
12:30 PM	7	46	16	4	9	42	8	2	128	11	51	8	0	30	62	6	4	168	296
12:45 PM	15	47	22	1	11	41	8	1	144	13	41	4	3	17	50	11	3	136	280
1:00 PM	8	40	24	1	10	39	4	0	125	13	40	5	2	21	39	10	2	128	253
1:15 PM	10	39	15	1	11	46	6	1	127	3	59	8	5	25	63	6	9	164	291
1:30 PM	12	62	17	0	14	60	9	0	174	11	59	10	2	27	53	7	2	167	341
1:45 PM	14	53	12	2	15	54	11	2	159	12	64	9	4	28	70	16	6	199	358
2:00 PM	10	54	24	3	13	58	11	0	170	21	58	11	2	30	57	9	5	186	356
2:15 PM	14	58	35	2	16	49	8	3	180	14	48	7	4	26	53	8	2	156	336
2:30 PM	19	63	26	8	18	47	7	0	180	13	73	13	3	31	87	9	6	226	406
2:45 PM	10	61	21	2	13	49	13	0	167	11	58	10	3	29	69	4	4	181	348
3:00 PM	9	75	23	1	23	65	13	1	208	19	61	18	3	28	56	15	3	197	405
3:15 PM	15	73	32	1	7	63	13	0	203	17	77	20	3	25	79	20	3	238	441
3:30 PM	27	86	19	2	17	76	11	1	236	21	73	10	6	31	75	17	4	227	463
3:45 PM	13	71	24	1	23	57	12	1	200	19	68	13	3	29	75	18	3	222	422
4:00 PM	16	85	19	0	10	65	13	1	208	19	67	8	1	27	66	15	1	202	410
4:15 PM	15	65	12	2	14	58	12	0	176	16	71	12	3	24	78	21	3	222	398
4:30 PM	13	53	21	2	12	61	11	1	171	24	78	9	2	37	59	13	0	220	391
4:45 PM	15	74	18	0	20	60	9	0	196	23	58	12	0	24	52	13	1	182	378
5:00 PM	22	71	16	0	10	59	8	3	186	21	66	16	1	29	70	13	0	215	401
5:15 PM	13	55	10	0	11	51	11	1	151	10	69	12	2	21	62	17	0	191	342
5:30 PM	17	57	15	0	11	53	9	0	162	10	46	12	1	23	72	13	2	176	338
5:45 PM	17	73	17	0	11	51	11	0	180	15	41	12	0	27	75	17	3	187	367

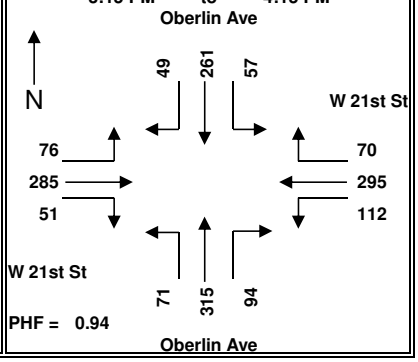
AM Peak Hour
7:45 AM to 8:45 AM



Midday Peak Hour
1:00 PM to 2:00 PM

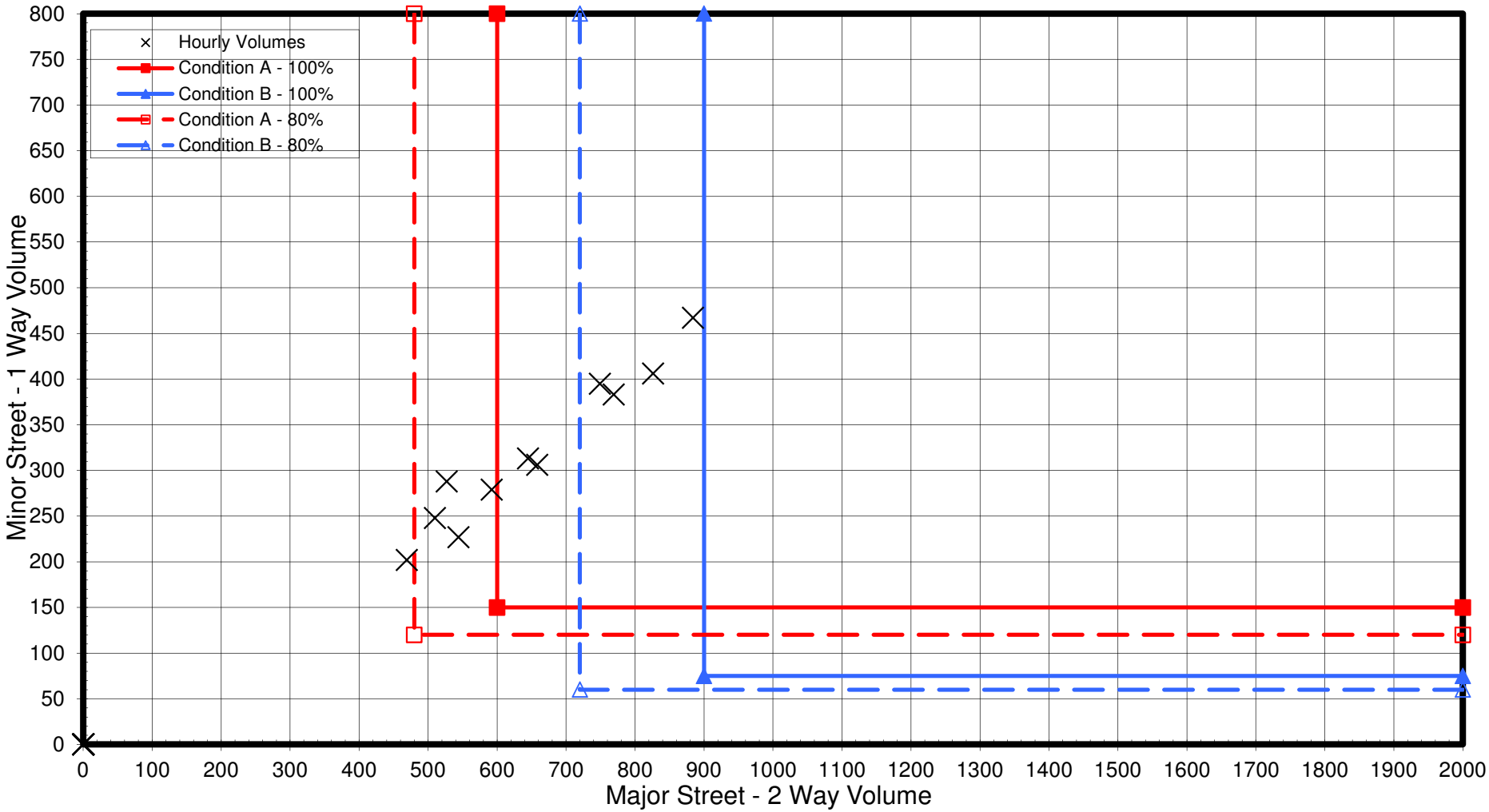


PM Peak Hour
3:15 PM to 4:15 PM



Notes:

WARRANT 1 - Conditions A & B



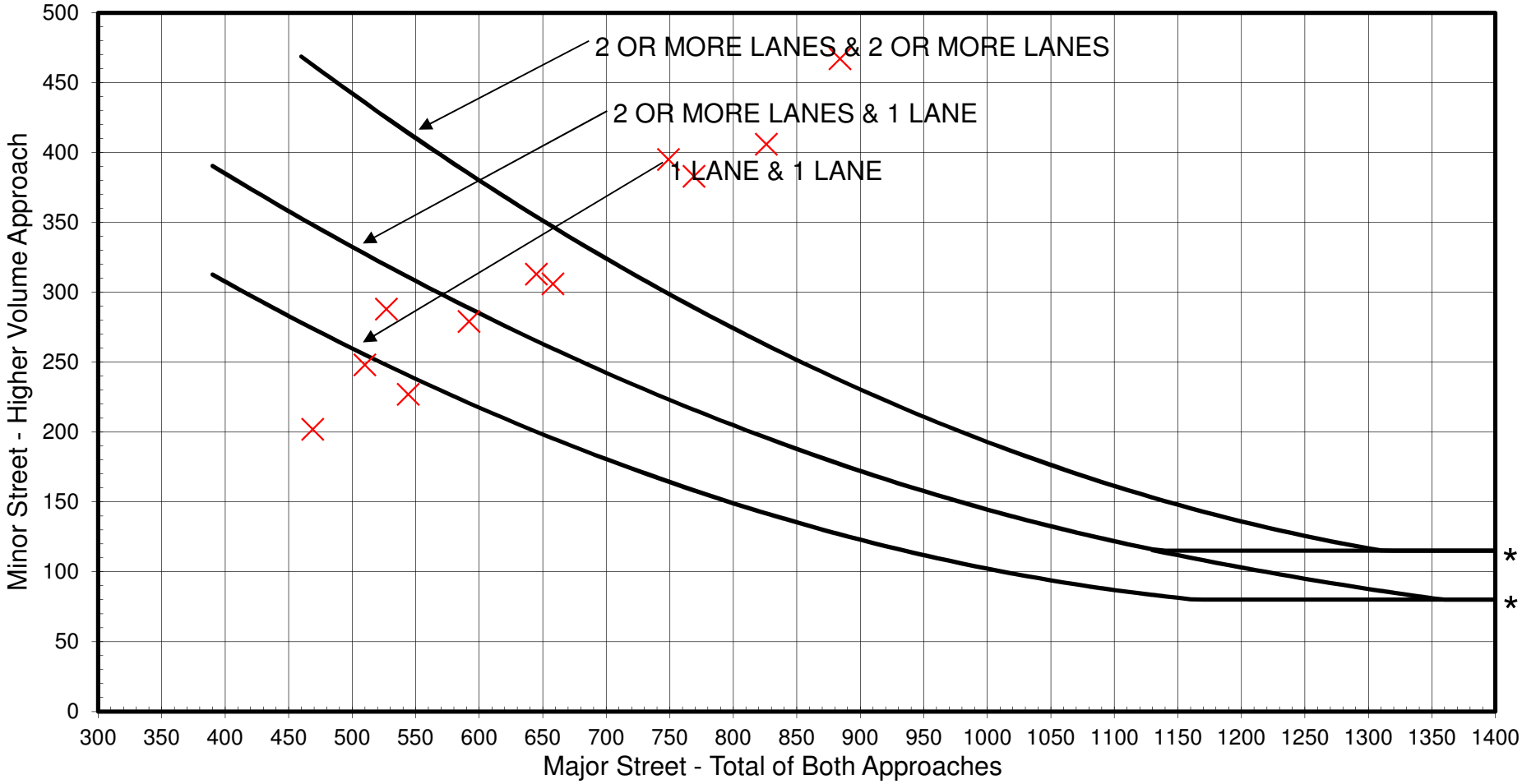
		Lanes
Major Road =	W 21st St	2
Minor Road =	Oberlin Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	6 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	10 Hours Meet	Yes
Condition B (80%) =	4 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W 21st St	2
Minor Road =	Oberlin Ave	1
Road Location =	Urban	

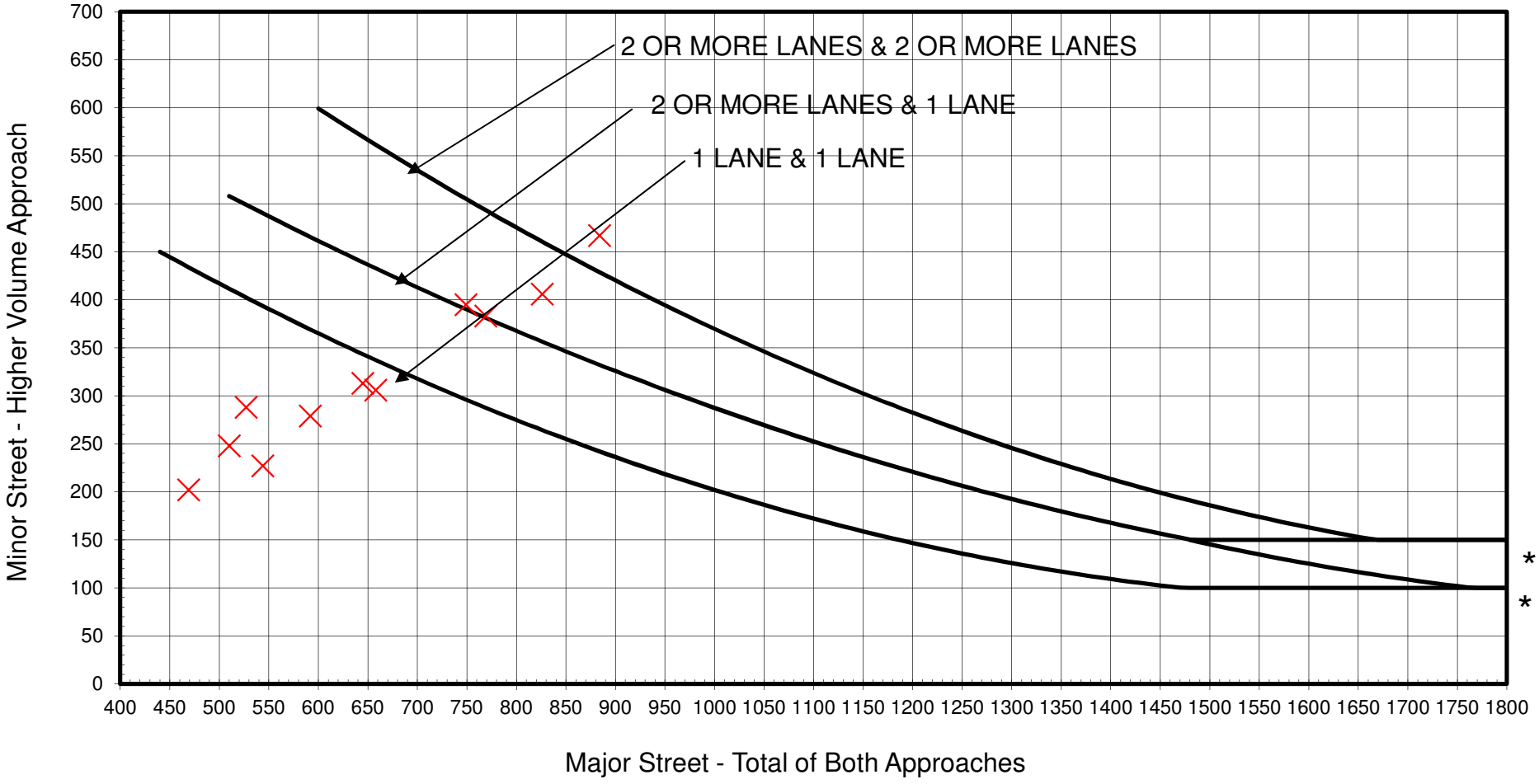
		Warrant Met?
Warrant 2 (Urban) =	8 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W 21st St	2
Minor Road =	Oberlin Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
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Appendix B.27

Traffic Signal Warrant Analysis Results

Intersection 27
W 21st St (SR 611) and Washington Ave

SIGNAL WARRANT

INTERSECTION: Washington Ave and W 21st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR					FOUR HOUR	PEAK HOUR
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		586	48	121	X		X	X		X		X						
8AM-9AM		640	135	173	X	X	X	X		X	X	X						
9AM-10AM		545	41	107	X		X			X		X						
10AM-11AM		604	42	111	X		X			X	X	X						
11AM-NOON		655	45	134	X		X	X		X	X	X						
NOON-1PM		693	47	134	X		X	X		X	X	X						
1PM-2PM		695	52	140	X		X	X		X	X	X						
2PM-3PM		874	89	205	X	X	X	X	X	X	X	X					X	
3PM-4PM		960	129	221	X	X	X	X	X	X	X	X					X	X
4PM-5PM		910	88	195	X	X	X	X	X	X	X	X					X	
5PM-6PM		646	77	182	X	X	X	X		X	X	X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					5		9		3		9						3	1
WARRANT SATISFIED?					NO		YES		NO		YES						NO	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Washington Ave and W 21st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

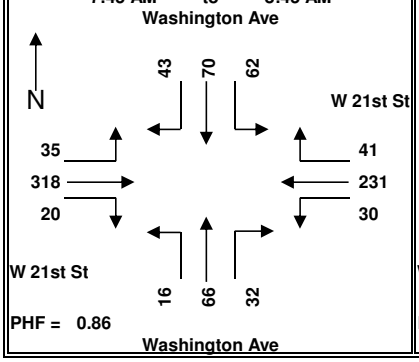
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.055	Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 27

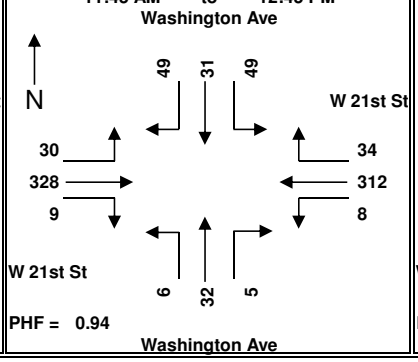
Start Time	Washington Ave Northbound				Washington Ave Southbound				Total North South	W 21st St Eastbound				W 21st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	122	505	166	22	554	592	577	51	2516	283	3456	168	128	186	3246	469	152	7808	10324
	Percent Trucks =			3%	Percent Trucks =			3%		Percent Trucks =			3%	Percent Trucks =			4%		
ADT	182	753	247	33	826	882	860	76	3749	422	5150	250	191	277	4837	699	226	11635	15384
7:00 AM	0	1	4	0	15	6	6	1	32	6	49	3	3	1	47	5	2	111	143
7:15 AM	1	3	4	2	12	3	9	4	32	6	56	4	1	3	55	6	7	130	162
7:30 AM	2	5	3	0	8	7	6	1	31	6	76	3	1	4	47	3	2	139	170
7:45 AM	8	12	5	1	17	21	11	0	74	11	100	7	7	7	67	14	6	206	280
8:00 AM	2	17	14	0	17	14	6	1	70	10	80	1	3	8	45	8	1	152	222
8:15 AM	3	14	2	2	16	9	13	1	57	7	59	5	1	5	62	9	4	147	204
8:30 AM	3	23	11	1	12	26	13	1	88	7	79	7	2	10	57	10	4	170	258
8:45 AM	5	31	10	1	11	26	10	1	93	5	71	8	8	10	70	7	4	171	264
9:00 AM	4	9	2	0	15	10	7	1	47	2	73	0	2	4	63	3	1	145	192
9:15 AM	3	6	2	0	8	9	7	1	35	6	58	5	4	1	44	4	3	118	153
9:30 AM	0	4	2	0	9	6	8	0	29	6	57	3	1	1	66	9	2	142	171
9:45 AM	1	6	2	1	9	9	10	1	37	6	65	0	3	2	60	7	5	140	177
10:00 AM	1	2	2	0	7	5	11	0	28	5	60	2	2	4	57	4	6	132	160
10:15 AM	6	6	1	0	10	6	15	2	44	6	70	1	4	3	65	2	2	147	191
10:30 AM	1	7	2	0	8	4	8	2	30	6	61	1	1	2	73	5	1	148	178
10:45 AM	4	7	3	0	12	11	14	3	51	8	81	4	5	4	72	8	6	177	228
11:00 AM	0	4	2	0	6	6	11	1	29	3	69	2	6	3	70	12	3	159	188
11:15 AM	3	15	4	2	9	14	8	1	53	4	56	1	4	1	80	4	5	146	199
11:30 AM	1	6	2	2	11	19	15	2	54	6	74	5	1	1	73	7	2	166	220
11:45 AM	1	7	0	0	13	6	16	2	43	8	86	1	2	2	79	8	6	184	227
12:00 PM	1	6	3	1	8	3	10	0	31	10	81	3	2	1	68	6	1	169	200
12:15 PM	1	6	0	0	12	8	10	1	37	6	89	1	3	3	92	10	2	201	238
12:30 PM	3	13	2	0	16	14	13	1	61	6	72	4	2	2	73	10	4	167	228
12:45 PM	0	10	2	0	13	9	18	1	52	7	70	4	1	5	61	9	4	156	208
1:00 PM	5	9	3	1	10	11	15	1	53	6	65	1	2	2	68	6	2	148	201
1:15 PM	1	9	1	0	11	14	12	1	48	8	73	1	5	5	82	13	1	182	230
1:30 PM	1	7	1	0	10	13	8	1	40	6	75	0	3	5	77	13	3	176	216
1:45 PM	3	11	1	0	15	11	10	1	51	6	82	2	2	5	81	13	5	189	240
2:00 PM	1	8	2	0	12	13	13	0	49	4	103	4	2	7	74	15	6	207	256
2:15 PM	2	10	1	0	13	15	28	1	69	6	91	4	4	3	79	19	9	202	271
2:30 PM	8	20	10	2	15	23	24	5	100	9	107	2	6	5	88	13	8	224	324
2:45 PM	1	19	7	0	15	21	13	0	76	8	111	5	3	5	93	19	3	241	317
3:00 PM	3	14	5	0	14	20	17	3	73	10	101	8	6	6	81	15	5	221	294
3:15 PM	3	21	5	4	11	26	20	2	86	4	109	10	1	5	108	20	8	256	342
3:30 PM	6	36	7	0	23	18	18	1	108	4	104	15	7	10	110	14	5	257	365
3:45 PM	3	17	9	0	10	14	30	0	83	5	95	7	5	5	99	15	3	226	309
4:00 PM	4	9	3	1	15	11	15	0	57	4	90	2	2	4	96	15	2	211	268
4:15 PM	6	14	6	0	17	18	18	2	79	7	87	6	3	11	106	19	4	236	315
4:30 PM	4	19	3	1	16	12	15	0	69	11	84	5	5	5	117	22	0	244	313
4:45 PM	3	12	5	0	21	25	12	1	78	8	91	2	1	7	97	14	3	219	297
5:00 PM	5	14	7	0	15	24	19	1	84	6	87	5	0	2	68	16	0	184	268
5:15 PM	5	12	4	0	13	24	9	0	67	8	85	5	0	2	64	14	2	178	245
5:30 PM	2	13	0	0	13	13	19	2	60	4	57	5	2	3	54	10	0	133	193
5:45 PM	2	11	2	0	11	15	7	0	48	6	67	4	0	2	58	14	0	151	199

AM Peak Hour
7:45 AM to 8:45 AM



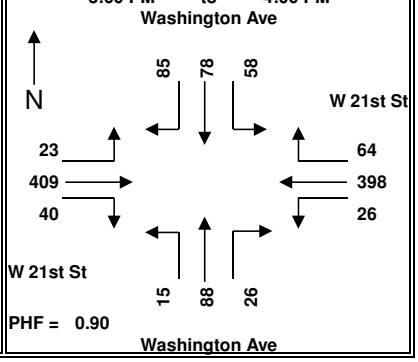
PHF = 0.86

Midday Peak Hour
11:45 AM to 12:45 PM



PHF = 0.94

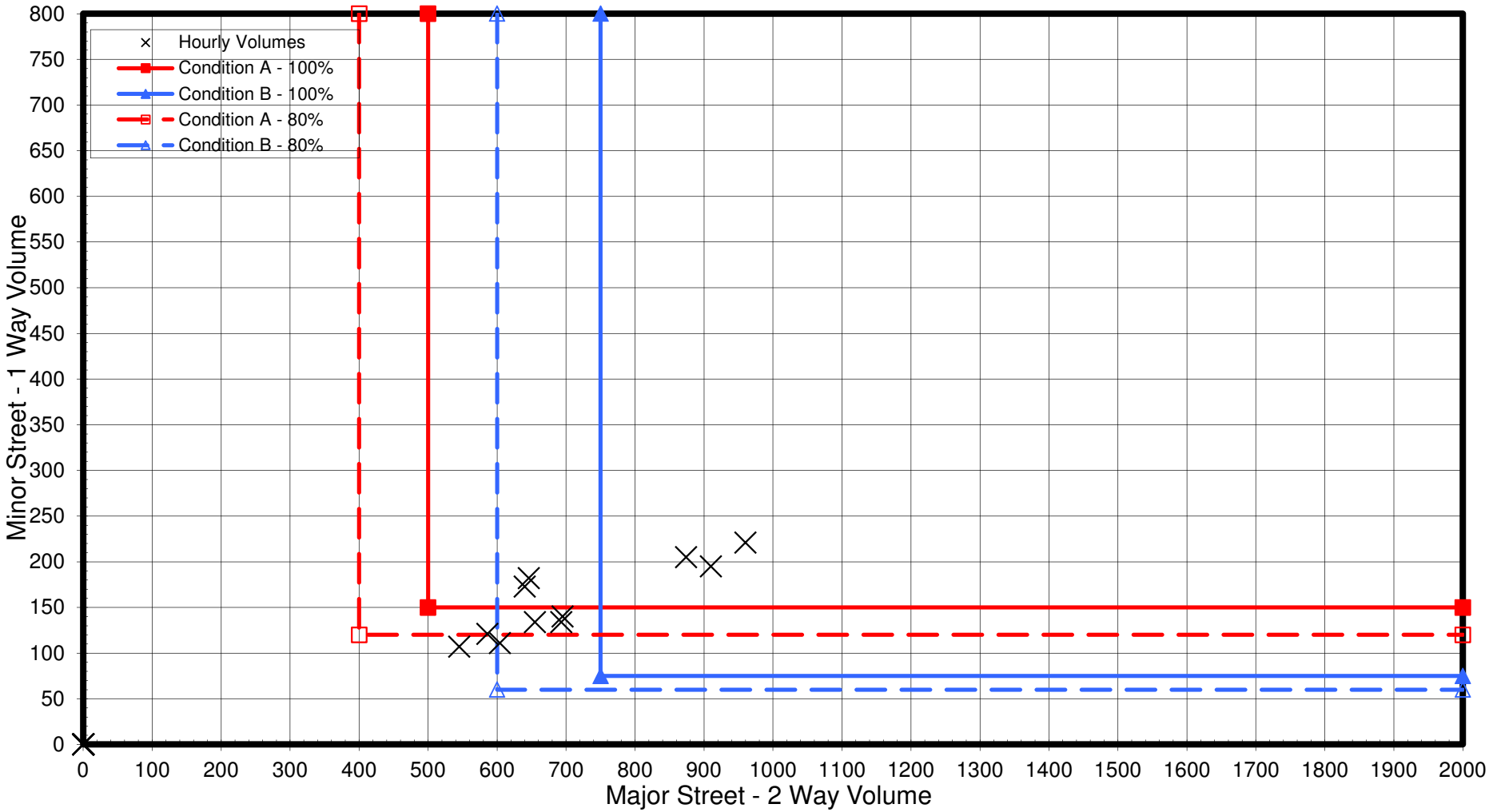
PM Peak Hour
3:00 PM to 4:00 PM



PHF = 0.90

Notes:

WARRANT 1 - Conditions A & B



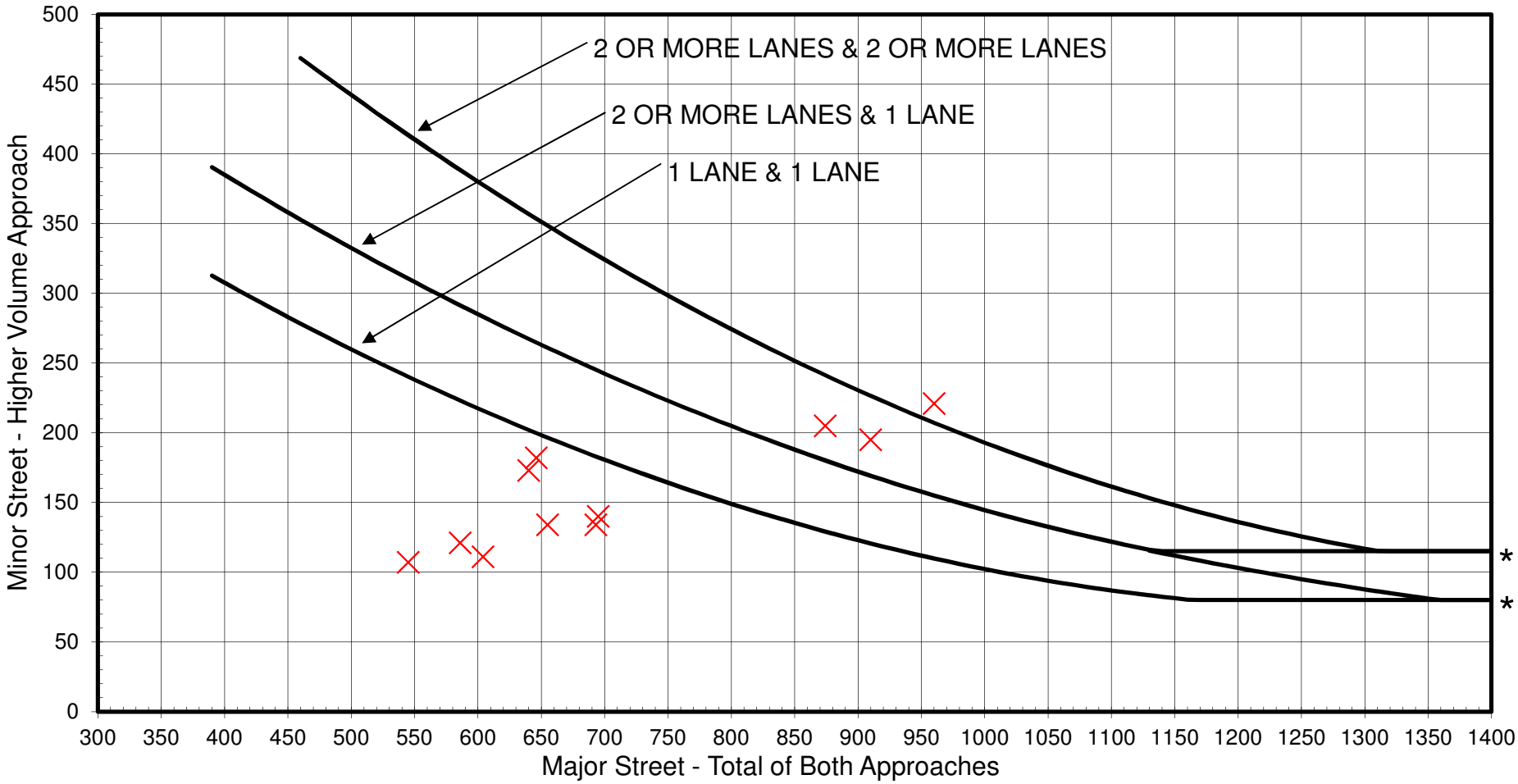
		Lanes
Major Road =	W 21st St	1
Minor Road =	Washington Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	5 Hours Meet	No
Condition B (100%) =	3 Hours Meet	No
Condition A (80%) =	9 Hours Meet	Yes
Condition B (80%) =	9 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W 21st St	1
Minor Road =	Washington Ave	1
Road Location =	Urban	

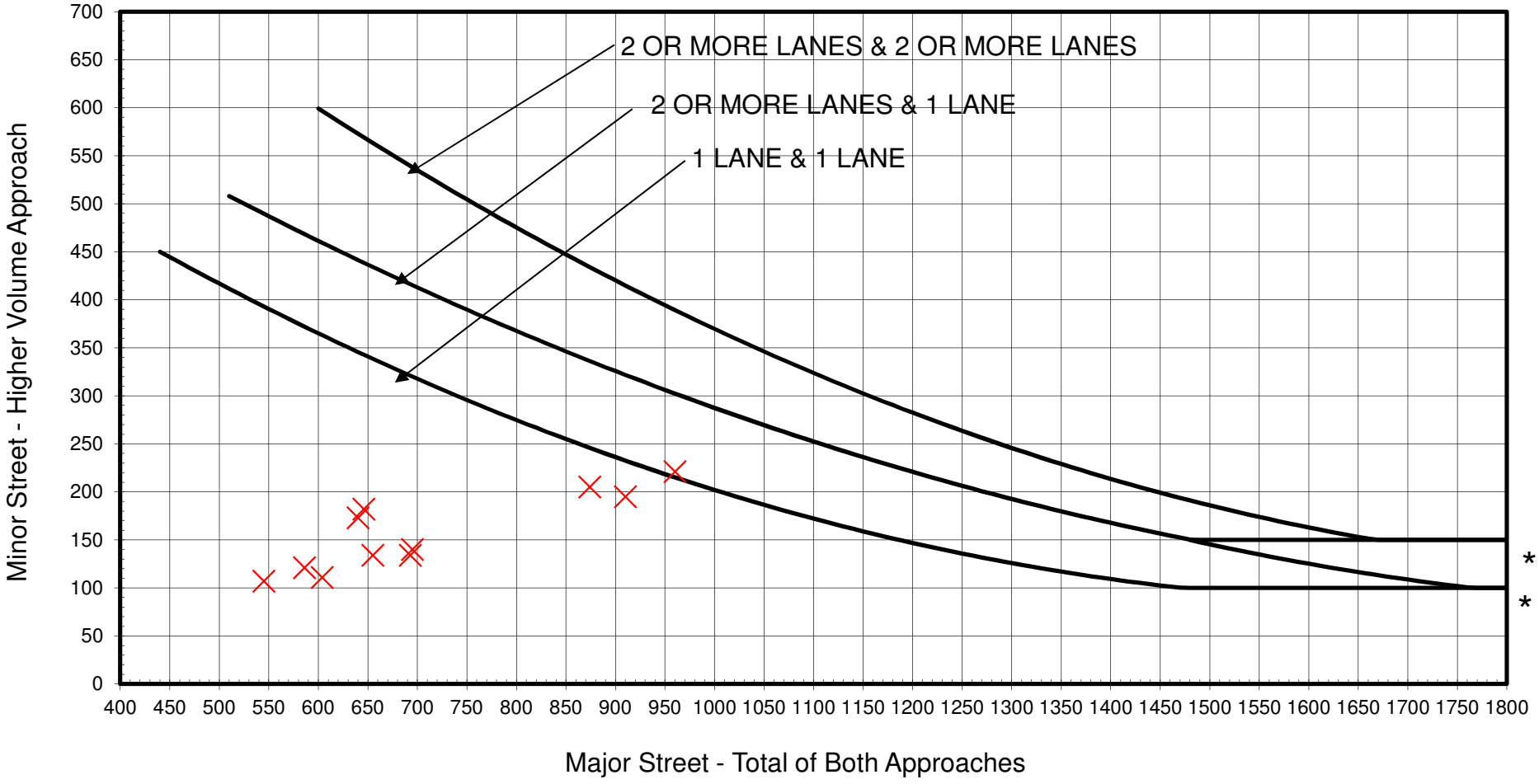
		Warrant Met?
Warrant 2 (Urban) =	3 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W 21st St	1
Minor Road =	Washington Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	1 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.28

Traffic Signal Warrant Analysis Results

Intersection 28
W 21st St (SR 611) and Oakdale Ave

SIGNAL WARRANT

INTERSECTION: Oakdale Ave and W 21st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		651	86	34	X		X			X	X	X						
8AM-9AM		674	97	38	X		X			X	X	X						
9AM-10AM		555	78	32	X		X			X		X						
10AM-11AM		639	65	19	X		X				X	X						
11AM-NOON		691	90	29	X		X			X	X	X						
NOON-1PM		709	103	18	X		X			X	X	X						
1PM-2PM		717	123	33	X		X	X		X	X	X						
2PM-3PM		904	144	49	X		X	X	X	X	X	X					X	
3PM-4PM		958	139	38	X		X	X	X	X	X	X					X	
4PM-5PM		940	132	29	X		X	X	X	X	X	X					X	
5PM-6PM		633	107	25	X		X			X	X	X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		4		3		10						3	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**YES**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Oakdale Ave and W 21st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

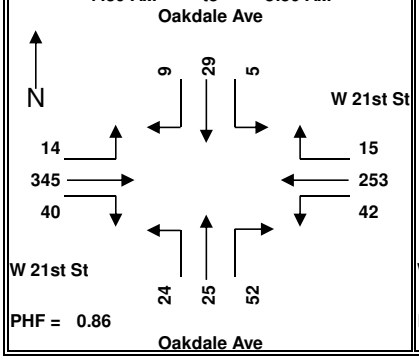
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.055	Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 28

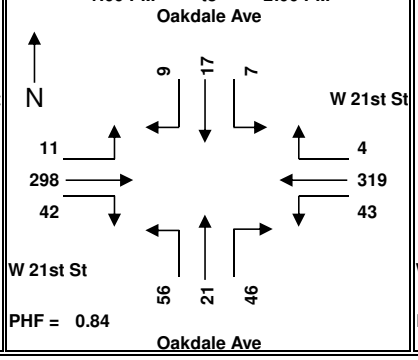
Start Time	Oakdale Ave Northbound				Oakdale Ave Southbound				Total North South	W 21st St Eastbound				W 21st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	482	235	447	27	65	216	63	10	1508	93	3597	492	156	433	3373	83	163	8071	9579
	Percent Trucks =			2%	Percent Trucks =			3%		Percent Trucks =			4%	Percent Trucks =			4%		
ADT	718	350	666	40	97	322	94	15	2247	139	5360	733	232	645	5026	124	243	12027	14274
7:00 AM	9	1	6	0	1	2	2	1	21	0	62	12	4	5	56	4	6	139	160
7:15 AM	8	3	6	0	1	3	2	0	23	4	66	7	2	5	40	4	5	126	149
7:30 AM	7	6	16	2	1	6	2	1	38	4	78	9	1	14	66	4	2	175	213
7:45 AM	5	7	12	1	2	7	5	0	38	8	101	18	6	15	63	6	6	211	249
8:00 AM	5	9	15	1	1	12	2	0	44	2	85	9	4	9	60	3	3	168	212
8:15 AM	7	3	9	1	1	4	0	0	24	0	81	4	2	4	64	2	4	155	179
8:30 AM	12	3	10	1	0	7	1	0	33	1	86	14	5	5	71	0	5	177	210
8:45 AM	8	4	12	2	2	6	2	1	34	1	85	7	10	9	71	1	3	174	208
9:00 AM	8	6	5	0	2	5	2	0	28	1	69	11	5	5	55	3	3	144	172
9:15 AM	6	4	9	0	3	3	0	0	25	1	60	6	3	6	46	1	0	120	145
9:30 AM	9	7	5	2	2	7	1	0	31	2	59	7	1	7	70	1	4	146	177
9:45 AM	9	4	6	0	2	3	2	1	26	0	68	8	2	7	60	2	4	145	171
10:00 AM	3	4	1	0	2	1	0	0	11	1	64	5	2	5	64	1	6	140	151
10:15 AM	4	1	6	0	1	4	1	1	17	3	66	10	5	6	71	2	3	158	175
10:30 AM	6	5	8	0	2	2	0	0	23	1	70	6	2	12	70	1	4	160	183
10:45 AM	11	6	10	2	1	4	1	0	33	0	83	13	5	12	70	3	4	181	214
11:00 AM	10	2	7	1	2	8	1	0	30	2	63	14	7	6	80	4	4	169	199
11:15 AM	8	3	11	1	1	6	0	1	29	0	62	6	5	11	79	1	3	159	188
11:30 AM	8	1	12	0	1	5	0	0	27	1	84	12	3	10	77	2	6	186	213
11:45 AM	11	6	11	0	1	1	3	2	33	2	83	7	3	13	72	0	3	177	210
12:00 PM	10	3	13	1	1	4	0	0	31	1	75	14	3	12	76	2	1	180	211
12:15 PM	9	2	15	1	1	2	1	0	30	0	95	14	3	5	75	0	5	189	219
12:30 PM	10	1	12	0	2	2	1	0	28	3	71	8	2	12	75	0	2	169	197
12:45 PM	13	6	9	2	1	3	0	0	32	3	82	11	2	10	64	1	4	171	203
1:00 PM	10	6	12	0	1	2	0	0	31	1	60	12	3	15	64	1	2	153	184
1:15 PM	18	3	13	0	2	4	3	0	43	1	73	13	5	7	79	0	2	173	216
1:30 PM	10	5	13	0	3	3	4	1	38	5	75	7	4	5	82	2	3	176	214
1:45 PM	18	7	8	1	1	8	2	0	44	4	90	10	4	16	94	1	7	215	259
2:00 PM	11	6	9	0	0	10	0	0	36	4	105	9	1	15	75	2	6	210	246
2:15 PM	14	8	14	0	0	10	2	0	48	3	86	16	4	7	89	9	11	210	258
2:30 PM	12	8	17	0	3	15	5	1	60	7	117	12	7	13	91	3	8	243	303
2:45 PM	24	8	13	1	1	2	1	0	49	1	107	18	4	18	95	2	4	241	290
3:00 PM	12	6	13	0	1	5	1	0	38	3	97	20	6	9	93	2	5	224	262
3:15 PM	20	15	8	1	4	6	3	0	56	3	113	9	3	11	116	2	6	254	310
3:30 PM	10	7	11	1	2	7	1	0	38	3	116	14	9	19	107	2	2	261	299
3:45 PM	15	14	8	1	2	5	1	0	45	2	100	7	3	11	97	2	3	219	264
4:00 PM	15	3	17	2	1	6	0	0	42	3	95	14	3	17	118	0	5	247	289
4:15 PM	11	8	11	0	1	1	2	0	34	1	92	13	4	15	112	1	3	234	268
4:30 PM	15	8	8	1	1	7	2	0	41	3	78	22	5	22	134	2	0	261	302
4:45 PM	16	6	14	1	3	3	2	0	44	3	98	11	0	6	79	1	2	198	242
5:00 PM	14	6	13	0	2	6	1	0	42	2	92	12	1	6	82	1	2	195	237
5:15 PM	19	6	10	0	2	4	2	0	43	2	88	12	0	9	53	1	1	165	208
5:30 PM	14	5	4	0	0	3	1	0	27	0	58	11	2	4	57	1	0	131	158
5:45 PM	8	3	5	0	1	2	1	0	20	1	59	18	1	3	61	0	1	142	162

AM Peak Hour
7:30 AM to 8:30 AM



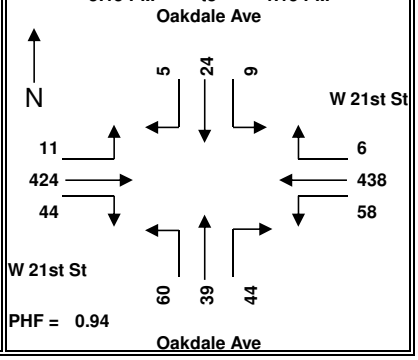
PHF = 0.86

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.84

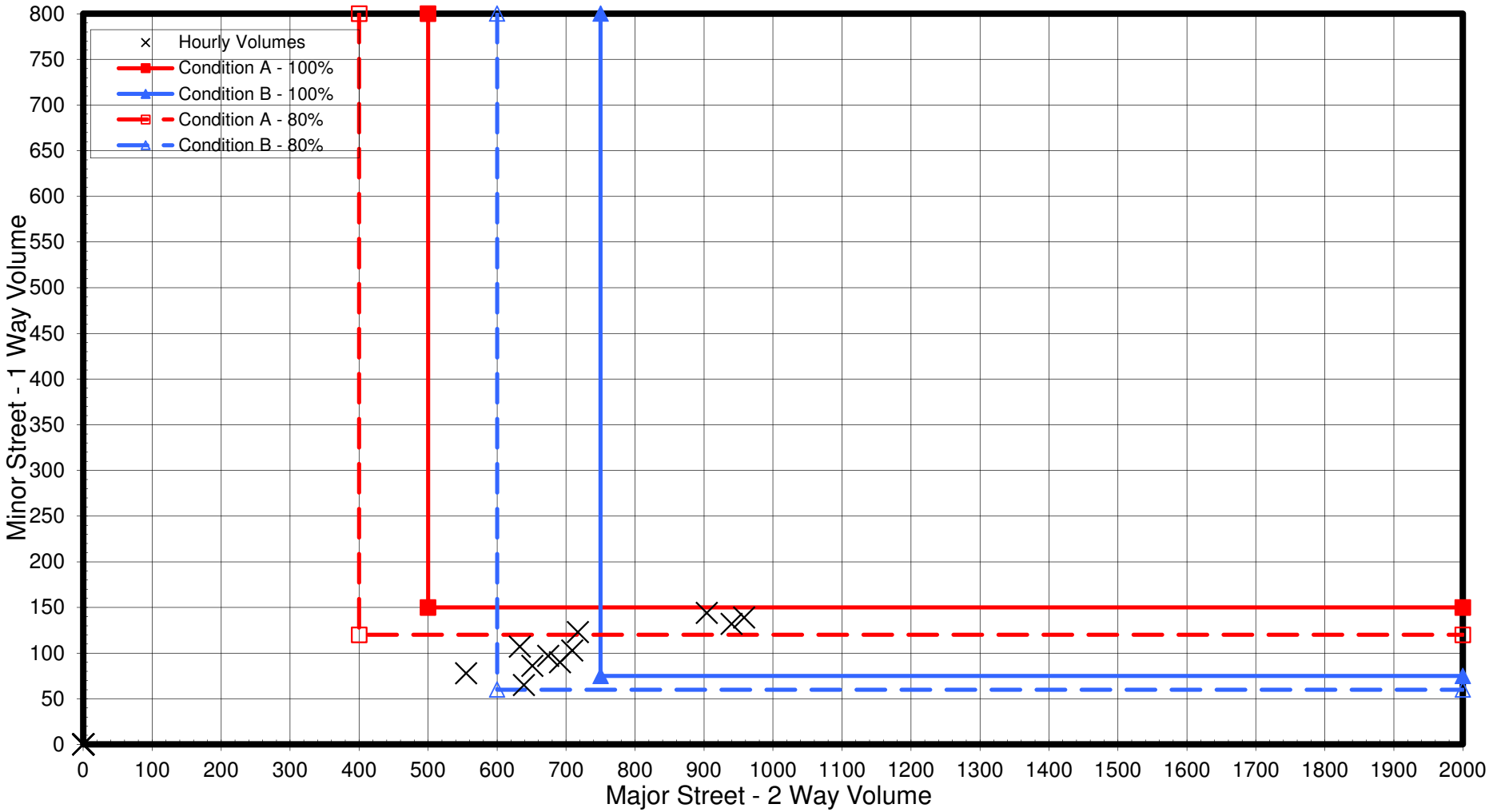
PM Peak Hour
3:15 PM to 4:15 PM



PHF = 0.94

Notes:

WARRANT 1 - Conditions A & B



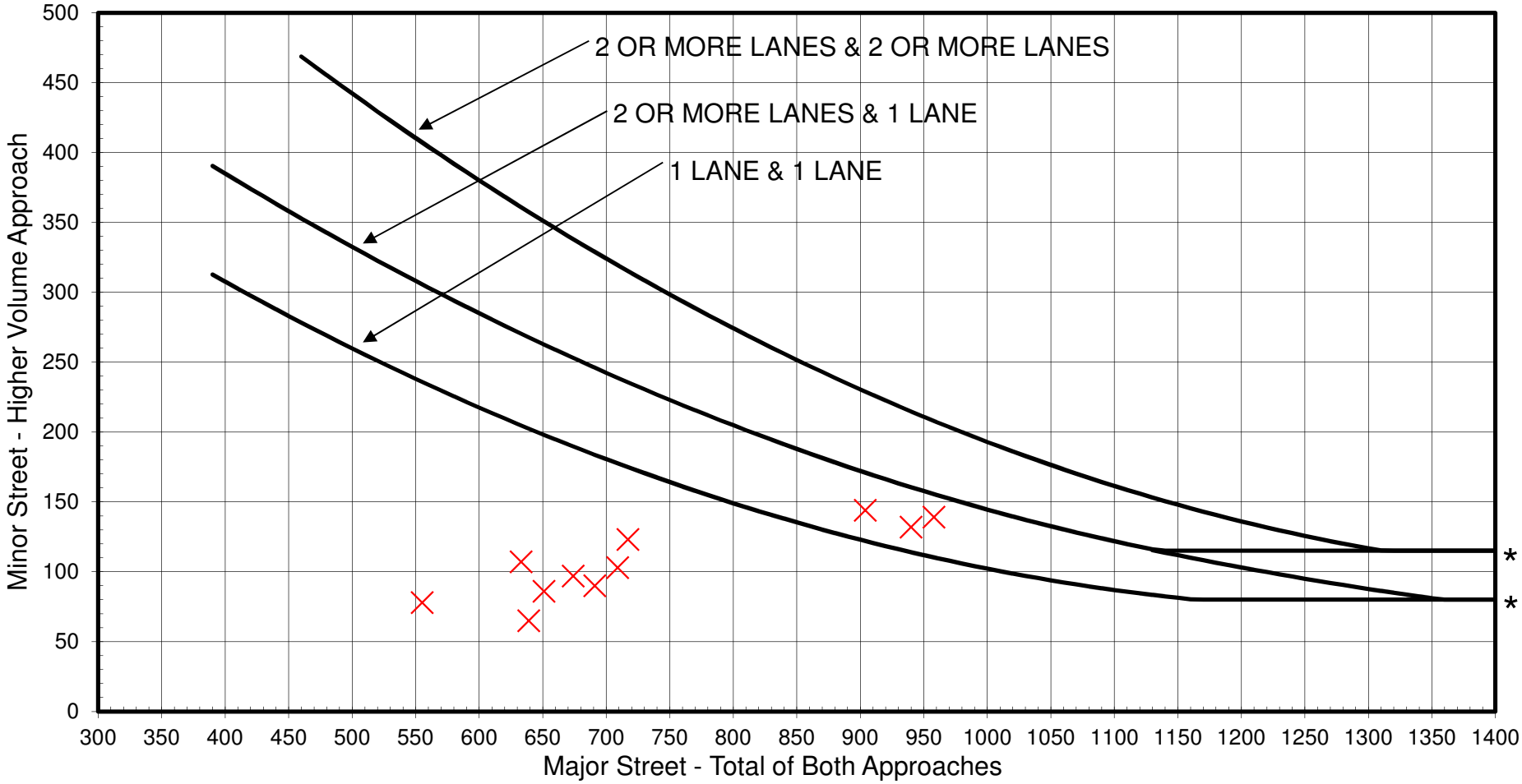
		Lanes
Major Road =	W 21st St	1
Minor Road =	Oakdale Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	3 Hours Meet	No
Condition A (80%) =	4 Hours Meet	No
Condition B (80%) =	10 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W 21st St	1
Minor Road =	Oakdale Ave	1
Road Location =	Urban	

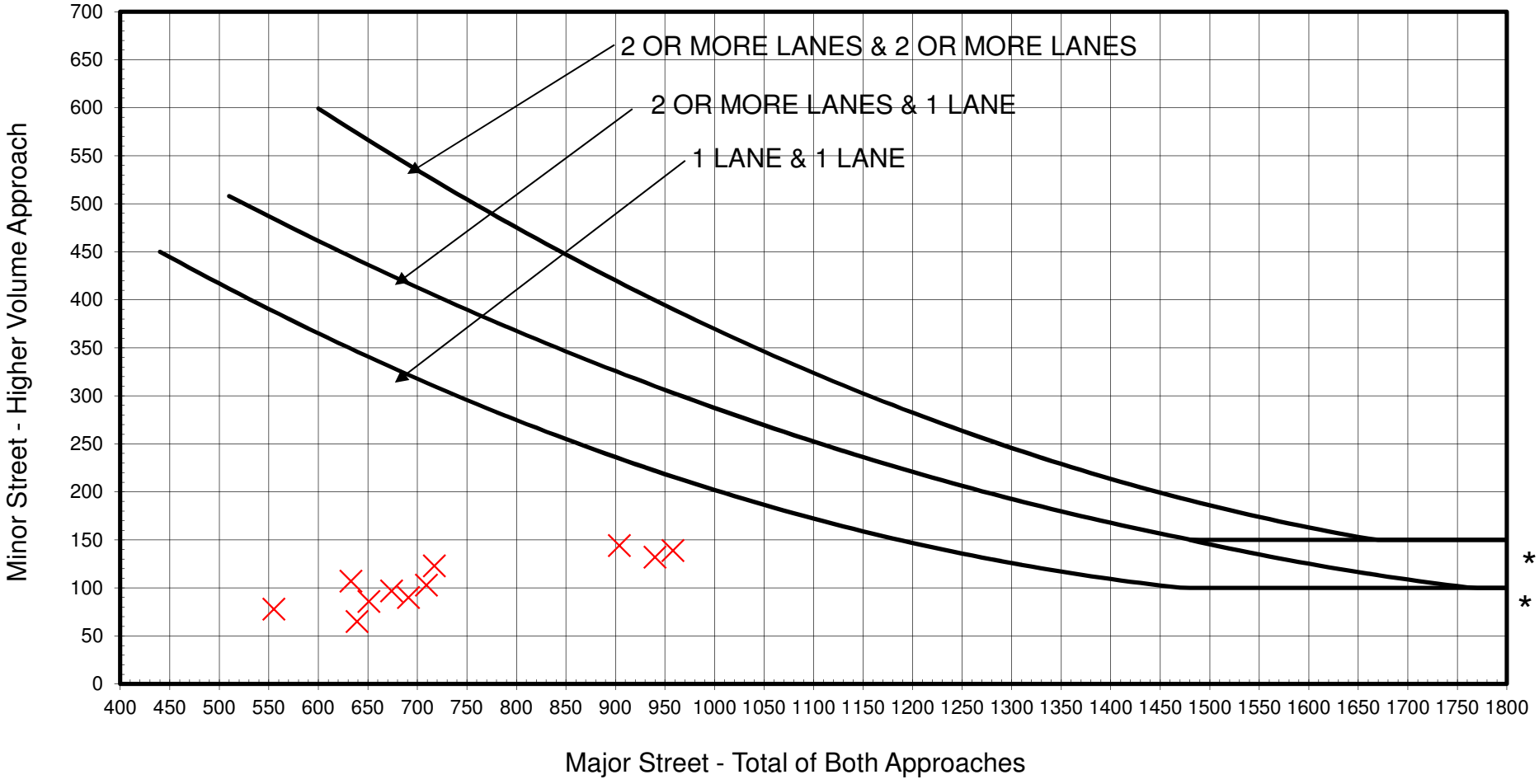
		Warrant Met?
Warrant 2 (Urban) =	3 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W 21st St	1
Minor Road =	Oakdale Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.29

Traffic Signal Warrant Analysis Results

Intersection 29
W 21st St (SR 611) and Reid Ave

SIGNAL WARRANT

INTERSECTION: Reid Ave and W 21st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		640	37	47	X		X				X							
8AM-9AM		690	59	103	X		X			X	X	X						
9AM-10AM		585	43	86	X		X			X		X						
10AM-11AM		608	48	101	X		X			X	X	X						
11AM-NOON		657	45	152	X	X	X	X		X	X	X						
NOON-1PM		676	77	94	X		X			X	X	X						
1PM-2PM		694	71	129	X		X	X		X	X	X						
2PM-3PM		843	84	137	X		X	X	X	X	X	X						
3PM-4PM		909	77	108	X		X		X	X	X	X						
4PM-5PM		851	80	157	X	X	X	X	X	X	X	X					X	
5PM-6PM		546	59	117	X		X			X		X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					2		4		3		8						1	0
WARRANT SATISFIED?					NO		NO		NO		YES						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Reid Ave and W 21st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

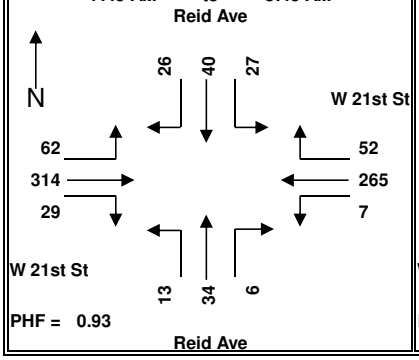
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.055	Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

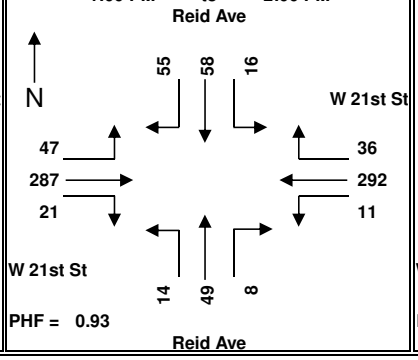
ADT Factor: 1.41
Intersection ID: 29

Start Time	Reid Ave Northbound				Reid Ave Southbound				Total North South	W 21st St Eastbound				W 21st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	154	421	105	17	262	463	506	25	1911	549	3258	253	160	96	3197	346	146	7699	9610
	Percent Trucks =			3%	Percent Trucks =			2%		Percent Trucks =			4%	Percent Trucks =			4%		
ADT	229	627	156	25	390	690	754	37	2848	818	4855	377	238	143	4764	516	218	11472	14320
7:00 AM	2	3	3	0	0	6	3	2	17	4	53	6	5	0	51	5	5	119	136
7:15 AM	2	6	0	2	1	5	3	0	17	6	66	2	1	1	43	12	4	130	147
7:30 AM	3	5	3	0	5	4	3	1	23	11	72	6	1	1	77	15	2	182	205
7:45 AM	0	7	3	0	6	7	4	3	27	16	89	11	7	0	79	14	5	209	236
8:00 AM	6	7	0	0	4	12	4	0	33	15	82	6	3	4	64	11	3	182	215
8:15 AM	4	8	2	0	9	5	7	1	35	15	69	8	0	1	63	12	4	168	203
8:30 AM	3	12	1	0	8	16	11	3	51	16	74	4	6	2	59	15	3	170	221
8:45 AM	2	10	4	0	3	9	15	2	43	13	75	8	14	2	62	10	1	170	213
9:00 AM	2	10	3	1	9	9	7	0	40	17	48	9	2	1	59	10	3	144	184
9:15 AM	4	3	0	0	7	8	7	0	29	16	58	3	4	2	43	17	3	139	168
9:30 AM	1	6	2	1	8	4	6	0	27	12	53	3	2	3	76	11	5	158	185
9:45 AM	4	6	2	2	9	6	6	0	33	18	58	4	2	3	60	1	2	144	177
10:00 AM	1	7	0	0	7	7	13	1	35	9	52	2	2	1	51	7	5	122	157
10:15 AM	4	13	1	0	4	10	13	0	45	11	55	3	4	2	60	11	3	142	187
10:30 AM	1	8	2	0	7	8	10	0	36	10	65	4	2	2	69	16	4	166	202
10:45 AM	0	9	2	0	6	10	6	0	33	8	84	2	3	2	76	6	6	178	211
11:00 AM	3	5	3	0	12	9	10	0	42	10	61	2	7	4	78	5	4	160	202
11:15 AM	2	6	1	1	6	12	13	0	40	8	61	2	3	1	76	10	4	158	198
11:30 AM	2	6	3	0	10	16	20	1	57	17	78	3	2	2	68	3	4	171	228
11:45 AM	0	11	3	0	5	13	26	0	58	20	73	7	4	3	58	7	2	168	226
12:00 PM	4	14	3	0	5	10	16	2	52	9	62	8	3	3	65	3	1	150	202
12:15 PM	4	12	3	1	7	12	6	0	44	15	83	5	3	3	71	12	6	189	233
12:30 PM	2	7	3	0	0	6	16	0	34	17	67	4	2	3	74	6	2	171	205
12:45 PM	6	16	3	0	3	3	10	0	41	18	69	5	3	5	56	13	3	166	207
1:00 PM	5	17	1	0	1	22	14	1	60	11	59	4	2	1	67	13	3	155	215
1:15 PM	1	9	1	0	5	11	10	0	37	13	75	4	5	4	68	9	1	173	210
1:30 PM	2	15	3	0	6	17	13	2	56	11	71	8	3	4	73	6	2	173	229
1:45 PM	6	8	3	2	4	8	18	0	47	12	82	5	3	2	84	8	5	193	240
2:00 PM	3	9	3	0	5	11	16	0	47	10	93	9	1	2	74	5	5	193	240
2:15 PM	7	9	7	0	8	13	11	0	55	12	77	7	4	6	87	10	11	199	254
2:30 PM	7	13	4	0	9	18	14	2	65	15	109	13	7	2	84	12	8	235	300
2:45 PM	5	14	3	0	6	14	12	0	54	14	91	12	5	2	92	5	3	216	270
3:00 PM	4	16	2	1	9	14	10	2	55	13	93	10	4	4	92	4	4	216	271
3:15 PM	8	15	3	2	5	6	11	1	48	13	101	6	3	0	106	5	5	231	279
3:30 PM	4	8	3	0	6	12	14	1	47	8	124	3	9	1	109	2	1	247	294
3:45 PM	4	9	1	0	2	10	9	0	35	12	92	6	3	5	97	3	3	215	250
4:00 PM	8	12	3	2	13	13	19	0	68	18	87	6	9	0	117	6	3	234	302
4:15 PM	5	10	2	0	6	18	14	0	55	19	74	4	7	3	103	7	3	210	265
4:30 PM	4	10	7	1	10	15	22	0	68	13	69	11	7	2	127	2	1	224	292
4:45 PM	4	12	3	0	5	6	16	0	46	12	93	5	1	2	66	5	1	183	229
5:00 PM	6	12	5	0	4	13	14	0	54	9	81	9	0	2	66	6	2	173	227
5:15 PM	2	7	0	0	6	7	13	0	35	12	77	7	0	0	48	3	1	147	182
5:30 PM	2	10	1	0	8	14	13	0	48	7	51	3	2	3	45	1	0	110	158
5:45 PM	5	9	0	1	3	14	8	0	39	4	52	4	0	0	54	2	0	116	155

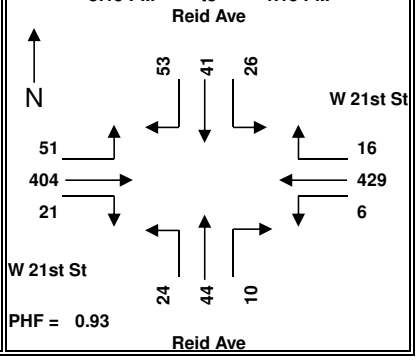
AM Peak Hour
7:45 AM to 8:45 AM



Midday Peak Hour
1:00 PM to 2:00 PM

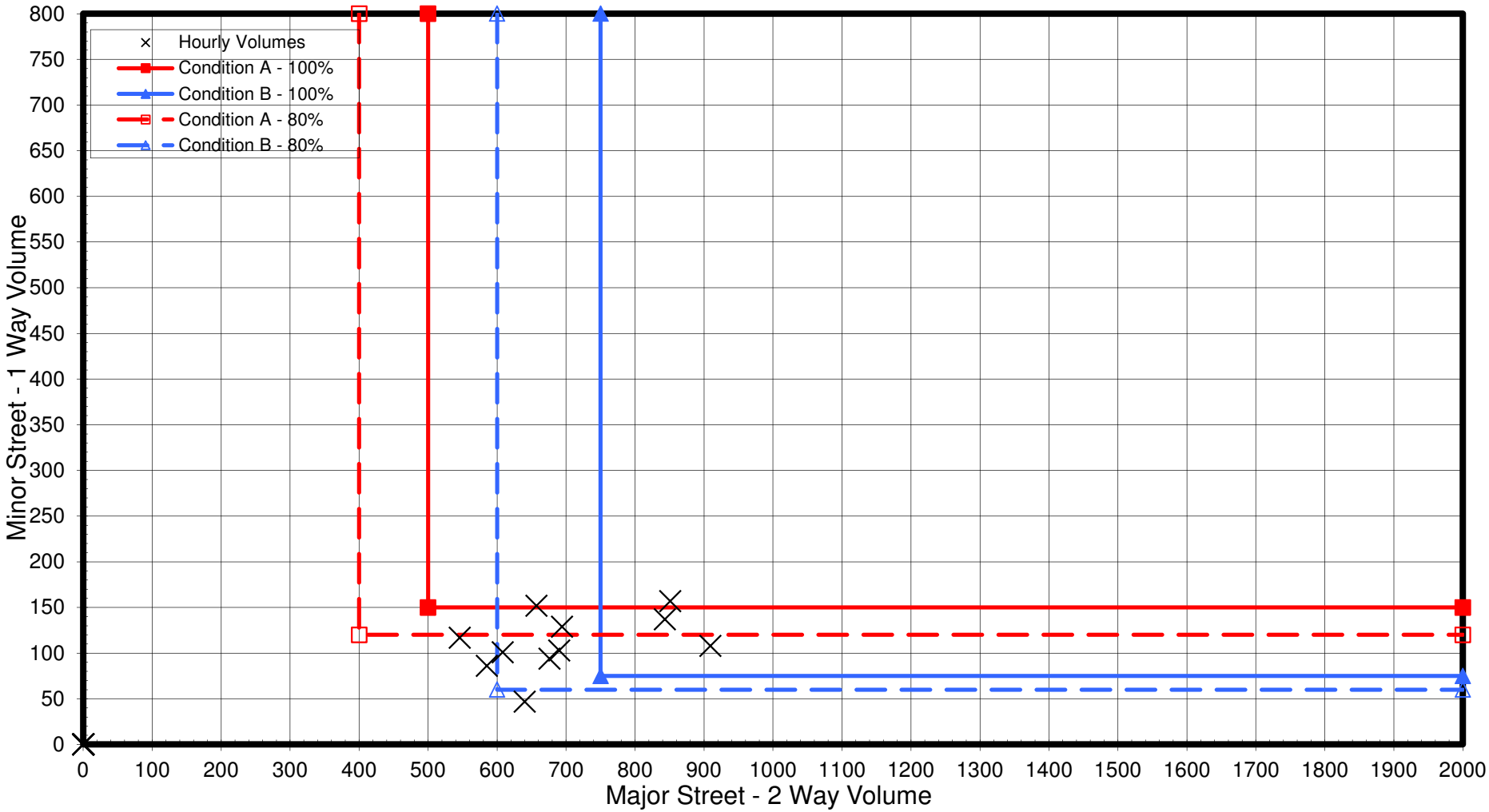


PM Peak Hour
3:15 PM to 4:15 PM



Notes:

WARRANT 1 - Conditions A & B



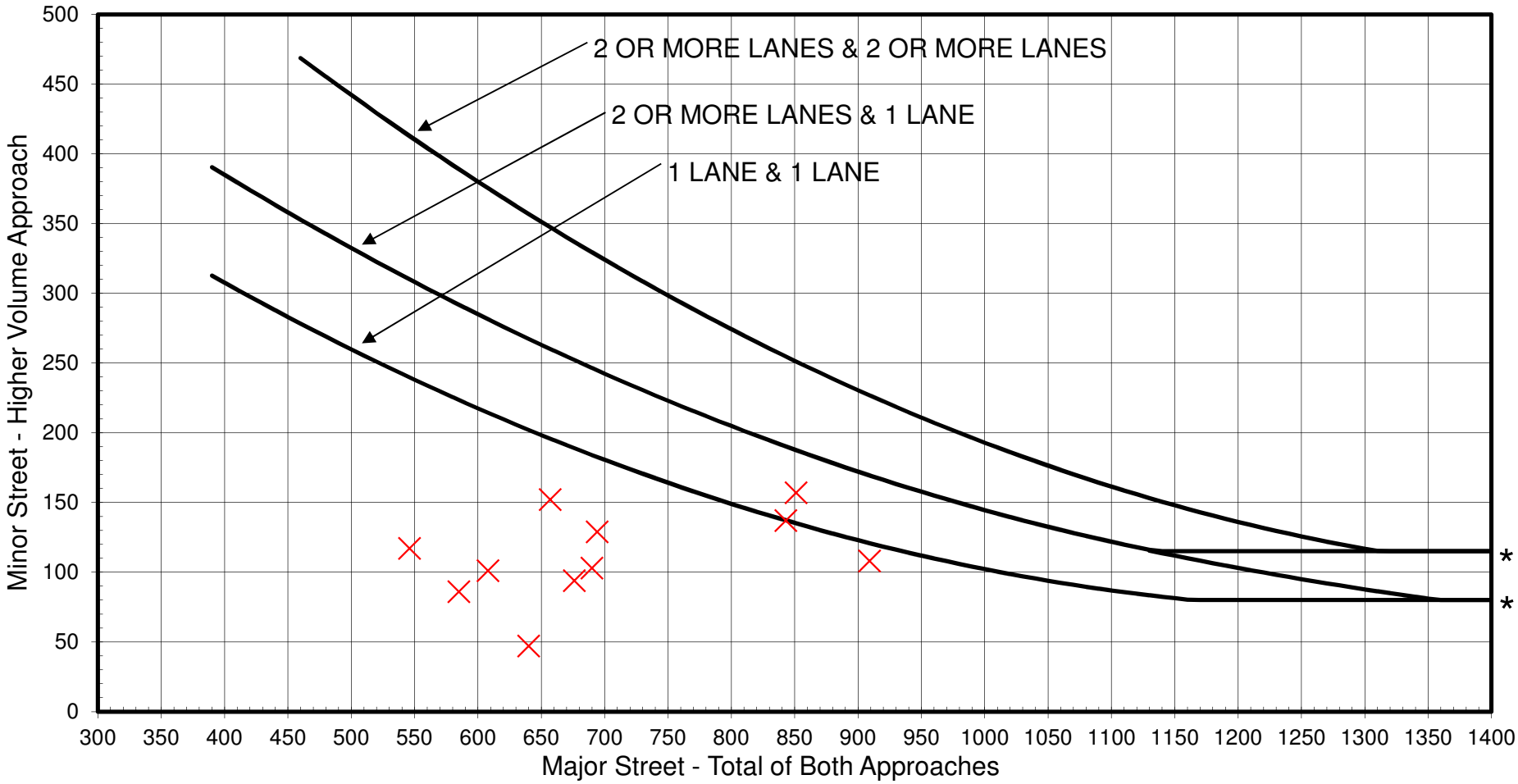
		Lanes
Major Road =	W 21st St	1
Minor Road =	Reid Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	2 Hours Meet	No
Condition B (100%) =	3 Hours Meet	No
Condition A (80%) =	4 Hours Meet	No
Condition B (80%) =	8 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W 21st St	1
Minor Road =	Reid Ave	1
Road Location =	Urban	

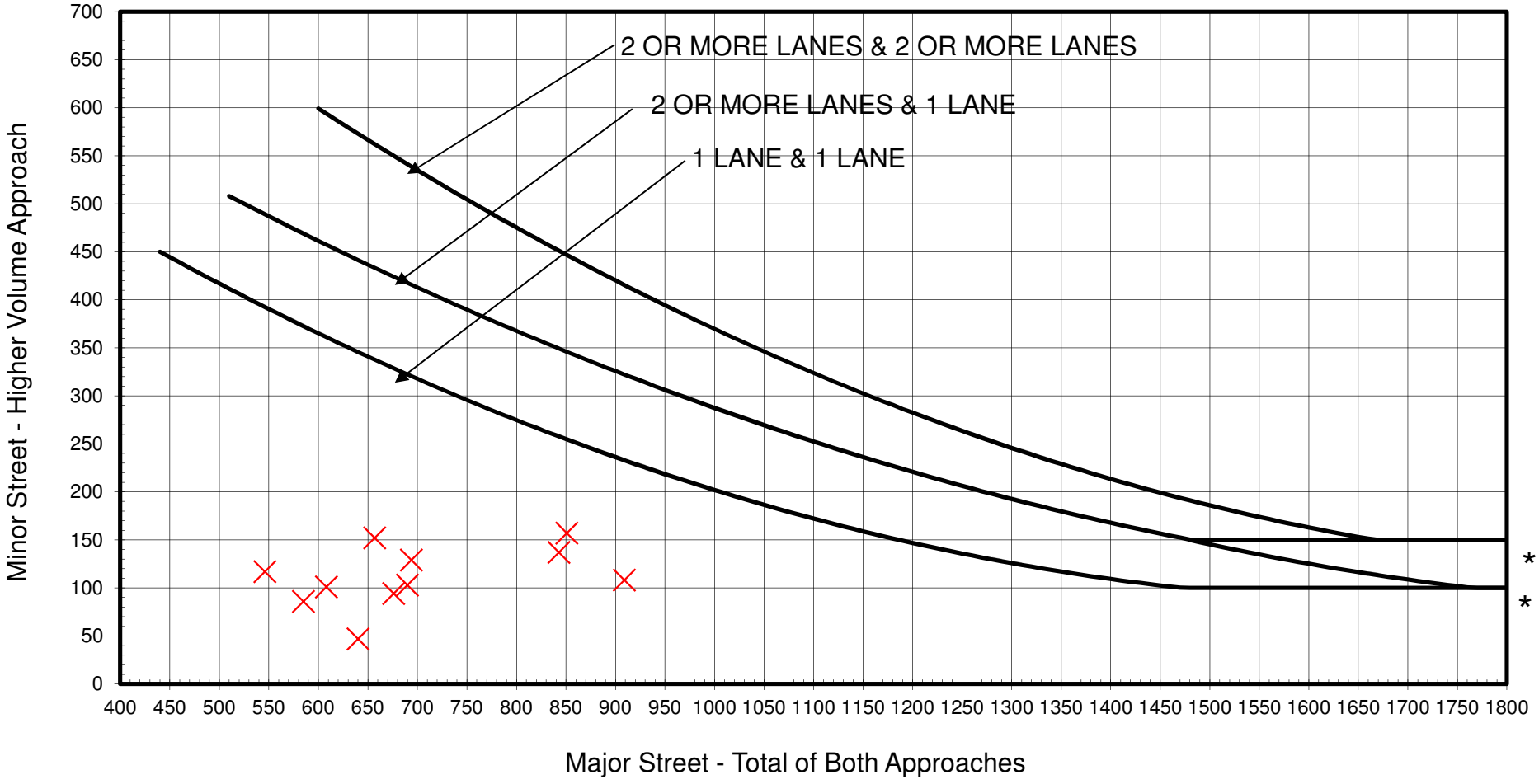
		Warrant Met?
Warrant 2 (Urban) =	1 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W 21st St	1
Minor Road =	Reid Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.30

Traffic Signal Warrant Analysis Results

Intersection 30
W 21st St (SR 611) and Elyria Ave
and Henderson Dr (SR 611) and E 21st St

SIGNAL WARRANT

INTERSECTION: Elyria Ave and W 21st St and Henderson Dr
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 2 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1		X	X	500	150	400	120	750	75	600	60						
	2+	X			600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		807	206	102	X	X	X	X		X	X	X					X	
8AM-9AM		768	267	150	X	X	X	X		X	X	X					X	
9AM-10AM		648	200	171	X	X	X	X		X		X						
10AM-11AM		587	224	173		X	X	X		X		X						
11AM-NOON		716	244	194	X	X	X	X		X		X					X	
NOON-1PM		761	277	225	X	X	X	X		X	X	X					X	
1PM-2PM		779	248	210	X	X	X	X		X	X	X					X	
2PM-3PM		1022	274	165	X	X	X	X	X	X	X	X					X	
3PM-4PM		1050	339	226	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1024	345	220	X	X	X	X	X	X	X	X					X	X
5PM-6PM		822	235	204	X	X	X	X		X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					10		11		3		8						9	2
WARRANT SATISFIED?					YES		YES		NO		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data

Elyria Ave and W 21st St and Henderson Dr

Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.985	Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

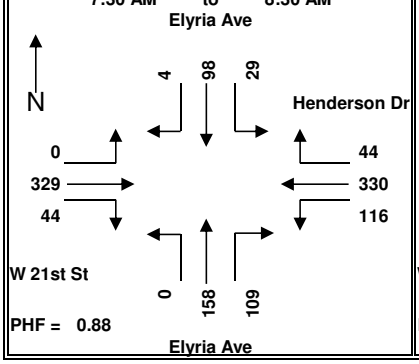
Roadway Classification:

ADT Factor: 1.41
Intersection ID: 30

Start Time	Elyria Ave Northbound				Elyria Ave Southbound				Total North South	W 21st St Eastbound				Henderson Dr Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	6	1688	1165	93	573	1359	108	59	4899	2	3378	615	278	1164	3287	538	312	8984	13883
	Percent Trucks =			3%	Percent Trucks =			3%		Percent Trucks =			7%	Percent Trucks =			6%		
ADT	8	2348	1621	129	797	1891	150	82	6816	3	4700	856	387	1619	4573	748	434	12499	19315
7:00 AM	0	9	10	0	2	21	0	0	42	0	47	17	4	28	62	8	6	162	204
7:15 AM	0	26	23	1	9	9	1	3	68	0	68	9	2	28	65	8	2	178	246
7:30 AM	0	29	22	2	5	22	1	1	79	0	67	7	3	37	111	7	6	229	308
7:45 AM	0	43	44	3	9	22	1	1	119	0	104	12	4	30	82	10	13	238	357
8:00 AM	0	38	24	2	6	25	0	2	93	0	96	13	14	25	81	14	10	229	322
8:15 AM	0	48	19	4	9	29	2	3	107	0	62	12	9	24	56	13	11	167	274
8:30 AM	0	39	22	3	9	30	3	4	103	0	73	16	12	15	61	9	6	174	277
8:45 AM	1	51	25	8	7	28	2	0	114	0	70	9	11	25	72	22	5	198	312
9:00 AM	0	15	17	1	13	29	3	1	77	0	54	10	5	18	49	8	4	139	216
9:15 AM	0	30	19	5	12	23	5	2	89	0	55	11	9	15	64	9	4	154	243
9:30 AM	0	39	17	3	13	26	3	0	98	0	59	16	10	25	72	12	11	184	282
9:45 AM	0	37	26	4	17	22	5	3	107	0	63	9	7	18	65	16	5	171	278
10:00 AM	0	29	20	4	14	29	3	0	95	0	44	11	9	25	67	12	5	159	254
10:15 AM	1	41	15	1	11	22	2	0	92	0	51	12	5	16	51	9	4	139	231
10:30 AM	0	40	13	1	12	35	0	1	100	0	60	14	6	16	50	5	3	145	245
10:45 AM	0	38	27	2	10	31	4	1	110	0	41	8	9	19	63	13	5	144	254
11:00 AM	0	30	21	0	12	26	2	3	91	0	81	19	9	22	51	13	8	186	277
11:15 AM	0	34	22	1	12	32	3	1	103	0	53	12	5	25	67	15	14	172	275
11:30 AM	0	44	22	3	17	24	2	2	109	0	57	22	7	25	61	17	4	182	291
11:45 AM	0	51	20	0	17	47	0	3	135	0	83	12	12	22	44	15	7	176	311
12:00 PM	0	39	28	3	15	42	3	1	127	0	73	14	9	32	51	18	9	188	315
12:15 PM	0	52	20	1	19	35	4	2	130	0	65	10	3	16	72	13	4	176	306
12:30 PM	0	30	15	3	17	34	4	0	100	0	74	18	2	26	75	14	6	207	307
12:45 PM	0	57	36	2	14	36	2	2	145	0	64	20	8	28	61	17	7	190	335
1:00 PM	0	47	13	0	17	38	4	4	119	0	74	15	9	23	64	10	4	186	305
1:15 PM	0	39	32	2	10	39	2	0	122	0	88	10	6	33	66	9	9	206	328
1:30 PM	0	36	17	0	22	29	5	1	109	0	69	14	7	19	70	9	7	181	290
1:45 PM	0	40	24	0	13	27	4	0	108	0	81	12	9	30	77	6	7	206	314
2:00 PM	1	39	24	0	14	31	5	1	114	1	71	20	2	19	87	9	16	207	321
2:15 PM	1	46	29	2	7	32	0	1	115	0	91	15	7	33	98	14	24	251	366
2:30 PM	0	30	31	3	12	31	1	0	105	0	103	12	10	35	97	16	15	263	368
2:45 PM	0	41	32	0	8	23	1	1	105	0	124	20	12	39	111	7	20	301	406
3:00 PM	0	45	34	1	10	36	5	1	130	1	109	13	2	31	97	10	10	261	391
3:15 PM	0	47	41	5	26	43	4	5	161	0	102	5	4	35	86	16	5	244	405
3:30 PM	0	54	41	4	14	38	3	2	150	0	103	12	5	51	106	16	11	288	438
3:45 PM	0	45	32	5	13	33	1	3	124	0	95	12	4	44	87	19	10	257	381
4:00 PM	0	41	48	9	16	41	2	0	148	0	102	24	5	24	97	21	4	268	416
4:15 PM	0	43	39	1	18	34	2	0	136	0	98	19	7	33	88	15	0	253	389
4:30 PM	1	52	37	1	16	47	3	0	156	0	102	20	6	36	96	12	3	266	422
4:45 PM	1	36	47	0	17	23	1	2	125	0	89	18	1	21	94	15	3	237	362
5:00 PM	0	24	39	1	20	48	3	0	134	0	85	20	1	31	101	15	1	252	386
5:15 PM	0	34	33	0	12	34	3	0	116	0	85	17	3	20	74	5	1	201	317
5:30 PM	0	32	24	1	15	22	2	1	95	0	67	13	2	25	79	11	3	195	290
5:45 PM	0	28	21	1	12	31	2	1	94	0	76	11	2	22	59	6	0	174	268

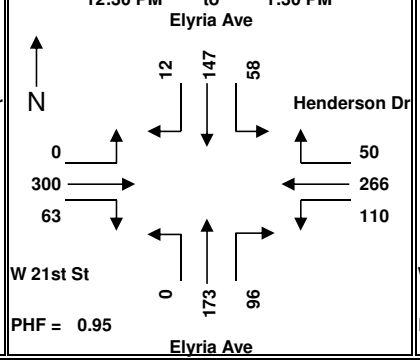
AM Peak Hour

7:30 AM to 8:30 AM



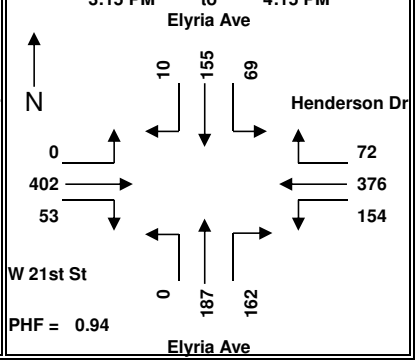
Midday Peak Hour

12:30 PM to 1:30 PM



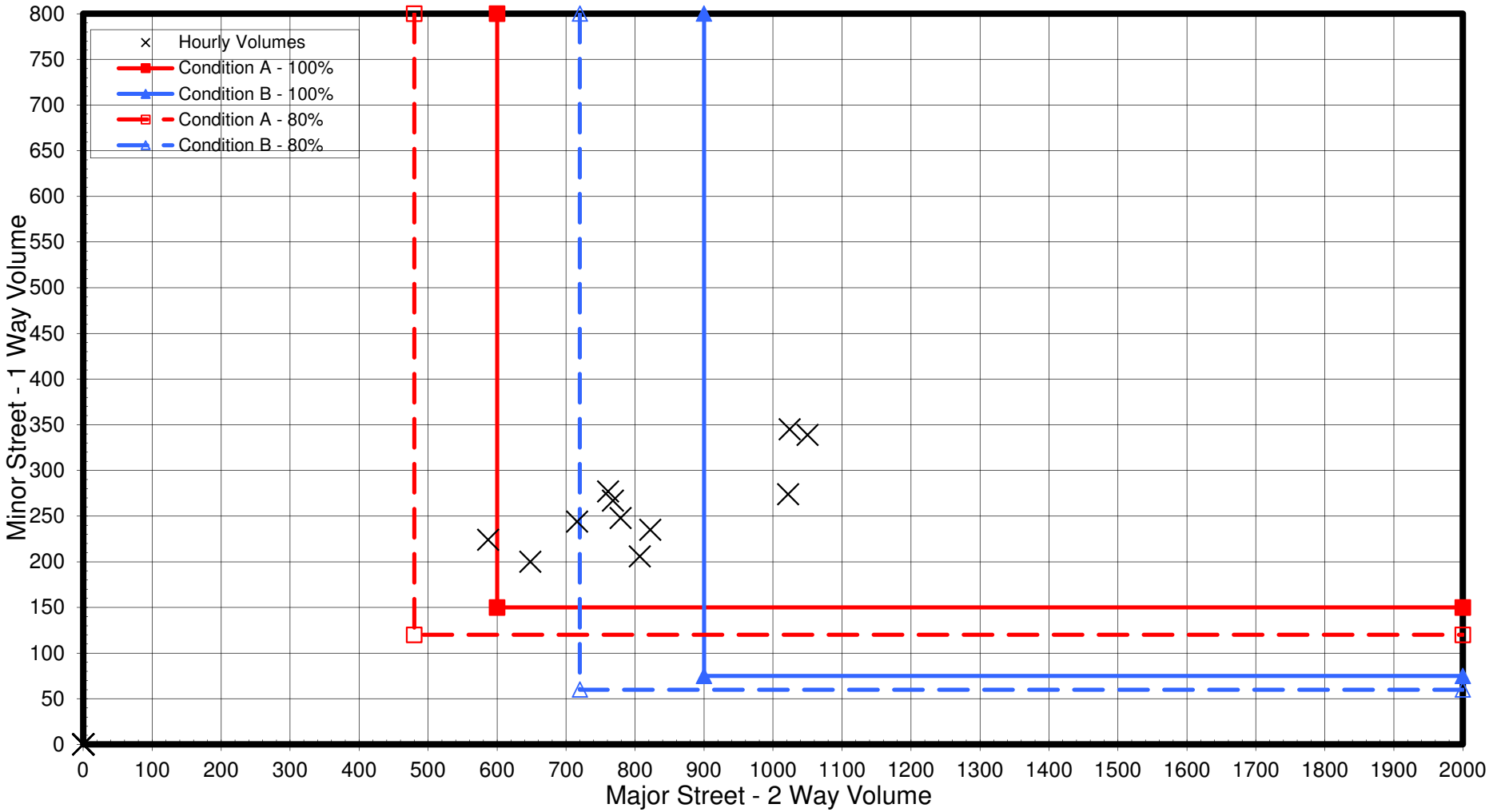
PM Peak Hour

3:15 PM to 4:15 PM



Notes:

WARRANT 1 - Conditions A & B



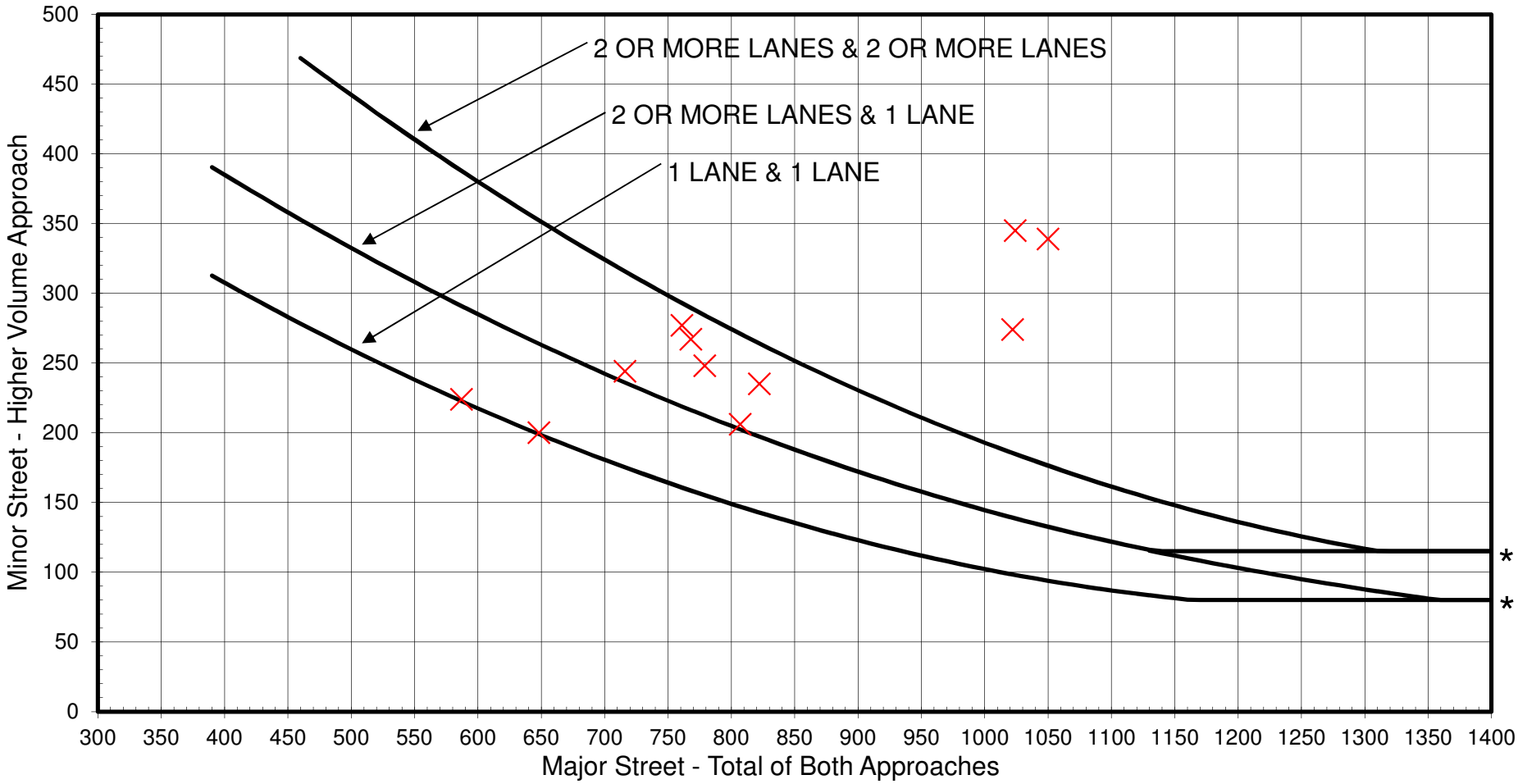
		Lanes
Major Road =	W 21st St and Henderson D	2
Minor Road =	Elyria Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	10 Hours Meet	Yes
Condition B (100%) =	3 Hours Meet	No
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	8 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W 21st St and Henderson D	2
Minor Road =	Elyria Ave	1
Road Location =	Urban	

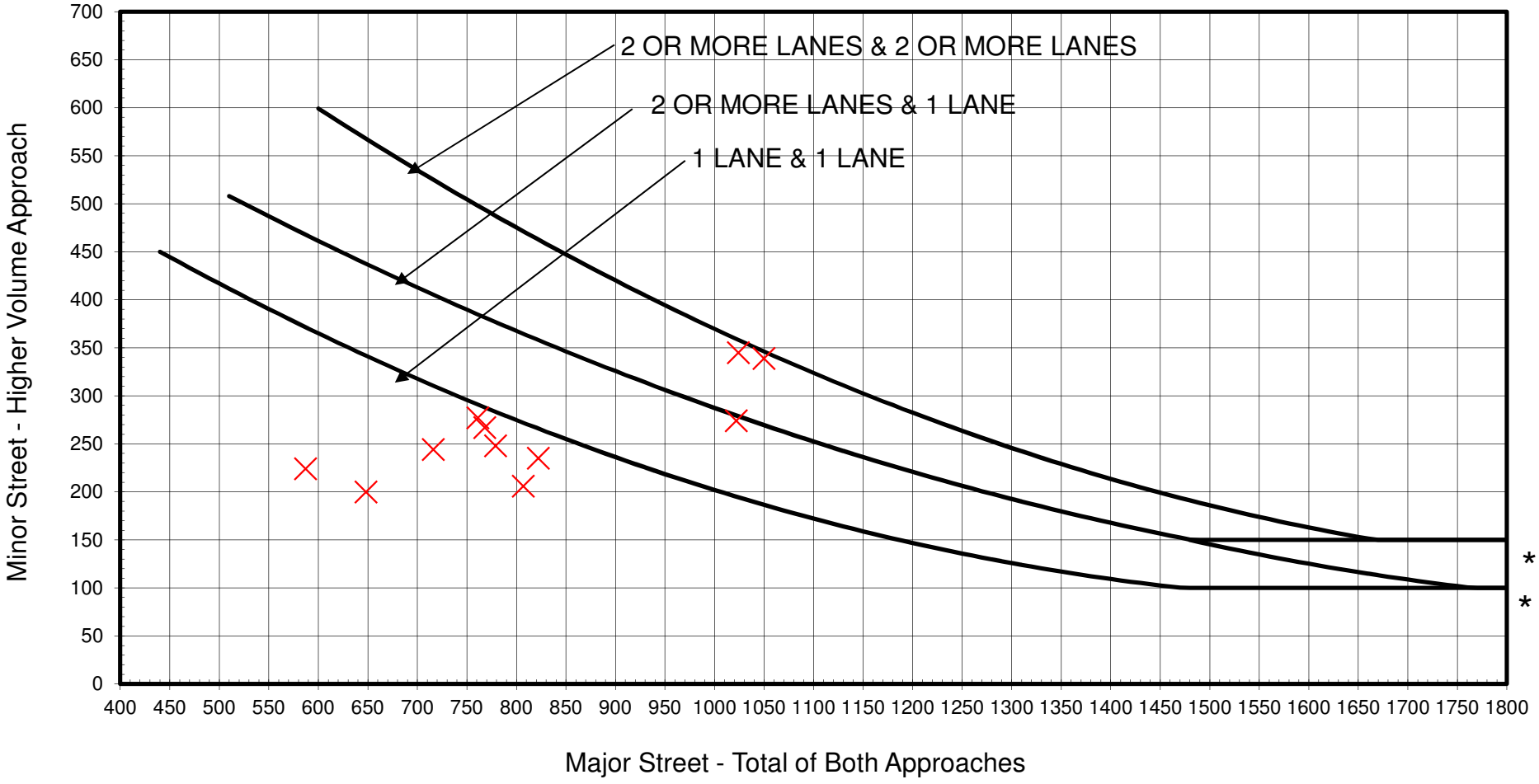
		Warrant Met?
Warrant 2 (Urban) =	9 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W 21st St and Henderson D	2
Minor Road =	Elyria Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	2 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	November 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.31

Traffic Signal Warrant Analysis Results

Intersection 31
W Erie Ave (US 6) and Baumhart Rd

SIGNAL WARRANT

INTERSECTION: Baumhart Rd and W Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Rural
NUMBER OF LANES PER APPROACH: N: 0 S :2 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? YES
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1				500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+	X		X	420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		663	281	0	X	X	X	X	X	X	X	X					X	X
8AM-9AM		581	263	0	X	X	X	X		X	X	X					X	
9AM-10AM		499	221	0	X	X	X	X		X		X						
10AM-11AM		495	201	0	X	X	X	X		X		X						
11AM-NOON		624	228	0	X	X	X	X		X	X	X					X	
NOON-1PM		627	249	0	X	X	X	X		X	X	X					X	
1PM-2PM		628	239	0	X	X	X	X		X	X	X					X	
2PM-3PM		699	273	0	X	X	X	X	X	X	X	X					X	X
3PM-4PM		724	330	0	X	X	X	X	X	X	X	X					X	X
4PM-5PM		780	426	0	X	X	X	X	X	X	X	X					X	X
5PM-6PM		695	380	0	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					11		11		5		9						9	5
WARRANT SATISFIED?					YES		YES		NO		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Baumhart Rd and W Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

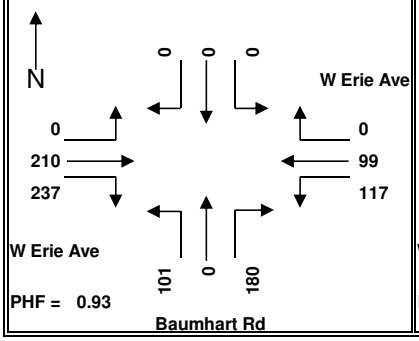
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.061	Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:
Rural Principle Arterial

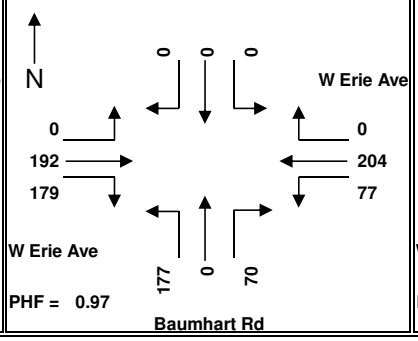
ADT Factor: 1.46
Intersection ID: 31

Start Time	Baumhart Rd Northbound LT	THRU	RT	Truck	Southbound LT	THRU	RT	Truck	Total North South	W Erie Ave Eastbound LT	THRU	RT	Truck	W Erie Ave Westbound LT	THRU	RT	Truck	Total East West	Total All Dir.
Totals	2037	0	1054	247	0	0	0	0	3091	0	1981	1991	185	976	2067	0	163	7015	10106
	Percent Trucks =			8%	Percent Trucks =			0%		Percent Trucks =			5%	Percent Trucks =			5%		
ADT	3155	0	1633	383	0	0	0	0	4788	0	3068	3084	287	1512	3202	0	252	10866	15653
7:00 AM	21	0	39	5	0	0	0	0	60	0	35	66	0	37	18	0	7	156	216
7:15 AM	21	0	50	5	0	0	0	0	71	0	58	60	1	21	23	0	1	162	233
7:30 AM	26	0	38	2	0	0	0	0	64	0	66	63	3	32	28	0	4	189	253
7:45 AM	33	0	53	7	0	0	0	0	86	0	51	48	4	27	30	0	10	156	242
8:00 AM	24	0	30	2	0	0	0	0	54	0	33	48	3	24	37	0	6	142	196
8:15 AM	32	0	44	3	0	0	0	0	76	0	39	57	7	18	33	0	3	147	223
8:30 AM	33	0	27	5	0	0	0	0	60	0	45	57	4	11	29	0	2	142	202
8:45 AM	47	0	26	8	0	0	0	0	73	0	54	43	3	14	39	0	2	150	223
9:00 AM	31	0	26	13	0	0	0	0	57	0	37	50	6	16	27	0	1	130	187
9:15 AM	31	0	17	1	0	0	0	0	48	0	36	42	7	10	26	0	3	114	162
9:30 AM	42	0	27	12	0	0	0	0	69	0	43	36	5	13	29	0	2	121	190
9:45 AM	31	0	16	8	0	0	0	0	47	0	37	37	4	19	41	0	7	134	181
10:00 AM	45	0	10	6	0	0	0	0	55	0	44	41	2	11	37	0	2	133	188
10:15 AM	21	0	22	4	0	0	0	0	43	0	39	32	5	8	34	0	1	113	156
10:30 AM	34	0	20	8	0	0	0	0	54	0	36	36	6	15	37	0	1	124	178
10:45 AM	39	0	10	4	0	0	0	0	49	0	39	29	7	17	40	0	2	125	174
11:00 AM	34	0	21	12	0	0	0	0	55	0	55	57	5	14	34	0	5	160	215
11:15 AM	33	0	16	11	0	0	0	0	49	0	44	44	5	14	38	0	1	140	189
11:30 AM	43	0	22	10	0	0	0	0	65	0	48	45	11	15	48	0	5	156	221
11:45 AM	37	0	22	7	0	0	0	0	59	0	44	44	7	24	56	0	11	168	227
12:00 PM	55	0	10	3	0	0	0	0	65	0	50	43	4	15	58	0	8	166	231
12:15 PM	42	0	16	10	0	0	0	0	58	0	50	47	7	23	42	0	7	162	220
12:30 PM	38	0	26	9	0	0	0	0	64	0	40	56	10	11	42	0	5	149	213
12:45 PM	42	0	20	2	0	0	0	0	62	0	46	38	3	14	52	0	2	150	212
1:00 PM	45	0	13	6	0	0	0	0	58	0	47	31	2	17	45	0	4	140	198
1:15 PM	48	0	19	11	0	0	0	0	67	0	51	41	5	9	48	0	0	149	216
1:30 PM	43	0	20	7	0	0	0	0	63	0	34	51	8	25	58	0	8	168	231
1:45 PM	37	0	14	5	0	0	0	0	51	0	45	59	3	17	50	0	6	171	222
2:00 PM	45	0	14	5	0	0	0	0	59	0	49	47	4	27	42	0	3	165	224
2:15 PM	52	0	15	6	0	0	0	0	67	0	65	50	7	20	57	0	6	192	259
2:30 PM	44	0	26	9	0	0	0	0	70	0	62	45	6	13	45	0	4	165	235
2:45 PM	48	0	29	2	0	0	0	0	77	0	49	49	8	23	56	0	1	177	254
3:00 PM	42	0	22	8	0	0	0	0	64	0	37	42	6	39	67	0	3	185	249
3:15 PM	60	0	24	2	0	0	0	0	84	0	58	39	1	31	55	0	4	183	267
3:30 PM	60	0	29	2	0	0	0	0	89	0	48	52	4	23	59	0	2	182	271
3:45 PM	68	0	25	9	0	0	0	0	93	0	37	44	2	27	66	0	2	174	267
4:00 PM	83	0	33	5	0	0	0	0	116	0	45	43	4	36	51	0	0	175	291
4:15 PM	90	0	22	1	0	0	0	0	112	0	55	37	1	25	83	0	6	200	312
4:30 PM	71	0	25	1	0	0	0	0	96	0	45	41	0	42	76	0	3	204	300
4:45 PM	83	0	19	5	0	0	0	0	102	0	50	33	2	42	76	0	5	201	303
5:00 PM	74	0	25	0	0	0	0	0	99	0	39	55	0	37	73	0	5	204	303
5:15 PM	72	0	16	4	0	0	0	0	88	0	28	42	0	48	67	0	1	185	273
5:30 PM	70	0	28	2	0	0	0	0	98	0	40	39	1	33	57	0	1	169	267
5:45 PM	67	0	28	0	0	0	0	0	95	0	28	32	2	19	58	0	1	137	232

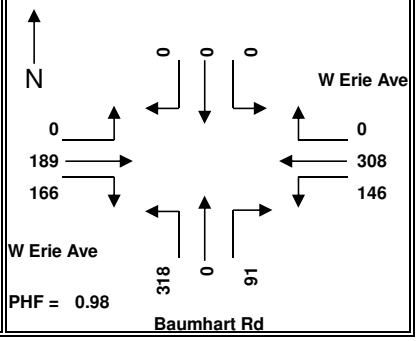
AM Peak Hour
7:00 AM to 8:00 AM



Midday Peak Hour
11:30 AM to 12:30 PM

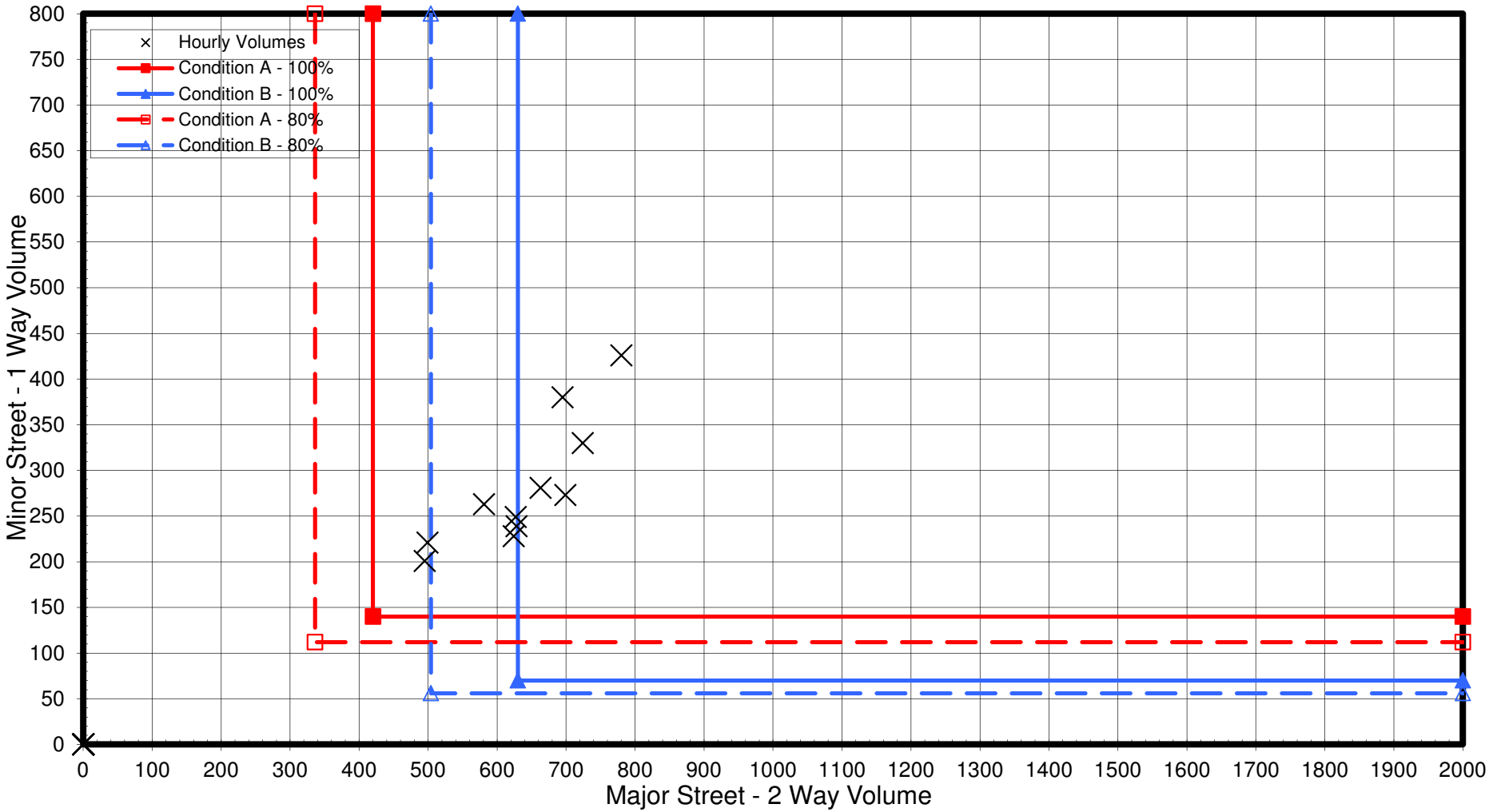


PM Peak Hour
4:15 PM to 5:15 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Baumhart Rd	2
Road Location =	Rural	

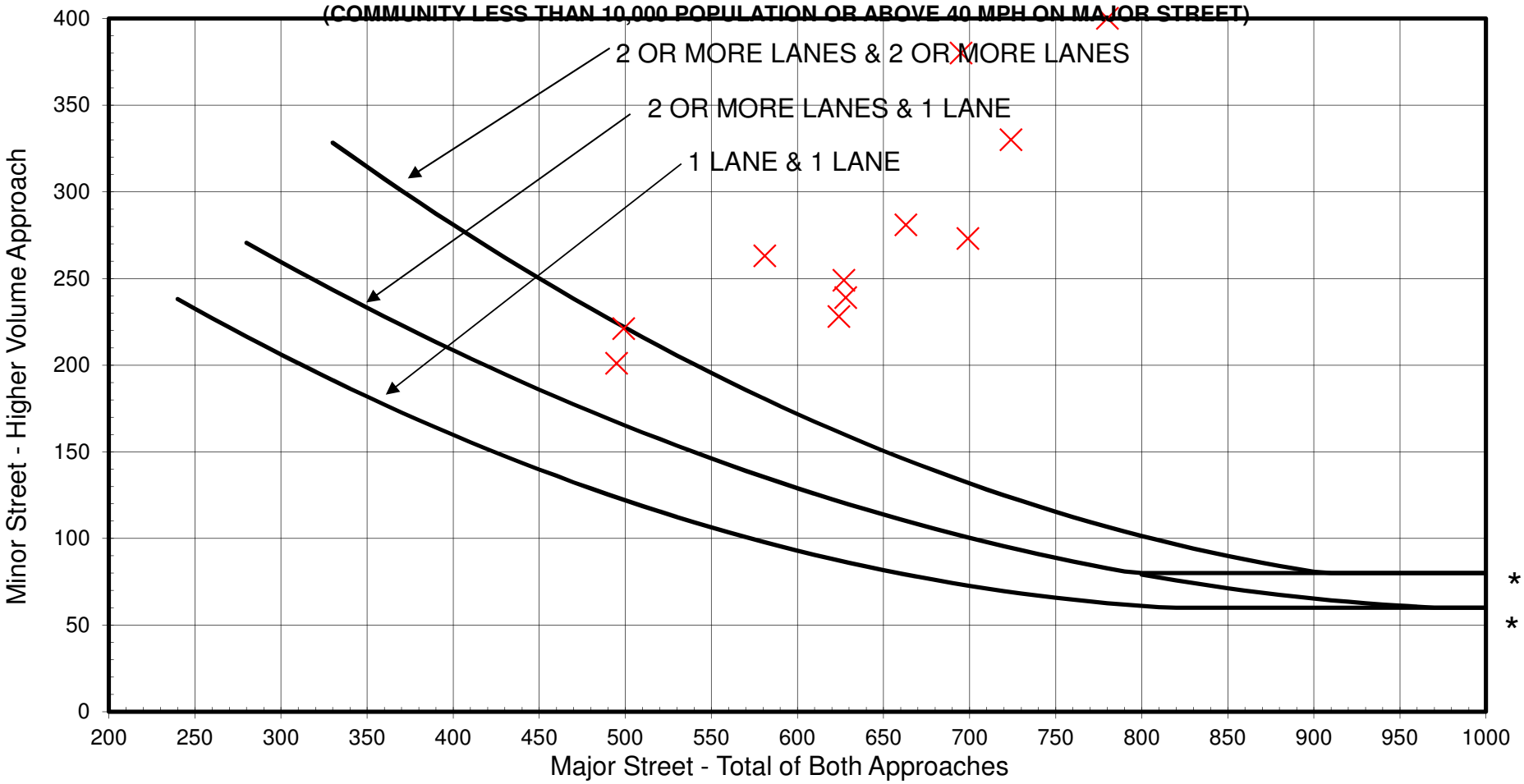
		Warrant Met?
Condition A (100%) =	11 Hours Meet	Yes
Condition B (100%) =	5 Hours Meet	No
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	9 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Baumhart Rd	2
Road Location =	Rural	

