APPENDIX C

NOISE LEVEL MODELING DATA AND CALCULATIONS
FHWA-TNM MODELING DATA
FTA RAILROAD NOISE CALCULATIONS
TABLE 9 – PREDICTED NOISE LEVEL RAILROAD CONTRIBUTION DISTRIBUTIONS

Metric Environmental, LLC
S. Raman
RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17-0057
RUN: SR 46 Intersection - Validation
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 40 deg F, 50% RH

11 June 2018
TNM 2.5
Calculated with TNM 2.5

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Measurement #1	19	1	0.0	58.7	66	58.7	15	----	58.7	0.0	8	-8.0
Measurement #2	20	1	0.0	72.7	66	72.7	15	Snd Lvl	72.7	0.0	8	-8.0
Measurement #3	21	1	0.0	68.2	66	68.2	15	Snd Lvl	68.2	0.0	8	-8.0
Measurement #4	22	1	0.0	64.3	66	64.3	15	----	64.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	4	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Metric Environmental, LLC
S. Raman
27 July 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17-0057
RUN: SR 46 Intersection - Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	51.7	66	51.7	15	----	51.7	0.0	7	-7.0
Receiver2	2	1	0.0	60.8	66	60.8	15	----	60.8	0.0	7	-7.0
Receiver3	3	1	0.0	57.6	66	57.6	15	----	57.6	0.0	7	-7.0
Receiver4	4	1	0.0	66.5	66	66.5	15	Snd