		Warrant Met?
Warrant 2 (Rural) =	9 Hours Meet	YES

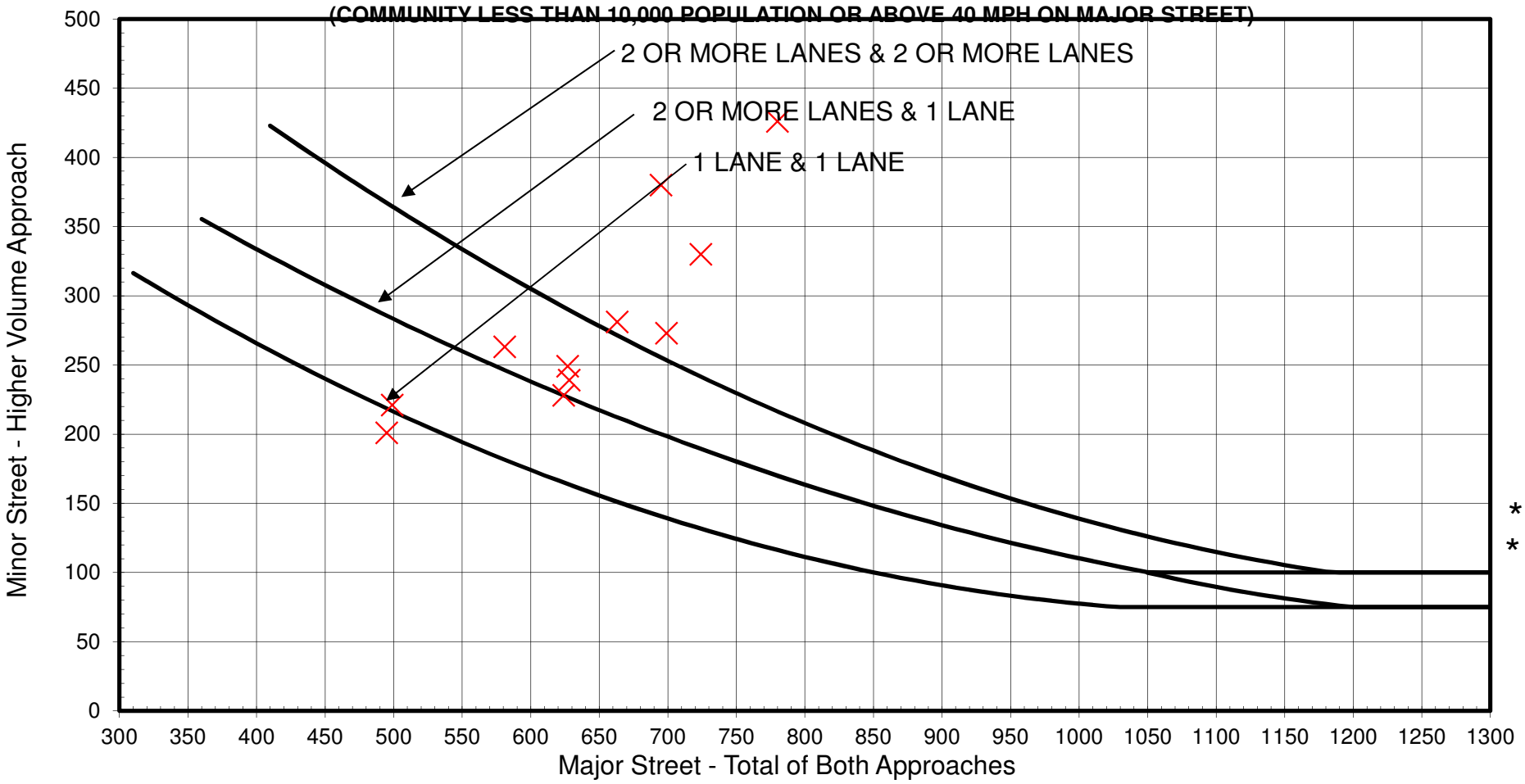
Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Baumhart Rd	2
Road Location =	Rural	

		Warrant Met?
Warrant 3 (Rural) =	5 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS

Appendix B.32

Traffic Signal Warrant Analysis Results

Intersection 32
Baumhart Rd and Old Ford Factory Entrance

SIGNAL WARRANT

INTERSECTION: Baumhart Rd and Old Ford Factory Entrance
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Rural
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 0
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? YES
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1				500	150	400	120	750	75	600	60						
NORM	2+				600	200	480	160	900	100	720	80						
*	1			X	350	105	280	84	525	53	420	42						
70%	2+	X			420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		672	0	1	X		X		X		X							
8AM-9AM		572	0	1	X		X				X							
9AM-10AM		452	0	0	X		X											
10AM-11AM		419	0	0			X											
11AM-NOON		508	0	0	X		X				X							
NOON-1PM		493	0	0	X		X											
1PM-2PM		506	0	0	X		X				X							
2PM-3PM		581	0	0	X		X				X							
3PM-4PM		673	0	0	X		X		X		X							
4PM-5PM		788	0	0	X		X		X		X							
5PM-6PM		700	0	0	X		X		X		X							
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Baumhart Rd and Old Ford Factory Entrance
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

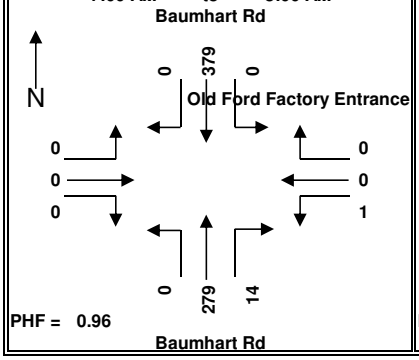
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.061	Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:
Rural Principle Arterial

ADT Factor: 1.46
Intersection ID: 32

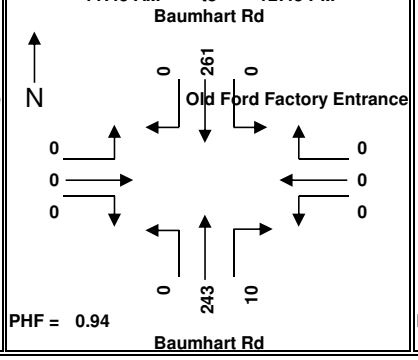
Start Time	Baumhart Rd Northbound				Baumhart Rd Southbound				Total North South	Eastbound				Old Ford Factory Entrance Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	0	3137	67	334	1	3159	0	299	6364	0	0	0	0	1	0	1	1	2	6366
	Percent Trucks =			10%	Percent Trucks =			9%		Percent Trucks =			0%	Percent Trucks =			50%		
ADT	0	4859	104	517	2	4893	0	463	9857	0	0	0	0	2	0	2	2	3	9860
7:00 AM	0	56	5	4	0	109	0	11	170	0	0	0	0	0	0	0	0	0	170
7:15 AM	0	71	2	2	0	88	0	5	161	0	0	0	0	1	0	0	1	1	162
7:30 AM	0	70	3	4	0	92	0	7	165	0	0	0	0	0	0	0	0	0	165
7:45 AM	0	82	4	10	0	90	0	12	176	0	0	0	0	0	0	0	0	0	176
8:00 AM	0	62	4	6	0	68	0	7	134	0	0	0	0	0	0	0	0	0	134
8:15 AM	0	87	2	5	0	69	0	7	158	0	0	0	0	0	0	0	0	0	158
8:30 AM	0	68	3	5	0	76	0	6	147	0	0	0	0	0	0	0	0	0	147
8:45 AM	0	73	3	9	0	57	0	6	133	0	0	0	0	0	0	1	0	1	134
9:00 AM	0	59	0	13	0	67	0	7	126	0	0	0	0	0	0	0	0	0	126
9:15 AM	0	51	1	7	0	48	0	7	100	0	0	0	0	0	0	0	0	0	100
9:30 AM	0	65	2	11	0	60	0	6	127	0	0	0	0	0	0	0	0	0	127
9:45 AM	0	47	2	8	0	50	0	10	99	0	0	0	0	0	0	0	0	0	99
10:00 AM	0	57	1	5	1	53	0	6	112	0	0	0	0	0	0	0	0	0	112
10:15 AM	0	44	0	5	0	56	0	8	100	0	0	0	0	0	0	0	0	0	100
10:30 AM	0	57	0	8	0	50	0	7	107	0	0	0	0	0	0	0	0	0	107
10:45 AM	0	48	2	6	0	50	0	5	100	0	0	0	0	0	0	0	0	0	100
11:00 AM	0	59	0	13	0	79	0	3	138	0	0	0	0	0	0	0	0	0	138
11:15 AM	0	50	1	13	0	66	0	6	117	0	0	0	0	0	0	0	0	0	117
11:30 AM	0	57	1	11	0	64	0	7	122	0	0	0	0	0	0	0	0	0	122
11:45 AM	0	59	6	9	0	66	0	13	131	0	0	0	0	0	0	0	0	0	131
12:00 PM	0	68	2	4	0	67	0	12	137	0	0	0	0	0	0	0	0	0	137
12:15 PM	0	50	2	11	0	67	0	12	119	0	0	0	0	0	0	0	0	0	119
12:30 PM	0	66	0	9	0	61	0	10	127	0	0	0	0	0	0	0	0	0	127
12:45 PM	0	59	2	5	0	49	0	6	110	0	0	0	0	0	0	0	0	0	110
1:00 PM	0	65	2	13	0	48	0	5	115	0	0	0	0	0	0	0	0	0	115
1:15 PM	0	65	2	14	0	54	0	6	121	0	0	0	0	0	0	0	0	0	121
1:30 PM	0	62	0	9	0	78	0	13	140	0	0	0	0	0	0	0	0	0	140
1:45 PM	0	55	1	10	0	74	0	5	130	0	0	0	0	0	0	0	0	0	130
2:00 PM	0	59	1	8	0	83	0	10	143	0	0	0	0	0	0	0	0	0	143
2:15 PM	0	71	1	8	0	71	0	10	143	0	0	0	0	0	0	0	0	0	143
2:30 PM	0	75	0	12	0	70	0	12	145	0	0	0	0	0	0	0	0	0	145
2:45 PM	0	79	1	5	0	70	0	9	150	0	0	0	0	0	0	0	0	0	150
3:00 PM	0	62	4	13	0	91	0	4	157	0	0	0	0	0	0	0	0	0	157
3:15 PM	0	90	1	7	0	74	0	4	165	0	0	0	0	0	0	0	0	0	165
3:30 PM	0	91	1	6	0	87	0	6	179	0	0	0	0	0	0	0	0	0	179
3:45 PM	0	94	3	15	0	75	0	3	172	0	0	0	0	0	0	0	0	0	172
4:00 PM	0	118	0	10	0	87	0	3	205	0	0	0	0	0	0	0	0	0	205
4:15 PM	0	116	0	4	0	79	0	6	195	0	0	0	0	0	0	0	0	0	195
4:30 PM	0	102	0	5	0	95	0	6	197	0	0	0	0	0	0	0	0	0	197
4:45 PM	0	101	0	7	0	90	0	5	191	0	0	0	0	0	0	0	0	0	191
5:00 PM	0	94	1	0	0	102	0	4	197	0	0	0	0	0	0	0	0	0	197
5:15 PM	0	91	0	4	0	101	0	1	192	0	0	0	0	0	0	0	0	0	192
5:30 PM	0	93	1	1	0	72	0	0	166	0	0	0	0	0	0	0	0	0	166
5:45 PM	0	89	0	0	0	56	0	1	145	0	0	0	0	0	0	0	0	0	145

AM Peak Hour
7:00 AM to 8:00 AM



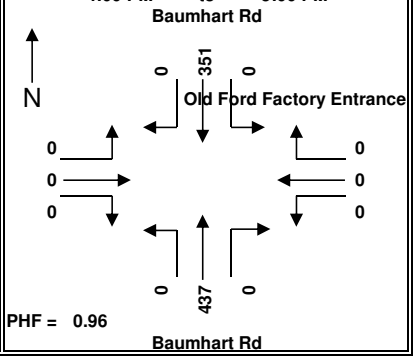
PHF = 0.96

Midday Peak Hour
11:45 AM to 12:45 PM



PHF = 0.94

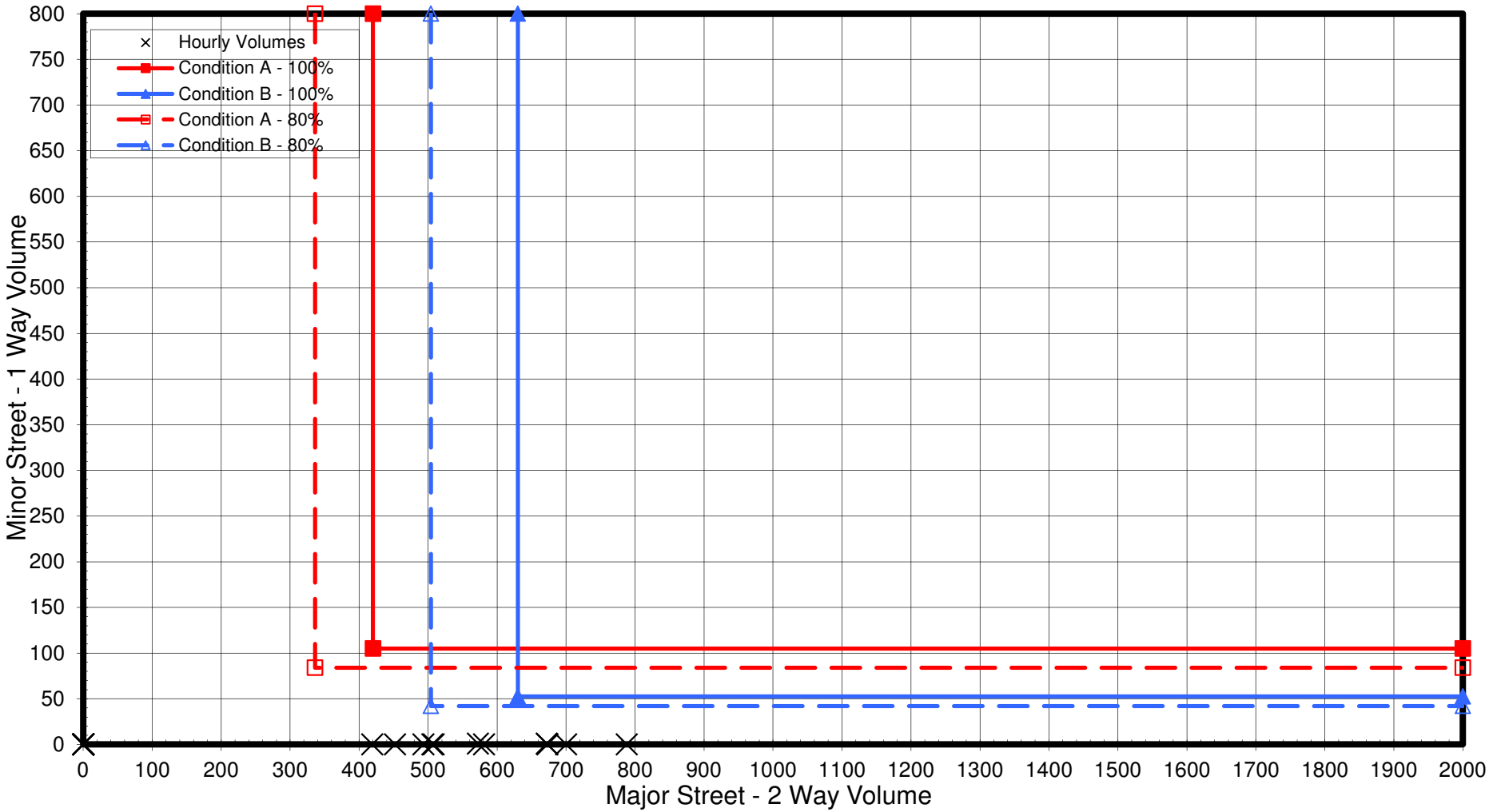
PM Peak Hour
4:00 PM to 5:00 PM



PHF = 0.96

Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	Baumhart Rd	2
Minor Road =	Old Ford Factory Entrance	1
Road Location =	Rural	

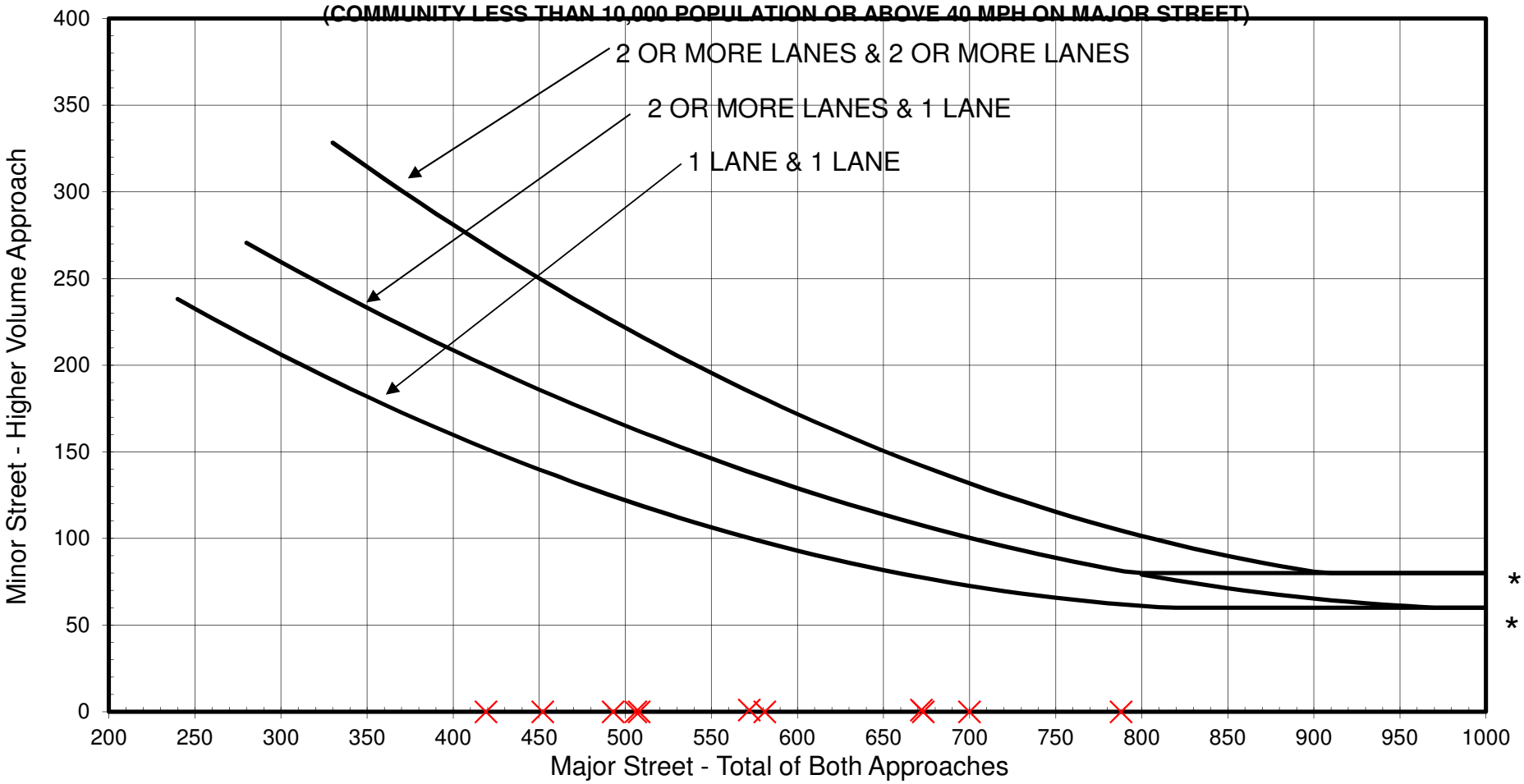
		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	Baumhart Rd	2
Minor Road =	Old Ford Factory Entrance	1
Road Location =	Rural	

		Warrant Met?
Warrant 2 (Rural) =	0 Hours Meet	NO

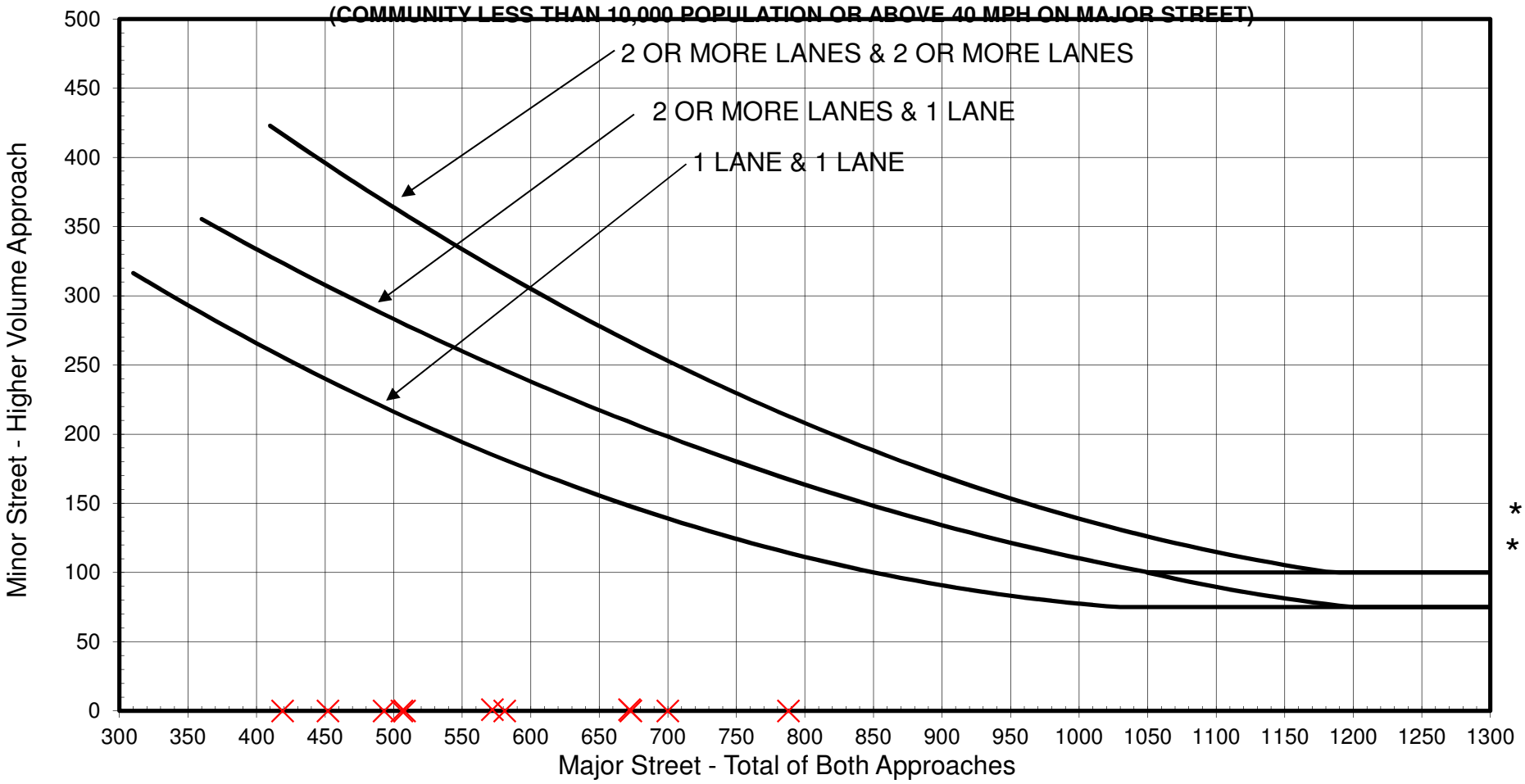
Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	Baumhart Rd	2
Minor Road =	Old Ford Factory Entrance	1
Road Location =	Rural	

		Warrant Met?
Warrant 3 (Rural) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS

Appendix B.33

Traffic Signal Warrant Analysis Results

Intersection 33
W Erie Ave (US 6) and Kolbe Rd

SIGNAL WARRANT

INTERSECTION: Private Entrance and Kolbe Rd and W Erie Ave
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		821	140	1	X		X	X		X	X	X						
8AM-9AM		652	120	1	X		X	X		X		X						
9AM-10AM		560	135	0			X	X		X		X						
10AM-11AM		556	162	0		X	X	X		X		X						
11AM-NOON		644	185	3	X	X	X	X		X		X						
NOON-1PM		710	230	0	X	X	X	X		X		X					X	
1PM-2PM		650	210	1	X	X	X	X		X		X						
2PM-3PM		778	239	0	X	X	X	X		X	X	X					X	
3PM-4PM		781	283	0	X	X	X	X		X	X	X					X	
4PM-5PM		916	268	1	X	X	X	X	X	X	X	X					X	
5PM-6PM		776	227	1	X	X	X	X		X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					7		11		1		5						5	0
WARRANT SATISFIED?					NO		YES		NO		NO						YES	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Private Entrance and Kolbe Rd and W Erie Ave
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

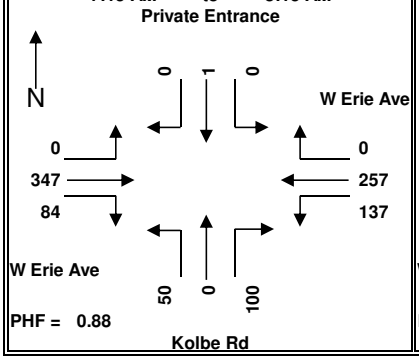
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.102	Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

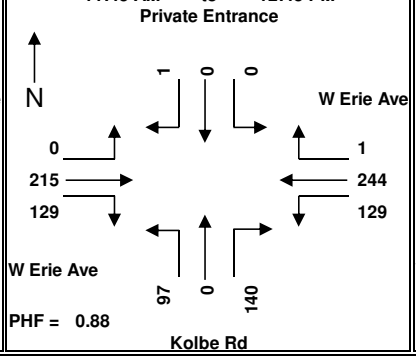
ADT Factor: 1.41
Intersection ID: 33

Start Time	Kolbe Rd Northbound				Private Entrance Southbound				Total North South	W Erie Ave Eastbound				W Erie Ave Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	877	4	1318	55	4	3	1	0	2207	0	2669	1004	136	1355	2813	3	181	7844	10051
	Percent Trucks =			3%	Percent Trucks =			0%		Percent Trucks =			4%	Percent Trucks =			4%		
ADT	1365	6	2051	86	6	5	2	0	3435	0	4154	1563	212	2109	4378	5	282	12209	15644
7:00 AM	9	0	10	2	0	0	0	0	19	0	51	13	3	28	75	0	2	167	186
7:15 AM	13	0	16	1	0	0	0	0	29	0	85	18	3	32	78	0	3	213	242
7:30 AM	14	0	36	2	0	0	0	0	50	0	91	29	2	29	59	0	8	208	258
7:45 AM	10	0	32	1	0	1	0	0	43	0	115	20	8	39	59	0	9	233	276
8:00 AM	13	0	16	1	0	0	0	0	29	0	56	17	1	37	61	0	4	171	200
8:15 AM	10	0	32	2	0	0	0	0	42	0	51	17	2	26	54	0	3	148	190
8:30 AM	4	0	21	0	0	1	0	0	26	0	66	17	2	29	46	0	4	158	184
8:45 AM	8	0	16	2	0	0	0	0	24	0	57	28	5	34	55	1	5	175	199
9:00 AM	12	0	18	1	0	0	0	0	30	0	45	17	7	25	44	0	4	131	161
9:15 AM	13	0	21	2	0	0	0	0	34	0	45	17	4	22	37	0	1	121	155
9:30 AM	16	0	20	1	0	0	0	0	36	0	53	26	3	25	52	0	5	156	192
9:45 AM	12	0	23	2	0	0	0	0	35	0	42	25	5	30	55	0	10	152	187
10:00 AM	15	0	23	0	0	0	0	0	38	0	39	27	6	16	45	0	3	127	165
10:15 AM	16	1	23	1	0	0	0	0	40	0	60	21	2	32	43	0	1	156	196
10:30 AM	18	0	17	0	0	0	0	0	35	0	47	20	3	25	47	0	4	139	174
10:45 AM	18	0	31	1	0	0	0	0	49	0	32	15	0	40	47	0	2	134	183
11:00 AM	14	0	28	2	1	0	0	0	43	0	53	26	5	18	53	0	7	150	193
11:15 AM	20	0	28	3	1	0	0	0	49	0	52	28	7	31	40	0	3	151	200
11:30 AM	15	0	24	1	0	0	0	0	39	0	57	25	7	26	47	0	3	155	194
11:45 AM	20	0	36	0	0	0	1	0	57	0	51	27	7	41	68	1	8	188	245
12:00 PM	25	0	32	3	0	0	0	0	57	0	65	51	3	29	69	0	11	214	271
12:15 PM	29	0	43	4	0	0	0	0	72	0	51	20	2	30	57	0	7	158	230
12:30 PM	23	0	29	0	0	0	0	0	52	0	48	31	6	29	50	0	4	158	210
12:45 PM	22	1	26	2	0	0	0	0	49	0	58	25	1	36	61	0	3	180	229
1:00 PM	18	0	24	0	0	0	0	0	42	0	49	24	1	34	61	0	3	168	210
1:15 PM	24	0	31	0	0	0	0	0	55	0	50	22	7	26	47	0	2	145	200
1:30 PM	23	0	32	0	0	1	0	0	56	0	46	26	2	45	70	0	6	187	243
1:45 PM	27	1	30	0	0	0	0	0	58	0	37	24	0	29	60	0	6	150	208
2:00 PM	19	0	39	1	0	0	0	0	58	0	71	24	5	35	73	0	2	203	261
2:15 PM	23	0	33	0	0	0	0	0	56	0	68	22	1	33	61	0	7	184	240
2:30 PM	18	0	33	0	0	0	0	0	51	0	63	32	6	31	53	0	4	179	230
2:45 PM	35	0	39	1	0	0	0	0	74	0	77	23	3	40	72	0	1	212	286
3:00 PM	28	0	38	3	0	0	0	0	66	0	73	13	0	43	68	0	3	197	263
3:15 PM	24	0	42	4	0	0	0	0	66	0	72	18	0	29	71	0	4	190	256
3:30 PM	33	0	53	1	0	0	0	0	86	0	64	18	2	39	63	0	1	184	270
3:45 PM	25	0	40	0	0	0	0	0	65	0	82	18	4	26	84	0	4	210	275
4:00 PM	30	0	40	1	1	0	0	0	71	0	84	24	3	28	68	0	2	204	275
4:15 PM	26	0	30	2	0	0	0	0	56	0	89	28	2	32	96	0	4	245	301
4:30 PM	36	0	43	3	0	0	0	0	79	0	78	29	2	25	117	0	2	249	328
4:45 PM	24	1	38	0	0	0	0	0	63	0	58	28	1	25	106	1	5	218	281
5:00 PM	29	0	41	1	0	0	0	0	70	0	64	15	0	39	94	0	4	212	282
5:15 PM	35	0	40	1	1	0	0	0	76	0	53	20	1	34	104	0	1	211	287
5:30 PM	16	0	32	3	0	0	0	0	48	0	69	13	2	28	71	0	3	181	229
5:45 PM	15	0	19	0	0	0	0	0	34	0	52	23	0	25	72	0	3	172	206

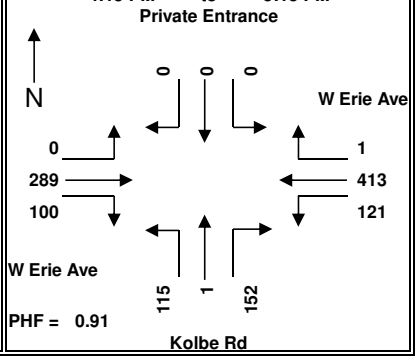
AM Peak Hour
7:15 AM to 8:15 AM



Midday Peak Hour
11:45 AM to 12:45 PM

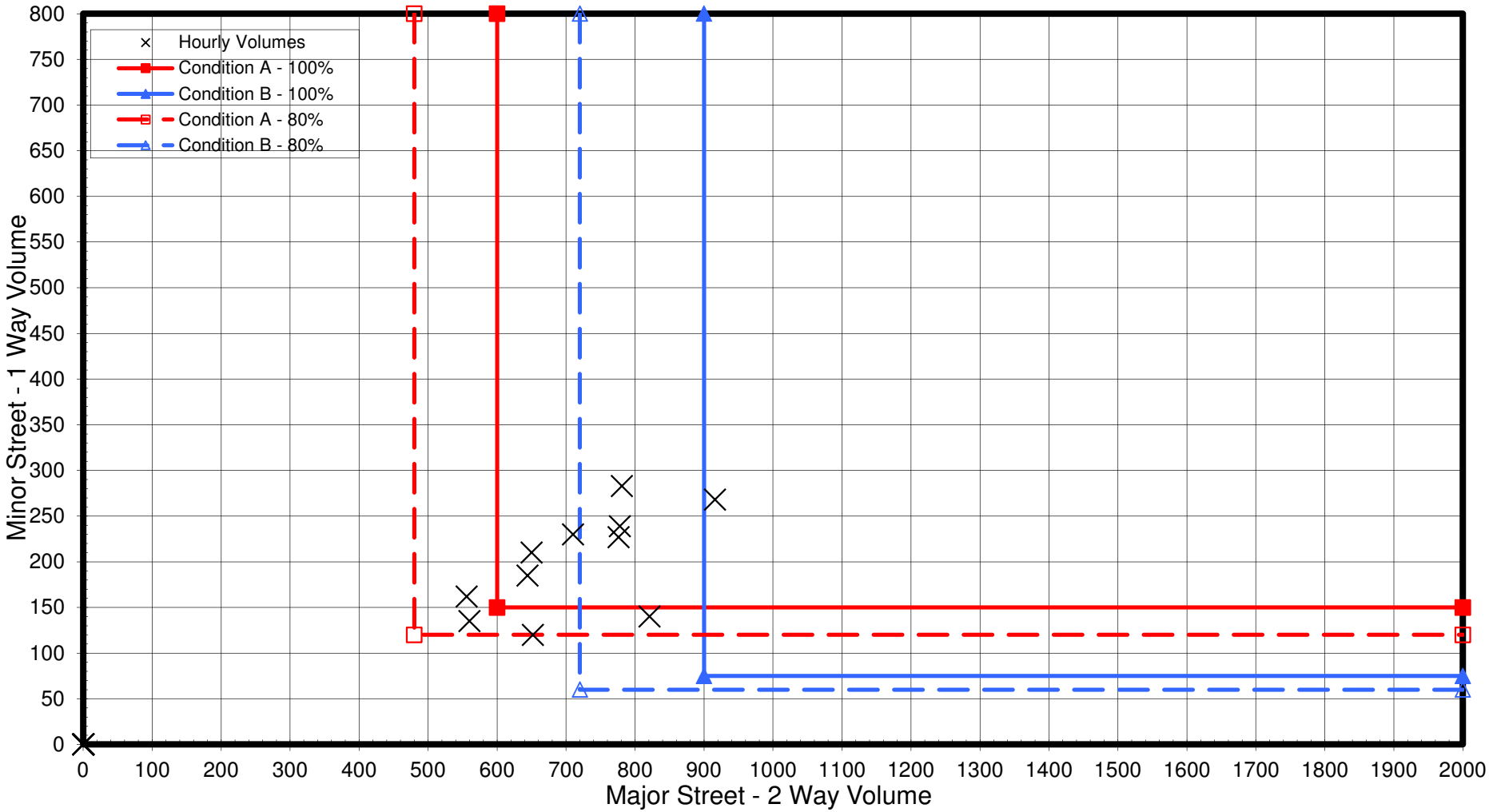


PM Peak Hour
4:15 PM to 5:15 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Private Entrance and Kolbe	1
Road Location =	Urban	

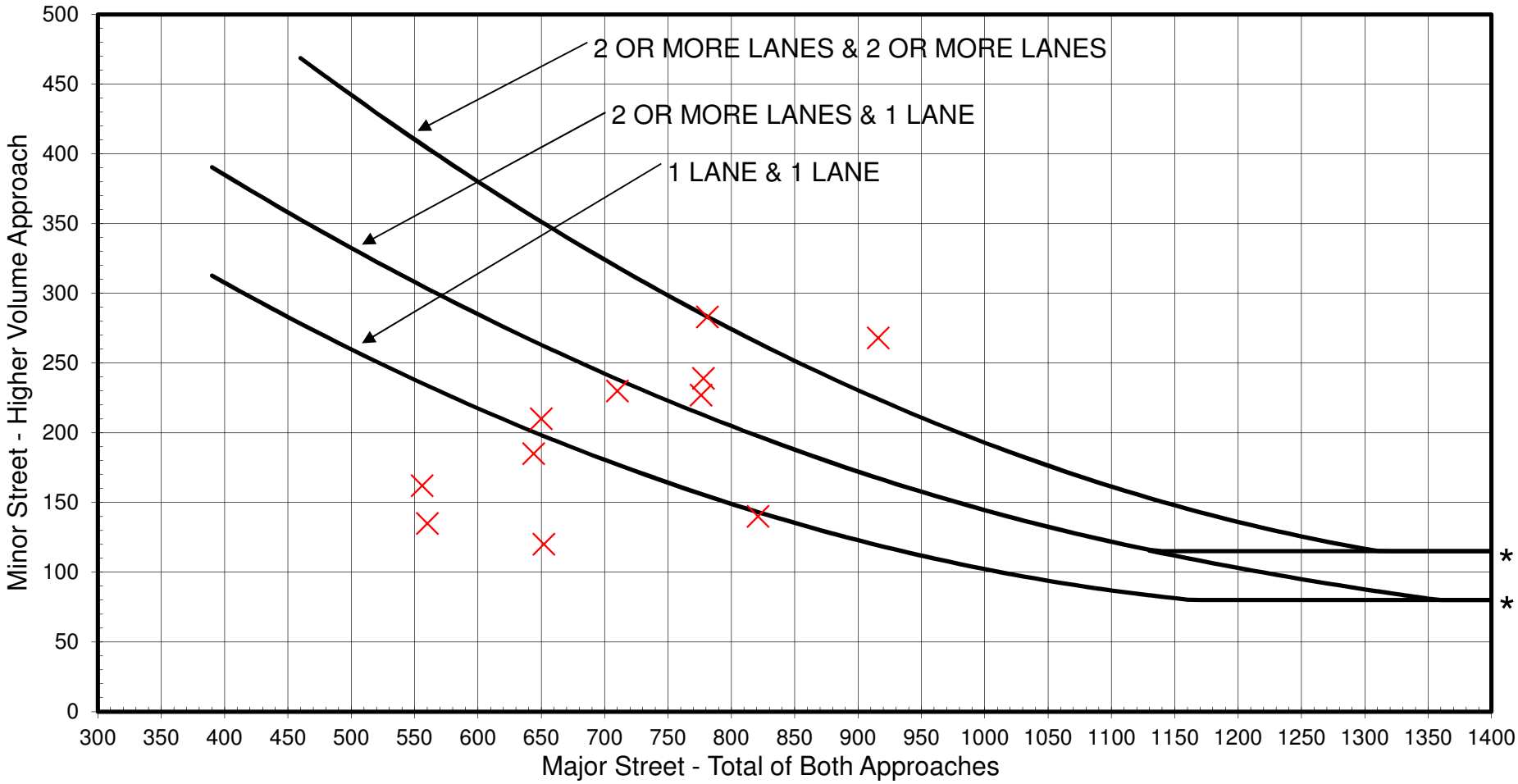
		Warrant Met?
Condition A (100%) =	7 Hours Meet	No
Condition B (100%) =	1 Hours Meet	No
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	5 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS

564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Private Entrance and Kolbe	1
Road Location =	Urban	

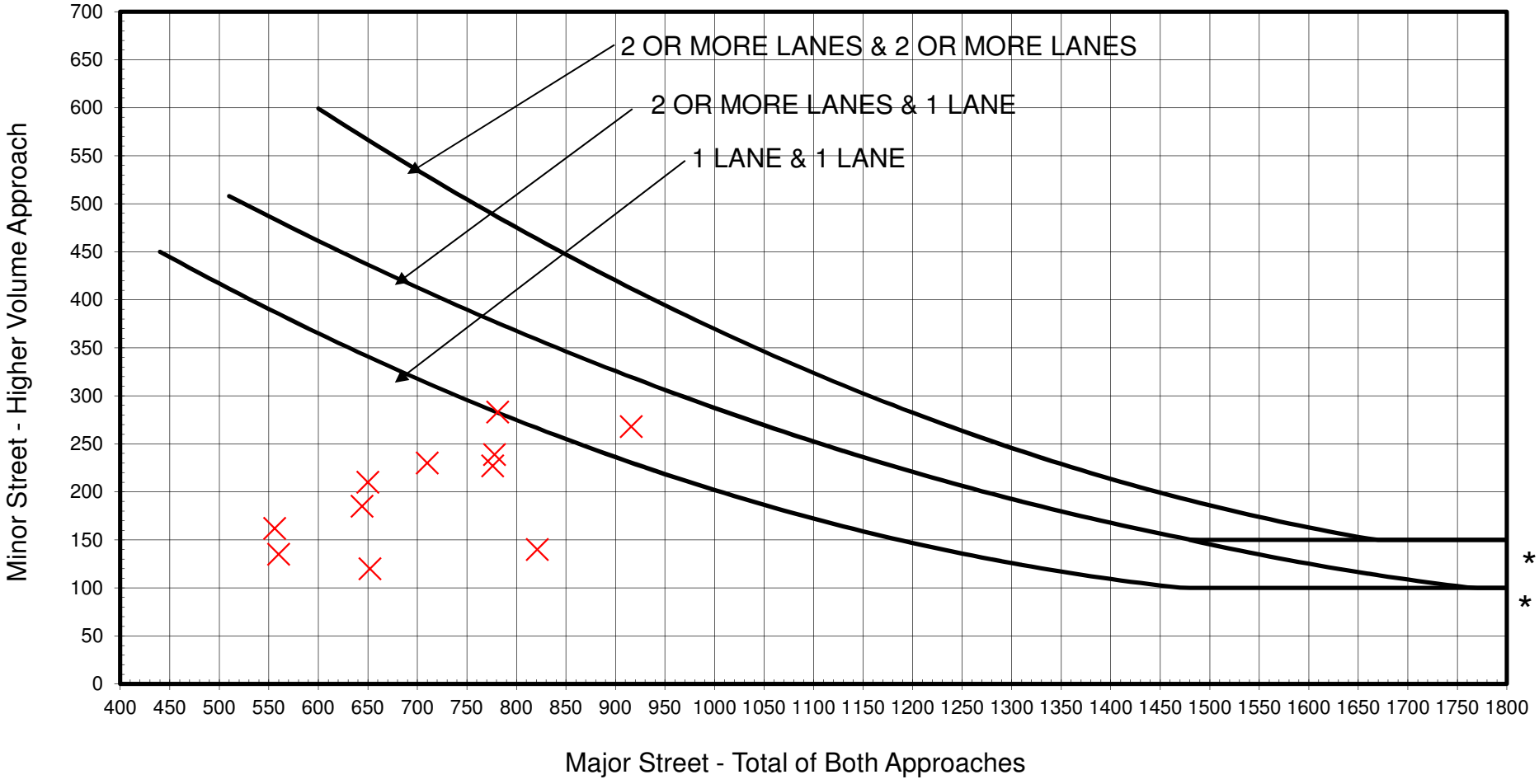
		Warrant Met?
Warrant 2 (Urban) =	5 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	W Erie Ave	2
Minor Road =	Private Entrance and Kolbe	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.34

Traffic Signal Warrant Analysis Results

Intersection 34
Oak Point Rd and Buck Horn Blvd/Park Square

SIGNAL WARRANT

INTERSECTION: Oak Point Rd and Buck Horn and Park Square
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		587	116	24	X		X			X		X						
8AM-9AM		476	93	32			X			X		X						
9AM-10AM		354	80	21						X		X						
10AM-11AM		331	81	18						X		X						
11AM-NOON		370	99	45						X		X						
NOON-1PM		434	130	50			X	X		X		X						
1PM-2PM		463	119	35			X			X		X						
2PM-3PM		539	148	36	X		X	X		X		X						
3PM-4PM		667	155	58	X	X	X	X		X	X	X						
4PM-5PM		648	171	90	X	X	X	X		X	X	X						
5PM-6PM		679	146	64	X		X	X		X	X	X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					2		5		0		3						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Oak Point Rd and Buck Horn and Park Square
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

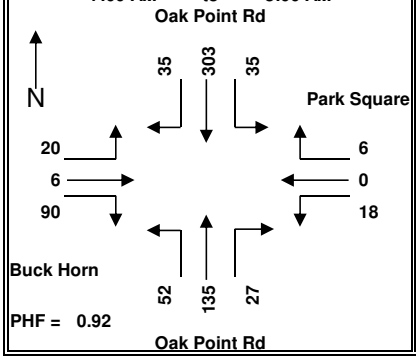
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.083	Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

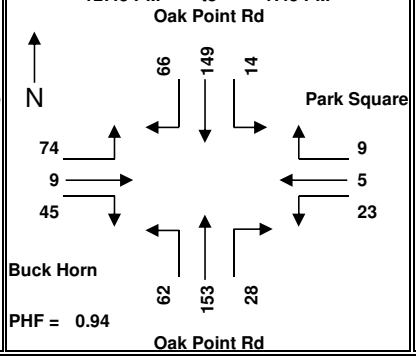
ADT Factor: 1.42
Intersection ID: 34

Start Time	Oak Point Rd Northbound				Oak Point Rd Southbound				Total North South	Buck Horn Eastbound				Park Square Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	733	1696	240	61	142	2065	672	59	5548	661	52	625	40	260	69	144	13	1811	7359
	Percent Trucks =			2%	Percent Trucks =			2%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	1126	2605	369	94	218	3172	1032	91	8523	1015	80	960	61	399	106	221	20	2782	11305
7:00 AM	7	9	5	0	3	103	5	3	132	2	1	38	1	4	0	1	0	46	178
7:15 AM	16	47	5	0	9	74	11	0	162	5	3	21	2	6	0	0	0	35	197
7:30 AM	16	41	7	0	7	80	6	1	157	5	2	16	1	4	0	2	0	29	186
7:45 AM	13	38	10	1	16	46	13	3	136	8	0	15	0	4	0	3	1	30	166
8:00 AM	9	19	14	1	9	53	10	2	114	9	1	15	1	6	1	3	0	35	149
8:15 AM	13	30	12	1	8	53	8	1	124	5	0	19	0	2	1	2	0	29	153
8:30 AM	11	37	14	1	5	46	7	0	120	7	2	18	0	4	3	4	0	38	158
8:45 AM	9	29	6	0	4	59	11	2	118	3	1	13	0	3	0	3	0	23	141
9:00 AM	11	24	6	2	4	50	10	1	105	14	2	10	1	1	1	3	0	31	136
9:15 AM	7	29	1	3	1	29	7	0	74	10	1	4	0	3	1	2	0	21	95
9:30 AM	17	24	3	1	2	32	12	2	90	7	0	10	3	1	1	4	0	23	113
9:45 AM	11	26	7	1	3	31	7	2	85	15	0	7	0	3	1	0	1	26	111
10:00 AM	9	28	5	1	2	24	9	0	77	11	0	15	3	2	1	3	0	32	109
10:15 AM	7	22	3	1	3	43	11	1	89	9	0	6	0	1	2	2	0	20	109
10:30 AM	11	16	2	4	3	35	15	2	82	8	0	11	1	0	0	0	0	19	101
10:45 AM	13	20	3	2	2	33	12	0	83	9	1	11	1	4	1	2	0	28	111
11:00 AM	12	19	5	0	3	28	17	1	84	14	1	15	4	4	3	0	0	37	121
11:15 AM	10	32	4	0	1	20	13	1	80	12	1	16	2	7	4	5	1	45	125
11:30 AM	13	37	4	6	4	35	17	5	110	7	0	9	1	2	1	6	3	25	135
11:45 AM	13	25	6	1	0	30	22	4	96	13	2	9	2	5	6	2	0	37	133
12:00 PM	18	23	2	3	2	27	17	1	89	22	1	12	1	7	5	5	0	52	141
12:15 PM	18	30	4	1	1	33	26	4	112	19	2	11	1	6	0	1	0	39	151
12:30 PM	12	33	5	0	7	31	23	0	111	13	3	8	0	8	6	4	0	42	153
12:45 PM	9	46	7	1	1	41	18	2	122	14	4	21	2	4	2	2	0	47	169
1:00 PM	18	30	4	0	4	34	16	0	106	26	0	9	0	6	2	2	1	45	151
1:15 PM	14	33	9	4	3	40	15	1	114	18	4	5	0	5	1	3	2	36	150
1:30 PM	21	44	8	3	6	34	17	0	130	16	1	10	0	8	0	2	0	37	167
1:45 PM	13	32	7	0	5	41	15	4	113	17	1	12	0	2	0	4	0	36	149
2:00 PM	13	39	9	0	0	41	17	0	119	17	2	9	1	4	2	2	0	36	155
2:15 PM	16	32	2	2	3	50	16	1	119	30	1	16	1	7	2	3	0	59	178
2:30 PM	21	48	5	1	2	62	14	0	152	21	1	18	0	4	2	2	0	48	200
2:45 PM	22	54	8	3	2	38	25	1	149	14	1	18	2	4	0	4	1	41	190
3:00 PM	25	45	4	4	1	58	16	4	149	16	3	22	3	4	1	3	0	49	198
3:15 PM	20	63	3	1	0	65	20	1	171	25	3	14	1	11	3	6	0	62	233
3:30 PM	34	59	3	2	1	51	23	0	171	15	2	15	0	8	1	5	0	46	217
3:45 PM	32	58	7	3	2	57	20	2	176	27	0	13	1	7	1	8	0	56	232
4:00 PM	28	60	2	0	2	45	10	1	147	26	1	14	2	8	3	4	0	56	203
4:15 PM	30	65	10	2	2	54	25	2	186	23	2	15	0	12	1	6	1	59	245
4:30 PM	16	50	2	1	2	52	24	0	146	25	2	21	1	22	1	10	1	81	227
4:45 PM	25	55	4	0	0	62	23	0	169	19	0	23	0	16	3	4	0	65	234
5:00 PM	23	77	3	3	1	68	12	0	184	21	0	10	1	15	3	5	0	54	238
5:15 PM	28	53	3	0	2	69	24	2	179	20	0	14	0	12	1	7	1	54	233
5:30 PM	26	65	3	1	2	69	11	1	176	23	0	17	0	10	1	3	0	54	230
5:45 PM	23	50	4	0	2	39	22	1	140	21	0	20	0	4	1	2	0	48	188

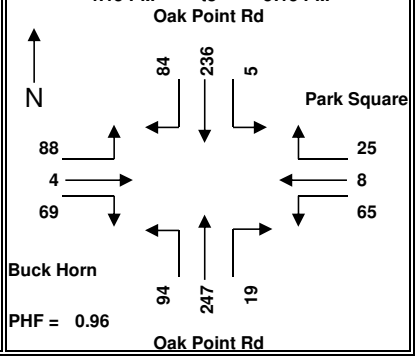
AM Peak Hour
7:00 AM to 8:00 AM



Midday Peak Hour
12:45 PM to 1:45 PM

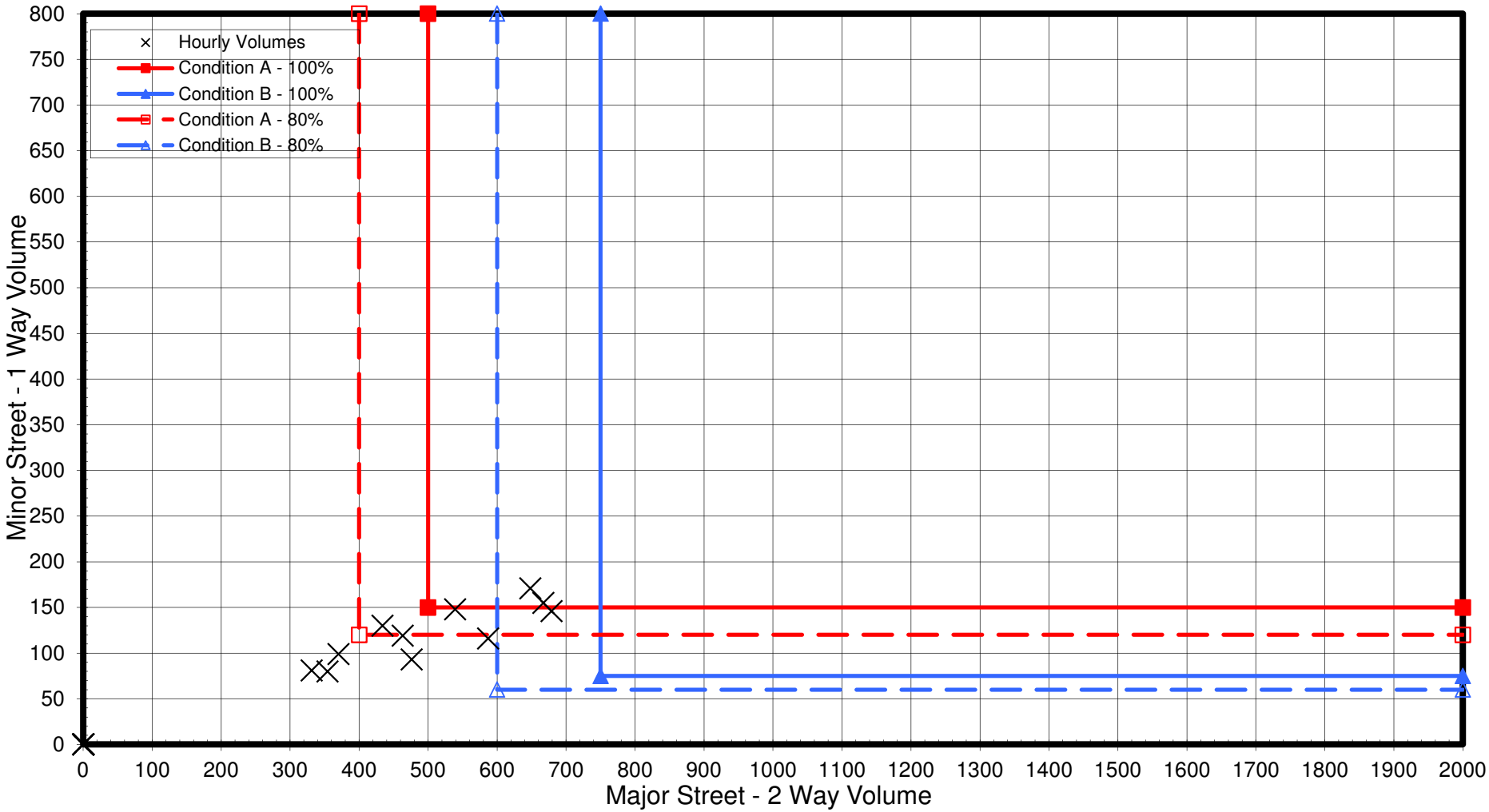


PM Peak Hour
4:15 PM to 5:15 PM



Notes:

WARRANT 1 - Conditions A & B



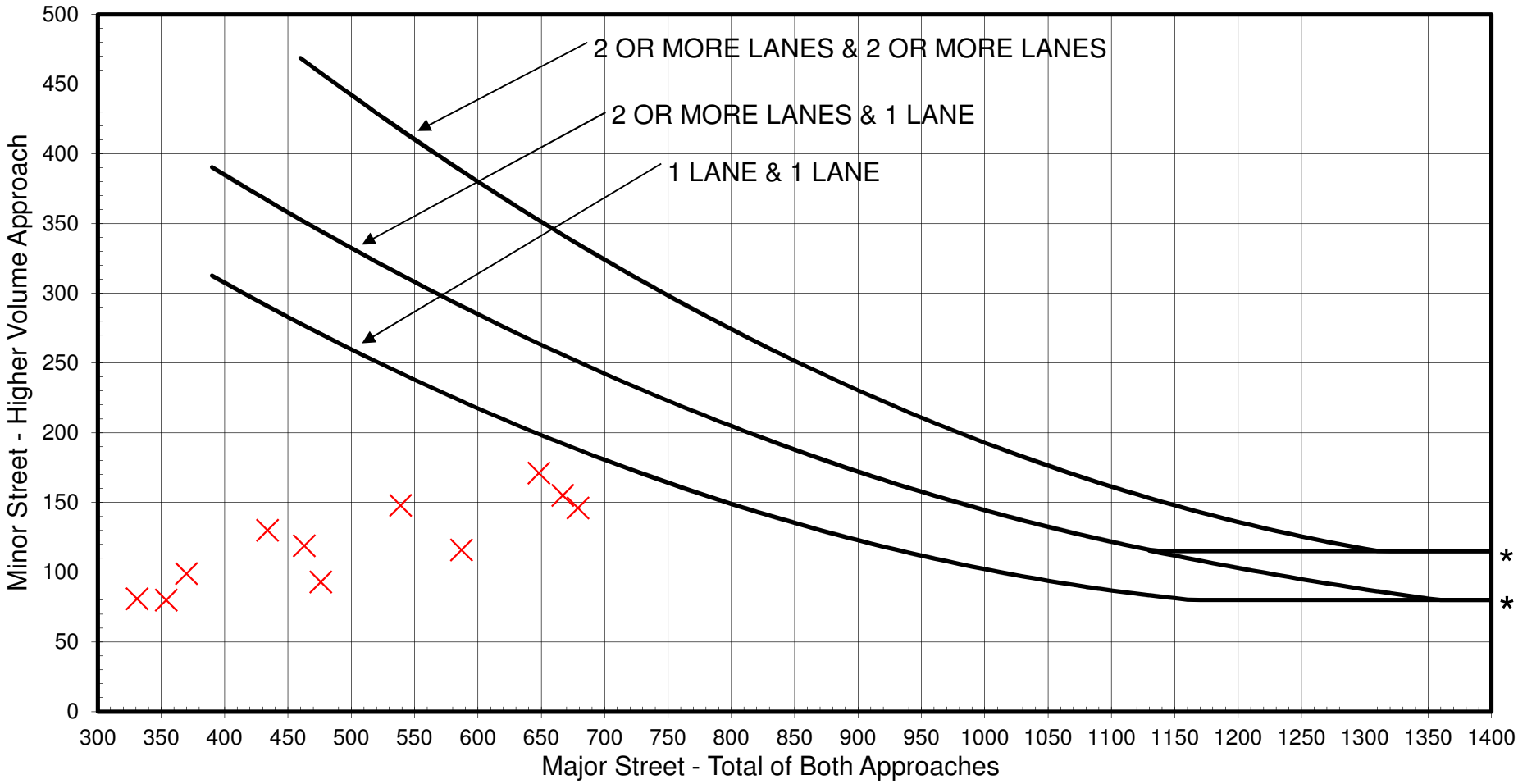
		Lanes
Major Road =	Oak Point Rd	1
Minor Road =	Buck Horn and Park Square	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	2 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	5 Hours Meet	No
Condition B (80%) =	3 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Oak Point Rd	1
Minor Road =	Buck Horn and Park Square	1
Road Location =	Urban	

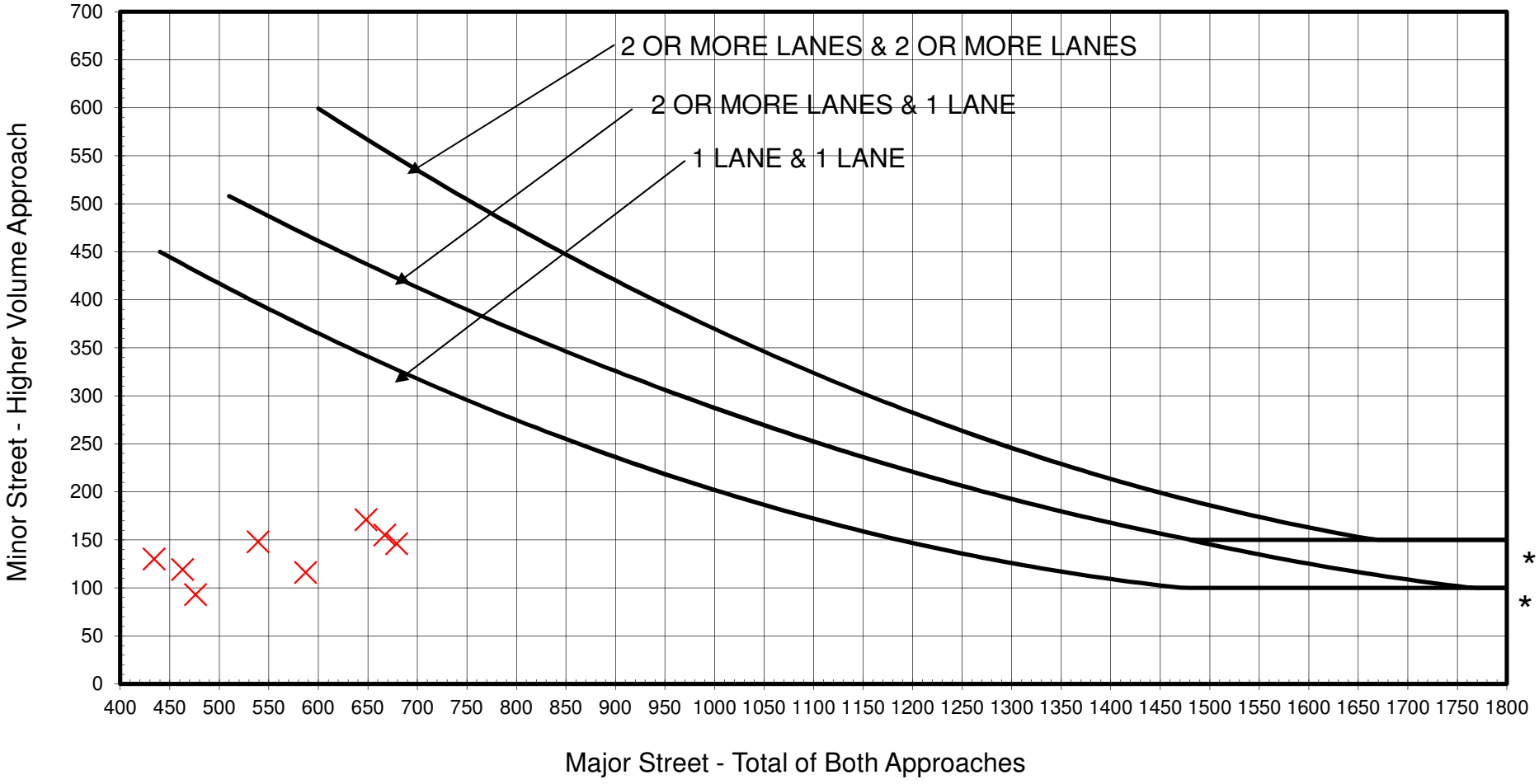
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Oak Point Rd	1
Minor Road =	Buck Horn and Park Square	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.35

Traffic Signal Warrant Analysis Results

Intersection 35
Cooper Foster Park Rd and Super K/
Funeral Home Entrance

SIGNAL WARRANT

INTERSECTION: Super K Entrance and Funeral Home Entrance and Cooper Foster Park Rd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		836	0	12	X		X				X							
8AM-9AM		712	2	27	X		X											
9AM-10AM		735	3	28	X		X				X							
10AM-11AM		764	2	47	X		X				X							
11AM-NOON		875	6	67	X		X				X	X						
NOON-1PM		915	2	80	X		X		X	X	X	X						
1PM-2PM		829	5	67	X		X				X	X						
2PM-3PM		1072	7	69	X		X		X		X	X						
3PM-4PM		994	4	65	X		X		X		X	X						
4PM-5PM		1037	4	75	X		X		X	X	X	X						
5PM-6PM		932	1	77	X		X		X	X	X	X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		3		7						0	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data

r K Entrance and Funeral Home Entrance and Cooper Foster Park

Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.018	Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

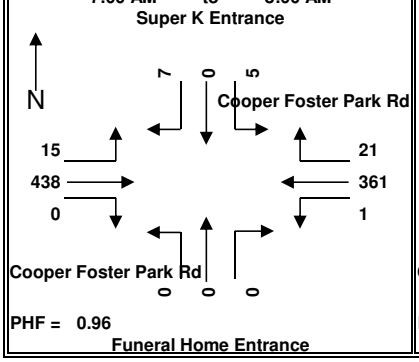
Roadway Classification:

ADT Factor: 1.41
Intersection ID: 35

Start Time	Funeral Home Entrance Northbound				Super K Entrance Southbound				Total North South	Cooper Foster Park Rd Eastbound				Cooper Foster Park Rd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	4	1	31	0	330	0	284	10	650	262	4587	7	96	28	4172	645	88	9701	10351
	Percent Trucks =			0%	Percent Trucks =			2%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	6	1	45	0	474	0	408	14	935	377	6595	10	138	40	5999	927	127	13949	14883
7:00 AM	0	0	0	0	2	0	2	0	4	5	88	0	1	0	112	7	1	212	216
7:15 AM	0	0	0	0	0	0	0	0	0	1	136	0	2	0	82	2	0	221	221
7:30 AM	0	0	0	0	2	0	2	0	4	7	105	0	3	0	87	4	1	203	207
7:45 AM	0	0	0	0	1	0	3	0	4	2	109	0	4	1	80	8	5	200	204
8:00 AM	0	0	0	0	3	0	4	1	7	2	68	0	0	1	90	7	5	168	175
8:15 AM	0	0	2	0	4	0	3	1	9	7	97	1	3	0	75	16	4	196	205
8:30 AM	0	0	0	0	5	0	7	0	12	1	92	0	2	0	65	7	1	165	177
8:45 AM	0	0	0	0	0	0	1	0	1	5	89	0	4	1	84	4	0	183	184
9:00 AM	0	0	1	0	3	0	3	1	7	3	74	1	0	1	67	5	4	151	158
9:15 AM	0	0	1	0	3	0	1	1	5	5	93	0	3	1	78	12	2	189	194
9:30 AM	0	0	0	0	3	0	3	0	6	8	99	0	2	2	77	11	4	197	203
9:45 AM	0	0	1	0	6	0	6	0	13	4	99	0	2	2	77	16	5	198	211
10:00 AM	0	0	0	0	3	0	5	1	8	4	87	1	1	0	74	15	2	181	189
10:15 AM	0	1	1	0	8	0	7	0	17	5	88	0	3	0	83	8	2	184	201
10:30 AM	0	0	0	0	1	0	6	0	7	8	101	0	4	0	64	17	1	190	197
10:45 AM	0	0	0	0	11	0	6	0	17	7	91	1	3	1	96	13	4	209	226
11:00 AM	0	0	4	0	9	0	5	0	18	10	89	0	2	0	73	22	1	194	212
11:15 AM	0	0	0	0	17	0	3	0	20	4	110	0	4	0	88	12	5	214	234
11:30 AM	1	0	0	0	11	0	7	0	19	14	101	0	3	0	88	22	3	225	244
11:45 AM	0	0	1	0	6	0	9	0	16	7	124	1	8	0	93	17	2	242	258
12:00 PM	0	0	0	0	13	0	5	0	18	5	107	0	2	3	89	22	2	226	244
12:15 PM	0	0	0	0	10	0	8	1	18	8	98	0	0	0	92	24	4	222	240
12:30 PM	0	0	2	0	7	0	11	0	20	7	111	0	7	0	106	17	0	241	261
12:45 PM	0	0	0	0	14	0	12	0	26	7	98	0	1	0	99	22	4	226	252
1:00 PM	0	0	2	0	13	0	11	0	26	8	87	0	2	2	83	25	2	205	231
1:15 PM	0	0	1	0	6	0	5	0	12	5	95	0	2	0	86	17	1	203	215
1:30 PM	0	0	1	0	9	0	6	0	16	5	89	0	2	1	91	18	0	204	220
1:45 PM	0	0	1	0	8	0	9	0	18	5	88	1	1	1	107	15	2	217	235
2:00 PM	1	0	1	0	5	0	9	1	16	7	100	0	2	1	119	17	0	244	260
2:15 PM	0	0	2	0	11	0	10	0	23	3	102	0	1	1	121	19	0	246	269
2:30 PM	0	0	0	0	9	0	8	0	17	9	137	0	3	0	126	14	3	286	303
2:45 PM	0	0	3	0	12	0	5	0	20	8	181	0	6	2	91	14	2	296	316
3:00 PM	0	0	0	0	7	0	9	0	16	6	125	0	2	0	96	15	3	242	258
3:15 PM	0	0	3	0	10	0	12	0	25	5	129	0	1	3	99	15	3	251	276
3:30 PM	0	0	1	0	4	0	11	0	16	6	127	0	1	1	117	16	1	267	283
3:45 PM	0	0	0	0	6	0	6	2	12	6	100	0	1	0	117	11	2	234	246
4:00 PM	0	0	1	0	18	0	11	0	30	4	120	0	3	1	118	19	1	262	292
4:15 PM	1	0	0	0	9	0	7	0	17	15	97	0	1	0	119	13	3	244	261
4:30 PM	1	0	0	0	7	0	6	1	14	2	126	1	2	0	106	23	1	258	272
4:45 PM	0	0	1	0	6	0	11	0	18	8	129	0	0	2	113	21	0	273	291
5:00 PM	0	0	0	0	11	0	8	0	19	7	127	0	0	0	128	17	1	279	298
5:15 PM	0	0	0	0	14	0	9	0	23	6	96	0	0	0	127	19	1	248	271
5:30 PM	0	0	0	0	6	0	6	0	12	3	88	0	0	0	99	17	0	207	219
5:45 PM	0	0	1	0	17	0	6	0	24	8	90	0	2	0	90	10	0	198	222

AM Peak Hour

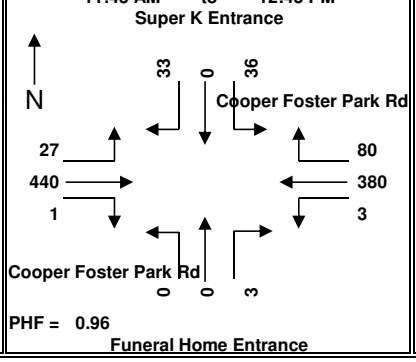
7:00 AM to 8:00 AM



PHF = 0.96

Midday Peak Hour

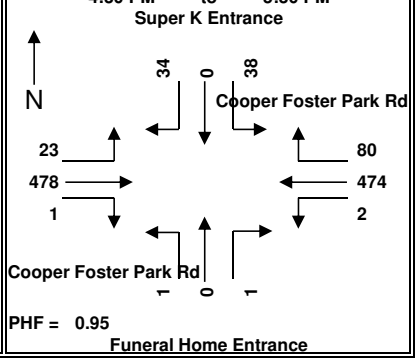
11:45 AM to 12:45 PM



PHF = 0.96

PM Peak Hour

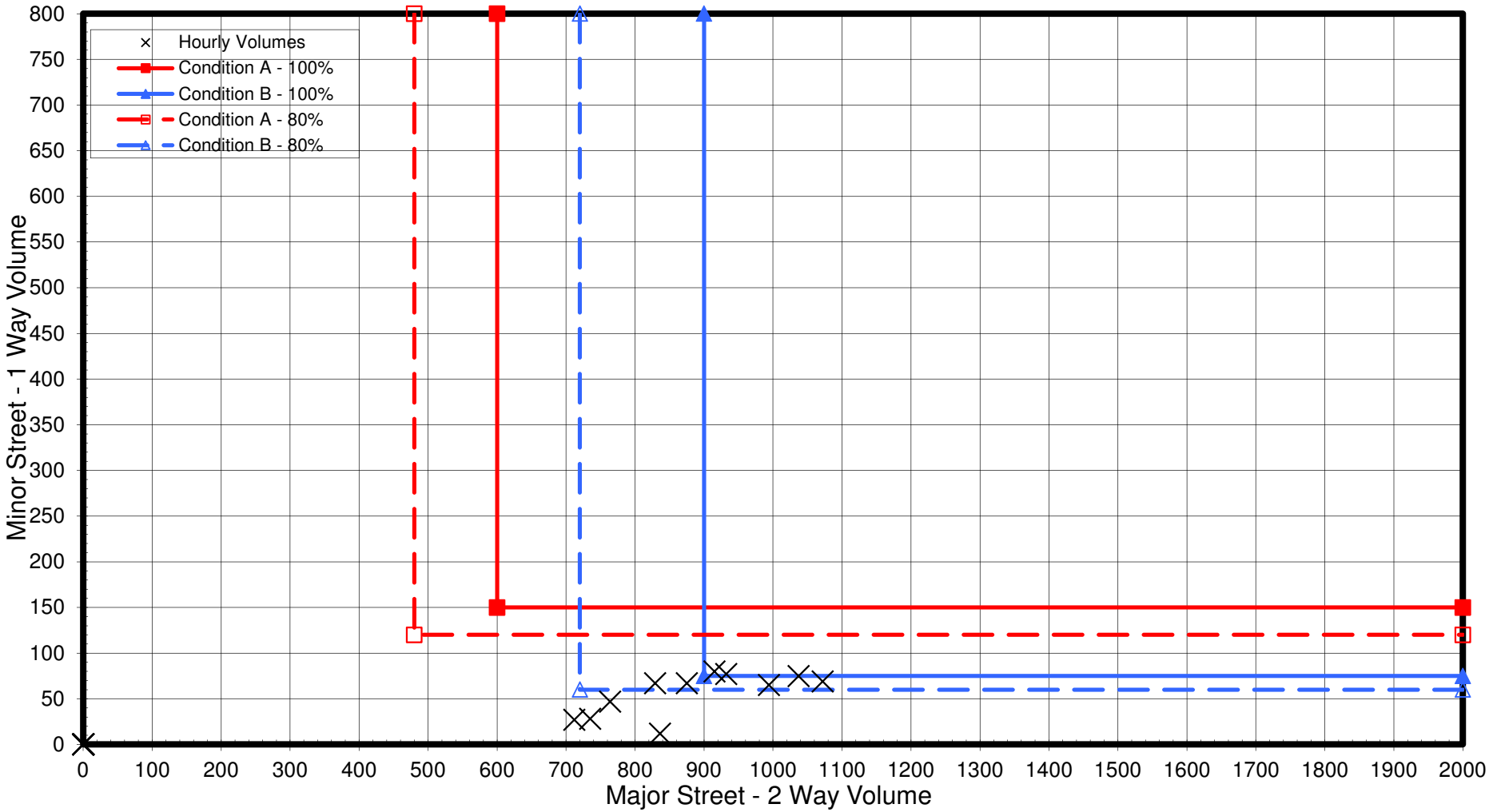
4:30 PM to 5:30 PM



PHF = 0.95

Notes:

WARRANT 1 - Conditions A & B



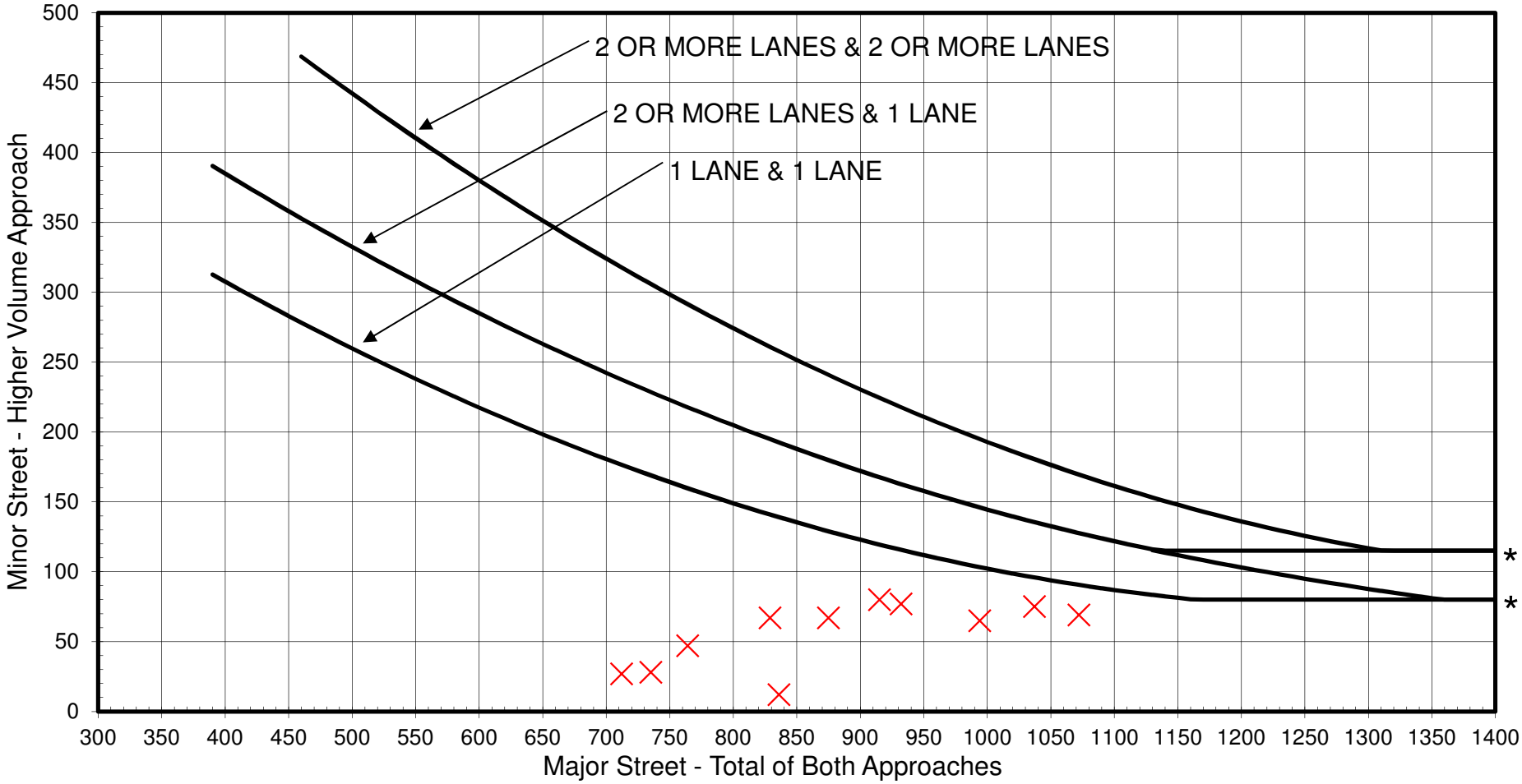
		Lanes
Major Road =	Cooper Foster Park Rd	2
Minor Road =	Super K Entrance and Funer	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	3 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	7 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Cooper Foster Park Rd	2
Minor Road =	Super K Entrance and Funer	1
Road Location =	Urban	

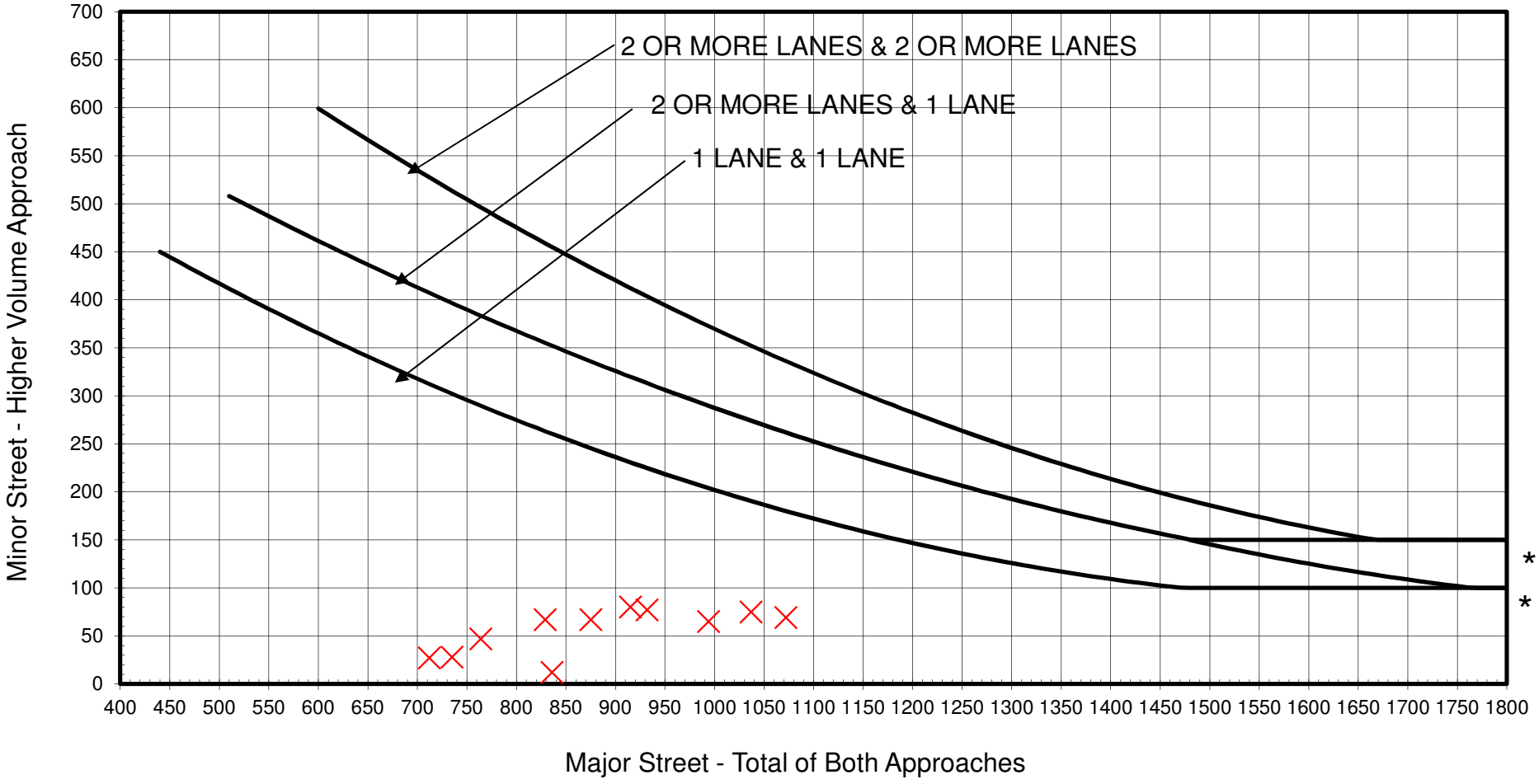
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Cooper Foster Park Rd	2
Minor Road =	Super K Entrance and Funer	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
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Appendix B.36

Traffic Signal Warrant Analysis Results

Intersection 36
N Leavitt Rd (SR 58) and Cooper Foster Park Rd

SIGNAL WARRANT

INTERSECTION: N Leavitt Rd and Cooper Foster Park Rd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1				500	150	400	120	750	75	600	60						
	2+	X	X	X	600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		1349	460	297	X	X	X	X	X	X	X	X					X	X
8AM-9AM		1238	400	326	X	X	X	X	X	X	X	X					X	X
9AM-10AM		1286	389	353	X	X	X	X	X	X	X	X					X	X
10AM-11AM		1535	418	491	X	X	X	X	X	X	X	X					X	X
11AM-NOON		1541	458	470	X	X	X	X	X	X	X	X					X	X
NOON-1PM		1731	500	585	X	X	X	X	X	X	X	X					X	X
1PM-2PM		1670	408	545	X	X	X	X	X	X	X	X					X	X
2PM-3PM		1796	584	607	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1872	527	582	X	X	X	X	X	X	X	X					X	X
4PM-5PM		2066	505	615	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1874	466	577	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					11		11		11		11						11	11
WARRANT SATISFIED?					YES		YES		YES		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
N Leavitt Rd and Cooper Foster Park Rd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

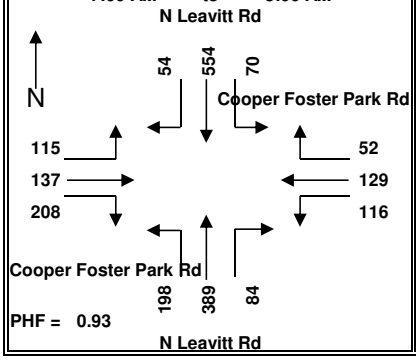
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.102	Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 36

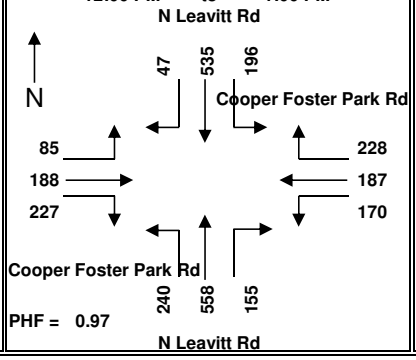
Start Time	N Leavitt Rd Northbound				N Leavitt Rd Southbound				Total North South	Cooper Foster Park Rd Eastbound				Cooper Foster Park Rd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	2260	5897	1490	246	1765	5886	660	165	17958	1001	1948	2166	110	1671	1942	1835	111	10563	28521
	Percent Trucks =			3%	Percent Trucks =			2%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	3518	9179	2319	383	2747	9162	1027	257	27952	1558	3032	3371	171	2601	3023	2856	173	16441	44393
7:00 AM	46	73	10	5	13	140	26	5	308	22	16	40	4	31	52	12	4	173	481
7:15 AM	42	88	20	3	21	146	11	3	328	41	42	52	1	30	31	14	2	210	538
7:30 AM	51	105	30	4	20	159	10	3	375	24	42	60	3	29	24	14	3	193	568
7:45 AM	59	123	24	5	16	109	7	3	338	28	37	56	4	26	22	12	1	181	519
8:00 AM	56	64	17	9	24	123	13	7	297	14	22	47	2	24	31	25	4	163	460
8:15 AM	48	89	29	10	18	111	12	4	307	26	36	55	4	34	37	23	2	211	518
8:30 AM	32	75	33	4	22	127	14	2	303	18	41	42	3	28	22	23	1	174	477
8:45 AM	49	87	38	5	23	122	12	4	331	16	41	42	4	28	27	24	3	178	509
9:00 AM	34	87	22	8	36	100	11	5	290	11	32	43	1	33	32	14	2	165	455
9:15 AM	53	98	29	6	15	107	5	5	307	16	37	45	3	25	23	33	3	179	486
9:30 AM	41	116	24	10	37	104	14	1	336	24	29	46	3	33	29	37	2	198	534
9:45 AM	59	111	26	10	42	102	13	7	353	22	47	37	2	27	35	32	3	200	553
10:00 AM	42	130	28	12	29	103	8	5	340	23	35	48	2	38	36	46	8	226	566
10:15 AM	42	141	36	3	39	102	12	2	372	22	41	35	3	43	32	38	5	211	583
10:30 AM	38	131	35	5	30	139	9	3	382	11	36	48	3	48	37	44	4	224	606
10:45 AM	51	161	30	5	56	129	14	4	441	28	47	44	5	36	43	50	2	248	689
11:00 AM	56	131	37	7	48	129	8	5	409	16	27	48	2	37	38	44	1	210	619
11:15 AM	41	116	24	10	43	111	20	5	355	18	55	59	4	34	38	29	1	233	588
11:30 AM	59	114	31	9	49	130	8	5	391	19	47	47	3	37	42	48	4	240	631
11:45 AM	41	120	34	5	54	123	14	6	386	31	49	42	6	39	48	36	6	245	631
12:00 PM	65	143	47	6	47	147	9	7	458	16	58	60	5	38	42	51	2	265	723
12:15 PM	54	117	31	9	54	126	12	4	394	22	47	55	0	53	45	44	3	266	660
12:30 PM	57	143	35	4	47	123	13	5	418	25	43	56	9	48	56	79	6	307	725
12:45 PM	64	155	42	8	48	139	13	4	461	22	40	56	1	31	44	54	4	247	708
1:00 PM	42	131	41	7	43	138	6	9	401	21	47	35	2	35	58	64	0	260	661
1:15 PM	54	133	36	1	46	151	21	3	441	18	40	46	4	54	33	38	1	229	670
1:30 PM	54	109	31	3	46	111	11	3	362	16	45	50	2	36	51	51	2	249	611
1:45 PM	60	152	31	6	53	149	21	3	466	20	35	35	1	29	49	47	1	215	681
2:00 PM	54	120	41	6	55	164	25	1	459	16	45	54	2	34	57	47	3	253	712
2:15 PM	46	157	30	8	47	160	21	5	461	28	49	45	1	41	75	49	1	287	748
2:30 PM	55	138	43	6	42	146	29	1	453	22	71	49	3	44	55	47	4	288	741
2:45 PM	40	158	51	4	41	117	16	1	423	55	94	56	6	45	53	60	2	363	786
3:00 PM	53	178	29	6	42	158	18	8	478	27	47	54	1	45	43	50	3	266	744
3:15 PM	56	134	39	2	52	128	16	6	425	28	52	69	0	46	47	65	2	307	732
3:30 PM	54	173	41	2	51	157	20	4	496	32	50	54	1	42	52	50	2	280	776
3:45 PM	56	144	44	8	60	148	21	4	473	23	37	54	1	41	55	46	2	256	729
4:00 PM	58	172	55	9	40	170	20	3	515	21	61	49	3	45	58	48	1	282	797
4:15 PM	66	174	39	2	48	158	20	3	505	15	50	42	1	46	49	52	4	254	759
4:30 PM	43	177	38	3	44	163	15	0	480	19	53	66	2	35	67	64	2	304	784
4:45 PM	65	220	44	4	54	161	22	2	566	26	52	51	1	47	52	52	1	280	846
5:00 PM	60	180	29	4	45	155	20	2	489	28	60	55	0	55	68	39	1	305	794
5:15 PM	66	187	41	1	36	143	17	1	490	24	35	44	0	39	56	52	1	250	740
5:30 PM	56	170	37	0	47	130	20	1	460	22	43	42	0	38	45	47	1	237	697
5:45 PM	42	172	38	2	42	128	13	1	435	25	35	53	2	44	53	41	1	251	686

AM Peak Hour
7:00 AM to 8:00 AM



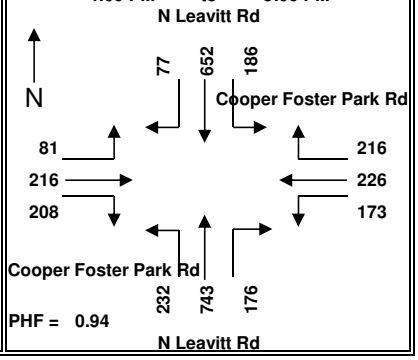
PHF = 0.93

Midday Peak Hour
12:00 PM to 1:00 PM



PHF = 0.97

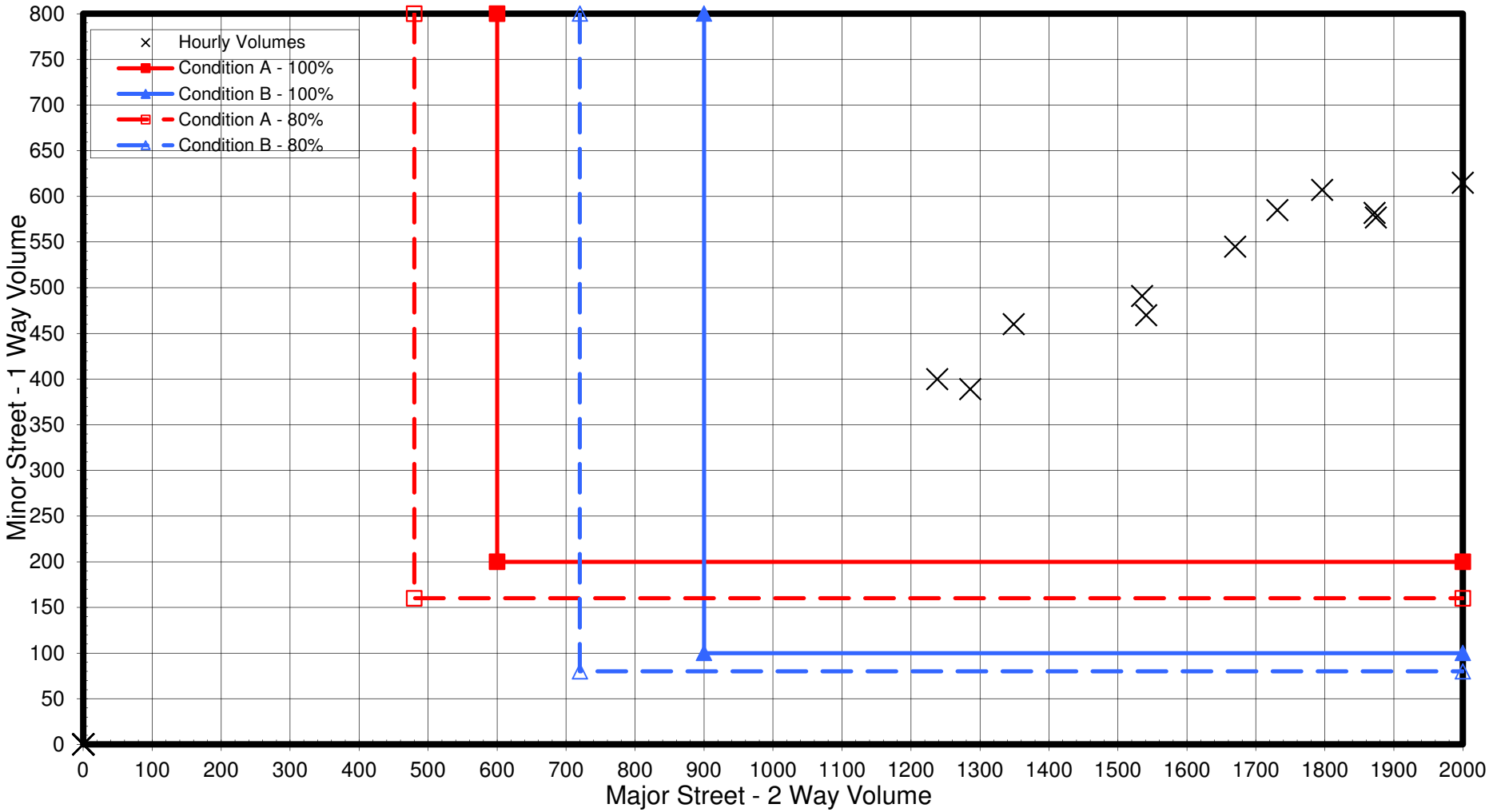
PM Peak Hour
4:00 PM to 5:00 PM



PHF = 0.94

Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Cooper Foster Park Rd	2
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	11 Hours Meet	Yes
Condition B (100%) =	11 Hours Meet	Yes
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
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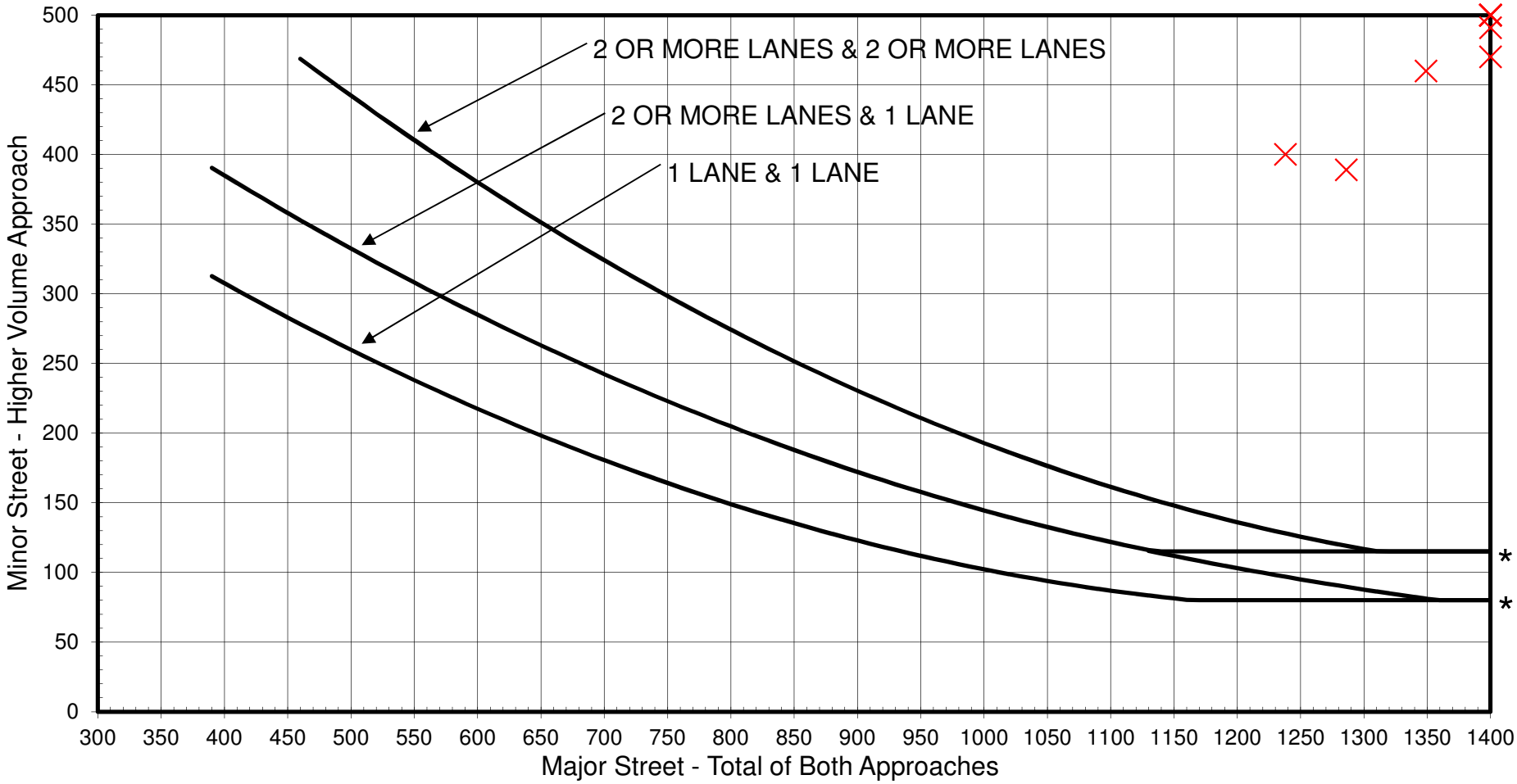
FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Cooper Foster Park Rd	2
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Urban) =	11 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
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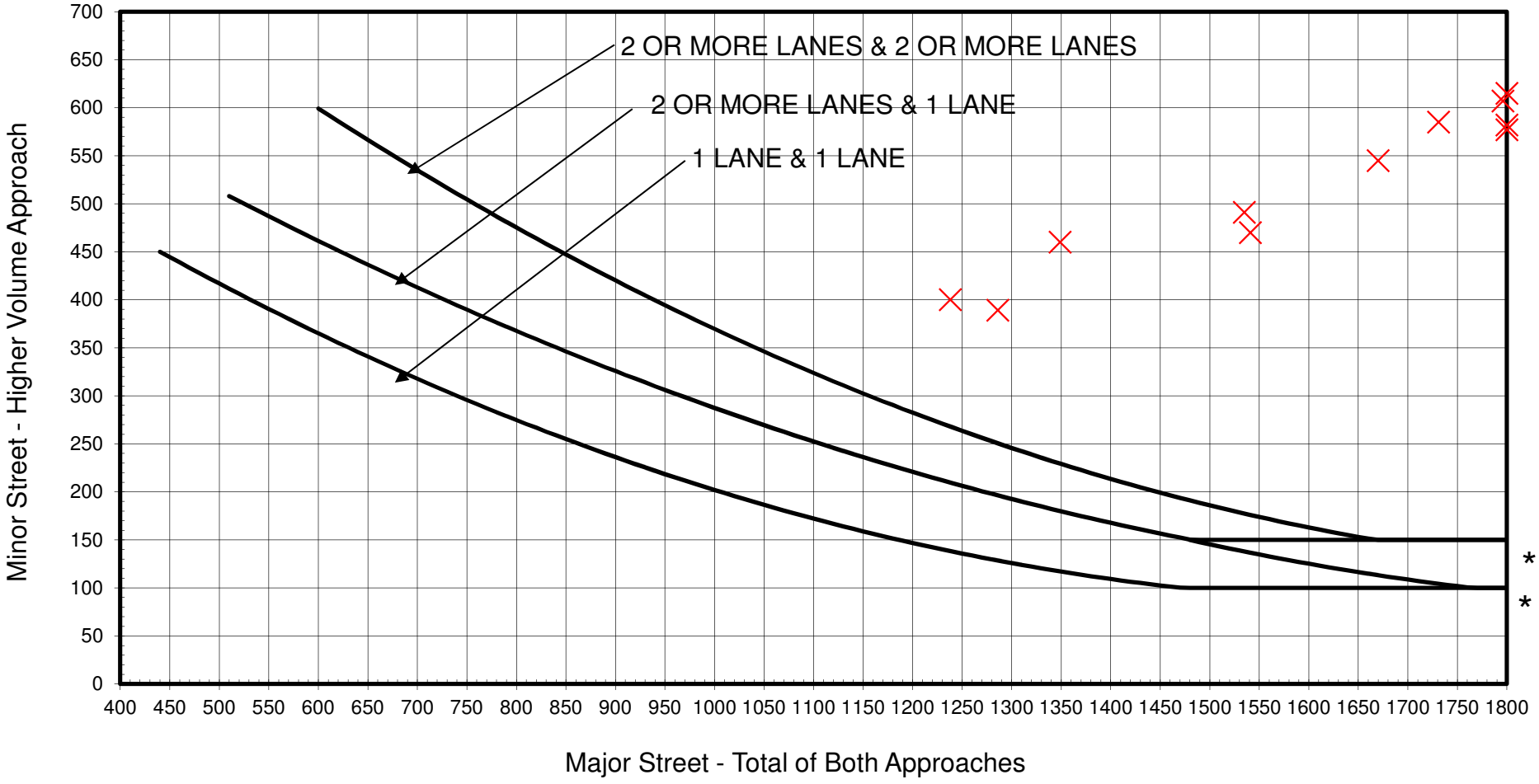
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Cooper Foster Park Rd	2
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	11 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
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Tel: 330.836.9111
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Appendix B.37

Traffic Signal Warrant Analysis Results

Intersection 37
N Leavitt Rd (SR 58) and Super K/Walgreens Entrance

SIGNAL WARRANT

INTERSECTION: N Leavitt Rd and Super K Entrance and Walgreens Entrance
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1		X	X	500	150	400	120	750	75	600	60						
	2+	X			600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		1180	22	25	X		X		X		X							
8AM-9AM		1117	28	28	X		X		X		X							
9AM-10AM		1140	65	29	X		X		X		X	X						
10AM-11AM		1313	81	52	X		X		X	X	X	X						
11AM-NOON		1406	122	69	X		X	X	X	X	X	X					X	
NOON-1PM		1607	142	82	X		X	X	X	X	X	X					X	X
1PM-2PM		1509	145	67	X		X	X	X	X	X	X					X	X
2PM-3PM		1727	115	68	X		X		X	X	X	X					X	X
3PM-4PM		1789	122	97	X		X	X	X	X	X	X					X	X
4PM-5PM		1822	133	109	X		X	X	X	X	X	X					X	X
5PM-6PM		1802	142	84	X		X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		6		8		9						7	6
WARRANT SATISFIED?					NO		NO		YES		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data

N Leavitt Rd and Super K Entrance and Walgreens Entrance

Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.102	Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

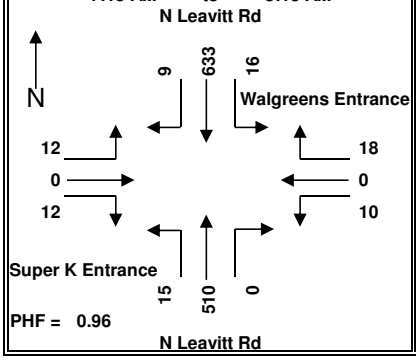
Roadway Classification:

ADT Factor: 1.41
Intersection ID: 37

Start Time	N Leavitt Rd Northbound				N Leavitt Rd Southbound				Total North South	Super K Entrance Eastbound				Walgreens Entrance Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	503	7799	19	197	294	7539	258	161	16412	399	39	679	10	292	38	380	7	1827	18239
	Percent Trucks =			2%	Percent Trucks =			2%		Percent Trucks =			1%	Percent Trucks =			1%		
ADT	783	12139	30	307	458	11734	402	251	25545	621	61	1057	16	454	59	591	11	2844	28389
7:00 AM	3	84	0	7	5	197	2	1	291	1	1	3	1	1	0	2	0	8	299
7:15 AM	4	133	0	1	2	169	0	3	308	2	0	4	0	2	0	5	0	13	321
7:30 AM	3	105	0	3	2	170	1	5	281	1	0	3	0	2	0	4	0	10	291
7:45 AM	3	148	0	5	6	139	4	4	300	5	0	2	0	3	0	6	0	16	316
8:00 AM	5	124	0	10	6	155	4	6	294	4	0	3	0	3	0	3	0	13	307
8:15 AM	3	102	0	3	5	139	3	4	252	3	0	5	0	2	0	5	0	15	267
8:30 AM	7	120	0	6	8	157	0	3	292	2	0	7	0	2	0	6	0	17	309
8:45 AM	10	117	1	3	1	146	4	4	279	2	0	2	0	2	0	5	0	11	290
9:00 AM	10	92	0	5	4	137	4	3	247	3	0	6	0	4	0	3	0	16	263
9:15 AM	5	135	0	7	4	144	4	8	292	3	0	12	0	0	1	3	0	19	311
9:30 AM	11	141	0	4	4	118	2	1	276	6	0	8	0	3	0	3	0	20	296
9:45 AM	10	147	1	11	5	156	6	4	325	10	0	17	0	1	1	10	0	39	364
10:00 AM	11	166	1	10	2	132	5	7	317	6	3	11	1	2	0	5	1	27	344
10:15 AM	17	147	1	5	4	128	4	2	301	4	0	11	2	6	0	8	0	29	330
10:30 AM	8	147	1	4	6	167	5	5	334	4	0	14	1	8	2	5	0	33	367
10:45 AM	10	164	0	1	9	172	6	6	361	9	0	19	0	8	2	6	1	44	405
11:00 AM	13	163	1	5	8	154	8	3	347	7	0	23	0	8	1	8	2	47	394
11:15 AM	10	169	0	8	4	160	11	4	354	13	1	15	1	10	2	7	1	48	402
11:30 AM	18	150	0	9	8	158	3	4	337	12	1	19	0	8	0	10	0	50	387
11:45 AM	14	165	0	6	5	172	12	6	368	14	0	17	0	6	0	9	0	46	414
12:00 PM	14	183	0	3	11	179	7	7	394	6	3	24	0	6	1	12	0	52	446
12:15 PM	18	178	0	8	8	179	13	5	396	14	1	20	1	6	2	9	0	52	448
12:30 PM	11	202	1	5	10	156	9	3	389	13	3	22	0	9	0	9	0	56	445
12:45 PM	12	225	1	5	9	172	9	5	428	13	0	23	0	11	0	17	1	64	492
1:00 PM	23	198	1	7	10	159	9	8	400	11	0	26	0	2	2	6	0	47	447
1:15 PM	11	163	1	1	5	172	9	2	361	16	0	23	0	8	2	8	0	57	418
1:30 PM	7	180	1	1	4	164	12	3	368	12	2	23	1	7	0	5	0	49	417
1:45 PM	12	180	0	2	8	176	4	4	380	10	4	18	0	10	0	17	0	59	439
2:00 PM	9	192	1	5	7	231	7	1	447	9	0	15	0	4	1	10	0	39	486
2:15 PM	16	178	2	8	4	218	7	4	425	15	2	13	0	7	0	13	0	50	475
2:30 PM	13	194	0	1	6	219	4	2	436	17	1	15	0	6	2	6	0	47	483
2:45 PM	13	232	0	3	10	156	8	2	419	8	1	19	0	8	1	10	0	47	466
3:00 PM	10	245	1	8	12	177	10	7	455	7	2	15	1	9	2	9	0	44	499
3:15 PM	16	204	0	1	11	182	6	3	419	8	1	17	0	14	1	9	0	50	469
3:30 PM	11	247	0	1	8	188	4	6	458	14	1	31	0	9	3	15	0	73	531
3:45 PM	9	211	1	4	6	220	10	4	457	6	2	18	0	12	0	14	0	52	509
4:00 PM	14	217	0	4	12	208	1	3	452	14	1	18	1	10	2	12	0	57	509
4:15 PM	14	202	2	3	13	188	6	2	425	7	3	13	0	15	1	10	1	49	474
4:30 PM	18	232	1	4	5	197	2	0	455	16	1	20	0	17	2	8	0	64	519
4:45 PM	14	277	0	5	11	182	6	1	490	14	2	24	0	15	3	14	0	72	562
5:00 PM	14	266	0	2	5	222	10	1	517	14	1	22	0	8	0	15	0	60	577
5:15 PM	15	227	0	2	8	186	8	2	444	14	1	18	0	8	1	15	0	57	501
5:30 PM	13	226	0	0	10	160	7	2	416	16	0	22	0	3	2	8	0	51	467
5:45 PM	21	221	0	1	3	178	2	1	425	14	1	19	0	7	1	16	0	58	483

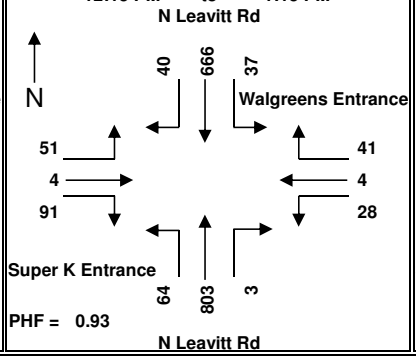
AM Peak Hour

7:15 AM to 8:15 AM



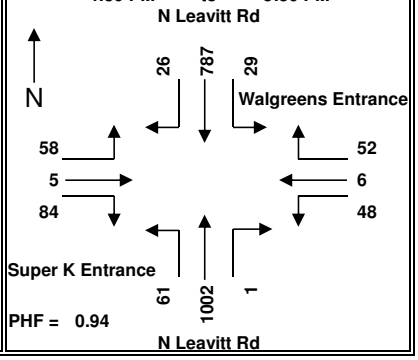
Midday Peak Hour

12:15 PM to 1:15 PM



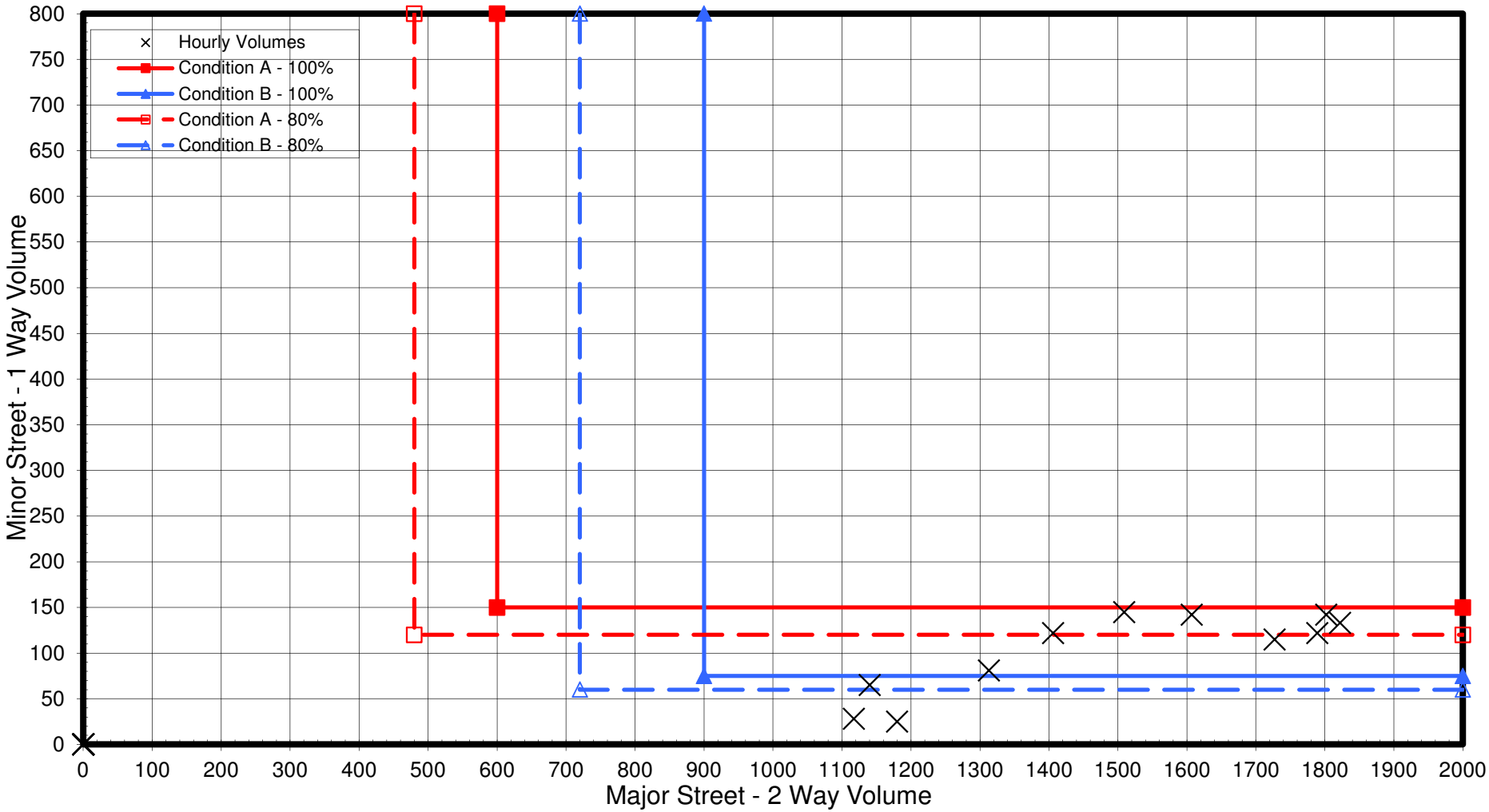
PM Peak Hour

4:30 PM to 5:30 PM



Notes:

WARRANT 1 - Conditions A & B



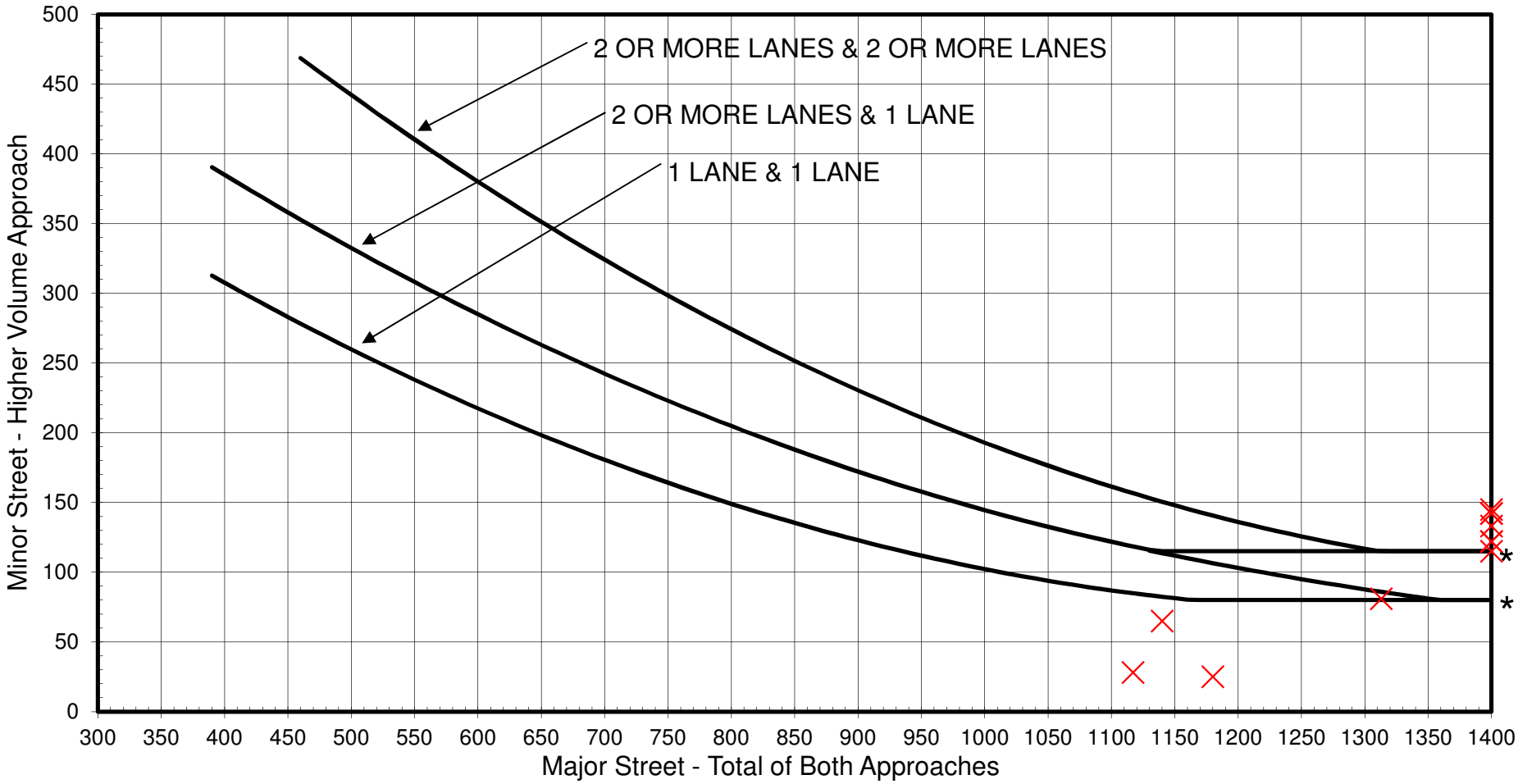
		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Super K Entrance and Walgr	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	8 Hours Meet	Yes
Condition A (80%) =	6 Hours Meet	No
Condition B (80%) =	9 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Super K Entrance and Walgr	1
Road Location =	Urban	

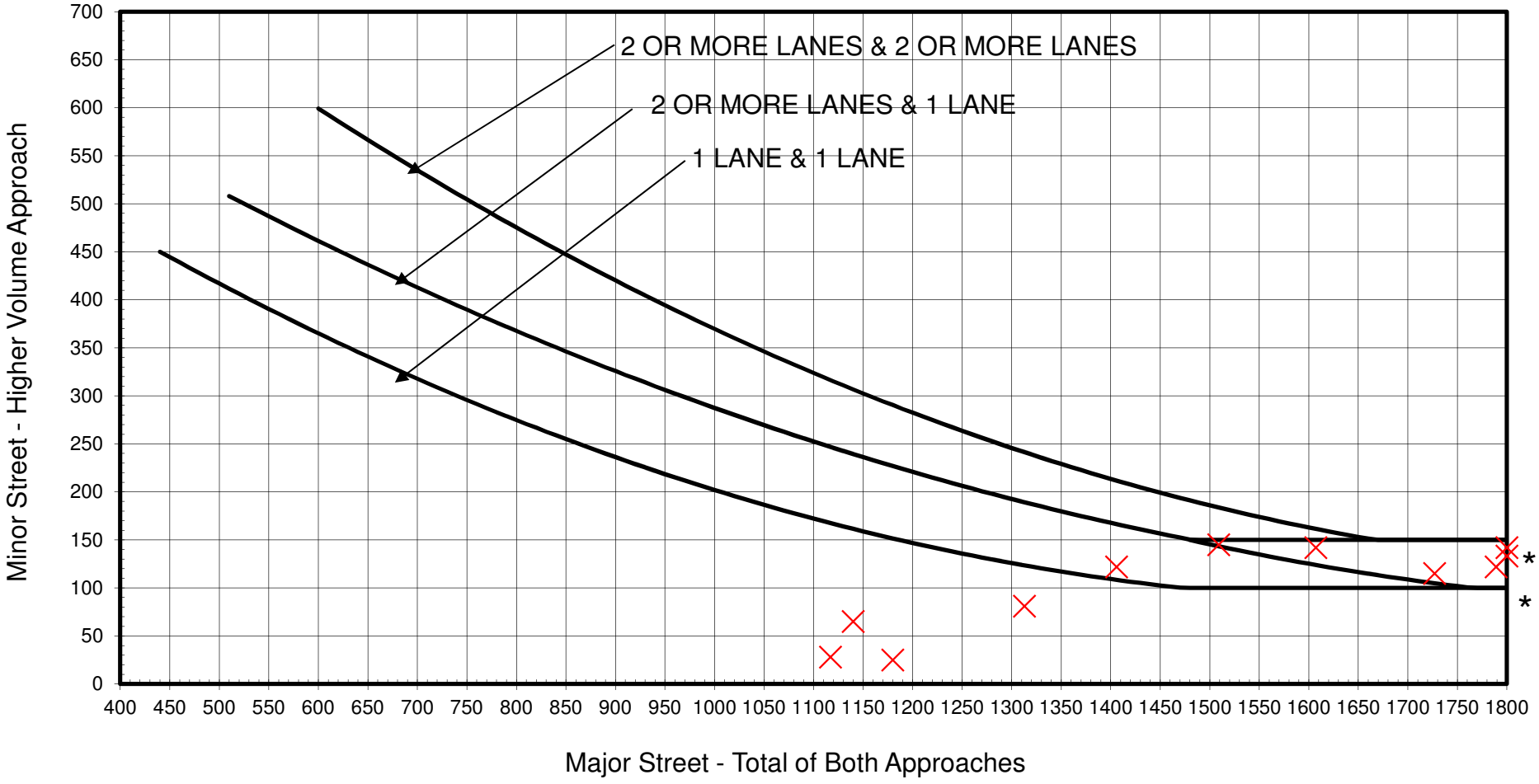
		Warrant Met?
Warrant 2 (Urban) =	7 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Super K Entrance and Walgr	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	6 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.38

Traffic Signal Warrant Analysis Results

Intersection 38
N Leavitt Rd (SR 58) and Jaeger Rd/
N Nantucket Dr

SIGNAL WARRANT

INTERSECTION: N Leavitt Rd and Jaeger Rd and Nantucket Dr
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		1117	147	46	X		X	X	X	X	X	X					X	
8AM-9AM		1077	126	23	X		X	X	X	X	X	X					X	
9AM-10AM		1092	126	24	X		X	X	X	X	X	X					X	
10AM-11AM		1305	170	33	X	X	X	X	X	X	X	X					X	
11AM-NOON		1398	154	26	X	X	X	X	X	X	X	X					X	
NOON-1PM		1591	158	25	X	X	X	X	X	X	X	X					X	X
1PM-2PM		1527	182	29	X	X	X	X	X	X	X	X					X	X
2PM-3PM		1666	236	30	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1818	195	42	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1857	232	36	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1764	233	40	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					8		11		11		11						11	6
WARRANT SATISFIED?					YES		YES		YES		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
N Leavitt Rd and Jaeger Rd and Nantucket Dr
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

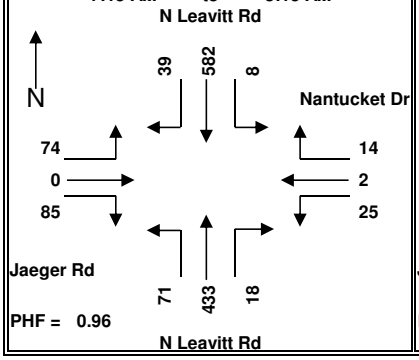
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.102	Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

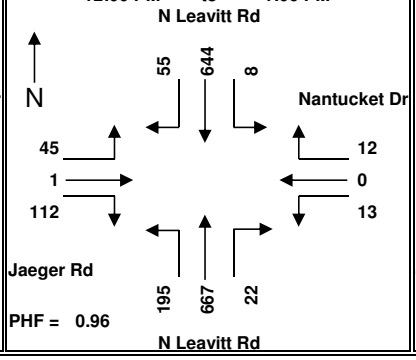
ADT Factor: 1.41
Intersection ID: 38

Start Time	N Leavitt Rd Northbound				N Leavitt Rd Southbound				Total North South	Jaeger Rd Eastbound				Nantucket Dr Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	1678	6722	197	174	111	6878	626	157	16212	610	30	1319	22	198	45	111	7	2313	18525
	Percent Trucks =			2%	Percent Trucks =			2%		Percent Trucks =			1%	Percent Trucks =			2%		
ADT	2612	10463	307	271	173	10706	974	244	25234	949	47	2053	34	308	70	173	11	3600	28834
7:00 AM	5	85	2	6	0	145	7	4	244	7	1	28	0	11	0	0	0	47	291
7:15 AM	18	113	7	3	1	157	8	2	304	9	0	17	0	5	0	4	0	35	339
7:30 AM	14	105	2	1	2	161	11	4	295	21	0	23	0	10	0	4	0	58	353
7:45 AM	25	120	5	1	3	111	10	2	274	21	0	20	0	5	2	5	1	53	327
8:00 AM	14	95	4	11	2	153	10	7	278	23	0	25	0	5	0	1	0	54	332
8:15 AM	28	85	3	5	1	135	8	4	260	6	0	15	0	1	1	1	1	24	284
8:30 AM	25	74	7	4	4	143	10	1	263	8	0	21	0	3	0	1	0	33	296
8:45 AM	17	101	8	5	4	134	12	4	276	8	2	18	0	8	0	2	0	38	314
9:00 AM	15	76	4	4	2	122	7	6	226	11	0	21	0	3	0	1	0	36	262
9:15 AM	26	105	2	4	3	103	12	5	251	14	1	19	0	5	0	1	0	40	291
9:30 AM	36	123	0	5	1	138	15	3	313	7	0	25	1	4	2	1	0	39	352
9:45 AM	38	115	2	7	4	134	9	7	302	14	0	14	1	2	0	5	0	35	337
10:00 AM	31	140	3	12	4	129	12	5	319	5	2	27	3	1	2	5	1	42	361
10:15 AM	35	123	1	2	6	131	12	2	308	23	0	21	0	4	1	3	0	52	360
10:30 AM	33	122	1	4	4	156	7	1	323	10	1	33	1	3	1	4	0	52	375
10:45 AM	36	141	2	2	1	162	13	8	355	14	0	34	0	5	2	2	0	57	412
11:00 AM	38	141	4	8	2	153	12	4	350	10	0	22	1	3	1	1	0	37	387
11:15 AM	35	142	3	6	1	135	10	5	326	6	0	33	0	2	1	3	0	45	371
11:30 AM	26	153	1	7	0	149	14	2	343	10	1	24	1	3	3	1	0	42	385
11:45 AM	37	160	3	5	3	163	13	9	379	13	0	35	0	7	0	1	0	56	435
12:00 PM	41	164	2	1	1	158	15	9	381	14	0	36	0	4	0	4	1	58	439
12:15 PM	48	137	5	6	2	168	14	5	374	12	0	26	0	6	0	5	1	49	423
12:30 PM	51	190	8	4	1	154	11	2	415	6	1	27	1	1	0	2	0	37	452
12:45 PM	55	176	7	4	4	164	15	4	421	13	0	23	1	2	0	1	0	39	460
1:00 PM	42	162	4	6	3	165	10	5	386	4	0	38	2	2	2	2	0	48	434
1:15 PM	29	166	4	0	1	155	19	3	374	14	1	29	1	4	0	0	0	48	422
1:30 PM	42	137	4	1	1	155	17	4	356	16	0	29	1	5	2	2	0	54	410
1:45 PM	37	173	3	2	3	173	22	3	411	14	1	36	0	3	3	4	0	61	472
2:00 PM	45	157	5	4	4	200	16	0	427	21	0	47	2	4	4	2	0	78	505
2:15 PM	36	180	3	7	4	187	16	3	426	18	1	41	0	7	0	1	0	68	494
2:30 PM	32	181	2	2	1	168	12	1	396	10	1	38	0	2	1	4	0	56	452
2:45 PM	49	186	13	5	2	152	15	1	417	22	3	34	0	2	1	2	0	64	481
3:00 PM	61	205	6	5	8	188	23	7	491	14	3	29	2	10	3	3	1	62	553
3:15 PM	39	177	8	1	2	157	13	5	396	11	0	39	1	5	0	4	0	59	455
3:30 PM	57	216	6	1	2	189	26	4	496	11	2	29	0	0	3	2	0	47	543
3:45 PM	50	163	4	4	6	189	23	2	435	12	3	42	2	8	1	3	0	69	504
4:00 PM	62	181	0	5	4	191	20	2	458	20	0	38	1	3	1	4	1	66	524
4:15 PM	55	174	4	1	4	167	18	4	422	28	2	38	0	8	1	4	0	81	503
4:30 PM	52	207	5	4	4	179	14	1	461	23	2	32	0	7	0	1	0	65	526
4:45 PM	54	263	5	4	1	167	26	1	516	18	0	31	0	4	1	2	0	56	572
5:00 PM	56	223	3	2	1	171	15	2	469	21	1	56	0	8	1	6	0	93	562
5:15 PM	48	211	8	2	0	158	16	1	441	19	0	39	0	4	2	2	0	66	507
5:30 PM	57	186	6	0	3	170	23	2	445	8	1	32	0	7	3	3	0	54	499
5:45 PM	48	188	18	1	1	139	15	1	409	21	0	35	0	2	0	2	0	60	469

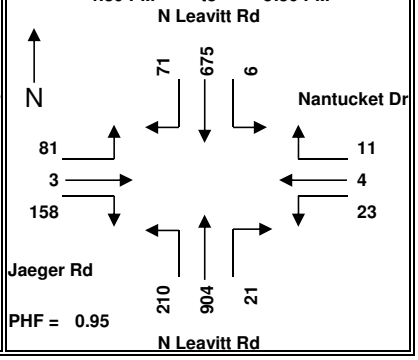
AM Peak Hour
7:15 AM to 8:15 AM



Midday Peak Hour
12:00 PM to 1:00 PM

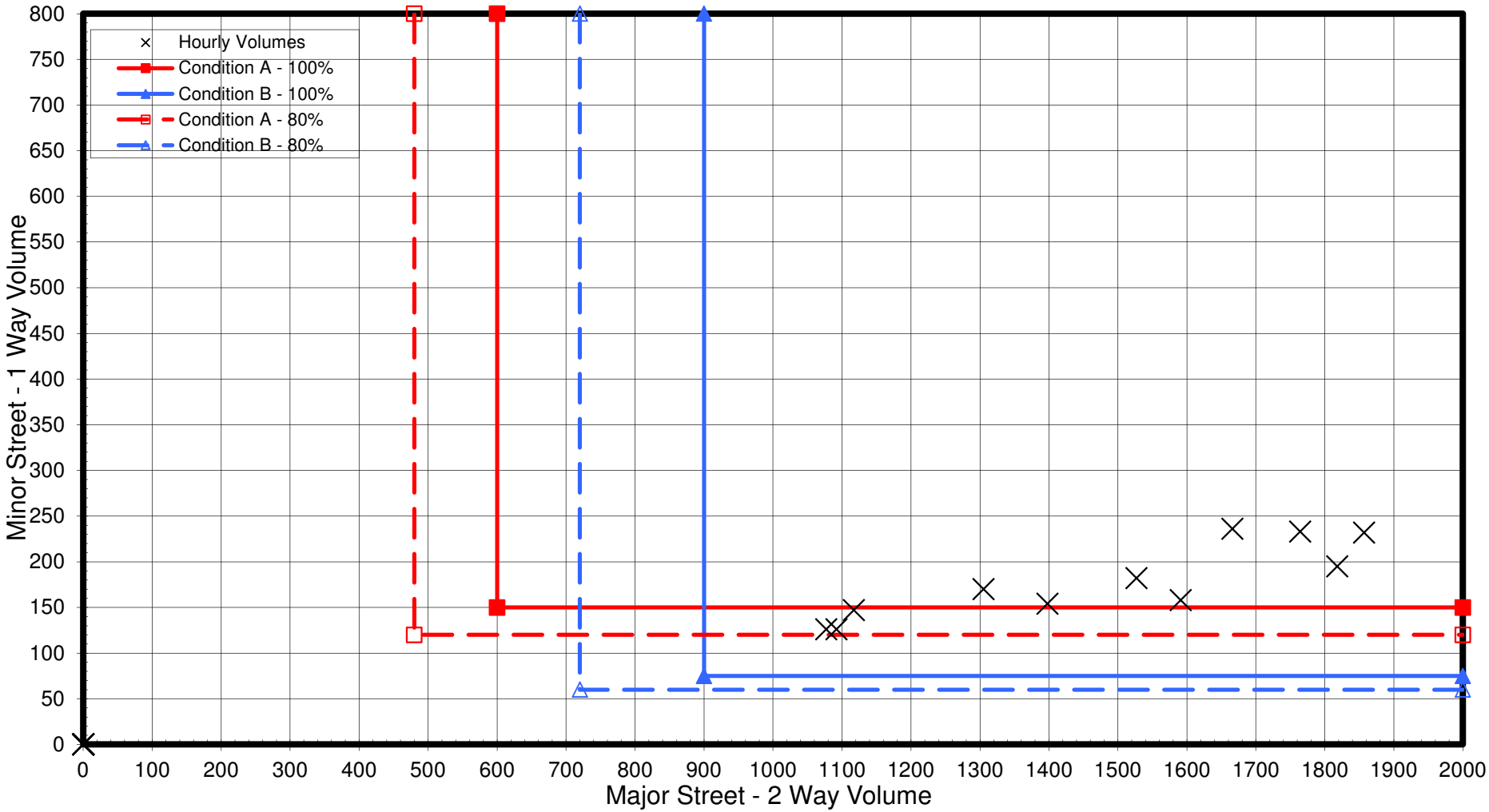


PM Peak Hour
4:30 PM to 5:30 PM



Notes:

WARRANT 1 - Conditions A & B



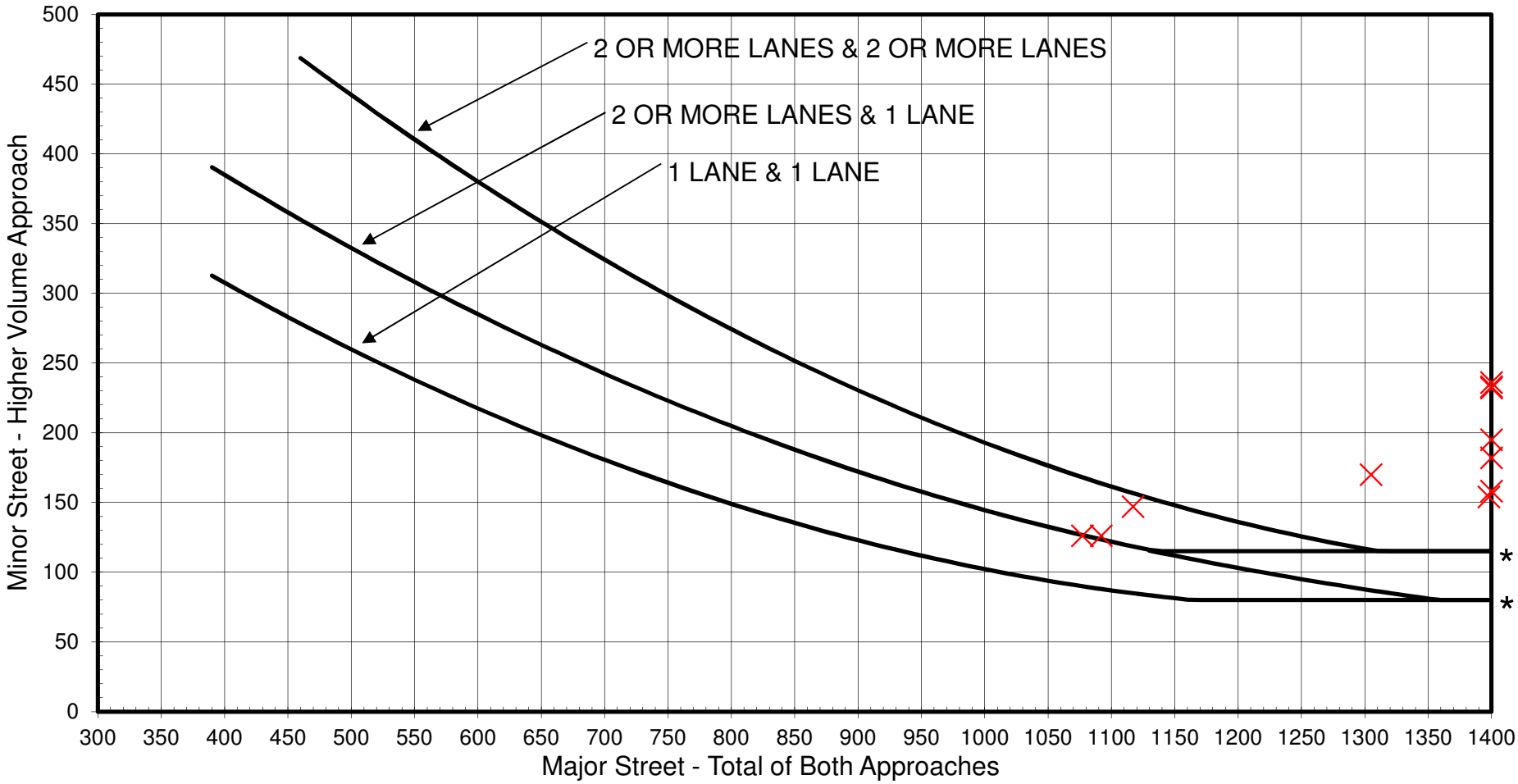
		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Jaeger Rd and Nantucket Dr	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	8 Hours Meet	Yes
Condition B (100%) =	11 Hours Meet	Yes
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Jaeger Rd and Nantucket Dr	1
Road Location =	Urban	

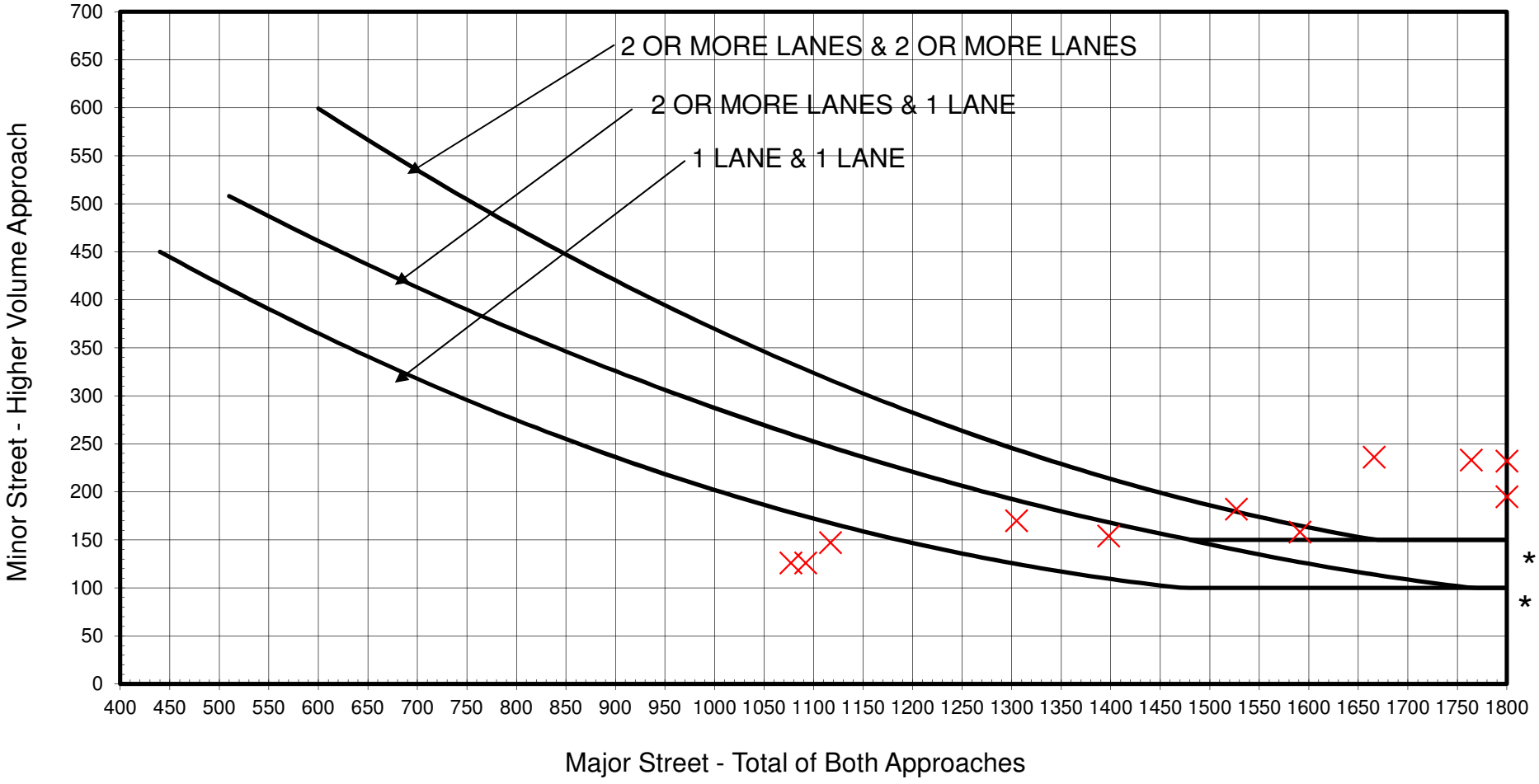
		Warrant Met?
Warrant 2 (Urban) =	11 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Jaeger Rd and Nantucket Dr	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	6 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 2, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.39

Traffic Signal Warrant Analysis Results

Intersection 39
N Leavitt Rd (SR 58) and Tower Blvd/ Lighthouse Village Shopping Entrance

SIGNAL WARRANT

INTERSECTION: N Leavitt Rd and Shopping Entrance and Tower Blvd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 2 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1 CONDITION A				WARRANT #1 CONDITION B								WARRANT #2	WARRANT #3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR					FOUR HOUR	PEAK HOUR
* NORM	1		X		500	150	400	120	750	75	600	60						
	2+	X		X	600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		1069	116	193	X		X	X	X	X	X	X					X	
8AM-9AM		922	150	241	X	X	X	X	X	X	X	X					X	
9AM-10AM		981	193	222	X	X	X	X	X	X	X	X					X	
10AM-11AM		1037	268	226	X	X	X	X	X	X	X	X					X	
11AM-NOON		1148	345	227	X	X	X	X	X	X	X	X					X	X
NOON-1PM		1290	413	241	X	X	X	X	X	X	X	X					X	X
1PM-2PM		1173	415	274	X	X	X	X	X	X	X	X					X	X
2PM-3PM		1276	400	269	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1493	404	315	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1473	467	341	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1311	355	297	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					10		11		11		11						11	7
WARRANT SATISFIED?					YES		YES		YES		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
N Leavitt Rd and Shopping Entrance and Tower Blvd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

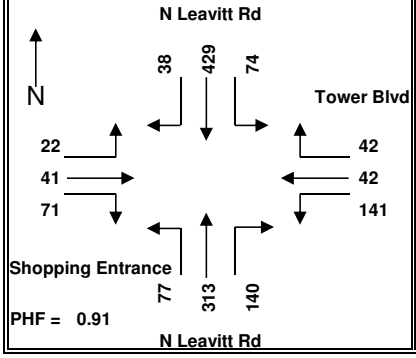
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.055	Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

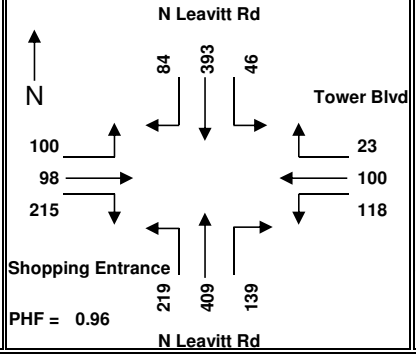
ADT Factor: 1.41
Intersection ID: 39

Start Time	N Leavitt Rd Northbound				N Leavitt Rd Southbound				Total North South	Shopping Entrance Eastbound				Tower Blvd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	1768	4046	1686	175	558	4392	723	147	13173	903	933	1690	32	1387	1075	384	51	6372	19545
	Percent Trucks =			2%	Percent Trucks =			3%		Percent Trucks =			1%	Percent Trucks =			2%		
ADT	2635	6029	2512	261	831	6545	1077	219	19629	1346	1390	2518	48	2067	1602	572	76	9495	29124
7:00 AM	14	59	28	1	11	120	6	1	238	4	9	15	2	24	7	4	0	63	301
7:15 AM	20	74	25	3	20	115	2	2	256	6	8	16	1	22	8	8	0	68	324
7:30 AM	21	91	45	6	18	124	9	1	308	6	11	11	0	34	11	10	3	83	391
7:45 AM	17	86	41	1	23	89	11	5	267	6	7	17	0	38	12	15	1	95	362
8:00 AM	19	62	29	5	13	101	16	4	240	4	15	27	1	47	11	9	1	113	353
8:15 AM	19	52	28	6	9	106	5	1	219	11	7	17	0	40	14	5	2	94	313
8:30 AM	24	63	18	4	16	88	10	6	219	13	8	11	0	30	13	11	1	86	305
8:45 AM	26	66	21	2	10	109	12	2	244	9	8	20	0	29	25	7	2	98	342
9:00 AM	22	72	24	4	11	98	9	4	236	13	10	26	1	27	22	6	1	104	340
9:15 AM	25	79	28	11	6	113	10	2	261	8	8	26	0	27	13	8	3	90	351
9:30 AM	31	62	32	6	13	81	11	4	230	8	16	27	1	30	20	4	3	105	335
9:45 AM	48	64	28	2	13	92	9	5	254	4	19	28	1	35	25	5	0	116	370
10:00 AM	29	55	32	3	9	84	8	4	217	11	24	33	0	23	22	6	2	119	336
10:15 AM	42	83	33	9	9	89	12	2	268	8	21	25	2	29	18	9	2	110	378
10:30 AM	34	76	34	3	8	109	15	3	276	24	15	42	2	18	19	7	1	125	401
10:45 AM	49	77	34	4	8	90	18	5	276	20	10	35	1	40	29	6	1	140	416
11:00 AM	44	86	36	7	12	85	19	3	282	23	22	48	0	29	28	5	1	155	437
11:15 AM	45	90	35	6	8	87	23	4	288	23	24	50	1	30	22	4	1	153	441
11:30 AM	44	90	33	2	5	101	18	4	291	13	18	37	0	24	33	6	2	131	422
11:45 AM	38	80	43	4	10	101	15	2	287	25	20	42	2	18	24	4	2	133	420
12:00 PM	57	121	32	10	14	87	27	2	338	24	22	50	2	35	30	7	0	168	506
12:15 PM	64	104	42	4	8	93	20	4	331	19	12	56	0	23	22	8	0	140	471
12:30 PM	48	97	32	4	13	100	11	8	301	29	36	54	0	24	24	2	1	169	470
12:45 PM	50	87	33	5	11	113	26	8	320	28	28	55	0	36	24	6	1	177	497
1:00 PM	55	86	37	1	11	83	19	5	291	26	30	54	1	31	27	5	1	173	464
1:15 PM	48	76	51	5	5	81	21	2	282	34	24	52	0	31	39	6	1	186	468
1:30 PM	38	80	32	3	11	99	7	3	267	22	27	57	1	35	29	5	0	175	442
1:45 PM	49	107	43	6	14	104	16	5	333	23	26	40	2	32	26	8	1	155	488
2:00 PM	60	80	30	3	12	120	16	4	318	22	26	44	0	29	25	10	0	156	474
2:15 PM	45	98	52	5	14	85	9	4	303	29	29	59	0	24	19	6	2	166	469
2:30 PM	43	107	49	5	16	102	13	7	330	21	26	48	1	30	23	13	1	161	491
2:45 PM	30	125	38	4	11	102	19	1	325	25	27	44	2	39	39	12	0	186	511
3:00 PM	51	105	54	4	20	99	25	3	354	18	18	39	0	33	27	18	1	153	507
3:15 PM	56	121	40	2	16	107	22	3	362	25	30	60	0	26	20	15	3	176	538
3:30 PM	53	106	50	6	26	137	22	8	394	32	31	56	0	26	32	12	1	189	583
3:45 PM	50	122	51	3	16	113	31	4	383	31	20	44	2	47	40	19	1	201	584
4:00 PM	58	119	50	3	15	125	26	2	393	32	31	46	1	35	44	12	3	200	593
4:15 PM	55	128	60	3	14	98	20	2	375	41	43	50	2	49	32	12	2	227	602
4:30 PM	48	109	40	4	8	120	24	2	349	41	25	48	1	31	30	11	1	186	535
4:45 PM	48	133	50	0	10	93	22	4	356	33	36	41	2	36	37	12	0	195	551
5:00 PM	36	102	60	2	18	97	17	1	330	31	38	37	0	30	25	10	2	171	501
5:15 PM	38	127	54	2	18	77	31	1	345	38	28	33	0	39	29	14	0	181	526
5:30 PM	40	108	44	0	12	92	16	0	312	28	24	42	0	43	29	8	0	174	486
5:45 PM	37	131	35	2	13	83	25	0	324	12	16	28	0	29	27	14	0	126	450

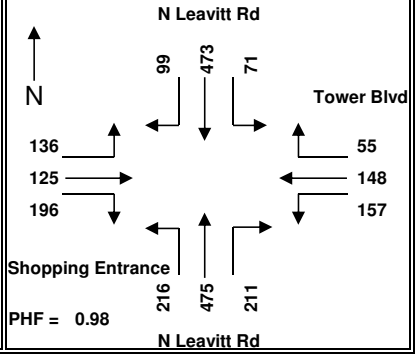
AM Peak Hour
7:15 AM to 8:15 AM



Midday Peak Hour
12:00 PM to 1:00 PM

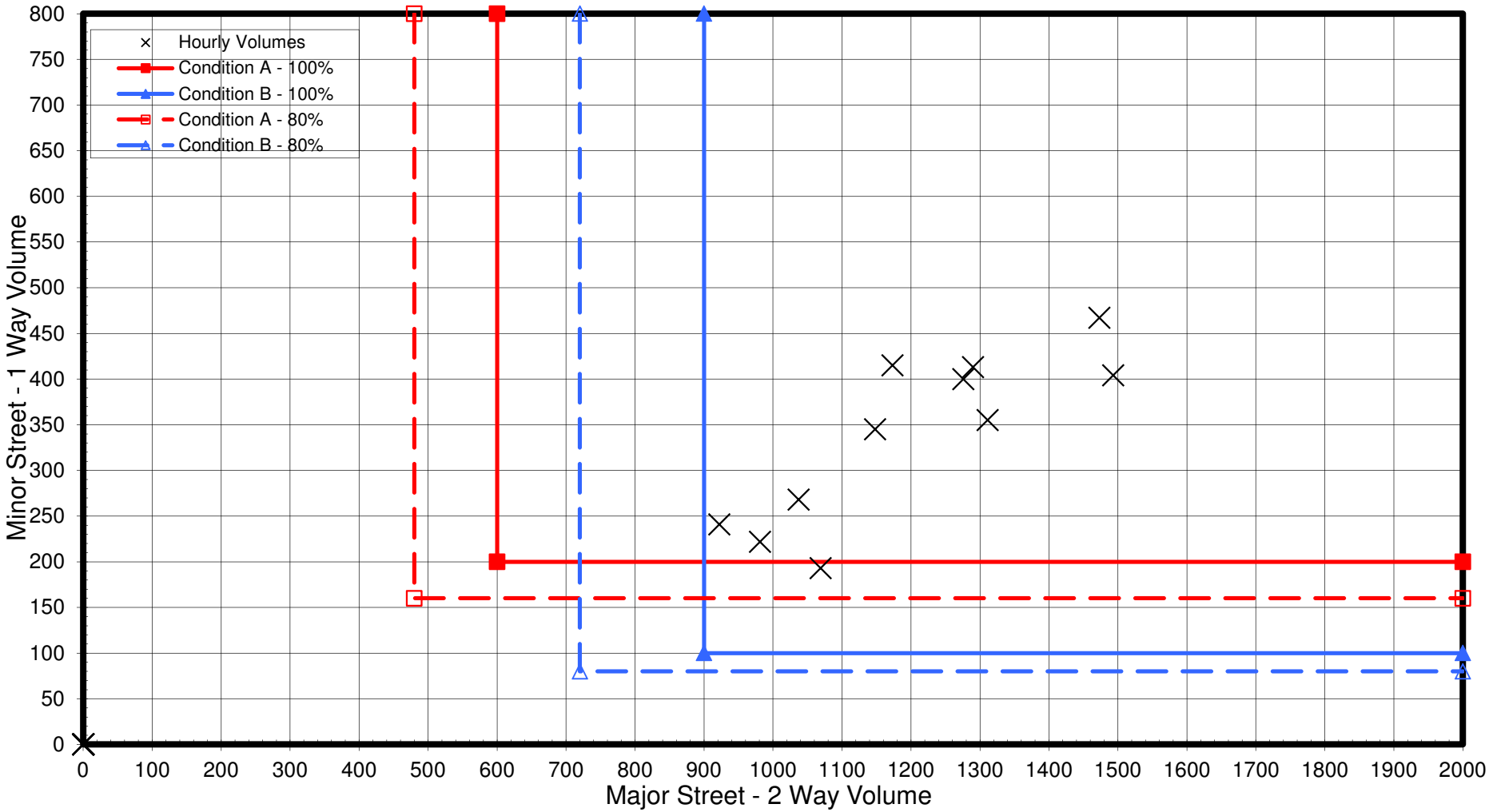


PM Peak Hour
3:30 PM to 4:30 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Shopping Entrance and Tow	2
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	10 Hours Meet	Yes
Condition B (100%) =	11 Hours Meet	Yes
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
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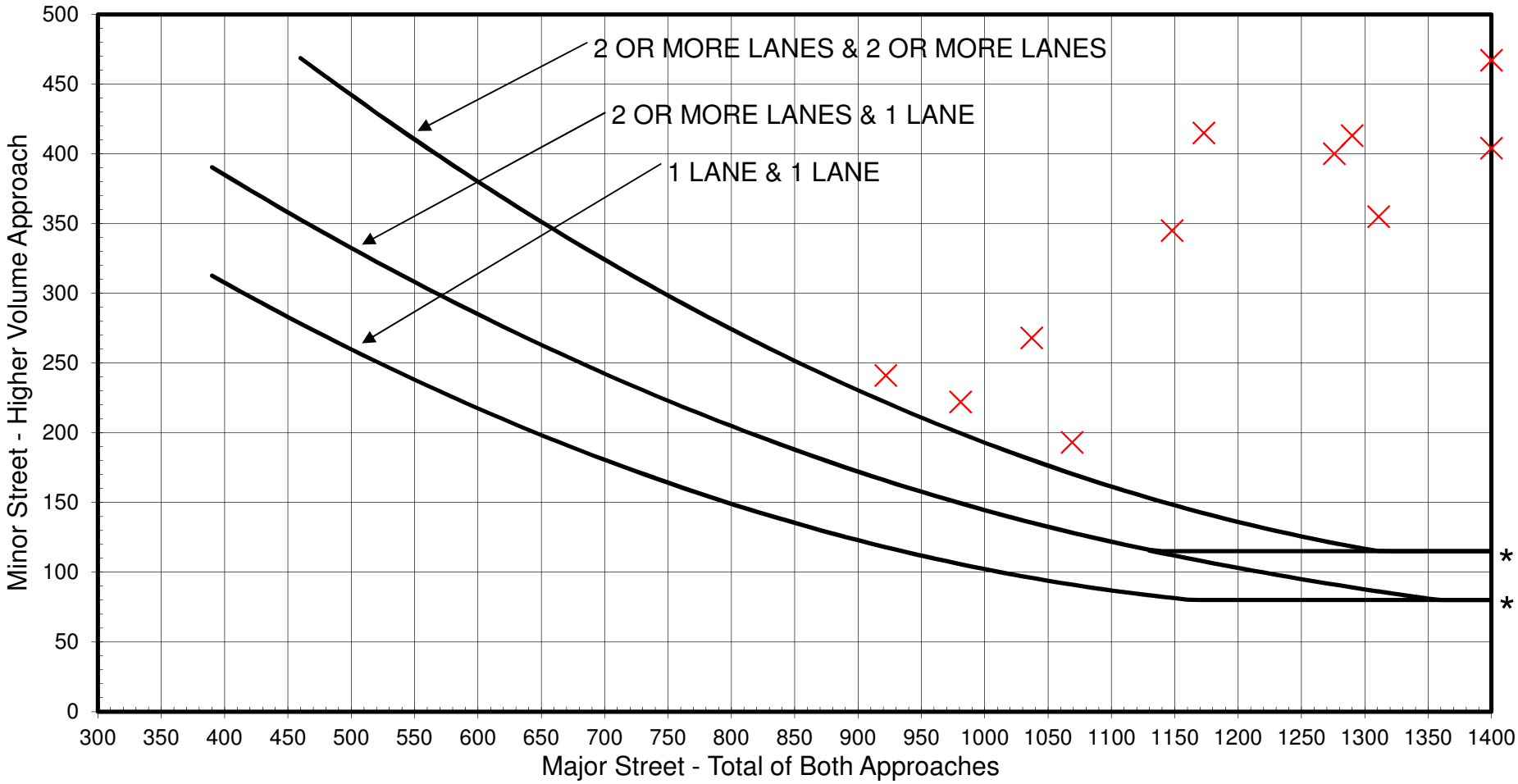
FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Shopping Entrance and Tow	2
Road Location =	Urban	

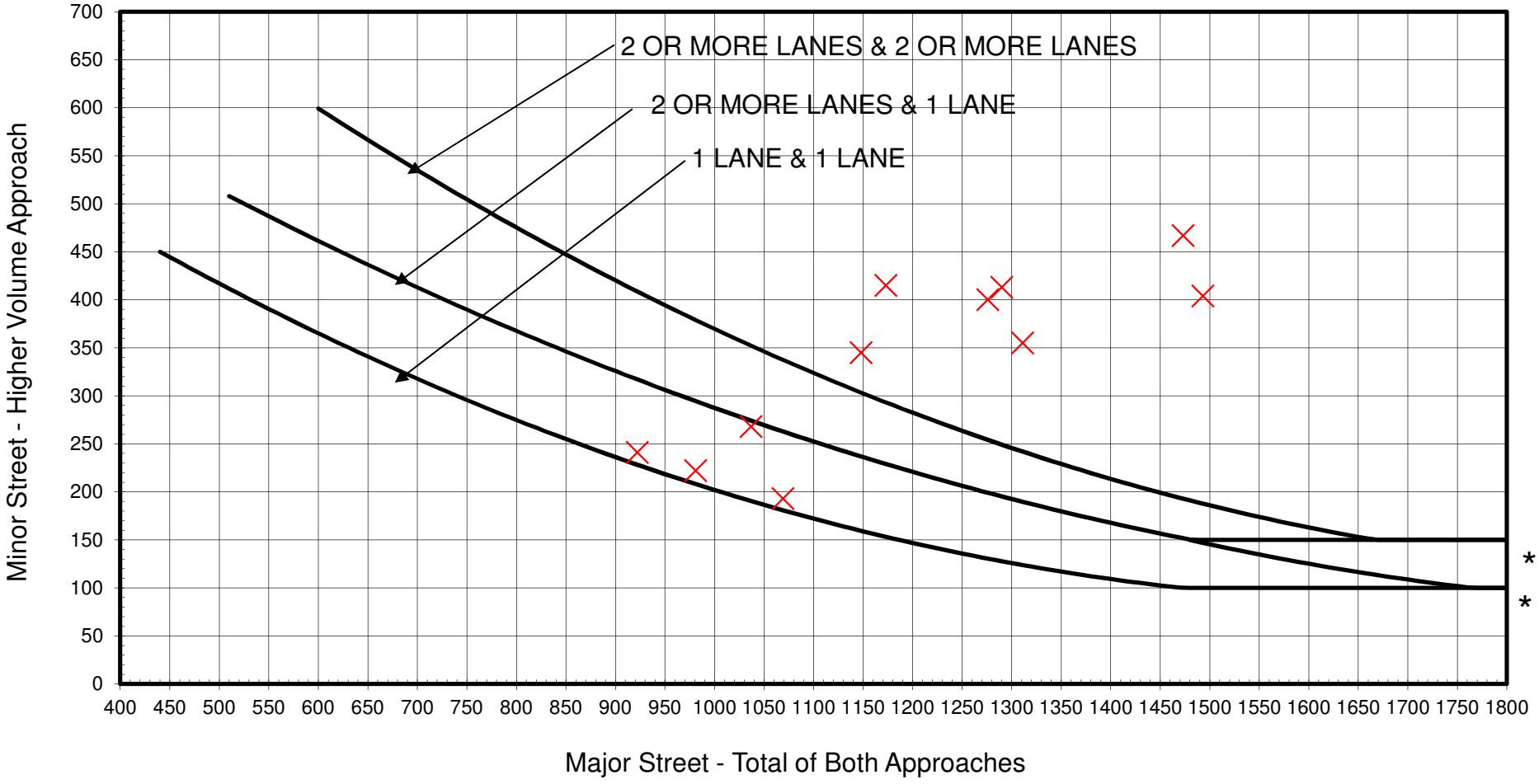
		Warrant Met?
Warrant 2 (Urban) =	11 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Shopping Entrance and Tow	2
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	7 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
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Appendix B.40

Traffic Signal Warrant Analysis Results

Intersection 40
N Leavitt Rd (SR 58) and W 40th St

SIGNAL WARRANT

INTERSECTION: N Leavitt Rd and W 40th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		812	142	52	X		X	X		X	X	X						
8AM-9AM		811	71	69	X		X				X	X						
9AM-10AM		789	74	27	X		X				X	X						
10AM-11AM		854	57	28	X		X				X							
11AM-NOON		969	63	31	X		X		X		X	X						
NOON-1PM		1051	79	38	X		X		X	X	X	X						
1PM-2PM		990	56	27	X		X		X		X							
2PM-3PM		1104	87	55	X		X		X	X	X	X						
3PM-4PM		1299	81	70	X		X		X	X	X	X						
4PM-5PM		1265	88	59	X		X		X	X	X	X						
5PM-6PM		1132	72	37	X		X		X		X	X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		1		4		9						0	0
WARRANT SATISFIED?					NO		NO		NO		YES						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
N Leavitt Rd and W 40th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

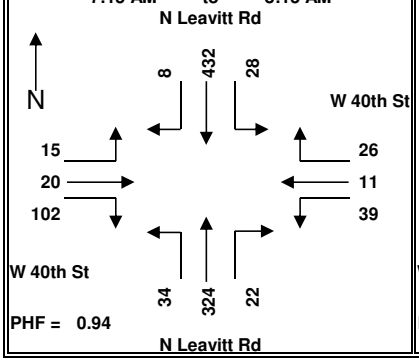
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.055	Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

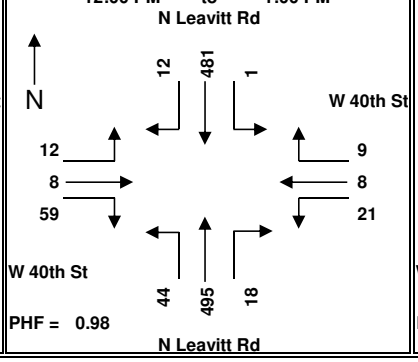
ADT Factor: 1.41
Intersection ID: 40

Start Time	N Leavitt Rd Northbound				N Leavitt Rd Southbound				Total North South	W 40th St Eastbound				W 40th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	526	4884	209	161	107	5193	157	162	11076	146	116	608	26	239	140	114	19	1363	12439
	Percent Trucks =			3%	Percent Trucks =			3%		Percent Trucks =			3%	Percent Trucks =			4%		
ADT	784	7278	311	240	159	7738	234	241	16504	218	173	906	39	356	209	170	28	2031	18536
7:00 AM	0	56	0	1	1	112	4	5	173	3	4	25	0	6	1	1	0	40	213
7:15 AM	11	59	6	2	2	103	1	1	182	3	0	33	1	6	2	5	2	49	231
7:30 AM	13	86	4	5	3	123	2	4	231	4	6	28	2	7	1	4	0	50	281
7:45 AM	5	93	9	5	12	105	2	6	226	4	10	22	2	8	4	7	2	55	281
8:00 AM	5	86	3	7	11	101	3	6	209	4	4	19	0	18	4	10	0	59	268
8:15 AM	5	63	5	4	2	112	5	2	192	3	1	14	3	8	0	3	0	29	221
8:30 AM	11	67	5	1	6	97	2	5	188	0	0	17	0	7	2	3	2	29	217
8:45 AM	4	87	2	4	3	125	1	2	222	2	3	4	0	8	2	4	1	23	245
9:00 AM	13	75	0	5	0	103	0	3	191	4	1	17	0	3	4	0	0	29	220
9:15 AM	10	88	4	10	1	121	2	4	226	4	2	19	1	4	0	1	0	30	256
9:30 AM	7	78	1	6	2	101	2	4	191	2	2	8	1	3	2	1	0	18	209
9:45 AM	5	65	1	0	1	106	3	5	181	1	2	12	0	4	0	5	0	24	205
10:00 AM	12	68	5	3	0	98	4	5	187	3	0	4	1	7	3	1	0	18	205
10:15 AM	9	79	7	4	1	110	0	6	206	2	3	11	1	5	2	0	0	23	229
10:30 AM	11	97	6	6	1	114	1	3	230	2	2	14	0	3	1	0	0	22	252
10:45 AM	5	100	7	4	1	114	4	5	231	8	3	5	1	3	2	1	0	22	253
11:00 AM	5	118	5	3	3	100	4	2	235	6	2	12	0	5	2	2	2	29	264
11:15 AM	3	107	6	6	5	118	4	4	243	0	2	10	0	3	1	3	0	19	262
11:30 AM	9	118	2	1	3	115	4	3	251	4	2	12	0	5	1	2	0	26	277
11:45 AM	7	105	2	4	1	123	2	3	240	2	1	10	0	1	5	1	0	20	260
12:00 PM	8	138	6	10	0	111	4	2	267	2	0	19	0	6	4	1	1	32	299
12:15 PM	15	123	4	3	0	115	0	4	257	2	3	10	0	5	1	3	1	24	281
12:30 PM	10	114	6	1	0	123	5	9	258	4	3	22	0	6	1	2	1	38	296
12:45 PM	11	120	2	4	1	132	3	7	269	4	2	8	0	4	2	3	0	23	292
1:00 PM	5	115	5	1	4	112	3	6	244	2	1	9	0	2	2	0	0	16	260
1:15 PM	10	106	5	3	0	115	2	3	238	3	5	9	0	4	2	2	1	25	263
1:30 PM	10	107	7	1	4	104	2	3	234	3	2	10	0	4	1	0	0	20	254
1:45 PM	16	125	1	6	2	127	3	5	274	0	3	9	0	3	5	2	0	22	296
2:00 PM	12	112	4	3	3	133	2	1	266	6	5	22	2	3	3	1	0	40	306
2:15 PM	11	127	7	1	1	116	3	4	265	6	3	6	1	2	1	0	0	18	283
2:30 PM	10	131	5	7	2	123	4	6	275	5	4	9	1	8	11	6	0	43	318
2:45 PM	25	129	6	7	4	131	3	1	298	7	2	12	0	7	6	7	1	41	339
3:00 PM	15	130	11	4	5	130	10	5	301	6	3	18	3	6	4	6	2	43	344
3:15 PM	22	131	7	2	4	133	7	5	304	5	2	12	0	5	11	5	1	40	344
3:30 PM	27	143	6	7	3	171	6	6	356	4	1	12	2	8	6	5	1	36	392
3:45 PM	16	157	4	6	3	153	5	6	338	3	0	15	2	6	4	4	1	32	370
4:00 PM	15	155	6	3	1	138	6	1	321	7	2	14	1	8	2	1	0	34	355
4:15 PM	20	168	3	2	2	125	9	3	327	5	3	11	0	10	6	4	0	39	366
4:30 PM	18	152	8	2	2	116	9	3	305	2	7	22	1	8	5	1	0	45	350
4:45 PM	24	157	5	1	3	122	1	2	312	3	3	9	0	7	5	2	0	29	341
5:00 PM	17	131	4	1	0	120	10	1	282	2	2	14	0	4	5	1	0	28	310
5:15 PM	17	157	5	3	1	116	4	1	300	3	4	17	0	2	5	1	0	32	332
5:30 PM	19	130	6	0	2	114	3	0	274	1	2	14	0	3	6	1	0	27	301
5:45 PM	23	131	6	2	1	112	3	0	276	0	4	9	0	4	3	2	0	22	298

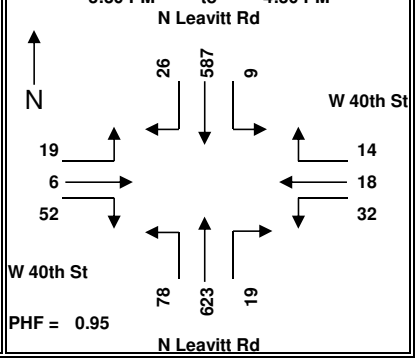
AM Peak Hour
7:15 AM to 8:15 AM



Midday Peak Hour
12:00 PM to 1:00 PM

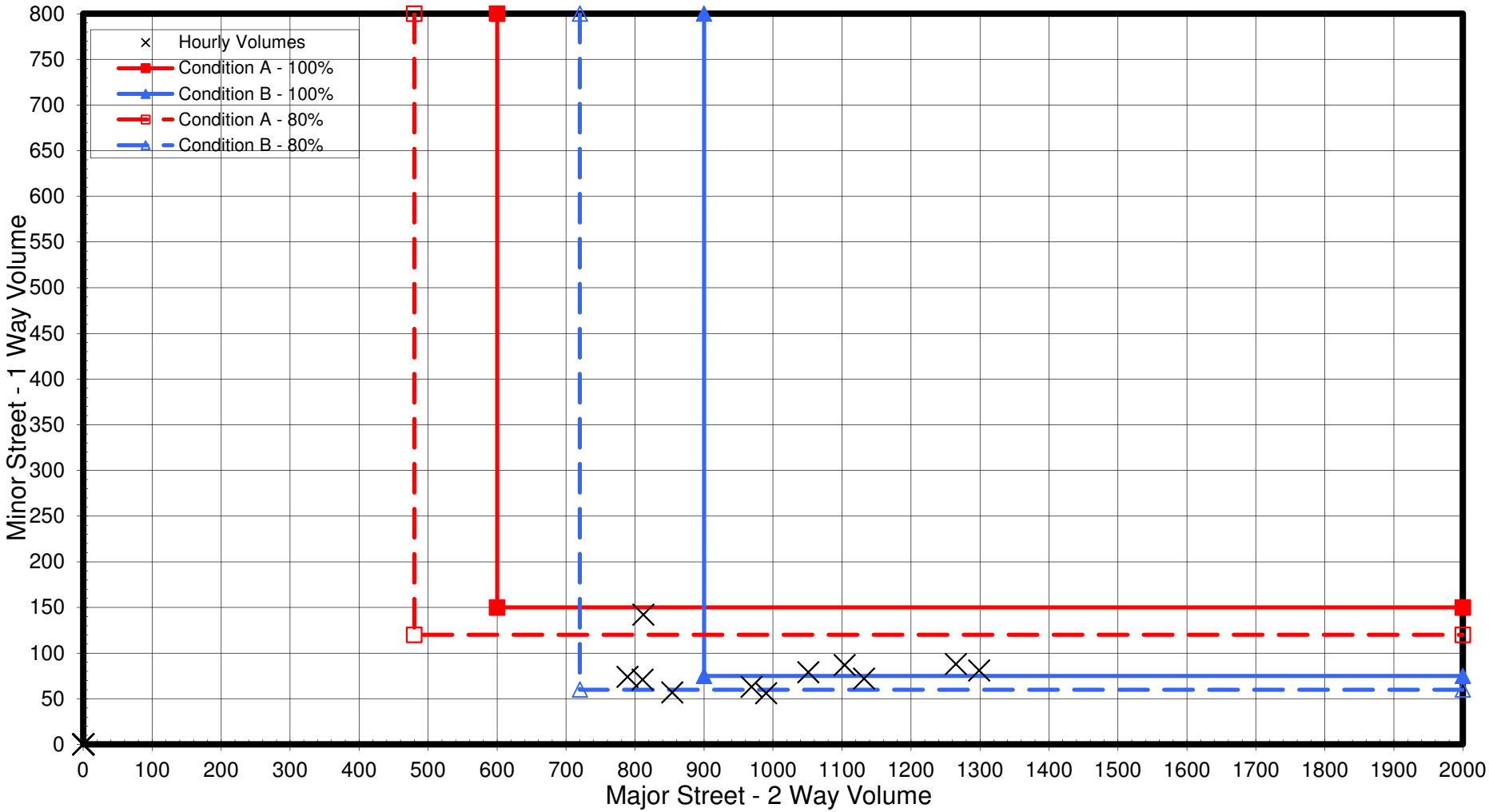


PM Peak Hour
3:30 PM to 4:30 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	W 40th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	4 Hours Meet	No
Condition A (80%) =	1 Hours Meet	No
Condition B (80%) =	9 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS

564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
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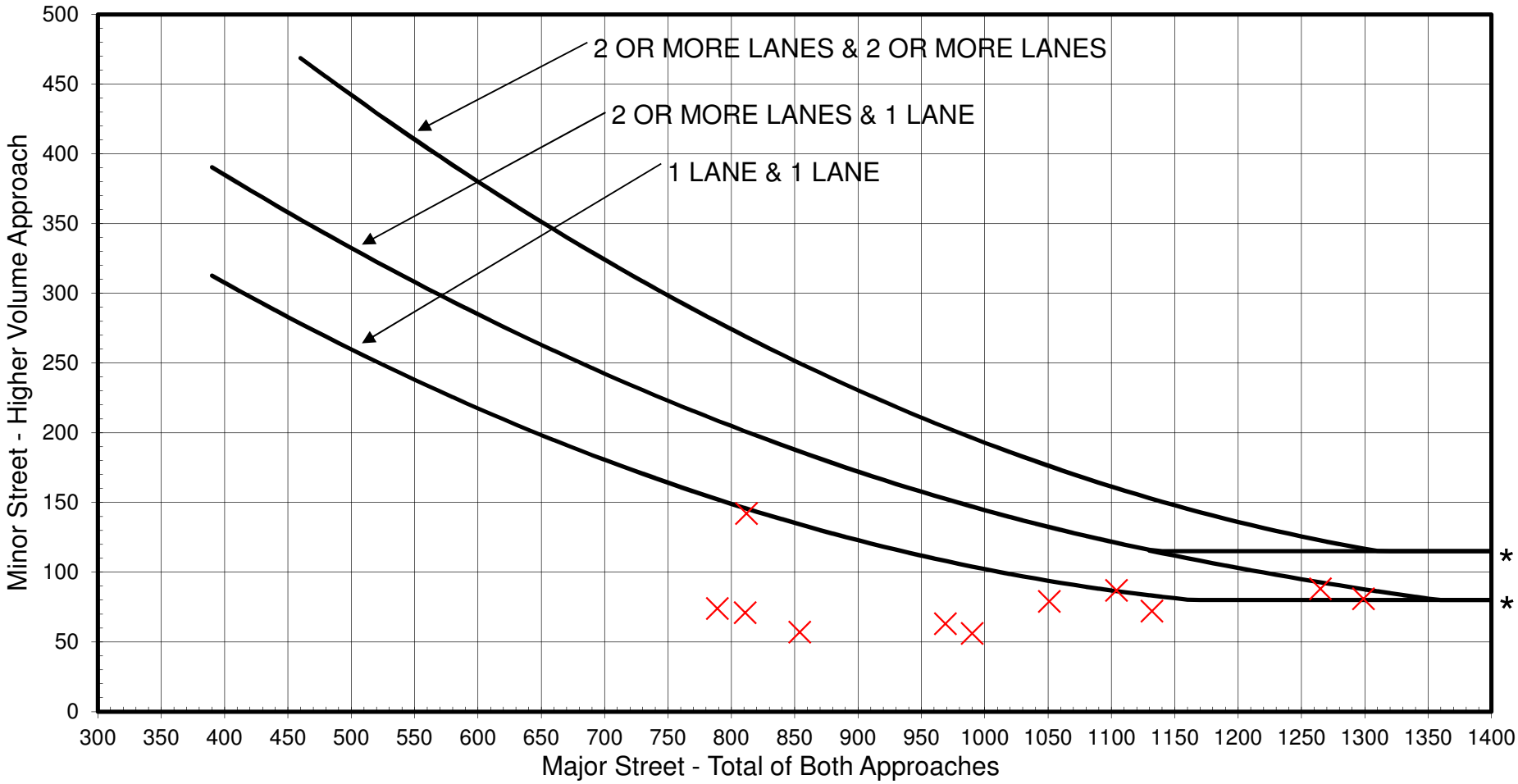
FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	W 40th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
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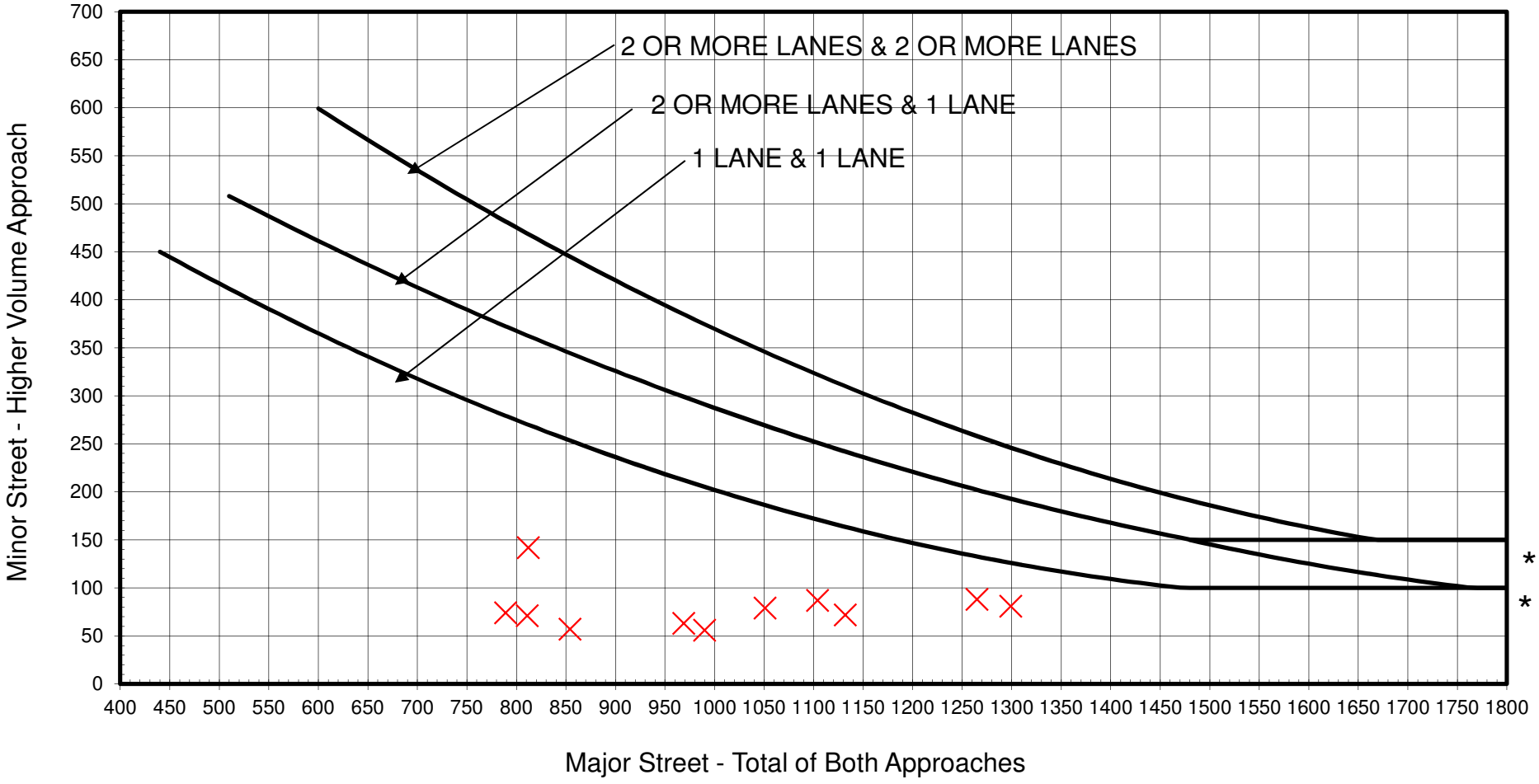
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	W 40th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
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Appendix B.41

Traffic Signal Warrant Analysis Results

Intersection 41
N Leavitt Rd (SR 58) and Meister Rd

SIGNAL WARRANT

INTERSECTION: N Leavitt Rd and Meister Rd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1 CONDITION A				WARRANT #1 CONDITION B								WARRANT #2	WARRANT #3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR					FOUR HOUR	PEAK HOUR
* NORM	1		X	X	500	150	400	120	750	75	600	60						
	2+	X			600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		648	221	185	X	X	X	X		X		X						
8AM-9AM		688	182	191	X	X	X	X		X		X						
9AM-10AM		651	152	131	X	X	X	X		X		X						
10AM-11AM		707	140	169	X	X	X	X		X		X						
11AM-NOON		848	144	179	X	X	X	X		X	X	X						
NOON-1PM		918	172	199	X	X	X	X	X	X	X	X					X	
1PM-2PM		835	161	181	X	X	X	X		X	X	X						
2PM-3PM		936	195	218	X	X	X	X	X	X	X	X					X	
3PM-4PM		1104	195	275	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1091	172	234	X	X	X	X	X	X	X	X					X	
5PM-6PM		913	188	202	X	X	X	X	X	X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					11		11		5		7						5	1
WARRANT SATISFIED?					**YES**		**YES**		**NO**		**NO**						**YES**	**YES**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
N Leavitt Rd and Meister Rd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

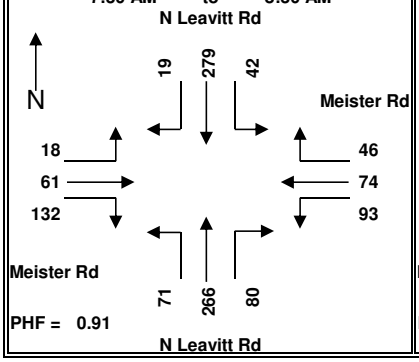
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.055	Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 41

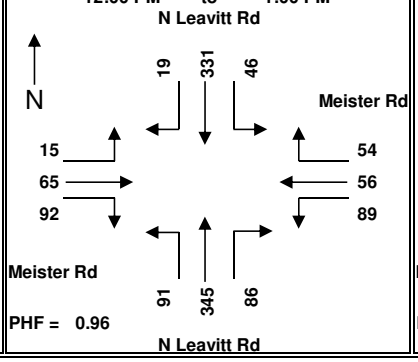
Start Time	N Leavitt Rd Northbound				N Leavitt Rd Southbound				Total North South	Meister Rd Eastbound				Meister Rd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	971	3229	1011	183	469	3440	219	131	9339	186	620	1116	54	1027	684	453	71	4086	13425
	Percent Trucks =			4%	Percent Trucks =			3%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	1447	4812	1507	273	699	5126	326	195	13916	277	924	1663	80	1530	1019	675	106	6089	20005
7:00 AM	9	35	17	1	3	53	3	4	120	3	20	35	0	22	7	3	2	90	210
7:15 AM	11	39	20	4	6	57	1	0	134	6	11	29	2	23	15	6	2	90	224
7:30 AM	17	70	23	6	10	74	2	5	196	6	17	40	3	15	14	8	2	100	296
7:45 AM	18	72	26	9	9	69	4	6	198	4	18	32	1	36	24	12	6	126	324
8:00 AM	17	75	12	5	14	74	6	3	198	5	16	28	2	17	18	19	3	103	301
8:15 AM	19	49	19	5	9	62	7	1	165	3	10	32	0	25	18	7	1	95	260
8:30 AM	16	47	17	4	5	59	3	2	147	4	10	29	3	11	14	8	1	76	223
8:45 AM	13	61	11	3	6	84	3	3	178	5	14	26	2	26	22	6	1	99	277
9:00 AM	13	61	19	7	7	65	1	1	166	0	5	22	2	17	10	6	4	60	226
9:15 AM	21	51	12	9	5	69	5	4	163	3	13	30	2	16	9	7	3	78	241
9:30 AM	18	55	11	6	8	69	3	4	164	4	13	18	3	16	7	3	1	61	225
9:45 AM	16	42	20	0	12	64	4	4	158	1	18	25	4	16	13	11	4	84	242
10:00 AM	13	46	17	3	6	69	5	6	156	3	12	23	1	9	13	9	1	69	225
10:15 AM	17	61	15	4	9	71	5	4	178	3	11	17	0	26	14	4	3	75	253
10:30 AM	18	58	22	4	8	75	2	5	183	2	11	21	3	30	13	7	1	84	267
10:45 AM	19	67	24	7	9	69	2	2	190	4	13	20	1	25	11	8	1	81	271
11:00 AM	9	87	27	3	7	74	3	3	207	3	15	13	0	18	11	12	2	72	279
11:15 AM	27	74	27	6	10	86	6	3	230	2	11	17	0	22	12	9	1	73	303
11:30 AM	14	73	16	1	13	84	8	2	208	4	11	28	1	21	14	12	3	90	298
11:45 AM	17	67	22	6	9	82	6	3	203	7	15	18	1	23	14	11	1	88	291
12:00 PM	28	97	18	10	13	82	2	5	240	5	12	25	0	21	19	15	1	97	337
12:15 PM	28	79	24	5	14	72	6	3	223	4	26	15	1	19	14	13	2	91	314
12:30 PM	12	88	25	2	7	78	3	7	213	2	13	28	0	25	10	15	1	93	306
12:45 PM	23	81	19	4	12	99	8	9	242	4	14	24	1	24	13	11	2	90	332
1:00 PM	17	73	29	1	9	76	4	2	208	5	11	18	1	15	12	20	0	81	289
1:15 PM	22	71	18	2	12	77	4	4	204	4	15	26	0	20	14	11	0	90	294
1:30 PM	26	64	19	1	13	65	2	0	189	4	10	26	1	26	16	9	2	91	280
1:45 PM	31	74	21	5	17	84	7	4	234	5	10	27	2	21	9	8	2	80	314
2:00 PM	17	67	28	2	15	82	7	2	216	5	14	28	1	27	12	10	1	96	312
2:15 PM	21	85	28	3	8	80	4	3	226	6	13	28	2	16	17	7	1	87	313
2:30 PM	23	82	29	5	23	91	9	6	257	2	26	21	3	33	14	16	0	112	369
2:45 PM	26	86	32	9	6	81	6	2	237	7	17	28	2	29	24	13	2	118	355
3:00 PM	36	97	23	5	18	96	5	2	275	11	17	28	2	25	20	21	1	122	397
3:15 PM	24	83	38	4	14	88	9	5	256	6	11	26	1	42	21	12	0	118	374
3:30 PM	26	95	28	9	18	121	8	4	296	8	7	29	1	44	22	10	4	120	416
3:45 PM	29	111	26	4	8	99	4	2	277	4	16	32	2	27	18	13	4	110	387
4:00 PM	32	108	22	3	13	99	10	0	284	2	16	26	0	34	18	16	3	112	396
4:15 PM	28	101	34	2	16	94	6	1	279	3	18	23	1	24	23	5	0	96	375
4:30 PM	36	96	33	8	16	72	6	3	259	5	14	30	0	34	18	10	0	111	370
4:45 PM	33	105	31	0	9	83	8	2	269	4	13	18	0	21	21	10	2	87	356
5:00 PM	27	59	26	2	12	84	6	0	214	8	21	34	1	19	22	9	0	113	327
5:15 PM	32	99	32	2	5	86	8	0	262	4	14	24	1	21	19	7	0	89	351
5:30 PM	39	63	27	0	19	74	4	0	226	3	18	26	0	23	14	11	0	95	321
5:45 PM	33	75	24	2	7	68	4	0	211	3	10	23	0	23	21	13	0	93	304

AM Peak Hour
7:30 AM to 8:30 AM



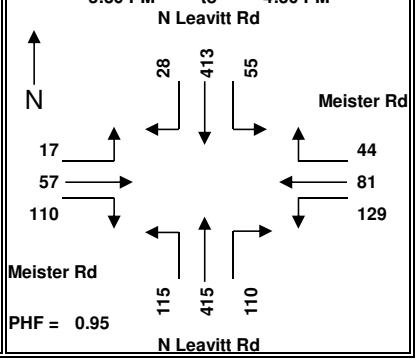
PHF = 0.91

Midday Peak Hour
12:00 PM to 1:00 PM



PHF = 0.96

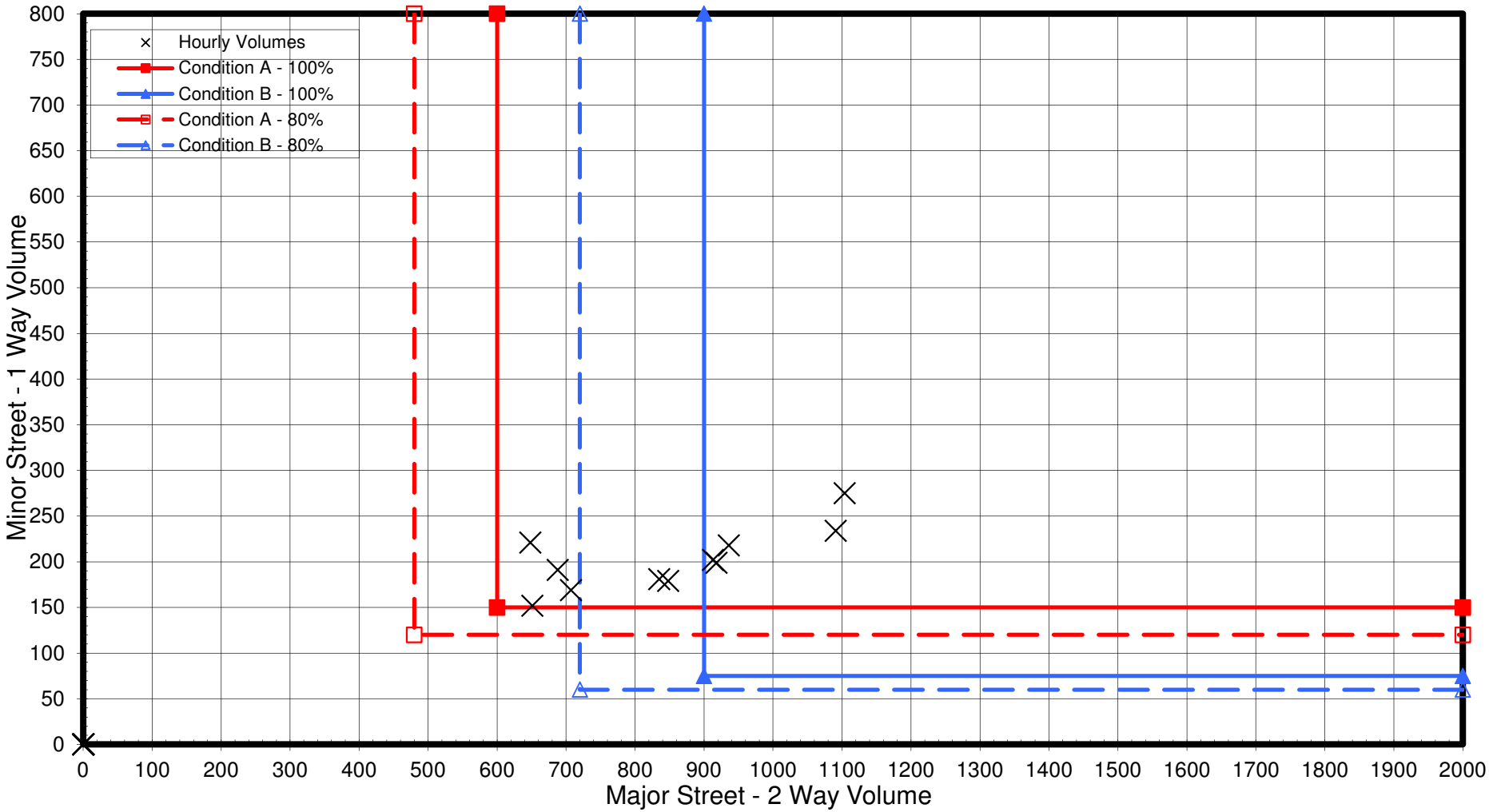
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.95

Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Meister Rd	1
Road Location =	Urban	

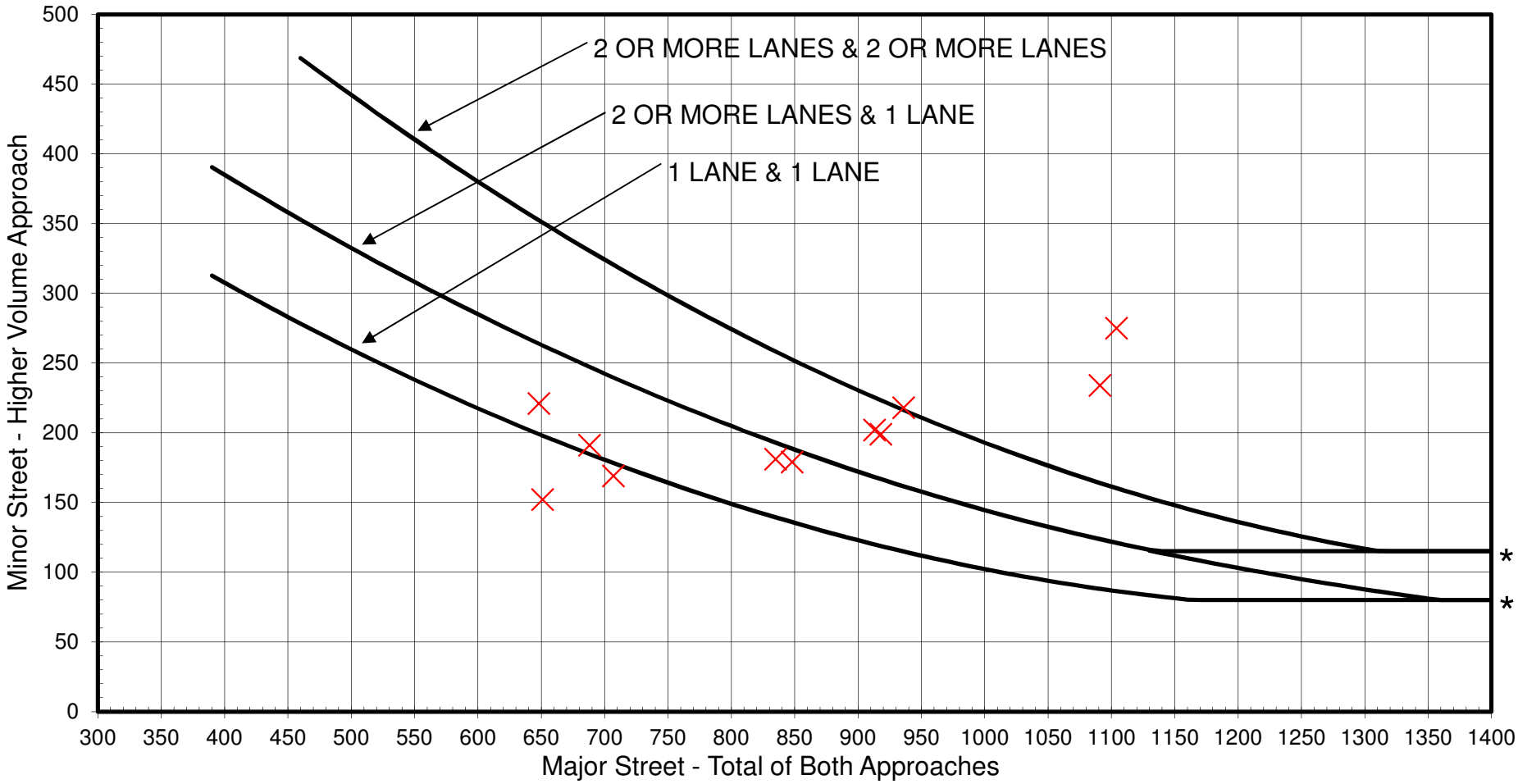
		Warrant Met?
Condition A (100%) =	11 Hours Meet	Yes
Condition B (100%) =	5 Hours Meet	No
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	7 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS

564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Meister Rd	1
Road Location =	Urban	

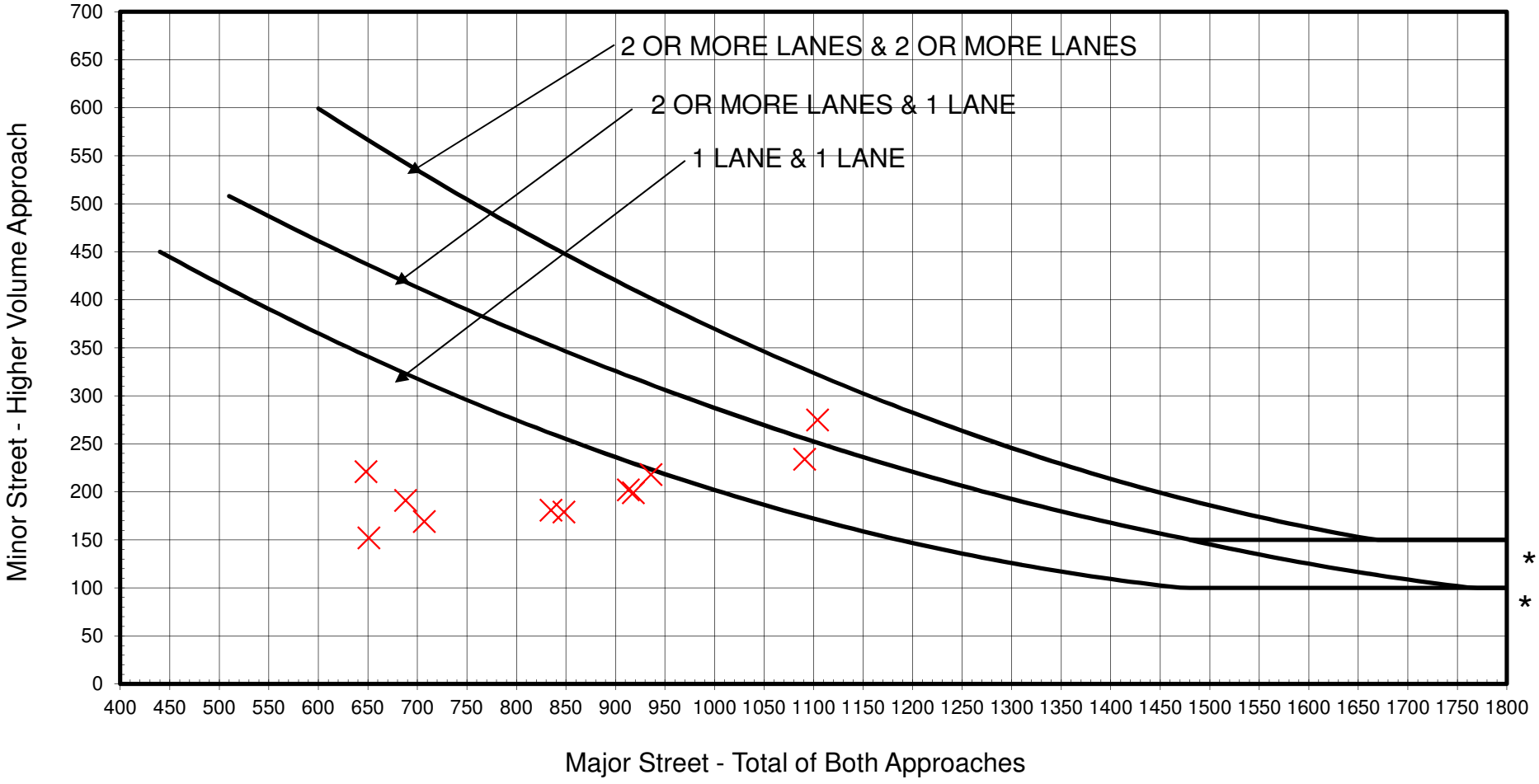
		Warrant Met?
Warrant 2 (Urban) =	5 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	N Leavitt Rd	2
Minor Road =	Meister Rd	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	1 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.42

Traffic Signal Warrant Analysis Results

Intersection 42
Meister Rd and Pole Ave

SIGNAL WARRANT

INTERSECTION: Pole Ave and Meister Rd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 0 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X		X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		295	6	0														
8AM-9AM		308	13	0														
9AM-10AM		230	8	0														
10AM-11AM		233	7	0														
11AM-NOON		282	11	0														
NOON-1PM		332	10	0														
1PM-2PM		320	12	0														
2PM-3PM		408	7	0			X											
3PM-4PM		493	8	0			X											
4PM-5PM		461	13	0			X											
5PM-6PM		450	11	0			X											
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Pole Ave and Meister Rd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

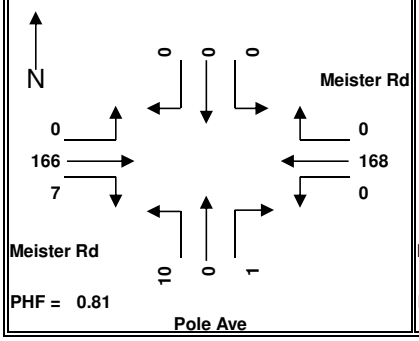
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.018	Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.43
Intersection ID: 42

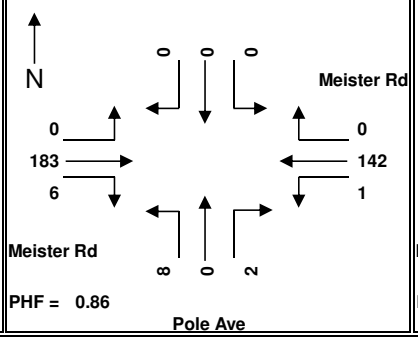
Start Time	Pole Ave Northbound LT	THRU	RT	Truck	Southbound LT	THRU	RT	Truck	Total North South	Meister Rd Eastbound LT	THRU	RT	Truck	Meister Rd Westbound LT	THRU	RT	Truck	Total East West	Total All Dir.
Totals	91	0	15	4	0	0	0	0	106	0	1925	69	37	7	1811	0	37	3812	3918
	Percent Trucks =			4%	Percent Trucks =			0%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	133	0	22	6	0	0	0	0	155	0	2812	101	54	10	2645	0	54	5568	5722
7:00 AM	2	0	0	0	0	0	0	0	2	0	41	1	1	0	22	0	0	64	66
7:15 AM	0	0	0	0	0	0	0	0	0	0	37	3	4	0	25	0	0	65	65
7:30 AM	2	0	1	0	0	0	0	0	3	0	35	0	0	0	31	0	0	66	69
7:45 AM	1	0	0	0	0	0	0	0	1	0	46	2	0	0	52	0	2	100	101
8:00 AM	4	0	0	0	0	0	0	0	4	0	54	1	3	0	49	0	2	104	108
8:15 AM	3	0	0	0	0	0	0	0	3	0	31	4	2	0	36	0	2	71	74
8:30 AM	1	0	1	0	0	0	0	0	2	0	40	1	1	0	25	0	3	66	68
8:45 AM	2	0	2	2	0	0	0	0	4	0	29	0	3	0	38	0	1	67	71
9:00 AM	2	0	1	1	0	0	0	0	3	0	24	2	3	1	21	0	0	48	51
9:15 AM	1	0	0	0	0	0	0	0	1	0	28	2	0	0	27	0	1	57	58
9:30 AM	3	0	0	0	0	0	0	0	3	0	29	2	0	0	39	0	1	70	73
9:45 AM	1	0	0	0	0	0	0	0	1	0	25	0	0	0	30	0	0	55	56
10:00 AM	1	0	0	0	0	0	0	0	1	0	21	0	0	0	20	0	1	41	42
10:15 AM	2	0	0	0	0	0	0	0	2	0	33	1	0	0	30	0	1	64	66
10:30 AM	2	0	0	0	0	0	0	0	2	0	37	0	0	0	29	0	0	66	68
10:45 AM	2	0	0	0	0	0	0	0	2	0	33	0	1	0	29	0	1	62	64
11:00 AM	6	0	0	0	0	0	0	0	6	0	32	0	0	0	30	0	1	62	68
11:15 AM	0	0	0	0	0	0	0	0	0	0	39	1	1	1	27	0	1	68	68
11:30 AM	1	0	1	0	0	0	0	0	2	0	39	1	1	0	40	0	2	80	82
11:45 AM	2	0	1	0	0	0	0	0	3	0	33	4	0	0	35	0	0	72	75
12:00 PM	2	0	0	0	0	0	0	0	2	0	49	1	1	0	32	0	1	82	84
12:15 PM	2	0	1	0	0	0	0	0	3	0	41	1	0	0	28	0	1	70	73
12:30 PM	2	0	1	0	0	0	0	0	3	0	51	1	0	1	44	0	1	97	100
12:45 PM	2	0	0	0	0	0	0	0	2	0	42	3	1	0	38	0	0	83	85
1:00 PM	3	0	0	0	0	0	0	0	3	0	33	6	1	0	32	0	0	71	74
1:15 PM	1	0	0	0	0	0	0	0	1	0	35	2	0	0	33	0	0	70	71
1:30 PM	2	0	0	0	0	0	0	0	2	0	39	3	0	0	46	0	1	88	90
1:45 PM	4	0	2	0	0	0	0	0	6	0	50	0	1	0	41	0	0	91	97
2:00 PM	1	0	0	0	0	0	0	0	1	0	53	2	2	0	31	0	1	86	87
2:15 PM	2	0	0	0	0	0	0	0	2	0	48	1	0	1	52	0	1	102	104
2:30 PM	1	0	0	0	0	0	0	0	1	0	56	4	1	0	43	0	1	103	104
2:45 PM	3	0	0	0	0	0	0	0	3	0	57	1	2	0	59	0	0	117	120
3:00 PM	1	0	0	0	0	0	0	0	1	0	60	3	0	0	49	0	0	112	113
3:15 PM	4	0	0	0	0	0	0	0	4	0	50	1	2	0	81	0	2	132	136
3:30 PM	1	0	1	1	0	0	0	0	2	0	67	4	1	0	67	0	3	138	140
3:45 PM	1	0	0	0	0	0	0	0	1	0	52	1	2	0	58	0	3	111	112
4:00 PM	2	0	0	0	0	0	0	0	2	0	60	0	1	0	56	0	0	116	118
4:15 PM	1	0	0	0	0	0	0	0	1	0	45	1	1	0	52	0	0	98	99
4:30 PM	4	0	2	0	0	0	0	0	6	0	62	3	1	2	53	0	1	120	126
4:45 PM	4	0	0	0	0	0	0	0	4	0	60	2	0	0	65	0	0	127	131
5:00 PM	5	0	1	0	0	0	0	0	6	0	63	1	0	0	43	0	0	107	113
5:15 PM	2	0	0	0	0	0	0	0	2	0	65	1	0	1	75	0	1	142	144
5:30 PM	2	0	0	0	0	0	0	0	2	0	51	1	0	0	48	0	0	100	102
5:45 PM	1	0	0	0	0	0	0	0	1	0	50	1	0	0	50	0	1	101	102

AM Peak Hour
7:30 AM to 8:30 AM



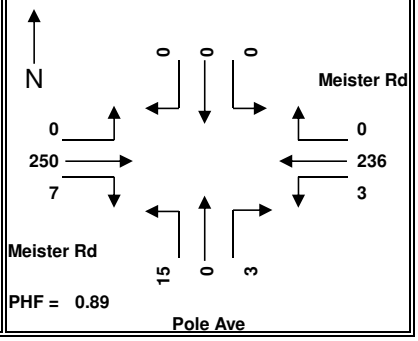
PHF = 0.81

Midday Peak Hour
12:00 PM to 1:00 PM



PHF = 0.86

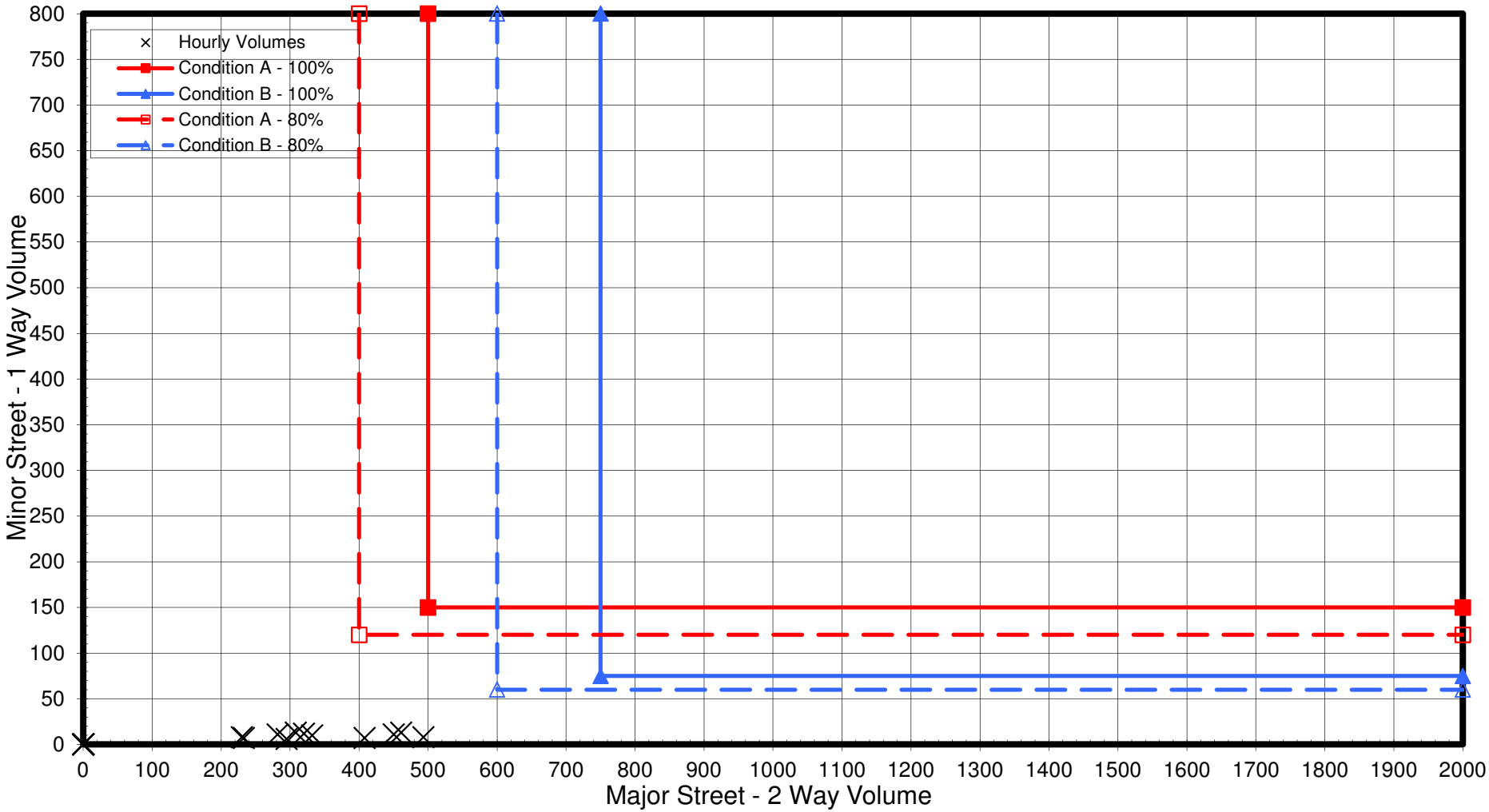
PM Peak Hour
4:30 PM to 5:30 PM



PHF = 0.89

Notes:

WARRANT 1 - Conditions A & B



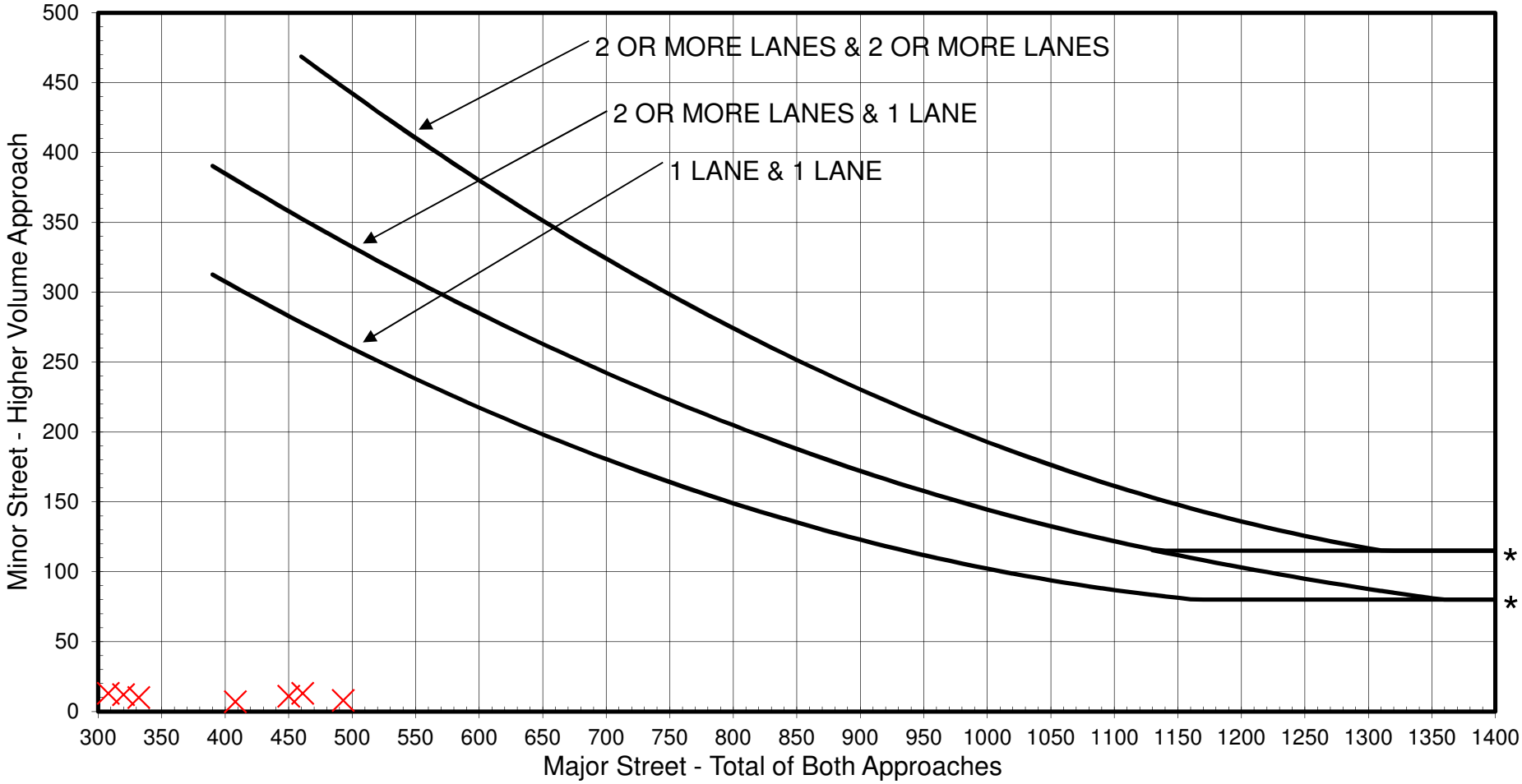
		Lanes
Major Road =	Meister Rd	1
Minor Road =	Pole Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Meister Rd	1
Minor Road =	Pole Ave	1
Road Location =	Urban	

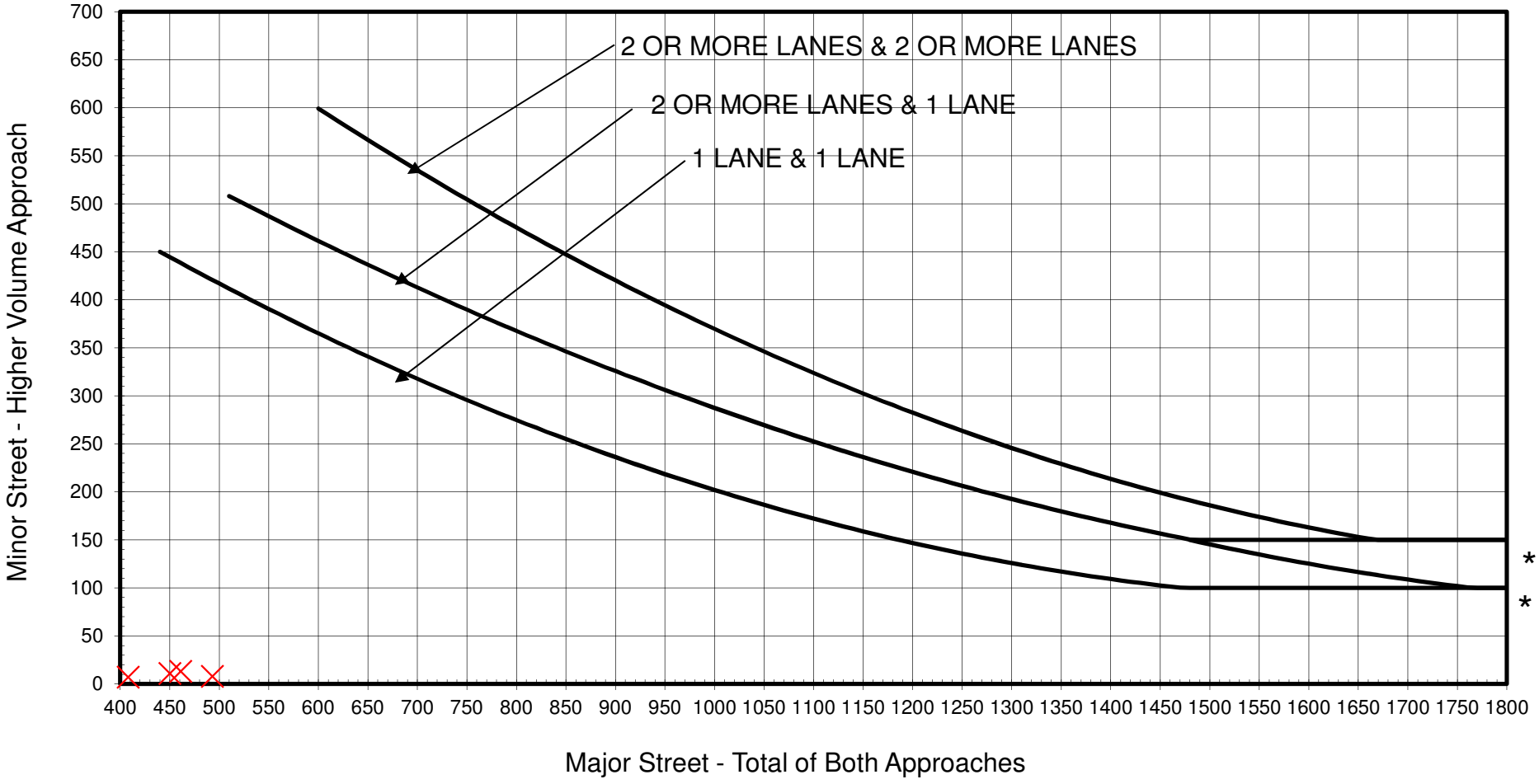
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Meister Rd	1
Minor Road =	Pole Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.43

Traffic Signal Warrant Analysis Results

Intersection 43
Meister Rd and Ashland Ave

SIGNAL WARRANT

INTERSECTION: Ashland Ave and Meister Rd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		288	42	23														
8AM-9AM		293	67	34								X						
9AM-10AM		234	35	24														
10AM-11AM		259	34	38														
11AM-NOON		291	55	31														
NOON-1PM		339	45	42														
1PM-2PM		333	46	33														
2PM-3PM		423	101	42			X			X		X						
3PM-4PM		435	78	53			X			X		X						
4PM-5PM		413	72	45			X					X						
5PM-6PM		394	51	37														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Ashland Ave and Meister Rd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

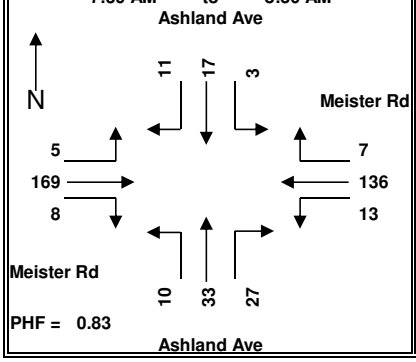
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.969	Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

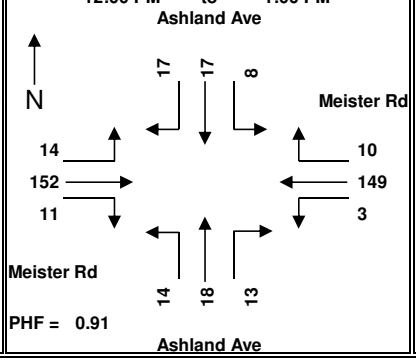
ADT Factor: 1.43
Intersection ID: 43

Start Time	Ashland Ave Northbound				Ashland Ave Southbound				Total North South	Meister Rd Eastbound				Meister Rd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	155	259	212	14	92	192	118	11	1028	114	1738	122	54	87	1525	116	48	3702	4730
	Percent Trucks =			2%	Percent Trucks =			3%		Percent Trucks =			3%	Percent Trucks =			3%		
ADT	215	360	295	19	128	267	164	15	1429	158	2416	170	75	121	2120	161	67	5147	6576
7:00 AM	2	1	2	0	0	1	1	0	7	1	28	2	0	2	12	0	1	45	52
7:15 AM	5	1	3	0	3	3	1	0	16	1	35	3	2	2	26	1	1	68	84
7:30 AM	0	3	8	0	1	1	1	0	14	1	40	2	1	2	24	1	1	70	84
7:45 AM	1	10	6	1	0	8	3	0	28	2	41	1	0	6	52	3	4	105	133
8:00 AM	5	12	4	0	1	7	2	0	31	0	45	4	2	3	32	2	3	86	117
8:15 AM	4	8	9	0	1	1	5	0	28	2	43	1	3	2	28	1	2	77	105
8:30 AM	0	2	8	0	2	3	1	0	16	3	26	0	3	1	35	1	0	66	82
8:45 AM	4	8	3	0	2	4	5	0	26	6	24	4	2	0	30	0	3	64	90
9:00 AM	5	3	5	0	0	7	2	1	22	3	21	2	3	0	17	1	2	44	66
9:15 AM	0	2	4	0	2	2	1	0	11	2	28	0	1	3	22	4	0	59	70
9:30 AM	2	3	4	0	2	0	1	0	12	1	28	2	2	1	15	1	2	48	60
9:45 AM	2	5	0	0	0	3	4	0	14	3	36	3	3	1	36	4	2	83	97
10:00 AM	3	7	2	0	1	4	4	0	21	0	30	1	2	0	22	2	1	55	76
10:15 AM	1	2	2	0	3	4	3	0	15	4	34	1	1	1	33	1	1	74	89
10:30 AM	1	5	3	0	2	7	1	0	19	0	29	2	2	0	23	1	0	55	74
10:45 AM	3	2	3	0	2	5	2	0	17	3	36	2	2	1	30	3	0	75	92
11:00 AM	2	7	5	1	3	2	2	0	21	3	37	1	1	0	29	2	1	72	93
11:15 AM	7	2	3	0	3	3	2	0	20	3	42	3	2	0	28	1	3	77	97
11:30 AM	5	5	7	0	1	3	3	0	24	0	29	6	0	2	33	0	2	70	94
11:45 AM	2	8	2	1	1	3	5	0	21	2	41	1	0	1	26	1	1	72	93
12:00 PM	4	7	4	0	0	6	6	3	27	2	42	1	1	0	45	0	1	90	117
12:15 PM	4	4	2	0	4	3	6	2	23	5	44	0	2	1	32	3	2	85	108
12:30 PM	3	5	3	0	2	5	2	0	20	2	32	4	1	1	34	3	0	76	96
12:45 PM	3	2	4	0	2	3	3	0	17	5	34	6	1	1	38	4	2	88	105
1:00 PM	2	2	6	1	1	5	4	1	20	0	44	2	0	1	33	1	0	81	101
1:15 PM	2	3	1	0	1	3	1	0	11	6	36	4	0	0	27	1	1	74	85
1:30 PM	3	10	4	4	4	1	4	1	26	3	43	2	0	2	37	4	1	91	117
1:45 PM	2	7	4	0	3	5	1	0	22	1	36	4	0	4	37	5	1	87	109
2:00 PM	7	6	5	1	0	3	2	0	23	5	50	3	0	1	26	1	0	86	109
2:15 PM	4	7	3	0	4	6	0	0	24	4	39	3	2	8	40	1	2	95	119
2:30 PM	6	15	17	0	0	13	0	1	51	1	73	9	4	3	50	1	0	137	188
2:45 PM	9	16	6	1	2	10	2	0	45	4	48	1	1	3	47	2	1	105	150
3:00 PM	2	13	11	1	1	5	6	0	38	0	49	9	1	2	52	7	0	119	157
3:15 PM	6	5	6	0	2	5	9	1	33	2	53	1	2	3	48	4	2	111	144
3:30 PM	4	4	3	0	1	7	5	0	24	4	46	3	1	4	44	3	3	104	128
3:45 PM	8	7	9	0	4	6	2	0	36	3	46	3	3	2	44	3	2	101	137
4:00 PM	4	6	12	1	4	6	1	1	33	3	46	1	0	4	57	9	0	120	153
4:15 PM	4	4	7	1	6	8	1	0	30	2	47	3	1	3	40	1	0	96	126
4:30 PM	4	7	4	0	5	4	5	0	29	3	45	6	0	1	38	6	0	99	128
4:45 PM	5	8	7	1	2	3	0	0	25	4	44	3	0	3	40	4	0	98	123
5:00 PM	1	11	3	0	2	2	0	0	19	5	48	2	0	2	46	7	0	110	129
5:15 PM	5	3	3	0	7	4	2	0	24	7	39	3	2	5	38	6	0	98	122
5:30 PM	5	6	4	0	3	6	3	0	27	2	50	5	0	2	39	3	0	101	128
5:45 PM	4	5	1	0	2	2	4	0	18	1	31	3	0	3	40	7	0	85	103

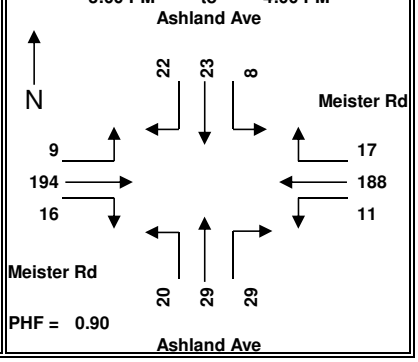
AM Peak Hour
7:30 AM to 8:30 AM



Midday Peak Hour
12:00 PM to 1:00 PM

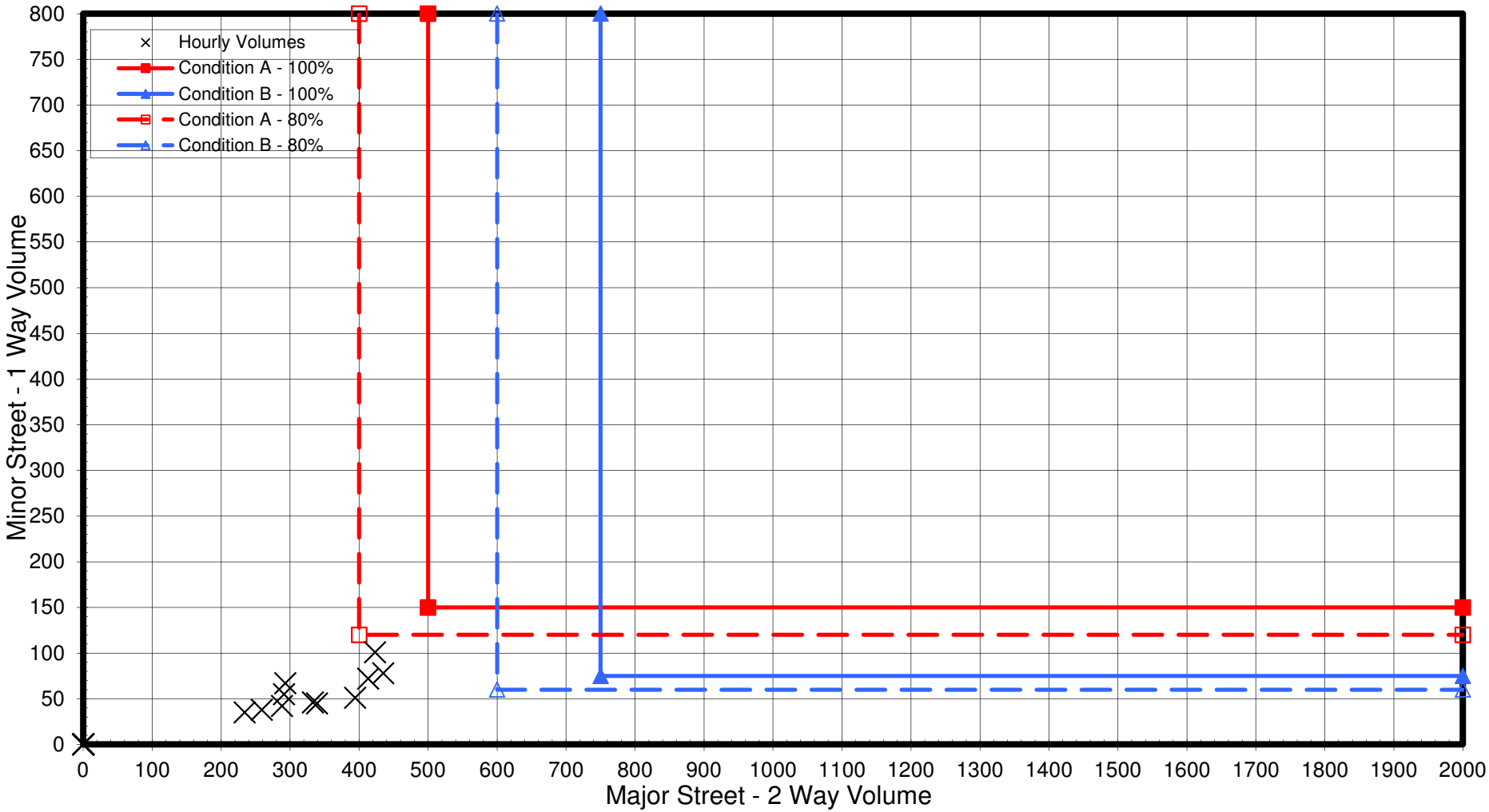


PM Peak Hour
3:00 PM to 4:00 PM



Notes:

WARRANT 1 - Conditions A & B



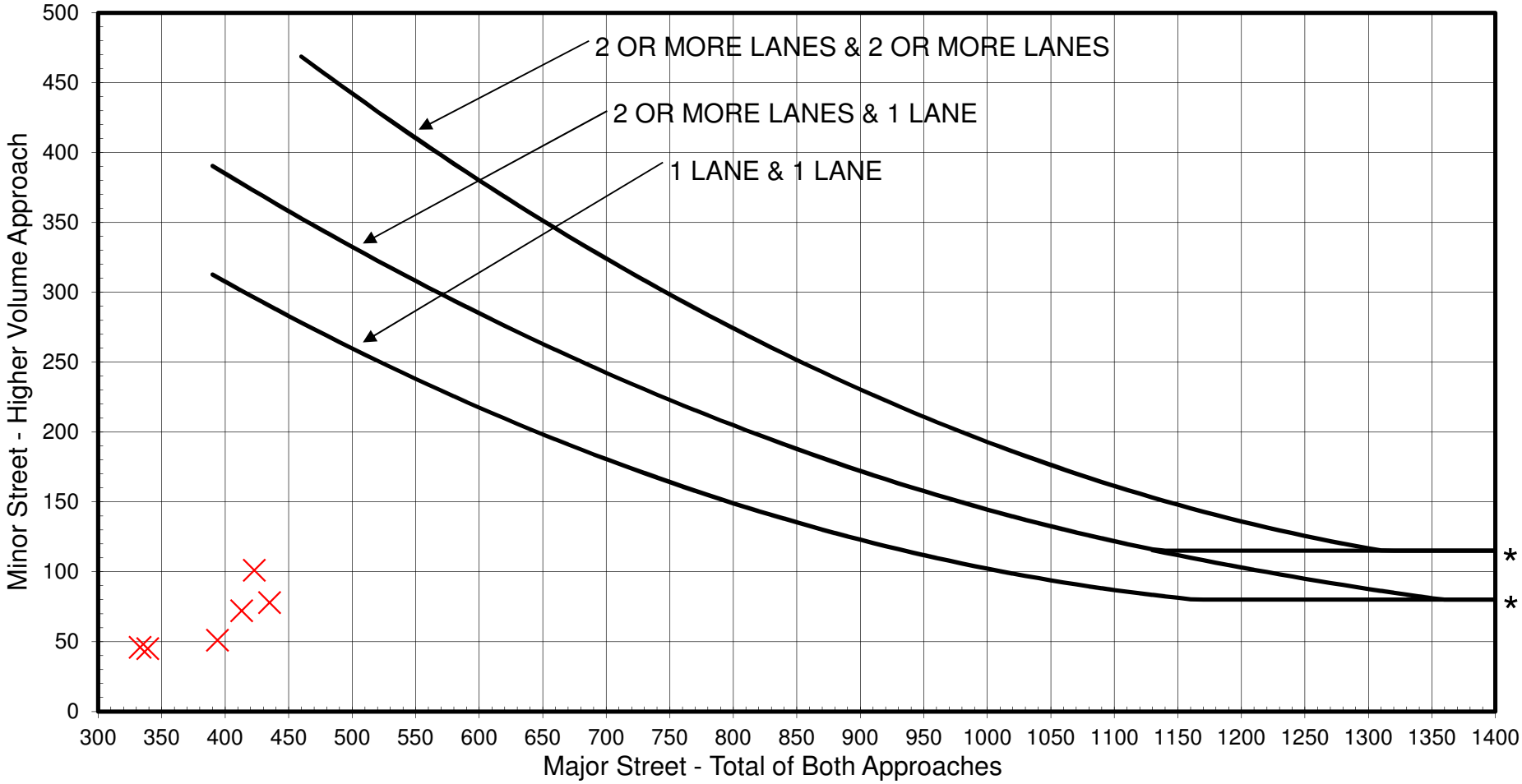
		Lanes
Major Road =	Meister Rd	1
Minor Road =	Ashland Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Meister Rd	1
Minor Road =	Ashland Ave	1
Road Location =	Urban	

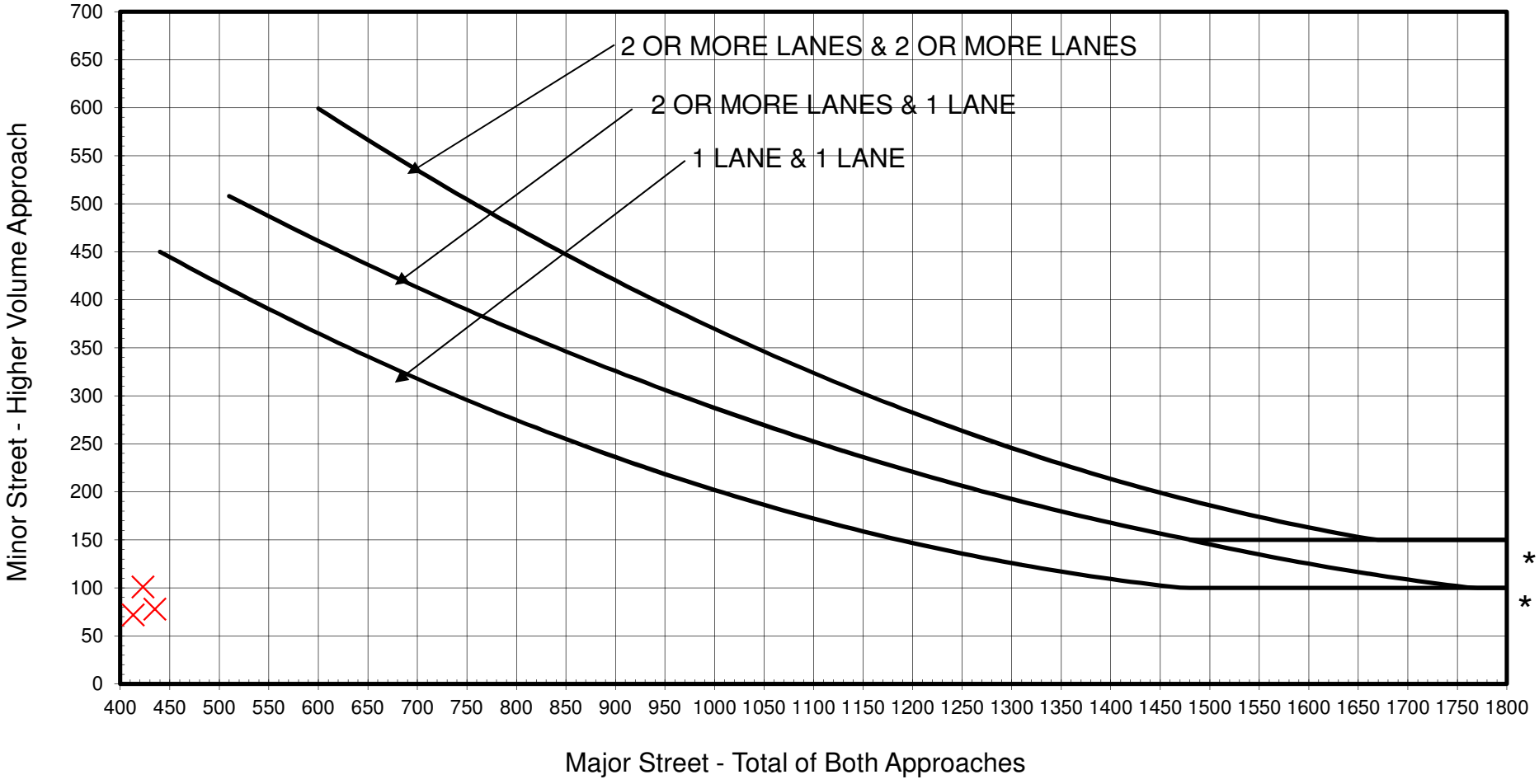
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Meister Rd	1
Minor Road =	Ashland Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.44

Traffic Signal Warrant Analysis Results

Intersection 44
Oberlin Ave and Meister Rd

SIGNAL WARRANT

INTERSECTION: Oberlin Ave and Meister Rd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		632	173	132	X	X	X	X		X		X						
8AM-9AM		729	172	148	X	X	X	X		X	X	X						
9AM-10AM		593	136	120			X	X		X		X						
10AM-11AM		618	153	135	X	X	X	X		X		X						
11AM-NOON		742	179	182	X	X	X	X		X	X	X						
NOON-1PM		750	187	212	X	X	X	X		X	X	X					X	
1PM-2PM		744	188	191	X	X	X	X		X	X	X						
2PM-3PM		1073	252	248	X	X	X	X	X	X	X	X					X	
3PM-4PM		1183	242	288	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1070	247	248	X	X	X	X	X	X	X	X					X	
5PM-6PM		1003	217	237	X	X	X	X	X	X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					10		11		4		8						5	1
WARRANT SATISFIED?					YES		YES		NO		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Oberlin Ave and Meister Rd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

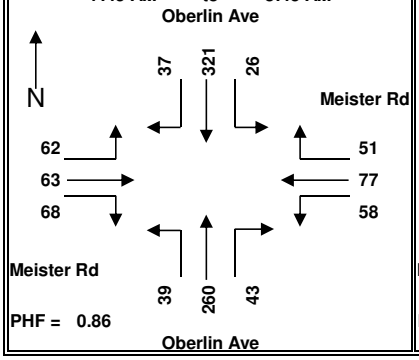
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.005	Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 44

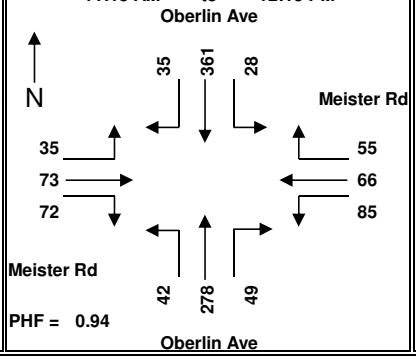
Start Time	Oberlin Ave Northbound				Oberlin Ave Southbound				Total North South	Meister Rd Eastbound				Meister Rd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	541	3342	560	105	376	3901	417	102	9137	648	761	737	49	793	809	539	34	4287	13424
	Percent Trucks =			2%	Percent Trucks =			2%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	768	4744	795	149	534	5537	592	145	12970	920	1080	1046	70	1126	1148	765	48	6085	19055
7:00 AM	4	41	3	1	1	66	4	1	119	10	12	8	0	3	5	4	0	42	161
7:15 AM	9	41	4	2	2	92	11	3	159	9	15	16	2	10	10	3	0	63	222
7:30 AM	5	52	13	6	6	79	7	1	162	12	22	21	1	11	10	8	1	84	246
7:45 AM	14	65	9	3	11	82	11	4	192	12	12	24	0	14	32	22	1	116	308
8:00 AM	12	89	13	3	4	94	6	4	218	14	20	18	2	20	17	13	1	102	320
8:15 AM	6	45	11	4	7	61	12	1	142	20	16	18	3	8	10	8	2	80	222
8:30 AM	7	61	10	4	4	84	8	4	174	16	15	8	2	16	18	8	2	81	255
8:45 AM	10	66	10	4	6	94	9	4	195	11	8	8	3	9	15	6	2	57	252
9:00 AM	3	53	6	3	3	59	8	3	132	12	12	10	2	14	9	7	0	64	196
9:15 AM	6	59	2	4	2	63	8	0	140	6	17	8	0	13	15	12	2	71	211
9:30 AM	4	41	10	3	7	79	11	7	152	7	16	14	3	7	8	4	1	56	208
9:45 AM	14	50	12	2	9	76	8	3	169	9	14	11	3	8	15	8	1	65	234
10:00 AM	7	43	7	4	7	65	7	3	136	7	10	15	2	14	15	12	2	73	209
10:15 AM	7	46	11	1	4	76	9	2	153	7	17	15	1	10	14	5	1	68	221
10:30 AM	8	54	10	4	5	74	7	2	158	15	9	11	2	9	11	6	0	61	219
10:45 AM	8	62	9	5	6	78	8	3	171	15	15	17	1	15	21	3	1	86	257
11:00 AM	13	61	9	2	9	60	7	1	159	14	14	16	1	16	15	4	3	79	238
11:15 AM	10	64	8	3	7	86	10	1	185	7	22	16	1	14	18	11	0	88	273
11:30 AM	10	75	10	3	11	84	9	4	199	9	16	16	0	16	15	13	2	85	284
11:45 AM	8	67	18	5	5	94	7	4	199	13	19	17	0	29	13	18	1	109	308
12:00 PM	14	72	13	1	5	97	9	2	210	6	16	23	2	26	20	13	0	104	314
12:15 PM	12	65	9	2	5	63	4	0	158	15	19	20	1	19	17	14	0	104	262
12:30 PM	10	84	12	1	10	76	7	2	199	13	14	14	0	24	22	7	0	94	293
12:45 PM	17	75	13	0	7	62	9	2	183	15	16	16	3	19	21	10	2	97	280
1:00 PM	12	58	10	0	9	81	6	1	176	27	7	19	0	13	16	20	1	102	278
1:15 PM	15	65	8	2	11	73	4	1	176	9	10	22	0	23	13	15	0	92	268
1:30 PM	14	83	17	5	5	63	7	5	189	13	19	15	0	13	22	5	0	87	276
1:45 PM	8	82	9	1	6	89	9	3	203	11	23	13	0	15	26	10	1	98	301
2:00 PM	11	53	11	0	8	111	7	3	201	16	30	12	0	26	17	12	0	113	314
2:15 PM	17	93	15	2	14	116	9	2	264	10	15	21	1	29	24	13	1	112	376
2:30 PM	16	117	18	1	13	123	14	5	301	30	26	26	5	44	22	7	3	155	456
2:45 PM	25	127	30	5	12	105	8	3	307	25	22	19	0	24	17	13	0	120	427
3:00 PM	19	120	23	4	9	108	11	1	290	24	22	11	1	27	30	17	0	131	421
3:15 PM	21	113	23	4	13	111	14	5	295	21	27	18	1	19	25	18	2	128	423
3:30 PM	8	110	15	0	16	140	18	4	307	15	22	20	1	31	26	23	0	137	444
3:45 PM	20	100	15	4	10	128	18	2	291	27	14	21	3	31	16	25	1	134	425
4:00 PM	18	105	34	2	13	91	13	0	274	24	23	21	0	26	40	17	0	151	425
4:15 PM	21	100	15	1	15	109	8	2	268	22	13	24	1	23	19	17	0	118	386
4:30 PM	13	95	15	2	9	119	11	0	262	15	25	31	0	15	27	10	0	123	385
4:45 PM	19	101	9	0	11	109	17	3	266	19	19	11	0	19	16	19	0	103	369
5:00 PM	17	111	20	1	22	90	9	0	269	25	30	17	0	16	29	19	0	136	405
5:15 PM	15	103	15	1	13	114	13	1	273	15	20	12	1	21	26	14	0	108	381
5:30 PM	20	93	16	0	18	85	14	0	246	13	19	26	0	16	15	22	0	111	357
5:45 PM	14	82	10	0	6	92	11	0	215	13	9	18	0	18	17	24	0	99	314

AM Peak Hour
7:45 AM to 8:45 AM



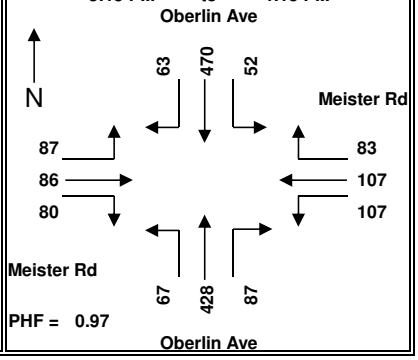
PHF = 0.86

Midday Peak Hour
11:15 AM to 12:15 PM



PHF = 0.94

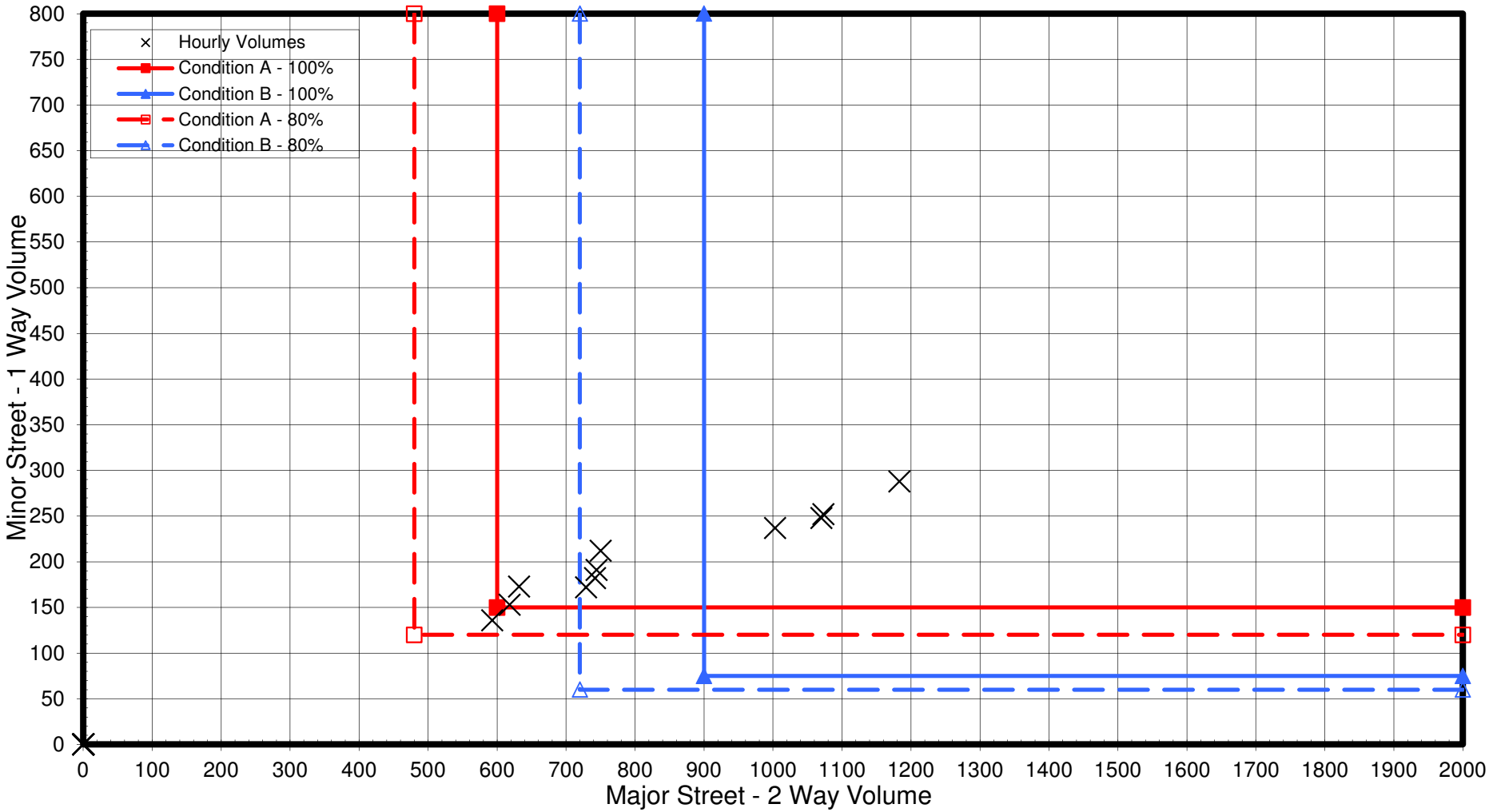
PM Peak Hour
3:15 PM to 4:15 PM



PHF = 0.97

Notes:

WARRANT 1 - Conditions A & B



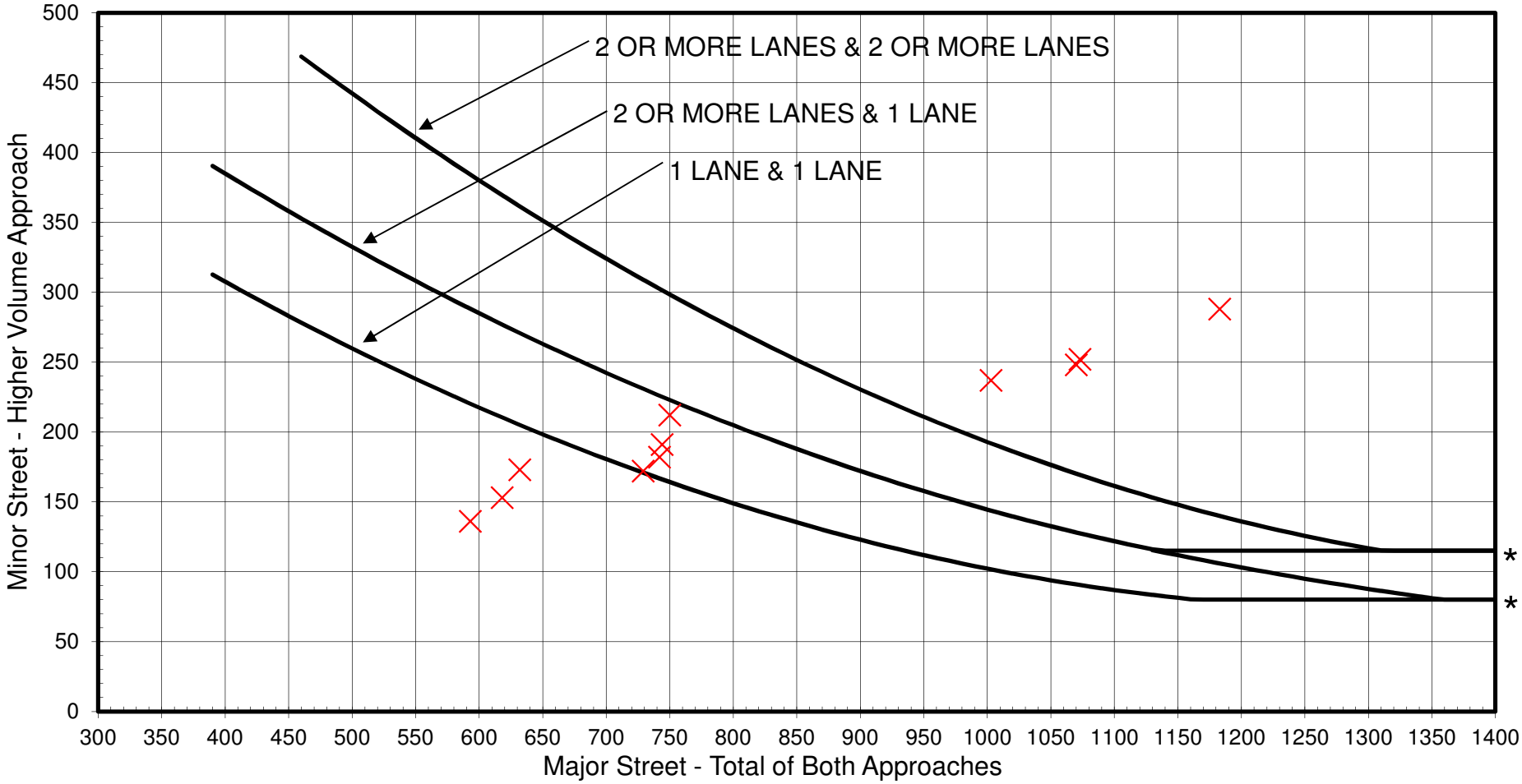
		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	Meister Rd	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	10 Hours Meet	Yes
Condition B (100%) =	4 Hours Meet	No
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	8 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	Meister Rd	1
Road Location =	Urban	

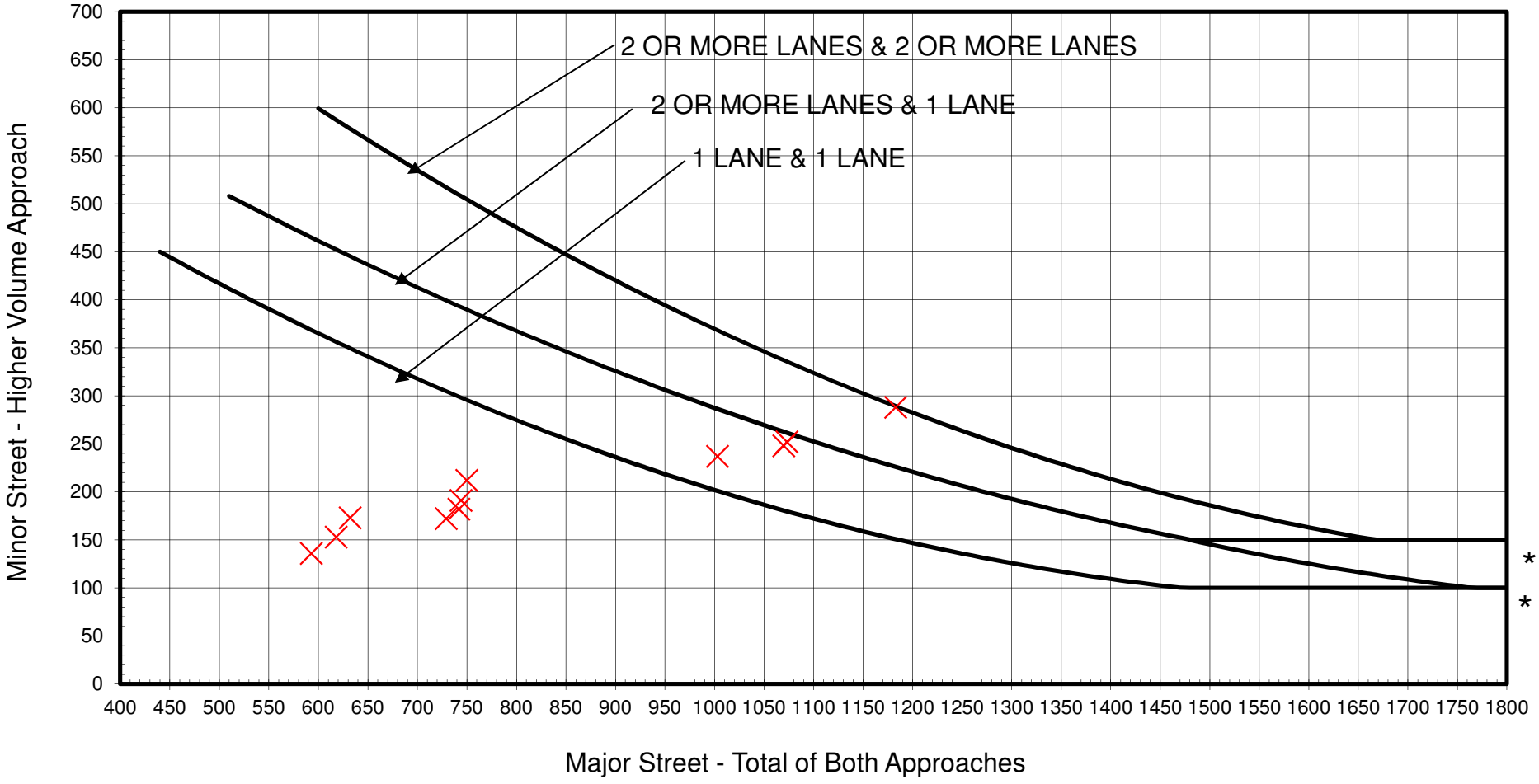
		Warrant Met?
Warrant 2 (Urban) =	5 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	Meister Rd	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	1 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.45

Traffic Signal Warrant Analysis Results

Intersection 45
Oberlin Ave and W 26th St

SIGNAL WARRANT

INTERSECTION: Oberlin Ave and W 26th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 0 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X		500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		620	30	0	X		X				X							
8AM-9AM		706	19	0	X		X				X							
9AM-10AM		558	14	0	X		X											
10AM-11AM		576	7	0	X		X											
11AM-NOON		689	10	0	X		X				X							
NOON-1PM		680	11	0	X		X				X							
1PM-2PM		722	14	0	X		X				X							
2PM-3PM		949	22	0	X		X		X		X							
3PM-4PM		1105	19	0	X		X		X		X							
4PM-5PM		977	9	0	X		X		X		X							
5PM-6PM		918	6	0	X		X		X		X							
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Oberlin Ave and W 26th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
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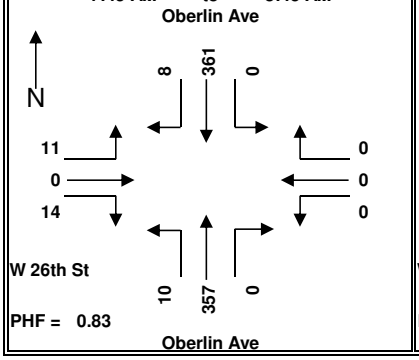
Roadway Classification:

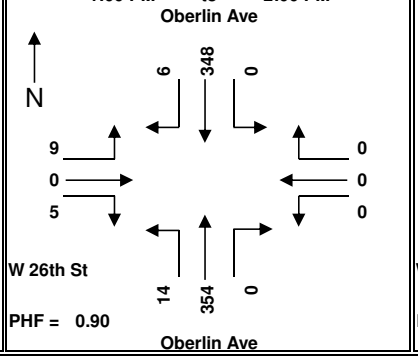
ADT Factor: 1.41
Intersection ID: 45

Start Time	Oberlin Ave Northbound				Oberlin Ave Southbound				Total North South	W 26th St Eastbound				Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	97	4074	0	90	0	4276	53	103	8500	56	0	105	7	0	0	0	0	161	8661
	Percent Trucks =			2%	Percent Trucks =			2%		Percent Trucks =			4%	Percent Trucks =			0%		
ADT	138	5783	0	128	0	6070	75	146	12066	79	0	149	10	0	0	0	0	229	12294
7:00 AM	0	43	0	1	0	75	1	0	119	2	0	6	1	0	0	0	0	8	127
7:15 AM	2	63	0	0	0	81	0	2	146	2	0	6	0	0	0	0	0	8	154
7:30 AM	0	72	0	2	0	83	2	0	157	3	0	3	0	0	0	0	0	6	163
7:45 AM	2	102	0	1	0	94	0	4	198	4	0	4	1	0	0	0	0	8	206
8:00 AM	5	112	0	7	0	103	4	5	224	2	0	3	0	0	0	0	0	5	229
8:15 AM	1	72	0	1	0	82	1	1	156	4	0	1	1	0	0	0	0	5	161
8:30 AM	2	71	0	4	0	82	3	4	158	1	0	6	1	0	0	0	0	7	165
8:45 AM	2	77	0	7	0	88	1	0	168	1	0	1	0	0	0	0	0	2	170
9:00 AM	2	72	0	0	0	67	1	5	142	0	0	2	0	0	0	0	0	2	144
9:15 AM	2	75	0	6	0	59	0	2	136	0	0	5	0	0	0	0	0	5	141
9:30 AM	2	57	0	3	0	72	0	5	131	2	0	2	1	0	0	0	0	4	135
9:45 AM	1	69	0	2	0	79	0	1	149	1	0	2	0	0	0	0	0	3	152
10:00 AM	0	59	0	3	0	68	1	2	128	0	0	0	0	0	0	0	0	0	128
10:15 AM	1	55	0	1	0	78	3	2	137	1	0	1	0	0	0	0	0	2	139
10:30 AM	4	58	0	2	0	77	1	1	140	1	0	0	0	0	0	0	0	1	141
10:45 AM	1	74	0	6	0	95	1	6	171	0	0	4	0	0	0	0	0	4	175
11:00 AM	0	74	0	2	0	67	0	1	141	0	0	2	0	0	0	0	0	2	143
11:15 AM	3	84	0	2	0	94	1	0	182	0	0	2	0	0	0	0	0	2	184
11:30 AM	2	79	0	3	0	93	0	3	174	2	0	2	0	0	0	0	0	4	178
11:45 AM	1	89	0	2	0	100	2	3	192	1	0	1	0	0	0	0	0	2	194
12:00 PM	5	79	0	1	0	92	0	3	176	0	0	3	0	0	0	0	0	3	179
12:15 PM	1	87	0	1	0	85	1	0	174	0	0	2	0	0	0	0	0	2	176
12:30 PM	2	84	0	1	0	84	2	1	172	2	0	1	0	0	0	0	0	3	175
12:45 PM	0	90	0	0	0	65	3	2	158	1	0	2	0	0	0	0	0	3	161
1:00 PM	3	94	0	1	0	83	2	2	182	2	0	1	0	0	0	0	0	3	185
1:15 PM	5	80	0	0	0	92	1	1	178	4	0	2	1	0	0	0	0	6	184
1:30 PM	3	85	0	0	0	68	2	4	158	3	0	1	0	0	0	0	0	4	162
1:45 PM	3	95	0	0	0	105	1	4	204	0	0	1	0	0	0	0	0	1	205
2:00 PM	3	79	0	2	0	119	0	5	201	2	0	2	0	0	0	0	0	4	205
2:15 PM	0	105	0	3	0	120	0	2	225	2	0	4	0	0	0	0	0	6	231
2:30 PM	3	139	0	3	0	124	2	4	268	3	0	4	0	0	0	0	0	7	275
2:45 PM	2	130	0	2	0	121	2	5	255	2	0	3	0	0	0	0	0	5	260
3:00 PM	3	147	0	2	0	134	1	2	285	1	0	4	1	0	0	0	0	5	290
3:15 PM	2	125	0	4	0	140	4	11	271	1	0	4	0	0	0	0	0	5	276
3:30 PM	6	136	0	4	0	144	2	2	288	1	0	6	0	0	0	0	0	7	295
3:45 PM	3	127	0	4	0	130	1	0	261	1	0	1	0	0	0	0	0	2	263
4:00 PM	2	123	0	2	0	97	1	3	223	0	0	2	0	0	0	0	0	2	225
4:15 PM	3	115	0	3	0	119	2	2	239	1	0	0	0	0	0	0	0	1	240
4:30 PM	2	116	0	1	0	139	2	0	259	0	0	4	0	0	0	0	0	4	263
4:45 PM	2	129	0	0	0	125	0	2	256	1	0	1	0	0	0	0	0	2	258
5:00 PM	1	120	0	0	0	119	1	0	241	0	0	3	0	0	0	0	0	3	244
5:15 PM	5	110	0	1	0	123	1	1	239	1	0	0	0	0	0	0	0	1	240
5:30 PM	4	117	0	0	0	99	0	0	220	1	0	1	0	0	0	0	0	2	222
5:45 PM	1	105	0	0	0	112	0	0	218	0	0	0	0	0	0	0	0	0	218

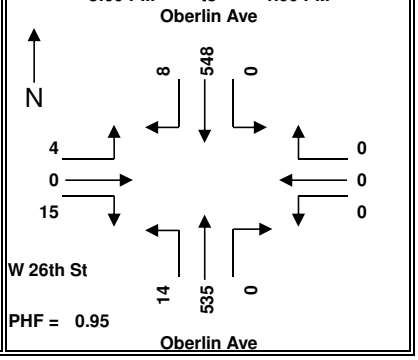
AM Peak Hour
7:45 AM to 8:45 AM



Midday Peak Hour
1:00 PM to 2:00 PM

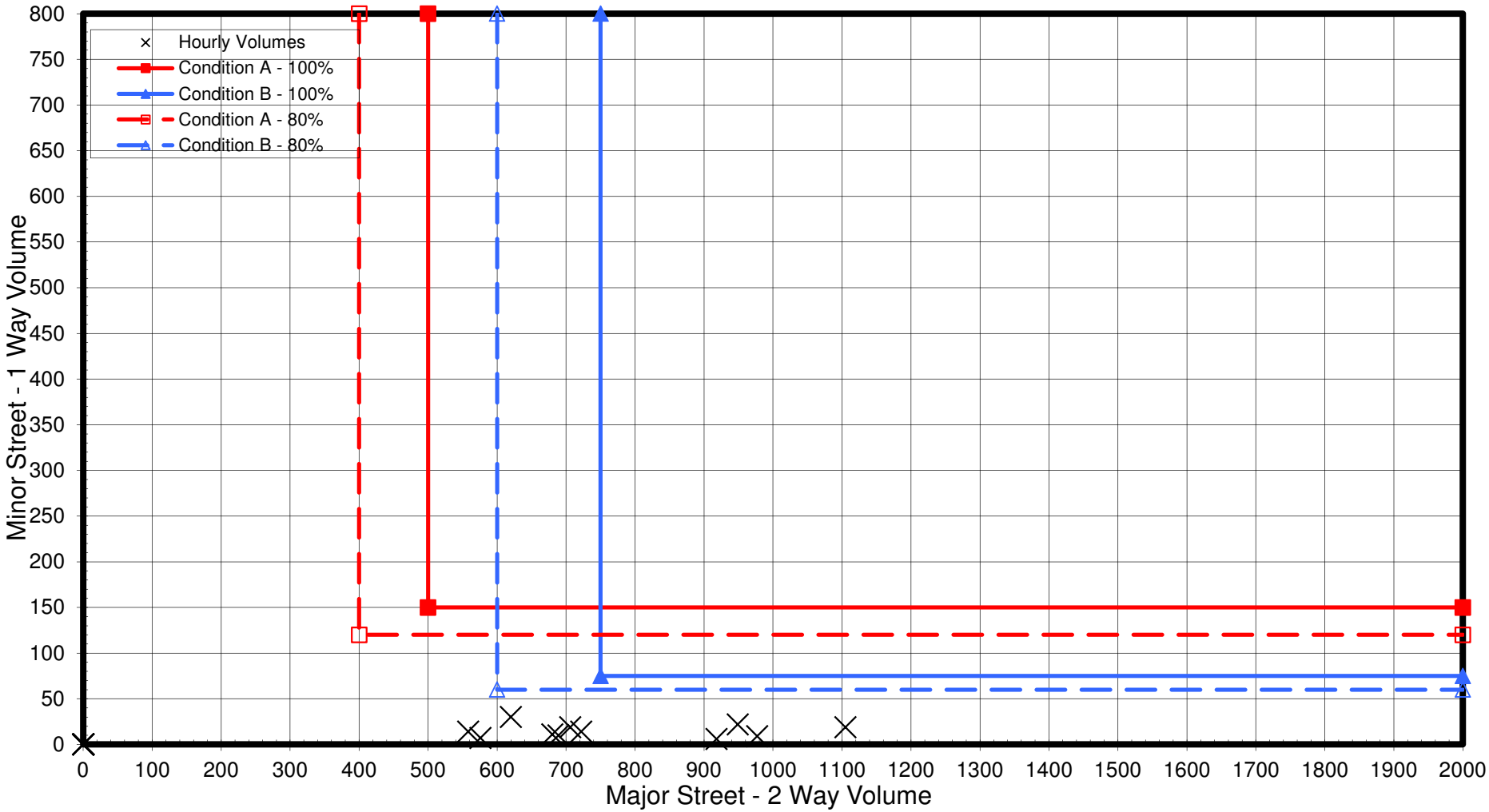


PM Peak Hour
3:00 PM to 4:00 PM



Notes:

WARRANT 1 - Conditions A & B



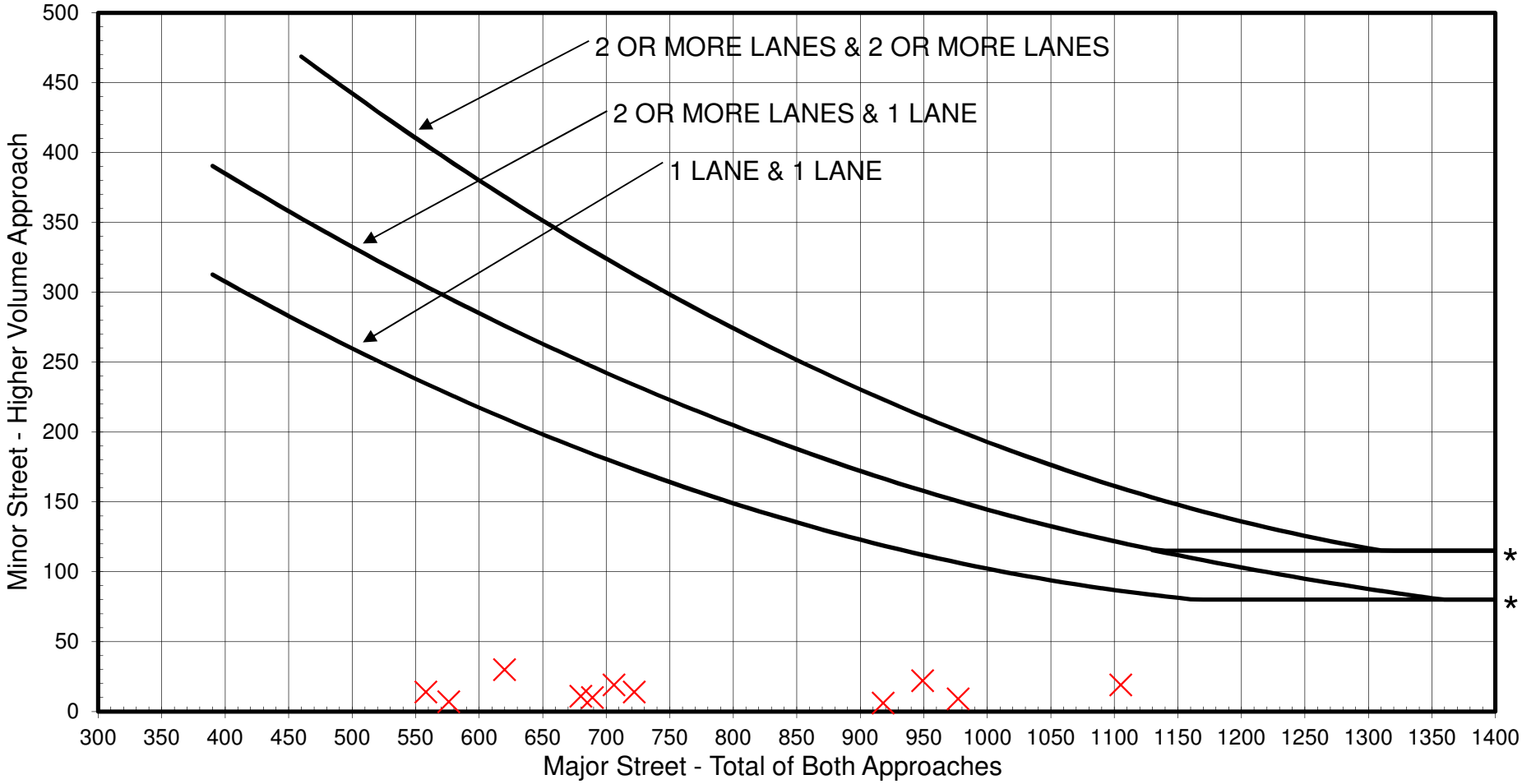
		Lanes
Major Road =	Oberlin Ave	1
Minor Road =	W 26th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Oberlin Ave	1
Minor Road =	W 26th St	1
Road Location =	Urban	

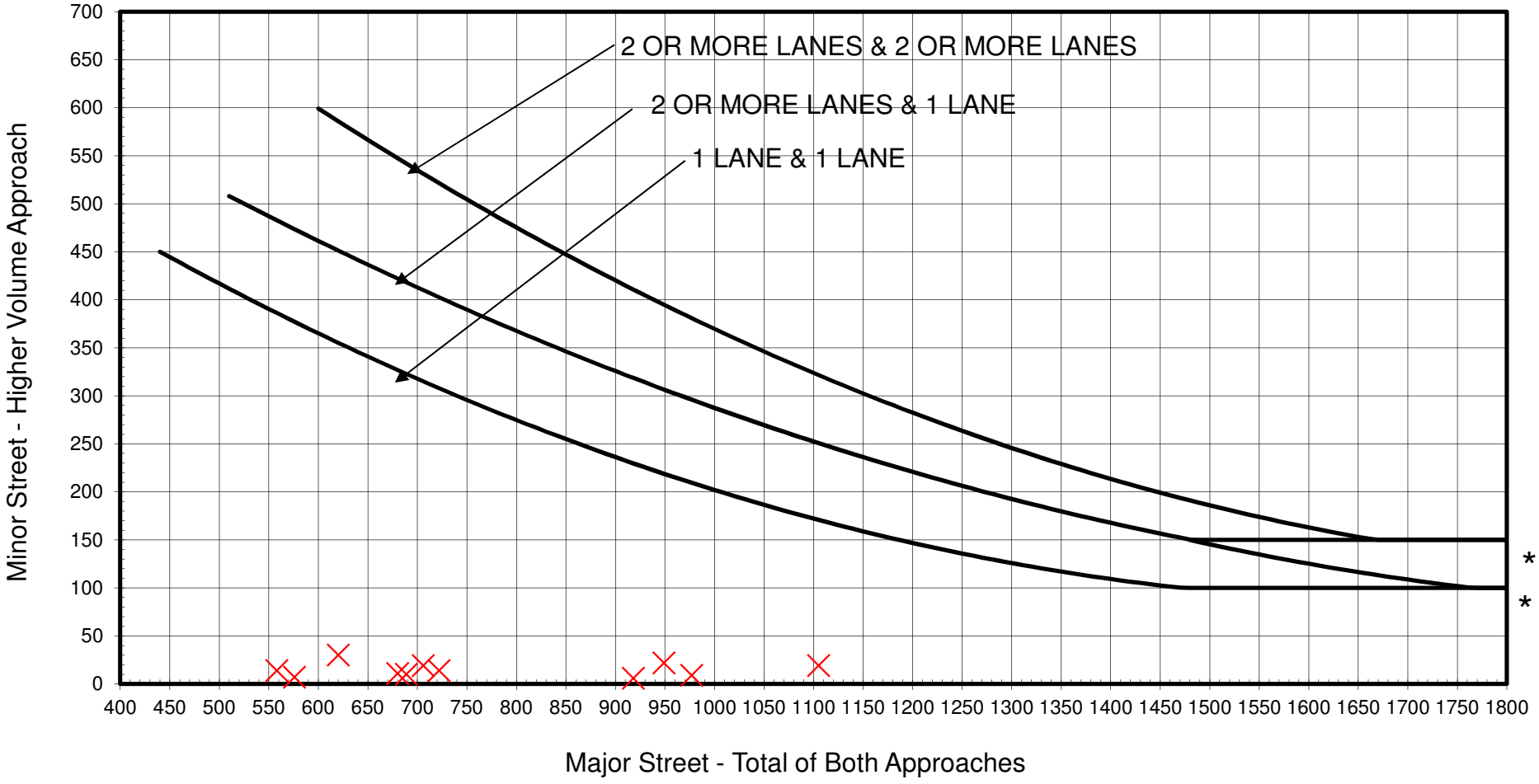
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Oberlin Ave	1
Minor Road =	W 26th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
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Appendix B.46

Traffic Signal Warrant Analysis Results

Intersection 46
Oberlin Ave and W 35th St

SIGNAL WARRANT

INTERSECTION: Oberlin Ave and W 35th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 0 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X		500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		666	43	0	X		X											
8AM-9AM		874	64	0	X		X				X	X						
9AM-10AM		712	25	0	X		X											
10AM-11AM		777	32	0	X		X				X							
11AM-NOON		828	41	0	X		X				X							
NOON-1PM		1105	29	0	X		X		X		X							
1PM-2PM		1098	27	0	X		X		X		X							
2PM-3PM		1455	55	0	X		X		X		X							
3PM-4PM		1351	41	0	X		X		X		X							
4PM-5PM		1363	45	0	X		X		X		X							
5PM-6PM		1335	19	0	X		X		X		X							
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		1						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Oberlin Ave and W 35th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

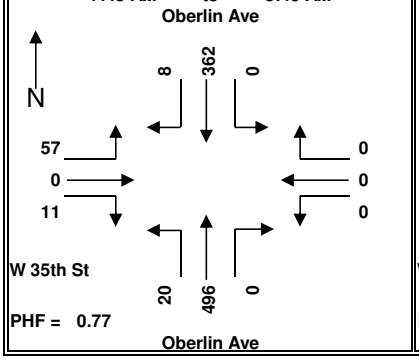
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.964	Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 46

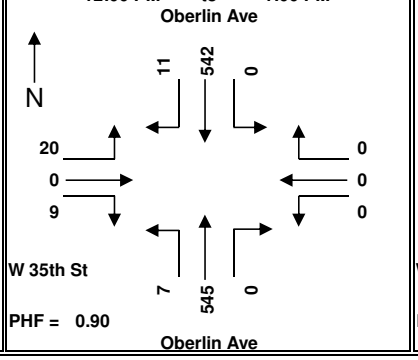
Start Time	Oberlin Ave Northbound				Oberlin Ave Southbound				Total North South	W 35th St Eastbound				Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	151	5744	0	109	0	5511	158	99	11564	264	0	157	9	0	0	0	0	421	11985
	Percent Trucks =			2%	Percent Trucks =			2%		Percent Trucks =			2%	Percent Trucks =			0%		
ADT	206	7821	0	148	0	7504	215	135	15745	359	0	214	12	0	0	0	0	573	16319
7:00 AM	0	48	0	2	0	59	1	1	108	2	0	3	0	0	0	0	0	5	113
7:15 AM	3	69	0	2	0	86	0	1	158	7	0	7	0	0	0	0	0	14	172
7:30 AM	1	69	0	5	0	101	2	4	173	5	0	4	0	0	0	0	0	9	182
7:45 AM	1	121	0	5	0	103	2	4	227	11	0	4	0	0	0	0	0	15	242
8:00 AM	14	186	0	4	0	72	2	3	274	33	0	2	0	0	0	0	0	35	309
8:15 AM	3	104	0	3	0	95	2	2	204	7	0	3	0	0	0	0	0	10	214
8:30 AM	2	85	0	3	0	92	2	4	181	6	0	2	1	0	0	0	0	8	189
8:45 AM	0	95	0	5	0	115	5	3	215	9	0	2	0	0	0	0	0	11	226
9:00 AM	0	62	0	3	0	116	5	6	183	5	0	3	0	0	0	0	0	8	191
9:15 AM	2	73	0	3	0	93	5	3	173	2	0	1	0	0	0	0	0	3	176
9:30 AM	4	68	0	3	0	84	5	4	161	1	0	4	0	0	0	0	0	5	166
9:45 AM	0	90	0	5	0	104	1	2	195	6	0	3	0	0	0	0	0	9	204
10:00 AM	1	80	0	2	0	101	4	6	186	2	0	4	0	0	0	0	0	6	192
10:15 AM	5	79	0	0	0	100	1	4	185	3	0	4	0	0	0	0	0	7	192
10:30 AM	0	91	0	2	0	109	1	1	201	5	0	5	0	0	0	0	0	10	211
10:45 AM	3	104	0	4	0	94	4	5	205	5	0	4	0	0	0	0	0	9	214
11:00 AM	1	93	0	8	0	87	3	1	184	5	0	5	0	0	0	0	0	10	194
11:15 AM	1	105	0	3	0	112	2	4	220	3	0	5	0	0	0	0	0	8	228
11:30 AM	4	122	0	2	0	83	2	2	211	6	0	6	1	0	0	0	0	12	223
11:45 AM	2	98	0	4	0	108	5	0	213	7	0	4	0	0	0	0	0	11	224
12:00 PM	3	141	0	1	0	164	1	1	309	5	0	2	0	0	0	0	0	7	316
12:15 PM	1	156	0	6	0	134	6	0	297	6	0	3	0	0	0	0	0	9	306
12:30 PM	1	125	0	2	0	122	3	0	251	2	0	4	0	0	0	0	0	6	257
12:45 PM	2	123	0	0	0	122	1	2	248	7	0	0	1	0	0	0	0	7	255
1:00 PM	2	126	0	0	0	146	6	2	280	5	0	5	0	0	0	0	0	10	290
1:15 PM	3	112	0	1	0	131	1	2	247	5	0	2	0	0	0	0	0	7	254
1:30 PM	3	138	0	2	0	147	5	2	293	3	0	4	0	0	0	0	0	7	300
1:45 PM	1	132	0	3	0	143	2	0	278	2	0	1	0	0	0	0	0	3	281
2:00 PM	7	168	0	1	0	141	3	1	319	4	0	4	0	0	0	0	0	8	327
2:15 PM	2	172	0	2	0	159	5	0	338	18	0	4	0	0	0	0	0	22	360
2:30 PM	4	208	0	2	0	139	5	5	356	15	0	3	0	0	0	0	0	18	374
2:45 PM	16	261	0	6	0	160	5	4	442	3	0	4	0	0	0	0	0	7	449
3:00 PM	6	190	0	1	0	161	6	4	363	3	0	1	0	0	0	0	0	4	367
3:15 PM	9	178	0	4	0	164	6	4	357	12	0	4	2	0	0	0	0	16	373
3:30 PM	6	143	0	4	0	144	5	2	298	8	0	5	1	0	0	0	0	13	311
3:45 PM	3	160	0	1	0	164	6	1	333	6	0	2	1	0	0	0	0	8	341
4:00 PM	7	180	0	1	0	183	5	3	375	5	0	4	0	0	0	0	0	9	384
4:15 PM	4	157	0	2	0	151	5	1	317	4	0	6	0	0	0	0	0	10	327
4:30 PM	3	161	0	1	0	149	8	1	321	8	0	11	0	0	0	0	0	19	340
4:45 PM	1	196	0	1	0	148	5	2	350	1	0	6	2	0	0	0	0	7	357
5:00 PM	5	181	0	0	0	173	6	1	365	3	0	3	0	0	0	0	0	6	371
5:15 PM	4	175	0	0	0	154	5	1	338	3	0	2	0	0	0	0	0	5	343
5:30 PM	4	145	0	0	0	164	1	0	314	1	0	1	0	0	0	0	0	2	316
5:45 PM	7	174	0	0	0	134	3	0	318	5	0	1	0	0	0	0	0	6	324

AM Peak Hour
7:45 AM to 8:45 AM



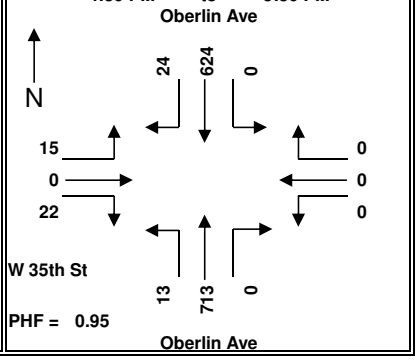
PHF = 0.77

Midday Peak Hour
12:00 PM to 1:00 PM



PHF = 0.90

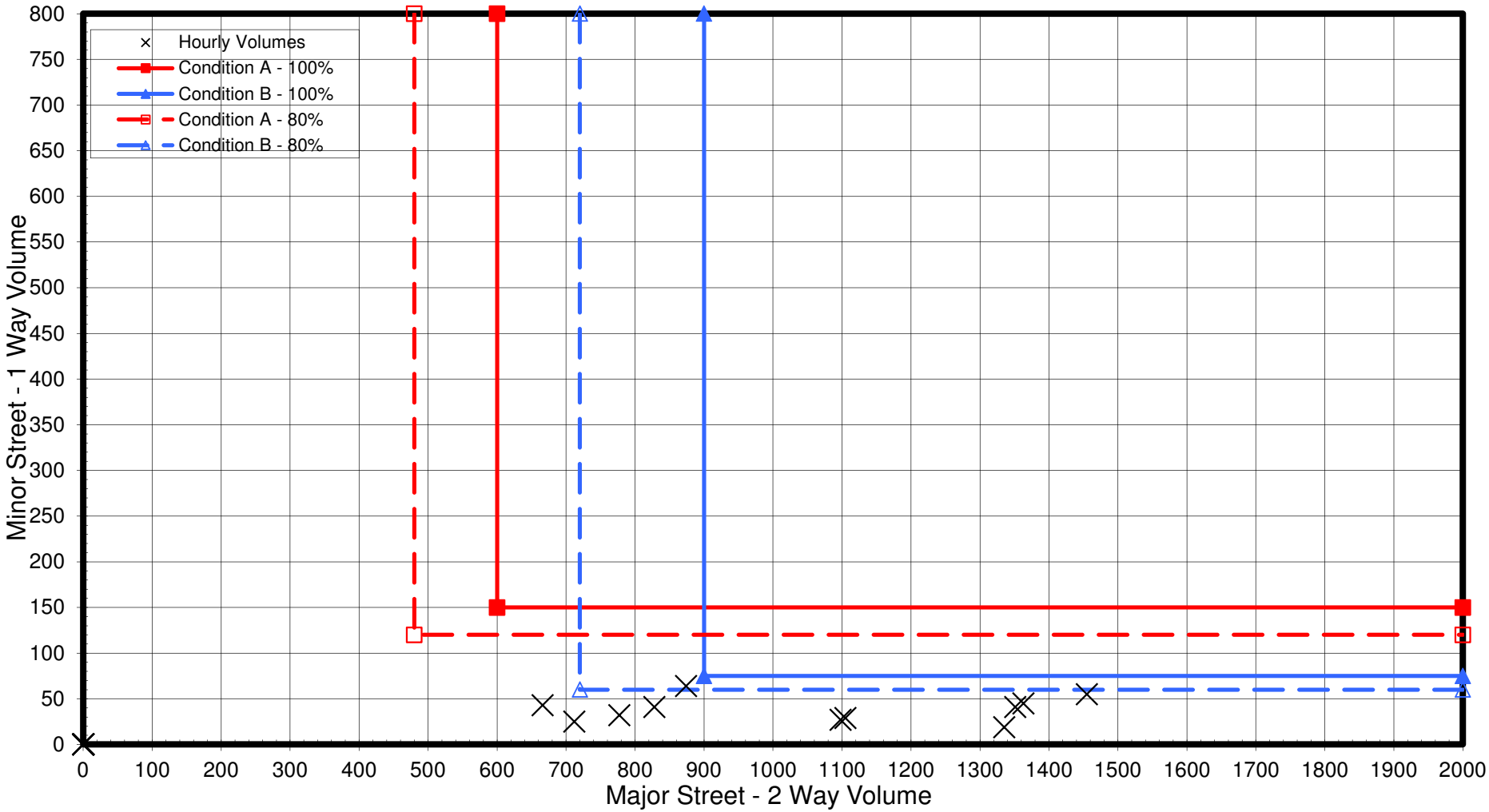
PM Peak Hour
4:30 PM to 5:30 PM



PHF = 0.95

Notes:

WARRANT 1 - Conditions A & B



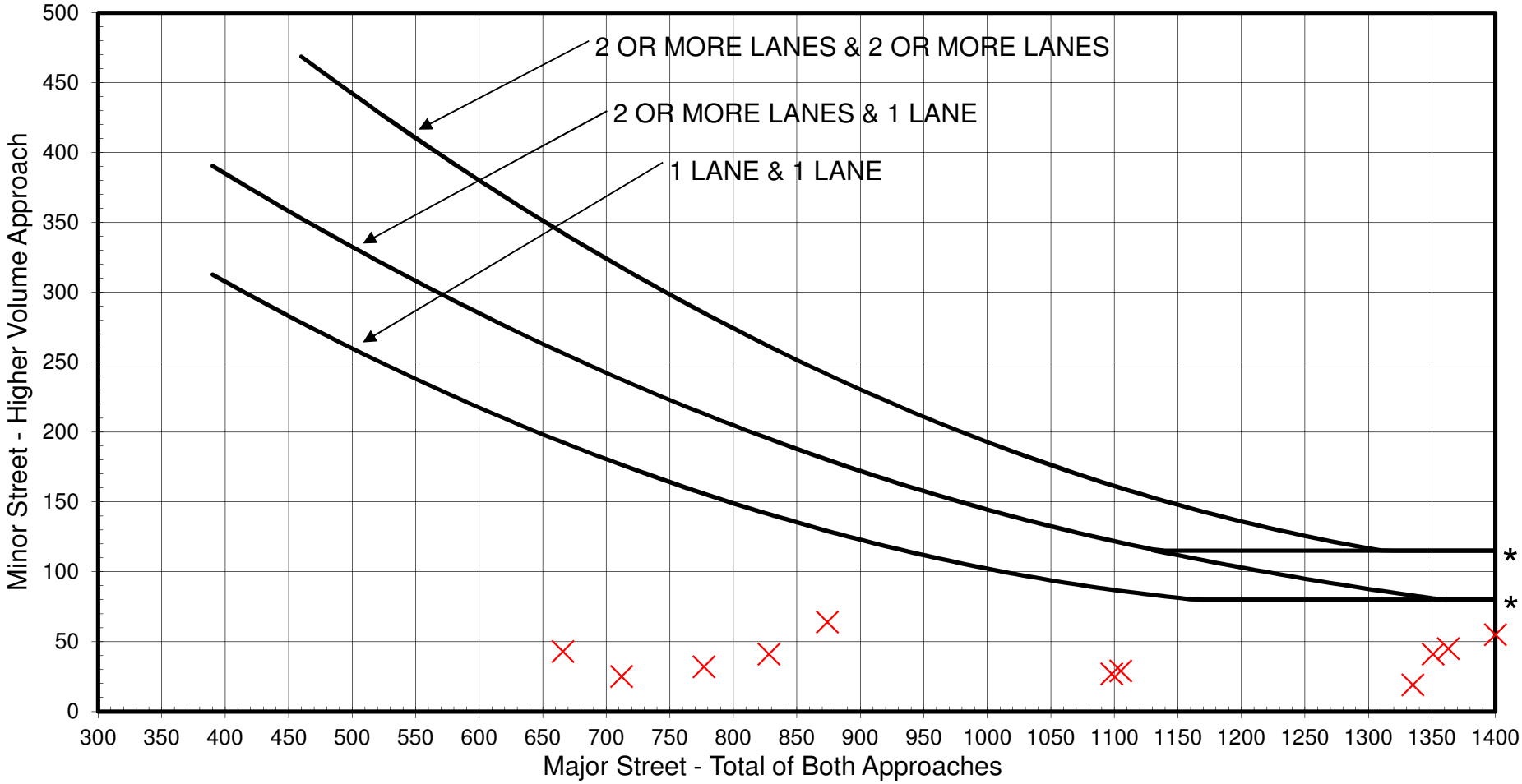
		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	W 35th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	1 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	W 35th St	1
Road Location =	Urban	

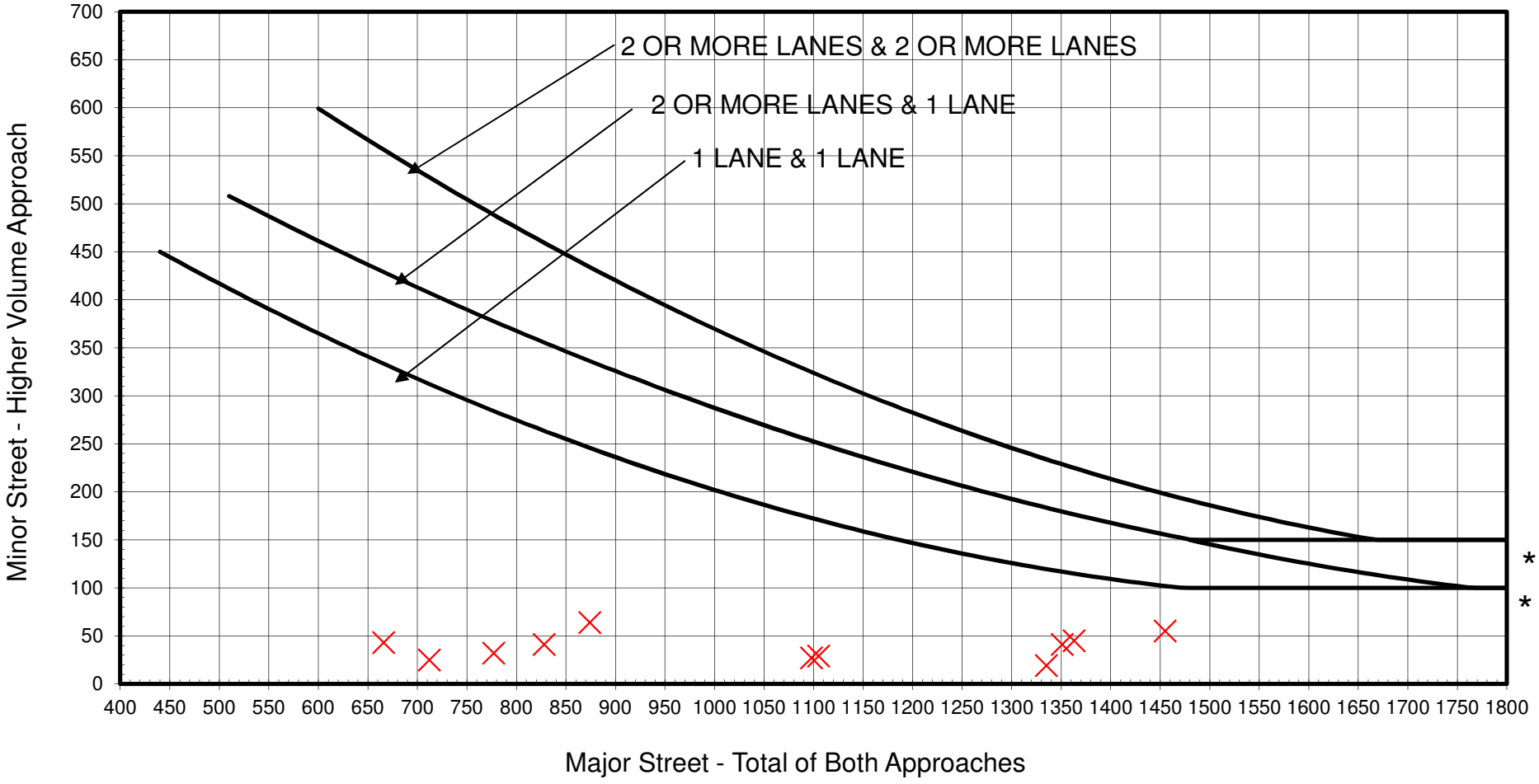
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	W 35th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
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Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.47

Traffic Signal Warrant Analysis Results

Intersection 47
Oberlin Ave and W 37th St

SIGNAL WARRANT

INTERSECTION: Oberlin Ave and W 37th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X	X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		699	20	40	X		X											
8AM-9AM		795	37	38	X		X				X							
9AM-10AM		659	54	78	X		X			X		X						
10AM-11AM		728	57	83	X		X			X	X	X						
11AM-NOON		803	55	66	X		X				X	X						
NOON-1PM		1009	69	101	X		X		X	X	X	X						
1PM-2PM		1048	80	108	X		X		X	X	X	X						
2PM-3PM		1345	64	110	X		X		X	X	X	X					X	
3PM-4PM		1256	57	111	X		X		X	X	X	X					X	
4PM-5PM		1257	68	112	X		X		X	X	X	X					X	
5PM-6PM		1231	42	111	X		X		X	X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		6		8						4	0
WARRANT SATISFIED?					NO		NO		NO		YES						YES	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Oberlin Ave and W 37th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

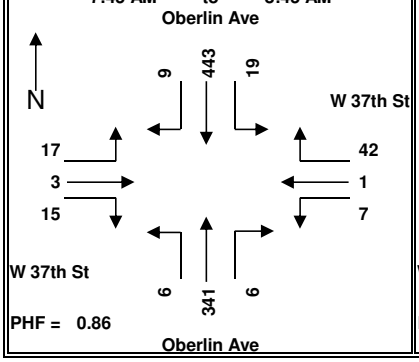
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.964	Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 47

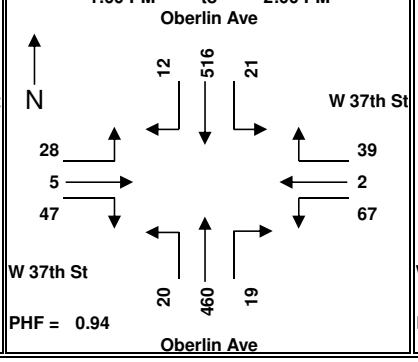
Start Time	Oberlin Ave Northbound				Oberlin Ave Southbound				Total North South	W 37th St Eastbound				W 37th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	128	4849	155	90	219	5333	146	95	10830	249	35	319	5	419	33	506	9	1561	12391
	Percent Trucks =			2%	Percent Trucks =			2%		Percent Trucks =			1%	Percent Trucks =			1%		
ADT	174	6602	211	123	298	7261	199	129	14746	339	48	434	7	571	45	689	12	2125	16871
7:00 AM	0	57	2	2	8	57	3	0	127	0	1	2	0	1	0	2	0	6	133
7:15 AM	0	64	3	2	8	85	3	2	163	3	1	1	0	2	0	7	0	14	177
7:30 AM	0	67	0	4	6	106	2	3	181	1	1	3	1	3	0	7	0	15	196
7:45 AM	3	98	2	3	6	118	1	3	228	3	1	3	0	1	0	17	1	25	253
8:00 AM	0	92	2	0	6	130	4	3	234	3	2	5	0	4	0	15	0	29	263
8:15 AM	0	73	1	2	5	95	1	2	175	7	0	3	0	1	1	5	0	17	192
8:30 AM	3	78	1	5	2	100	3	4	187	4	0	4	0	1	0	5	0	14	201
8:45 AM	1	77	2	4	4	112	3	3	199	3	2	4	0	2	0	4	0	15	214
9:00 AM	2	57	1	4	6	89	4	5	159	4	0	8	1	5	0	12	0	29	188
9:15 AM	2	53	0	3	4	85	4	3	148	5	0	7	0	9	0	16	0	37	185
9:30 AM	0	65	2	4	6	80	0	4	153	5	0	9	0	6	1	8	0	29	182
9:45 AM	3	79	2	1	2	107	6	5	199	6	1	9	0	10	0	11	2	37	236
10:00 AM	2	68	3	1	4	91	3	5	171	5	0	6	0	11	1	11	0	34	205
10:15 AM	1	72	1	1	3	94	3	2	174	6	0	7	0	8	1	8	0	30	204
10:30 AM	2	84	2	3	0	104	2	2	194	5	2	7	0	7	2	6	0	29	223
10:45 AM	2	96	3	7	4	80	4	3	189	6	0	13	1	13	2	13	1	47	236
11:00 AM	2	81	3	4	8	97	0	3	191	4	0	2	1	5	1	7	0	19	210
11:15 AM	2	88	1	3	1	90	6	2	188	9	1	4	0	8	3	6	0	31	219
11:30 AM	2	108	5	4	4	76	3	3	198	7	0	12	0	10	0	11	0	40	238
11:45 AM	3	100	3	2	3	113	4	1	226	6	0	10	0	8	1	6	1	31	257
12:00 PM	5	127	5	4	5	139	2	0	283	7	1	11	1	8	1	15	0	43	326
12:15 PM	5	111	5	3	3	136	5	0	265	6	1	9	0	10	0	11	0	37	302
12:30 PM	2	116	5	2	2	109	4	0	238	3	2	9	0	9	0	15	0	38	276
12:45 PM	4	93	8	0	7	110	1	4	223	6	0	14	0	15	1	16	0	52	275
1:00 PM	7	119	4	1	6	137	4	2	277	4	1	11	0	16	1	7	0	40	317
1:15 PM	5	90	5	0	2	123	3	1	228	12	2	13	0	15	0	10	1	52	280
1:30 PM	4	124	4	0	9	132	2	1	275	7	2	16	0	16	0	14	1	55	330
1:45 PM	4	127	6	4	4	124	3	0	268	5	0	7	0	20	1	8	0	41	309
2:00 PM	5	126	2	0	7	164	5	1	309	5	0	8	0	10	0	11	0	34	343
2:15 PM	6	164	3	2	6	126	4	1	309	14	2	2	0	7	2	15	0	42	351
2:30 PM	3	162	5	2	3	163	3	4	339	12	2	7	0	13	0	19	0	53	392
2:45 PM	4	180	6	4	5	188	5	5	388	6	2	4	0	11	0	22	0	45	433
3:00 PM	4	136	6	1	8	162	2	3	318	5	0	7	0	10	1	19	0	42	360
3:15 PM	1	156	6	1	9	161	2	4	335	5	2	12	0	14	0	12	0	45	380
3:30 PM	4	122	7	3	3	146	2	2	284	5	0	6	0	13	1	18	1	43	327
3:45 PM	5	143	4	0	5	158	4	1	319	8	0	7	0	12	3	8	0	38	357
4:00 PM	5	142	6	1	8	152	8	3	321	7	0	9	0	10	1	13	0	40	361
4:15 PM	2	137	5	1	5	143	2	0	294	10	0	12	0	16	0	13	1	51	345
4:30 PM	6	146	3	2	5	145	5	1	310	11	3	6	0	8	0	23	0	51	361
4:45 PM	2	179	2	0	6	138	5	2	332	2	2	6	0	12	1	15	0	38	370
5:00 PM	5	167	9	0	3	154	7	2	345	1	1	8	0	26	2	14	0	52	397
5:15 PM	3	141	4	0	7	140	2	0	297	5	0	6	0	17	3	11	0	42	339
5:30 PM	3	137	2	0	6	149	2	0	299	2	0	3	0	9	2	11	0	27	326
5:45 PM	4	147	4	0	5	125	5	0	290	9	0	7	0	7	0	9	0	32	322

AM Peak Hour
7:45 AM to 8:45 AM



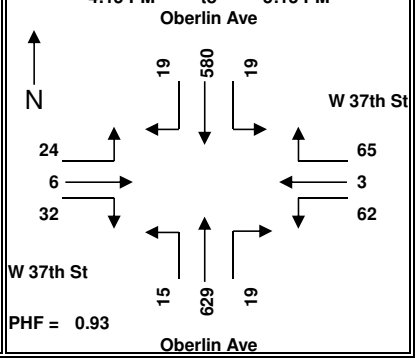
PHF = 0.86

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.94

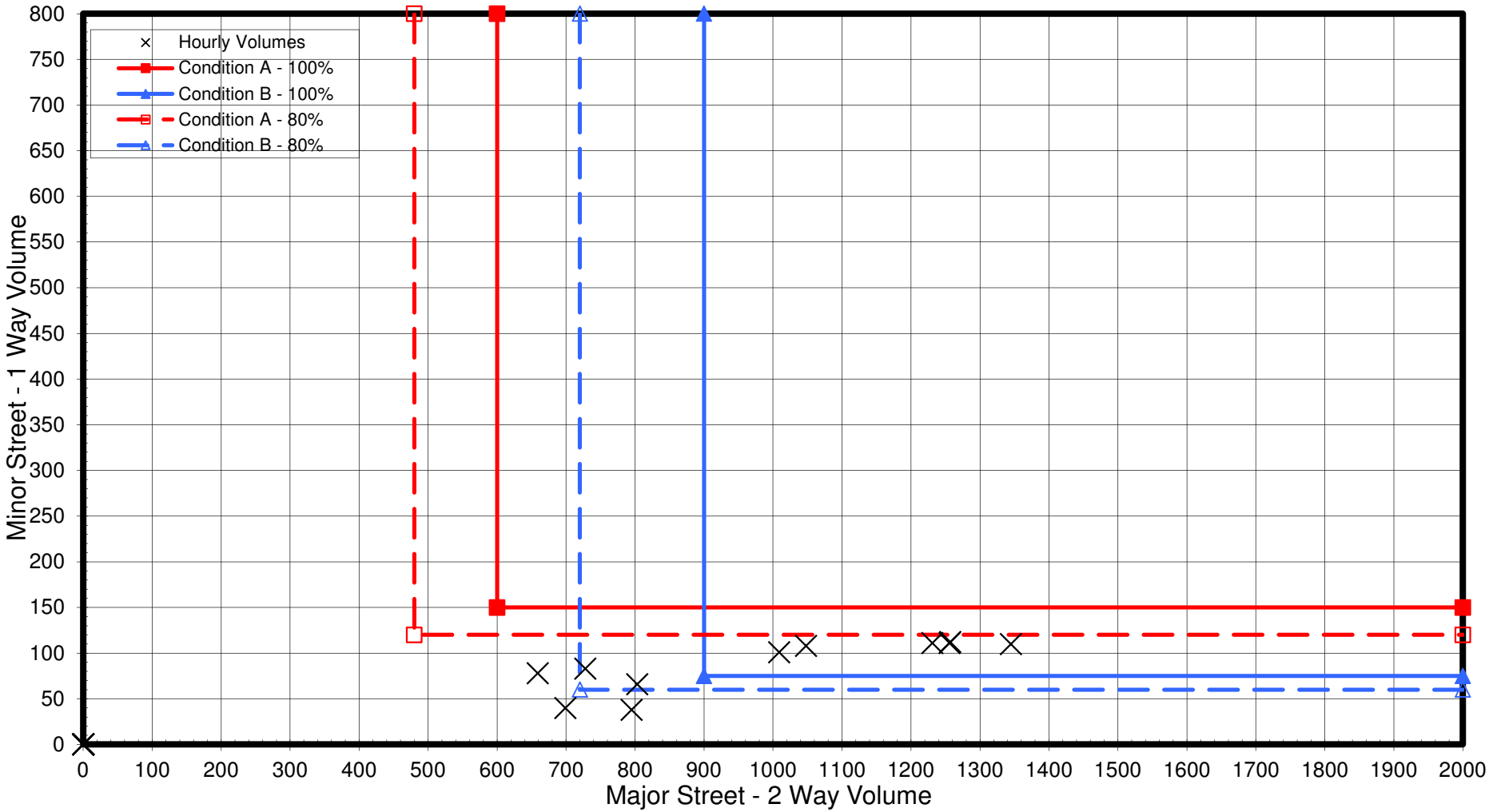
PM Peak Hour
4:15 PM to 5:15 PM



PHF = 0.93

Notes:

WARRANT 1 - Conditions A & B



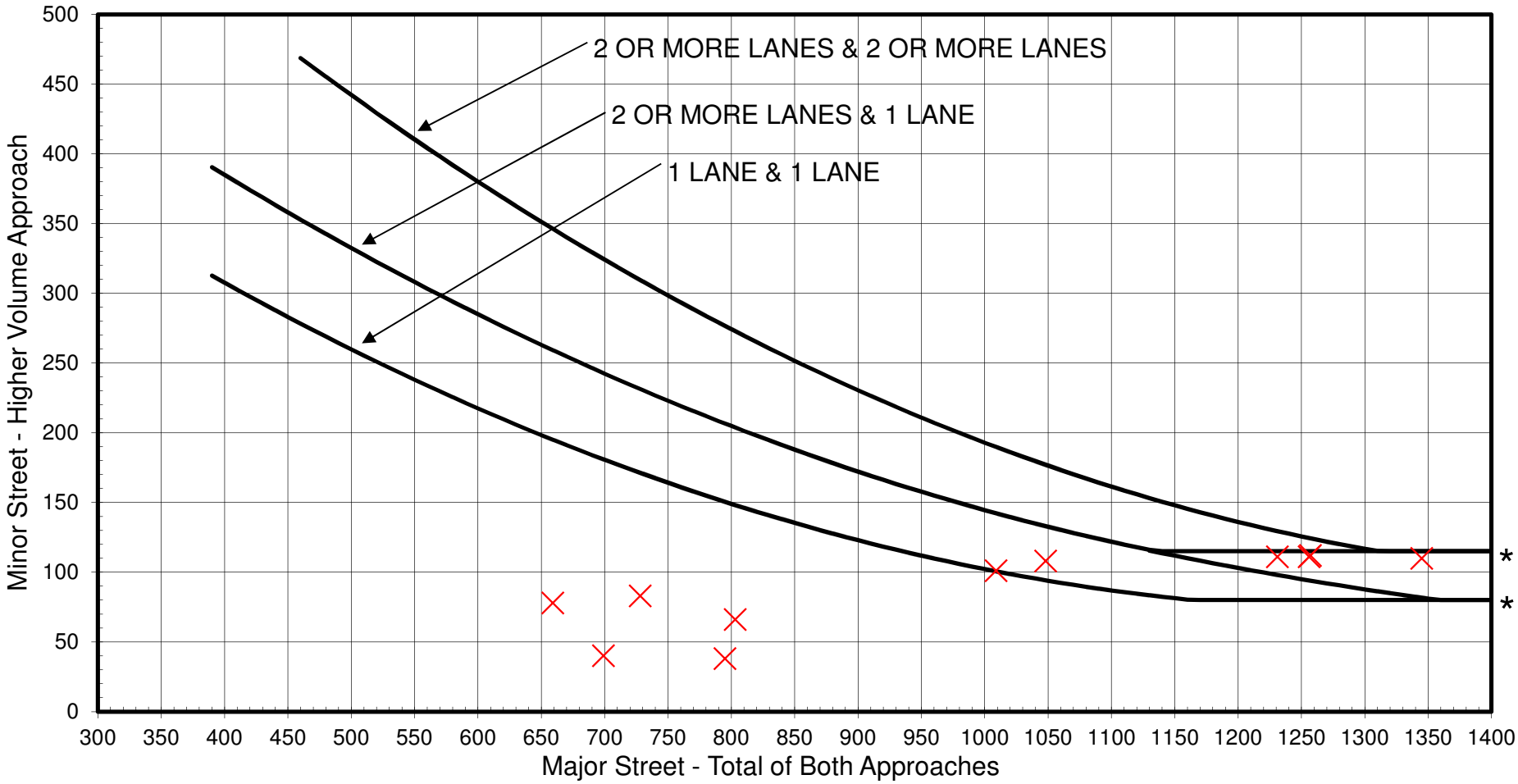
		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	W 37th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	6 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	8 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	W 37th St	1
Road Location =	Urban	

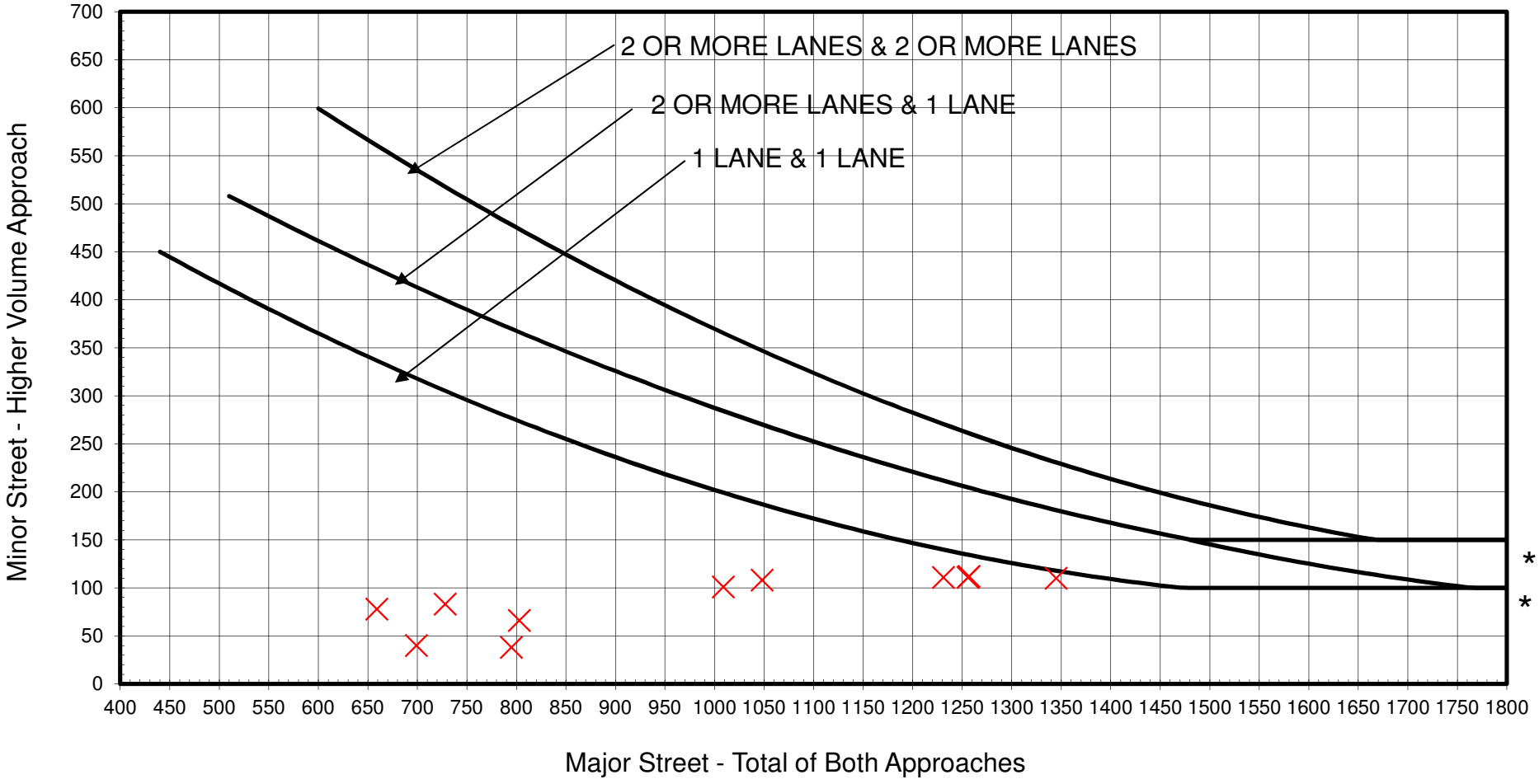
		Warrant Met?
Warrant 2 (Urban) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	W 37th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.48

Traffic Signal Warrant Analysis Results

Intersection 48
Tower Blvd and Edgewood Dr

SIGNAL WARRANT

INTERSECTION: Edgewood Dr and Tower Blvd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1 CONDITION A				WARRANT #1 CONDITION B								WARRANT #2 FOUR HOUR	WARRANT #3 PEAK HOUR
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR						
* NORM	1		X	X	500	150	400	120	750	75	600	60						
	2+	X			600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		431	35	22														
8AM-9AM		401	24	32														
9AM-10AM		396	18	8														
10AM-11AM		429	25	21														
11AM-NOON		479	35	18														
NOON-1PM		530	34	14			X											
1PM-2PM		537	36	23			X											
2PM-3PM		608	48	28	X		X											
3PM-4PM		680	60	20	X		X					X						
4PM-5PM		699	44	24	X		X											
5PM-6PM		612	47	15	X		X											
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Edgewood Dr and Tower Blvd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

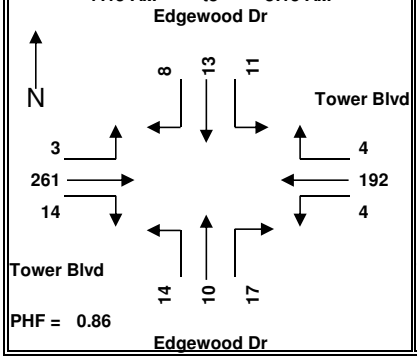
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.969	Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.42
Intersection ID: 48

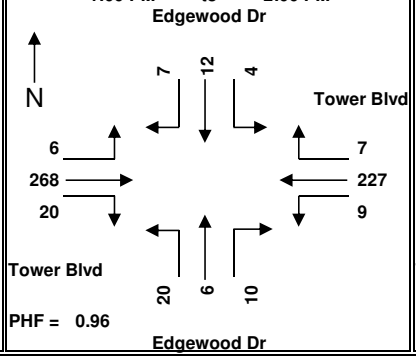
Start Time	Edgewood Dr Northbound				Edgewood Dr Southbound				Total North South	Tower Blvd Eastbound				Tower Blvd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	183	96	127	3	57	94	74	8	631	60	2831	249	62	91	2521	50	56	5802	6433
	Percent Trucks =			1%	Percent Trucks =			4%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	252	132	175	4	78	129	102	11	867	82	3891	342	85	125	3465	69	77	7975	8842
7:00 AM	3	0	1	0	2	3	0	0	9	0	54	2	0	1	24	0	0	81	90
7:15 AM	0	1	5	0	0	1	2	0	9	1	59	2	1	3	34	1	1	100	109
7:30 AM	4	2	1	0	6	2	2	0	17	0	64	6	2	0	42	0	2	112	129
7:45 AM	8	3	7	0	1	3	0	0	22	0	78	3	6	1	55	1	4	138	160
8:00 AM	2	4	4	0	4	7	4	0	25	2	60	3	1	0	61	2	1	128	153
8:15 AM	3	0	0	0	2	0	3	2	8	0	42	3	2	2	41	1	3	89	97
8:30 AM	4	2	2	0	1	1	2	1	12	1	42	2	0	0	46	1	0	92	104
8:45 AM	3	0	0	0	1	2	5	0	11	3	35	4	0	2	47	1	3	92	103
9:00 AM	5	1	0	0	0	0	1	0	7	1	41	6	1	2	43	0	0	93	100
9:15 AM	1	1	0	0	1	2	2	0	7	2	33	3	4	3	47	0	2	88	95
9:30 AM	2	1	1	0	1	1	0	0	6	1	47	5	3	1	40	0	1	94	100
9:45 AM	3	1	2	0	0	0	0	0	6	2	58	6	0	2	51	2	2	121	127
10:00 AM	1	0	3	0	1	3	0	0	8	2	52	5	0	0	58	0	2	117	125
10:15 AM	1	1	5	0	0	1	2	0	10	1	54	6	3	2	40	1	2	104	114
10:30 AM	3	0	3	0	0	2	4	0	12	0	52	1	1	1	35	0	1	89	101
10:45 AM	3	2	3	0	2	3	3	0	16	2	39	8	1	1	66	3	1	119	135
11:00 AM	2	0	4	0	2	2	0	0	10	3	55	11	2	1	49	0	1	119	129
11:15 AM	5	4	3	0	3	3	2	0	20	1	60	5	2	0	54	1	1	121	141
11:30 AM	5	1	2	1	0	0	3	0	11	5	55	3	1	2	53	1	2	119	130
11:45 AM	6	2	1	1	2	0	1	0	12	1	60	6	1	2	50	1	1	120	132
12:00 PM	5	4	2	0	1	2	1	0	15	0	60	9	2	3	63	0	0	135	150
12:15 PM	3	2	4	0	0	1	0	0	10	0	61	10	1	0	49	1	0	121	131
12:30 PM	3	3	2	0	0	0	5	0	13	1	80	6	3	3	50	0	1	140	153
12:45 PM	5	0	1	0	1	2	1	0	10	1	65	5	0	1	61	1	1	134	144
1:00 PM	7	2	2	0	1	5	2	0	19	0	72	4	2	1	42	2	1	121	140
1:15 PM	7	1	2	0	0	1	2	0	13	3	67	5	1	2	64	2	1	143	156
1:30 PM	2	2	3	0	1	4	2	0	14	1	59	5	0	3	67	1	0	136	150
1:45 PM	4	1	3	0	2	2	1	0	13	2	70	6	2	3	54	2	2	137	150
2:00 PM	4	2	1	0	1	0	1	0	9	1	60	12	0	3	43	1	0	120	129
2:15 PM	3	5	0	0	1	2	0	0	11	0	86	5	2	2	49	1	2	143	154
2:30 PM	3	5	7	0	4	12	2	1	33	2	89	6	2	3	58	5	1	163	196
2:45 PM	5	5	8	0	1	2	2	0	23	3	67	1	1	4	106	1	3	182	205
3:00 PM	7	8	3	1	4	3	0	0	25	0	77	11	2	3	54	3	1	148	173
3:15 PM	9	3	0	0	1	2	3	0	18	0	81	6	2	8	59	2	3	156	174
3:30 PM	4	1	3	0	1	2	2	1	13	4	80	11	5	1	71	2	2	169	182
3:45 PM	11	6	5	0	1	0	1	0	24	1	84	7	4	1	113	1	2	207	231
4:00 PM	4	2	3	0	5	4	2	1	20	3	88	6	0	2	88	1	2	188	208
4:15 PM	3	2	3	0	1	1	1	1	11	2	100	7	1	0	80	1	2	190	201
4:30 PM	4	5	4	0	0	4	0	1	17	2	69	5	0	5	73	1	0	155	172
4:45 PM	6	3	5	0	2	2	2	0	20	1	79	10	0	3	72	1	1	166	186
5:00 PM	2	3	7	0	0	0	2	0	14	1	100	6	0	2	69	2	1	180	194
5:15 PM	6	2	3	0	0	3	2	0	16	0	83	6	1	6	66	1	0	162	178
5:30 PM	7	1	2	0	0	1	2	0	13	2	55	5	0	4	77	0	0	143	156
5:45 PM	5	2	7	0	0	3	2	0	19	2	59	5	0	2	57	2	0	127	146

AM Peak Hour
7:15 AM to 8:15 AM



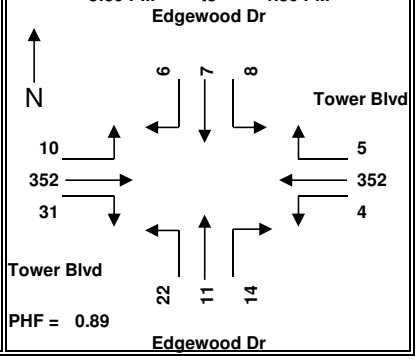
PHF = 0.86

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.96

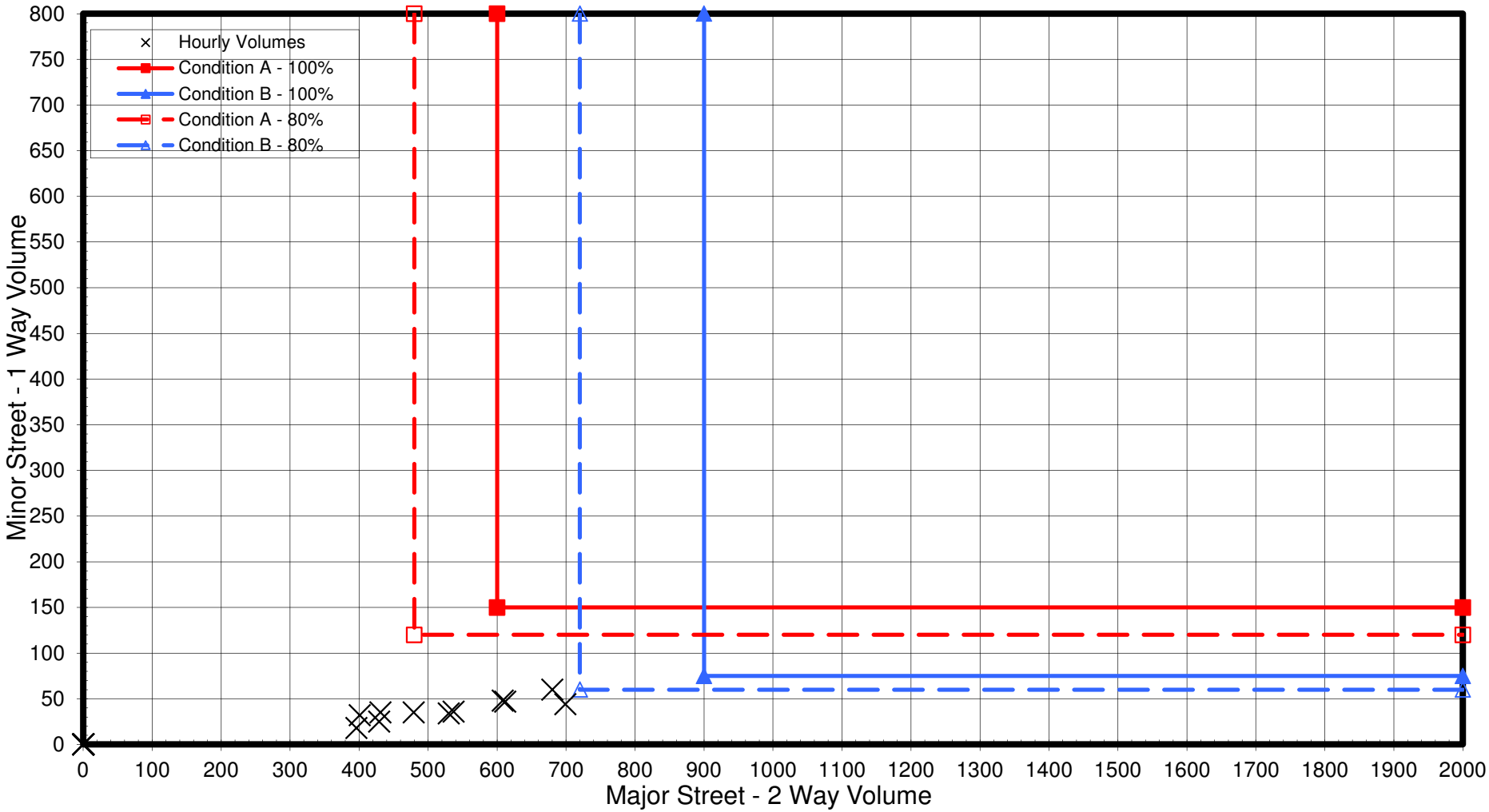
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.89

Notes:

WARRANT 1 - Conditions A & B



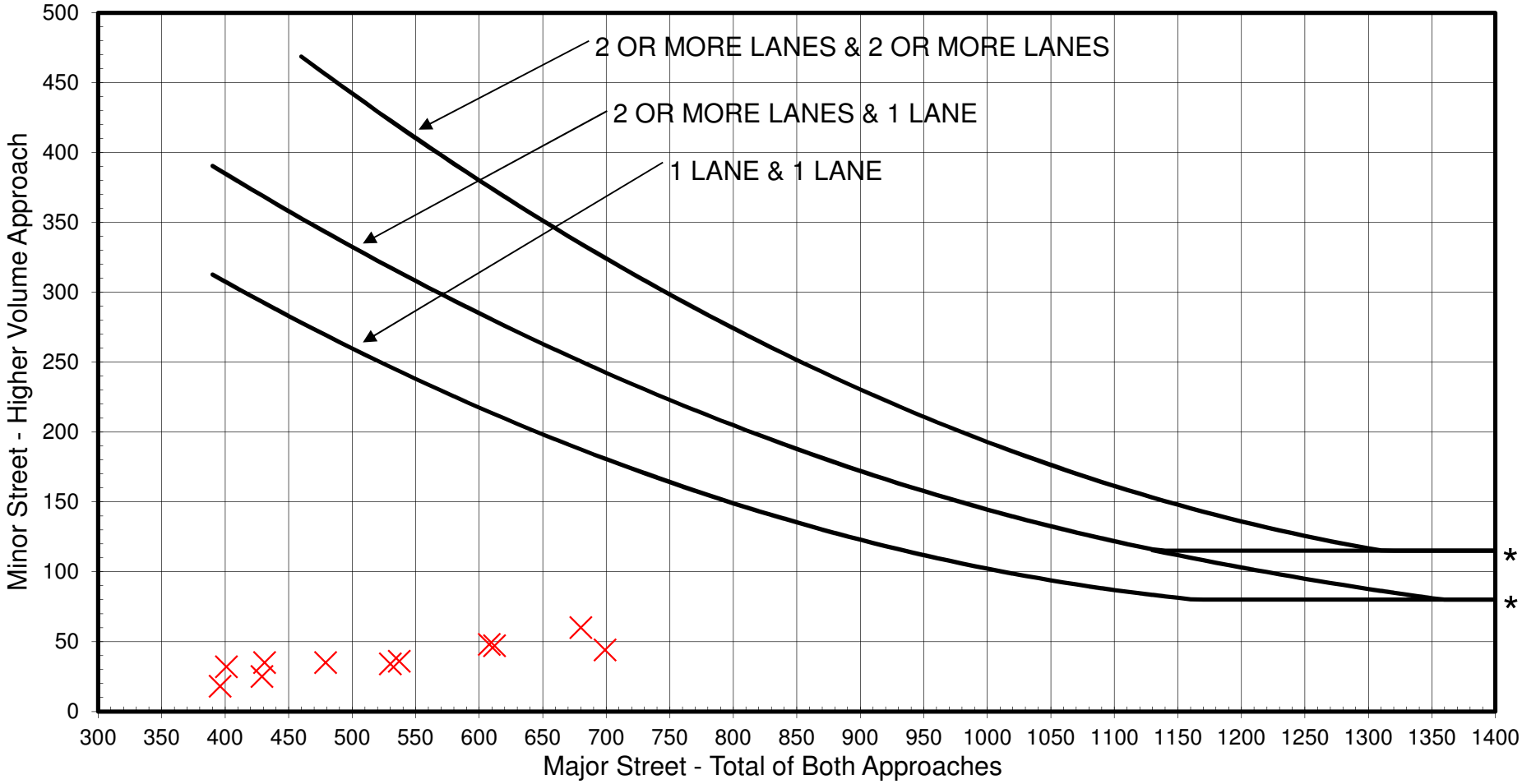
		Lanes
Major Road =	Tower Blvd	2
Minor Road =	Edgewood Dr	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Tower Blvd	2
Minor Road =	Edgewood Dr	1
Road Location =	Urban	

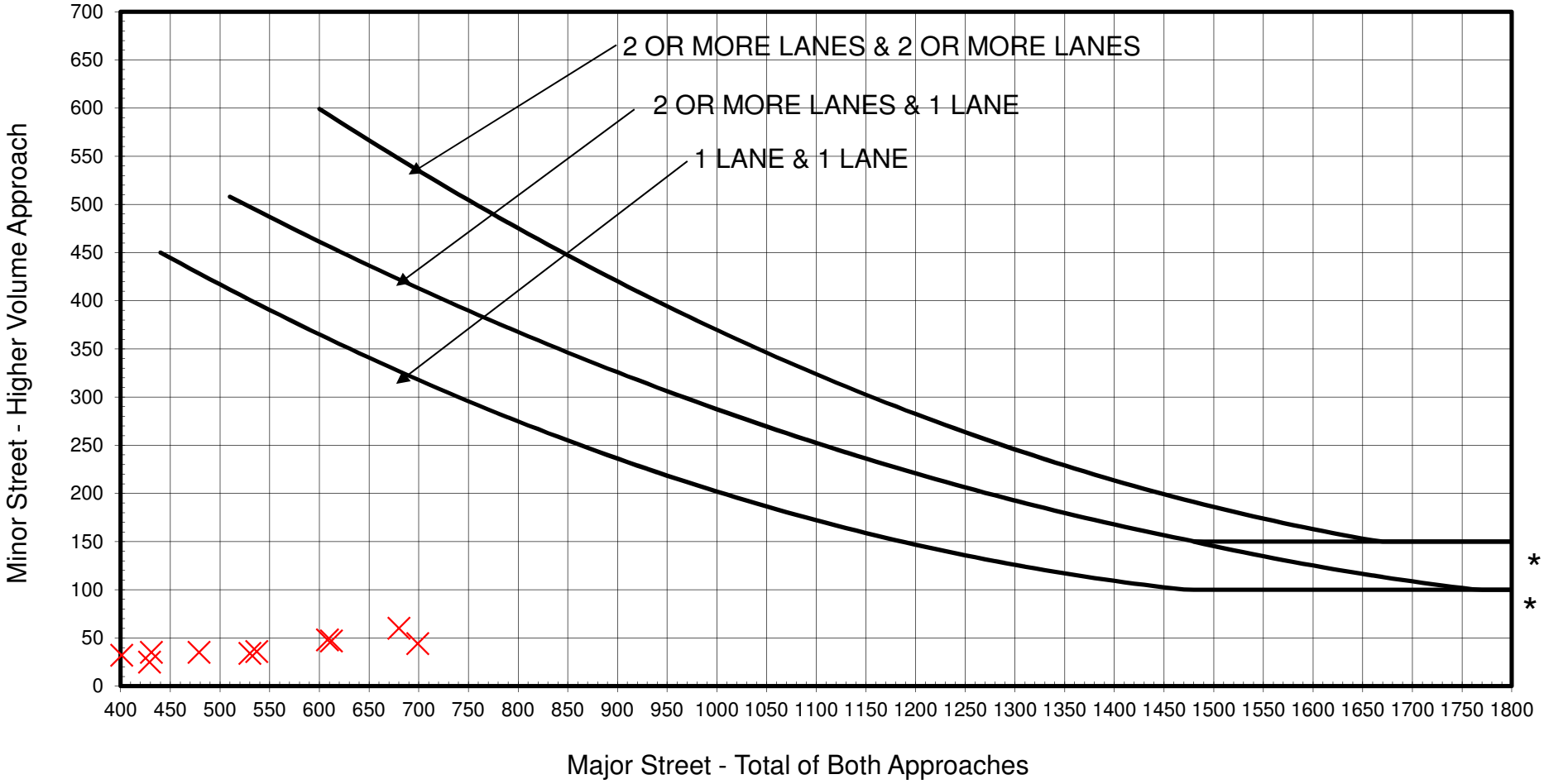
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Tower Blvd	2
Minor Road =	Edgewood Dr	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	November 13, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.49

Traffic Signal Warrant Analysis Results

Intersection 49
Oberlin Ave and Tower Blvd

SIGNAL WARRANT

INTERSECTION: Oberlin Ave and Tower Blvd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1				500	150	400	120	750	75	600	60						
	2+	X	X	X	600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		632	272	190	X	X	X	X		X		X						
8AM-9AM		694	214	208	X	X	X	X		X		X						
9AM-10AM		686	196	191	X		X	X		X		X						
10AM-11AM		740	235	213	X	X	X	X		X	X	X						
11AM-NOON		797	248	226	X	X	X	X		X	X	X						
NOON-1PM		1007	314	242	X	X	X	X	X	X	X	X					X	
1PM-2PM		1059	317	214	X	X	X	X	X	X	X	X					X	
2PM-3PM		1274	397	340	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1299	380	345	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1323	406	311	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1262	354	285	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					10		11		6		8						6	4
WARRANT SATISFIED?					**YES**		**YES**		**NO**		**YES**						**YES**	**YES**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Oberlin Ave and Tower Blvd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

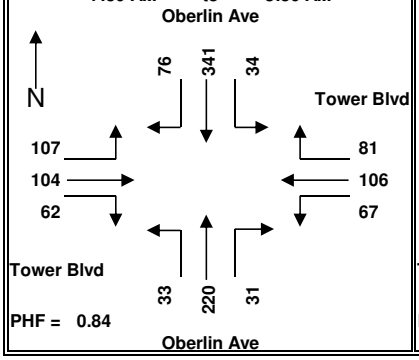
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.964	Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 49

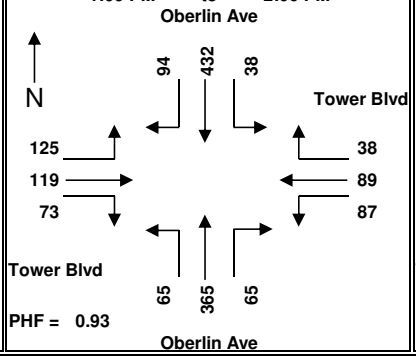
Start Time	Oberlin Ave Northbound				Oberlin Ave Southbound				Total North South	Tower Blvd Eastbound				Tower Blvd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	553	3803	720	93	462	4328	907	83	10773	1237	1383	713	61	974	1199	592	54	6098	16871
	Percent Trucks =			2%	Percent Trucks =			1%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	753	5178	980	127	629	5893	1235	113	14668	1684	1883	971	83	1326	1633	806	74	8303	22971
7:00 AM	2	43	2	1	9	49	5	0	110	14	28	10	0	3	15	13	0	83	193
7:15 AM	3	40	13	3	10	77	4	2	147	13	30	19	1	10	17	6	1	95	242
7:30 AM	12	42	7	5	5	100	8	3	174	31	20	15	4	12	23	8	2	109	283
7:45 AM	10	71	10	2	12	89	9	3	201	32	35	25	2	24	34	25	5	175	376
8:00 AM	6	55	10	1	9	79	39	3	198	21	28	14	2	22	33	32	2	150	348
8:15 AM	5	52	4	2	8	73	20	3	162	23	21	8	2	9	16	16	2	93	255
8:30 AM	5	53	4	4	10	71	17	0	160	21	13	12	2	6	18	9	0	79	239
8:45 AM	9	47	9	2	3	93	13	3	174	21	17	15	3	19	17	11	1	100	274
9:00 AM	11	46	7	5	4	74	21	4	163	19	19	14	3	17	20	9	2	98	261
9:15 AM	1	47	14	5	3	71	16	3	152	7	19	16	1	17	19	4	5	82	234
9:30 AM	6	55	9	3	9	65	15	2	159	20	23	13	4	14	35	15	4	120	279
9:45 AM	15	69	16	9	1	94	17	3	212	15	21	10	1	17	18	6	0	87	299
10:00 AM	4	56	17	1	4	79	17	5	177	22	19	12	0	17	17	4	0	91	268
10:15 AM	12	53	10	3	10	78	15	2	178	20	21	13	0	26	24	8	2	112	290
10:30 AM	7	60	16	1	10	90	13	2	196	36	26	15	3	24	20	6	1	127	323
10:45 AM	11	68	17	3	5	69	19	3	189	23	18	10	4	16	38	13	1	118	307
11:00 AM	10	63	11	1	9	77	15	3	185	24	27	11	1	22	24	9	1	117	302
11:15 AM	6	78	8	4	7	68	13	1	180	23	30	13	0	23	14	10	1	113	293
11:30 AM	6	68	12	2	7	72	10	2	175	21	22	17	0	25	25	15	2	125	300
11:45 AM	13	95	15	1	9	113	12	1	257	20	25	15	2	25	26	8	1	119	376
12:00 PM	13	100	18	5	10	111	23	2	275	23	37	18	1	19	31	17	0	145	420
12:15 PM	11	89	11	1	10	100	22	0	243	29	36	19	1	24	25	14	0	147	390
12:30 PM	6	92	17	0	10	89	22	0	236	26	25	19	1	19	22	13	0	124	360
12:45 PM	13	98	13	0	6	101	22	2	253	26	34	22	0	29	26	3	0	140	393
1:00 PM	12	98	18	0	4	119	20	1	271	17	30	15	1	14	20	10	0	106	377
1:15 PM	19	72	14	1	8	99	21	1	233	32	36	22	1	24	25	9	1	148	381
1:30 PM	15	100	17	0	15	108	27	1	282	40	27	15	0	24	27	11	1	144	426
1:45 PM	19	95	16	1	11	106	26	0	273	36	26	21	1	25	17	8	0	133	406
2:00 PM	17	108	18	0	15	125	25	3	308	39	35	20	0	20	28	12	1	154	462
2:15 PM	15	114	17	2	10	101	18	2	275	44	41	16	3	24	28	17	1	170	445
2:30 PM	24	119	26	1	26	132	23	3	350	47	37	18	2	43	33	30	1	208	558
2:45 PM	16	118	22	2	27	132	26	3	341	40	46	14	1	32	44	29	9	205	546
3:00 PM	12	132	18	3	13	140	35	4	350	32	32	21	2	28	44	17	0	174	524
3:15 PM	19	111	30	2	17	121	26	4	324	35	49	24	3	26	26	15	2	175	499
3:30 PM	18	116	26	6	8	120	28	2	316	34	51	11	2	41	40	19	2	196	512
3:45 PM	16	118	25	3	10	118	22	1	309	29	42	20	1	27	41	21	2	180	489
4:00 PM	22	115	21	0	15	131	22	2	326	25	55	21	4	27	35	15	0	178	504
4:15 PM	12	123	23	2	18	115	35	1	326	37	51	13	1	30	33	10	0	174	500
4:30 PM	28	105	34	3	13	108	22	1	310	44	36	22	0	17	40	20	1	179	489
4:45 PM	20	152	22	1	18	128	21	1	361	44	42	16	0	28	37	19	0	186	547
5:00 PM	20	136	22	0	12	124	39	1	353	40	42	14	0	36	30	14	0	176	529
5:15 PM	17	107	24	0	13	120	29	0	310	29	30	25	0	23	32	11	0	150	460
5:30 PM	17	113	31	1	14	104	32	0	311	26	33	16	0	20	34	12	0	141	452
5:45 PM	18	111	26	1	15	95	23	0	288	37	48	14	1	26	28	19	0	172	460

AM Peak Hour
7:30 AM to 8:30 AM



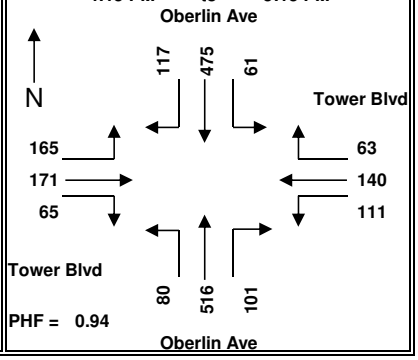
PHF = 0.84

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.93

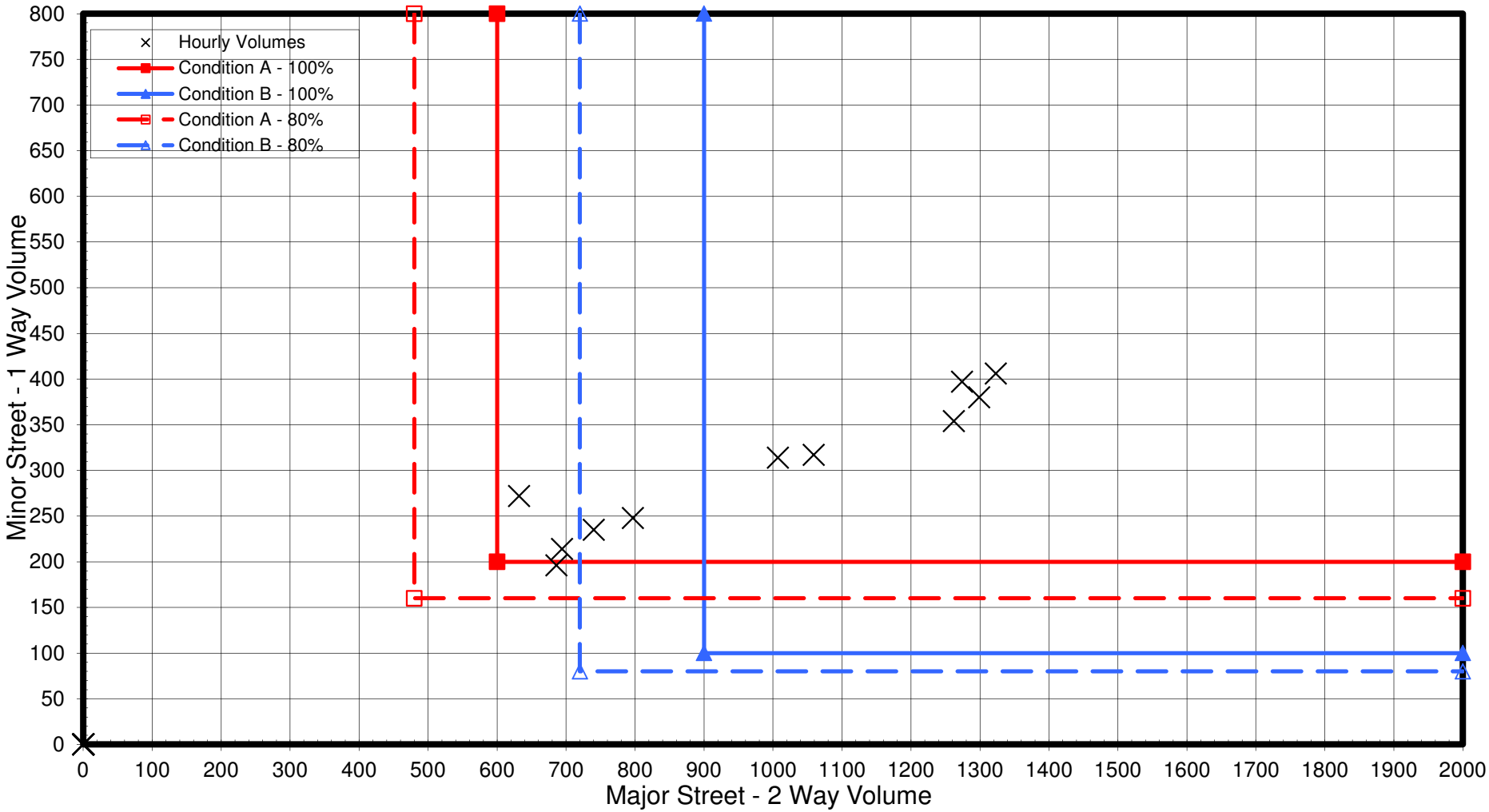
PM Peak Hour
4:15 PM to 5:15 PM



PHF = 0.94

Notes:

WARRANT 1 - Conditions A & B



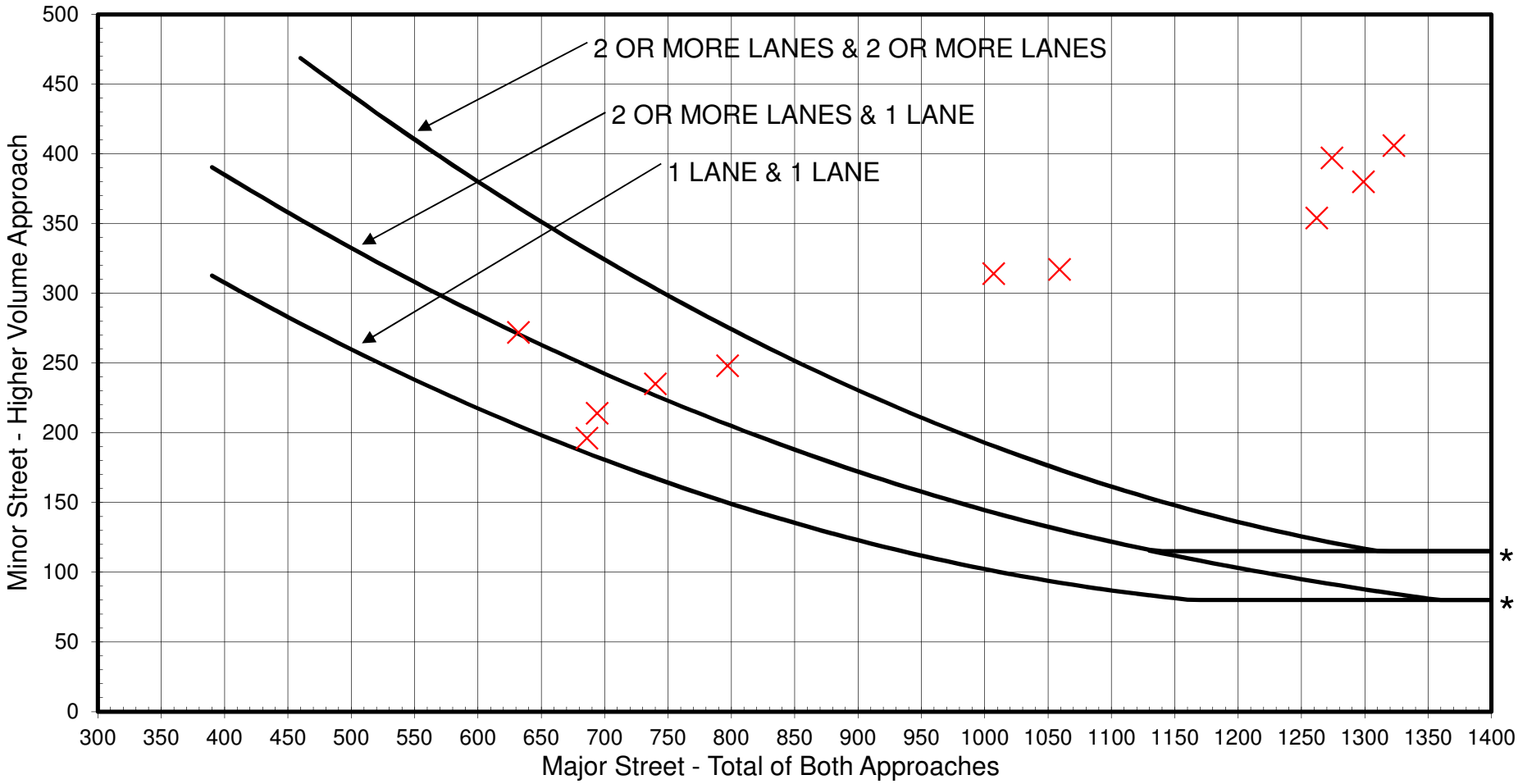
		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	Tower Blvd	2
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	10 Hours Meet	Yes
Condition B (100%) =	6 Hours Meet	No
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	8 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	Tower Blvd	2
Road Location =	Urban	

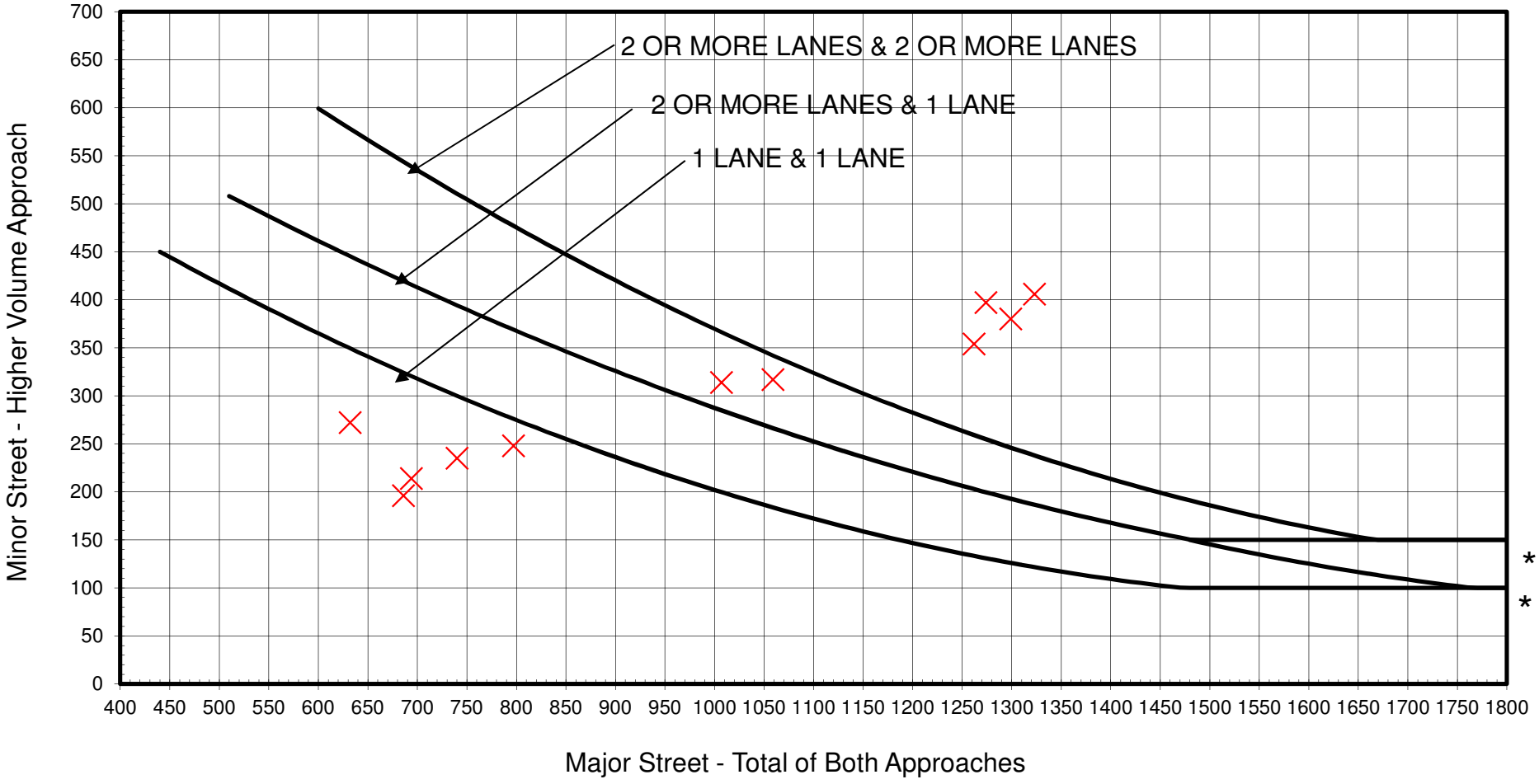
		Warrant Met?
Warrant 2 (Urban) =	6 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Oberlin Ave	2
Minor Road =	Tower Blvd	2
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.50

Traffic Signal Warrant Analysis Results

Intersection 50
Oberlin Ave and Cooper Foster Park Rd

SIGNAL WARRANT

INTERSECTION: Oberlin Ave and Cooper Foster Park Rd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 2 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1				500	150	400	120	750	75	600	60						
	2+	X	X	X	600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		343	84	462		X		X		X		X						
8AM-9AM		341	91	390		X		X		X		X						
9AM-10AM		461	59	327		X		X		X		X						
10AM-11AM		561	67	369		X	X	X		X		X						
11AM-NOON		690	78	418	X	X	X	X		X		X					X	
NOON-1PM		778	91	439	X	X	X	X		X	X	X					X	
1PM-2PM		753	92	504	X	X	X	X		X	X	X					X	X
2PM-3PM		785	97	632	X	X	X	X		X	X	X					X	X
3PM-4PM		836	105	517	X	X	X	X		X	X	X					X	X
4PM-5PM		805	102	541	X	X	X	X		X	X	X					X	X
5PM-6PM		693	112	475	X	X	X	X		X		X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					7		8		0		5						7	4
WARRANT SATISFIED?					NO		YES		NO		NO						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Oberlin Ave and Cooper Foster Park Rd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

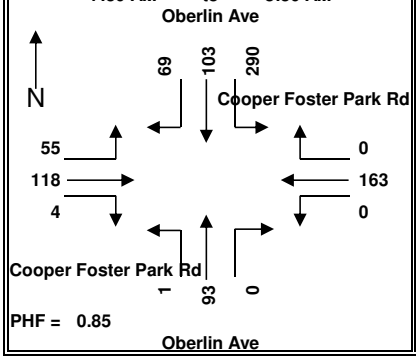
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.018	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 50

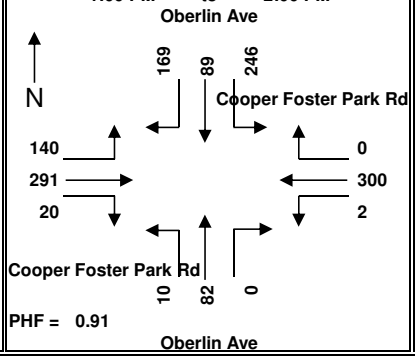
Start Time	Oberlin Ave Northbound				Oberlin Ave Southbound				Total North South	Cooper Foster Park Rd Eastbound				Cooper Foster Park Rd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	67	909	2	17	2508	1046	1520	86	6052	1320	2710	145	65	8	2860	3	32	7046	13098
	Percent Trucks =			2%	Percent Trucks =			2%		Percent Trucks =			2%	Percent Trucks =			1%		
ADT	96	1307	3	24	3606	1504	2186	124	8702	1898	3897	208	93	12	4112	4	46	10131	18833
7:00 AM	0	15	0	0	64	21	10	2	110	8	32	2	2	0	26	0	0	68	178
7:15 AM	0	18	0	0	71	19	10	0	118	11	27	1	1	0	36	0	0	75	193
7:30 AM	0	20	0	0	92	34	18	1	164	19	37	0	1	0	34	0	0	90	254
7:45 AM	0	31	0	0	79	28	16	0	154	17	35	1	2	0	57	0	1	110	264
8:00 AM	0	21	0	0	49	22	17	0	109	9	22	0	2	0	32	0	0	63	172
8:15 AM	1	21	0	0	70	19	18	4	129	10	24	3	0	0	40	0	3	77	206
8:30 AM	1	17	0	1	54	17	21	1	110	17	47	1	3	0	42	0	2	107	217
8:45 AM	5	25	0	1	58	15	30	2	133	14	32	1	2	0	47	0	1	94	227
9:00 AM	1	12	0	1	40	14	27	3	94	18	37	2	0	1	49	1	1	108	202
9:15 AM	1	13	0	1	40	14	16	1	84	18	48	1	3	1	41	0	1	109	193
9:30 AM	3	15	0	0	48	13	26	3	105	13	50	4	3	1	52	1	1	121	226
9:45 AM	2	12	0	0	49	20	20	1	103	21	56	4	2	0	42	0	0	123	226
10:00 AM	0	11	0	0	48	14	32	4	105	23	51	5	2	0	57	0	1	136	241
10:15 AM	0	22	0	0	29	12	26	1	89	20	59	4	2	0	62	0	1	145	234
10:30 AM	1	13	0	0	53	17	28	2	112	20	43	6	0	0	73	0	1	142	254
10:45 AM	2	18	0	1	45	28	37	1	130	23	41	5	3	1	68	0	0	138	268
11:00 AM	2	22	0	1	49	12	28	1	113	33	70	4	1	0	68	0	1	175	288
11:15 AM	0	21	0	0	55	18	36	2	130	17	60	3	3	0	69	0	1	149	279
11:30 AM	0	15	0	1	45	18	43	5	121	47	66	3	1	0	78	0	3	194	315
11:45 AM	4	14	0	0	45	24	45	4	132	43	62	8	2	1	58	0	2	172	304
12:00 PM	1	13	0	0	40	23	41	1	118	36	85	7	2	0	87	0	0	215	333
12:15 PM	3	26	0	1	55	19	41	3	144	38	81	2	3	0	76	0	1	197	341
12:30 PM	2	17	0	1	56	19	42	4	136	33	76	2	1	0	79	0	0	190	326
12:45 PM	2	27	0	0	45	21	37	2	132	27	77	4	1	0	68	0	1	176	308
1:00 PM	2	16	0	0	45	23	51	2	137	32	72	6	3	0	84	0	0	194	331
1:15 PM	4	19	0	1	53	21	28	1	125	25	79	4	1	1	70	0	1	179	304
1:30 PM	3	21	0	0	73	16	37	3	150	50	71	5	3	0	66	0	0	192	342
1:45 PM	1	26	0	0	75	29	53	1	184	33	69	5	2	1	80	0	1	188	372
2:00 PM	0	23	0	0	58	31	50	2	162	43	78	4	2	0	81	0	1	206	368
2:15 PM	5	23	0	0	61	26	52	2	167	36	70	5	4	0	68	0	0	179	346
2:30 PM	1	19	0	0	82	36	53	3	191	48	85	1	0	0	67	0	1	201	392
2:45 PM	1	25	0	1	75	40	68	3	209	44	76	5	0	0	74	0	2	199	408
3:00 PM	1	28	0	0	67	26	48	4	170	54	96	6	3	0	81	0	1	237	407
3:15 PM	0	20	0	0	64	28	36	1	148	41	68	1	0	1	82	0	0	193	341
3:30 PM	2	29	0	1	53	30	37	2	151	45	88	2	1	0	57	0	1	192	343
3:45 PM	2	23	0	1	44	37	47	4	153	44	76	3	0	0	91	0	0	214	367
4:00 PM	5	22	0	2	75	45	37	1	184	36	72	6	2	0	72	0	0	186	370
4:15 PM	0	25	0	1	42	31	42	1	140	34	65	1	1	0	90	0	0	190	330
4:30 PM	0	26	1	0	55	40	38	1	160	37	91	5	0	0	93	0	1	226	386
4:45 PM	2	21	0	0	72	27	37	1	159	42	69	5	0	0	87	0	1	203	362
5:00 PM	2	34	0	1	69	30	48	1	183	31	82	5	0	0	77	1	0	196	379
5:15 PM	3	20	1	0	58	33	40	0	155	30	68	3	0	0	70	0	0	171	326
5:30 PM	1	33	0	0	42	24	28	2	128	43	54	0	1	0	70	0	0	167	295
5:45 PM	1	17	0	0	66	12	25	3	121	37	63	0	0	0	59	0	0	159	280

AM Peak Hour
7:30 AM to 8:30 AM



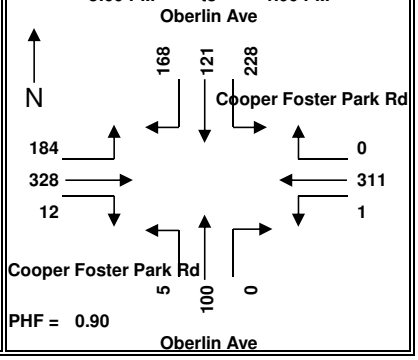
PHF = 0.85

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.91

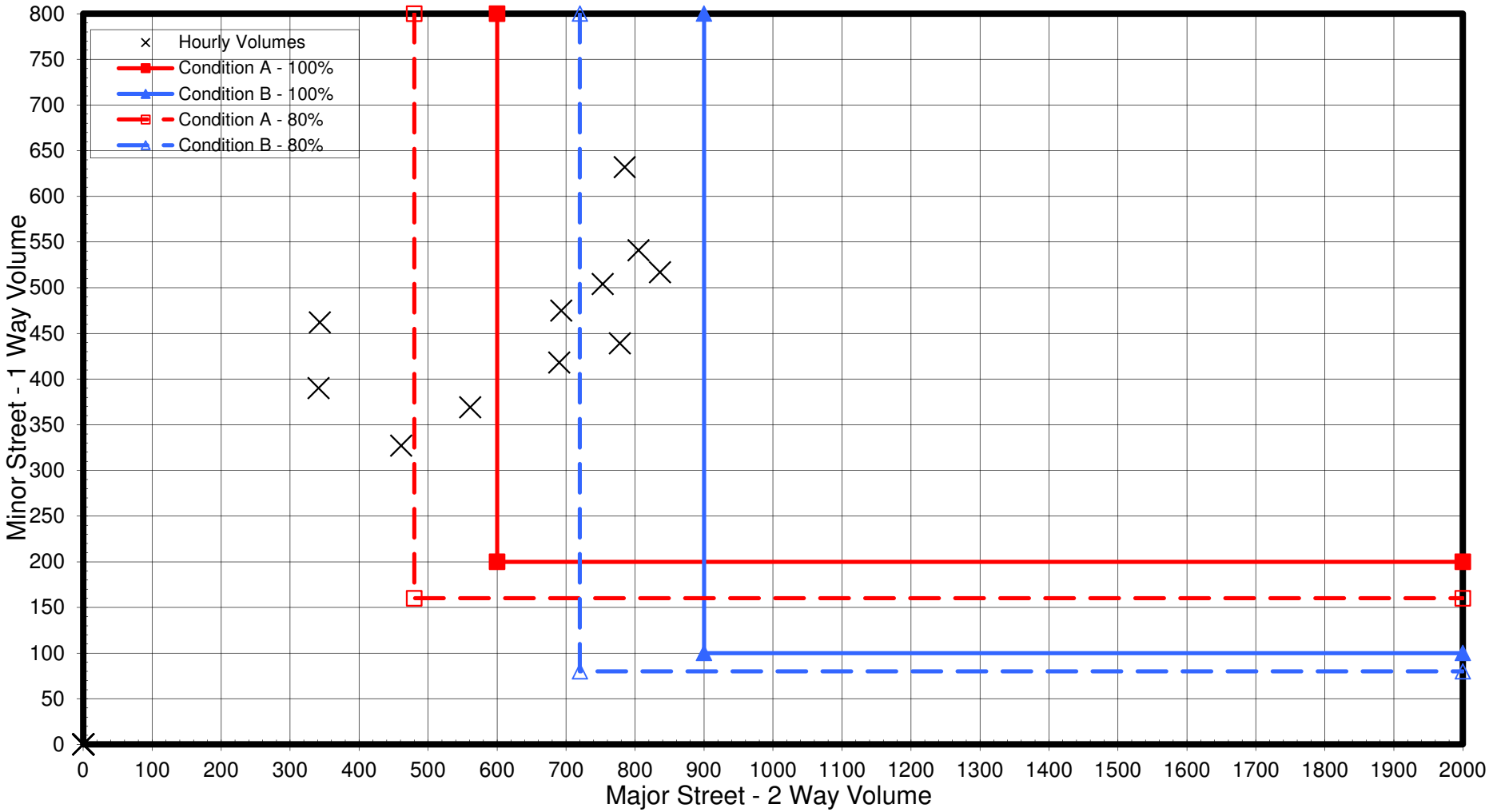
PM Peak Hour
3:00 PM to 4:00 PM



PHF = 0.90

Notes:

WARRANT 1 - Conditions A & B



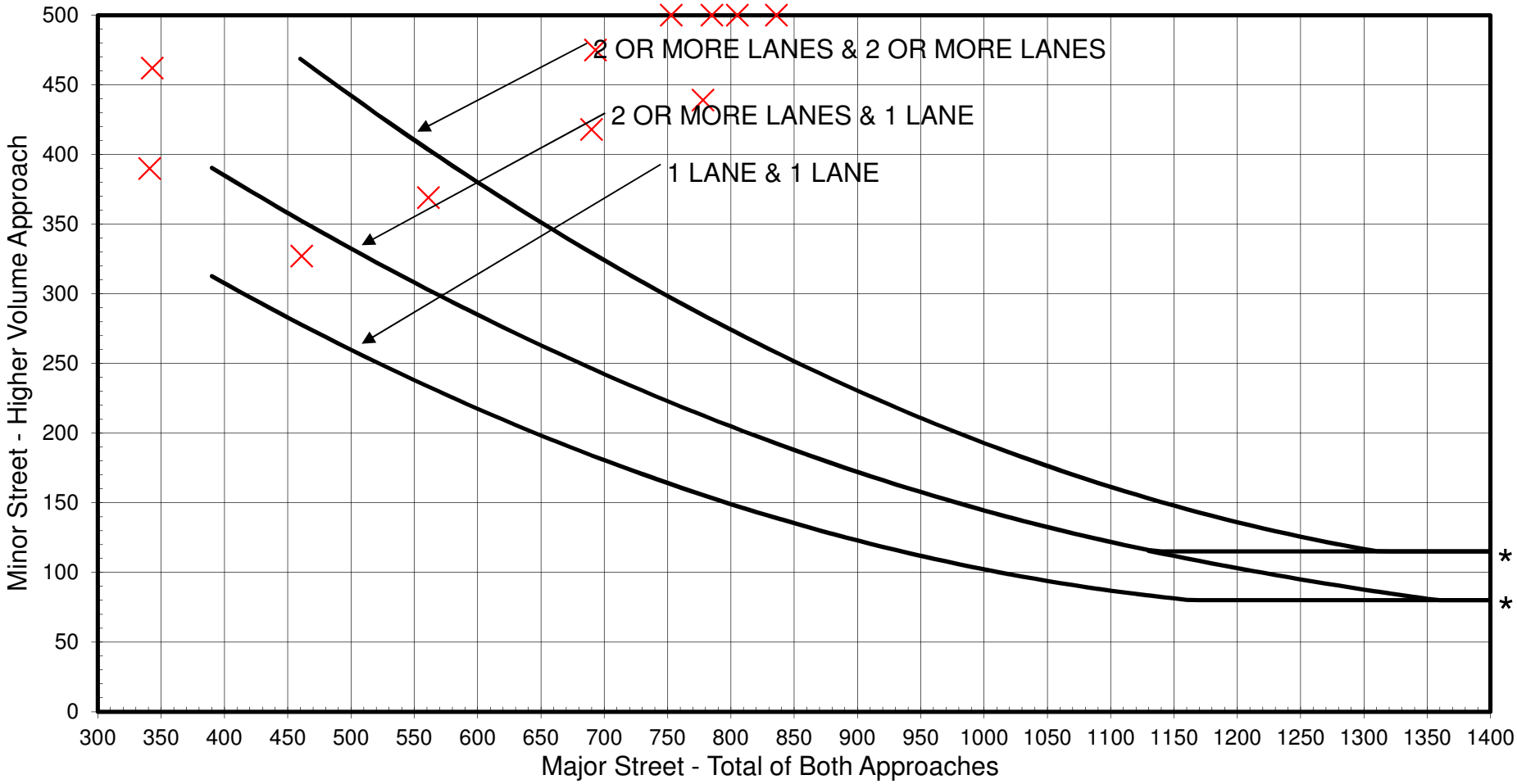
		Lanes
Major Road =	Cooper Foster Park Rd	2
Minor Road =	Oberlin Ave	2
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	7 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	8 Hours Meet	Yes
Condition B (80%) =	5 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Cooper Foster Park Rd	2
Minor Road =	Oberlin Ave	2
Road Location =	Urban	

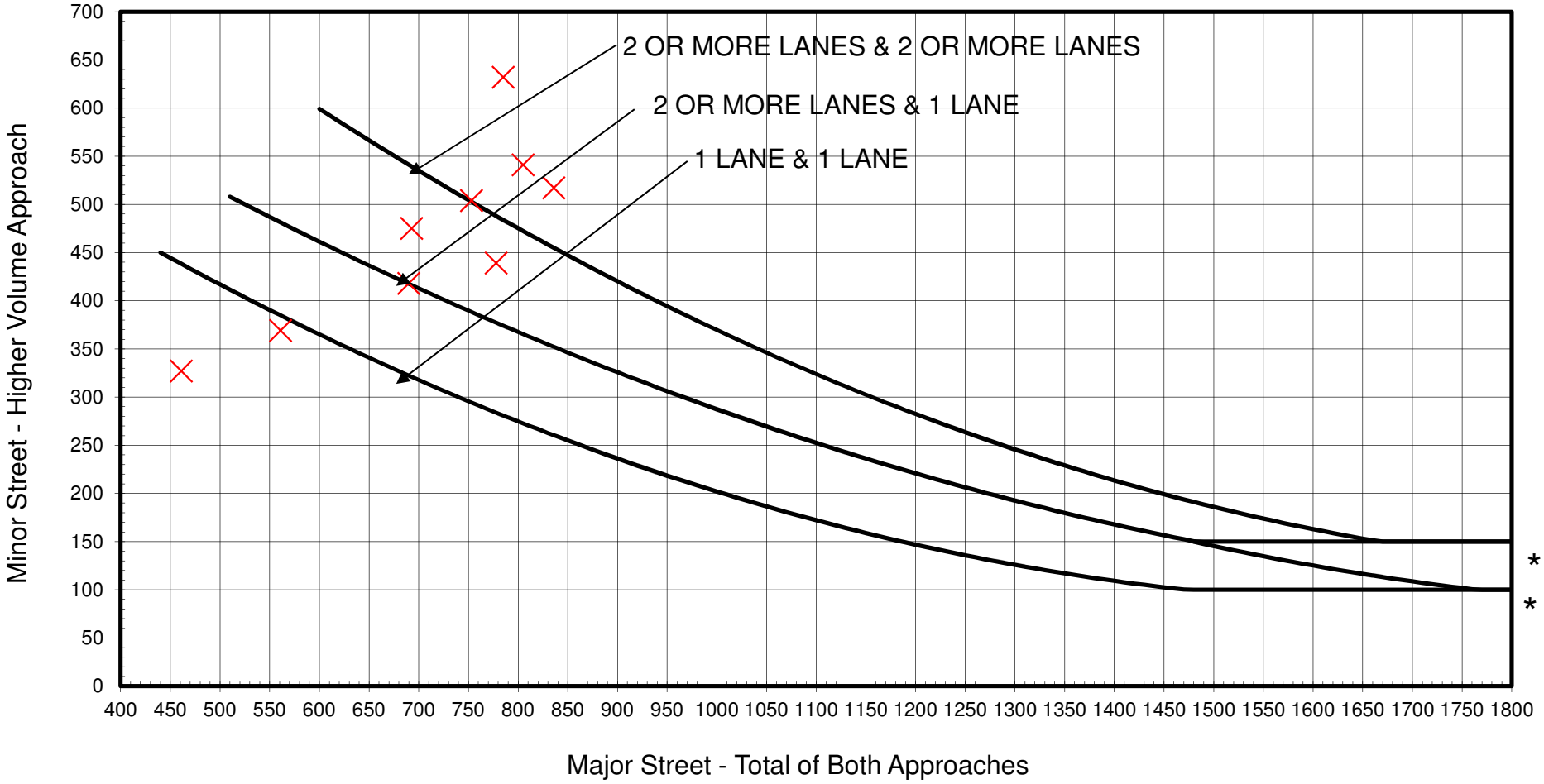
		Warrant Met?
Warrant 2 (Urban) =	7 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Cooper Foster Park Rd	2
Minor Road =	Oberlin Ave	2
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.51

Traffic Signal Warrant Analysis Results

Intersection 51
Cooper Foster Park Rd and N Ridge Rd

SIGNAL WARRANT

INTERSECTION: N Ridge Rd and Cooper Foster Park Rd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1		X	X	500	150	400	120	750	75	600	60						
	2+	X			600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		759	138	122	X		X	X		X	X	X						
8AM-9AM		728	77	88	X		X			X	X	X						
9AM-10AM		763	73	85	X		X			X	X	X						
10AM-11AM		792	75	115	X		X			X	X	X						
11AM-NOON		927	83	114	X		X		X	X	X	X						
NOON-1PM		945	91	139	X		X	X	X	X	X	X						
1PM-2PM		1108	93	124	X		X	X	X	X	X	X					X	
2PM-3PM		1190	131	161	X	X	X	X	X	X	X	X					X	
3PM-4PM		1320	116	190	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1294	97	151	X	X	X	X	X	X	X	X					X	
5PM-6PM		1317	95	134	X		X	X	X	X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					3		7		7		11						5	1
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**YES**						**YES**	**YES**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*.....** **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
***Warrant Satisfied?*.....** **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*.....** **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*.....** **NO**

15-Minute Count Data
N Ridge Rd and Cooper Foster Park Rd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

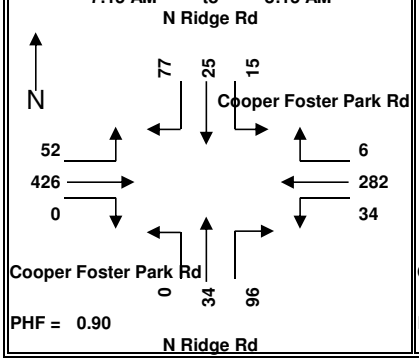
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.964	Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 51

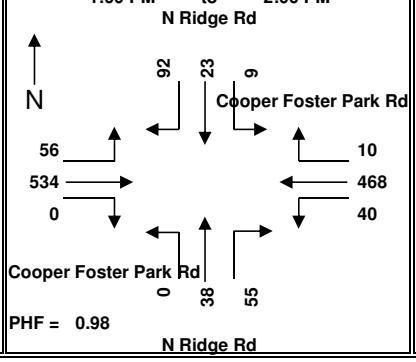
Start Time	N Ridge Rd Northbound				N Ridge Rd Southbound				Total North South	Cooper Foster Park Rd Eastbound				Cooper Foster Park Rd Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	6	350	713	21	73	325	1025	18	2492	665	5046	10	101	494	4868	60	116	11143	13635
	Percent Trucks =			2%	Percent Trucks =			1%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	8	477	971	29	99	443	1396	25	3393	905	6871	14	138	673	6628	82	158	15172	18565
7:00 AM	0	10	17	0	3	4	16	0	50	9	77	0	0	18	35	1	1	140	190
7:15 AM	0	15	25	0	1	6	15	0	62	13	105	0	1	11	60	2	4	191	253
7:30 AM	0	9	28	1	4	6	23	0	70	14	127	0	0	8	65	0	6	214	284
7:45 AM	0	7	27	0	5	8	31	0	78	18	112	0	3	4	78	2	5	214	292
8:00 AM	0	3	16	0	5	5	8	0	37	7	82	0	3	11	79	2	4	181	218
8:15 AM	0	5	15	0	1	2	15	0	38	8	103	0	3	12	74	1	1	198	236
8:30 AM	0	3	17	1	2	3	18	1	43	7	84	0	2	8	53	1	5	153	196
8:45 AM	0	6	12	0	1	9	19	1	47	10	88	0	4	9	89	0	1	196	243
9:00 AM	0	6	7	0	0	3	17	3	33	7	90	0	4	8	77	1	2	183	216
9:15 AM	0	7	11	0	0	2	11	1	31	14	104	0	3	5	58	0	5	181	212
9:30 AM	0	4	17	2	3	10	16	0	50	9	101	0	3	9	82	0	3	201	251
9:45 AM	0	4	17	3	1	3	19	0	44	9	90	0	2	6	92	1	5	198	242
10:00 AM	0	7	8	1	2	2	18	0	37	10	80	0	4	10	70	0	7	170	207
10:15 AM	0	5	11	1	1	7	18	1	42	9	77	0	5	9	88	2	3	185	227
10:30 AM	0	11	14	1	1	5	22	0	53	13	118	0	5	12	89	1	6	233	286
10:45 AM	0	9	10	0	3	8	28	1	58	9	86	1	2	10	95	3	2	204	262
11:00 AM	1	6	6	1	0	5	24	0	42	15	113	0	1	9	105	0	4	242	284
11:15 AM	0	6	9	0	1	9	19	1	44	11	102	1	2	10	88	2	4	214	258
11:30 AM	0	10	20	1	1	8	15	0	54	14	105	0	3	13	96	3	1	231	285
11:45 AM	1	6	18	0	0	7	25	0	57	18	94	0	4	14	113	1	4	240	297
12:00 PM	0	11	13	0	2	7	27	1	60	16	98	0	1	9	104	3	2	230	290
12:15 PM	1	5	23	0	0	8	29	1	66	13	111	3	2	5	89	1	3	222	288
12:30 PM	1	7	11	0	1	7	22	0	49	11	117	0	5	9	116	1	4	254	303
12:45 PM	0	5	14	0	2	11	23	1	55	12	112	0	1	8	106	1	3	239	294
1:00 PM	0	15	12	1	3	4	20	0	54	7	119	0	4	11	134	4	4	275	329
1:15 PM	0	6	7	1	3	9	25	0	50	14	134	0	2	9	112	2	2	271	321
1:30 PM	0	9	19	1	2	3	17	1	50	22	140	0	3	7	119	1	2	289	339
1:45 PM	0	8	17	0	1	7	30	0	63	13	141	0	1	13	103	3	1	273	336
2:00 PM	1	9	19	0	0	12	33	1	74	18	120	0	2	11	105	1	0	255	329
2:15 PM	0	11	15	0	2	9	25	1	62	16	142	0	5	14	136	0	1	308	370
2:30 PM	0	7	31	1	1	9	25	0	73	27	132	0	4	20	146	1	3	326	399
2:45 PM	0	15	23	1	1	6	38	0	83	21	131	1	2	10	137	1	1	301	384
3:00 PM	0	7	22	0	4	15	38	0	86	27	149	0	5	14	149	2	2	341	427
3:15 PM	0	8	16	1	2	11	30	1	67	18	155	0	3	15	145	1	1	334	401
3:30 PM	0	12	21	1	6	6	24	0	69	20	161	1	2	9	156	2	6	349	418
3:45 PM	0	11	19	0	2	13	39	0	84	17	105	0	0	20	154	0	1	296	380
4:00 PM	0	6	17	0	2	14	31	0	70	21	145	0	3	15	152	2	1	335	405
4:15 PM	0	7	16	0	1	6	24	0	54	22	137	0	0	15	143	2	0	319	373
4:30 PM	0	7	17	0	0	11	17	1	52	19	129	1	0	18	143	1	3	311	363
4:45 PM	0	13	14	1	1	14	30	0	72	22	131	0	1	16	158	2	0	329	401
5:00 PM	1	9	13	0	1	10	26	0	60	22	152	0	0	10	168	0	0	352	412
5:15 PM	0	8	20	1	0	10	23	1	61	17	119	1	1	9	163	2	1	311	372
5:30 PM	0	10	15	0	1	5	25	0	56	18	132	0	0	13	177	0	2	340	396
5:45 PM	0	5	14	0	0	6	27	0	52	28	96	1	0	18	167	4	0	314	366

AM Peak Hour
7:15 AM to 8:15 AM



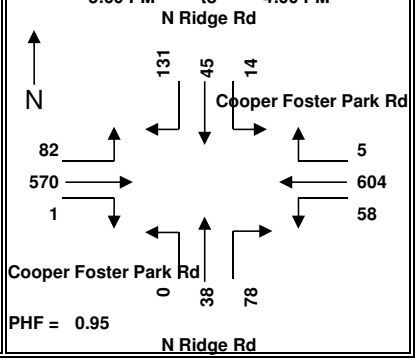
PHF = 0.90

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.98

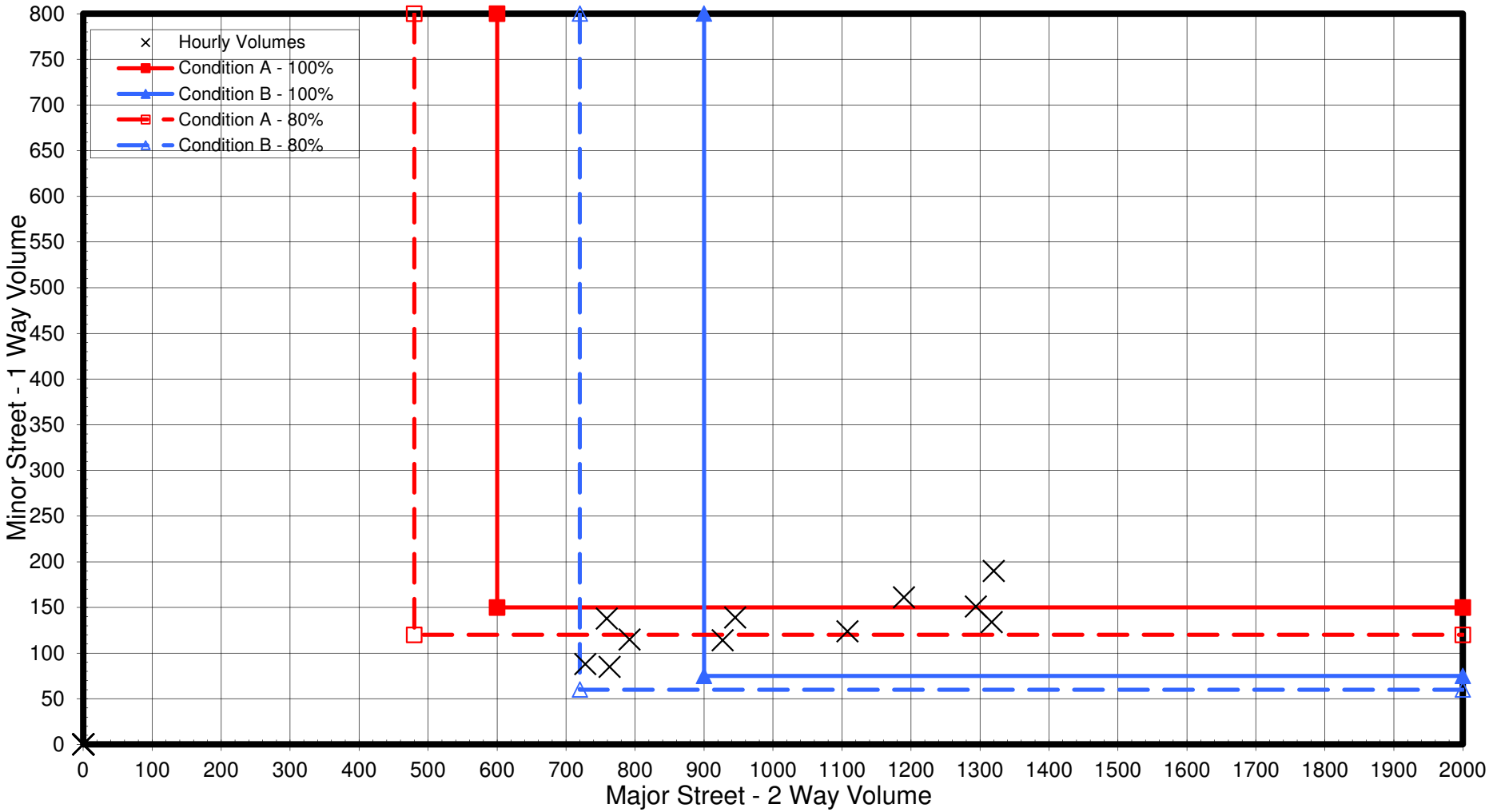
PM Peak Hour
3:00 PM to 4:00 PM



PHF = 0.95

Notes:

WARRANT 1 - Conditions A & B



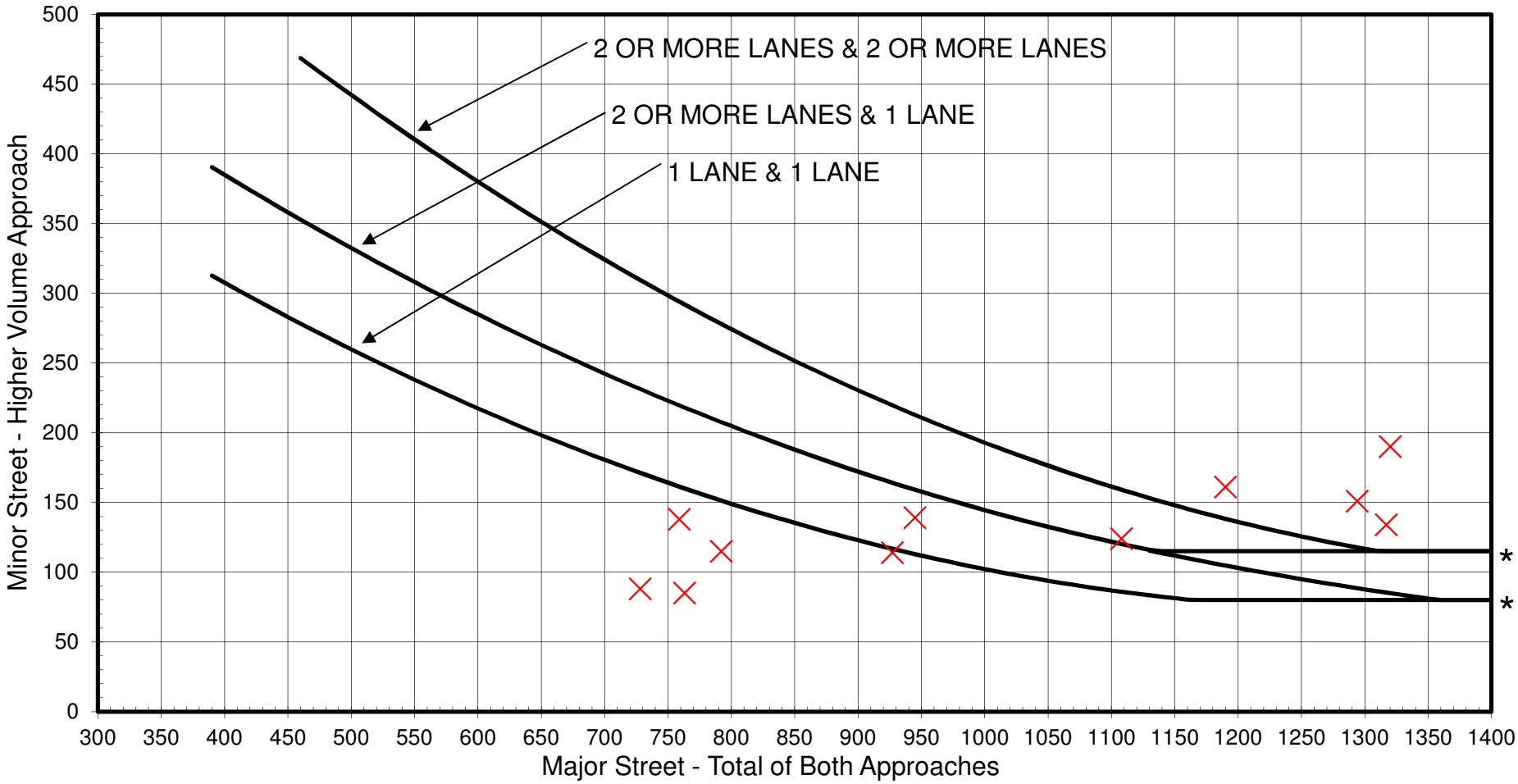
		Lanes
Major Road =	Cooper Foster Park Rd	2
Minor Road =	N Ridge Rd	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	3 Hours Meet	No
Condition B (100%) =	7 Hours Meet	No
Condition A (80%) =	7 Hours Meet	No
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Cooper Foster Park Rd	2
Minor Road =	N Ridge Rd	1
Road Location =	Urban	

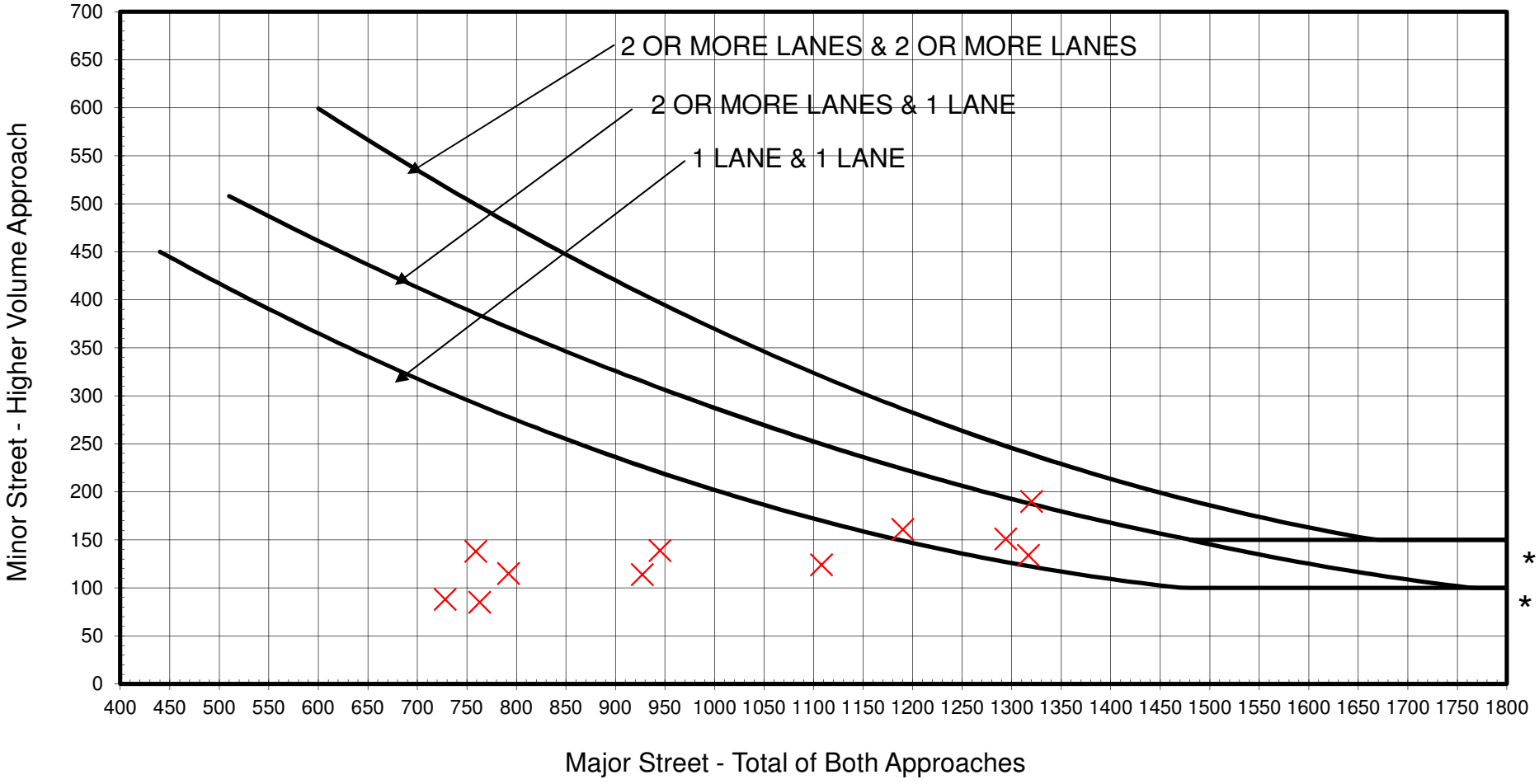
		Warrant Met?
Warrant 2 (Urban) =	5 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Cooper Foster Park Rd	2
Minor Road =	N Ridge Rd	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	1 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.52

Traffic Signal Warrant Analysis Results

Intersection 52
Elyria Ave and E 25th St

SIGNAL WARRANT

INTERSECTION: Elyria Ave and E 25th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 0
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X		X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		439	0	20			X											
8AM-9AM		503	0	18	X		X											
9AM-10AM		392	0	23														
10AM-11AM		417	0	12			X											
11AM-NOON		452	0	24			X											
NOON-1PM		511	0	26	X		X											
1PM-2PM		562	0	36	X		X											
2PM-3PM		639	0	39	X		X				X							
3PM-4PM		682	0	36	X		X				X							
4PM-5PM		745	0	14	X		X				X							
5PM-6PM		514	0	26	X		X											
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Elyria Ave and E 25th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

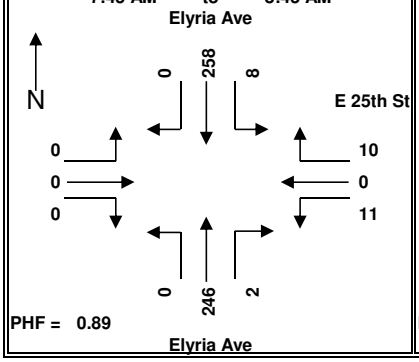
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.964	Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 52

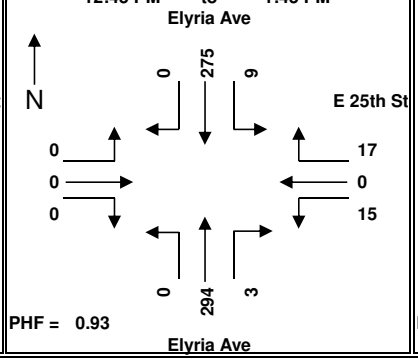
Start Time	Elyria Ave Northbound				Elyria Ave Southbound				Total North South	Eastbound				E 25th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	0	2770	46	93	83	2957	0	93	5856	0	0	0	0	110	0	164	2	274	6130
	Percent Trucks =			3%	Percent Trucks =			3%		Percent Trucks =			0%	Percent Trucks =			1%		
ADT	0	3772	63	127	113	4026	0	127	7973	0	0	0	0	150	0	223	3	373	8346
7:00 AM	0	33	1	2	0	50	0	3	84	0	0	0	0	0	0	3	0	3	87
7:15 AM	0	43	0	1	2	55	0	2	100	0	0	0	0	1	0	3	0	4	104
7:30 AM	0	51	0	1	1	59	0	1	111	0	0	0	0	2	0	5	0	7	118
7:45 AM	0	75	0	5	1	68	0	2	144	0	0	0	0	3	0	3	0	6	150
8:00 AM	0	38	2	2	3	60	0	4	103	0	0	0	0	3	0	5	0	8	111
8:15 AM	0	76	0	5	3	58	0	1	137	0	0	0	0	2	0	1	0	3	140
8:30 AM	0	57	0	5	1	72	0	2	130	0	0	0	0	3	0	1	0	4	134
8:45 AM	0	63	1	6	1	68	0	1	133	0	0	0	0	2	0	1	0	3	136
9:00 AM	0	53	1	1	0	50	0	0	104	0	0	0	0	0	0	3	0	3	107
9:15 AM	0	50	1	4	1	51	0	2	103	0	0	0	0	0	0	6	0	6	109
9:30 AM	0	46	0	2	0	44	0	0	90	0	0	0	0	5	0	3	0	8	98
9:45 AM	0	46	0	5	1	48	0	2	95	0	0	0	0	2	0	4	0	6	101
10:00 AM	0	46	1	5	1	46	0	0	94	0	0	0	0	0	0	1	0	1	95
10:15 AM	0	53	0	0	0	42	0	1	95	0	0	0	0	1	0	1	0	2	97
10:30 AM	0	47	0	2	2	50	0	1	99	0	0	0	0	2	0	2	0	4	103
10:45 AM	0	54	1	0	5	69	0	3	129	0	0	0	0	2	0	3	0	5	134
11:00 AM	0	32	1	1	3	62	0	2	98	0	0	0	0	1	0	4	0	5	103
11:15 AM	0	46	1	0	2	57	0	1	106	0	0	0	0	4	0	2	0	6	112
11:30 AM	0	57	1	1	0	69	0	0	127	0	0	0	0	2	0	4	0	6	133
11:45 AM	0	62	2	0	2	55	0	0	121	0	0	0	0	3	0	4	0	7	128
12:00 PM	0	67	2	1	2	53	0	0	124	0	0	0	0	2	0	4	0	6	130
12:15 PM	0	63	1	4	2	49	0	2	115	0	0	0	0	1	0	4	0	5	120
12:30 PM	0	68	0	0	0	68	0	2	136	0	0	0	0	3	0	5	0	8	144
12:45 PM	0	68	0	1	3	65	0	2	136	0	0	0	0	3	0	4	0	7	143
1:00 PM	0	87	1	2	3	66	0	3	157	0	0	0	0	3	0	4	0	7	164
1:15 PM	0	79	2	1	2	70	0	2	153	0	0	0	0	3	0	5	0	8	161
1:30 PM	0	60	0	0	1	74	0	2	135	0	0	0	0	6	0	4	0	10	145
1:45 PM	0	51	1	1	4	61	0	2	117	0	0	0	0	3	0	8	1	11	128
2:00 PM	0	66	0	1	0	93	0	14	159	0	0	0	0	6	0	1	0	7	166
2:15 PM	0	74	0	1	2	75	0	6	151	0	0	0	0	1	0	2	0	3	154
2:30 PM	0	85	6	3	5	90	0	5	186	0	0	0	0	6	0	9	1	15	201
2:45 PM	0	69	1	0	1	72	0	3	143	0	0	0	0	5	0	9	0	14	157
3:00 PM	0	86	1	3	1	81	0	1	169	0	0	0	0	2	0	5	0	7	176
3:15 PM	0	75	1	4	1	66	0	2	143	0	0	0	0	1	0	8	0	9	152
3:30 PM	0	83	1	2	2	102	0	7	188	0	0	0	0	5	0	3	0	8	196
3:45 PM	0	89	1	6	3	89	0	5	182	0	0	0	0	4	0	8	0	12	194
4:00 PM	0	97	4	6	1	106	0	1	208	0	0	0	0	1	0	4	0	5	213
4:15 PM	0	99	0	4	5	73	0	3	177	0	0	0	0	3	0	1	0	4	181
4:30 PM	0	76	1	1	6	96	0	0	179	0	0	0	0	1	0	0	0	1	180
4:45 PM	0	77	3	1	3	98	0	1	181	0	0	0	0	1	0	3	0	4	185
5:00 PM	0	60	0	2	2	103	0	0	165	0	0	0	0	2	0	2	0	4	169
5:15 PM	0	64	4	0	2	67	0	0	137	0	0	0	0	2	0	2	0	4	141
5:30 PM	0	48	1	0	1	57	0	1	107	0	0	0	0	2	0	6	0	8	115
5:45 PM	0	51	2	1	2	50	0	1	105	0	0	0	0	6	0	4	0	10	115

AM Peak Hour
7:45 AM to 8:45 AM



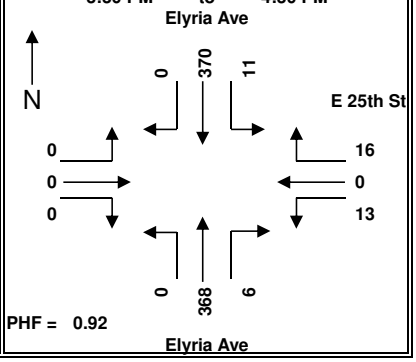
PHF = 0.89

Midday Peak Hour
12:45 PM to 1:45 PM



PHF = 0.93

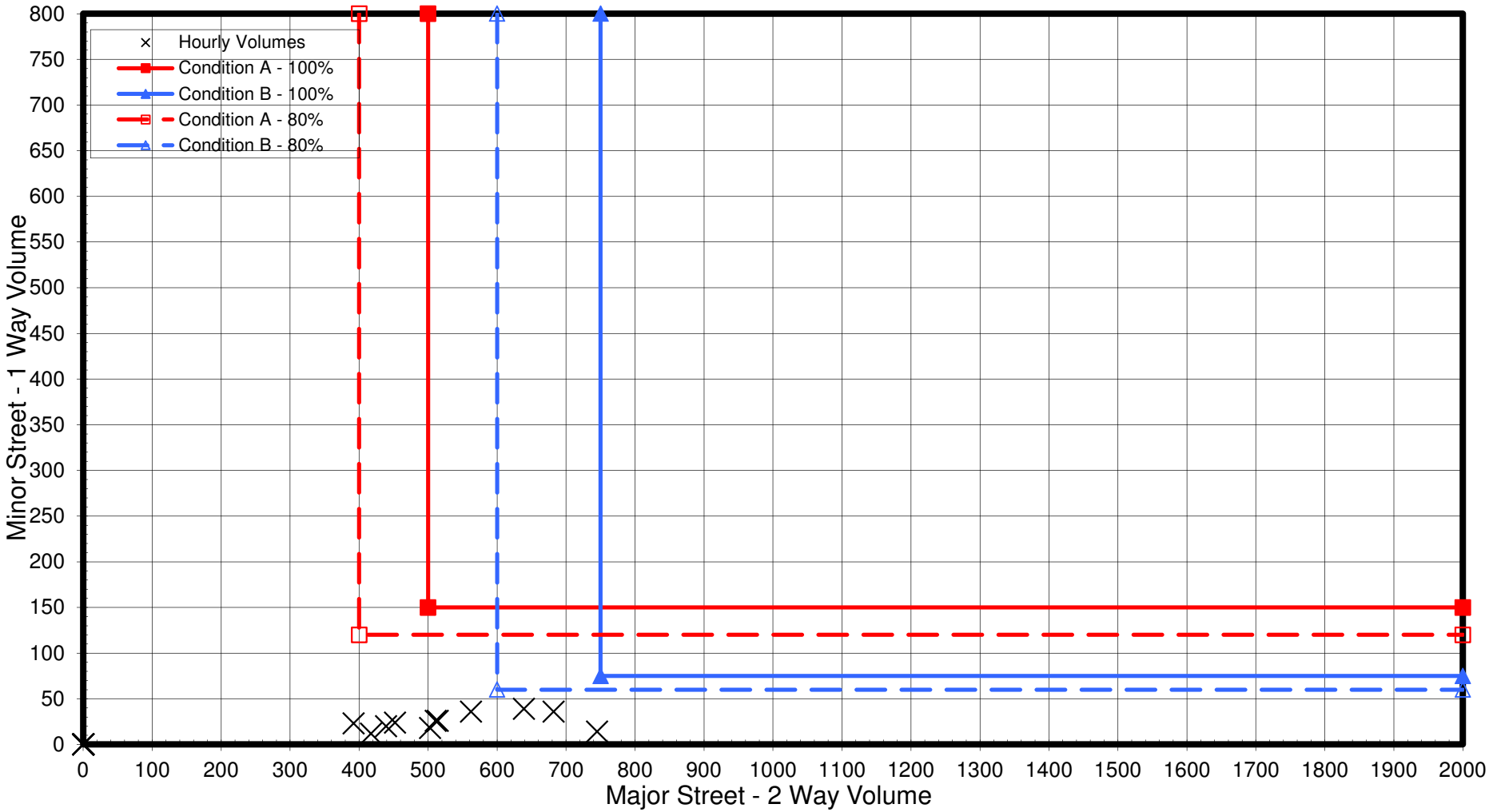
PM Peak Hour
3:30 PM to 4:30 PM



PHF = 0.92

Notes:

WARRANT 1 - Conditions A & B



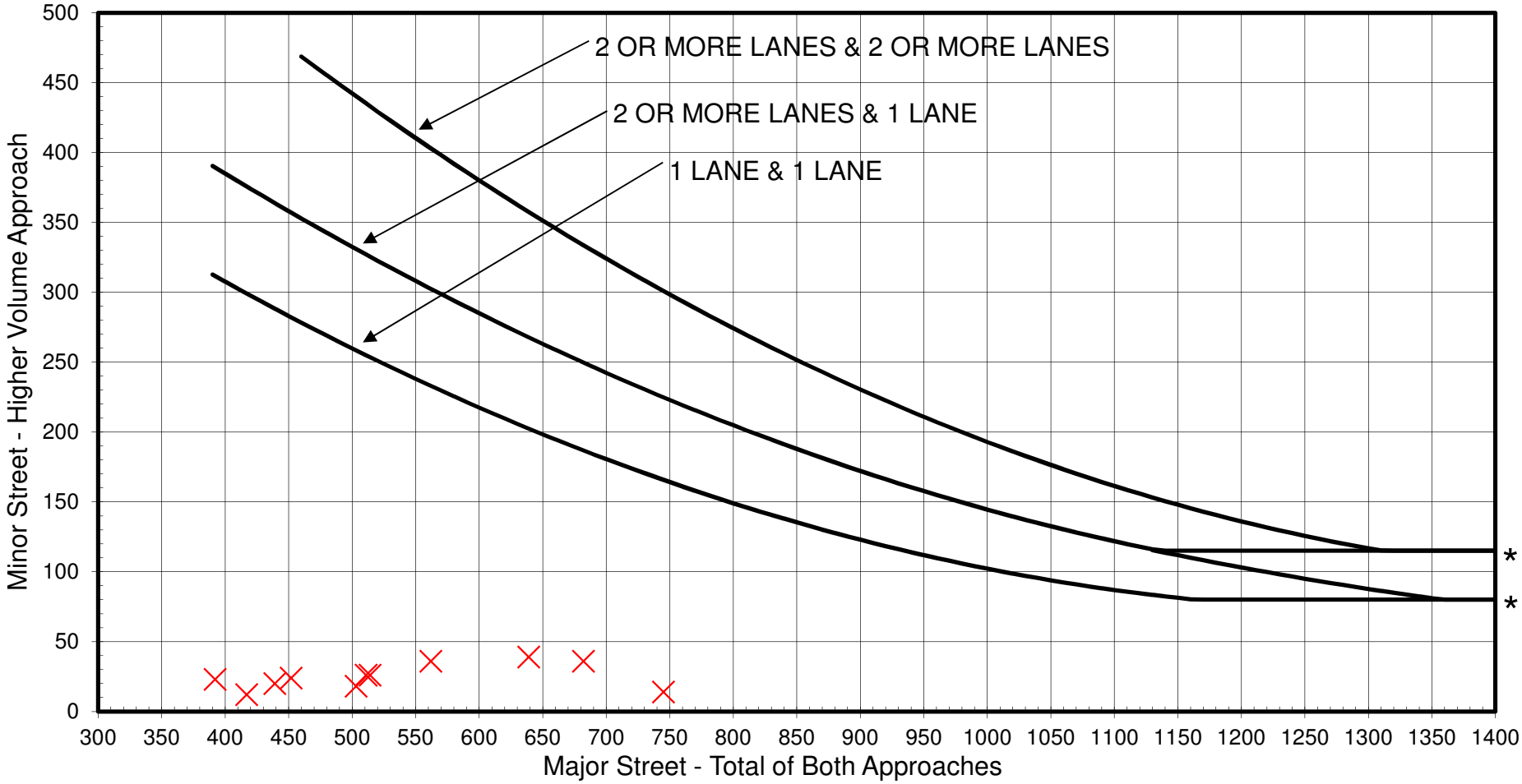
		Lanes
Major Road =	Elyria Ave	1
Minor Road =	E 25th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Elyria Ave	1
Minor Road =	E 25th St	1
Road Location =	Urban	

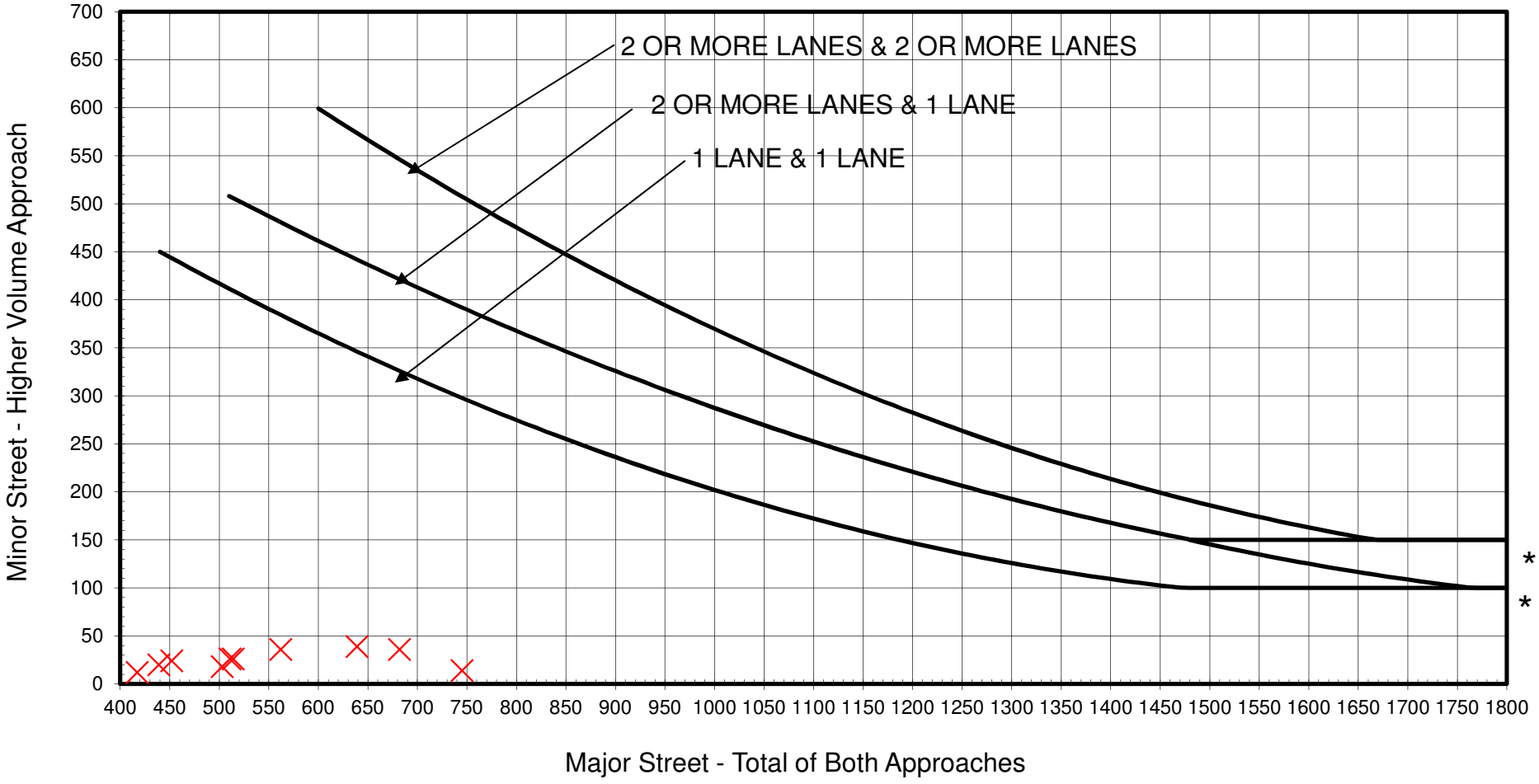
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Elyria Ave	1
Minor Road =	E 25th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.53

Traffic Signal Warrant Analysis Results

Intersection 53
Elyria Ave and E 30th St

SIGNAL WARRANT

INTERSECTION: Elyria Ave and E 30th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		303	32	11														
8AM-9AM		332	43	17														
9AM-10AM		288	34	11														
10AM-11AM		262	18	14														
11AM-NOON		315	32	15														
NOON-1PM		347	38	27														
1PM-2PM		369	47	14														
2PM-3PM		431	58	28			X											
3PM-4PM		475	52	35			X											
4PM-5PM		485	45	30			X											
5PM-6PM		375	51	20														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Elyria Ave and E 30th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

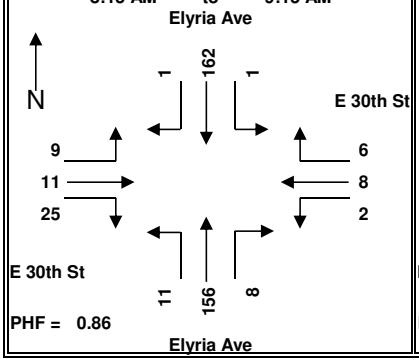
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.018	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

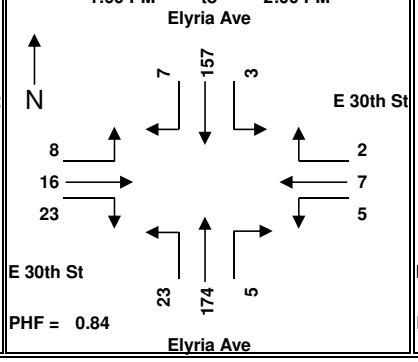
ADT Factor: 1.41
Intersection ID: 53

Start Time	Elyria Ave Northbound				Elyria Ave Southbound				Total North South	E 30th St Eastbound				E 30th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	252	1822	87	69	21	1763	37	63	3982	83	139	228	14	73	122	27	10	672	4654
	Percent Trucks =			3%	Percent Trucks =			3%		Percent Trucks =			3%	Percent Trucks =			5%		
ADT	362	2620	125	99	30	2535	53	91	5726	119	200	328	20	105	175	39	14	966	6692
7:00 AM	1	20	0	0	0	29	1	1	51	0	5	4	0	2	1	0	0	12	63
7:15 AM	5	35	0	3	1	34	0	0	75	0	2	5	0	1	2	0	0	10	85
7:30 AM	7	32	1	0	0	40	0	0	80	2	1	5	0	1	2	0	1	11	91
7:45 AM	5	46	0	5	0	44	2	2	97	1	1	6	0	0	2	0	0	10	107
8:00 AM	4	33	1	2	0	27	0	2	65	2	2	2	3	0	3	1	0	10	75
8:15 AM	2	40	4	3	0	38	1	1	85	2	2	9	0	1	2	1	1	17	102
8:30 AM	3	35	0	2	0	44	0	1	82	2	3	6	1	1	1	4	1	17	99
8:45 AM	3	47	0	4	0	50	0	1	100	3	2	8	1	0	3	0	0	16	116
9:00 AM	3	34	4	4	1	30	0	0	72	2	4	2	0	0	2	1	0	11	83
9:15 AM	2	23	2	3	0	50	2	1	79	0	2	2	0	0	1	0	0	5	84
9:30 AM	4	25	0	1	0	38	0	1	67	0	1	5	0	0	1	0	0	7	74
9:45 AM	2	32	2	3	1	33	0	1	70	3	7	6	0	3	3	0	1	22	92
10:00 AM	7	29	2	5	0	27	0	1	65	1	2	4	0	2	0	0	0	9	74
10:15 AM	2	26	1	1	1	22	0	3	52	1	1	2	0	0	2	0	0	6	58
10:30 AM	5	36	2	1	0	28	1	1	72	1	1	2	0	1	0	1	0	6	78
10:45 AM	8	35	2	1	0	28	0	0	73	1	1	1	0	3	4	1	1	11	84
11:00 AM	4	44	2	4	5	42	0	3	97	3	1	5	0	1	1	0	0	11	108
11:15 AM	4	36	0	1	0	24	1	0	65	1	1	5	0	1	4	0	0	12	77
11:30 AM	3	33	0	0	0	32	1	2	69	1	3	1	0	0	2	1	0	8	77
11:45 AM	7	35	3	2	0	38	1	0	84	3	5	3	1	4	1	0	1	16	100
12:00 PM	3	40	0	3	0	41	0	2	84	0	4	4	0	2	6	1	0	17	101
12:15 PM	4	39	5	3	1	38	2	2	89	3	1	4	0	1	3	2	0	14	103
12:30 PM	7	52	1	1	0	32	0	2	92	3	0	7	0	2	6	1	1	19	111
12:45 PM	7	41	2	1	0	28	4	1	82	0	3	9	1	2	1	0	0	15	97
1:00 PM	5	38	0	0	1	40	1	0	85	3	6	6	0	1	2	2	0	20	105
1:15 PM	7	34	0	0	0	40	3	1	84	2	4	7	0	0	3	0	0	16	100
1:30 PM	6	45	1	0	0	35	2	2	89	1	1	3	0	3	0	0	0	8	97
1:45 PM	5	57	4	0	2	42	1	5	111	2	5	7	0	1	2	0	0	17	128
2:00 PM	7	45	3	1	0	52	1	12	108	2	2	3	0	2	6	0	0	15	123
2:15 PM	7	42	3	0	0	43	0	6	95	3	4	7	1	2	3	0	0	19	114
2:30 PM	9	41	4	1	1	51	2	1	108	10	7	6	2	3	3	3	1	32	140
2:45 PM	8	54	7	2	2	46	3	1	120	5	3	6	0	2	3	1	0	20	140
3:00 PM	6	58	2	4	0	48	1	1	115	2	6	12	1	6	4	2	0	32	147
3:15 PM	9	54	4	1	1	45	0	1	113	0	1	5	1	2	3	1	0	12	125
3:30 PM	10	58	5	1	0	50	2	3	125	2	8	5	1	6	6	0	0	27	152
3:45 PM	11	50	3	0	1	57	0	0	122	0	5	6	0	1	4	0	0	16	138
4:00 PM	3	59	0	1	1	47	0	1	110	2	5	6	0	2	1	2	0	18	128
4:15 PM	6	58	5	2	0	56	0	0	125	2	2	7	0	3	1	1	0	16	141
4:30 PM	9	51	5	0	0	58	1	0	124	2	4	4	0	2	8	0	1	20	144
4:45 PM	9	57	1	1	1	58	0	0	126	2	5	4	0	4	6	0	0	21	147
5:00 PM	10	55	2	0	0	59	2	0	128	5	6	6	0	2	6	1	0	26	154
5:15 PM	7	45	1	0	1	44	0	1	98	1	2	9	0	2	2	0	1	16	114
5:30 PM	6	40	1	0	0	26	1	0	74	1	6	8	1	0	3	0	0	18	92
5:45 PM	10	33	2	2	0	29	1	0	75	1	2	4	0	1	3	0	0	11	86

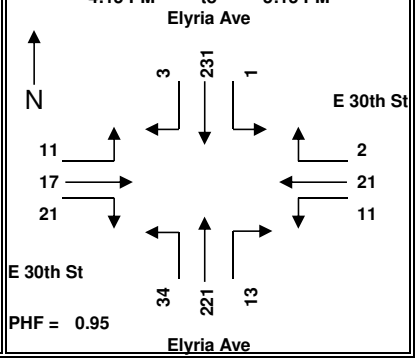
AM Peak Hour
8:15 AM to 9:15 AM



Midday Peak Hour
1:00 PM to 2:00 PM

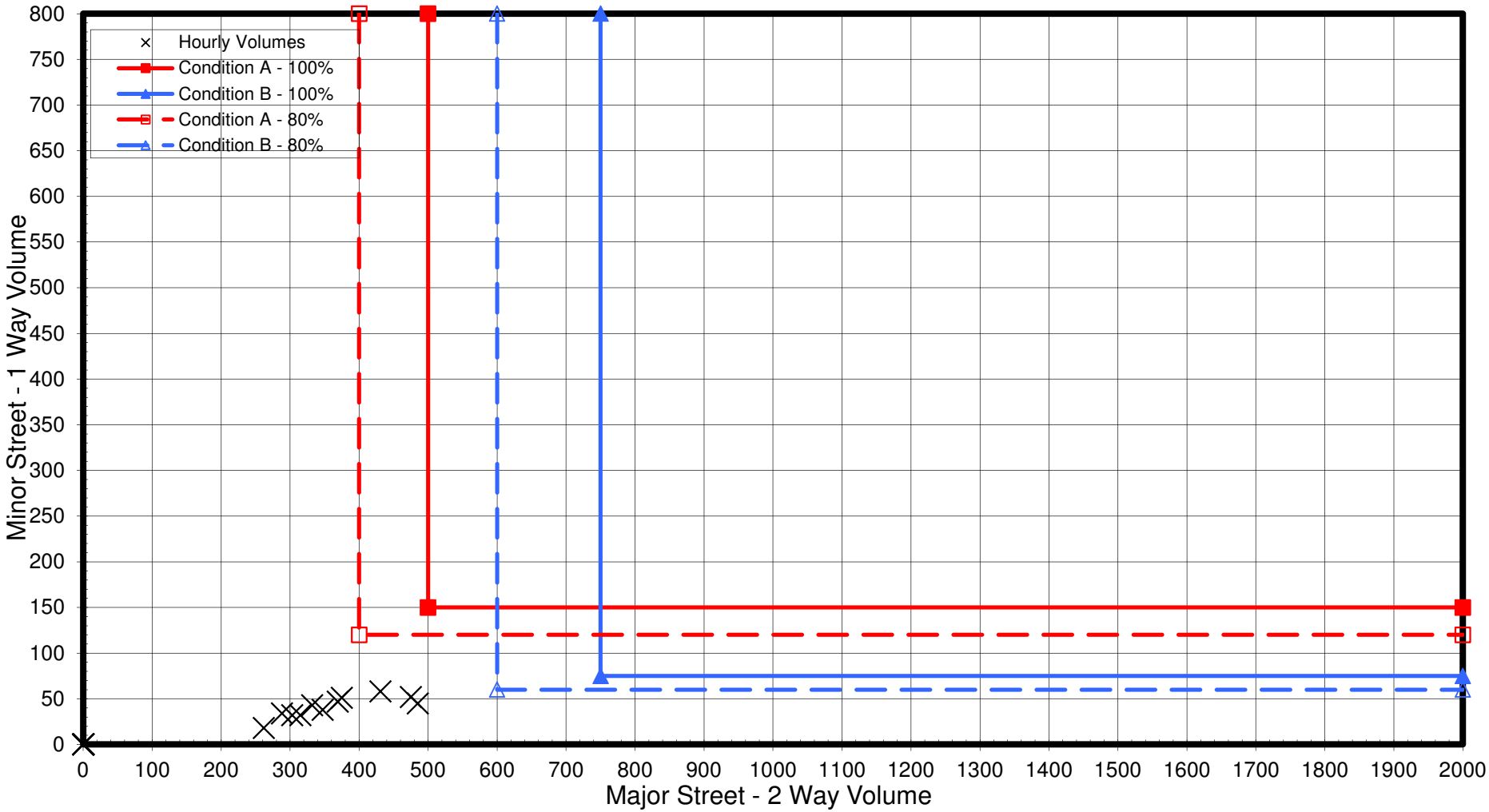


PM Peak Hour
4:15 PM to 5:15 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	Elyria Ave	1
Minor Road =	E 30th St	1
Road Location =	Urban	

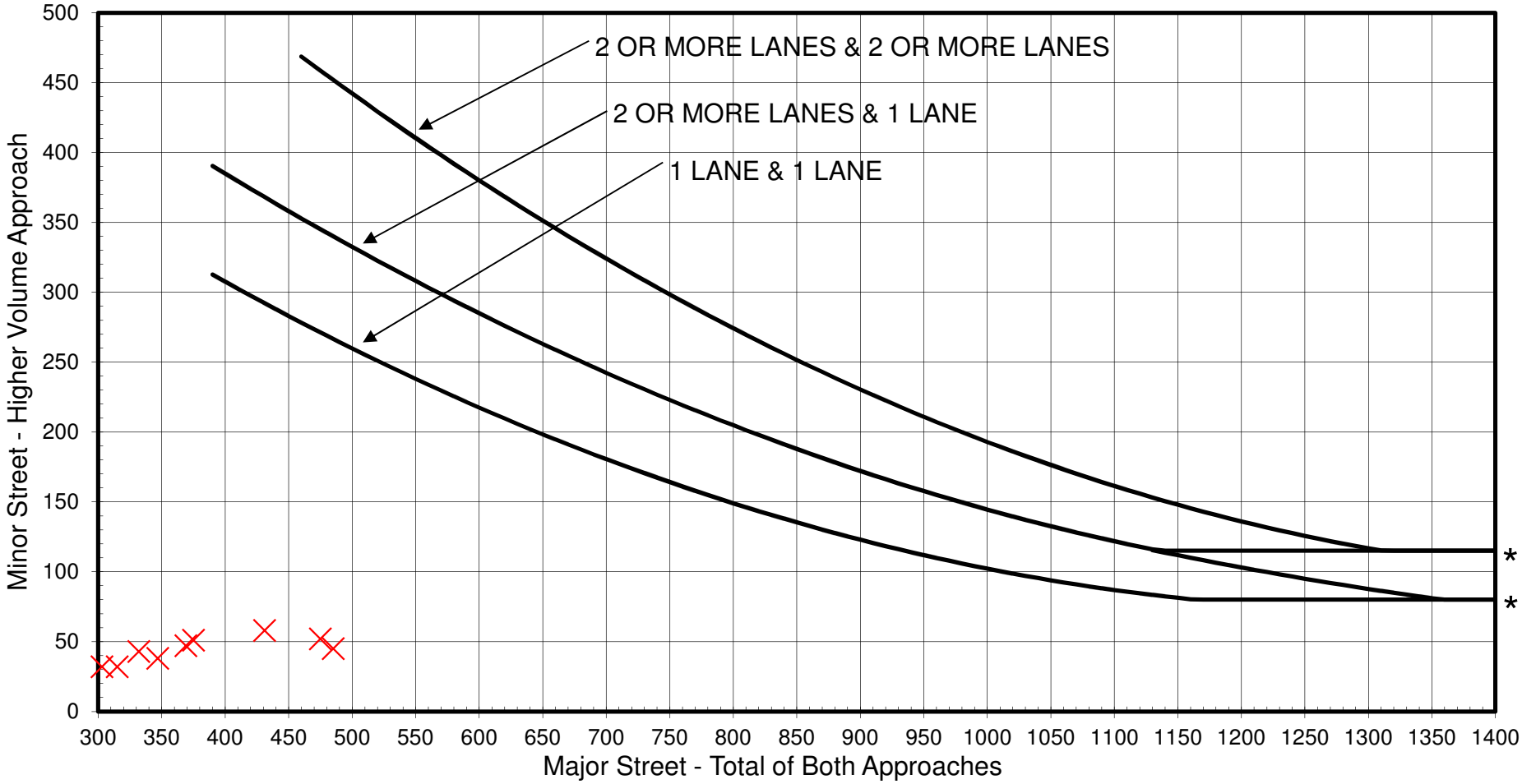
		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS

564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Elyria Ave	1
Minor Road =	E 30th St	1
Road Location =	Urban	

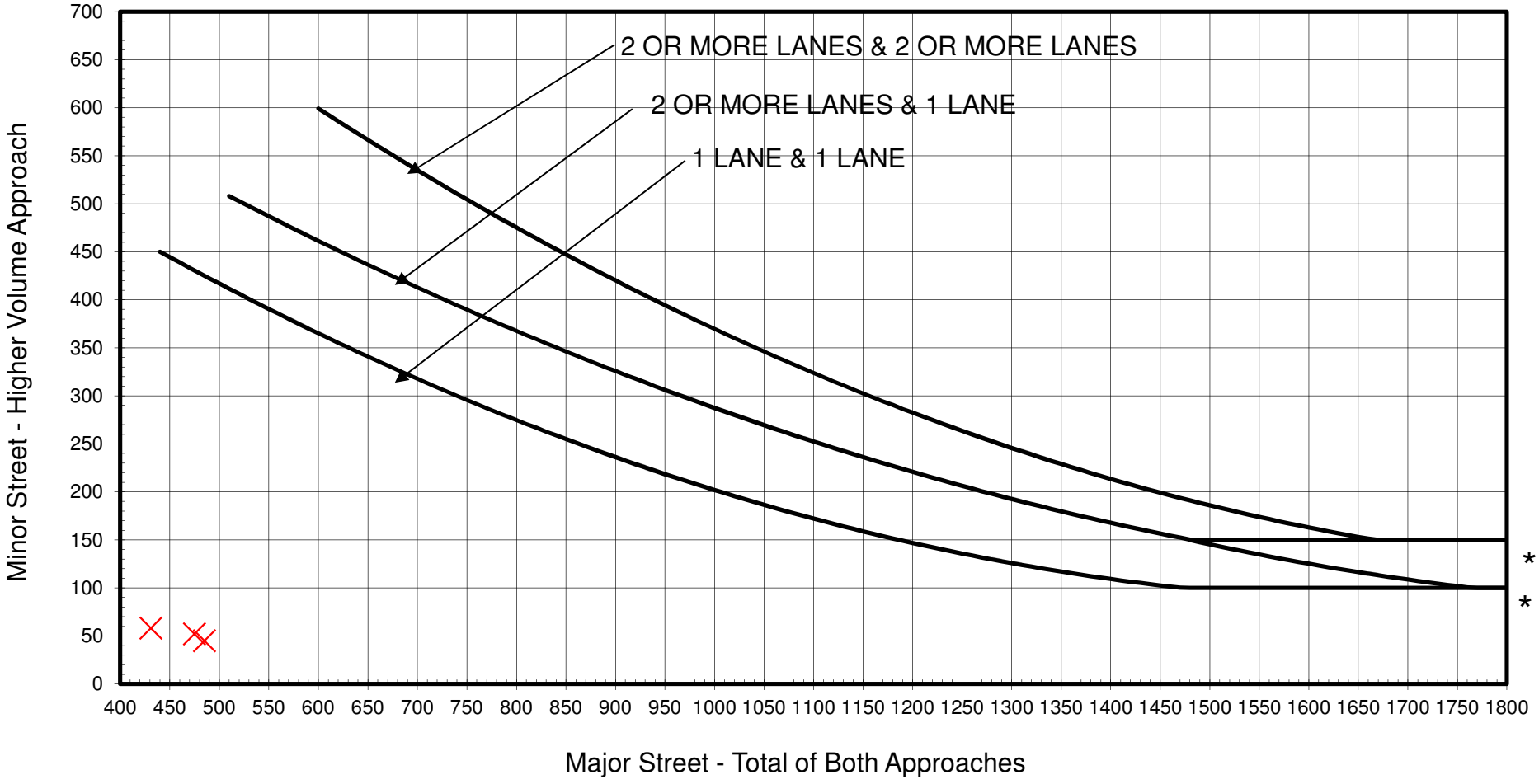
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Elyria Ave	1
Minor Road =	E 30th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.54

Traffic Signal Warrant Analysis Results

Intersection 54
Elyria Ave and E 36th St

SIGNAL WARRANT

INTERSECTION: Elyria Ave and Electrical Substation and E 36th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR					FOUR HOUR	PEAK HOUR
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		435	0	138			X	X		X		X						
8AM-9AM		426	0	100			X			X		X						
9AM-10AM		330	0	88						X		X						
10AM-11AM		345	0	97						X		X						
11AM-NOON		388	0	92						X		X						
NOON-1PM		464	0	115			X			X		X						
1PM-2PM		492	0	120			X	X		X		X						
2PM-3PM		614	0	181	X	X	X	X		X	X	X						
3PM-4PM		629	0	176	X	X	X	X		X	X	X						
4PM-5PM		656	0	168	X	X	X	X		X	X	X						
5PM-6PM		553	0	130	X		X	X		X		X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					3		6		0		3						0	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data

Elyria Ave and Electrical Substation and E 36th St

Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.018	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

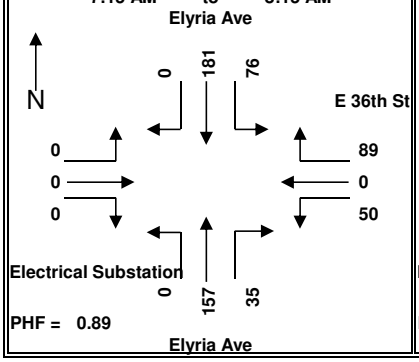
Roadway Classification:

ADT Factor: 1.41
Intersection ID: 54

Start Time	Elyria Ave Northbound				Elyria Ave Southbound				Total North South	Electrical Substation Eastbound				E 36th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	0	1974	394	62	921	2042	1	71	5332	0	0	0	0	469	0	936	29	1405	6737
	Percent Trucks =			3%	Percent Trucks =			2%		Percent Trucks =			0%	Percent Trucks =			2%		
ADT	0	2838	567	89	1324	2936	1	102	7667	0	0	0	0	674	0	1346	42	2020	9687
7:00 AM	0	17	3	0	19	45	0	1	84	0	0	0	0	17	0	5	1	22	106
7:15 AM	0	42	16	1	16	47	0	1	121	0	0	0	0	13	0	16	4	29	150
7:30 AM	0	38	8	0	13	49	0	0	108	0	0	0	0	15	0	29	1	44	152
7:45 AM	0	44	5	3	26	47	0	1	122	0	0	0	0	14	0	29	2	43	165
8:00 AM	0	33	6	1	21	38	0	4	98	0	0	0	0	8	0	15	2	23	121
8:15 AM	0	39	3	2	18	46	0	1	106	0	0	0	0	2	0	15	1	17	123
8:30 AM	0	34	2	3	18	49	0	2	103	0	0	0	0	10	0	17	0	27	130
8:45 AM	0	46	6	4	17	50	0	1	119	0	0	0	0	10	0	23	0	33	152
9:00 AM	0	32	2	5	6	31	0	0	71	0	0	0	0	4	0	12	0	16	87
9:15 AM	0	24	6	3	15	49	0	1	94	0	0	0	0	11	0	13	0	24	118
9:30 AM	0	23	10	2	15	36	0	2	84	0	0	0	0	8	0	16	1	24	108
9:45 AM	0	28	7	3	12	34	0	1	81	0	0	0	0	7	0	17	0	24	105
10:00 AM	0	37	5	3	10	38	0	2	90	0	0	0	0	5	0	14	1	19	109
10:15 AM	0	21	9	2	11	28	0	1	69	0	0	0	0	8	0	18	0	26	95
10:30 AM	0	39	6	1	12	30	0	1	87	0	0	0	0	10	0	15	0	25	112
10:45 AM	0	38	5	2	20	36	0	0	99	0	0	0	0	9	0	18	0	27	126
11:00 AM	0	44	7	2	10	39	0	2	100	0	0	0	0	8	0	11	2	19	119
11:15 AM	0	37	6	0	20	28	0	1	91	0	0	0	0	7	0	18	0	25	116
11:30 AM	0	40	3	0	11	36	0	2	90	0	0	0	0	9	0	15	1	24	114
11:45 AM	0	40	6	0	11	50	0	0	107	0	0	0	0	5	0	19	0	24	131
12:00 PM	0	41	10	2	18	46	0	0	115	0	0	0	0	10	0	13	1	23	138
12:15 PM	0	42	7	4	21	41	0	0	111	0	0	0	0	9	0	21	0	30	141
12:30 PM	0	50	13	1	14	45	0	4	122	0	0	0	0	16	0	21	0	37	159
12:45 PM	0	46	12	0	18	40	0	1	116	0	0	0	0	9	0	16	2	25	141
1:00 PM	0	38	11	1	15	49	0	0	113	0	0	0	0	10	0	16	1	26	139
1:15 PM	0	48	7	0	23	47	0	2	125	0	0	0	0	10	0	15	0	25	150
1:30 PM	0	45	8	0	18	42	0	2	113	0	0	0	0	12	0	19	0	31	144
1:45 PM	0	58	7	0	28	48	0	4	141	0	0	0	0	12	0	26	1	38	179
2:00 PM	0	55	12	1	34	63	0	12	164	0	0	0	0	17	0	32	2	49	213
2:15 PM	0	54	9	0	29	48	0	5	140	0	0	0	0	8	0	42	0	50	190
2:30 PM	0	42	10	1	32	57	0	4	141	0	0	0	0	18	0	33	0	51	192
2:45 PM	0	59	19	1	28	63	0	0	169	0	0	0	0	9	0	22	0	31	200
3:00 PM	0	54	16	4	27	57	0	2	154	0	0	0	0	10	0	28	1	38	192
3:15 PM	0	60	10	1	21	54	0	1	145	0	0	0	0	17	0	36	0	53	198
3:30 PM	0	59	9	2	31	60	1	3	160	0	0	0	0	10	0	33	3	43	203
3:45 PM	0	65	15	1	38	52	0	2	170	0	0	0	0	12	0	30	1	42	212
4:00 PM	0	62	10	3	24	53	0	2	149	0	0	0	0	18	0	27	0	45	194
4:15 PM	0	67	12	0	34	61	0	1	174	0	0	0	0	10	0	30	0	40	214
4:30 PM	0	64	16	0	23	71	0	0	174	0	0	0	0	16	0	26	0	42	216
4:45 PM	0	61	12	1	24	62	0	0	159	0	0	0	0	13	0	28	1	41	200
5:00 PM	0	63	11	0	27	64	0	0	165	0	0	0	0	11	0	26	0	37	202
5:15 PM	0	61	13	0	29	44	0	0	147	0	0	0	0	14	0	22	0	36	183
5:30 PM	0	43	9	0	40	35	0	2	127	0	0	0	0	10	0	14	0	24	151
5:45 PM	0	41	15	2	24	34	0	0	114	0	0	0	0	8	0	25	0	33	147

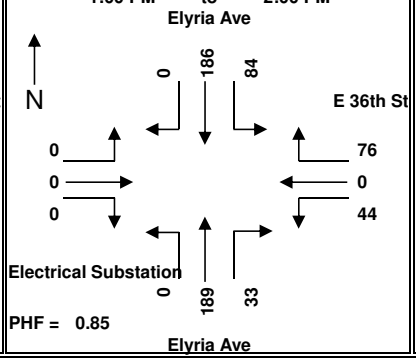
AM Peak Hour

7:15 AM to 8:15 AM



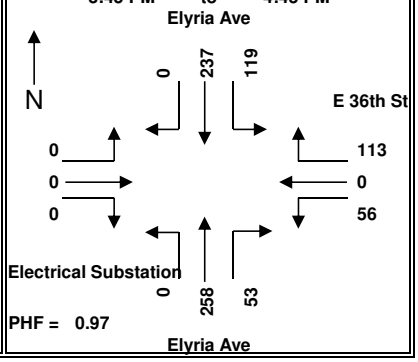
Midday Peak Hour

1:00 PM to 2:00 PM



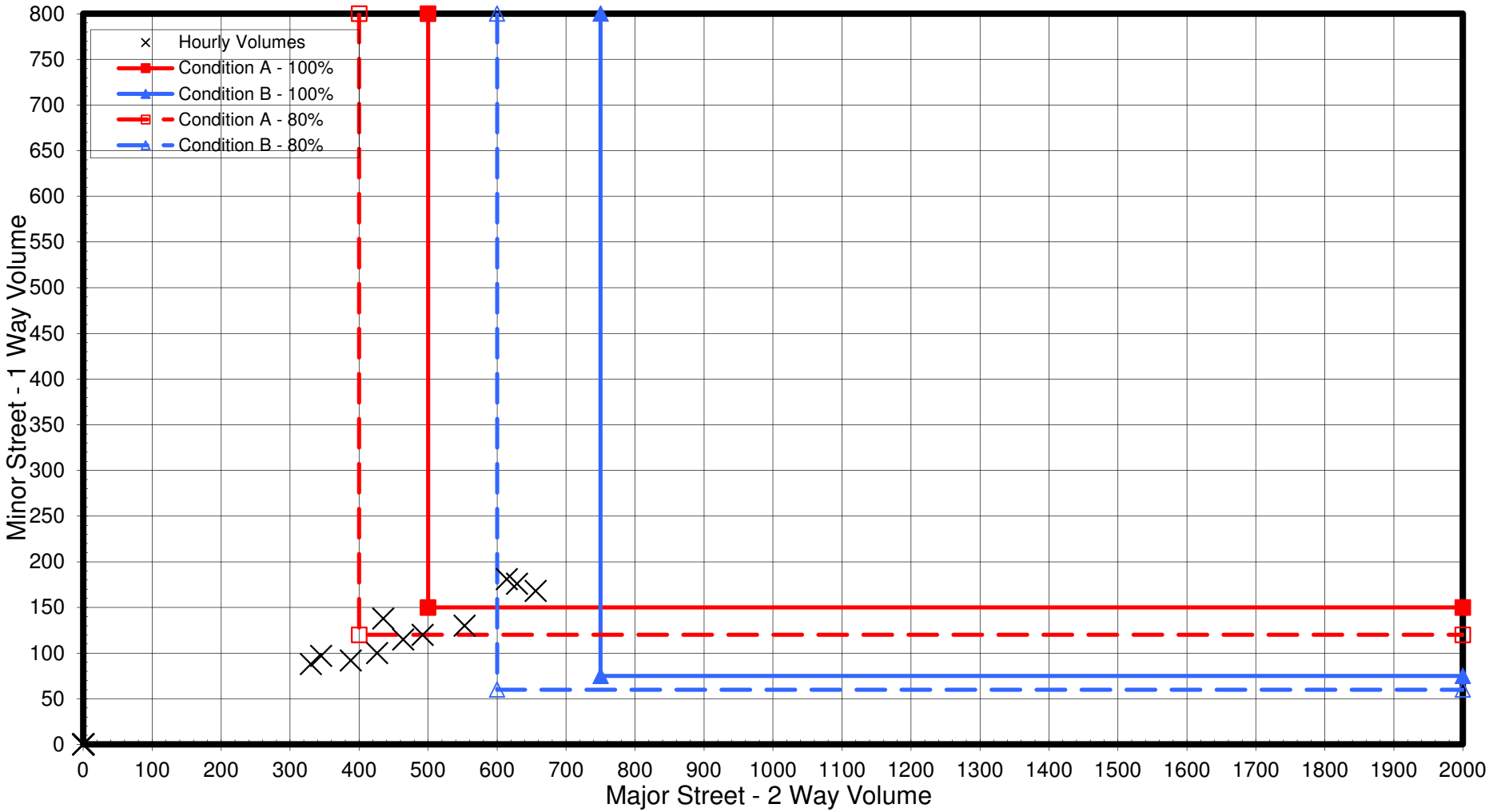
PM Peak Hour

3:45 PM to 4:45 PM



Notes:

WARRANT 1 - Conditions A & B



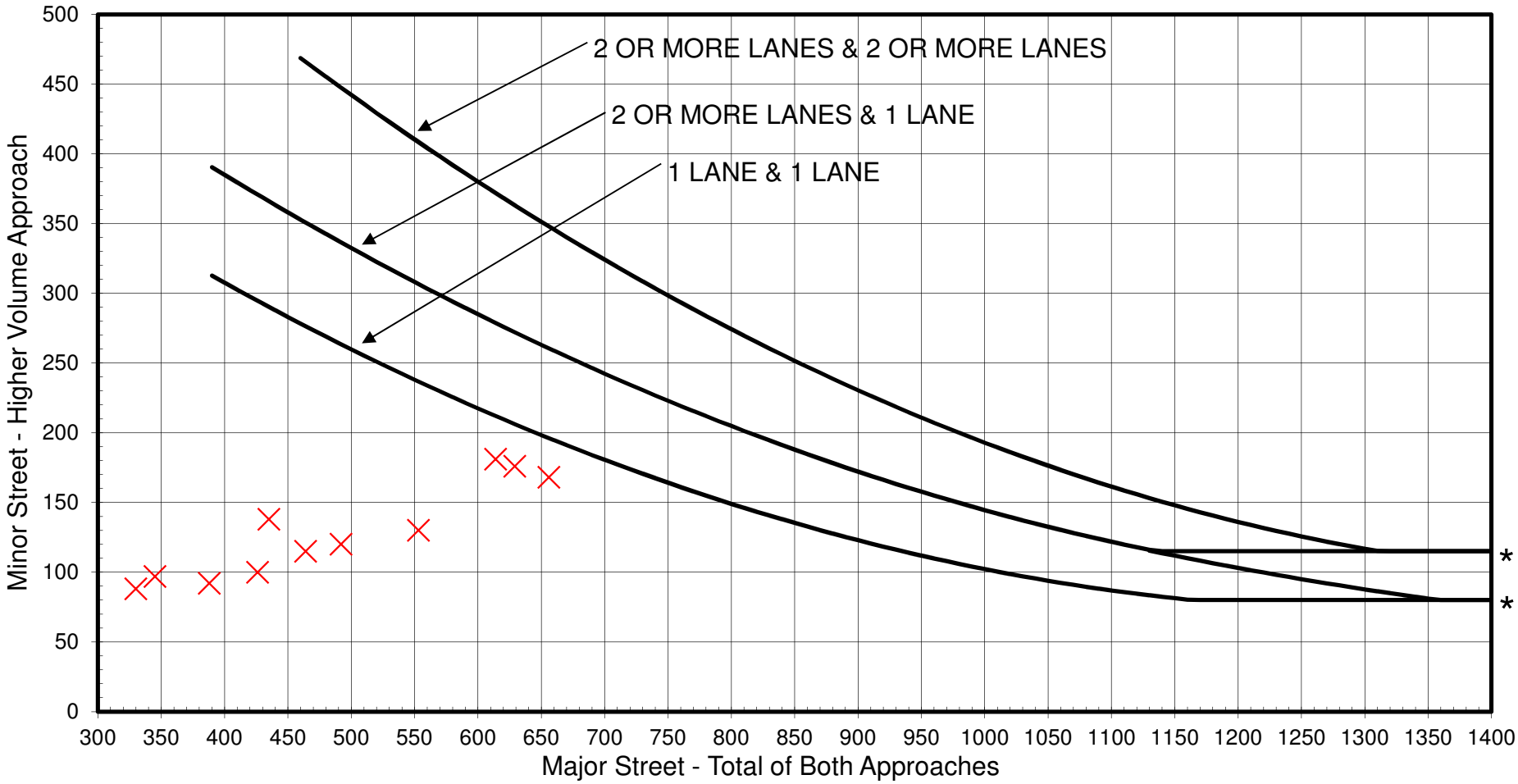
		Lanes
Major Road =	Elyria Ave	1
Minor Road =	Electrical Substation and E 3	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	3 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	6 Hours Meet	No
Condition B (80%) =	3 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Elyria Ave	1
Minor Road =	Electrical Substation and E 3	1
Road Location =	Urban	

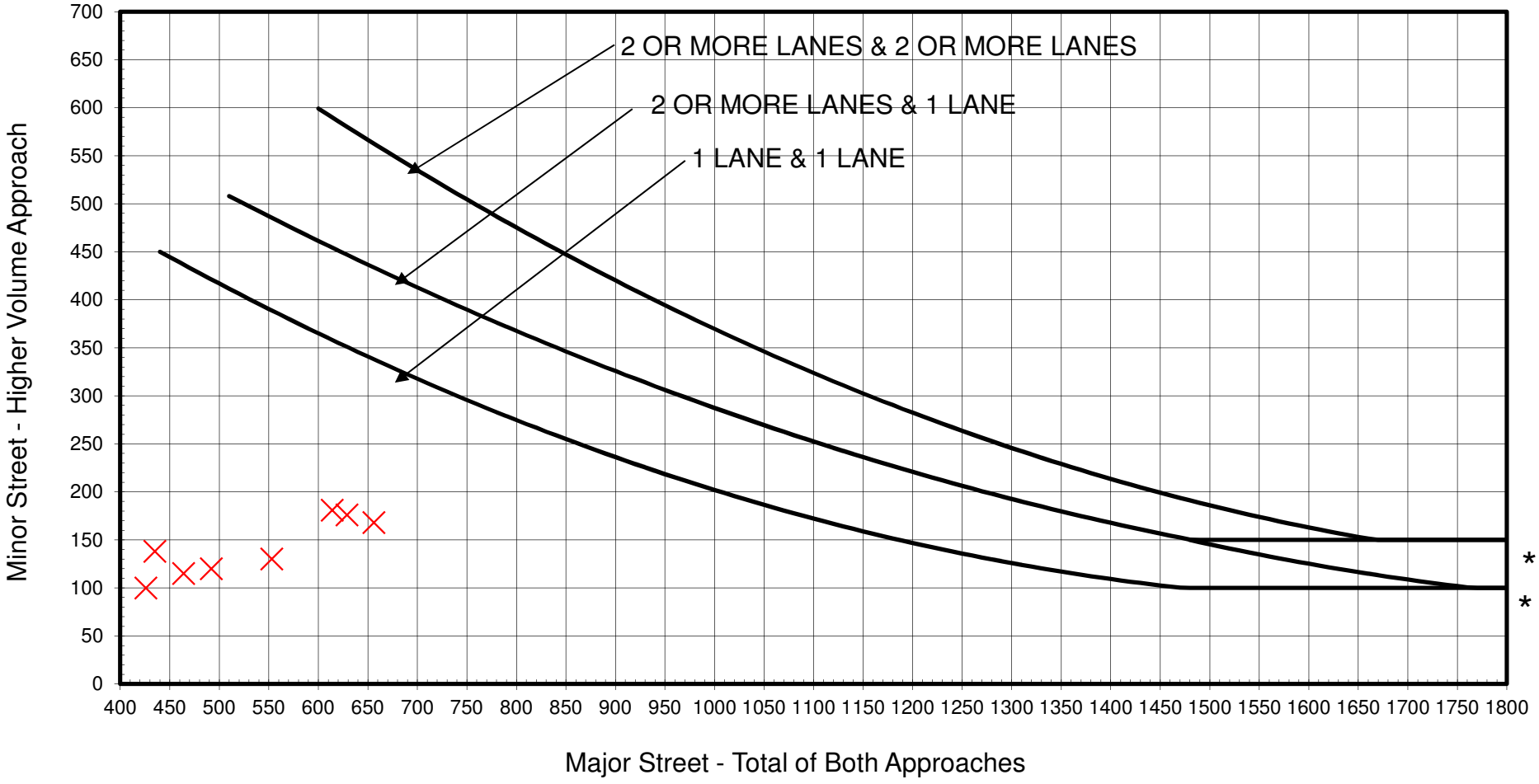
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Elyria Ave	1
Minor Road =	Electrical Substation and E 3	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.55

Traffic Signal Warrant Analysis Results

Intersection 55
E 31st St and Vine Ave

SIGNAL WARRANT

INTERSECTION: Vine Ave and E 31st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1 CONDITION A				WARRANT #1 CONDITION B								WARRANT #2	WARRANT #3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR	100% MAJOR	100% MINOR	80% MAJOR	80% MINOR					FOUR HOUR	PEAK HOUR
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		56	12	2														
8AM-9AM		99	66	26								X						
9AM-10AM		38	18	9														
10AM-11AM		38	14	2														
11AM-NOON		52	15	17														
NOON-1PM		55	19	8														
1PM-2PM		76	18	8														
2PM-3PM		102	27	17														
3PM-4PM		130	67	19								X						
4PM-5PM		92	25	12														
5PM-6PM		86	30	11														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Vine Ave and E 31st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

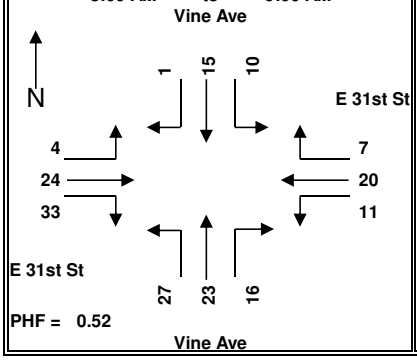
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.083	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.43
Intersection ID: 55

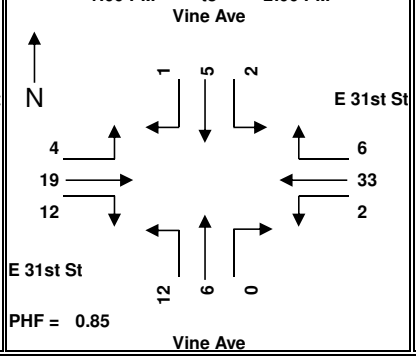
Start Time	Vine Ave Northbound				Vine Ave Southbound				Total North South	E 31st St Eastbound				E 31st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	187	81	43	15	37	69	25	4	442	36	223	169	15	34	311	51	16	824	1266
	Percent Trucks =			5%	Percent Trucks =			3%		Percent Trucks =			4%	Percent Trucks =			4%		
ADT	291	126	67	23	57	107	39	6	687	56	346	263	23	53	483	79	25	1280	1967
7:00 AM	2	1	0	0	0	0	0	0	3	0	5	3	0	0	1	0	0	9	12
7:15 AM	1	0	0	0	0	0	1	0	2	0	2	3	0	0	0	0	0	5	7
7:30 AM	2	2	0	1	1	0	0	0	5	0	7	2	0	1	6	0	0	16	21
7:45 AM	3	1	0	2	0	0	0	0	4	1	6	7	2	0	12	0	0	26	30
8:00 AM	2	0	0	0	0	2	0	0	4	0	2	7	0	1	3	3	1	16	20
8:15 AM	3	0	0	0	1	1	0	0	5	4	8	9	3	3	3	0	0	27	32
8:30 AM	15	12	13	5	8	7	1	1	56	0	9	10	2	4	9	3	1	35	91
8:45 AM	7	11	3	1	1	5	0	1	27	0	5	7	0	3	5	1	1	21	48
9:00 AM	3	1	0	0	0	2	1	0	7	0	0	3	1	0	6	2	0	11	18
9:15 AM	5	3	0	0	0	2	0	0	10	1	2	0	0	0	2	0	0	5	15
9:30 AM	2	0	0	0	0	0	0	0	2	0	3	0	0	2	7	0	0	12	14
9:45 AM	2	2	0	0	0	2	2	0	8	0	5	1	0	0	4	0	0	10	18
10:00 AM	5	0	0	0	0	0	0	0	5	0	3	3	0	0	4	1	1	11	16
10:15 AM	2	0	0	0	0	1	0	0	3	0	2	1	0	1	3	1	0	8	11
10:30 AM	3	1	0	0	0	1	0	0	5	1	2	1	0	0	6	0	0	10	15
10:45 AM	1	2	0	0	0	0	0	0	3	0	1	2	0	1	5	0	1	9	12
11:00 AM	3	0	0	0	1	2	3	0	9	2	2	2	0	0	6	1	0	13	22
11:15 AM	2	0	2	0	1	1	0	0	6	0	3	4	0	0	7	0	0	14	20
11:30 AM	3	2	0	0	0	2	1	0	8	1	4	1	0	2	4	0	0	12	20
11:45 AM	3	0	0	0	0	4	2	0	9	0	2	2	0	0	6	3	0	13	22
12:00 PM	5	0	0	0	0	0	0	0	5	0	6	5	0	0	4	1	0	16	21
12:15 PM	5	1	1	0	0	1	0	0	8	0	3	3	0	2	6	0	0	14	22
12:30 PM	2	1	0	0	0	3	0	1	6	0	3	1	0	2	6	0	2	12	18
12:45 PM	4	0	0	0	1	3	0	0	8	1	4	2	0	0	6	0	0	13	21
1:00 PM	4	0	0	0	0	3	1	0	8	1	6	1	0	0	12	2	0	22	30
1:15 PM	2	3	0	0	2	1	0	0	8	2	5	3	0	1	6	2	0	19	27
1:30 PM	3	0	0	0	0	0	0	0	3	1	5	3	0	0	7	0	0	16	19
1:45 PM	3	3	0	0	0	1	0	0	7	0	3	5	0	1	8	2	0	19	26
2:00 PM	8	0	0	1	2	1	1	0	12	1	10	4	0	0	7	1	0	23	35
2:15 PM	5	1	0	0	1	2	0	0	9	2	9	2	1	1	8	3	0	25	34
2:30 PM	3	0	3	0	2	1	2	0	11	3	5	8	0	0	11	0	2	27	38
2:45 PM	5	2	0	0	2	2	1	0	12	1	10	3	1	0	11	2	2	27	39
3:00 PM	6	6	9	2	6	7	0	0	34	0	6	10	0	3	8	3	0	30	64
3:15 PM	13	9	7	0	0	1	1	0	31	1	8	9	1	0	19	5	1	42	73
3:30 PM	5	3	0	1	1	0	1	0	10	1	8	5	0	1	11	3	1	29	39
3:45 PM	8	1	0	0	0	2	0	1	11	2	6	9	2	2	9	1	0	29	40
4:00 PM	3	1	1	1	0	4	1	0	10	2	4	4	1	0	9	2	0	21	31
4:15 PM	6	1	0	1	1	0	1	0	9	2	8	2	0	0	10	3	2	25	34
4:30 PM	3	3	1	0	2	0	0	0	9	3	3	5	0	0	6	3	0	20	29
4:45 PM	6	0	0	0	0	0	3	0	9	2	9	6	1	1	8	0	0	26	35
5:00 PM	4	3	2	0	2	2	0	0	13	0	7	3	0	2	3	3	0	18	31
5:15 PM	8	3	0	0	1	2	1	0	15	1	7	4	0	0	17	0	0	29	44
5:30 PM	4	1	0	0	1	1	0	0	7	0	8	3	0	0	10	0	0	21	28
5:45 PM	3	1	1	0	0	0	1	0	6	0	7	1	0	0	10	0	1	18	24

AM Peak Hour
8:00 AM to 9:00 AM



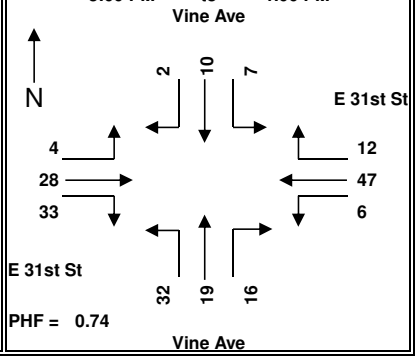
PHF = 0.52

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.85

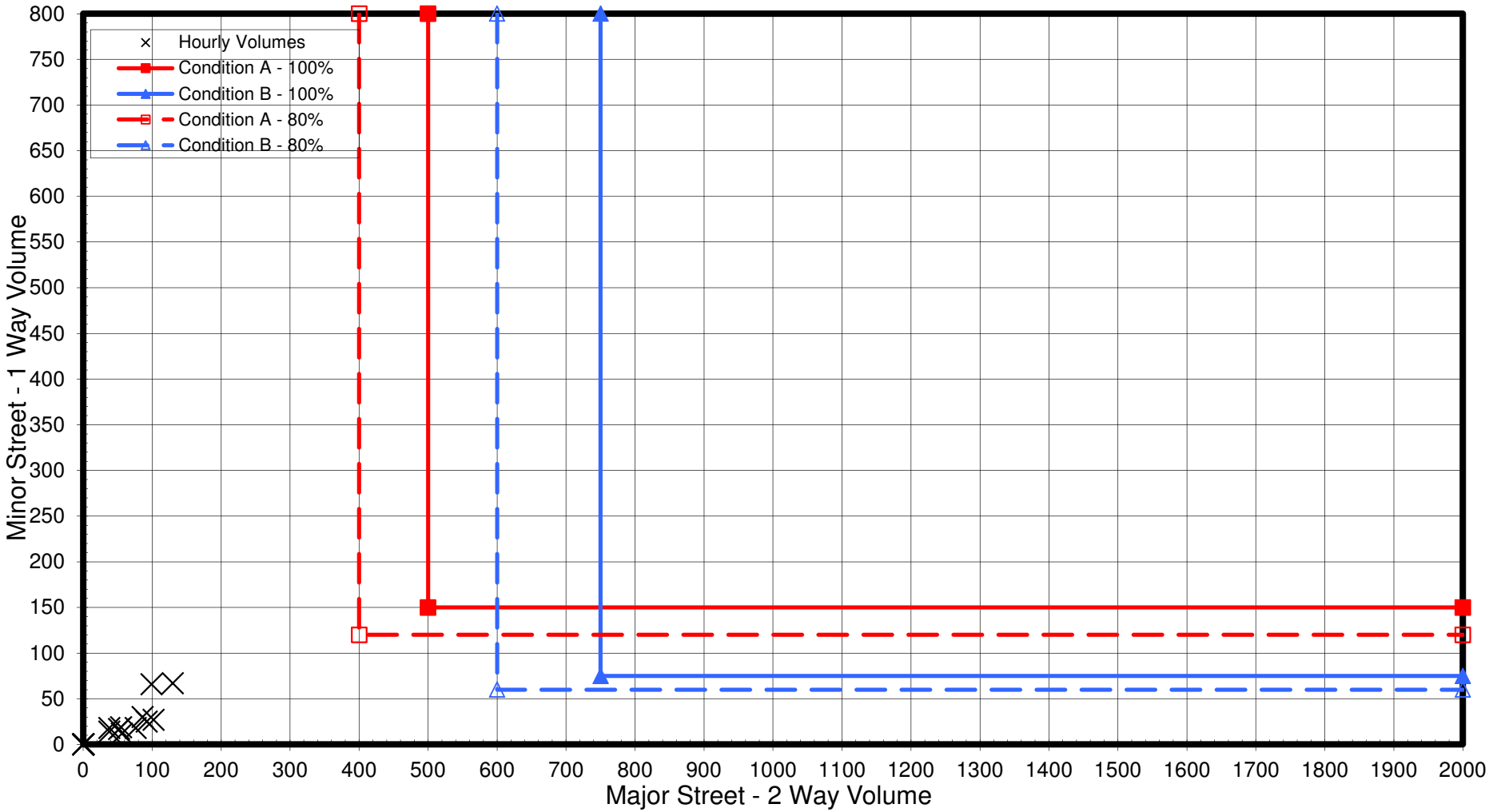
PM Peak Hour
3:00 PM to 4:00 PM



PHF = 0.74

Notes:

WARRANT 1 - Conditions A & B



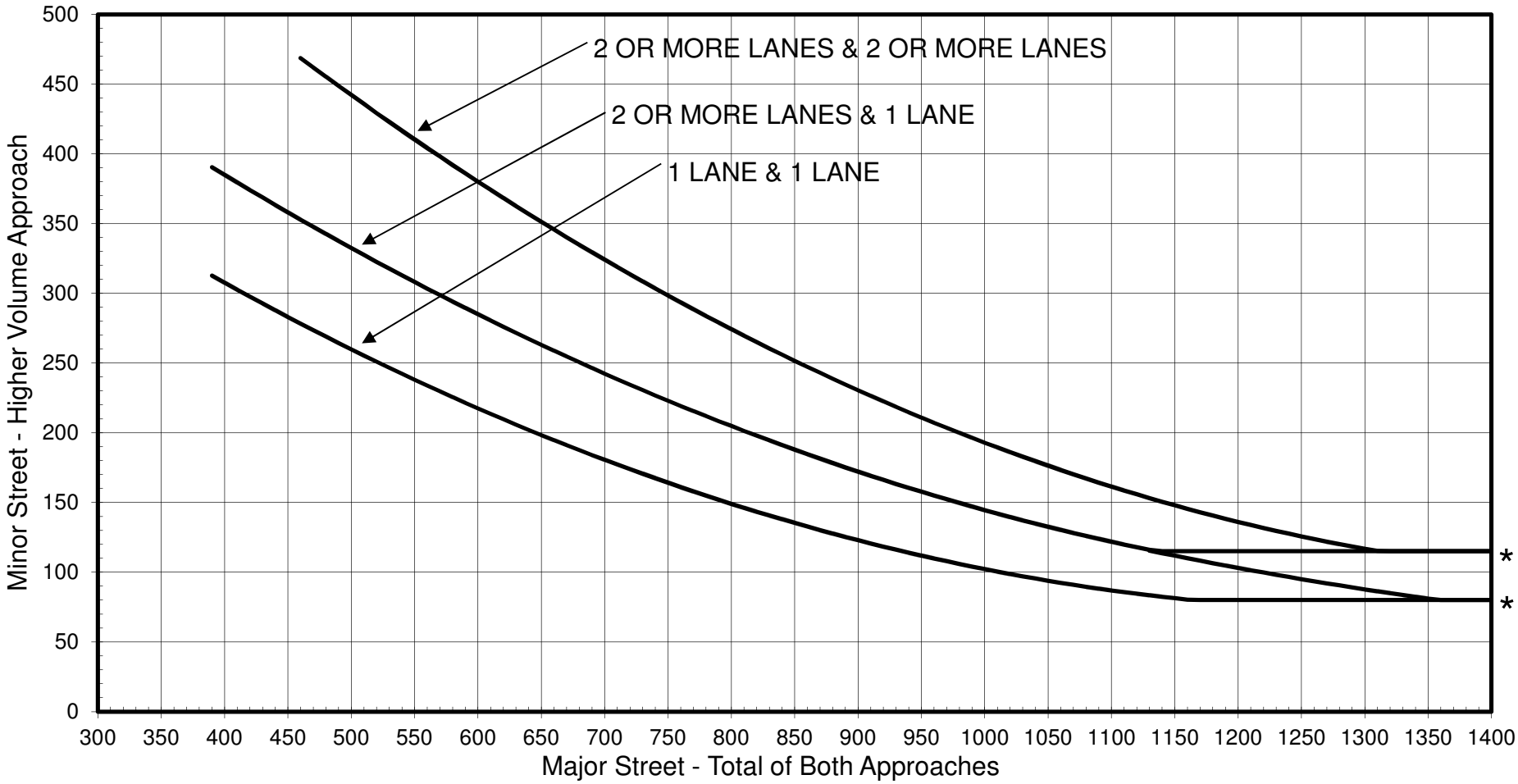
		Lanes
Major Road =	E 31st St	1
Minor Road =	Vine Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E 31st St	1
Minor Road =	Vine Ave	1
Road Location =	Urban	

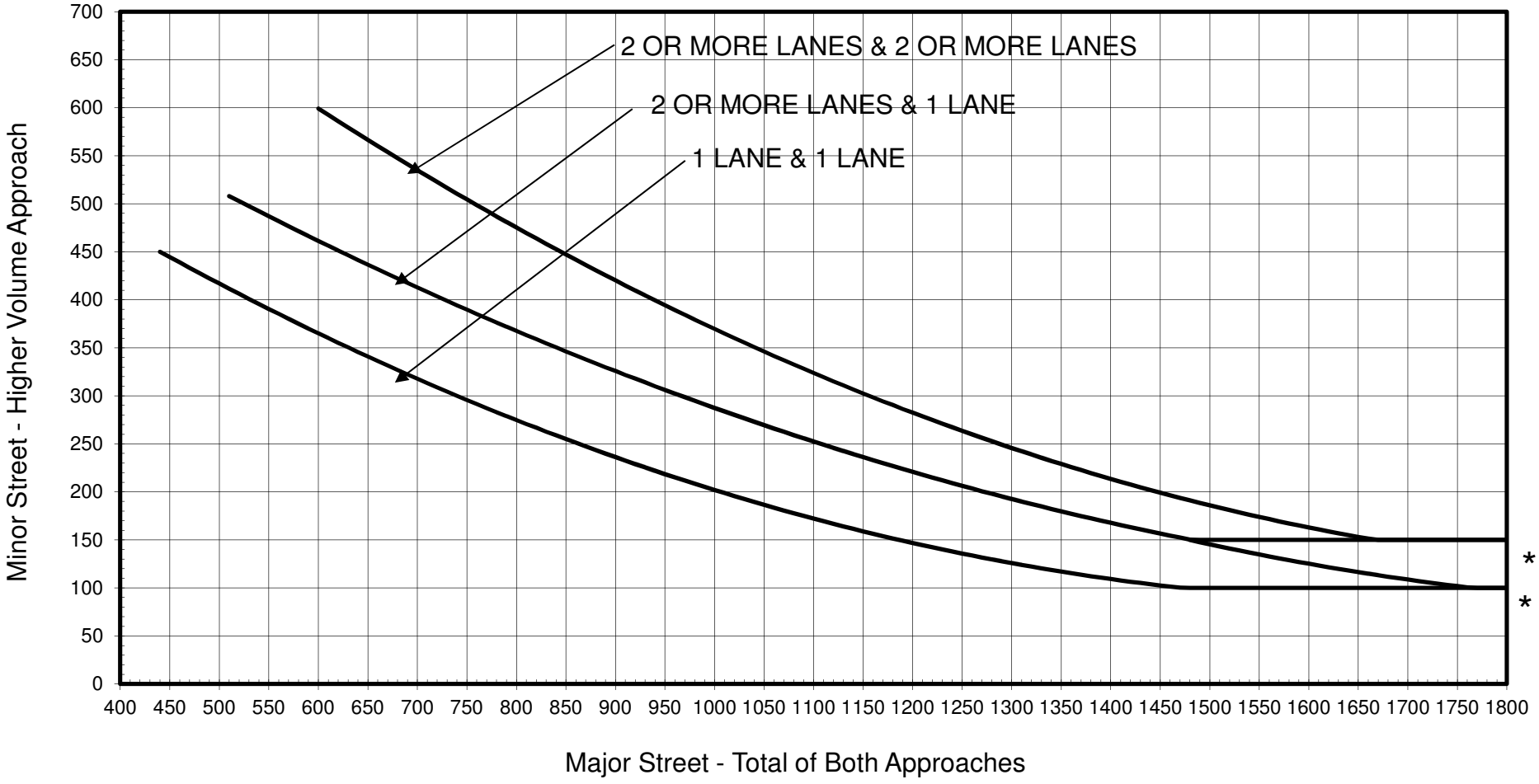
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E 31st St	1
Minor Road =	Vine Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.56

Traffic Signal Warrant Analysis Results

Intersection 56
E 31st St and Globe Ave

SIGNAL WARRANT

INTERSECTION: Globe Ave and E 31st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		45	5	12														
8AM-9AM		90	16	20														
9AM-10AM		40	6	9														
10AM-11AM		42	5	8														
11AM-NOON		48	12	11														
NOON-1PM		54	11	25														
1PM-2PM		65	14	21														
2PM-3PM		96	25	20														
3PM-4PM		112	30	37														
4PM-5PM		69	19	23														
5PM-6PM		93	15	21														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Globe Ave and E 31st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

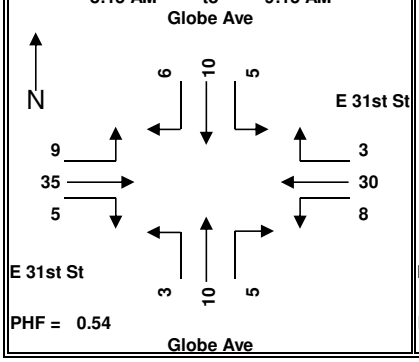
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.083	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

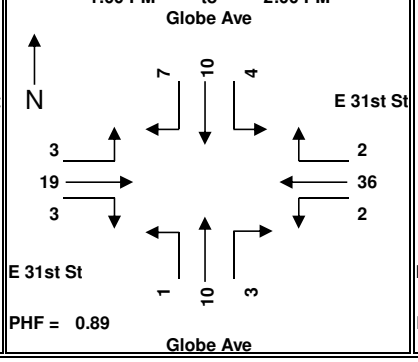
ADT Factor: 1.43
Intersection ID: 56

Start Time	Globe Ave Northbound				Globe Ave Southbound				Total North South	E 31st St Eastbound				E 31st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	14	107	37	7	47	111	49	13	365	36	252	21	11	43	353	49	16	754	1119
	Percent Trucks =			4%	Percent Trucks =			6%		Percent Trucks =			4%	Percent Trucks =			4%		
ADT	22	166	57	11	73	172	76	20	567	56	392	33	17	67	548	76	25	1172	1739
7:00 AM	0	1	0	0	3	2	0	1	6	0	3	0	0	0	5	0	0	8	14
7:15 AM	0	1	0	0	0	1	1	0	3	0	2	0	0	0	4	0	0	6	9
7:30 AM	0	1	0	0	0	3	1	2	5	0	8	0	0	0	5	0	0	13	18
7:45 AM	1	0	1	0	1	0	0	0	3	1	5	0	1	1	10	1	0	18	21
8:00 AM	0	0	0	0	1	0	1	1	2	0	2	0	0	1	7	1	0	11	13
8:15 AM	0	2	3	1	0	1	1	0	7	0	8	0	0	2	5	0	0	15	22
8:30 AM	2	2	1	0	0	6	4	0	15	7	18	5	5	3	11	1	2	45	60
8:45 AM	1	4	1	0	4	1	1	0	12	2	7	0	1	2	6	2	1	19	31
9:00 AM	0	2	0	0	1	2	0	0	5	0	2	0	0	1	8	0	0	11	16
9:15 AM	1	0	0	0	1	0	0	0	2	0	3	0	0	1	1	1	1	6	8
9:30 AM	0	0	0	0	2	2	0	0	4	0	3	0	0	1	7	1	0	12	16
9:45 AM	0	2	1	0	0	1	0	0	4	0	5	0	0	1	4	1	0	11	15
10:00 AM	0	1	0	0	0	0	0	0	1	0	3	0	0	1	6	1	1	11	12
10:15 AM	0	2	0	0	0	2	1	0	5	0	3	1	0	1	6	0	0	11	16
10:30 AM	0	2	0	0	0	0	0	0	2	1	3	0	0	0	7	0	0	11	13
10:45 AM	0	0	0	0	1	3	1	1	5	0	1	0	0	0	6	2	1	9	14
11:00 AM	0	2	0	0	1	0	0	0	3	1	2	0	0	1	4	0	0	8	11
11:15 AM	0	5	1	1	2	1	1	2	10	0	4	1	0	2	5	1	0	13	23
11:30 AM	0	0	0	0	1	1	1	0	3	1	3	0	0	0	5	1	0	10	13
11:45 AM	0	3	1	0	0	3	0	0	7	1	2	0	0	0	11	3	0	17	24
12:00 PM	0	1	2	0	0	3	1	0	7	0	6	1	0	2	6	0	0	15	22
12:15 PM	0	0	0	0	2	4	1	0	7	1	4	0	0	0	7	1	0	13	20
12:30 PM	0	3	2	0	3	4	1	1	13	0	4	0	0	0	7	1	0	12	25
12:45 PM	0	2	1	0	2	3	1	0	9	0	4	0	0	3	5	2	0	14	23
1:00 PM	0	2	0	0	1	3	0	0	6	1	5	1	0	2	13	0	0	22	28
1:15 PM	0	4	0	0	1	2	3	0	10	0	5	0	0	0	8	1	0	14	24
1:30 PM	1	3	2	0	1	2	1	0	10	2	5	0	0	0	5	1	0	13	23
1:45 PM	0	1	1	0	1	3	3	0	9	0	4	2	0	0	10	0	0	16	25
2:00 PM	0	4	0	0	1	1	1	0	7	0	13	0	0	0	8	3	0	24	31
2:15 PM	0	7	1	0	0	2	1	0	11	0	10	0	0	1	12	0	0	23	34
2:30 PM	0	6	2	1	0	3	2	1	13	3	6	1	0	1	15	1	2	27	40
2:45 PM	0	3	2	1	0	6	3	1	14	1	8	1	0	1	9	2	1	22	36
3:00 PM	2	6	1	0	1	6	4	0	20	3	13	2	1	1	6	2	0	27	47
3:15 PM	3	4	2	0	0	7	3	2	19	7	8	3	1	5	11	3	2	37	56
3:30 PM	0	2	3	0	1	3	3	0	12	0	9	0	0	3	12	2	1	26	38
3:45 PM	0	5	2	2	3	4	2	1	16	2	6	0	0	1	11	2	0	22	38
4:00 PM	0	3	2	0	0	3	1	0	9	0	4	1	1	0	14	2	2	21	30
4:15 PM	1	3	2	0	1	5	2	0	14	0	7	1	0	0	9	1	1	18	32
4:30 PM	1	3	1	0	1	6	1	0	13	0	5	0	0	0	8	0	0	13	26
4:45 PM	0	2	1	0	2	0	1	0	6	0	8	0	1	1	8	0	0	17	23
5:00 PM	0	4	0	0	2	5	1	0	12	1	9	1	0	0	8	2	0	21	33
5:15 PM	1	0	0	0	2	1	0	0	4	1	6	0	0	0	12	3	0	22	26
5:30 PM	0	7	0	1	3	4	0	0	14	0	11	0	0	1	13	1	0	26	40
5:45 PM	0	2	1	0	1	2	0	0	6	0	5	0	0	3	13	3	1	24	30

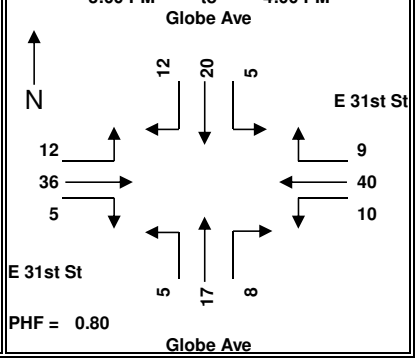
AM Peak Hour
8:15 AM to 9:15 AM



Midday Peak Hour
1:00 PM to 2:00 PM

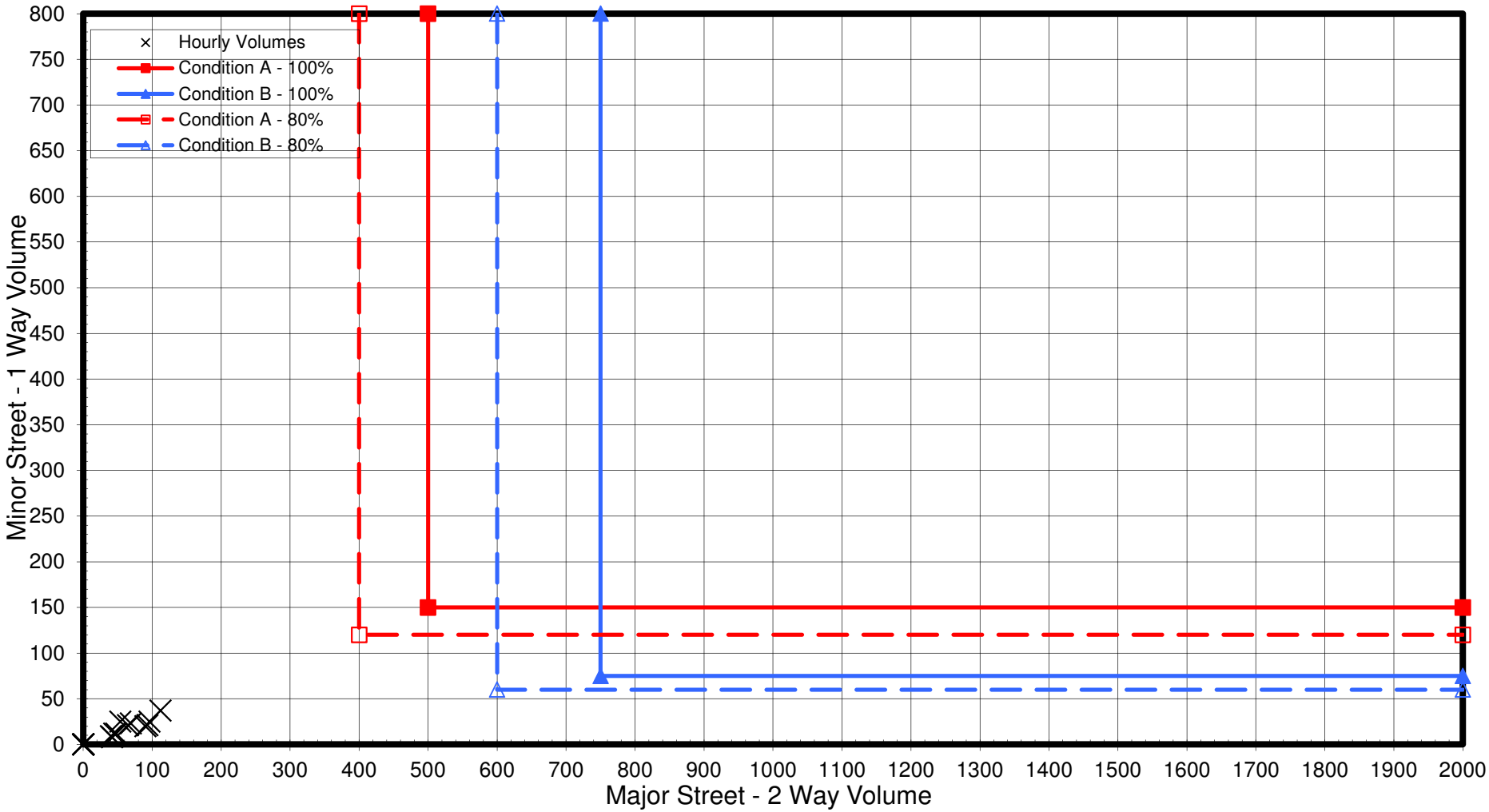


PM Peak Hour
3:00 PM to 4:00 PM



Notes:

WARRANT 1 - Conditions A & B



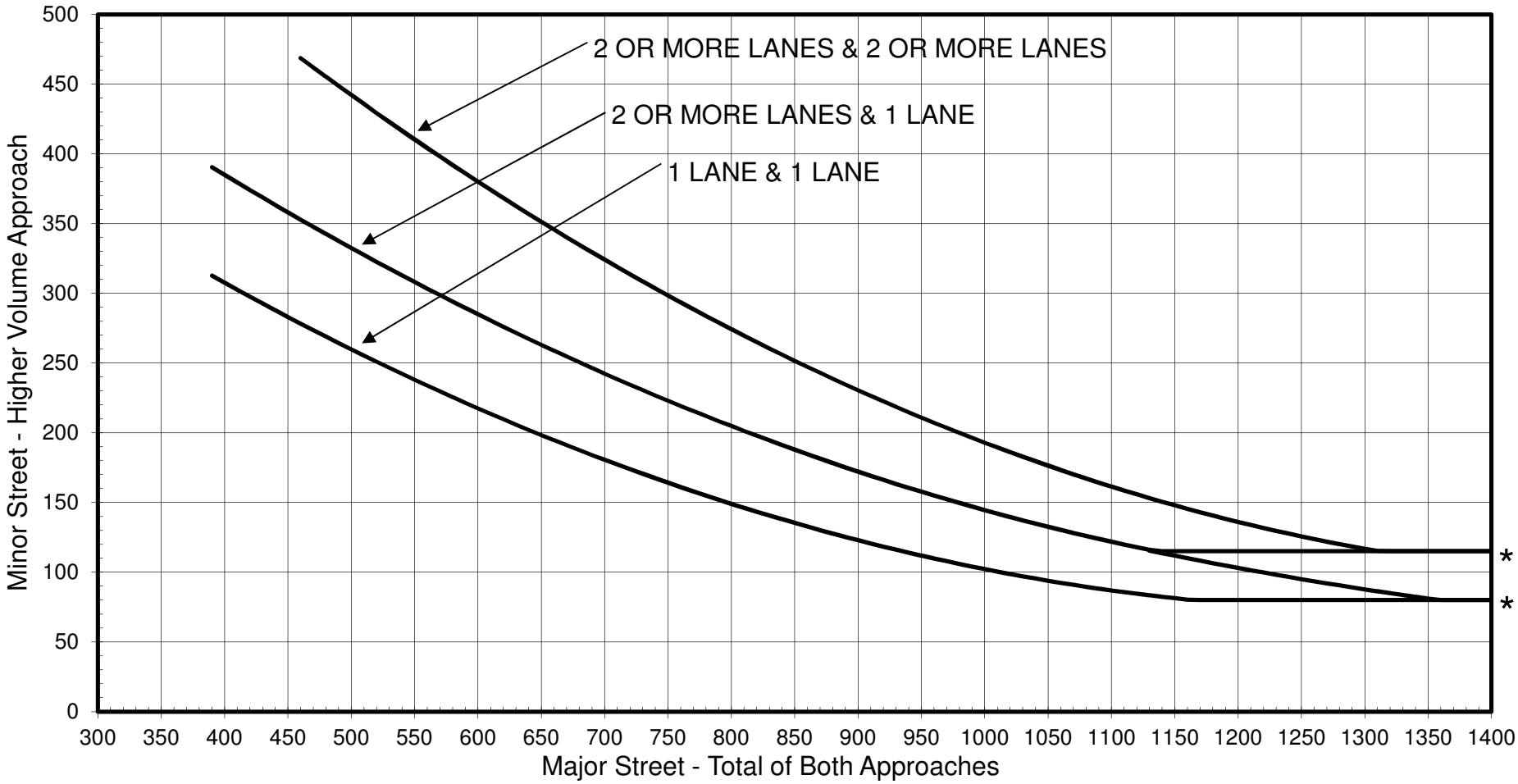
		Lanes
Major Road =	E 31st St	1
Minor Road =	Globe Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E 31st St	1
Minor Road =	Globe Ave	1
Road Location =	Urban	

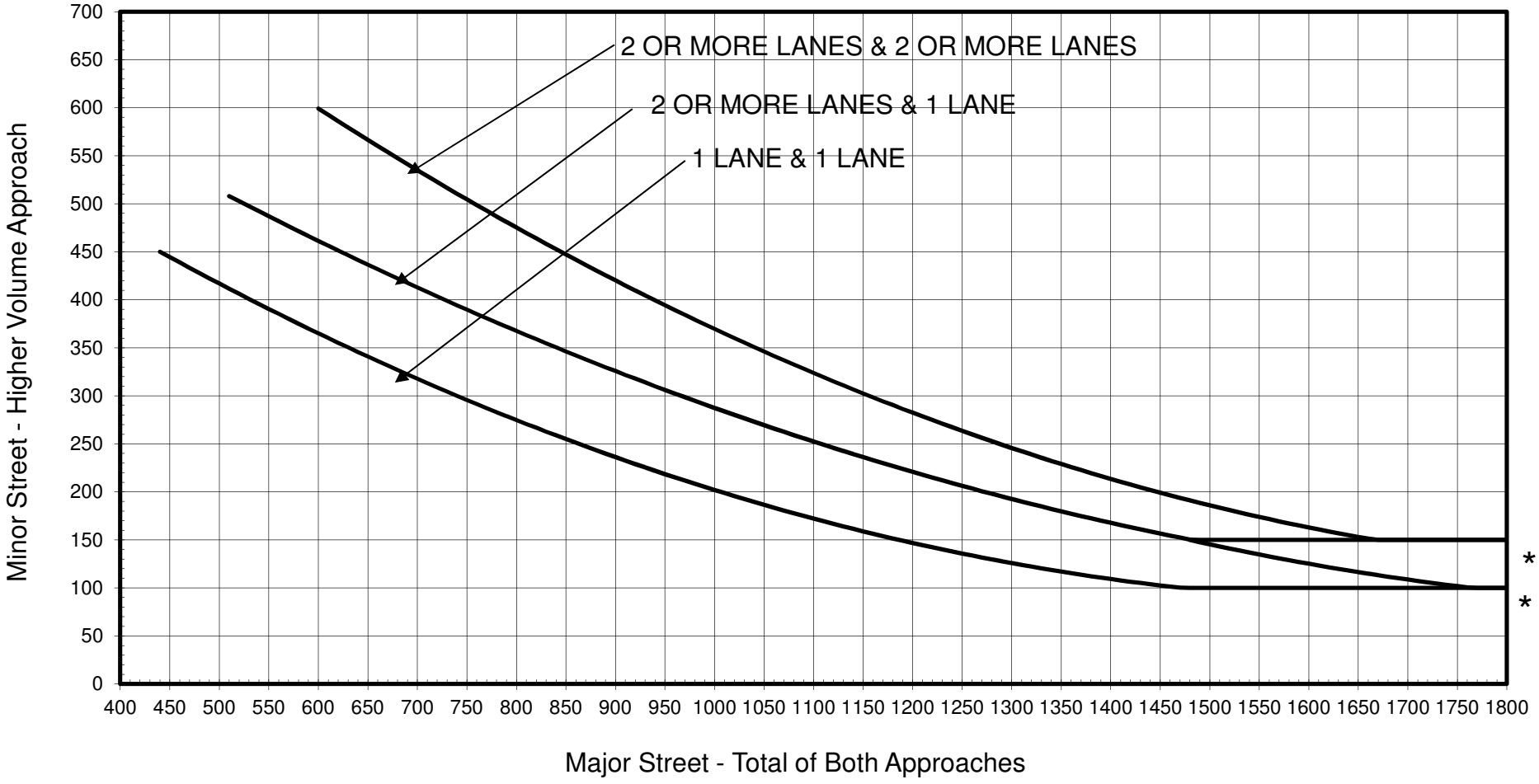
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E 31st St	1
Minor Road =	Globe Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.57

Traffic Signal Warrant Analysis Results

Intersection 57
E 31st St and Pearl Ave

SIGNAL WARRANT

INTERSECTION: Pearl Ave and E 31st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		178	26	52														
8AM-9AM		179	49	59														
9AM-10AM		186	22	49														
10AM-11AM		237	13	58														
11AM-NOON		233	19	70								X						
NOON-1PM		254	24	69								X						
1PM-2PM		280	30	91						X		X						
2PM-3PM		334	44	101						X		X						
3PM-4PM		362	48	105						X		X						
4PM-5PM		345	36	107						X		X						
5PM-6PM		310	39	106						X		X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Pearl Ave and E 31st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

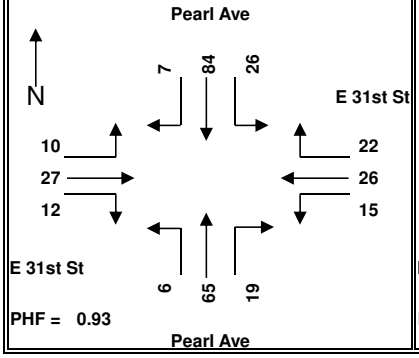
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.083	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.42
Intersection ID: 57

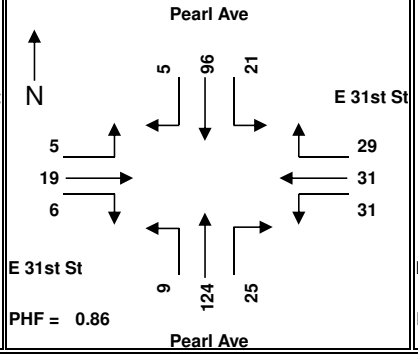
Start Time	Pearl Ave Northbound				Pearl Ave Southbound				Total North South	E 31st St Eastbound				E 31st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	78	1144	207	97	244	1169	56	88	2898	51	214	85	15	246	327	294	25	1217	4115
	Percent Trucks =			7%	Percent Trucks =			6%		Percent Trucks =			4%	Percent Trucks =			3%		
ADT	120	1757	318	149	375	1796	86	135	4452	78	329	131	23	378	502	452	38	1870	6321
7:00 AM	0	11	4	0	6	24	0	0	45	0	8	1	1	4	5	3	0	21	66
7:15 AM	0	16	4	2	10	16	0	3	46	0	3	1	0	2	4	6	1	16	62
7:30 AM	3	23	3	6	3	13	0	0	45	1	5	0	0	5	3	5	1	19	64
7:45 AM	1	17	3	2	3	18	0	2	42	0	6	1	1	4	10	1	0	22	64
8:00 AM	0	14	0	3	2	14	2	4	32	0	1	3	0	2	6	0	0	12	44
8:15 AM	1	8	8	2	6	23	1	3	47	0	7	5	1	3	5	8	1	28	75
8:30 AM	2	18	5	2	4	16	1	5	46	3	10	4	4	6	12	5	3	40	86
8:45 AM	2	19	3	5	8	22	0	3	54	5	8	3	1	3	5	4	1	28	82
9:00 AM	1	20	3	3	8	23	5	1	60	2	2	0	0	3	4	5	0	16	76
9:15 AM	1	12	2	1	3	22	2	4	42	1	3	2	0	2	2	3	0	13	55
9:30 AM	1	20	2	3	2	19	0	3	44	0	6	1	0	2	7	5	0	21	65
9:45 AM	1	17	2	3	1	19	0	1	40	0	4	1	0	4	7	5	0	21	61
10:00 AM	1	25	1	0	5	25	0	3	57	2	3	0	0	3	4	2	1	14	71
10:15 AM	2	21	0	5	2	27	0	3	52	0	3	0	0	1	5	8	0	17	69
10:30 AM	0	28	7	3	3	24	3	4	65	0	3	1	0	8	5	7	0	24	89
10:45 AM	1	31	3	6	2	26	0	3	63	0	0	1	0	1	8	6	0	16	79
11:00 AM	1	23	1	3	3	18	0	4	46	0	1	3	1	6	5	2	0	17	63
11:15 AM	2	22	8	4	4	19	1	1	56	2	3	0	1	5	5	6	0	21	77
11:30 AM	0	16	3	4	10	24	2	3	55	1	3	1	0	4	7	6	0	22	77
11:45 AM	2	32	7	4	4	30	1	5	76	0	4	1	0	6	9	9	1	29	105
12:00 PM	0	39	6	2	6	30	1	2	82	1	5	2	0	6	7	10	0	31	113
12:15 PM	1	26	4	2	5	17	3	1	56	1	2	0	0	5	3	6	0	17	73
12:30 PM	1	20	3	3	3	32	0	0	59	2	1	4	1	7	6	3	0	23	82
12:45 PM	0	23	5	1	2	25	2	4	57	2	4	0	0	1	7	8	0	22	79
1:00 PM	4	35	9	2	7	24	0	1	79	1	4	2	0	9	11	10	2	37	116
1:15 PM	0	29	6	1	2	30	2	2	69	2	5	1	0	6	8	6	0	28	97
1:30 PM	3	34	6	1	9	18	0	1	70	0	5	2	0	8	6	6	0	27	97
1:45 PM	2	26	4	2	3	24	3	1	62	2	5	1	0	8	6	7	1	29	91
2:00 PM	3	24	7	1	7	37	1	3	79	3	8	2	0	4	10	9	1	36	115
2:15 PM	2	40	6	0	6	29	0	0	83	1	7	5	0	8	9	13	1	43	126
2:30 PM	2	34	10	6	9	27	1	1	83	2	5	1	0	7	10	8	0	33	116
2:45 PM	5	34	4	0	6	40	0	2	89	2	7	1	1	8	9	6	2	33	122
3:00 PM	4	39	6	0	8	40	1	3	98	2	6	2	1	7	8	5	2	30	128
3:15 PM	0	40	3	6	9	46	4	2	102	3	10	8	1	7	13	9	3	50	152
3:30 PM	3	21	5	1	11	28	1	0	69	2	3	2	0	9	11	5	0	32	101
3:45 PM	1	45	7	2	6	33	1	4	93	2	6	2	0	6	12	13	1	41	134
4:00 PM	3	25	7	2	4	38	4	3	81	1	3	3	0	4	10	9	1	30	111
4:15 PM	3	37	6	1	8	31	2	1	87	1	6	1	0	8	8	9	0	33	120
4:30 PM	4	26	7	0	9	36	3	0	85	0	8	2	0	7	7	12	0	36	121
4:45 PM	3	28	7	0	11	42	1	1	92	1	7	3	1	14	7	12	1	44	136
5:00 PM	2	36	4	0	6	41	2	0	91	0	10	0	0	9	8	9	1	36	127
5:15 PM	3	21	2	1	3	24	1	0	54	0	4	4	0	10	13	7	0	38	92
5:30 PM	1	31	9	0	8	23	1	0	73	2	5	4	0	6	7	7	0	31	104
5:45 PM	6	38	5	2	7	32	4	1	92	1	5	4	0	8	13	9	0	40	132

AM Peak Hour
8:15 AM to 9:15 AM



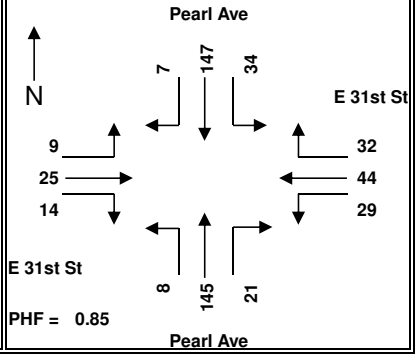
PHF = 0.93

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.86

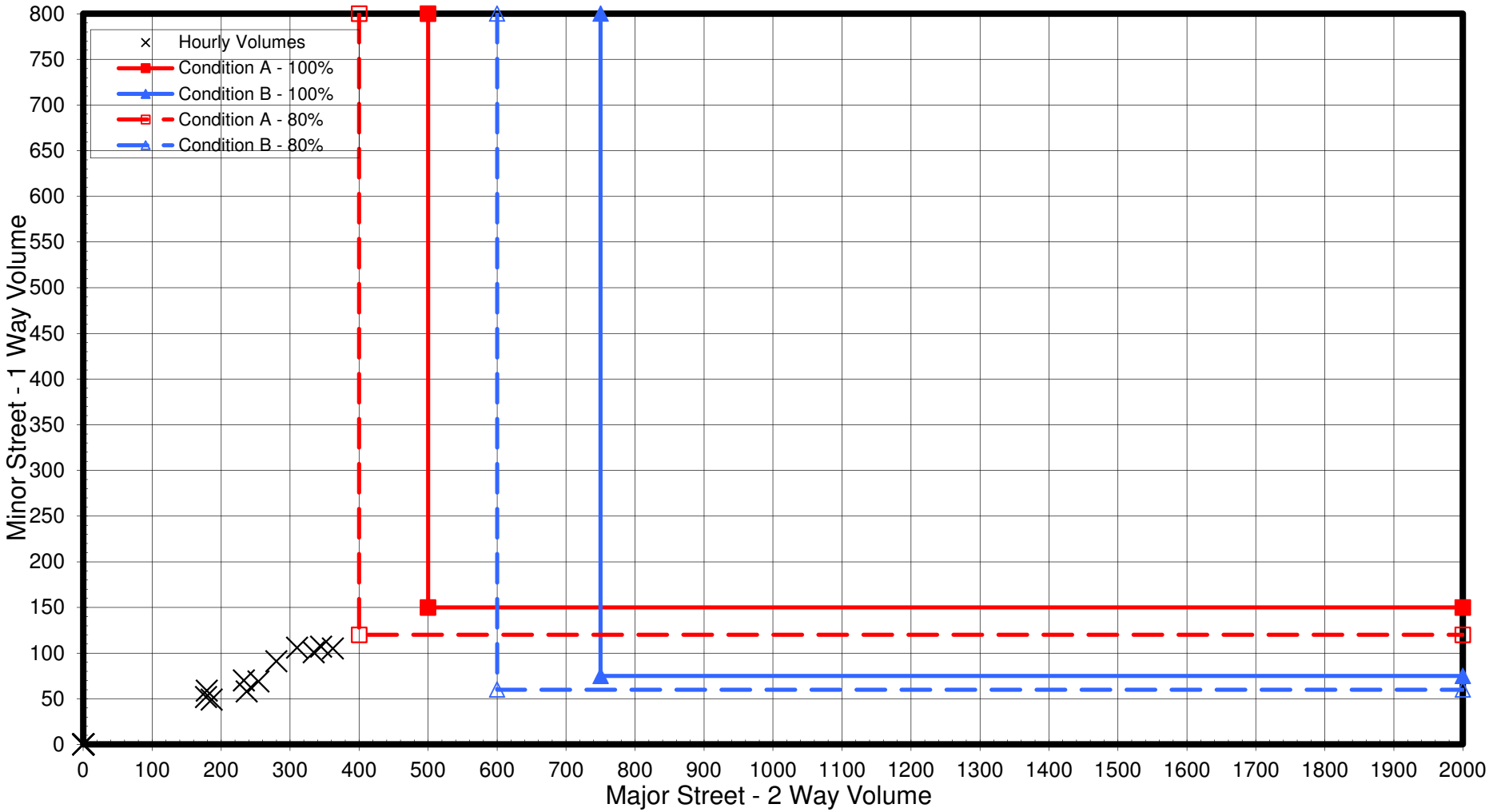
PM Peak Hour
3:00 PM to 4:00 PM



PHF = 0.85

Notes:

WARRANT 1 - Conditions A & B



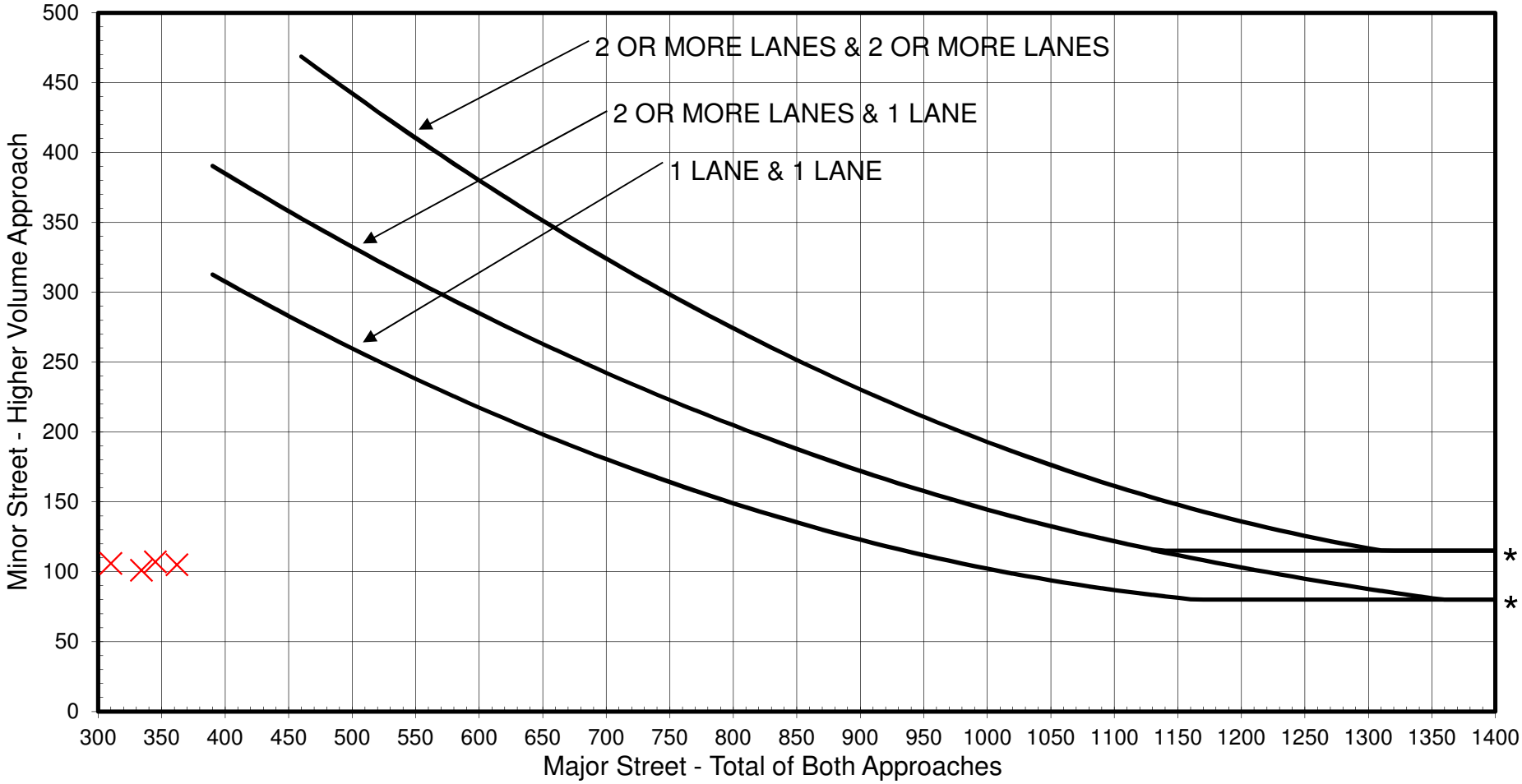
		Lanes
Major Road =	Pearl Ave	1
Minor Road =	E 31st St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Pearl Ave	1
Minor Road =	E 31st St	1
Road Location =	Urban	

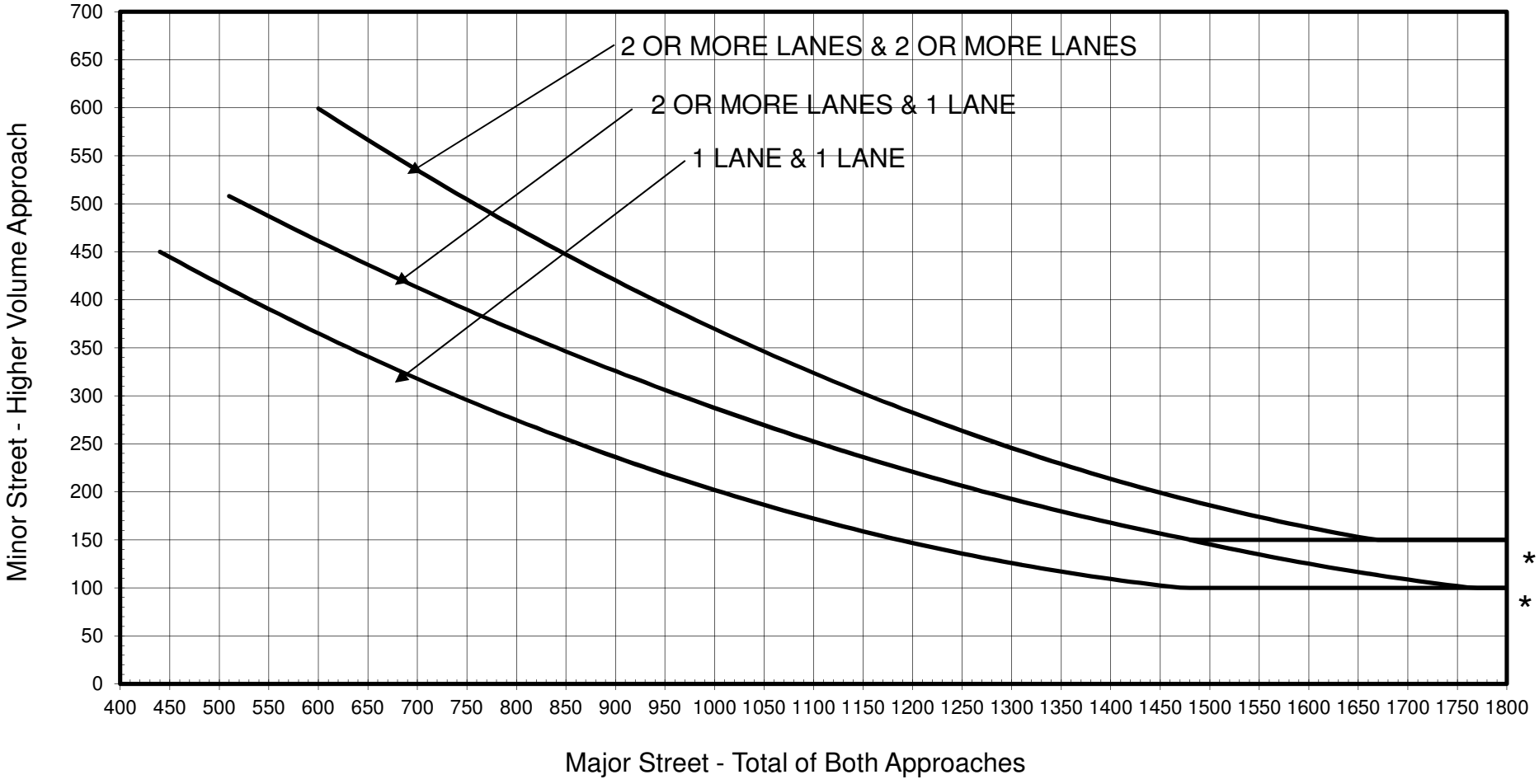
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Pearl Ave	1
Minor Road =	E 31st St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.58

Traffic Signal Warrant Analysis Results

Intersection 58
E 31st St and Seneca Ave

SIGNAL WARRANT

INTERSECTION: Seneca Ave and E 31st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		113	9	12														
8AM-9AM		118	18	6														
9AM-10AM		85	9	14														
10AM-11AM		92	15	13														
11AM-NOON		115	12	17														
NOON-1PM		120	5	18														
1PM-2PM		144	28	21														
2PM-3PM		172	21	20														
3PM-4PM		183	24	23														
4PM-5PM		205	22	15														
5PM-6PM		168	15	17														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Seneca Ave and E 31st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

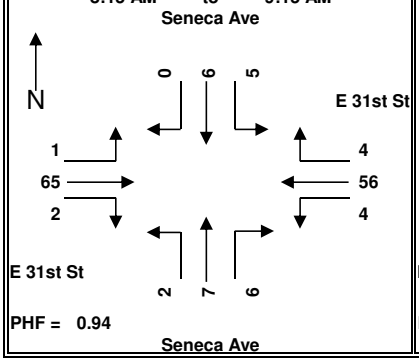
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.083	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.43
Intersection ID: 58

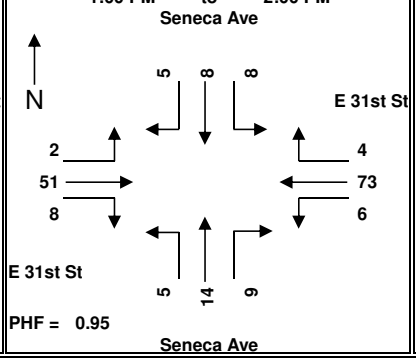
Start Time	Seneca Ave Northbound				Seneca Ave Southbound				Total North South	E 31st St Eastbound				E 31st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	39	76	63	22	61	89	26	7	354	18	583	32	12	58	762	62	22	1515	1869
	Percent Trucks =			12%	Percent Trucks =			4%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	61	118	98	34	95	138	40	11	550	28	906	50	19	90	1184	96	34	2354	2904
7:00 AM	0	0	1	0	2	1	0	0	4	0	18	1	0	1	12	0	0	32	36
7:15 AM	1	0	1	1	0	1	0	1	3	0	18	0	0	0	12	1	0	31	34
7:30 AM	1	1	0	1	3	0	0	0	5	0	10	0	0	1	15	0	1	26	31
7:45 AM	0	2	2	1	0	5	0	1	9	1	11	1	0	1	10	0	0	24	33
8:00 AM	1	3	1	2	0	0	0	0	5	0	2	0	0	1	8	1	0	12	17
8:15 AM	1	2	4	2	0	2	0	0	9	0	18	0	1	0	14	1	1	33	42
8:30 AM	1	1	1	1	1	0	0	0	4	0	17	0	3	0	20	1	1	38	42
8:45 AM	0	2	1	0	3	0	0	0	6	0	20	2	0	3	10	0	1	35	41
9:00 AM	0	2	0	0	1	4	0	0	7	1	10	0	0	1	12	2	0	26	33
9:15 AM	0	0	1	0	1	2	0	0	4	0	6	0	0	0	5	3	0	14	18
9:30 AM	0	2	0	0	1	1	0	0	4	0	9	0	0	1	16	1	0	27	31
9:45 AM	0	1	3	1	1	2	1	0	8	0	8	0	0	0	9	1	0	18	26
10:00 AM	0	3	0	1	1	0	1	0	5	0	7	0	0	1	8	0	1	16	21
10:15 AM	1	2	1	0	1	0	0	0	5	0	5	1	0	0	16	0	0	22	27
10:30 AM	1	1	1	0	2	3	0	0	8	0	14	0	0	0	18	3	0	35	43
10:45 AM	2	2	1	0	1	3	1	0	10	0	3	1	0	1	11	3	0	19	29
11:00 AM	1	2	1	1	2	4	2	0	12	1	5	0	0	0	10	1	0	17	29
11:15 AM	1	2	1	0	1	2	0	0	7	1	13	0	0	1	15	2	0	32	39
11:30 AM	0	0	0	0	1	3	0	1	4	1	14	0	0	0	16	0	0	31	35
11:45 AM	1	2	1	1	0	1	1	0	6	1	14	0	1	0	19	1	1	35	41
12:00 PM	1	0	0	0	2	1	1	0	5	0	15	1	0	2	22	1	0	41	46
12:15 PM	0	2	1	1	2	2	0	0	7	1	9	0	0	3	14	0	0	27	34
12:30 PM	0	0	0	0	3	2	0	0	5	0	8	0	0	4	14	1	1	27	32
12:45 PM	0	0	1	0	0	5	0	0	6	1	6	2	0	2	14	0	0	25	31
1:00 PM	2	3	2	2	1	3	2	0	13	1	12	2	0	1	22	0	0	38	51
1:15 PM	2	6	2	1	2	1	0	1	13	1	11	4	1	0	17	3	0	36	49
1:30 PM	1	2	0	0	4	2	2	0	11	0	17	2	0	2	15	0	0	36	47
1:45 PM	0	3	5	0	1	2	1	0	12	0	11	0	0	3	19	1	1	34	46
2:00 PM	1	0	2	0	2	4	1	1	10	2	19	0	0	2	16	3	1	42	52
2:15 PM	5	2	2	1	1	1	2	0	13	0	18	2	0	1	22	0	1	43	56
2:30 PM	0	2	3	0	0	2	1	0	8	1	21	0	3	1	21	4	1	48	56
2:45 PM	2	0	2	0	1	4	1	0	10	0	13	2	0	2	19	3	1	39	49
3:00 PM	1	2	4	0	0	1	1	1	9	0	17	1	1	1	20	1	2	40	49
3:15 PM	1	6	6	2	2	3	1	0	19	1	22	2	1	3	29	1	2	58	77
3:30 PM	0	3	0	0	3	4	3	0	13	1	15	0	0	1	15	0	0	32	45
3:45 PM	0	1	0	1	1	3	1	0	6	1	14	4	1	1	30	3	2	53	59
4:00 PM	2	3	2	2	3	2	0	0	12	1	13	0	0	2	23	2	2	41	53
4:15 PM	1	1	2	0	0	1	0	0	5	1	19	0	0	4	21	2	0	47	52
4:30 PM	3	2	3	0	3	3	1	0	15	0	19	2	0	2	29	2	0	54	69
4:45 PM	0	2	1	0	0	1	1	0	5	0	23	0	0	5	32	3	1	63	68
5:00 PM	4	1	2	0	4	1	0	0	12	0	18	1	0	0	22	6	0	47	59
5:15 PM	0	2	1	0	2	1	1	1	7	0	9	1	0	1	24	0	1	35	42
5:30 PM	0	1	0	0	1	2	0	0	4	0	19	0	0	0	22	1	0	42	46
5:45 PM	1	2	1	0	1	4	0	0	9	0	13	0	0	3	24	4	0	44	53

AM Peak Hour
8:15 AM to 9:15 AM



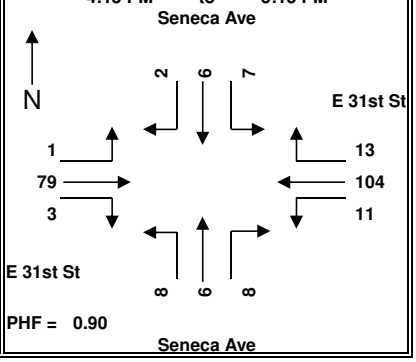
PHF = 0.94

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.95

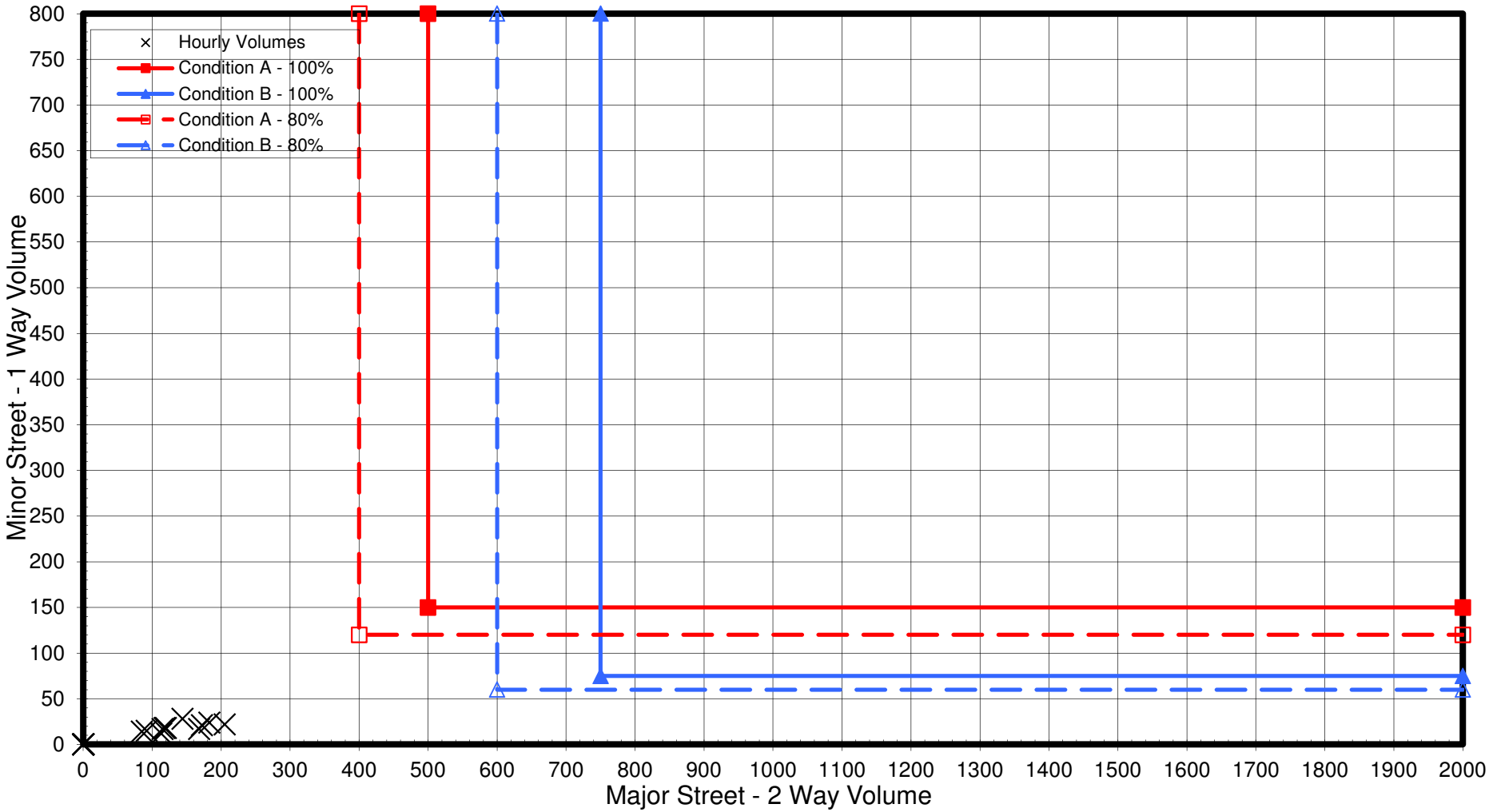
PM Peak Hour
4:15 PM to 5:15 PM



PHF = 0.90

Notes:

WARRANT 1 - Conditions A & B



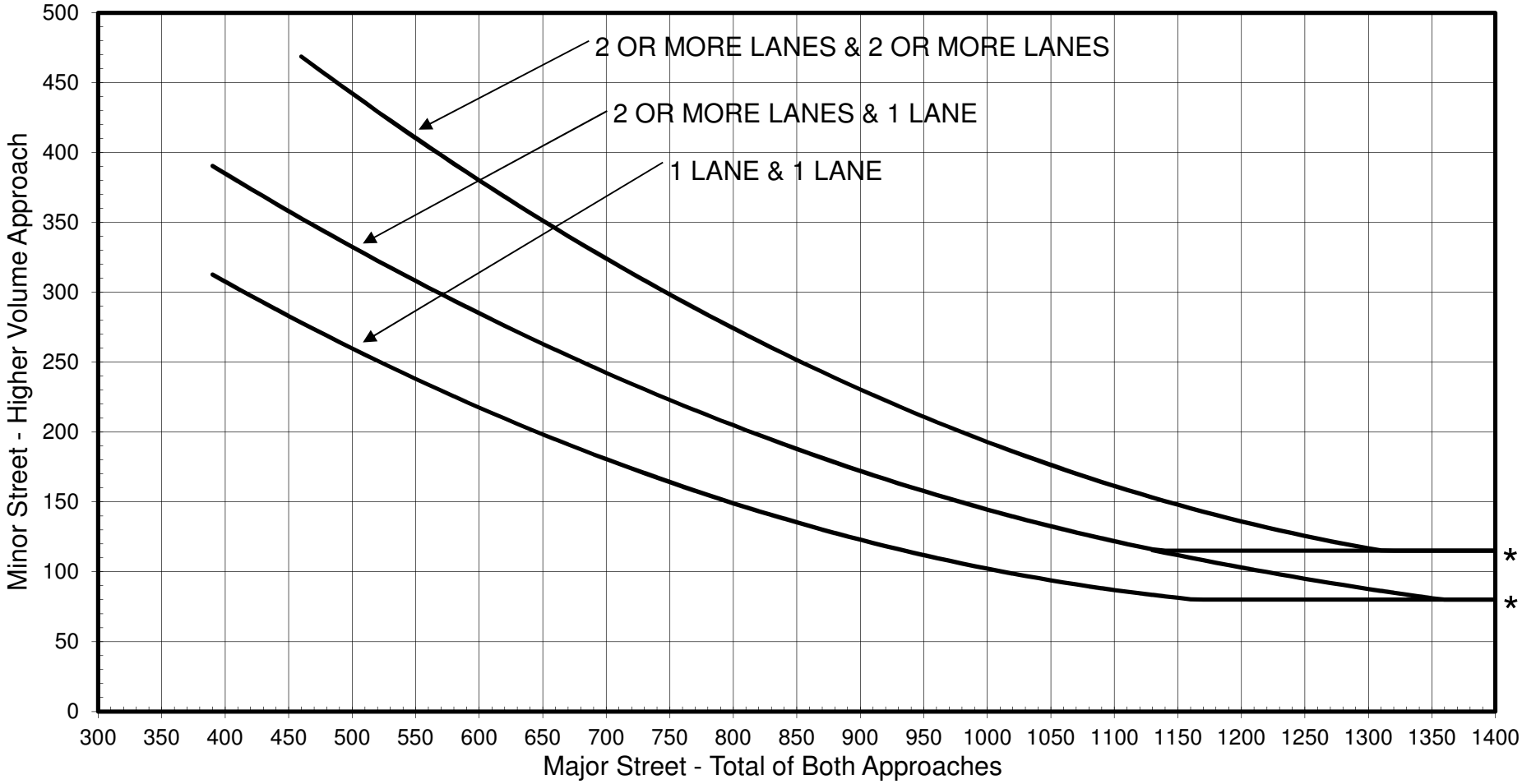
		Lanes
Major Road =	E 31st St	1
Minor Road =	Seneca Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E 31st St	1
Minor Road =	Seneca Ave	1
Road Location =	Urban	

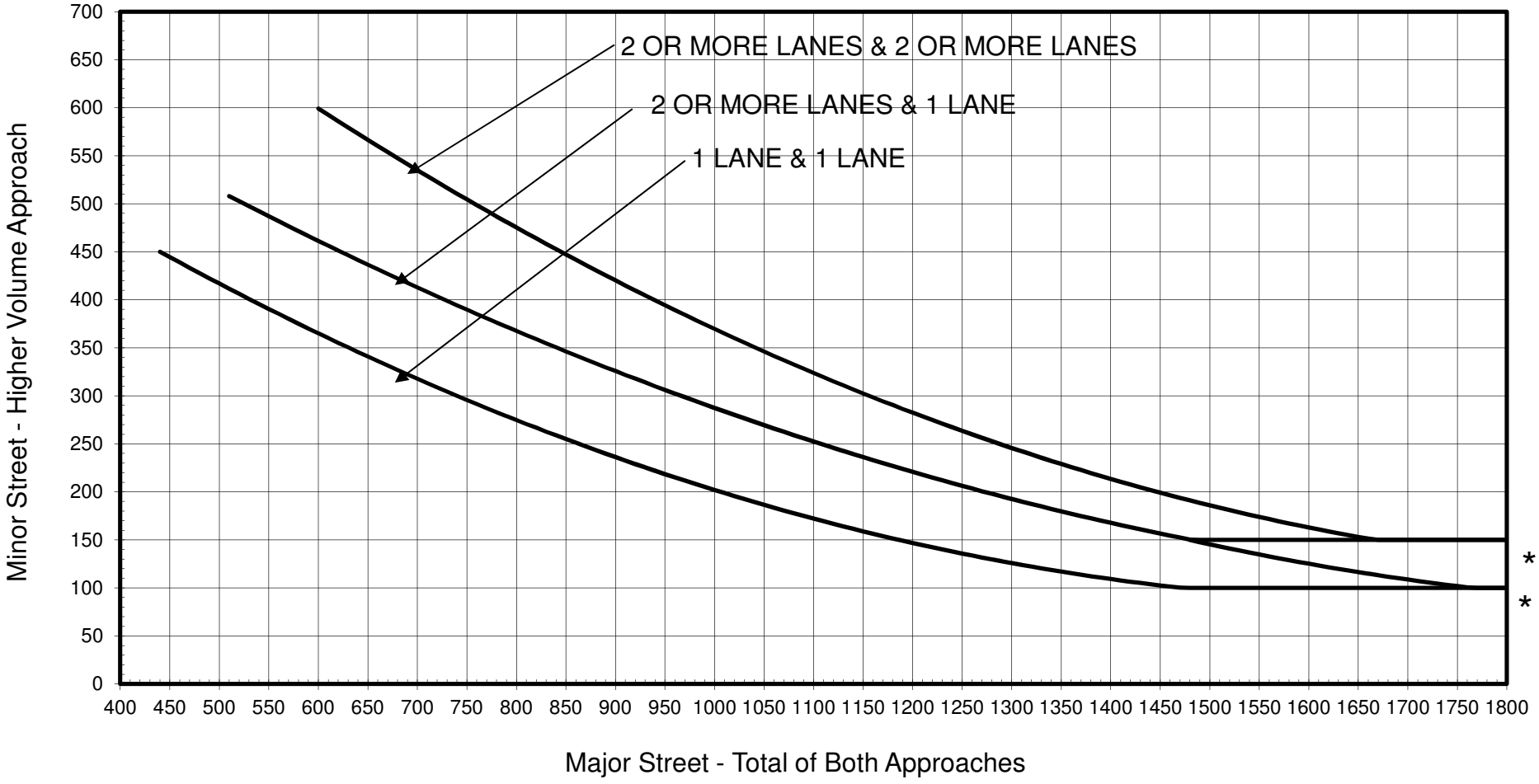
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E 31st St	1
Minor Road =	Seneca Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.59

Traffic Signal Warrant Analysis Results

Intersection 59
E 31st St and Clinton Ave

SIGNAL WARRANT

INTERSECTION: Clinton Ave and E 31st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		140	63	31								X						
8AM-9AM		153	52	26														
9AM-10AM		103	33	18														
10AM-11AM		111	50	23														
11AM-NOON		136	49	32														
NOON-1PM		154	56	31														
1PM-2PM		176	57	24														
2PM-3PM		254	72	55								X						
3PM-4PM		230	79	48						X		X						
4PM-5PM		253	63	49								X						
5PM-6PM		212	75	45						X		X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Clinton Ave and E 31st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

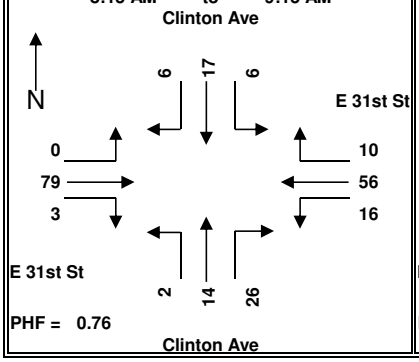
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.083	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.43
Intersection ID: 59

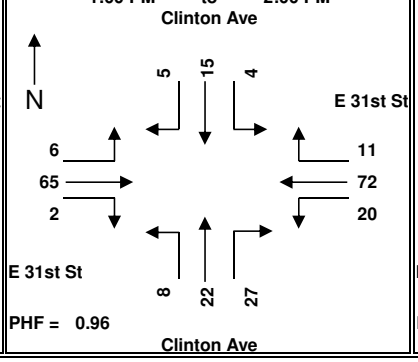
Start Time	Clinton Ave Northbound				Clinton Ave Southbound				Total North South	E 31st St Eastbound				E 31st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	71	280	298	21	93	245	44	20	1031	33	650	58	17	264	806	111	39	1922	2953
	Percent Trucks =			3%	Percent Trucks =			5%		Percent Trucks =			2%	Percent Trucks =			3%		
ADT	110	435	463	33	145	381	68	31	1602	51	1010	90	26	410	1252	172	61	2986	4588
7:00 AM	2	7	15	3	0	7	1	1	32	0	19	2	0	5	11	0	1	37	69
7:15 AM	1	5	4	0	2	6	0	0	18	0	20	1	0	5	14	3	2	43	61
7:30 AM	1	5	7	1	4	3	2	1	22	1	16	0	0	3	9	0	0	29	51
7:45 AM	0	11	5	0	1	3	2	1	22	0	10	1	0	5	12	3	1	31	53
8:00 AM	0	8	8	1	1	2	0	0	19	0	8	0	0	2	10	2	0	22	41
8:15 AM	0	4	3	1	2	2	2	2	13	0	21	0	1	3	9	0	0	33	46
8:30 AM	1	3	13	3	2	3	0	0	22	0	24	2	3	5	22	2	1	55	77
8:45 AM	0	4	8	0	0	10	2	1	24	0	21	1	1	4	13	4	2	43	67
9:00 AM	1	3	2	1	2	2	2	0	12	0	13	0	0	4	12	4	0	33	45
9:15 AM	0	6	5	0	1	1	2	0	15	0	10	0	0	2	6	1	0	19	34
9:30 AM	2	4	5	0	1	1	0	1	13	0	10	0	0	3	12	1	0	26	39
9:45 AM	0	1	4	1	0	4	2	0	11	1	9	0	0	1	12	2	0	25	36
10:00 AM	0	2	7	0	5	2	0	0	16	0	10	1	0	3	8	3	2	25	41
10:15 AM	1	6	5	0	1	1	0	0	14	0	7	0	0	4	13	1	0	25	39
10:30 AM	3	5	4	0	2	3	0	0	17	0	14	2	0	4	18	0	2	38	55
10:45 AM	2	4	11	0	1	6	2	0	26	2	4	0	1	2	14	1	0	23	49
11:00 AM	0	11	2	1	1	3	1	0	18	0	6	0	0	7	10	1	3	24	42
11:15 AM	0	6	6	0	3	6	0	0	21	0	10	2	0	5	12	2	0	31	52
11:30 AM	2	4	7	0	2	8	0	0	23	0	17	3	0	8	16	1	0	45	68
11:45 AM	2	6	3	2	2	6	0	0	19	2	10	0	1	3	19	2	0	36	55
12:00 PM	2	10	5	0	2	3	1	0	23	0	21	0	1	2	24	2	0	49	72
12:15 PM	0	8	2	0	2	8	1	1	21	0	10	1	0	7	16	1	0	35	56
12:30 PM	2	7	5	0	0	6	1	0	21	0	10	0	0	2	18	1	2	31	52
12:45 PM	2	7	6	0	1	6	0	0	22	1	7	2	0	9	16	4	0	39	61
1:00 PM	1	5	8	1	2	4	1	1	21	3	11	1	1	3	26	2	1	46	67
1:15 PM	2	4	3	0	1	1	0	0	11	1	16	0	1	8	18	5	0	48	59
1:30 PM	3	9	2	0	1	5	2	0	22	1	20	1	0	5	13	4	0	44	66
1:45 PM	2	4	14	0	0	5	2	0	27	1	18	0	0	4	15	0	2	38	65
2:00 PM	2	7	8	1	5	5	0	1	27	2	19	2	0	8	23	4	2	58	85
2:15 PM	3	7	6	0	5	10	0	0	31	2	20	2	0	18	25	7	2	74	105
2:30 PM	2	14	8	0	6	6	0	0	36	3	15	2	3	10	27	3	5	60	96
2:45 PM	1	5	9	0	7	8	3	2	33	1	22	1	0	12	22	4	2	62	95
3:00 PM	4	10	11	1	2	11	1	2	39	0	19	3	1	8	17	1	2	48	87
3:15 PM	7	7	5	1	1	5	2	1	27	0	20	5	1	14	25	6	4	70	97
3:30 PM	1	11	7	0	2	5	1	2	27	2	20	2	0	7	20	6	0	57	84
3:45 PM	3	4	9	0	3	13	2	1	34	3	11	3	0	7	25	6	1	55	89
4:00 PM	1	5	13	3	2	15	1	1	37	0	15	2	1	8	24	4	1	53	90
4:15 PM	2	7	7	0	3	5	0	0	24	1	16	1	0	4	28	3	1	53	77
4:30 PM	1	7	9	0	8	9	2	0	36	4	23	3	0	9	30	3	0	72	108
4:45 PM	1	5	5	0	0	1	3	0	15	1	13	6	0	13	38	4	0	75	90
5:00 PM	2	8	10	0	2	9	2	1	33	0	23	1	0	6	21	2	0	53	86
5:15 PM	4	8	9	0	0	7	0	0	28	0	16	2	1	7	29	1	0	55	83
5:30 PM	4	5	9	0	1	10	0	0	29	1	14	1	0	8	25	3	0	52	81
5:45 PM	1	11	4	0	4	9	1	0	30	0	12	2	0	7	29	2	0	52	82

AM Peak Hour
8:15 AM to 9:15 AM



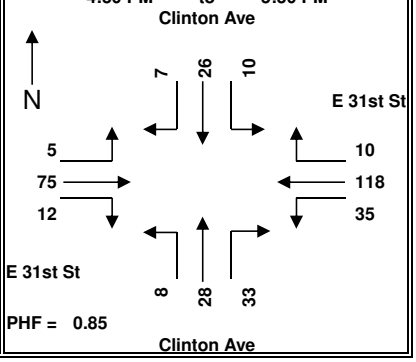
PHF = 0.76

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.96

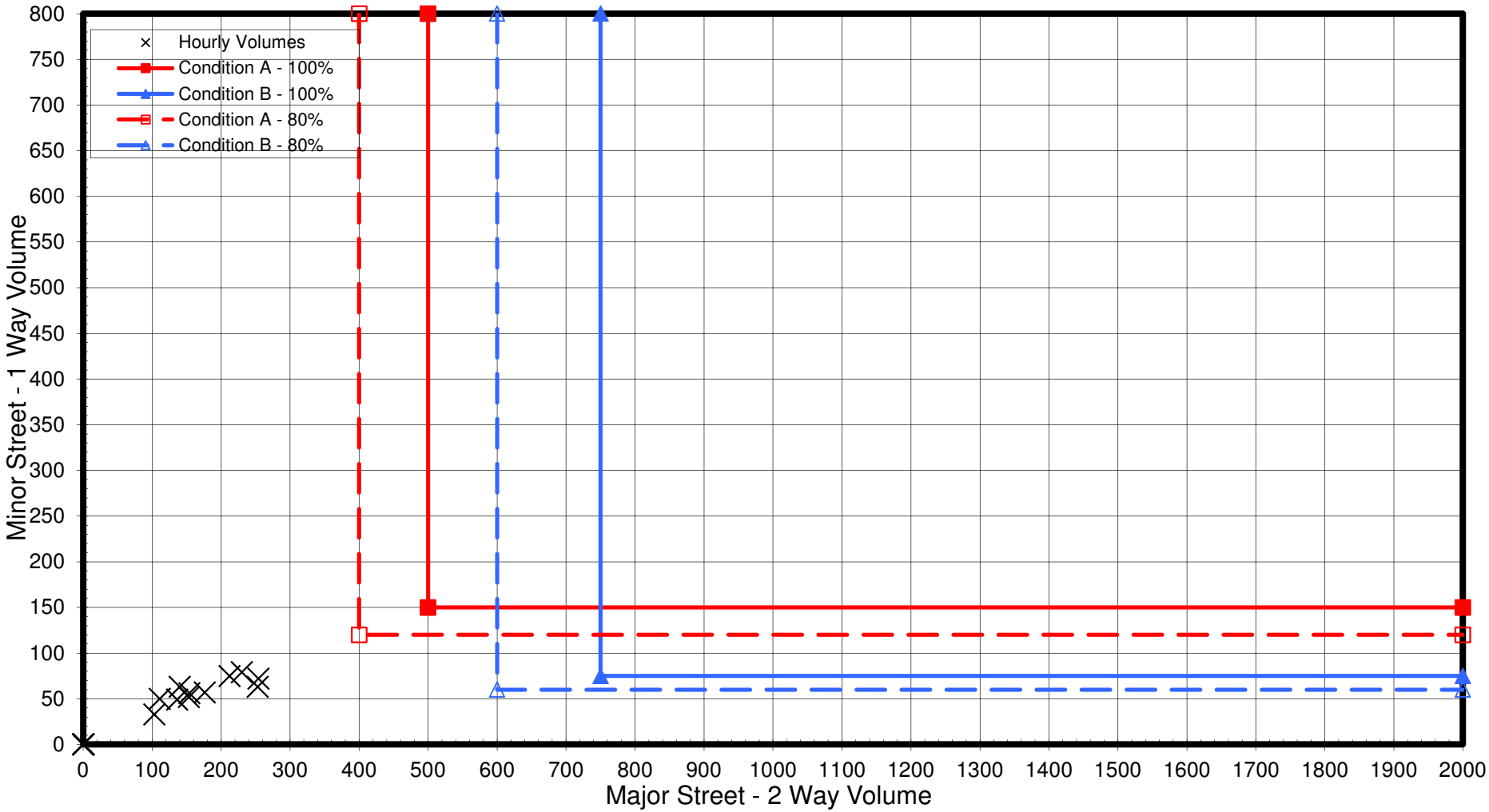
PM Peak Hour
4:30 PM to 5:30 PM



PHF = 0.85

Notes:

WARRANT 1 - Conditions A & B



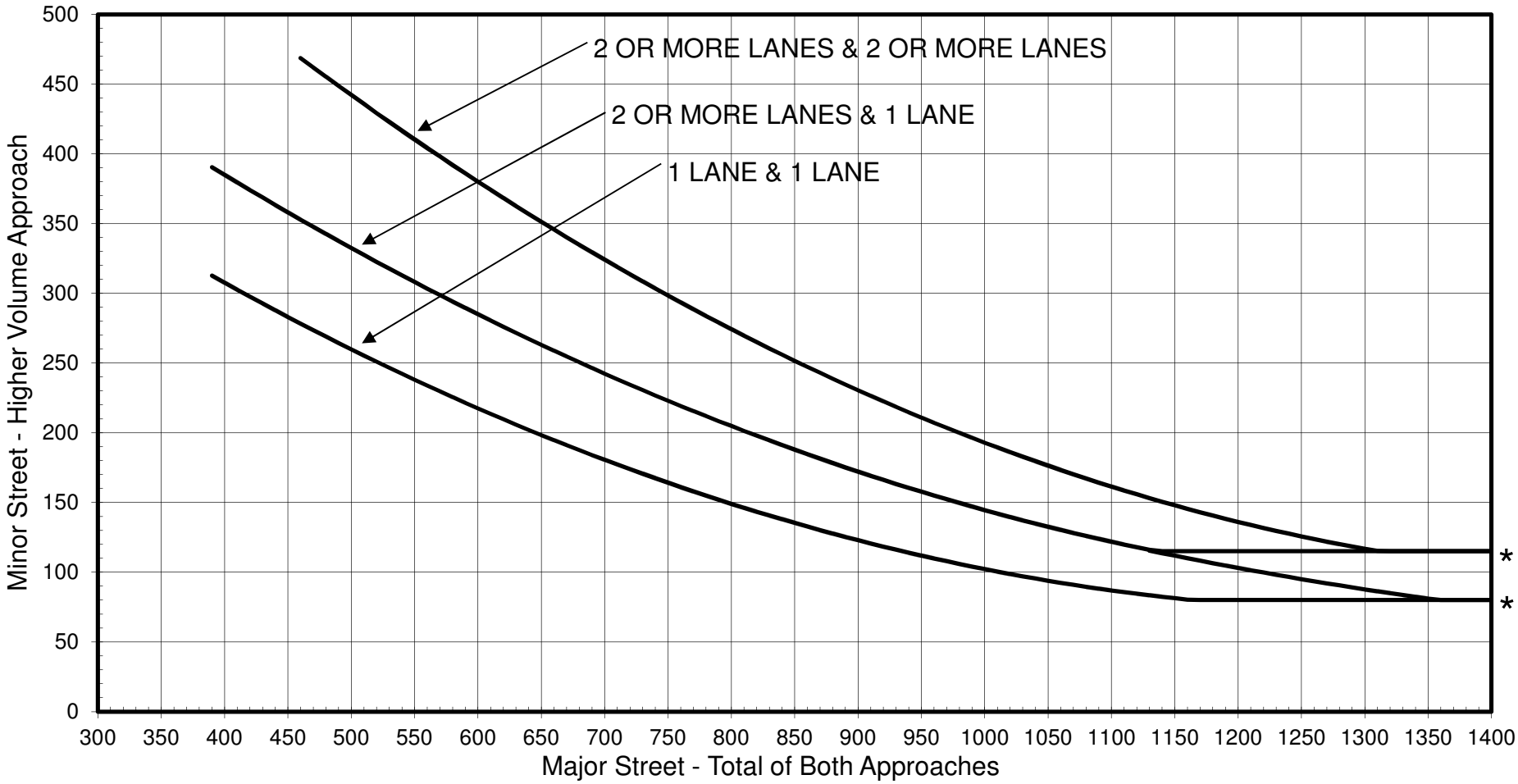
		Lanes
Major Road =	E 31st St	1
Minor Road =	Clinton Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E 31st St	1
Minor Road =	Clinton Ave	1
Road Location =	Urban	

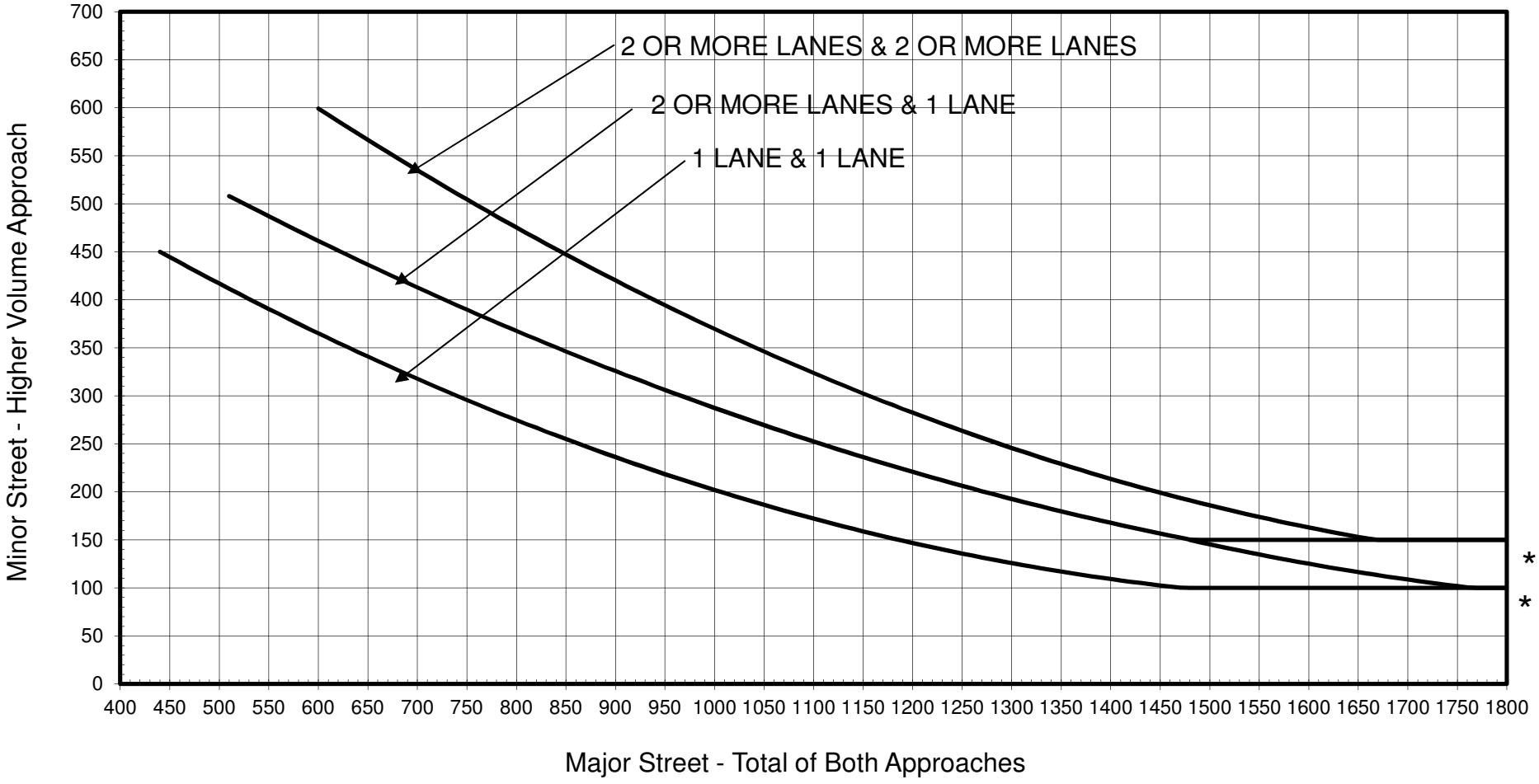
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E 31st St	1
Minor Road =	Clinton Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.60

Traffic Signal Warrant Analysis Results

Intersection 60
Grove Ave (SR 57) and E 31st St

SIGNAL WARRANT

INTERSECTION: Grove Ave and E 31st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1	X			500	150	400	120	750	75	600	60						
NORM	2+		X	X	600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		756	124	181	X		X	X	X	X	X	X						
8AM-9AM		599	121	143	X		X			X		X						
9AM-10AM		447	64	111			X			X		X						
10AM-11AM		475	76	104			X			X		X						
11AM-NOON		588	73	138	X		X			X		X						
NOON-1PM		683	66	141	X		X			X	X	X						
1PM-2PM		700	92	155	X		X			X	X	X						
2PM-3PM		896	132	199	X		X	X	X	X	X	X					X	
3PM-4PM		925	120	220	X	X	X	X	X	X	X	X					X	
4PM-5PM		820	114	226	X	X	X	X	X	X	X	X					X	
5PM-6PM		847	106	249	X	X	X	X	X	X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					3		5		5		7						4	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**YES**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Grove Ave and E 31st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

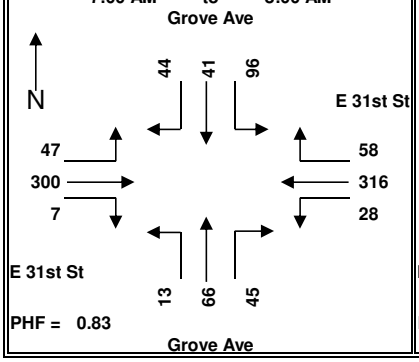
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.018	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 60

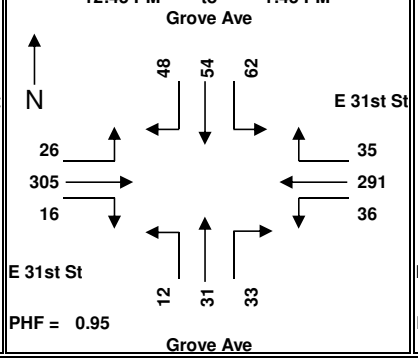
Start Time	Grove Ave Northbound				Grove Ave Southbound				Total North South	E 31st St Eastbound				E 31st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	126	516	446	28	778	573	516	37	2955	438	3018	148	226	471	3027	634	284	7736	10691
	Percent Trucks =			3%	Percent Trucks =			2%		Percent Trucks =			6%	Percent Trucks =			7%		
ADT	181	742	641	40	1119	824	742	53	4249	630	4339	213	325	677	4352	912	408	11123	15372
7:00 AM	6	20	11	1	20	7	12	0	76	21	104	3	5	4	57	16	11	205	281
7:15 AM	2	12	23	1	17	10	9	0	73	8	110	2	3	14	98	16	16	248	321
7:30 AM	3	18	9	0	25	6	7	0	68	10	57	0	7	5	85	13	4	170	238
7:45 AM	2	16	2	0	34	18	16	2	88	8	29	2	3	5	76	13	14	133	221
8:00 AM	2	9	8	0	13	9	16	1	57	6	43	2	7	2	57	12	4	122	179
8:15 AM	0	11	8	2	27	3	7	2	56	9	64	1	5	9	64	14	4	161	217
8:30 AM	3	21	24	3	14	8	8	2	78	6	68	3	11	15	62	11	8	165	243
8:45 AM	3	16	16	1	18	8	12	2	73	8	46	5	10	7	75	10	6	151	224
9:00 AM	3	6	7	0	14	12	8	0	50	8	43	1	6	11	48	13	7	124	174
9:15 AM	1	9	7	0	8	3	9	0	37	9	35	1	1	2	52	8	6	107	144
9:30 AM	2	10	7	1	19	9	4	0	51	9	36	2	5	3	37	10	5	97	148
9:45 AM	1	6	5	1	14	4	7	0	37	7	44	0	4	8	54	6	11	119	156
10:00 AM	2	13	11	0	13	7	12	1	58	7	44	2	5	3	54	7	4	117	175
10:15 AM	2	4	3	0	10	5	8	1	32	9	44	3	6	5	51	10	5	122	154
10:30 AM	4	6	11	0	9	6	5	2	41	5	43	4	5	8	54	8	5	122	163
10:45 AM	4	15	1	1	9	10	10	1	49	3	31	1	3	5	60	14	6	114	163
11:00 AM	1	3	5	0	16	9	8	1	42	5	65	1	5	9	64	11	14	155	197
11:15 AM	2	8	8	0	22	11	5	2	56	10	63	2	5	7	55	9	10	146	202
11:30 AM	4	18	9	0	15	11	6	0	63	12	56	6	3	5	50	9	6	138	201
11:45 AM	4	8	3	2	16	10	9	1	50	8	64	1	5	11	49	16	4	149	199
12:00 PM	3	7	11	1	14	15	9	0	59	8	73	1	6	14	59	15	4	170	229
12:15 PM	1	8	6	0	13	7	7	1	42	9	66	6	2	11	65	12	4	169	211
12:30 PM	2	6	8	0	12	8	15	2	51	7	54	2	6	7	81	16	10	167	218
12:45 PM	1	11	2	0	17	13	11	0	55	8	66	3	5	9	79	12	10	177	232
1:00 PM	2	5	8	1	18	17	15	2	65	3	75	2	10	6	63	5	5	154	219
1:15 PM	3	10	10	2	12	16	14	0	65	8	75	5	5	14	72	8	5	182	247
1:30 PM	6	5	13	0	15	8	8	0	55	7	89	6	5	7	77	10	5	196	251
1:45 PM	5	13	12	0	15	8	9	0	62	3	82	1	6	6	62	14	4	168	230
2:00 PM	7	14	12	1	16	18	9	1	76	9	93	3	6	13	66	14	10	198	274
2:15 PM	1	15	17	0	17	17	14	0	81	8	70	5	6	30	120	16	6	249	330
2:30 PM	2	13	8	1	25	18	11	0	77	15	70	3	9	21	87	15	19	211	288
2:45 PM	4	16	23	0	19	18	17	0	97	15	98	6	5	12	87	20	5	238	335
3:00 PM	0	12	22	1	16	11	14	2	75	10	124	3	6	9	63	21	5	230	305
3:15 PM	2	11	14	1	18	20	25	4	90	10	88	7	7	19	120	19	8	263	353
3:30 PM	7	15	10	1	29	17	19	2	97	15	91	5	5	15	86	16	11	228	325
3:45 PM	4	11	12	1	19	21	11	2	78	23	71	2	7	15	71	22	5	204	282
4:00 PM	4	14	11	4	18	21	14	0	82	15	113	4	5	18	50	19	2	219	301
4:15 PM	2	13	9	0	23	25	14	0	86	17	104	6	5	11	55	23	3	216	302
4:30 PM	1	22	13	0	27	21	11	0	95	11	63	3	2	14	70	17	4	178	273
4:45 PM	6	8	11	0	17	20	15	0	77	15	84	12	4	15	63	18	0	207	284
5:00 PM	2	22	10	0	25	17	20	0	96	25	78	8	3	16	76	24	1	227	323
5:15 PM	3	14	7	1	20	22	14	1	80	12	78	1	5	15	70	28	2	204	284
5:30 PM	2	14	3	0	24	30	25	2	98	9	72	6	1	22	101	27	3	237	335
5:45 PM	5	8	16	0	16	19	17	0	81	8	52	6	1	14	82	17	3	179	260

AM Peak Hour
7:00 AM to 8:00 AM



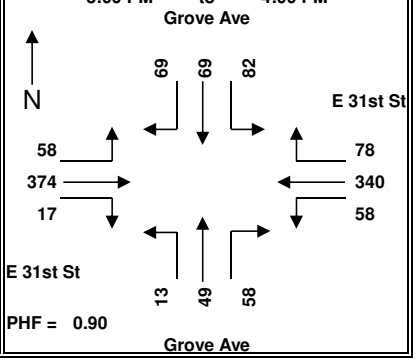
PHF = 0.83

Midday Peak Hour
12:45 PM to 1:45 PM



PHF = 0.95

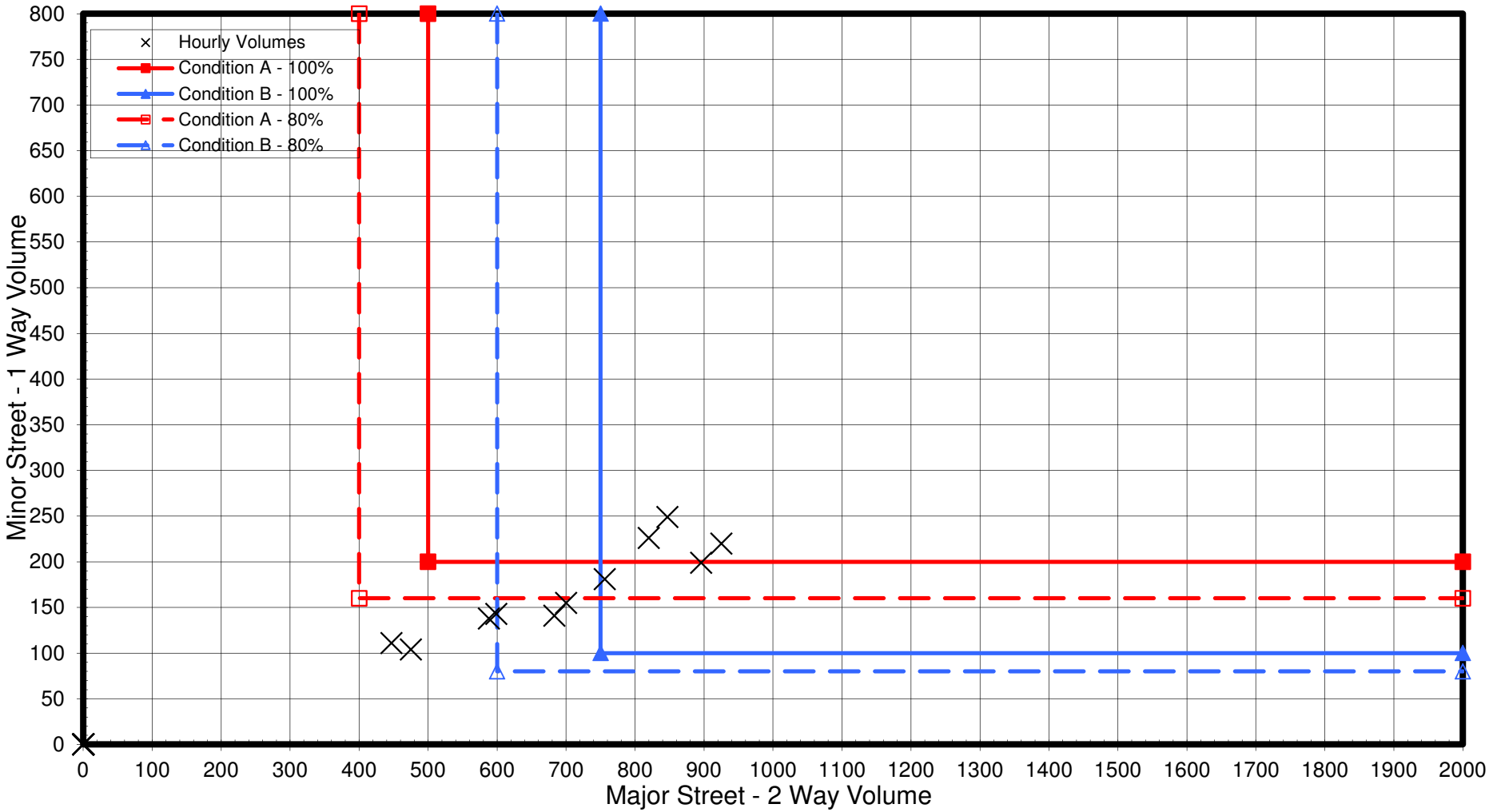
PM Peak Hour
3:00 PM to 4:00 PM



PHF = 0.90

Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	E 31st St	1
Minor Road =	Grove Ave	2
Road Location =	Urban	

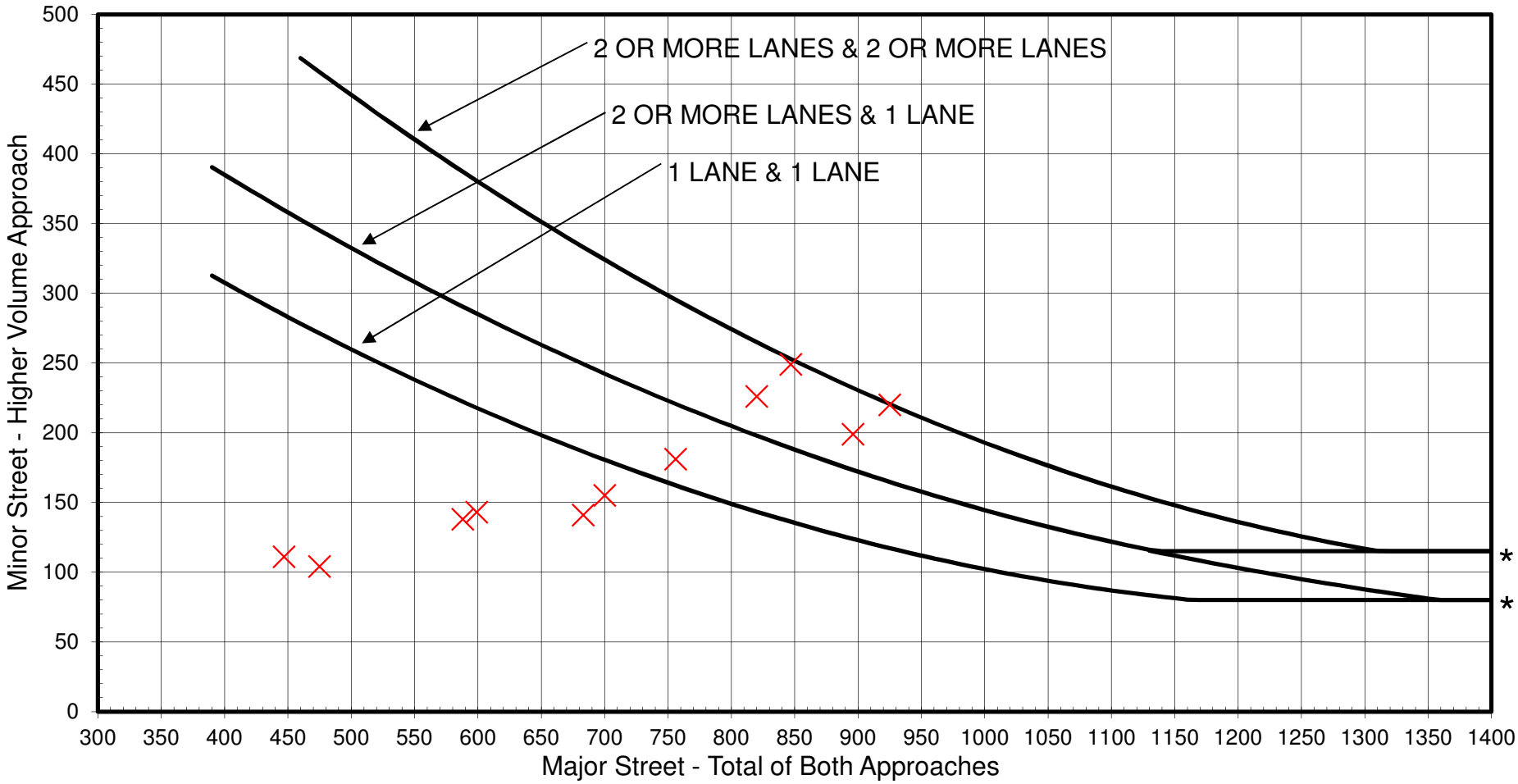
		Warrant Met?
Condition A (100%) =	3 Hours Meet	No
Condition B (100%) =	5 Hours Meet	No
Condition A (80%) =	5 Hours Meet	No
Condition B (80%) =	7 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS

564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E 31st St	1
Minor Road =	Grove Ave	2
Road Location =	Urban	

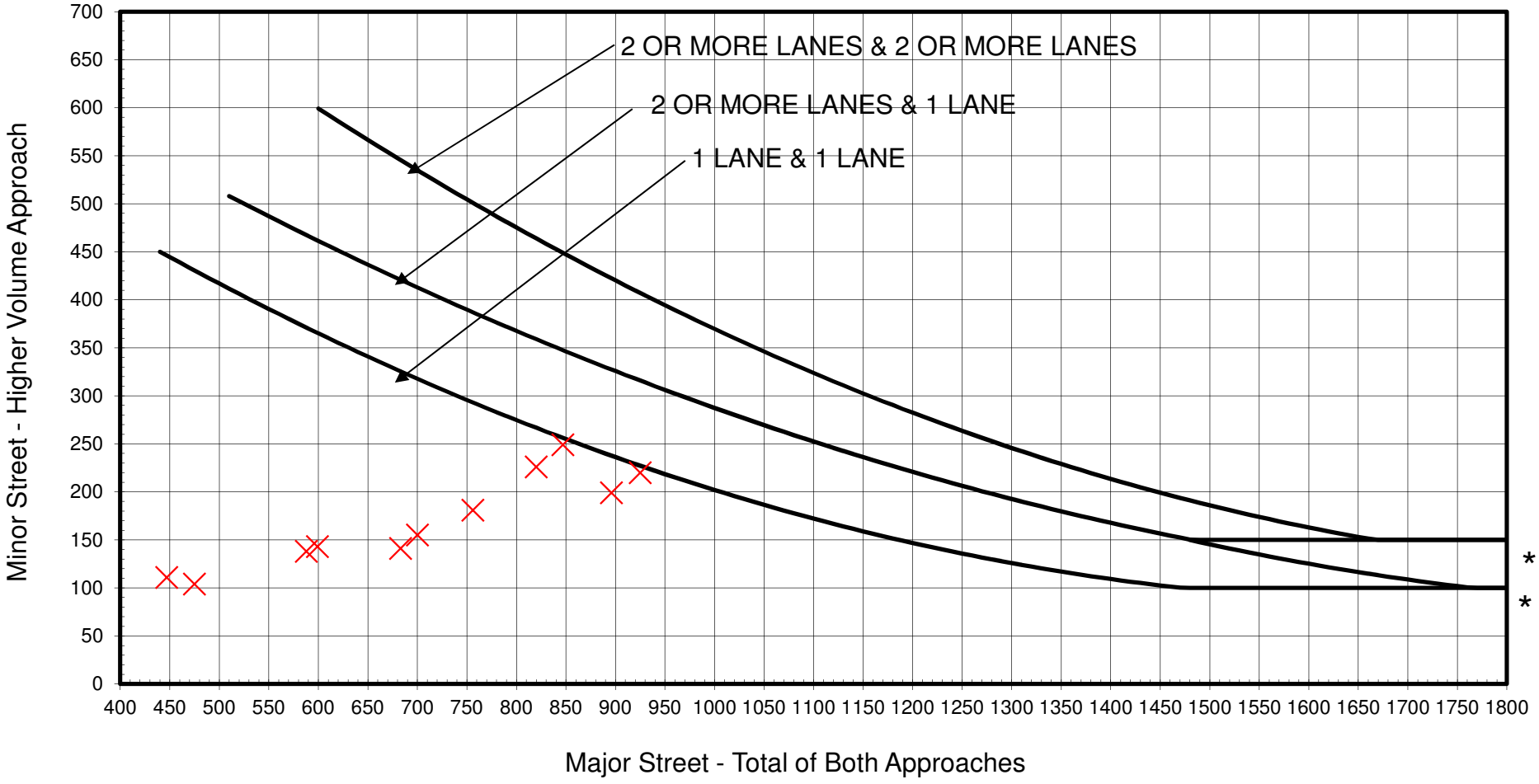
		Warrant Met?
Warrant 2 (Urban) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E 31st St	1
Minor Road =	Grove Ave	2
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.61

Traffic Signal Warrant Analysis Results

Intersection 61
E 31st St and Palm Ave

SIGNAL WARRANT

INTERSECTION: Palm Ave and E 31st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1	X	X	X	500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		354	30	8														
8AM-9AM		275	24	16														
9AM-10AM		216	8	4														
10AM-11AM		225	11	11														
11AM-NOON		216	11	12														
NOON-1PM		250	19	16														
1PM-2PM		290	23	7														
2PM-3PM		369	25	21														
3PM-4PM		100	11	11														
4PM-5PM		0	0	0														
5PM-6PM		0	0	0														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Palm Ave and E 31st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

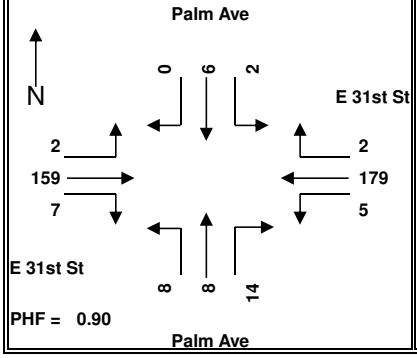
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.083	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.43
Intersection ID: 61

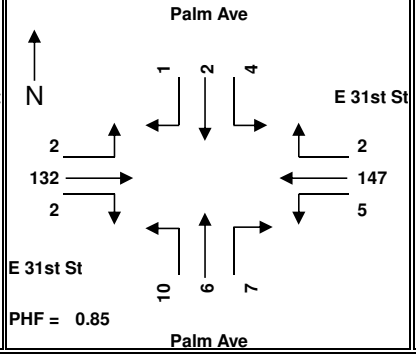
Start Time	Palm Ave Northbound				Palm Ave Southbound				Total North South	E 31st St Eastbound				E 31st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	53	48	61	2	28	61	17	5	268	22	1024	52	27	55	1127	15	26	2295	2563
	Percent Trucks =			1%	Percent Trucks =			5%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	82	75	95	3	44	95	26	8	416	34	1591	81	42	85	1751	23	40	3566	3982
7:00 AM	3	2	6	0	0	3	0	0	14	1	38	1	0	0	28	0	0	68	82
7:15 AM	3	4	4	0	0	1	0	0	12	0	39	3	3	3	37	0	0	82	94
7:30 AM	2	2	3	0	0	2	0	1	9	1	47	0	2	1	49	2	1	100	109
7:45 AM	0	0	1	0	2	0	0	0	3	0	35	3	0	1	65	0	3	104	107
8:00 AM	0	0	0	0	0	0	1	0	1	0	27	0	0	1	30	1	0	59	60
8:15 AM	2	2	3	0	1	7	0	2	15	0	31	3	3	2	30	0	0	66	81
8:30 AM	3	5	8	1	0	2	0	1	18	0	40	6	1	4	39	0	0	89	107
8:45 AM	0	0	1	0	1	2	2	0	6	0	21	2	0	5	33	0	4	61	67
9:00 AM	1	0	1	0	0	0	0	0	2	2	27	0	0	0	29	0	0	58	60
9:15 AM	1	0	1	0	0	1	0	0	3	0	20	1	0	1	27	1	0	50	53
9:30 AM	1	0	0	0	0	1	2	0	4	1	32	0	0	0	27	0	1	60	64
9:45 AM	0	2	1	0	0	0	0	0	3	2	20	3	0	1	22	0	0	48	51
10:00 AM	0	1	0	0	2	0	0	0	3	0	32	0	1	2	35	0	3	69	72
10:15 AM	0	2	2	0	1	3	0	0	8	1	22	0	0	0	25	1	0	49	57
10:30 AM	1	1	0	0	1	0	0	0	3	0	27	1	0	1	19	0	1	48	51
10:45 AM	2	2	0	0	1	3	0	0	8	2	19	0	1	2	35	1	0	59	67
11:00 AM	3	2	1	0	0	0	3	0	9	0	25	2	0	2	18	1	2	48	57
11:15 AM	0	0	3	0	1	4	1	0	9	0	24	0	0	0	20	0	0	44	53
11:30 AM	0	0	0	0	0	0	0	0	0	0	28	1	1	1	30	0	2	60	60
11:45 AM	1	1	0	0	2	1	0	0	5	1	29	1	1	0	33	0	1	64	69
12:00 PM	2	2	1	0	0	3	2	0	10	0	28	1	1	4	34	0	0	67	77
12:15 PM	2	0	2	0	0	4	0	0	8	2	24	5	2	0	25	0	0	56	64
12:30 PM	3	1	1	0	1	1	1	0	8	1	30	0	0	0	46	2	0	79	87
12:45 PM	0	1	4	0	2	1	1	0	9	1	23	1	1	1	22	0	0	48	57
1:00 PM	3	1	4	1	1	1	1	0	11	0	34	0	2	0	32	0	1	66	77
1:15 PM	3	1	2	0	1	0	0	0	7	1	30	0	1	2	32	1	1	66	73
1:30 PM	2	2	1	0	0	0	0	0	5	0	40	2	3	2	45	0	1	89	94
1:45 PM	2	2	0	0	2	1	0	0	7	1	28	0	1	1	38	1	3	69	76
2:00 PM	0	1	3	0	2	5	0	0	11	0	38	2	0	4	46	0	1	90	101
2:15 PM	1	6	3	0	0	3	1	0	14	1	36	1	2	1	45	1	0	85	99
2:30 PM	2	1	0	0	2	1	0	0	6	2	42	3	0	3	44	0	1	94	100
2:45 PM	4	3	1	0	2	4	1	0	15	1	37	2	0	7	51	2	0	100	115
3:00 PM	6	1	4	0	3	7	1	1	22	1	51	8	1	3	36	1	0	100	122
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak Hour
7:00 AM to 8:00 AM



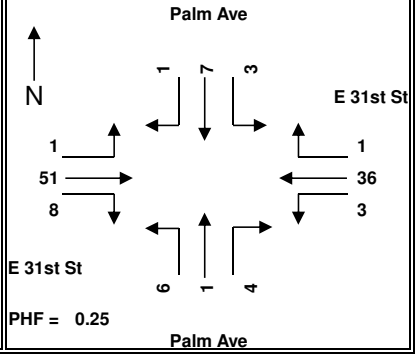
PHF = 0.90

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.85

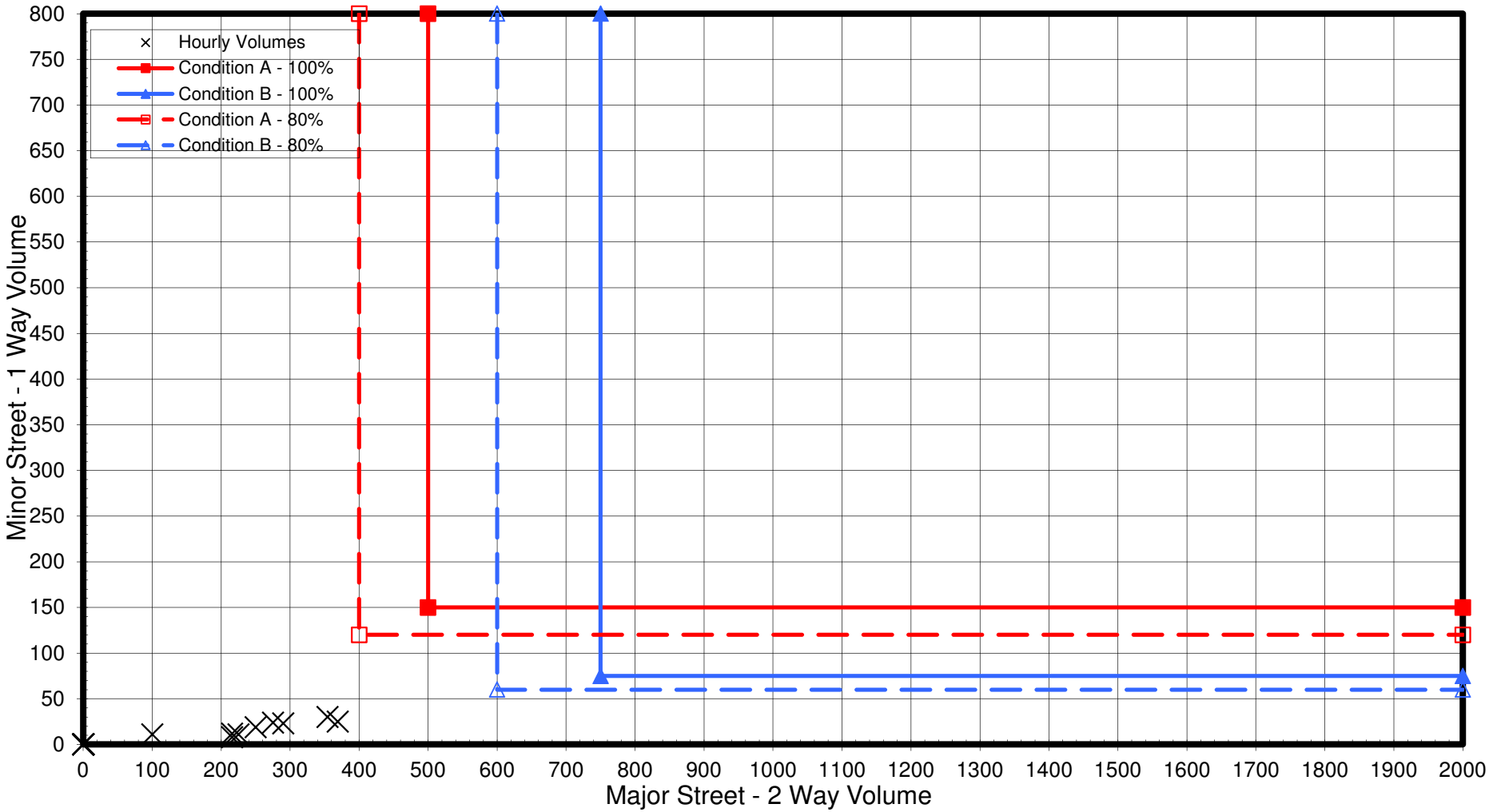
PM Peak Hour
3:00 PM to 4:00 PM



PHF = 0.25

Notes:

WARRANT 1 - Conditions A & B



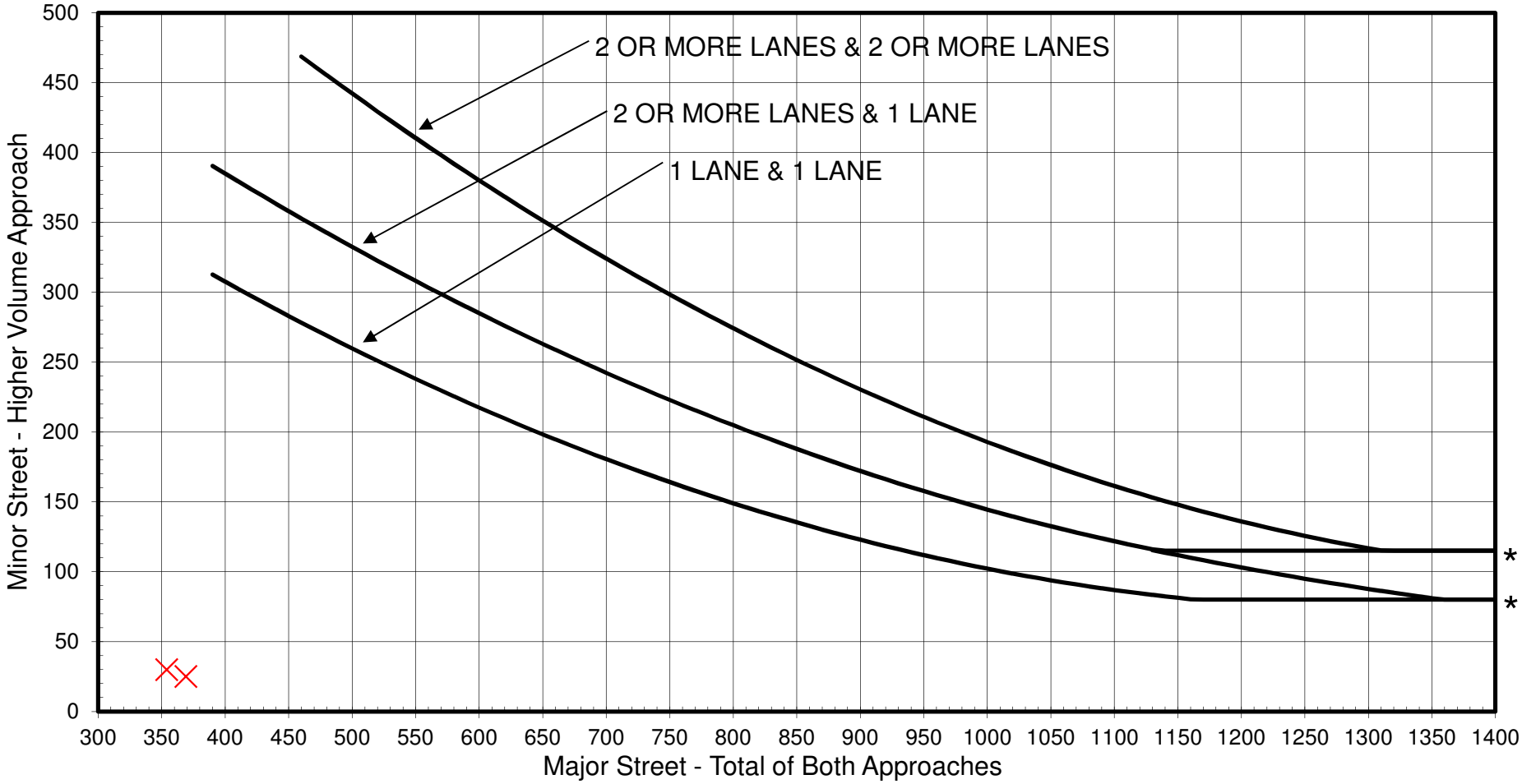
		Lanes
Major Road =	E 31st St	1
Minor Road =	Palm Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E 31st St	1
Minor Road =	Palm Ave	1
Road Location =	Urban	

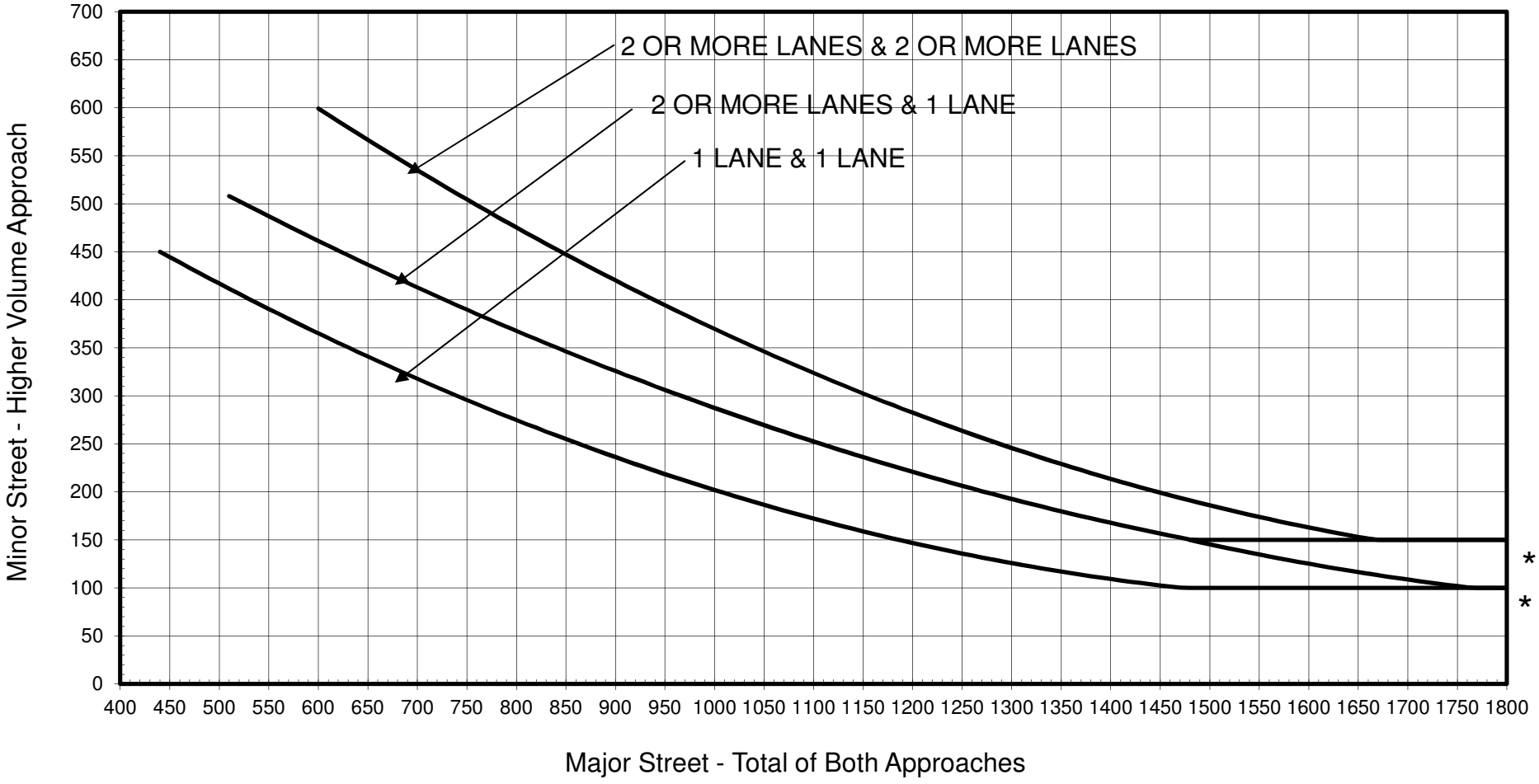
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E 31st St	1
Minor Road =	Palm Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.62

Traffic Signal Warrant Analysis Results

Intersection 62
E 31st St and Tacoma Ave

SIGNAL WARRANT

INTERSECTION: Tacoma Ave and E 31st St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1	X	X	X	500	150	400	120	750	75	600	60						
NORM	2+				600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		381	113	31						X		X						
8AM-9AM		321	82	28						X		X						
9AM-10AM		256	61	26								X						
10AM-11AM		231	60	25								X						
11AM-NOON		274	41	27														
NOON-1PM		311	55	34														
1PM-2PM		353	59	32														
2PM-3PM		429	110	53			X			X		X						
3PM-4PM		521	110	45	X		X			X		X						
4PM-5PM		558	96	54	X		X			X		X						
5PM-6PM		470	87	49			X			X		X						
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Tacoma Ave and E 31st St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

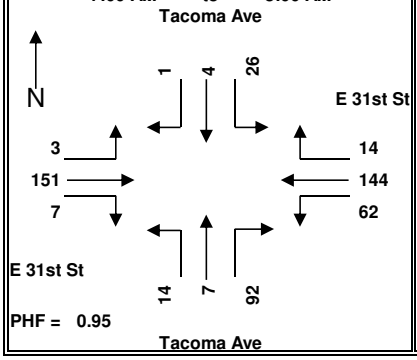
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.018	Thursday	December 18, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.42
Intersection ID: 62

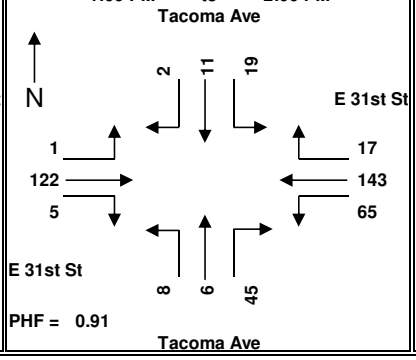
Start Time	Tacoma Ave Northbound				Tacoma Ave Southbound				Total North South	E 31st St Eastbound				E 31st St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	125	99	650	32	289	97	18	21	1278	23	1466	117	29	647	1637	215	70	4105	5383
	Percent Trucks =			4%	Percent Trucks =			5%		Percent Trucks =			2%	Percent Trucks =			3%		
ADT	180	143	939	46	417	140	26	30	1845	33	2117	169	42	934	2364	310	101	5928	7773
7:00 AM	2	2	22	0	8	2	0	1	36	0	47	1	0	19	24	4	1	95	131
7:15 AM	2	4	24	1	4	2	0	1	36	0	37	3	2	16	38	2	1	96	132
7:30 AM	5	1	27	0	6	0	1	0	40	0	40	1	1	18	36	3	5	98	138
7:45 AM	5	0	19	0	8	0	0	2	32	3	27	2	1	9	46	5	2	92	124
8:00 AM	3	0	12	0	8	0	0	1	23	0	25	4	0	6	37	6	1	78	101
8:15 AM	2	0	14	2	1	2	1	2	20	1	23	4	0	14	30	9	3	81	101
8:30 AM	6	3	28	5	5	4	0	0	46	2	34	5	3	9	35	2	6	87	133
8:45 AM	4	1	9	0	6	1	0	0	21	0	34	2	2	12	24	3	2	75	96
9:00 AM	3	3	13	1	6	1	0	0	26	1	21	3	0	11	33	4	1	73	99
9:15 AM	3	1	9	0	3	1	1	0	18	2	23	3	1	4	18	5	1	55	73
9:30 AM	0	1	16	1	7	1	0	2	25	0	25	2	1	10	27	4	1	68	93
9:45 AM	4	1	7	1	3	2	1	1	18	1	22	3	0	2	30	2	0	60	78
10:00 AM	3	0	17	0	4	0	1	0	25	1	15	4	0	9	17	3	1	49	74
10:15 AM	1	1	11	0	9	0	0	0	22	1	15	1	0	3	23	2	1	45	67
10:30 AM	3	2	14	0	9	0	0	1	28	0	23	0	0	7	33	4	2	67	95
10:45 AM	0	2	6	0	2	0	0	0	10	0	28	4	0	11	24	3	0	70	80
11:00 AM	3	1	3	0	3	1	0	0	11	0	23	0	0	8	27	5	3	63	74
11:15 AM	2	0	9	0	7	1	0	1	19	2	19	3	0	8	24	5	0	61	80
11:30 AM	2	1	5	0	6	1	0	0	15	0	29	1	0	10	24	1	1	65	80
11:45 AM	2	3	10	0	5	2	1	0	23	0	36	2	1	7	35	5	2	85	108
12:00 PM	2	2	8	0	6	0	0	0	18	0	27	2	1	6	33	6	1	74	92
12:15 PM	3	2	9	0	11	3	1	0	29	1	27	4	1	10	24	3	1	69	98
12:30 PM	3	5	11	1	2	0	1	0	22	0	26	6	0	13	32	3	1	80	102
12:45 PM	1	3	6	0	8	2	0	0	20	0	34	3	0	8	36	7	0	88	108
1:00 PM	3	1	14	0	4	1	1	1	24	1	32	1	0	14	34	4	2	86	110
1:15 PM	3	1	5	1	3	6	0	0	18	0	27	3	2	13	38	9	3	90	108
1:30 PM	0	1	12	0	6	3	0	0	22	0	30	1	0	14	35	2	5	82	104
1:45 PM	2	3	14	0	6	1	1	1	27	0	33	0	1	24	36	2	12	95	122
2:00 PM	0	2	15	1	6	8	0	1	31	0	47	3	1	21	43	2	0	116	147
2:15 PM	5	4	33	2	9	4	0	0	55	1	32	2	2	16	39	5	0	95	150
2:30 PM	2	3	26	0	8	2	0	0	41	1	30	3	3	11	52	8	0	105	146
2:45 PM	3	2	15	0	7	7	2	2	36	1	37	3	0	29	37	6	3	113	149
3:00 PM	3	2	22	0	6	4	1	1	38	0	49	3	0	13	45	9	1	119	157
3:15 PM	10	4	24	4	8	3	0	0	49	1	60	1	0	17	49	6	2	134	183
3:30 PM	3	2	21	2	9	5	0	0	40	0	32	5	0	18	61	10	0	126	166
3:45 PM	0	3	16	0	9	0	0	1	28	1	43	9	0	36	49	4	1	142	170
4:00 PM	5	4	16	2	12	4	2	1	43	0	49	3	2	22	59	8	3	141	184
4:15 PM	2	4	19	3	12	2	0	1	39	0	45	4	1	28	45	3	0	125	164
4:30 PM	3	2	20	3	7	3	1	0	36	0	51	4	0	38	58	6	1	157	193
4:45 PM	6	3	12	1	8	3	0	0	32	0	36	1	0	23	65	10	0	135	167
5:00 PM	2	4	13	0	17	7	0	0	43	1	44	1	0	23	53	3	0	125	168
5:15 PM	2	7	12	0	4	2	1	0	28	0	47	1	1	20	46	6	0	120	148
5:30 PM	5	6	16	0	6	2	0	0	35	0	41	4	1	23	40	13	0	121	156
5:45 PM	2	2	16	1	5	4	1	0	30	1	41	2	1	14	43	3	0	104	134

AM Peak Hour
7:00 AM to 8:00 AM



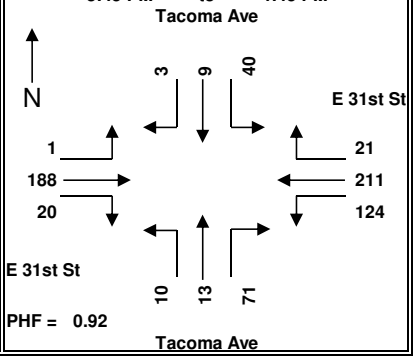
PHF = 0.95

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.91

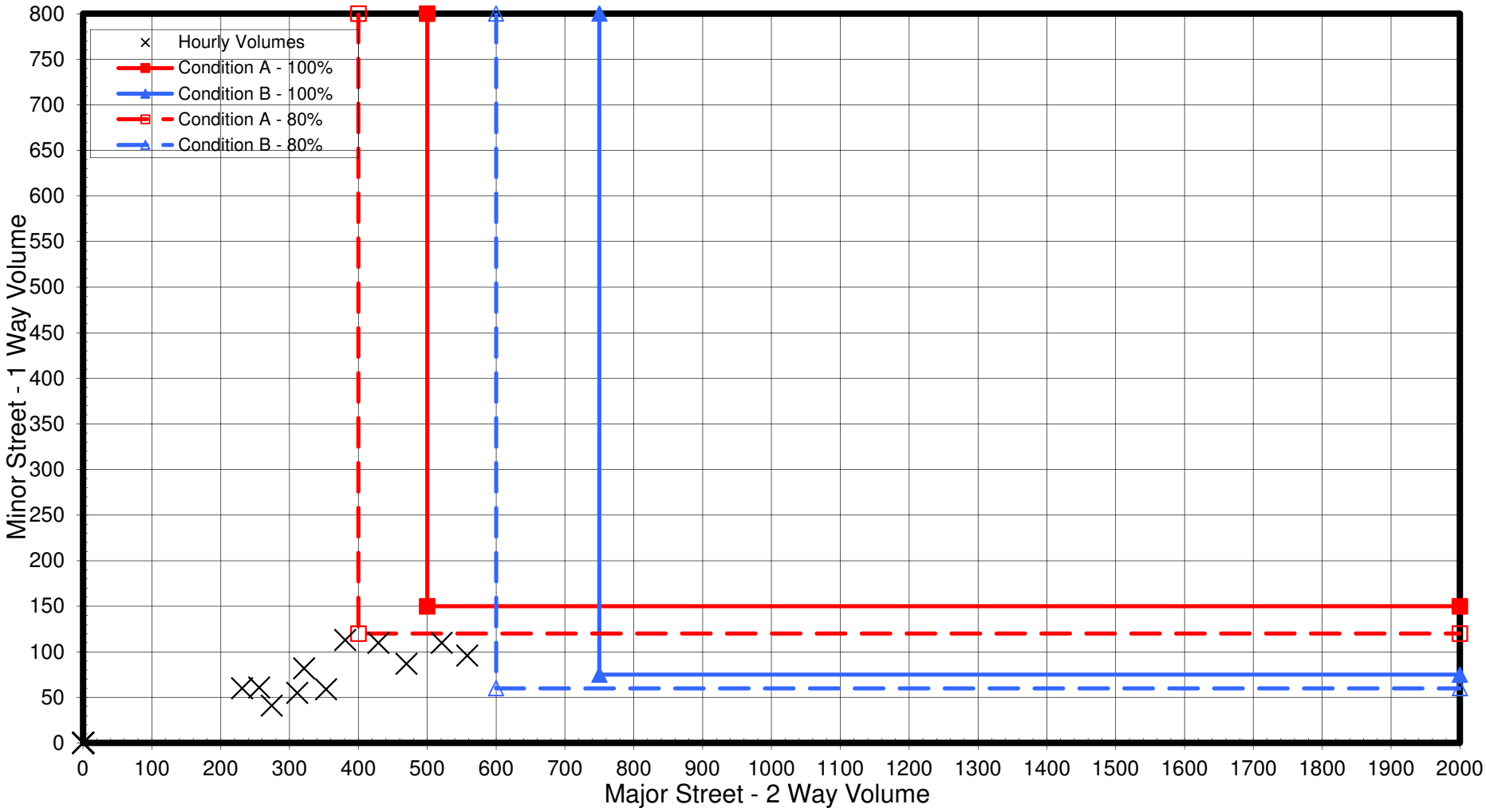
PM Peak Hour
3:45 PM to 4:45 PM



PHF = 0.92

Notes:

WARRANT 1 - Conditions A & B



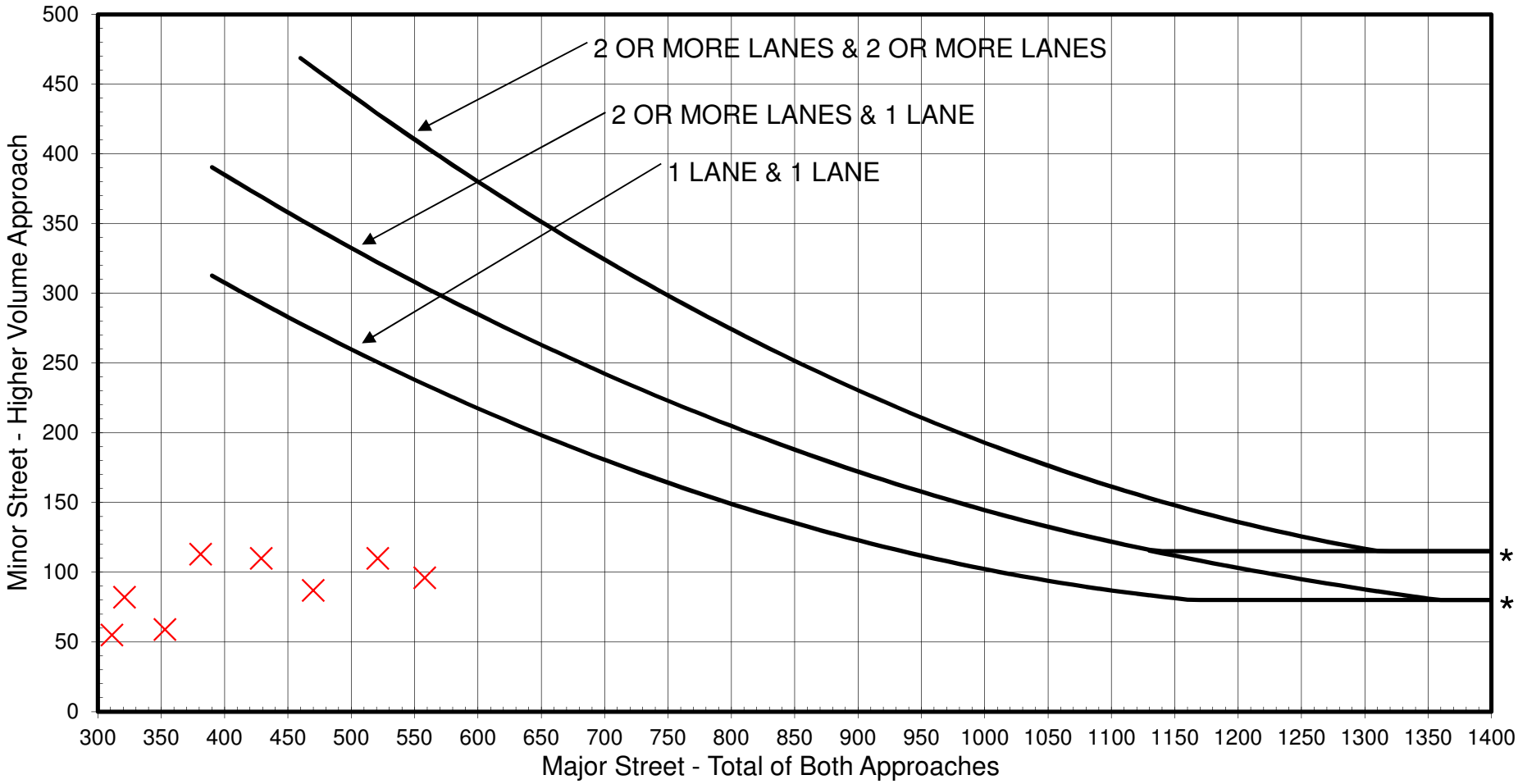
		Lanes
Major Road =	E 31st St	1
Minor Road =	Tacoma Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 18, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	E 31st St	1
Minor Road =	Tacoma Ave	1
Road Location =	Urban	

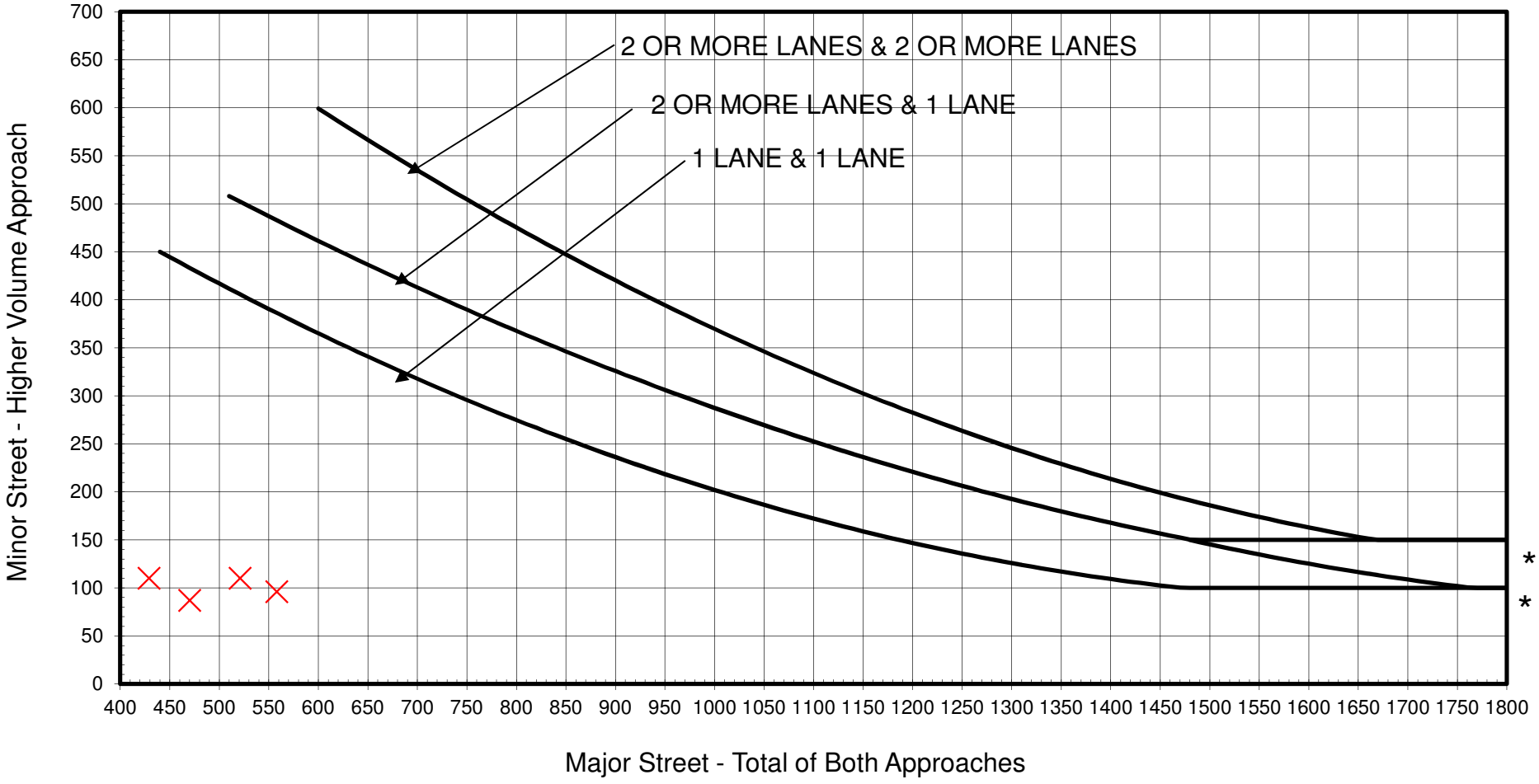
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 18, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	E 31st St	1
Minor Road =	Tacoma Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 18, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.63

Traffic Signal Warrant Analysis Results

Intersection 63
E 31st St and Metro Park Bicycle Trail

Appendix B.64

Traffic Signal Warrant Analysis Results

Intersection 64
SR 2 Eastbound Interchange Ramp and Middle Ridge Rd

SIGNAL WARRANT

INTERSECTION: Middle Ridge Rd and SR 2 EB off-ramp
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :2 E: 0 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1		X		500	150	400	120	750	75	600	60						
	2+	X			600	200	480	160	900	100	720	80						
* 70%	1				350	105	280	84	525	53	420	42						
	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		1459	300	0	X	X	X	X	X	X	X	X					X	X
8AM-9AM		1143	197	0	X	X	X	X	X	X	X	X					X	
9AM-10AM		899	173	0	X	X	X	X		X	X	X					X	
10AM-11AM		888	156	0	X	X	X	X		X	X	X						
11AM-NOON		860	134	0	X		X	X		X	X	X						
NOON-1PM		994	180	0	X	X	X	X	X	X	X	X					X	
1PM-2PM		932	179	0	X	X	X	X	X	X	X	X					X	
2PM-3PM		1189	198	0	X	X	X	X	X	X	X	X					X	
3PM-4PM		1405	172	0	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1625	210	0	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1451	235	0	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					10		11		8		11						9	4
WARRANT SATISFIED?					YES		YES		YES		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Middle Ridge Rd and SR 2 EB off-ramp
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

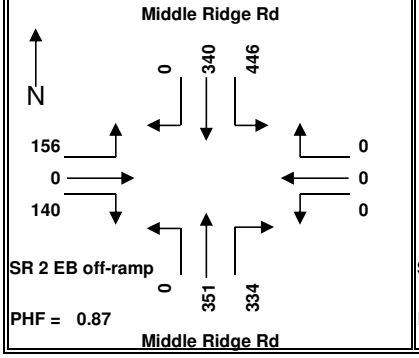
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.000	Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 64

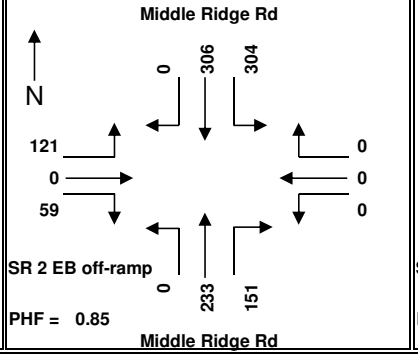
Start Time	Middle Ridge Rd Northbound				Middle Ridge Rd Southbound				Total North South	SR 2 EB off-ramp Eastbound				Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	0	3031	2064	192	3721	4029	0	250	12845	1255	0	879	81	0	0	0	0	2134	14979
	Percent Trucks =			4%	Percent Trucks =			3%		Percent Trucks =			4%	Percent Trucks =			0%		
ADT	0	4281	2915	271	5256	5691	0	353	18143	1773	0	1242	114	0	0	0	0	3014	21157
7:00 AM	0	52	74	3	114	71	0	5	311	36	0	24	3	0	0	0	0	60	371
7:15 AM	0	84	73	6	115	71	0	1	343	35	0	39	7	0	0	0	0	74	417
7:30 AM	0	89	110	3	131	96	0	7	426	33	0	49	3	0	0	0	0	82	508
7:45 AM	0	95	85	6	105	94	0	2	379	49	0	35	2	0	0	0	0	84	463
8:00 AM	0	83	66	7	95	79	0	6	323	39	0	17	2	0	0	0	0	56	379
8:15 AM	0	74	63	8	88	80	0	10	305	30	0	19	1	0	0	0	0	49	354
8:30 AM	0	67	60	7	101	48	0	13	276	26	0	17	5	0	0	0	0	43	319
8:45 AM	0	57	46	3	88	48	0	5	239	36	0	13	2	0	0	0	0	49	288
9:00 AM	0	48	57	3	81	40	0	5	226	30	0	8	3	0	0	0	0	38	264
9:15 AM	0	45	40	4	71	51	0	7	207	28	0	15	1	0	0	0	0	43	250
9:30 AM	0	55	43	6	57	67	0	3	222	28	0	24	1	0	0	0	0	52	274
9:45 AM	0	75	47	7	77	45	0	3	244	31	0	9	2	0	0	0	0	40	284
10:00 AM	0	65	26	11	74	69	0	8	234	28	0	12	1	0	0	0	0	40	274
10:15 AM	0	50	42	2	70	59	0	8	221	28	0	10	2	0	0	0	0	38	259
10:30 AM	0	55	42	9	73	46	0	6	216	22	0	15	4	0	0	0	0	37	253
10:45 AM	0	56	39	3	69	53	0	12	217	31	0	10	3	0	0	0	0	41	258
11:00 AM	0	45	43	7	76	70	0	5	234	20	0	5	1	0	0	0	0	25	259
11:15 AM	0	46	32	4	63	71	0	9	212	15	0	11	1	0	0	0	0	26	238
11:30 AM	0	61	31	4	54	71	0	3	217	32	0	9	2	0	0	0	0	41	258
11:45 AM	0	46	28	4	63	60	0	4	197	27	0	15	1	0	0	0	0	42	239
12:00 PM	0	41	35	2	70	78	0	7	224	32	0	19	1	0	0	0	0	51	275
12:15 PM	0	56	33	3	83	70	0	6	242	28	0	16	3	0	0	0	0	44	286
12:30 PM	0	64	54	5	87	95	0	6	300	34	0	13	2	0	0	0	0	47	347
12:45 PM	0	72	29	4	64	63	0	4	228	27	0	11	1	0	0	0	0	38	266
1:00 PM	0	54	20	3	59	79	0	6	212	24	0	18	2	0	0	0	0	42	254
1:15 PM	0	57	31	3	58	75	0	4	221	23	0	18	0	0	0	0	0	41	262
1:30 PM	0	58	39	4	83	72	0	3	252	28	0	23	2	0	0	0	0	51	303
1:45 PM	0	48	29	2	84	86	0	9	247	25	0	20	3	0	0	0	0	45	292
2:00 PM	0	61	25	4	91	100	0	7	277	32	0	21	2	0	0	0	0	53	330
2:15 PM	0	75	32	8	98	103	0	4	308	25	0	28	2	0	0	0	0	53	361
2:30 PM	0	62	34	1	74	118	0	6	288	17	0	23	2	0	0	0	0	40	328
2:45 PM	0	89	42	3	68	117	0	8	316	29	0	23	1	0	0	0	0	52	368
3:00 PM	0	104	42	4	86	108	0	11	340	21	0	23	1	0	0	0	0	44	384
3:15 PM	0	100	48	7	85	124	0	12	357	18	0	22	2	0	0	0	0	40	397
3:30 PM	0	78	47	3	89	128	0	6	342	22	0	16	0	0	0	0	0	38	380
3:45 PM	0	66	49	5	100	151	0	12	366	37	0	13	1	0	0	0	0	50	416
4:00 PM	0	80	51	3	105	153	0	2	389	21	0	19	1	0	0	0	0	40	429
4:15 PM	0	89	47	4	89	147	0	3	372	27	0	38	1	0	0	0	0	65	437
4:30 PM	0	83	64	4	115	178	0	1	440	28	0	32	4	0	0	0	0	60	500
4:45 PM	0	113	61	2	103	147	0	4	424	23	0	22	0	0	0	0	0	45	469
5:00 PM	0	106	53	7	95	152	0	3	406	40	0	34	1	0	0	0	0	74	480
5:15 PM	0	95	47	0	81	169	0	1	392	41	0	31	1	0	0	0	0	72	464
5:30 PM	0	74	51	3	97	123	0	1	345	29	0	21	0	0	0	0	0	50	395
5:45 PM	0	58	54	1	92	104	0	2	308	20	0	19	1	0	0	0	0	39	347

AM Peak Hour
7:15 AM to 8:15 AM



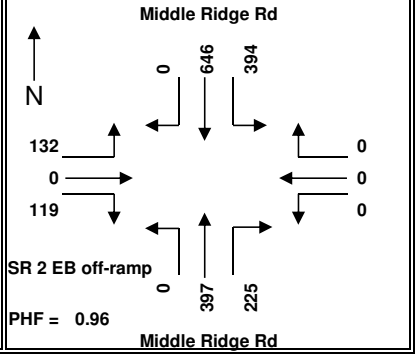
PHF = 0.87

Midday Peak Hour
12:00 PM to 1:00 PM



PHF = 0.85

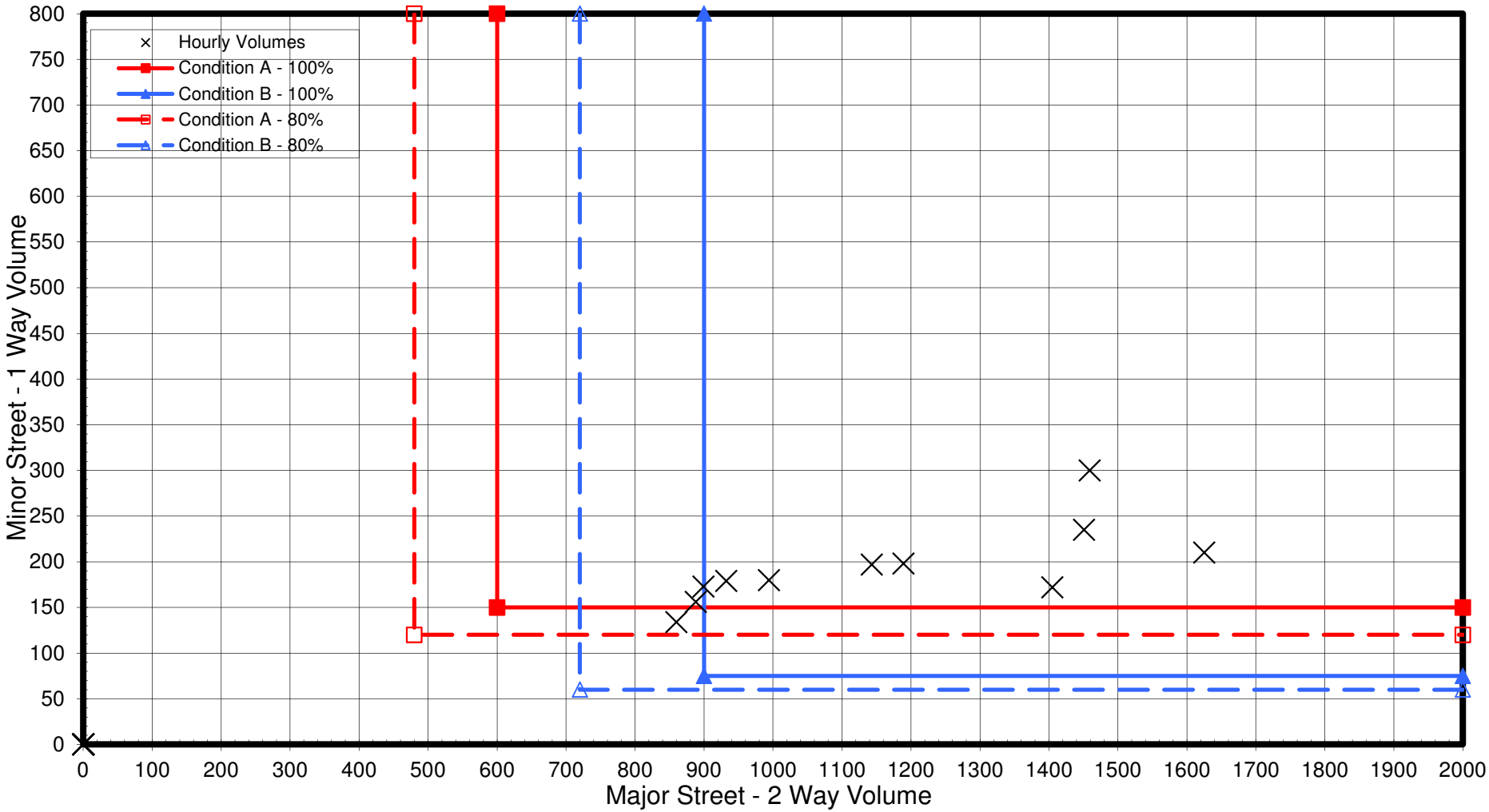
PM Peak Hour
4:30 PM to 5:30 PM



PHF = 0.96

Notes:

WARRANT 1 - Conditions A & B



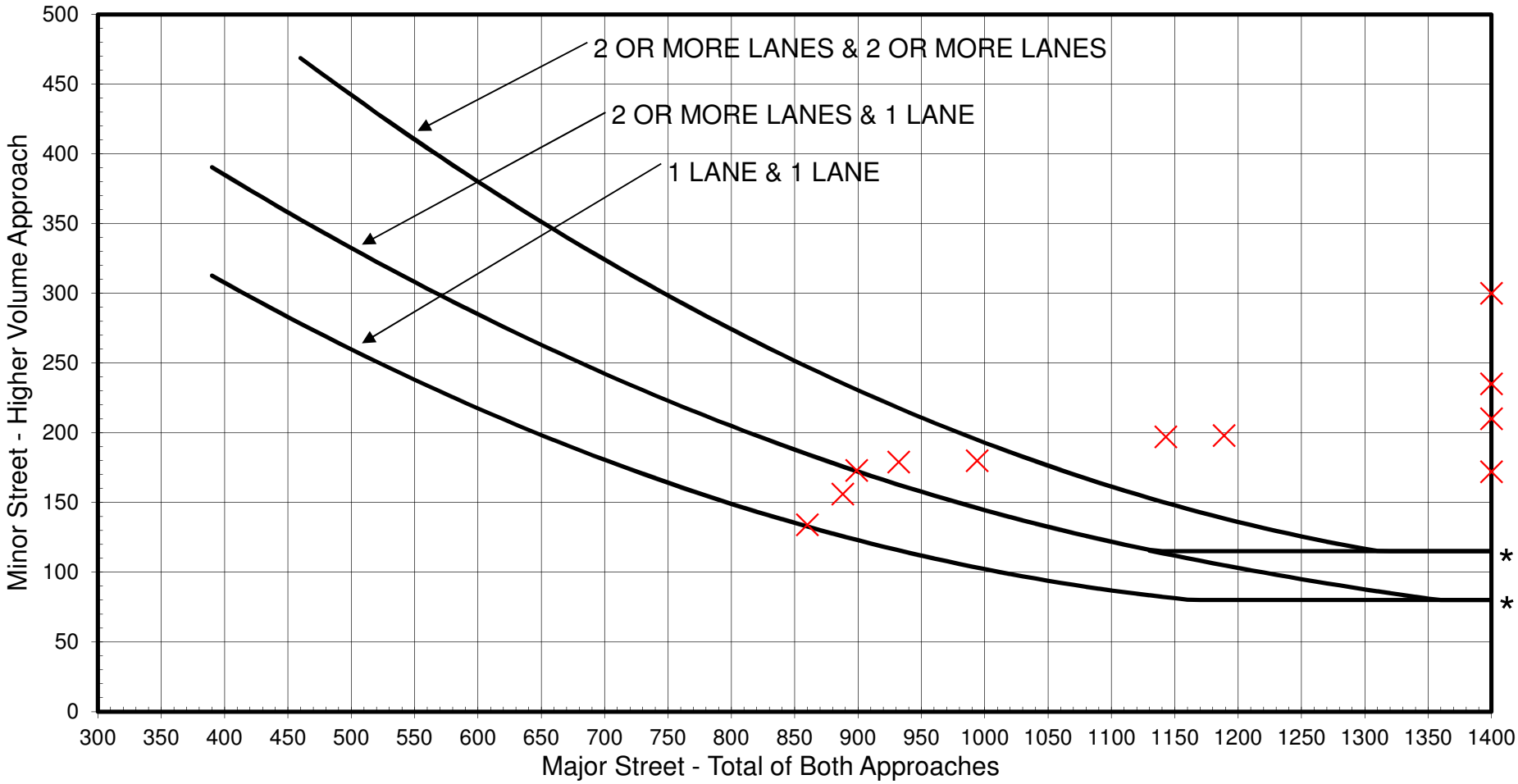
		Lanes
Major Road =	Middle Ridge Rd	2
Minor Road =	SR 2 EB off-ramp	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	10 Hours Meet	Yes
Condition B (100%) =	8 Hours Meet	Yes
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Middle Ridge Rd	2
Minor Road =	SR 2 EB off-ramp	1
Road Location =	Urban	

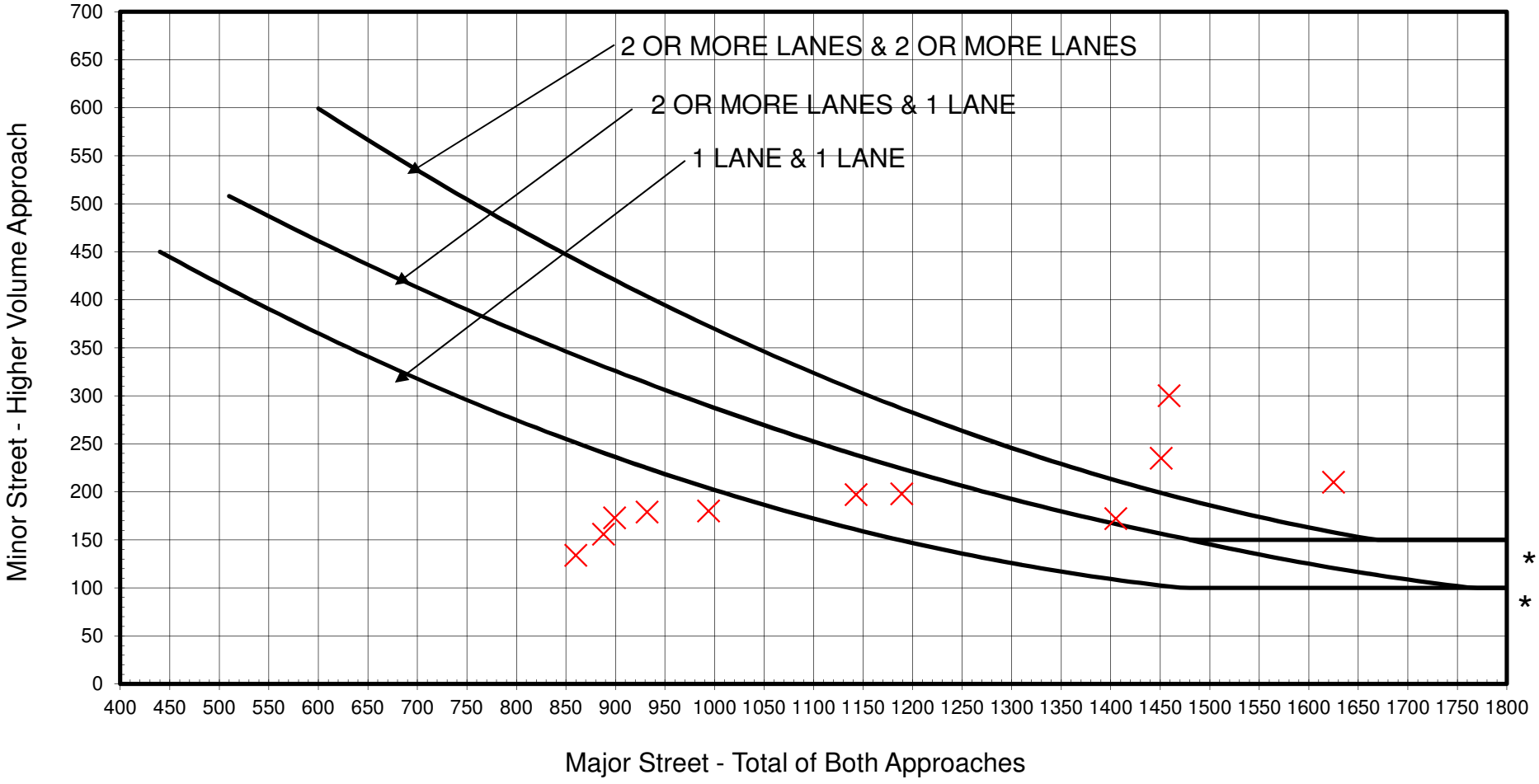
		Warrant Met?
Warrant 2 (Urban) =	9 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Middle Ridge Rd	2
Minor Road =	SR 2 EB off-ramp	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	4 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.65

Traffic Signal Warrant Analysis Results

Intersection 65
SR 2 Westbound Interchange Ramp and Middle Ridge Rd

SIGNAL WARRANT

INTERSECTION: Middle Ridge Rd and SR 2 WB off-ramp
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 0
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1			X	500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		1241	0	401	X	X	X	X	X	X	X	X					X	X
8AM-9AM		1016	0	334	X	X	X	X	X	X	X	X					X	X
9AM-10AM		823	0	256	X	X	X	X		X	X	X					X	
10AM-11AM		833	0	296	X	X	X	X		X	X	X					X	
11AM-NOON		847	0	341	X	X	X	X		X	X	X					X	
NOON-1PM		972	0	362	X	X	X	X	X	X	X	X					X	X
1PM-2PM		892	0	377	X	X	X	X		X	X	X					X	X
2PM-3PM		1092	0	546	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1258	0	646	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1329	0	790	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1207	0	819	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					11		11		7		11						11	8
WARRANT SATISFIED?					**YES**		**YES**		**NO**		**YES**						**YES**	**YES**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Middle Ridge Rd and SR 2 WB off-ramp
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

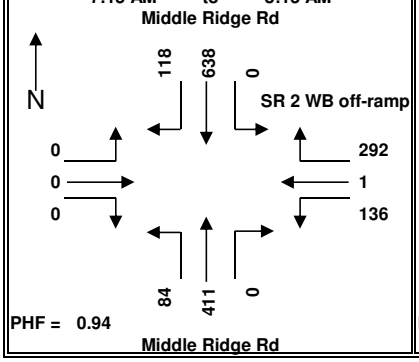
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.000	Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

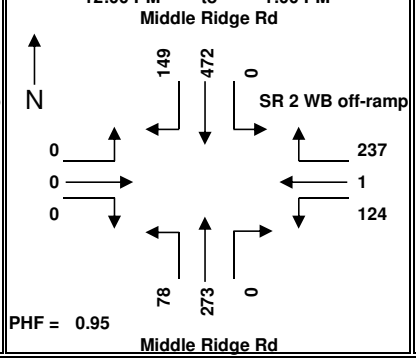
ADT Factor: 1.41
Intersection ID: 65

Start Time	Middle Ridge Rd Northbound				Middle Ridge Rd Southbound				Total North South	Eastbound				SR 2 WB off-ramp Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	1014	3261	0	199	0	5735	1500	251	11510	0	0	0	0	1898	21	3249	149	5168	16678
	Percent Trucks =			5%	Percent Trucks =			3%		Percent Trucks =			0%	Percent Trucks =			3%		
ADT	1432	4606	0	281	0	8100	2119	355	16257	0	0	0	0	2681	30	4589	210	7299	23556
7:00 AM	21	68	0	8	0	157	16	4	262	0	0	0	0	22	0	54	2	76	338
7:15 AM	24	98	0	7	0	170	29	2	321	0	0	0	0	34	0	76	5	110	431
7:30 AM	22	100	0	4	0	196	28	7	346	0	0	0	0	35	0	67	3	102	448
7:45 AM	23	110	0	5	0	141	38	3	312	0	0	0	0	33	1	79	5	113	425
8:00 AM	15	103	0	7	0	131	23	8	272	0	0	0	0	34	0	70	5	104	376
8:15 AM	19	87	0	4	0	130	22	10	258	0	0	0	0	26	1	46	3	73	331
8:30 AM	24	65	0	7	0	114	26	12	229	0	0	0	0	15	0	65	7	80	309
8:45 AM	20	80	0	2	0	124	33	4	257	0	0	0	0	21	0	56	4	77	334
9:00 AM	13	65	0	4	0	98	16	3	192	0	0	0	0	13	0	45	4	58	250
9:15 AM	18	61	0	4	0	98	13	5	190	0	0	0	0	13	1	46	5	60	250
9:30 AM	19	54	0	8	0	109	20	2	202	0	0	0	0	23	0	43	4	66	268
9:45 AM	17	93	0	11	0	106	23	3	239	0	0	0	0	17	0	55	6	72	311
10:00 AM	23	67	0	8	0	115	26	11	231	0	0	0	0	25	1	38	2	64	295
10:15 AM	19	62	0	7	0	92	22	8	195	0	0	0	0	35	2	38	3	75	270
10:30 AM	15	57	0	9	0	93	29	7	194	0	0	0	0	24	1	55	4	80	274
10:45 AM	18	70	0	5	0	107	18	6	213	0	0	0	0	28	0	49	5	77	290
11:00 AM	13	52	0	5	0	104	30	3	199	0	0	0	0	36	0	42	3	78	277
11:15 AM	16	48	0	3	0	92	28	8	184	0	0	0	0	26	0	62	1	88	272
11:30 AM	23	69	0	6	0	99	40	6	231	0	0	0	0	38	2	53	4	93	324
11:45 AM	18	62	0	3	0	112	41	9	233	0	0	0	0	23	0	59	5	82	315
12:00 PM	23	47	0	2	0	113	40	4	223	0	0	0	0	27	1	56	5	84	307
12:15 PM	17	68	0	5	0	126	46	8	257	0	0	0	0	41	0	52	1	93	350
12:30 PM	16	80	0	7	0	133	34	9	263	0	0	0	0	30	0	59	4	89	352
12:45 PM	22	78	0	4	0	100	29	5	229	0	0	0	0	26	0	70	2	96	325
1:00 PM	14	53	0	2	0	109	31	8	207	0	0	0	0	31	0	47	4	78	285
1:15 PM	18	71	0	3	0	98	34	7	221	0	0	0	0	36	1	44	1	81	302
1:30 PM	21	60	0	2	0	112	29	6	222	0	0	0	0	40	1	75	5	116	338
1:45 PM	19	67	0	4	0	134	22	7	242	0	0	0	0	30	0	72	5	102	344
2:00 PM	17	81	0	8	0	149	36	6	283	0	0	0	0	53	2	64	3	119	402
2:15 PM	20	70	0	4	0	151	36	6	277	0	0	0	0	47	0	87	2	134	411
2:30 PM	13	69	0	2	0	129	33	4	244	0	0	0	0	55	0	94	5	149	393
2:45 PM	29	92	0	5	0	130	37	11	288	0	0	0	0	57	0	87	1	144	432
3:00 PM	37	82	0	1	0	151	55	10	325	0	0	0	0	54	1	74	2	129	454
3:15 PM	35	78	0	7	0	135	56	8	304	0	0	0	0	66	0	108	4	174	478
3:30 PM	32	78	0	3	0	156	52	7	318	0	0	0	0	57	0	99	5	156	474
3:45 PM	29	70	0	3	0	165	47	8	311	0	0	0	0	73	1	113	5	187	498
4:00 PM	26	82	0	1	0	198	60	3	366	0	0	0	0	62	0	98	2	160	526
4:15 PM	38	64	0	3	0	155	44	3	301	0	0	0	0	81	0	100	1	181	482
4:30 PM	37	82	0	7	0	169	49	1	337	0	0	0	0	109	0	110	3	219	556
4:45 PM	44	90	0	2	0	149	42	1	325	0	0	0	0	90	0	140	5	230	555
5:00 PM	42	101	0	5	0	159	54	2	356	0	0	0	0	82	1	137	2	220	576
5:15 PM	33	96	0	0	0	160	43	1	332	0	0	0	0	89	1	139	1	229	561
5:30 PM	31	69	0	2	0	147	38	3	285	0	0	0	0	80	2	115	0	197	482
5:45 PM	21	62	0	0	0	119	32	2	234	0	0	0	0	61	1	111	1	173	407

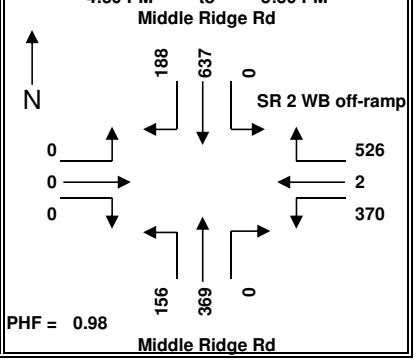
AM Peak Hour
7:15 AM to 8:15 AM



Midday Peak Hour
12:00 PM to 1:00 PM

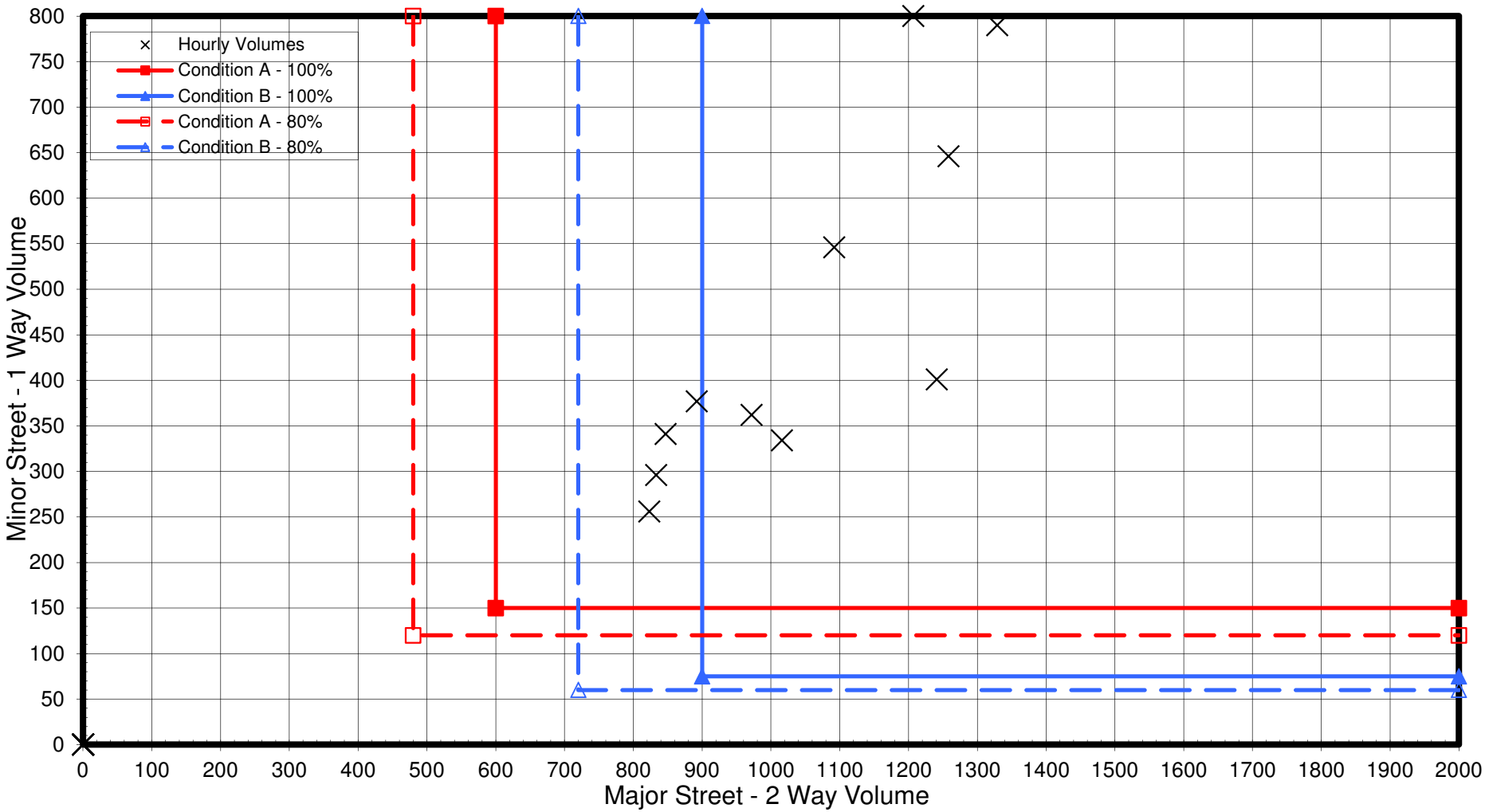


PM Peak Hour
4:30 PM to 5:30 PM



Notes:

WARRANT 1 - Conditions A & B



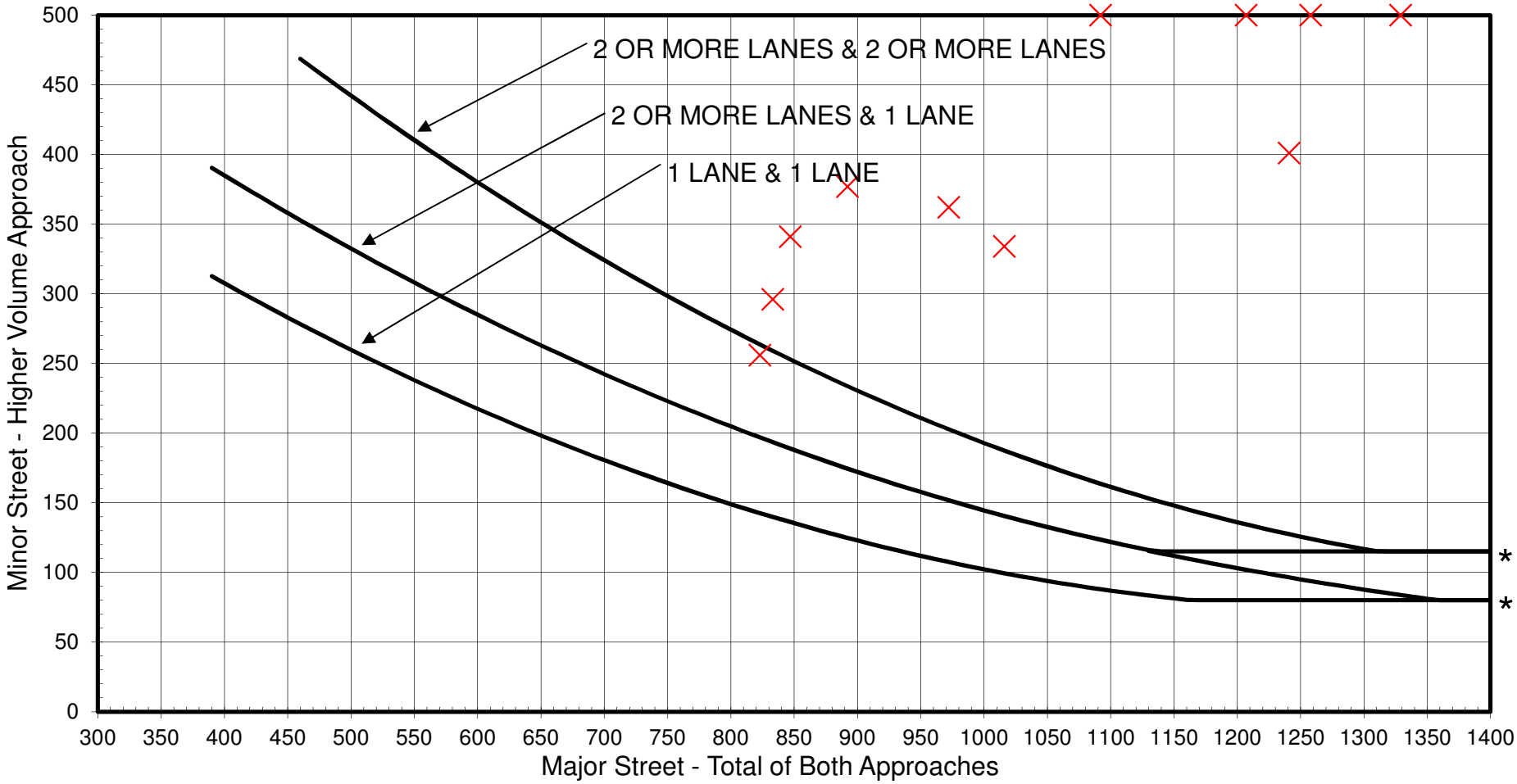
		Lanes
Major Road =	Middle Ridge Rd	2
Minor Road =	SR 2 WB off-ramp	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	11 Hours Meet	Yes
Condition B (100%) =	7 Hours Meet	No
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Middle Ridge Rd	2
Minor Road =	SR 2 WB off-ramp	1
Road Location =	Urban	

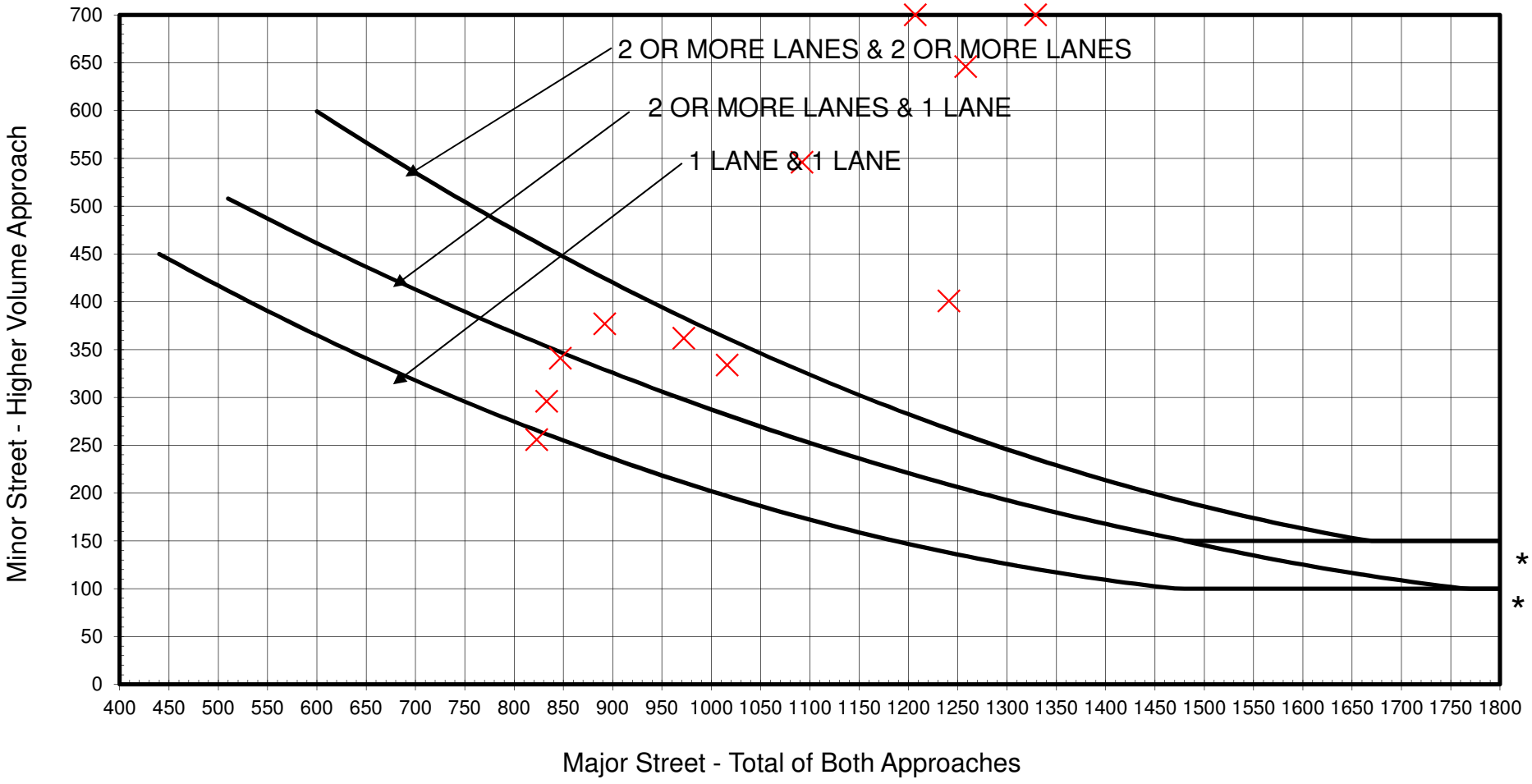
		Warrant Met?
Warrant 2 (Urban) =	11 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Middle Ridge Rd	2
Minor Road =	SR 2 WB off-ramp	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	8 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 4, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.66

Traffic Signal Warrant Analysis Results

Intersection 66
Pearl Ave and E 34th St

SIGNAL WARRANT

INTERSECTION: Pearl Ave and E 34th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :1 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1	X	X	X	500	150	400	120	750	75	600	60						
NORM	2+				600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		164	46	44														
8AM-9AM		186	35	25														
9AM-10AM		175	33	25														
10AM-11AM		224	30	14														
11AM-NOON		213	32	24														
NOON-1PM		228	33	23														
1PM-2PM		262	33	30														
2PM-3PM		303	42	31														
3PM-4PM		363	56	41														
4PM-5PM		348	41	37														
5PM-6PM		339	43	28														
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		0		0		0						0	0
WARRANT SATISFIED?					**NO**		**NO**		**NO**		**NO**						**NO**	**NO**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH
ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*.....** **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
***Warrant Satisfied?*.....** **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*.....** **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*.....** **NO**

15-Minute Count Data
Pearl Ave and E 34th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

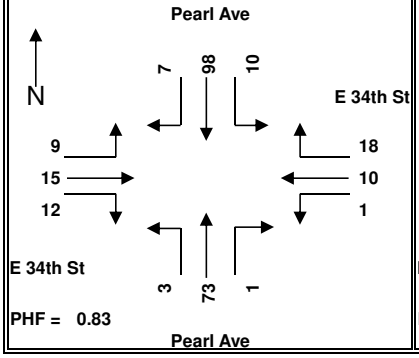
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
1.083	Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

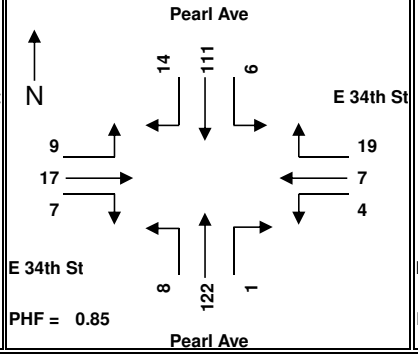
ADT Factor: 1.42
Intersection ID: 66

Start Time	Pearl Ave Northbound				Pearl Ave Southbound				Total North South	E 34th St Eastbound				E 34th St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	67	1151	45	69	127	1265	150	93	2805	143	200	81	8	50	123	149	46	746	3551
	Percent Trucks =			5%	Percent Trucks =			6%		Percent Trucks =			2%	Percent Trucks =			14%		
ADT	103	1768	69	106	195	1943	230	143	4309	220	307	124	12	77	189	229	71	1146	5455
7:00 AM	1	10	0	0	5	23	5	1	44	4	8	2	0	2	4	1	1	21	65
7:15 AM	0	13	0	1	3	20	3	4	39	1	8	3	1	1	5	4	2	22	61
7:30 AM	3	18	0	4	0	19	3	0	43	2	4	5	0	3	7	5	2	26	69
7:45 AM	1	18	0	1	2	15	2	2	38	3	4	2	0	1	6	5	5	21	59
8:00 AM	2	9	1	2	3	18	2	4	35	2	3	3	0	4	0	2	2	14	49
8:15 AM	0	15	1	4	3	19	4	3	42	3	2	1	0	1	3	0	0	10	52
8:30 AM	1	20	0	1	5	24	1	5	51	3	3	2	0	0	3	6	2	17	68
8:45 AM	1	25	0	5	3	29	0	2	58	2	5	6	1	0	2	4	2	19	77
9:00 AM	0	12	1	1	1	21	1	1	36	2	5	1	0	1	3	5	1	17	53
9:15 AM	1	16	0	1	1	24	5	3	47	2	2	3	0	0	2	3	1	12	59
9:30 AM	0	15	0	2	0	27	1	2	43	2	7	1	0	0	1	4	1	15	58
9:45 AM	2	21	0	2	3	23	0	1	49	3	5	0	0	1	4	1	0	14	63
10:00 AM	0	21	2	2	1	21	4	3	49	4	2	0	0	1	1	0	0	8	57
10:15 AM	1	22	0	3	3	24	6	4	56	4	3	0	0	0	2	2	1	11	67
10:30 AM	4	23	1	1	4	21	4	3	57	5	2	1	0	1	0	4	2	13	70
10:45 AM	2	33	2	5	3	22	0	2	62	3	4	2	0	0	2	1	1	12	74
11:00 AM	1	14	0	3	3	21	2	3	41	6	3	0	0	1	2	1	1	13	54
11:15 AM	1	16	1	2	5	19	2	1	44	4	3	2	0	0	2	3	0	14	58
11:30 AM	1	20	1	3	0	27	3	5	52	3	3	0	1	2	2	2	3	12	64
11:45 AM	0	33	1	3	3	36	3	4	76	2	4	2	0	3	2	4	1	17	93
12:00 PM	2	30	0	0	0	33	7	5	72	3	4	0	0	0	4	3	1	14	86
12:15 PM	1	25	0	1	1	24	4	1	55	3	4	1	0	0	0	2	1	10	65
12:30 PM	2	18	1	2	4	31	0	1	56	2	3	3	0	0	2	4	2	14	70
12:45 PM	0	17	0	1	3	25	0	3	45	4	5	1	0	2	2	4	1	18	63
1:00 PM	1	32	1	1	0	29	3	2	66	3	2	2	0	2	1	6	2	16	82
1:15 PM	4	25	0	0	3	27	2	2	61	2	4	3	0	0	3	4	1	16	77
1:30 PM	2	45	0	1	2	27	5	2	81	4	5	2	0	0	0	4	0	15	96
1:45 PM	1	20	0	0	1	28	4	1	54	0	6	0	0	2	3	5	3	16	70
2:00 PM	1	26	0	1	3	29	7	2	66	4	5	5	0	1	6	2	2	23	89
2:15 PM	2	33	1	0	1	28	6	0	71	7	1	2	1	1	6	5	0	22	93
2:30 PM	2	32	2	2	3	27	6	1	72	5	1	0	0	1	1	3	1	11	83
2:45 PM	2	40	4	1	1	42	5	1	94	3	6	3	0	2	1	2	1	17	111
3:00 PM	5	36	2	2	2	43	6	4	94	5	9	1	0	1	2	5	0	23	117
3:15 PM	3	38	2	3	11	45	5	2	104	2	10	4	0	1	9	2	3	28	132
3:30 PM	1	34	1	1	4	35	4	0	79	2	8	3	1	2	4	7	0	26	105
3:45 PM	0	41	3	1	4	34	4	3	86	4	5	3	1	1	3	4	0	20	106
4:00 PM	0	37	4	1	6	35	3	5	85	3	3	3	1	1	4	4	0	18	103
4:15 PM	4	34	0	1	3	39	3	1	83	6	8	0	0	0	2	4	0	20	103
4:30 PM	5	33	2	0	5	38	7	0	90	2	3	0	0	3	3	6	0	17	107
4:45 PM	0	27	2	0	7	49	5	2	90	4	8	1	0	2	5	3	0	23	113
5:00 PM	1	37	3	0	3	46	3	1	93	2	5	1	0	3	3	5	0	19	112
5:15 PM	0	32	4	2	4	30	5	0	75	5	7	2	0	2	0	0	0	16	91
5:30 PM	1	39	1	0	1	29	1	1	72	5	4	3	0	1	2	4	0	19	91
5:45 PM	5	46	1	2	4	39	4	0	99	3	4	2	1	0	4	4	0	17	116

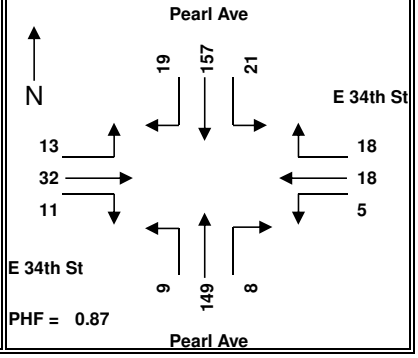
AM Peak Hour
8:30 AM to 9:30 AM



Midday Peak Hour
1:00 PM to 2:00 PM

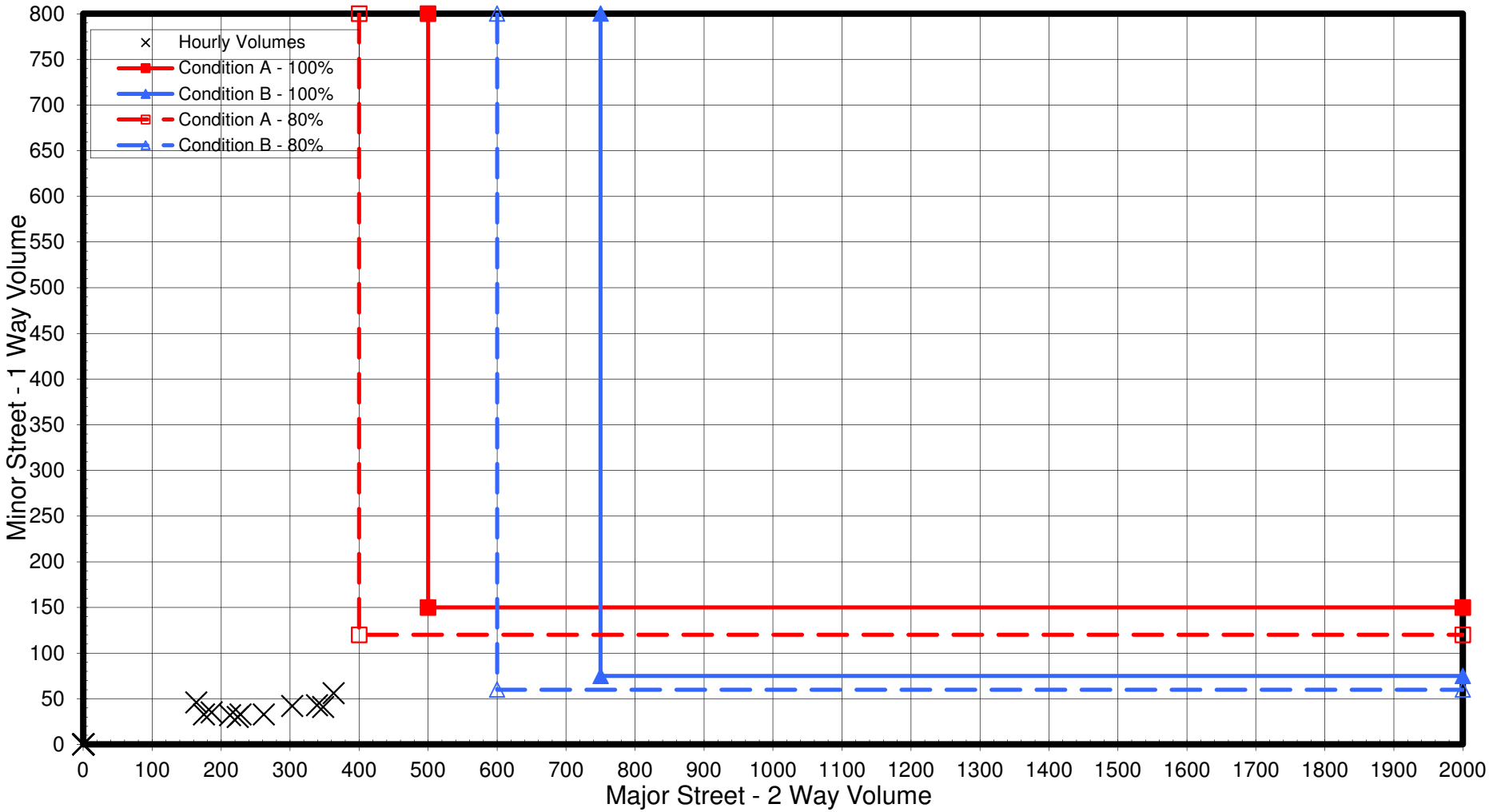


PM Peak Hour
3:00 PM to 4:00 PM



Notes:

WARRANT 1 - Conditions A & B



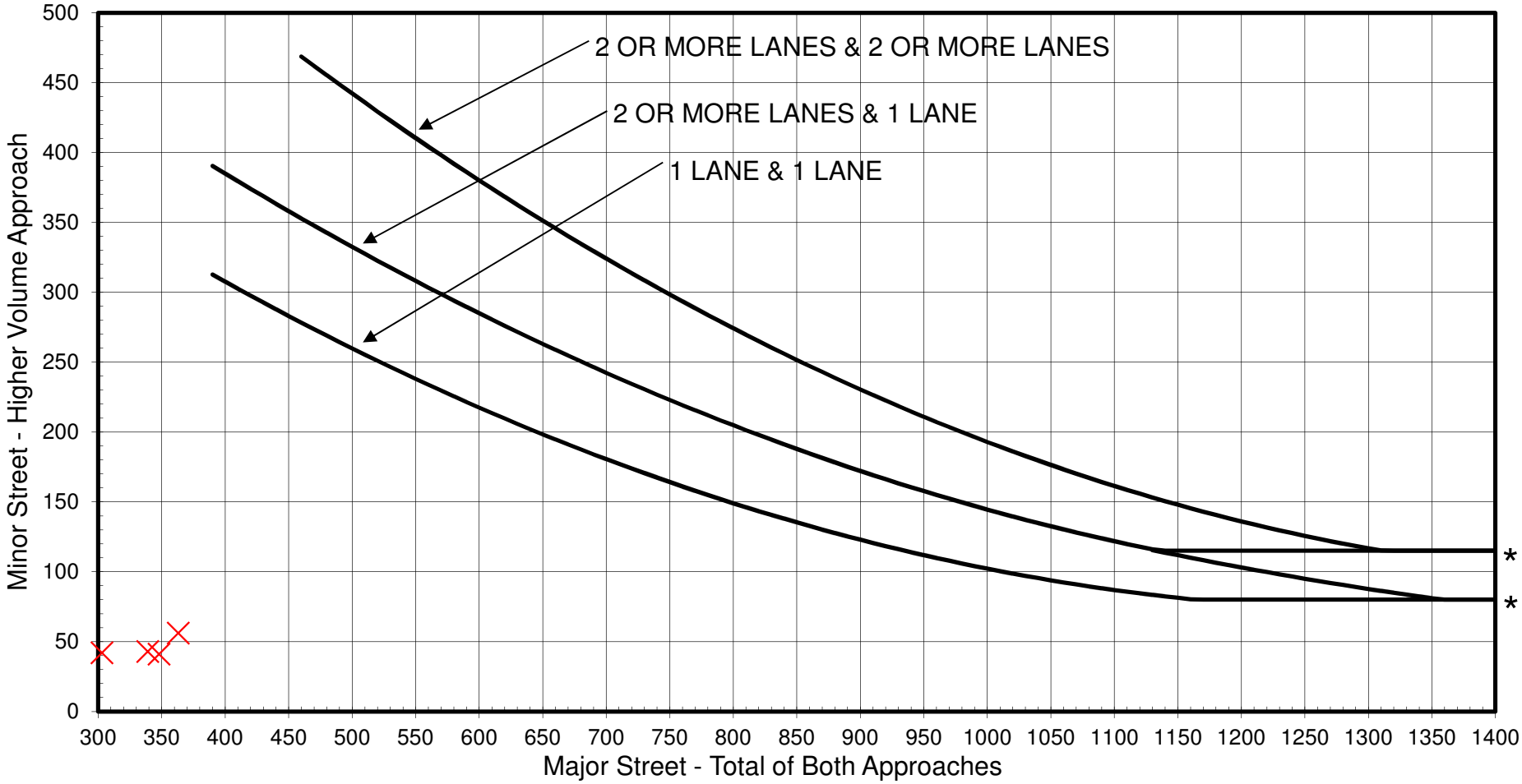
		Lanes
Major Road =	Pearl Ave	1
Minor Road =	E 34th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	0 Hours Meet	No
Condition A (80%) =	0 Hours Meet	No
Condition B (80%) =	0 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Pearl Ave	1
Minor Road =	E 34th St	1
Road Location =	Urban	

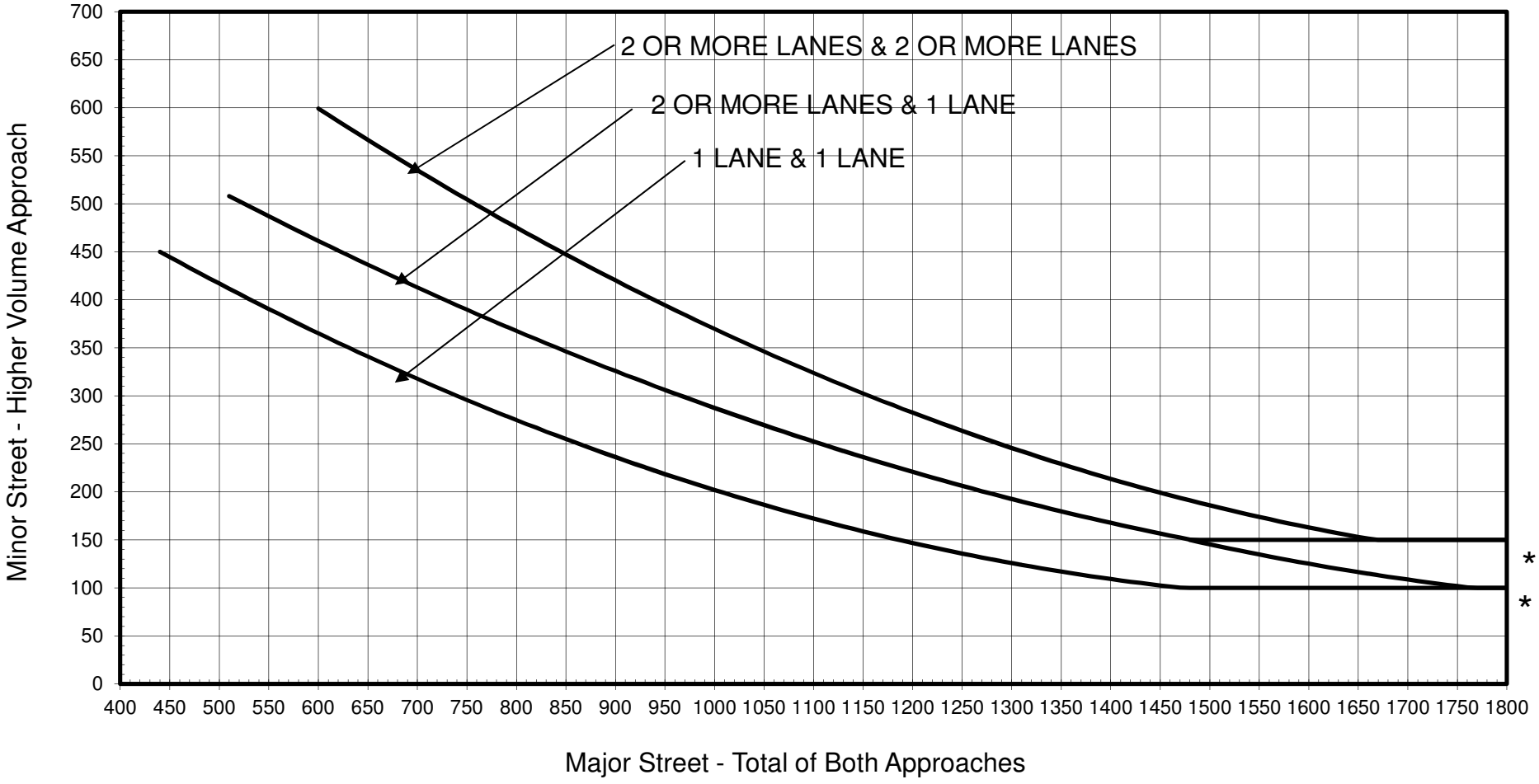
		Warrant Met?
Warrant 2 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Pearl Ave	1
Minor Road =	E 34th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Tuesday	December 9, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.67

Traffic Signal Warrant Analysis Results

Intersection 67
Pearl Ave and N Ridge Rd

SIGNAL WARRANT

INTERSECTION: Pearl Ave and N Ridge Rd
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 1 S :0 E: 2 W: 2
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X		500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		876	0	140	X		X	X		X	X	X						
8AM-9AM		893	0	106	X		X			X	X	X						
9AM-10AM		845	0	102	X		X			X	X	X						
10AM-11AM		892	0	109	X		X			X	X	X						
11AM-NOON		1002	0	125	X		X	X	X	X	X	X						
NOON-1PM		1170	0	131	X		X	X	X	X	X	X					X	
1PM-2PM		1226	0	154	X	X	X	X	X	X	X	X					X	
2PM-3PM		1581	0	165	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1875	0	184	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1848	0	188	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1360	0	161	X	X	X	X	X	X	X	X					X	
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					5		8		7		11						6	3
WARRANT SATISFIED?					**NO**		**YES**		**NO**		**YES**						**YES**	**YES**

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Pearl Ave and N Ridge Rd
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

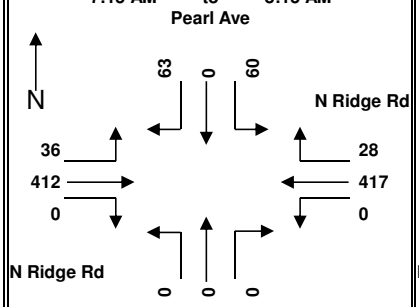
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.964	Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

ADT Factor: 1.41
Intersection ID: 67

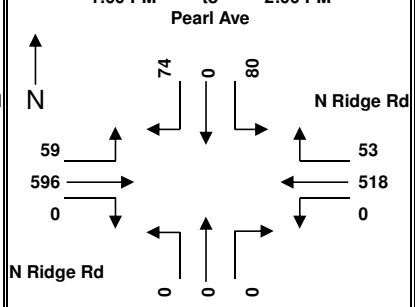
Start Time	Northbound LT	Northbound THRU	Northbound RT	Northbound Truck	Pearl Ave Southbound LT	Pearl Ave Southbound THRU	Pearl Ave Southbound RT	Pearl Ave Southbound Truck	Total North South	N Ridge Rd Eastbound LT	N Ridge Rd Eastbound THRU	N Ridge Rd Eastbound RT	N Ridge Rd Eastbound Truck	N Ridge Rd Westbound LT	N Ridge Rd Westbound THRU	N Ridge Rd Westbound RT	N Ridge Rd Westbound Truck	Total East West	Total All Dir.
Totals	0	0	0	0	803	0	762	41	1565	682	5585	0	140	0	6659	642	186	13568	15133
	Percent Trucks =			0%	Percent Trucks =			3%		Percent Trucks =			2%	Percent Trucks =			3%		
ADT	0	0	0	0	1093	0	1038	56	2131	929	7604	0	191	0	9067	874	253	18474	20605
7:00 AM	0	0	0	0	16	0	21	2	37	7	70	0	3	0	94	9	2	180	217
7:15 AM	0	0	0	0	21	0	17	4	38	8	98	0	4	0	111	6	7	223	261
7:30 AM	0	0	0	0	18	0	23	1	41	8	99	0	3	0	109	6	2	222	263
7:45 AM	0	0	0	0	11	0	13	0	24	10	103	0	2	0	132	6	5	251	275
8:00 AM	0	0	0	0	10	0	10	2	20	10	112	0	7	0	65	10	7	197	217
8:15 AM	0	0	0	0	12	0	9	1	21	8	106	0	8	0	90	9	8	213	234
8:30 AM	0	0	0	0	28	0	10	2	38	11	114	0	11	0	117	9	10	251	289
8:45 AM	0	0	0	0	19	0	8	1	27	10	106	0	4	0	111	5	2	232	259
9:00 AM	0	0	0	0	12	0	15	0	27	14	94	0	4	0	89	5	2	202	229
9:15 AM	0	0	0	0	17	0	12	1	29	10	90	0	4	0	77	9	3	186	215
9:30 AM	0	0	0	0	13	0	10	0	23	7	131	0	4	0	82	3	3	223	246
9:45 AM	0	0	0	0	11	0	12	0	23	9	121	0	4	0	98	6	2	234	257
10:00 AM	0	0	0	0	9	0	12	0	21	8	77	0	2	0	93	6	3	184	205
10:15 AM	0	0	0	0	12	0	13	1	25	14	118	0	1	0	80	20	8	232	257
10:30 AM	0	0	0	0	12	0	20	0	32	11	98	0	1	0	115	7	6	231	263
10:45 AM	0	0	0	0	15	0	16	1	31	10	116	0	0	0	107	12	4	245	276
11:00 AM	0	0	0	0	18	0	13	1	31	18	87	0	4	0	105	12	3	222	253
11:15 AM	0	0	0	0	14	0	10	0	24	13	120	0	2	0	114	9	7	256	280
11:30 AM	0	0	0	0	16	0	15	0	31	11	122	0	4	0	125	13	5	271	302
11:45 AM	0	0	0	0	23	0	16	2	39	19	106	0	2	0	111	17	4	253	292
12:00 PM	0	0	0	0	15	0	20	1	35	17	122	0	1	0	145	17	2	301	336
12:15 PM	0	0	0	0	19	0	11	3	30	10	130	0	3	0	119	17	4	276	306
12:30 PM	0	0	0	0	17	0	15	1	32	19	128	0	3	0	124	14	2	285	317
12:45 PM	0	0	0	0	17	0	17	0	34	19	129	0	4	0	143	17	6	308	342
1:00 PM	0	0	0	0	14	0	16	2	30	15	120	0	4	0	136	14	1	285	315
1:15 PM	0	0	0	0	22	0	12	0	34	13	144	0	3	0	117	16	5	290	324
1:30 PM	0	0	0	0	28	0	28	1	56	15	189	0	5	0	124	12	1	340	396
1:45 PM	0	0	0	0	16	0	18	0	34	16	143	0	2	0	141	11	3	311	345
2:00 PM	0	0	0	0	25	0	16	0	41	16	132	0	3	0	172	10	6	330	371
2:15 PM	0	0	0	0	13	0	20	0	33	16	145	0	2	0	206	18	1	385	418
2:30 PM	0	0	0	0	15	0	31	1	46	14	127	0	1	0	243	18	3	402	448
2:45 PM	0	0	0	0	26	0	19	0	45	25	160	0	3	0	262	17	10	464	509
3:00 PM	0	0	0	0	17	0	36	1	53	24	187	0	10	0	247	22	10	480	533
3:15 PM	0	0	0	0	26	0	21	3	47	24	130	0	6	0	284	26	4	464	511
3:30 PM	0	0	0	0	19	0	17	0	36	18	145	0	3	0	290	22	14	475	511
3:45 PM	0	0	0	0	24	0	24	3	48	23	133	0	3	0	276	24	7	456	504
4:00 PM	0	0	0	0	21	0	28	2	49	24	184	0	0	0	239	24	1	471	520
4:15 PM	0	0	0	0	14	0	26	1	40	32	156	0	4	0	243	25	2	456	496
4:30 PM	0	0	0	0	31	0	17	0	48	28	177	0	1	0	284	24	2	513	561
4:45 PM	0	0	0	0	26	0	25	1	51	25	166	0	1	0	195	22	1	408	459
5:00 PM	0	0	0	0	29	0	27	1	56	17	130	0	1	0	181	25	3	353	409
5:15 PM	0	0	0	0	21	0	17	1	38	19	167	0	3	0	160	27	0	373	411
5:30 PM	0	0	0	0	26	0	18	0	44	15	133	0	0	0	153	27	4	328	372
5:45 PM	0	0	0	0	15	0	8	0	23	22	120	0	0	0	150	14	1	306	329

AM Peak Hour
7:15 AM to 8:15 AM



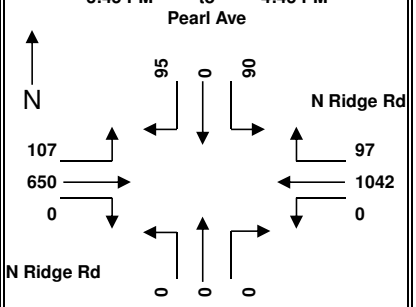
PHF = 0.92

Midday Peak Hour
1:00 PM to 2:00 PM



PHF = 0.87

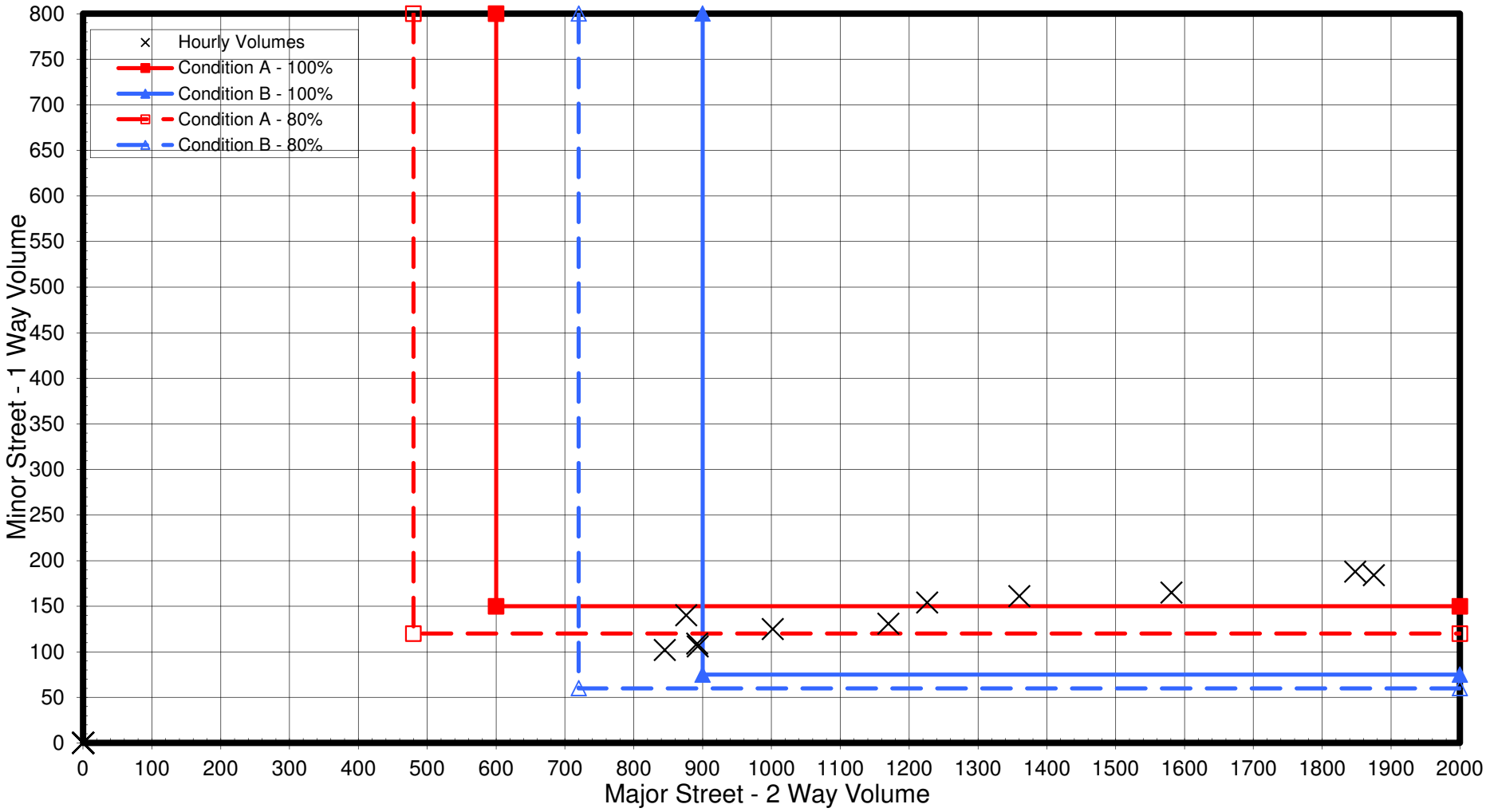
PM Peak Hour
3:45 PM to 4:45 PM



PHF = 0.93

Notes:

WARRANT 1 - Conditions A & B



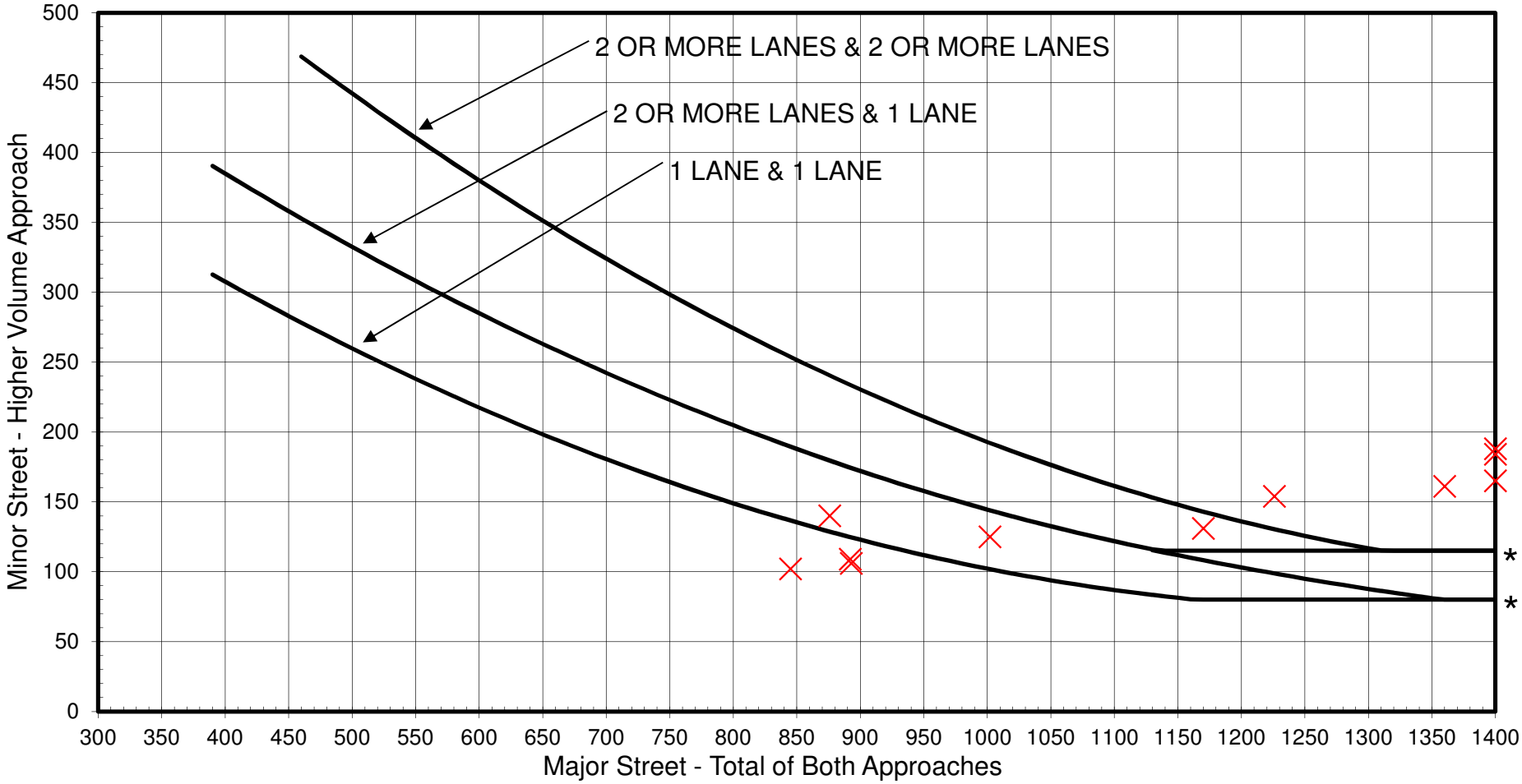
		Lanes
Major Road =	N Ridge Rd	2
Minor Road =	Pearl Ave	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	5 Hours Meet	No
Condition B (100%) =	7 Hours Meet	No
Condition A (80%) =	8 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	N Ridge Rd	2
Minor Road =	Pearl Ave	1
Road Location =	Urban	

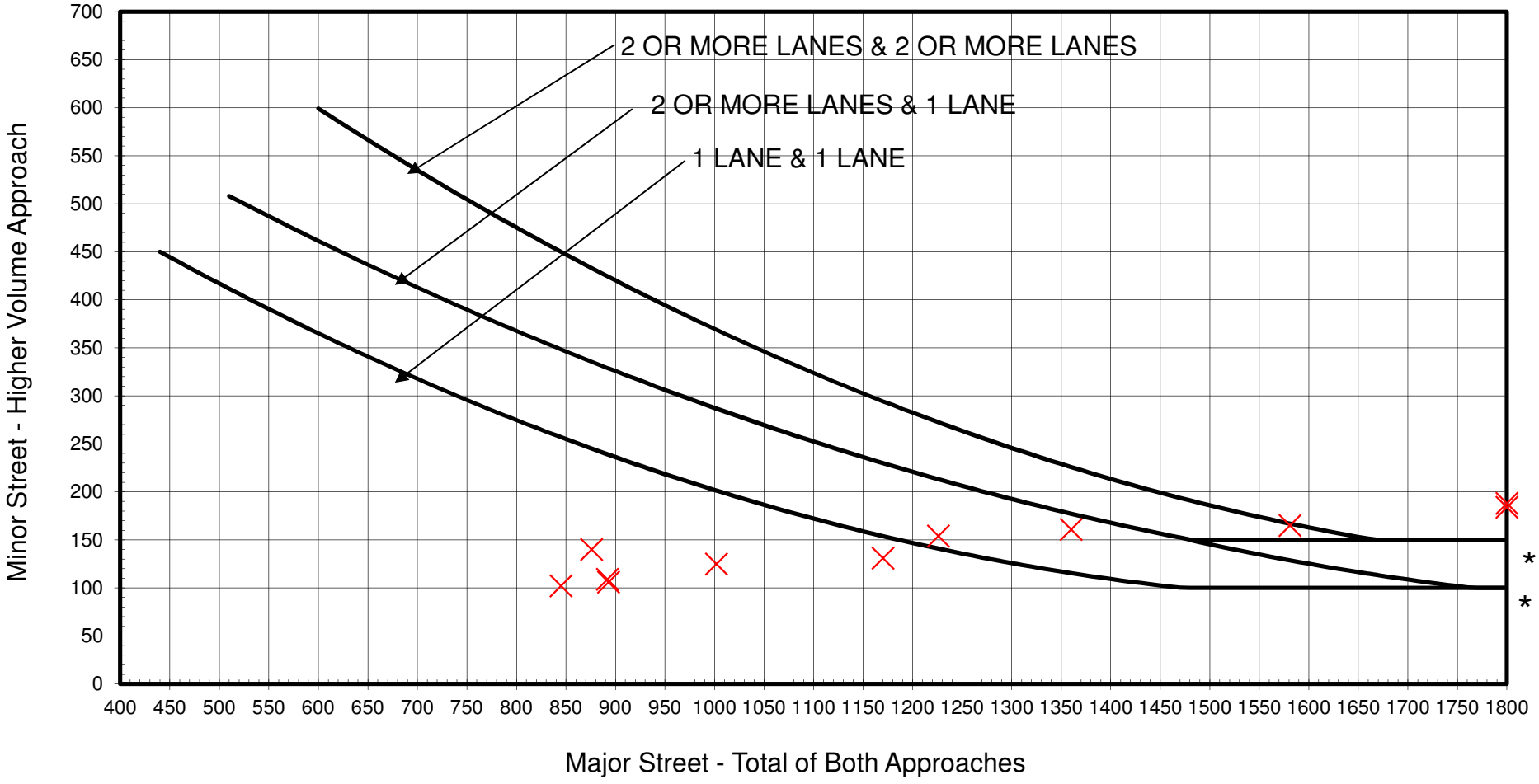
		Warrant Met?
Warrant 2 (Urban) =	6 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	N Ridge Rd	2
Minor Road =	Pearl Ave	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	3 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.68

Traffic Signal Warrant Analysis Results

Intersection 68
Grove Ave (SR 57) and E 36th St

SIGNAL WARRANT

INTERSECTION: Grove Ave and E 36th St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Urban
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 0 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? NO
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
*	1		X		500	150	400	120	750	75	600	60						
NORM	2+	X			600	200	480	160	900	100	720	80						
*	1				350	105	280	84	525	53	420	42						
70%	2+				420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		930	137	0	X		X	X	X	X	X	X						
8AM-9AM		720	99	0	X		X			X	X	X						
9AM-10AM		567	29	0			X											
10AM-11AM		594	41	0			X											
11AM-NOON		655	60	0	X		X					X						
NOON-1PM		795	73	0	X		X				X	X						
1PM-2PM		757	97	0	X		X			X	X	X						
2PM-3PM		1081	115	0	X		X		X	X	X	X						
3PM-4PM		1220	131	0	X		X	X	X	X	X	X					X	
4PM-5PM		1039	115	0	X		X		X	X	X	X						
5PM-6PM		1106	54	0	X		X		X		X							
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					0		2		4		7						1	0
WARRANT SATISFIED?					NO		NO		NO		NO						NO	NO

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH
ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can
be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be
prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Grove Ave and E 36th St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

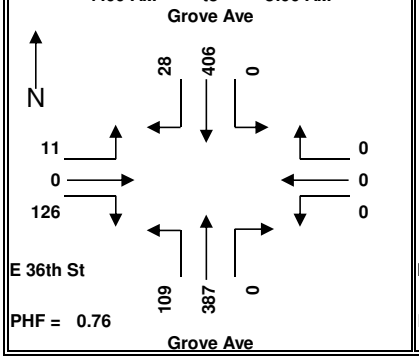
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.964	Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:

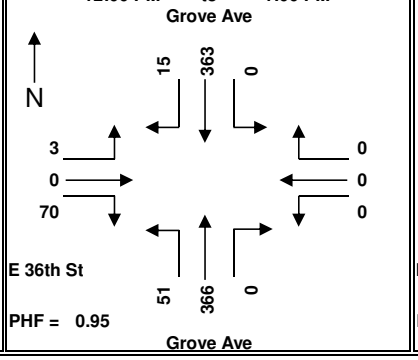
ADT Factor: 1.41
Intersection ID: 68

Start Time	Grove Ave Northbound				Grove Ave Southbound				Total North South	E 36th St Eastbound				Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	838	4185	0	266	0	4179	262	222	9464	153	0	798	17	0	0	0	0	951	10415
	Percent Trucks =			5%	Percent Trucks =			5%		Percent Trucks =			2%	Percent Trucks =			0%		
ADT	1141	5698	0	362	0	5690	357	302	12886	208	0	1087	23	0	0	0	0	1295	14181
7:00 AM	23	85	0	11	0	130	6	1	244	1	0	45	1	0	0	0	0	46	290
7:15 AM	40	127	0	9	0	132	4	2	303	5	0	44	1	0	0	0	0	49	352
7:30 AM	29	98	0	11	0	83	5	7	215	3	0	23	0	0	0	0	0	26	241
7:45 AM	17	77	0	7	0	61	13	7	168	2	0	14	0	0	0	0	0	16	184
8:00 AM	16	68	0	9	0	85	4	13	173	1	0	17	0	0	0	0	0	18	191
8:15 AM	15	65	0	6	0	84	3	7	167	3	0	21	1	0	0	0	0	24	191
8:30 AM	24	86	0	8	0	79	13	4	202	10	0	22	1	0	0	0	0	32	234
8:45 AM	13	71	0	3	0	84	10	5	178	2	0	23	0	0	0	0	0	25	203
9:00 AM	22	73	0	10	0	65	3	4	163	0	0	11	1	0	0	0	0	11	174
9:15 AM	22	64	0	4	0	52	2	1	140	0	0	9	0	0	0	0	0	9	149
9:30 AM	12	56	0	2	0	56	4	3	128	1	0	6	1	0	0	0	0	7	135
9:45 AM	11	68	0	2	0	53	4	0	136	0	0	2	0	0	0	0	0	2	138
10:00 AM	6	67	0	5	0	69	3	2	145	2	0	9	0	0	0	0	0	11	156
10:15 AM	8	69	0	8	0	76	1	5	154	2	0	7	0	0	0	0	0	9	163
10:30 AM	15	69	0	7	0	58	4	5	146	2	0	5	0	0	0	0	0	7	153
10:45 AM	7	70	0	6	0	68	4	7	149	4	0	10	0	0	0	0	0	14	163
11:00 AM	17	72	0	9	0	81	4	7	174	0	0	10	0	0	0	0	0	10	184
11:15 AM	15	69	0	3	0	60	5	2	149	0	0	15	1	0	0	0	0	15	164
11:30 AM	13	73	0	9	0	69	6	4	161	1	0	17	0	0	0	0	0	18	179
11:45 AM	10	68	0	3	0	92	1	7	171	0	0	17	0	0	0	0	0	17	188
12:00 PM	8	96	0	11	0	103	3	15	210	1	0	17	0	0	0	0	0	18	228
12:15 PM	16	94	0	6	0	77	3	3	190	0	0	21	0	0	0	0	0	21	211
12:30 PM	16	90	0	6	0	102	5	7	213	0	0	11	0	0	0	0	0	11	224
12:45 PM	11	86	0	6	0	81	4	8	182	2	0	21	0	0	0	0	0	23	205
1:00 PM	13	102	0	6	0	70	7	5	192	6	0	23	0	0	0	0	0	29	221
1:15 PM	19	84	0	13	0	68	5	4	176	5	0	17	0	0	0	0	0	22	198
1:30 PM	8	76	0	4	0	99	4	6	187	5	0	19	0	0	0	0	0	24	211
1:45 PM	17	86	0	14	0	98	1	5	202	4	0	18	1	0	0	0	0	22	224
2:00 PM	24	100	0	5	0	135	4	7	263	2	0	31	0	0	0	0	0	33	296
2:15 PM	50	187	0	17	0	82	13	6	332	3	0	26	1	0	0	0	0	29	361
2:30 PM	23	115	0	2	0	95	7	10	240	5	0	29	1	0	0	0	0	34	274
2:45 PM	32	104	0	2	0	100	10	9	246	5	0	14	1	0	0	0	0	19	265
3:00 PM	22	119	0	10	0	158	9	7	308	15	0	20	3	0	0	0	0	35	343
3:15 PM	28	149	0	8	0	134	16	8	327	5	0	34	1	0	0	0	0	39	366
3:30 PM	36	117	0	4	0	126	11	7	290	6	0	22	0	0	0	0	0	28	318
3:45 PM	23	134	0	4	0	129	9	3	295	7	0	22	1	0	0	0	0	29	324
4:00 PM	18	101	0	6	0	160	4	7	283	5	0	23	0	0	0	0	0	28	311
4:15 PM	13	94	0	0	0	118	10	3	235	5	0	21	0	0	0	0	0	26	261
4:30 PM	14	118	0	2	0	130	4	2	266	5	0	20	0	0	0	0	0	25	291
4:45 PM	11	118	0	6	0	118	8	2	255	7	0	29	0	0	0	0	0	36	291
5:00 PM	21	137	0	1	0	133	10	0	301	6	0	14	1	0	0	0	0	20	321
5:15 PM	30	146	0	0	0	109	5	1	290	8	0	11	0	0	0	0	0	19	309
5:30 PM	20	124	0	0	0	95	5	2	244	2	0	1	0	0	0	0	0	3	247
5:45 PM	30	113	0	1	0	122	6	2	271	5	0	7	0	0	0	0	0	12	283

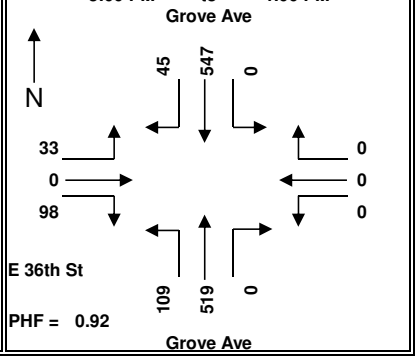
AM Peak Hour
7:00 AM to 8:00 AM



Midday Peak Hour
12:00 PM to 1:00 PM

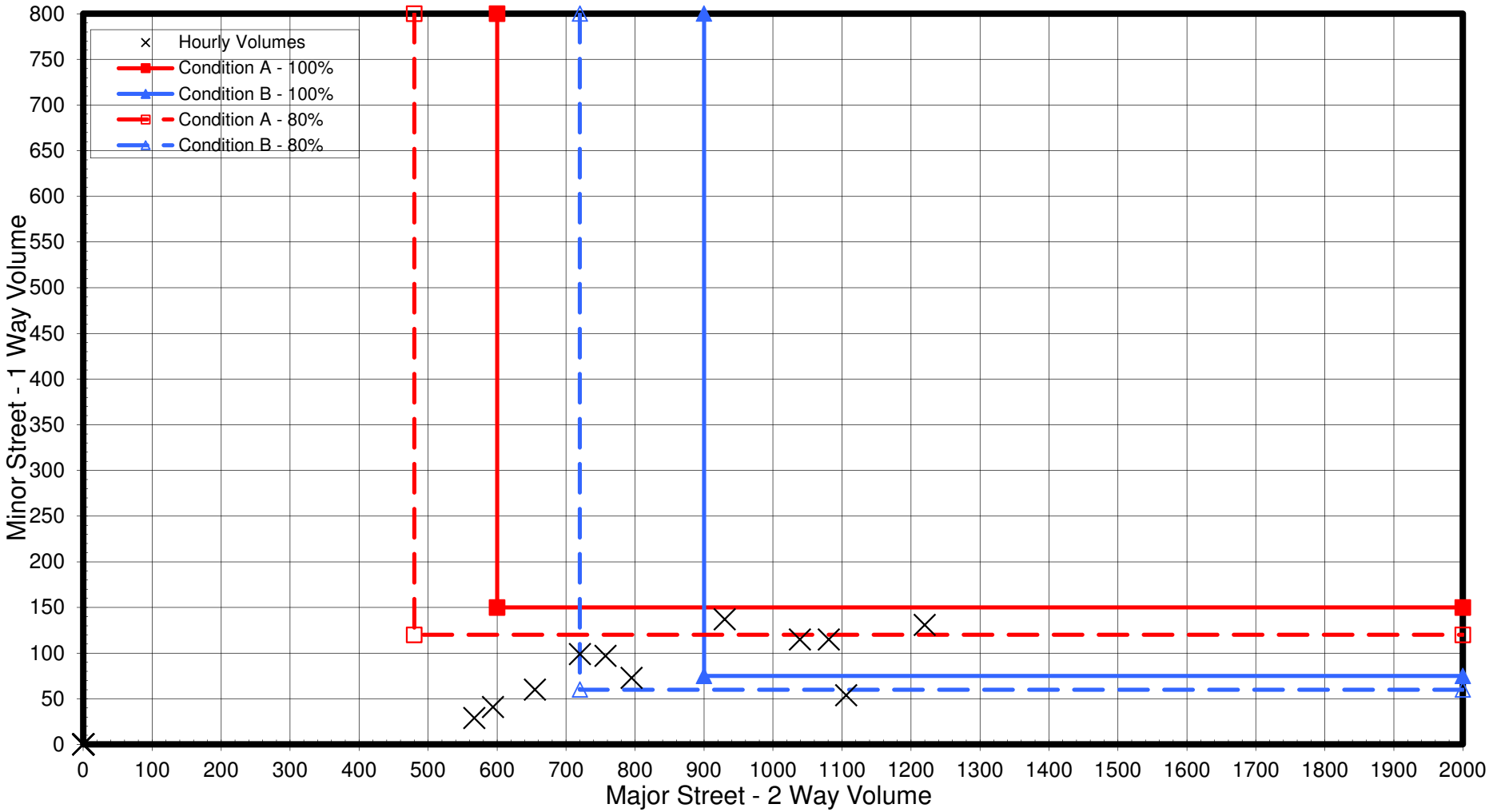


PM Peak Hour
3:00 PM to 4:00 PM



Notes:

WARRANT 1 - Conditions A & B



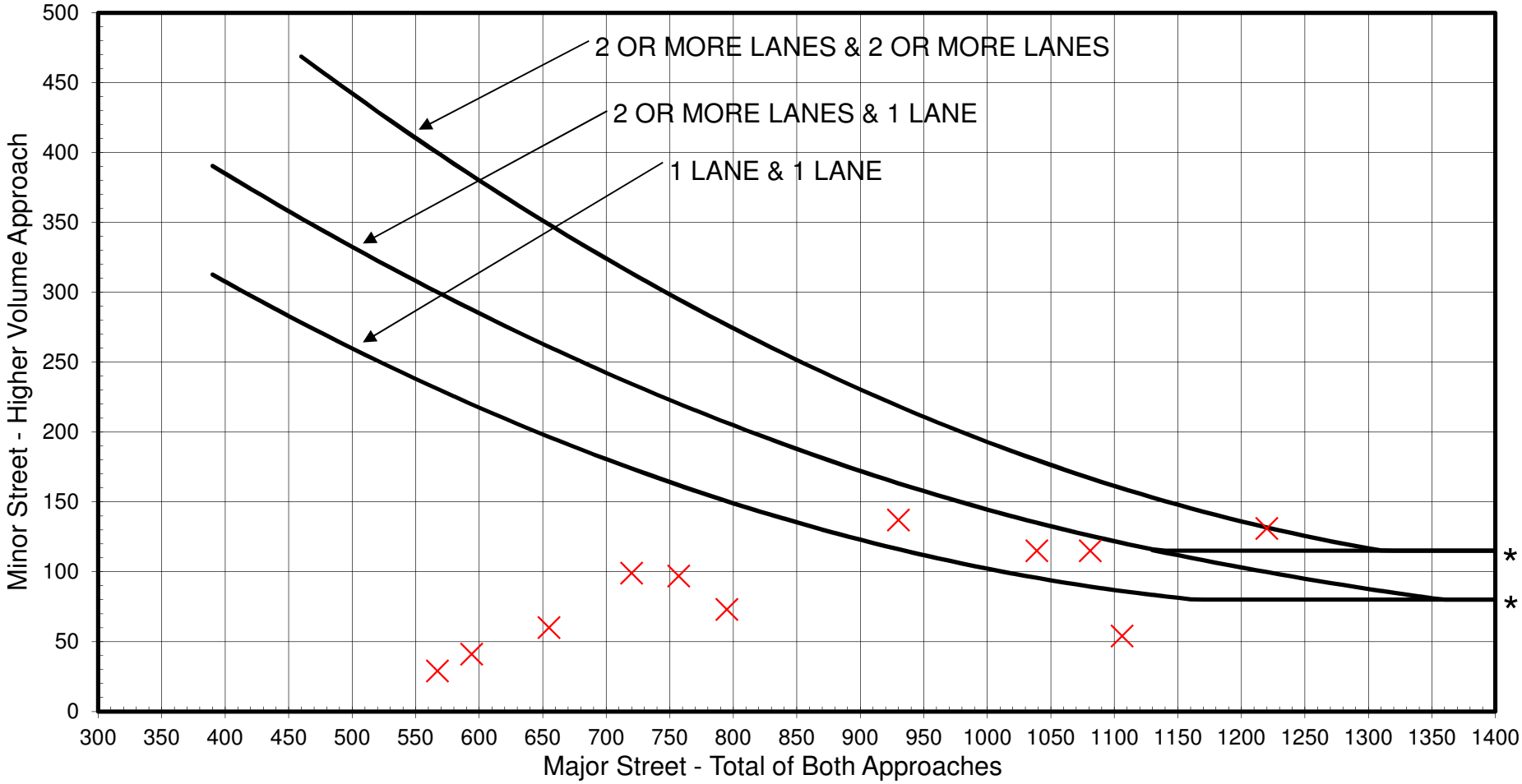
		Lanes
Major Road =	Grove Ave	2
Minor Road =	E 36th St	1
Road Location =	Urban	

		Warrant Met?
Condition A (100%) =	0 Hours Meet	No
Condition B (100%) =	4 Hours Meet	No
Condition A (80%) =	2 Hours Meet	No
Condition B (80%) =	7 Hours Meet	No

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.

		Lanes
Major Road =	Grove Ave	2
Minor Road =	E 36th St	1
Road Location =	Urban	

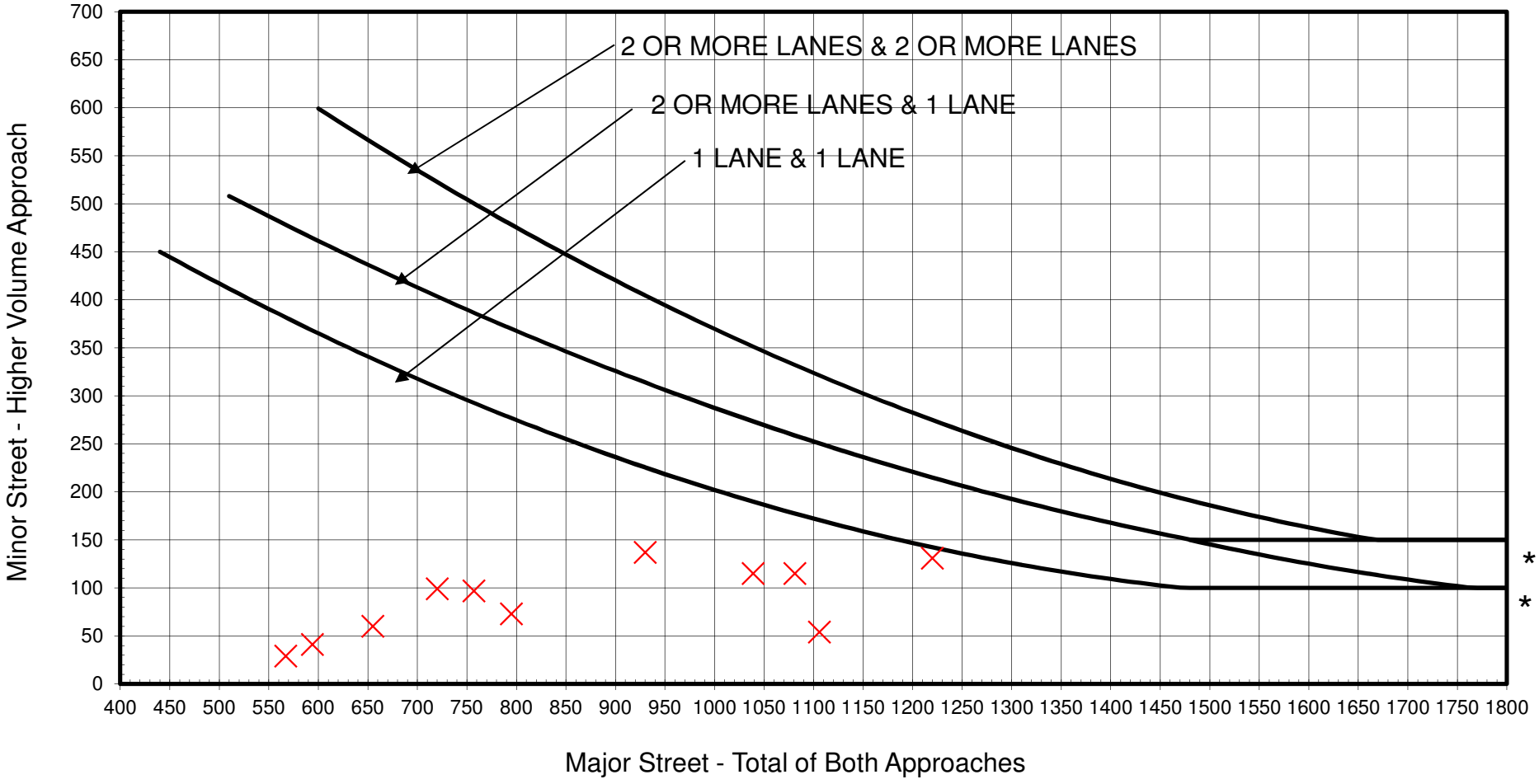
		Warrant Met?
Warrant 2 (Urban) =	1 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)



* NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE

		Lanes
Major Road =	Grove Ave	2
Minor Road =	E 36th St	1
Road Location =	Urban	

		Warrant Met?
Warrant 3 (Urban) =	0 Hours Meet	NO

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

Appendix B.69

Traffic Signal Warrant Analysis Results

Intersection 69
Grove Ave (SR 57) and Homewood Dr

SIGNAL WARRANT

INTERSECTION: Grove Ave and Homewood Dr
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Rural
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? YES
MAINTAINING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1				500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1		X	X	350	105	280	84	525	53	420	42						
	2+	X			420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		980	148	87	X	X	X	X	X	X	X	X					X	X
8AM-9AM		788	100	90	X		X	X	X	X	X	X					X	
9AM-10AM		703	66	78	X		X		X	X	X	X						
10AM-11AM		686	54	67	X		X		X	X	X	X						
11AM-NOON		760	51	51	X		X		X		X	X						
NOON-1PM		907	71	80	X		X		X	X	X	X					X	
1PM-2PM		925	84	92	X		X	X	X	X	X	X					X	
2PM-3PM		1257	86	142	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1250	107	89	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1190	132	85	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1233	89	111	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					5		7		10		11						8	5
WARRANT SATISFIED?					NO		NO		YES		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **NO**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
***Warrant Satisfied?*.....**

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
***Warrant Satisfied?*..... NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
***Warrant Satisfied?*..... NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
***Warrant Satisfied?*..... NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
***Warrant Satisfied?*..... NO**

15-Minute Count Data
Grove Ave and Homewood Dr
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

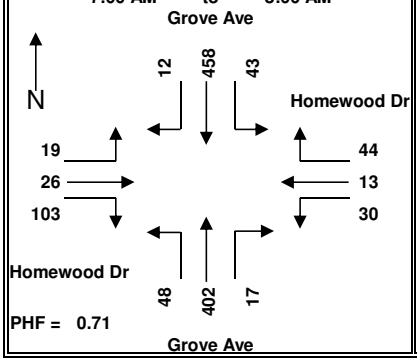
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.996	Thursday	December 18, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification: Rural Local Road

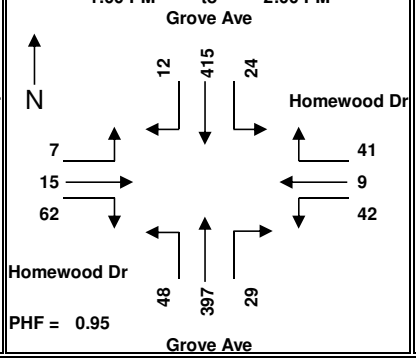
ADT Factor: 1.42
Intersection ID: 69

Start Time	Grove Ave Northbound				Grove Ave Southbound				Total North South	Homewood Dr Eastbound				Homewood Dr Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	524	4570	337	302	416	4620	212	257	10679	161	197	630	36	358	148	466	29	1960	12639
	Percent Trucks =			6%	Percent Trucks =			5%		Percent Trucks =			4%	Percent Trucks =			3%		
ADT	740	6456	476	427	588	6527	300	363	15087	227	278	890	51	506	209	658	41	2769	17856
7:00 AM	9	71	2	5	11	144	2	1	239	4	7	33	0	8	2	8	1	62	301
7:15 AM	22	139	6	12	24	158	3	1	352	4	9	34	0	8	5	14	3	74	426
7:30 AM	9	106	5	12	6	93	3	11	222	3	3	18	1	7	4	12	4	47	269
7:45 AM	8	86	4	8	2	63	4	4	167	8	7	18	5	7	2	10	1	52	219
8:00 AM	7	65	5	7	6	98	1	4	182	4	1	10	1	8	0	7	0	30	212
8:15 AM	2	76	3	5	9	78	7	7	175	5	5	14	2	3	3	10	1	40	215
8:30 AM	8	88	7	12	11	99	8	11	221	10	13	10	1	9	8	15	2	65	286
8:45 AM	4	84	8	7	11	95	8	7	210	4	8	16	3	8	10	9	0	55	265
9:00 AM	6	82	5	9	5	85	2	7	185	3	1	16	0	9	0	8	1	37	222
9:15 AM	7	83	7	4	7	74	1	6	179	0	3	13	0	4	0	6	0	26	205
9:30 AM	4	53	4	9	9	70	1	4	141	2	2	16	0	13	2	15	1	50	191
9:45 AM	9	94	9	9	10	74	2	9	198	2	3	5	0	7	1	13	0	31	229
10:00 AM	8	64	5	10	7	68	3	5	155	1	1	12	0	9	2	5	0	30	185
10:15 AM	9	106	3	11	3	74	1	11	196	1	4	6	1	6	1	5	1	23	219
10:30 AM	6	72	6	9	6	67	2	6	159	2	4	6	0	7	1	5	0	25	184
10:45 AM	7	67	10	7	9	80	3	6	176	5	1	11	0	7	5	14	2	43	219
11:00 AM	6	75	6	6	6	69	3	4	165	2	4	10	0	7	2	3	1	28	193
11:15 AM	7	74	1	2	6	81	5	4	174	1	1	7	0	6	1	0	0	16	190
11:30 AM	14	89	5	11	9	91	1	1	209	0	3	8	0	13	3	6	1	33	242
11:45 AM	7	80	5	7	9	109	2	6	212	1	0	14	0	6	3	1	0	25	237
12:00 PM	11	98	5	8	13	84	1	7	212	4	1	8	0	7	2	9	0	31	243
12:15 PM	6	97	5	2	12	92	4	6	216	5	3	8	1	8	3	7	0	34	250
12:30 PM	14	110	8	3	9	101	8	11	250	1	4	15	1	10	7	7	0	44	294
12:45 PM	15	85	9	7	4	115	1	11	229	5	3	14	0	11	2	7	0	42	271
1:00 PM	11	92	7	4	6	92	3	11	211	2	4	15	0	8	3	11	1	43	254
1:15 PM	14	113	5	10	4	100	2	4	238	2	2	16	0	12	2	9	0	43	281
1:30 PM	12	90	10	7	6	112	3	2	233	2	6	12	0	9	4	9	1	42	275
1:45 PM	11	102	7	10	8	111	4	6	243	1	3	19	0	13	0	12	0	48	291
2:00 PM	11	130	11	12	13	164	4	8	333	2	5	21	0	8	4	22	1	62	395
2:15 PM	31	190	14	16	14	107	5	7	361	3	9	12	1	12	10	39	4	85	446
2:30 PM	19	140	8	7	15	109	7	12	298	5	5	18	1	9	5	16	0	58	356
2:45 PM	12	130	6	10	3	106	8	7	265	3	3	0	0	6	3	8	1	23	288
3:00 PM	13	114	12	7	17	177	15	11	348	12	10	24	8	10	3	10	1	69	417
3:15 PM	23	133	10	9	8	140	8	4	322	9	1	12	2	6	7	14	0	49	371
3:30 PM	23	101	11	2	11	138	6	3	290	5	5	16	2	6	8	8	1	48	338
3:45 PM	17	121	11	2	8	126	7	4	290	2	6	5	1	7	4	6	0	30	320
4:00 PM	18	118	9	7	12	150	5	4	312	11	8	33	3	8	3	10	0	73	385
4:15 PM	13	126	7	4	13	126	7	7	292	2	4	11	1	6	2	10	0	35	327
4:30 PM	17	107	20	2	9	117	11	1	281	5	7	31	1	9	2	9	0	63	344
4:45 PM	15	131	14	1	21	114	10	5	305	2	5	13	0	12	2	12	0	46	351
5:00 PM	12	146	10	3	7	124	3	1	302	2	2	17	0	7	3	13	0	44	346
5:15 PM	20	140	8	2	15	132	8	2	323	5	4	9	0	8	5	21	0	52	375
5:30 PM	16	157	14	2	10	118	12	2	327	4	13	17	0	8	2	18	0	62	389
5:45 PM	11	145	10	3	12	95	8	6	281	5	4	7	0	6	7	13	0	42	323

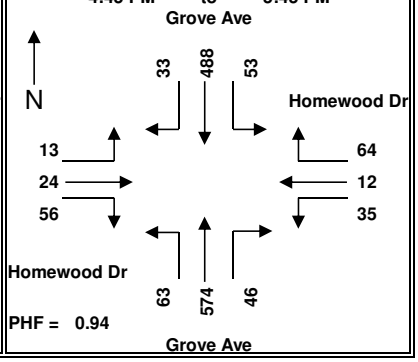
AM Peak Hour
7:00 AM to 8:00 AM



Midday Peak Hour
1:00 PM to 2:00 PM

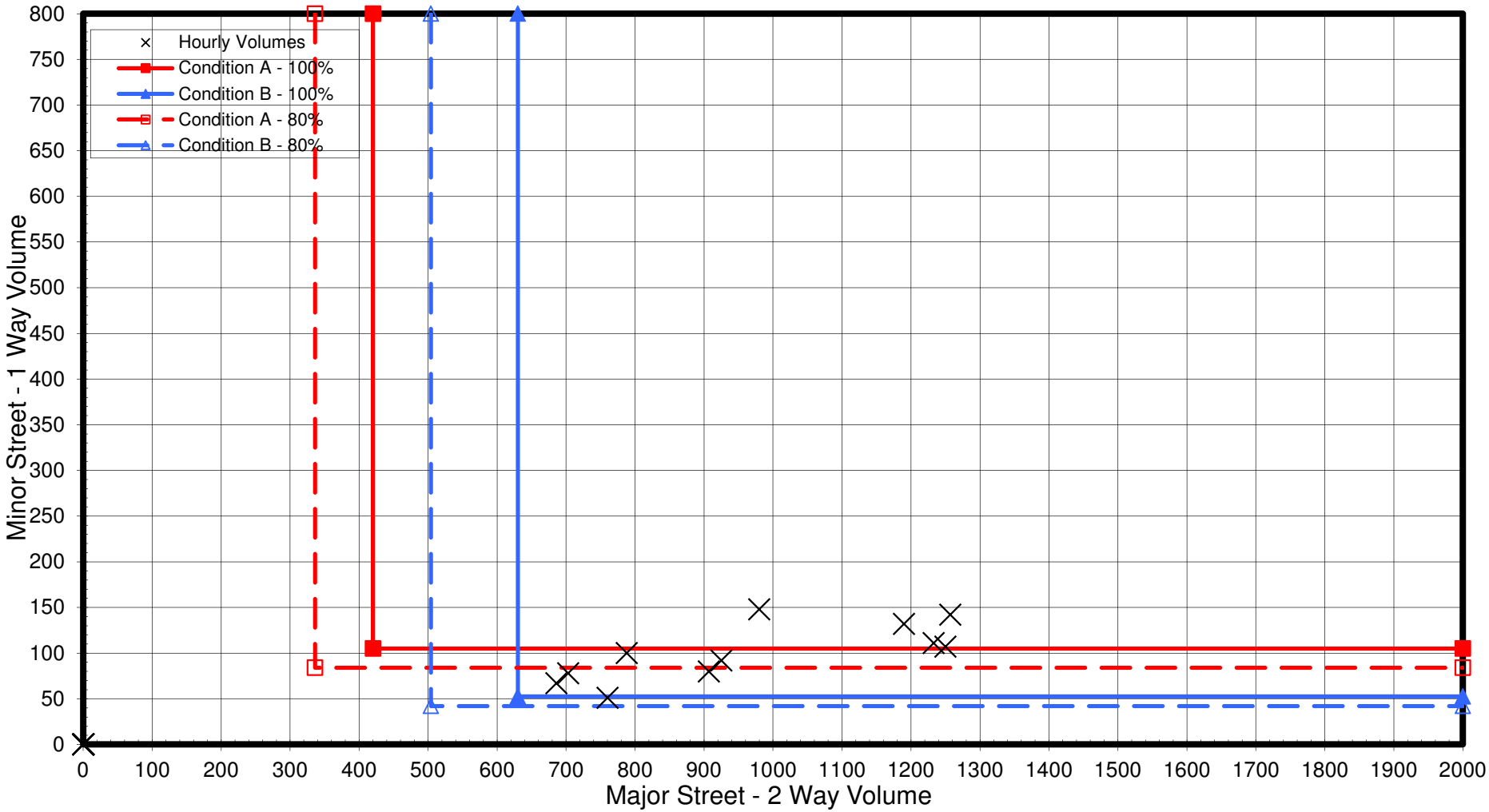


PM Peak Hour
4:45 PM to 5:45 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	Grove Ave	2
Minor Road =	Homewood Dr	1
Road Location =	Rural	

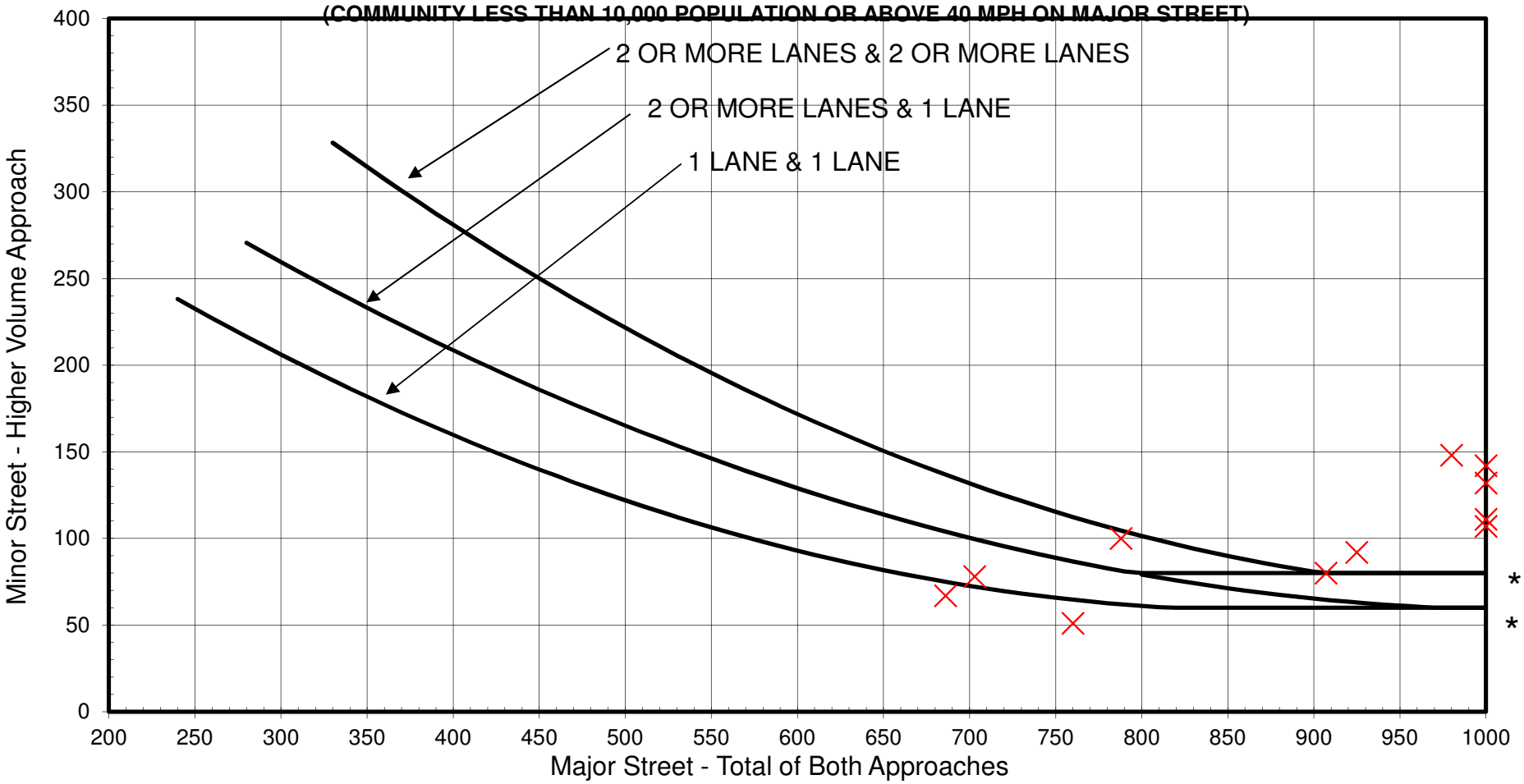
		Warrant Met?
Condition A (100%) =	5 Hours Meet	No
Condition B (100%) =	10 Hours Meet	Yes
Condition A (80%) =	7 Hours Meet	No
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 18, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	Grove Ave	2
Minor Road =	Homewood Dr	1
Road Location =	Rural	

		Warrant Met?
Warrant 2 (Rural) =	8 Hours Meet	YES

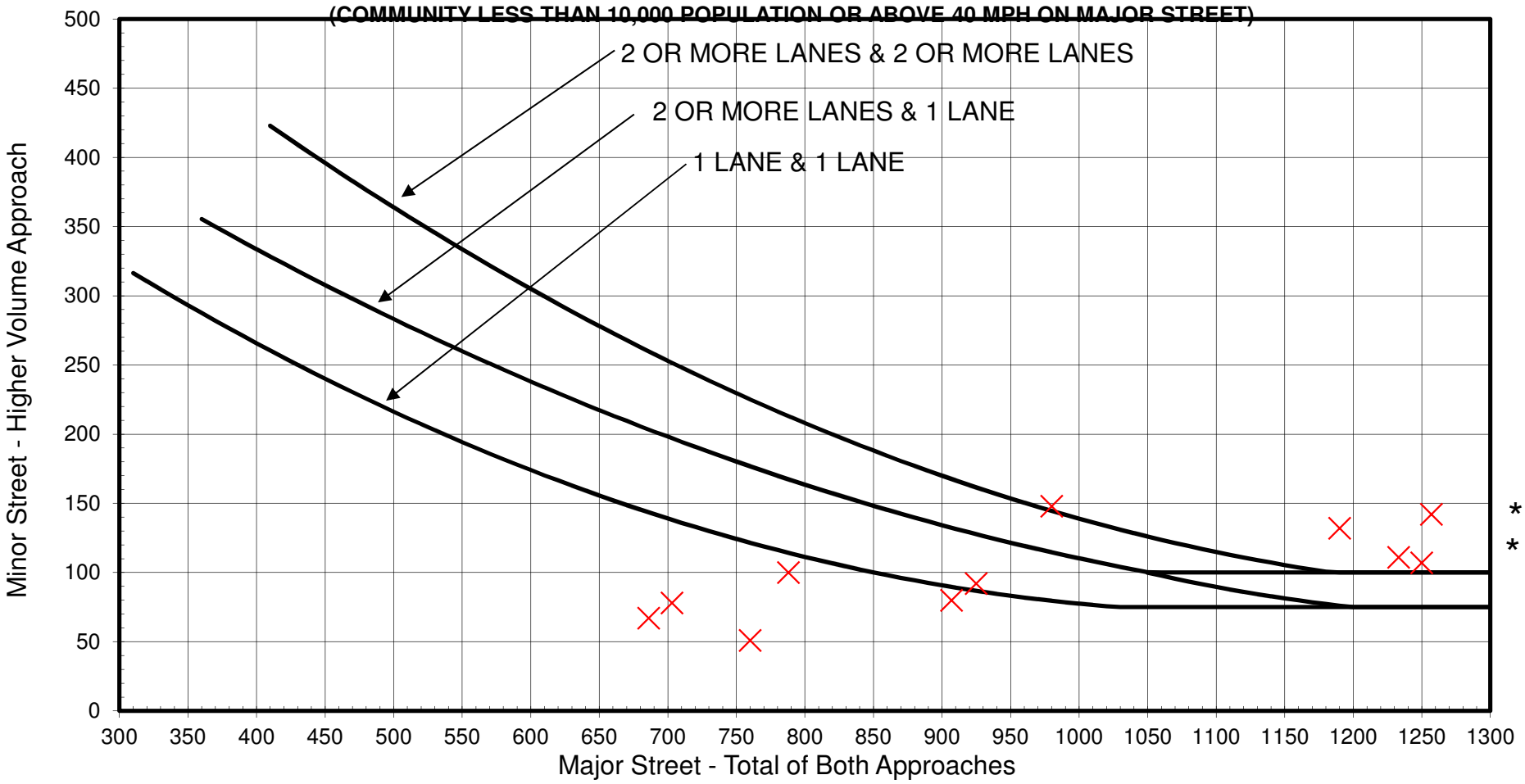
Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 18, 2014	7:00 AM	6:00 PM	Normal

URS

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	Grove Ave	2
Minor Road =	Homewood Dr	1
Road Location =	Rural	

		Warrant Met?
Warrant 3 (Rural) =	5 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 18, 2014	7:00 AM	6:00 PM	Normal

URS

Appendix B.70

Traffic Signal Warrant Analysis Results

Intersection 70
Grove Ave (SR 57) and E 42nd St

SIGNAL WARRANT

INTERSECTION: Grove Ave and E 42nd St
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Rural
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 0
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? YES
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT #2	WARRANT #3
					CONDITION A				CONDITION B									
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1				500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1			X	350	105	280	84	525	53	420	42						
	2+	X			420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		1037	0	243	X	X	X	X	X	X	X	X					X	X
8AM-9AM		774	0	54	X		X		X	X	X	X						
9AM-10AM		637	0	99	X		X	X	X	X	X	X						
10AM-11AM		662	0	96	X		X	X	X	X	X	X						
11AM-NOON		761	0	79	X		X		X	X	X	X						
NOON-1PM		874	0	146	X	X	X	X	X	X	X	X					X	X
1PM-2PM		940	0	114	X	X	X	X	X	X	X	X					X	
2PM-3PM		1128	0	258	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1355	0	166	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1260	0	126	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1266	0	155	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					7		9		11		11						7	6
WARRANT SATISFIED?					NO		YES		YES		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Grove Ave and E 42nd St
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

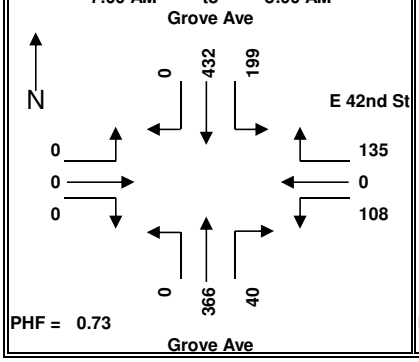
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.996	Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:
Rural Local Road

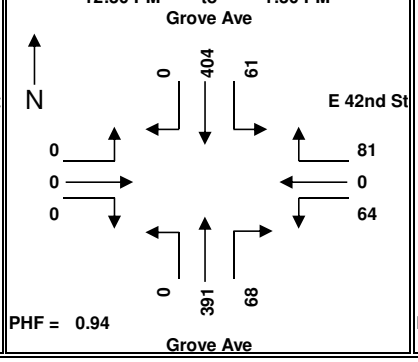
ADT Factor: 1.42
Intersection ID: 70

Start Time	Grove Ave Northbound				Grove Ave Southbound				Total North South	Eastbound				E 42nd St Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	0	4546	782	270	847	4519	0	247	10694	0	0	0	0	722	0	814	43	1536	12230
	Percent Trucks =			5%	Percent Trucks =			5%		Percent Trucks =			0%	Percent Trucks =			3%		
ADT	0	6422	1105	381	1197	6384	0	349	15108	0	0	0	0	1020	0	1150	61	2170	17278
7:00 AM	0	77	12	12	39	123	0	4	251	0	0	0	0	15	0	23	1	38	289
7:15 AM	0	103	9	9	108	118	0	0	338	0	0	0	0	35	0	65	0	100	438
7:30 AM	0	109	16	11	42	106	0	3	273	0	0	0	0	31	0	37	1	68	341
7:45 AM	0	77	3	7	10	85	0	8	175	0	0	0	0	27	0	10	0	37	212
8:00 AM	0	74	6	12	7	90	0	11	177	0	0	0	0	4	0	5	1	9	186
8:15 AM	0	65	4	8	15	98	0	13	182	0	0	0	0	7	0	1	0	8	190
8:30 AM	0	97	14	8	10	92	0	5	213	0	0	0	0	12	0	3	0	15	228
8:45 AM	0	72	8	6	21	101	0	4	202	0	0	0	0	14	0	8	2	22	224
9:00 AM	0	79	7	7	14	84	0	10	184	0	0	0	0	13	0	20	1	33	217
9:15 AM	0	71	13	6	9	57	0	4	150	0	0	0	0	10	0	11	2	21	171
9:30 AM	0	61	13	3	7	82	0	4	163	0	0	0	0	9	0	11	1	20	183
9:45 AM	0	65	9	4	10	56	0	3	140	0	0	0	0	16	0	9	0	25	165
10:00 AM	0	71	12	3	9	61	0	1	153	0	0	0	0	12	0	8	0	20	173
10:15 AM	0	74	15	12	7	75	0	5	171	0	0	0	0	14	0	7	2	21	192
10:30 AM	0	71	9	9	16	68	0	5	164	0	0	0	0	19	0	16	1	35	199
10:45 AM	0	74	18	9	10	72	0	8	174	0	0	0	0	7	0	13	0	20	194
11:00 AM	0	96	18	9	15	86	0	5	215	0	0	0	0	9	0	12	0	21	236
11:15 AM	0	73	16	4	12	85	0	8	186	0	0	0	0	16	0	9	3	25	211
11:30 AM	0	74	10	9	11	84	0	4	179	0	0	0	0	5	0	12	1	17	196
11:45 AM	0	67	13	3	16	85	0	6	181	0	0	0	0	3	0	13	2	16	197
12:00 PM	0	96	13	9	9	101	0	11	219	0	0	0	0	18	0	5	0	23	242
12:15 PM	0	78	19	4	17	92	0	8	206	0	0	0	0	19	0	19	0	38	244
12:30 PM	0	90	16	5	19	109	0	5	234	0	0	0	0	19	0	30	1	49	283
12:45 PM	0	85	12	8	17	101	0	7	215	0	0	0	0	18	0	18	0	36	251
1:00 PM	0	99	22	5	12	98	0	6	231	0	0	0	0	11	0	15	0	26	257
1:15 PM	0	117	18	8	13	96	0	5	244	0	0	0	0	16	0	18	3	34	278
1:30 PM	0	83	22	4	12	94	0	4	211	0	0	0	0	14	0	12	0	26	237
1:45 PM	0	101	23	9	29	101	0	4	254	0	0	0	0	14	0	14	1	28	282
2:00 PM	0	76	26	6	55	111	0	10	268	0	0	0	0	18	0	15	1	33	301
2:15 PM	0	144	25	8	33	104	0	3	306	0	0	0	0	40	0	103	11	143	449
2:30 PM	0	159	23	5	12	106	0	6	300	0	0	0	0	21	0	31	0	52	352
2:45 PM	0	113	16	1	21	104	0	8	254	0	0	0	0	13	0	17	0	30	284
3:00 PM	0	132	20	7	11	161	0	11	324	0	0	0	0	21	0	30	2	51	375
3:15 PM	0	168	22	9	18	161	0	16	369	0	0	0	0	17	0	27	1	44	413
3:30 PM	0	161	18	3	19	134	0	5	332	0	0	0	0	22	0	22	0	44	376
3:45 PM	0	159	19	2	12	140	0	9	330	0	0	0	0	15	0	12	0	27	357
4:00 PM	0	138	28	7	21	177	0	3	364	0	0	0	0	17	0	14	1	31	395
4:15 PM	0	121	22	2	15	131	0	4	289	0	0	0	0	18	0	13	1	31	320
4:30 PM	0	116	36	3	14	125	0	3	291	0	0	0	0	17	0	6	0	23	314
4:45 PM	0	132	36	5	25	123	0	3	316	0	0	0	0	20	0	21	1	41	357
5:00 PM	0	169	33	4	24	114	0	1	340	0	0	0	0	20	0	18	0	38	378
5:15 PM	0	157	29	1	20	126	0	1	332	0	0	0	0	26	0	19	1	45	377
5:30 PM	0	156	36	2	13	118	0	0	323	0	0	0	0	13	0	28	1	41	364
5:45 PM	0	146	23	2	18	84	0	3	271	0	0	0	0	17	0	14	0	31	302

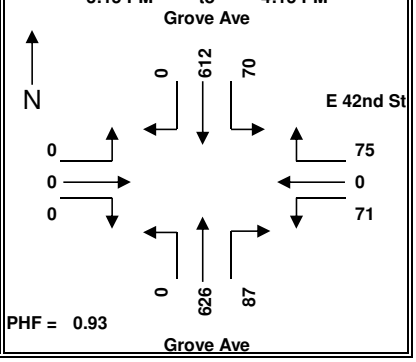
AM Peak Hour
7:00 AM to 8:00 AM



Midday Peak Hour
12:30 PM to 1:30 PM

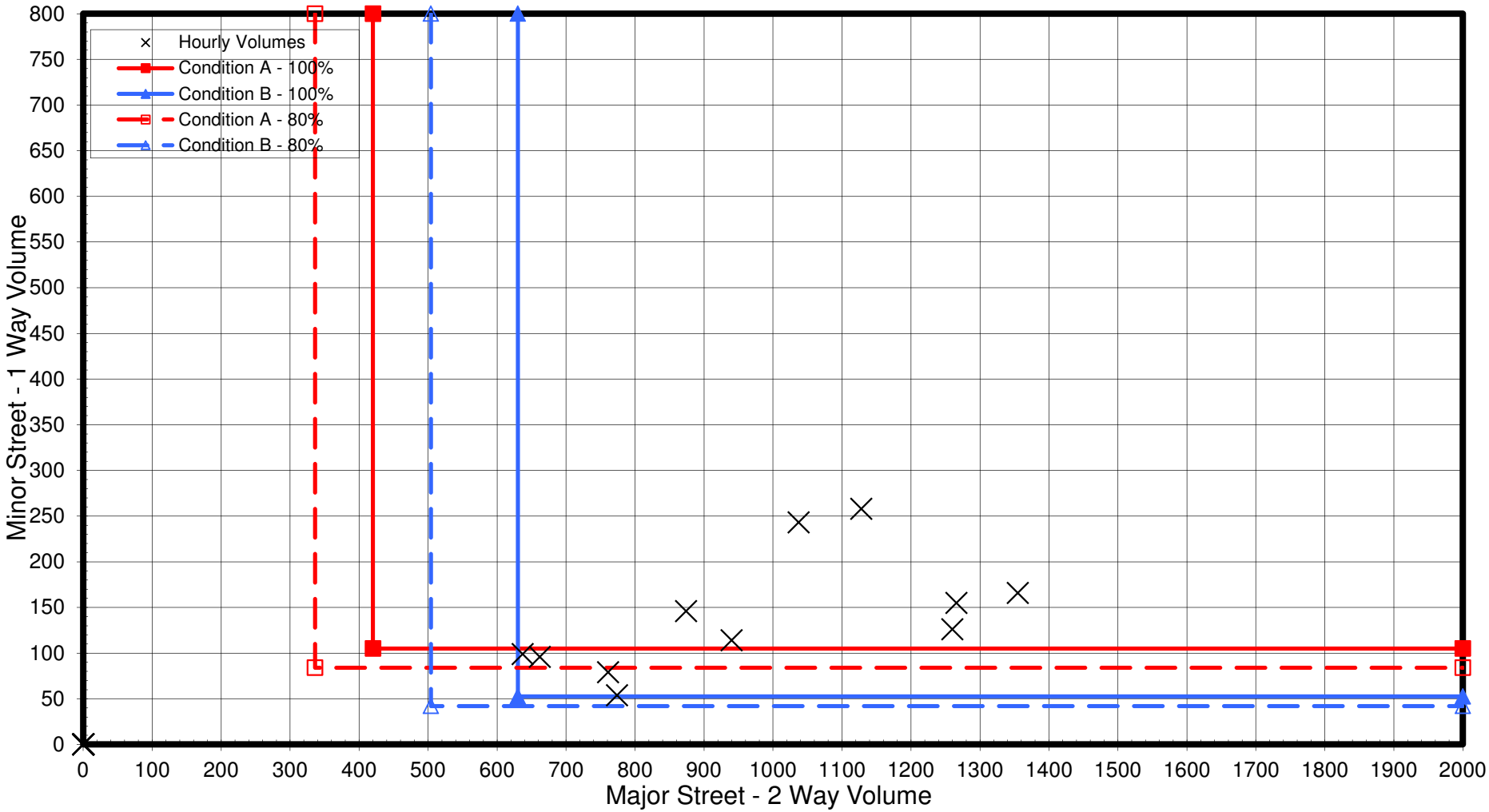


PM Peak Hour
3:15 PM to 4:15 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	Grove Ave	2
Minor Road =	E 42nd St	1
Road Location =	Rural	

		Warrant Met?
Condition A (100%) =	7 Hours Meet	No
Condition B (100%) =	11 Hours Meet	Yes
Condition A (80%) =	9 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

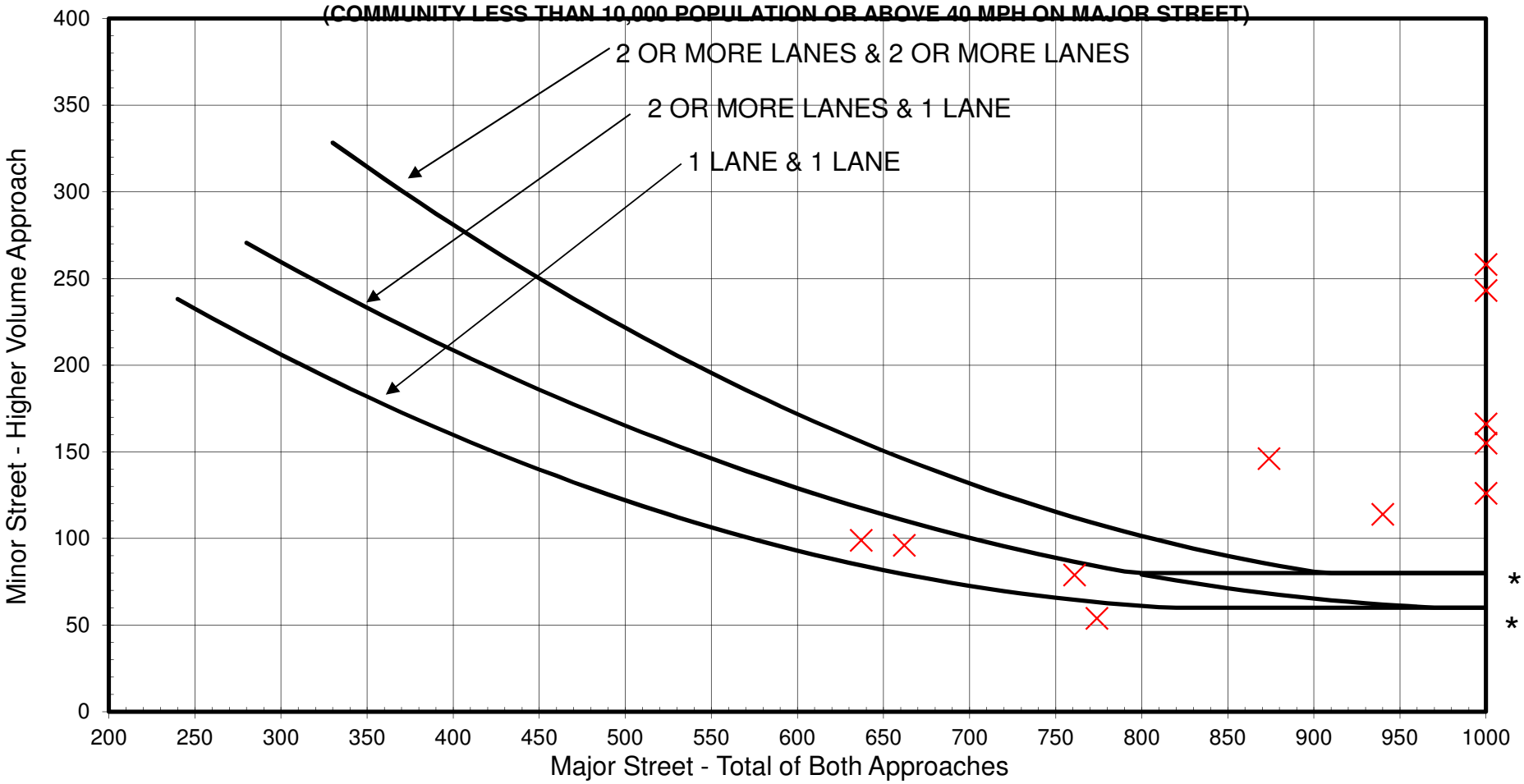
Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS

564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	Grove Ave	2
Minor Road =	E 42nd St	1
Road Location =	Rural	

		Warrant Met?
Warrant 2 (Rural) =	7 Hours Meet	YES

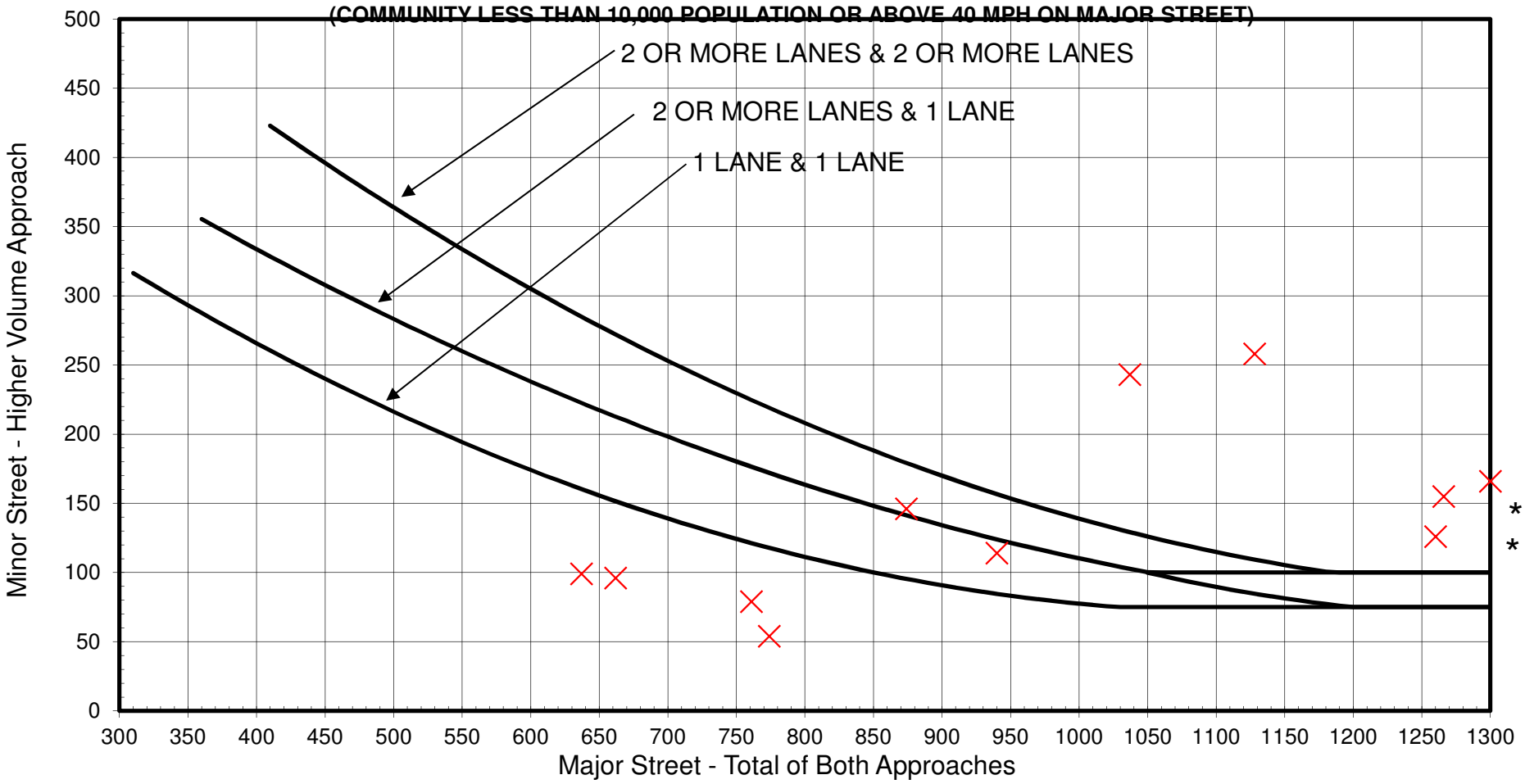
Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	Grove Ave	2
Minor Road =	E 42nd St	1
Road Location =	Rural	

		Warrant Met?
Warrant 3 (Rural) =	6 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS

Appendix B.71

Traffic Signal Warrant Analysis Results

Intersection 71
Grove Ave (SR 57) and Fairless Dr

SIGNAL WARRANT

INTERSECTION: Grove Ave and Fairless Dr
LOCATED IN CITY/VILLAGE/RURAL: Lorain / OH / Rural
NUMBER OF LANES PER APPROACH: N: 2 S :2 E: 1 W: 1
PRESENTLY SIGNALIZED? No DOES 70% WARRANT APPLY? YES
MAINTAING AGENCY:

CO: Lorain RTE: SECT:
CONSULTANT: AECOM
CALC. BY: CKD BY:

URS

ADDITIONAL ITEMS ATTACHED

SKETCH OR DRAWING		SPEED DATA		OTHER (DESCRIBE):
VEHICULAR VOLUME COUNT		DELAY ANALYSIS		
TRAFFIC PROJECTION		TIME/SPACE DIAGRAM		
ACCIDENT DATA		GROUND PHOTOGRAPHS		
PEDESTRIAN COUNT		AERIAL PHOTOGRAPHS		
GAP ANALYSIS		DOCUMENTATION/EXPLANATION		

		ADJUSTED HOURLY VOLUMES			WARRANT #1												WARRANT	
					CONDITION A				CONDITION B								#2	#3
COND-TION	NO. OF LANES	MAJOR ST 2-WAY	MINOR ST. 1-WAY	MINOR ST. 1-WAY	100%		80%		100%		80%						FOUR HOUR	PEAK HOUR
					MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR						
* NORM	1				500	150	400	120	750	75	600	60						
	2+				600	200	480	160	900	100	720	80						
* 70%	1		X	X	350	105	280	84	525	53	420	42						
	2+	X			420	140	336	112	630	70	504	56						
MID-1AM		0	0	0														
1AM-2AM		0	0	0														
2AM-3AM		0	0	0														
3AM-4AM		0	0	0														
4AM-5AM		0	0	0														
5AM-6AM		0	0	0														
6AM-7AM		0	0	0														
7AM-8AM		958	2	303	X	X	X	X	X	X	X	X					X	X
8AM-9AM		792	18	203	X	X	X	X	X	X	X	X					X	X
9AM-10AM		661	24	186	X	X	X	X	X	X	X	X					X	
10AM-11AM		735	29	137	X	X	X	X	X	X	X	X					X	
11AM-NOON		797	20	162	X	X	X	X	X	X	X	X					X	
NOON-1PM		955	45	214	X	X	X	X	X	X	X	X					X	X
1PM-2PM		952	50	218	X	X	X	X	X	X	X	X					X	X
2PM-3PM		1151	40	350	X	X	X	X	X	X	X	X					X	X
3PM-4PM		1493	56	292	X	X	X	X	X	X	X	X					X	X
4PM-5PM		1360	56	245	X	X	X	X	X	X	X	X					X	X
5PM-6PM		1410	56	287	X	X	X	X	X	X	X	X					X	X
6PM-7PM		0	0	0														
7PM-8PM		0	0	0														
8PM-9PM		0	0	0														
9PM-10PM		0	0	0														
10PM-11PM		0	0	0														
11PM-MID		0	0	0														
HOURS MET					11		11		11		11						11	8
WARRANT SATISFIED?					YES		YES		YES		YES						YES	YES

* CONDITION IS DETERMINED BY ENVIRONMENT: USE 70% VALUES IF 85 PERCENTILE SPEED EXCEEDS 40 MPH ON THE MAJOR APPROACH OR IF LOCATION IS IN THE BUILT-UP AREA OF AN ISOLATED COMMUNITY WITH A POPULATION OF LESS THAN 10,000.

WARRANT #1 (COMBINATION)
Conditions A & B are each met at the 80% level:..... **YES**

WARRANT #4 (PEDESTRIAN VOLUME)
Hours with 100 or more pedestrians:.....
Hours with 190 or more pedestrians:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Warrant Satisfied?.....

WARRANT #5 (SCHOOL CROSSING)
On approved school route?..... NO
Gap analysis made during period from..... to
Number of vehicles during analysis period:.....
Pedestrian crossing time (t):.....
Number of gaps greater than (t) during period:.....
Approximate vehicular speed:.....
Number of children crossing during period:.....
Warrant Satisfied?..... **NO**

WARRANT #6 (COORDINATED SIGNAL SYSTEM)
Major street is:..... TWO-WAY
Distance to nearest signal in each direction on major street:.....
Time space diagram (attached) shows that this location can be implemented into a system:..... N/A
Warrant Satisfied?..... **NO**

WARRANT #7 (CRASH EXPERIENCE)
Adequate trial of less restrictive measures:.....
Number of accidents per year of a type which could be prevented by signalization:.....
80% of warrant #1 or #2 satisfied:.....
Will signalization disrupt progressive movement?.....
Warrant Satisfied?..... **NO**

WARRANT #8 (ROADWAY NETWORK)
Both streets are considered major routes:.....
At least 1000 V.P.H. during weekday peak hour:.....
5-Year projection meets Warrant 1, 2, or 3:.....
At least 1000 V.P.H. for any 5 hours on a Saturday or Sunday:.....
Meets Characteristic requirements?.....
Warrant Satisfied?..... **NO**

15-Minute Count Data
Grove Ave and Fairless Dr
Lorain, OH

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111

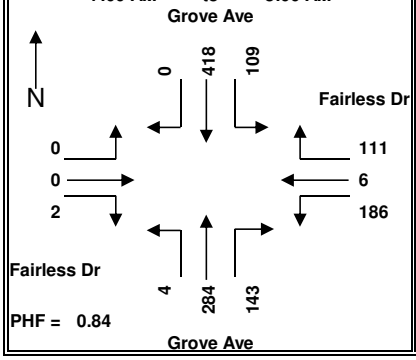
Seasonal Factor	Day of Week	Date	Start Time	End Time	Weather
0.996	Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

Roadway Classification:
Rural Local Road

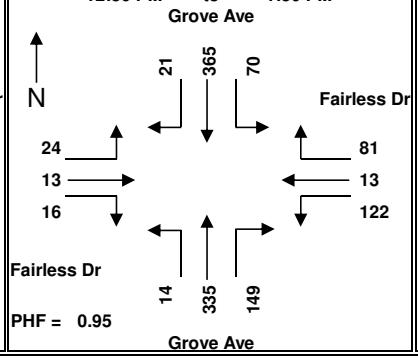
ADT Factor: 1.42
Intersection ID: 71

Start Time	Grove Ave Northbound				Grove Ave Southbound				Total North South	Fairless Dr Eastbound				Fairless Dr Westbound				Total East West	Total All Dir.
	LT	THRU	RT	Truck	LT	THRU	RT	Truck		LT	THRU	RT	Truck	LT	THRU	RT	Truck		
Totals	146	4156	1616	272	831	4357	158	237	11264	173	89	134	6	1559	110	928	55	2993	14257
	Percent Trucks =			5%	Percent Trucks =			4%		Percent Trucks =			2%	Percent Trucks =			2%		
ADT	206	5871	2283	384	1174	6155	223	335	15913	244	126	189	8	2203	155	1311	78	4228	20142
7:00 AM	0	60	61	9	28	105	0	3	254	0	0	1	0	35	1	25	5	62	316
7:15 AM	0	78	32	6	48	117	0	0	275	0	0	0	0	56	1	46	5	103	378
7:30 AM	1	67	24	12	23	104	0	4	219	0	0	0	0	50	0	29	1	79	298
7:45 AM	3	79	26	9	10	92	0	7	210	0	0	1	0	45	4	11	4	61	271
8:00 AM	0	57	20	8	17	93	2	12	189	1	1	0	0	22	3	14	1	41	230
8:15 AM	2	59	16	10	13	82	3	12	175	1	2	2	0	27	0	13	2	45	220
8:30 AM	3	97	21	7	17	92	0	3	230	2	0	1	0	39	3	22	2	67	297
8:45 AM	1	59	21	4	25	86	6	5	198	5	0	3	0	49	0	11	1	68	266
9:00 AM	3	61	15	6	22	70	3	10	174	1	2	3	1	31	0	28	1	65	239
9:15 AM	1	60	19	5	10	53	1	3	144	2	2	1	0	24	3	19	0	51	195
9:30 AM	2	74	20	6	10	83	2	4	191	2	1	1	0	27	3	6	3	40	231
9:45 AM	6	59	20	2	9	53	5	2	152	5	2	2	1	30	1	14	0	54	206
10:00 AM	2	68	30	8	9	65	1	1	175	3	1	4	0	23	2	7	0	40	215
10:15 AM	3	74	31	9	12	83	3	4	206	4	1	3	0	29	4	11	1	52	258
10:30 AM	1	72	14	10	12	71	4	6	174	4	1	3	0	19	2	9	0	38	212
10:45 AM	1	76	24	8	15	63	1	8	180	3	0	2	1	20	1	10	0	36	216
11:00 AM	4	82	21	10	15	88	2	6	212	2	0	1	0	26	1	13	0	43	255
11:15 AM	1	71	24	4	8	82	1	4	187	0	0	2	0	32	0	12	1	46	233
11:30 AM	2	77	30	9	17	76	2	4	204	3	1	2	0	24	3	12	1	45	249
11:45 AM	6	56	36	5	22	72	2	4	194	2	0	7	0	19	2	18	0	48	242
12:00 PM	4	84	43	8	16	105	1	10	253	4	3	2	0	29	1	18	0	57	310
12:15 PM	5	81	26	7	17	87	9	7	225	3	1	6	1	28	4	15	1	57	282
12:30 PM	2	84	35	4	15	106	5	6	247	5	2	6	0	39	2	22	1	76	323
12:45 PM	3	75	35	4	27	85	5	6	230	5	3	5	1	33	4	19	0	69	299
1:00 PM	5	85	42	4	15	85	5	5	237	9	2	2	0	31	3	26	1	73	310
1:15 PM	4	91	37	10	13	89	6	9	240	5	6	3	0	19	4	14	0	51	291
1:30 PM	4	75	33	7	20	103	5	6	240	5	4	1	1	38	4	20	2	72	312
1:45 PM	4	92	32	8	19	85	3	2	235	5	4	4	0	33	3	23	1	72	307
2:00 PM	4	78	44	5	27	100	4	8	257	2	4	2	0	41	7	27	5	83	340
2:15 PM	6	124	41	8	36	106	4	3	317	5	3	6	0	54	2	48	1	118	435
2:30 PM	4	121	46	3	21	93	5	7	290	5	3	1	0	59	2	31	1	101	391
2:45 PM	4	112	46	6	19	104	2	9	287	5	2	2	0	56	3	20	2	88	375
3:00 PM	4	116	42	5	22	150	4	10	338	1	2	8	0	39	4	27	0	81	419
3:15 PM	4	169	50	9	18	158	8	11	407	7	2	7	0	46	3	24	1	89	496
3:30 PM	7	144	46	8	17	140	4	6	358	6	3	5	0	61	4	17	0	96	454
3:45 PM	7	159	57	6	22	137	8	8	390	9	2	4	0	44	1	22	2	82	472
4:00 PM	5	132	57	5	19	160	5	5	378	9	2	2	0	32	2	24	1	71	449
4:15 PM	7	123	45	3	14	136	7	5	332	1	3	5	0	28	1	20	1	58	390
4:30 PM	4	120	62	3	20	120	2	1	328	11	5	4	0	36	3	27	1	86	414
4:45 PM	5	124	57	6	30	100	6	2	322	4	5	5	0	39	5	28	2	86	408
5:00 PM	4	170	59	1	22	128	9	2	392	6	3	5	0	41	2	34	0	91	483
5:15 PM	5	152	57	1	13	135	7	1	369	8	4	7	0	34	4	24	0	81	450
5:30 PM	1	128	70	2	22	114	3	2	338	8	4	2	0	38	6	33	4	91	429
5:45 PM	2	131	49	2	25	101	3	4	311	5	3	1	0	34	2	35	0	80	391

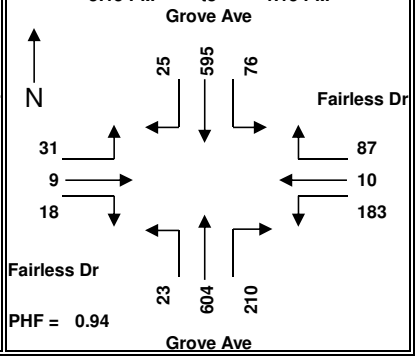
AM Peak Hour
7:00 AM to 8:00 AM



Midday Peak Hour
12:30 PM to 1:30 PM

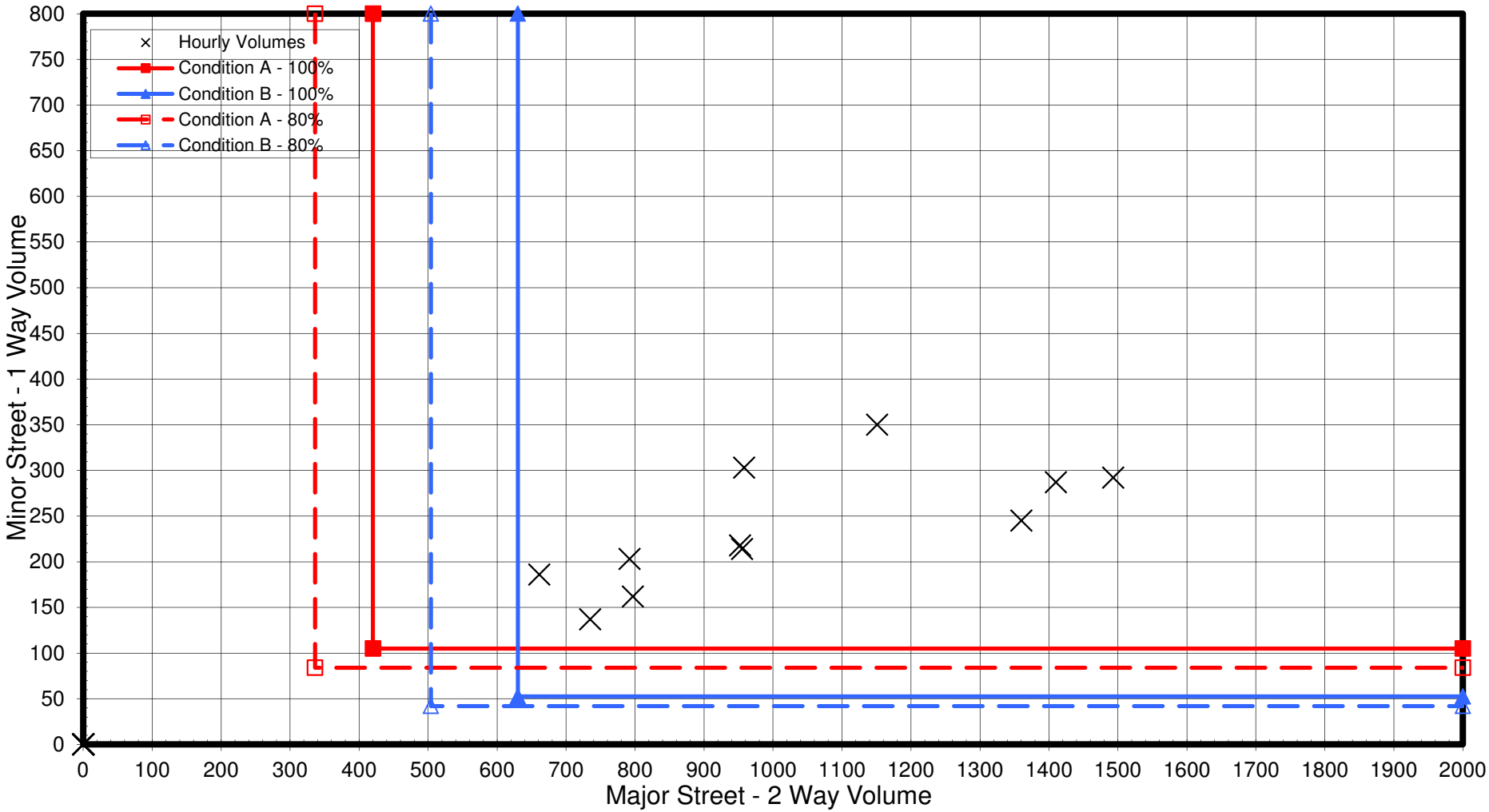


PM Peak Hour
3:15 PM to 4:15 PM



Notes:

WARRANT 1 - Conditions A & B



		Lanes
Major Road =	Grove Ave	2
Minor Road =	Fairless Dr	1
Road Location =	Rural	

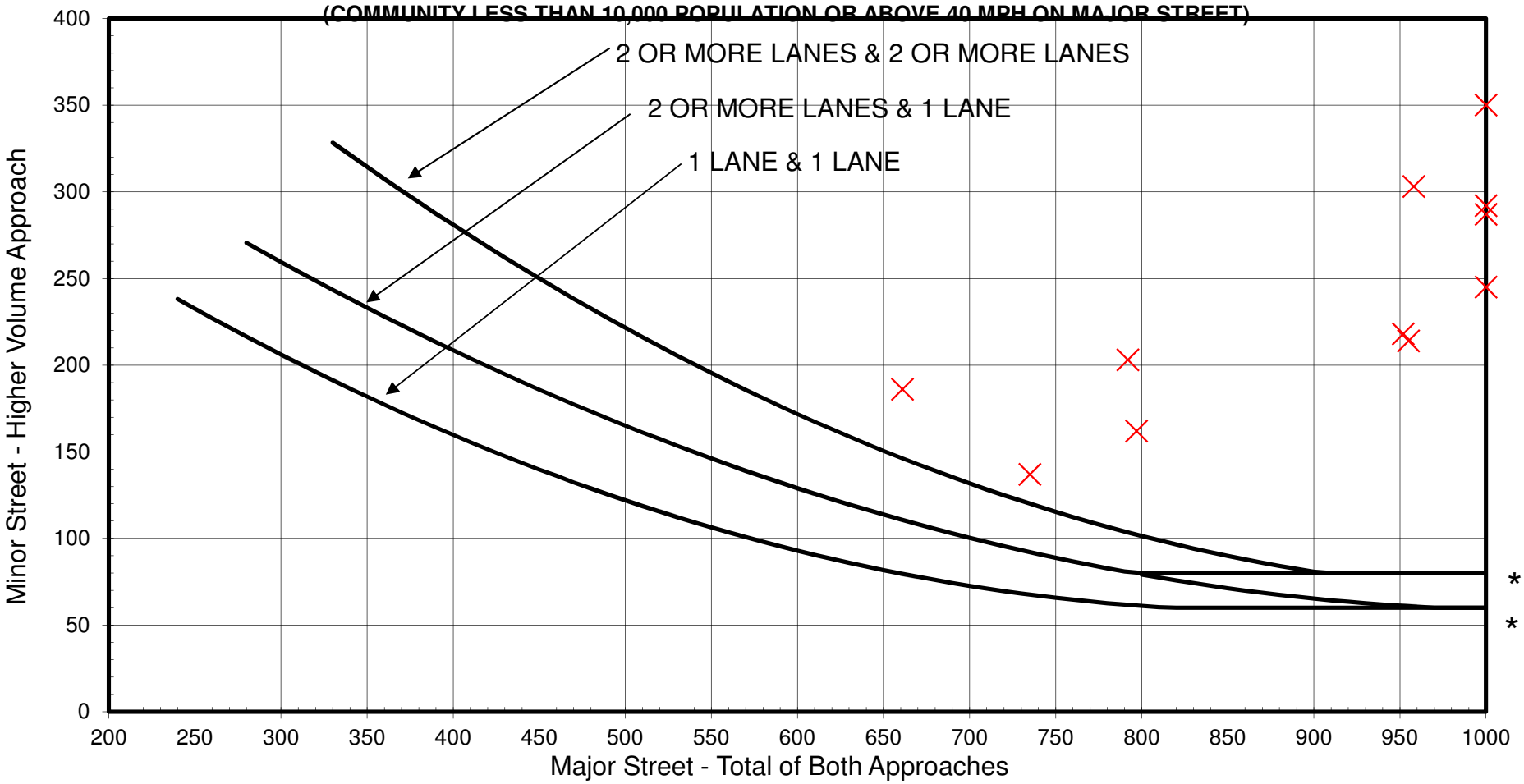
		Warrant Met?
Condition A (100%) =	11 Hours Meet	Yes
Condition B (100%) =	11 Hours Meet	Yes
Condition A (80%) =	11 Hours Meet	Yes
Condition B (80%) =	11 Hours Meet	Yes

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS
564 White Pond Drive
Akron, OH 44320-1100
Tel: 330.836.9111
Fax: 330.836.9115

FOUR HOUR VOLUME WARRANT (WARRANT 2)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
60 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	Grove Ave	2
Minor Road =	Fairless Dr	1
Road Location =	Rural	

		Warrant Met?
Warrant 2 (Rural) =	11 Hours Meet	YES

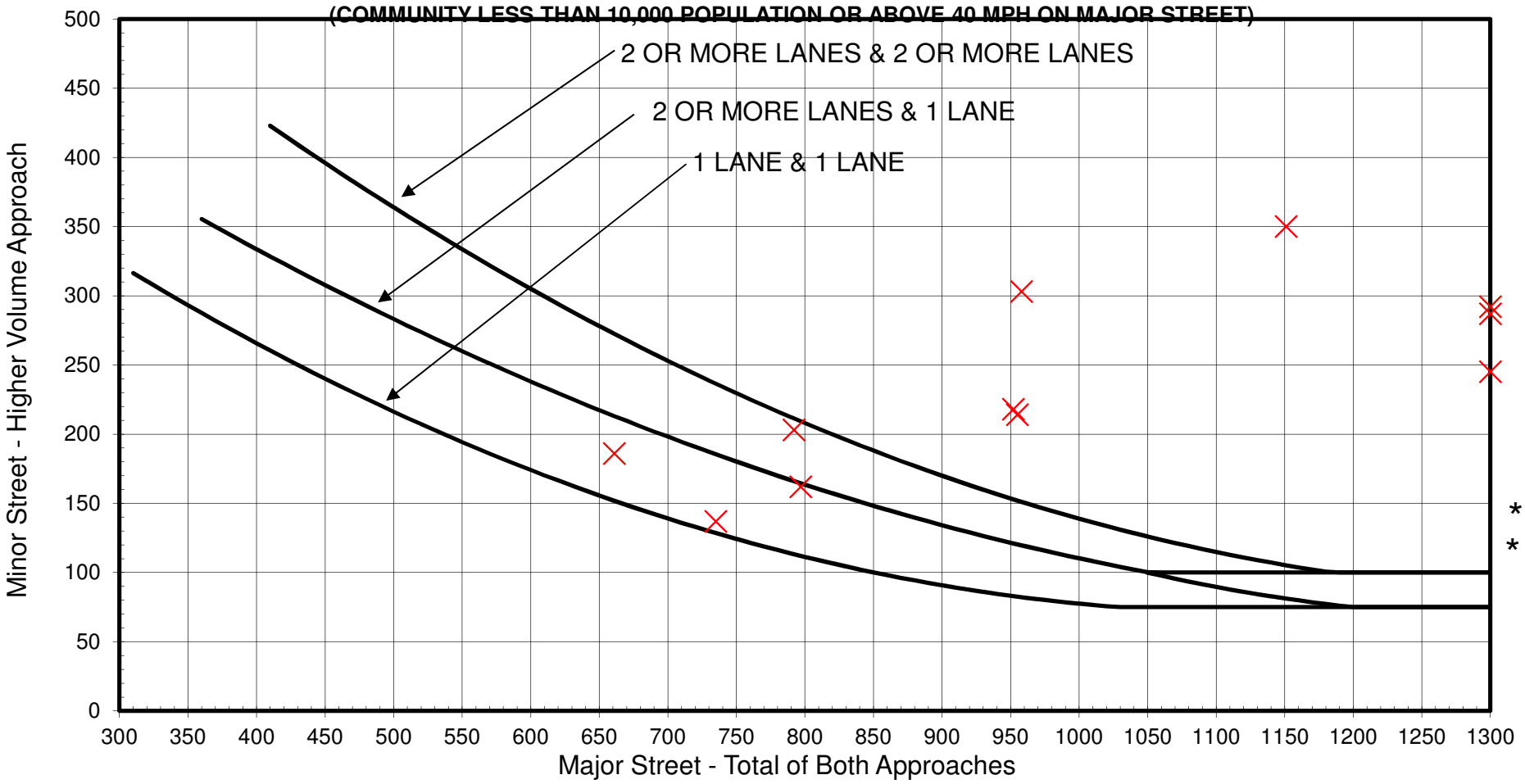
Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS

PEAK HOUR VOLUME WARRANT (WARRANT 3)

PEAK HOUR VOLUME WARRANT (WARRANT 3)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



* NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES.
75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

		Lanes
Major Road =	Grove Ave	2
Minor Road =	Fairless Dr	1
Road Location =	Rural	

		Warrant Met?
Warrant 3 (Rural) =	8 Hours Meet	YES

Day of Week	Date & Year	Hours From	Hours To	Weather
Thursday	December 11, 2014	7:00 AM	6:00 PM	Normal

URS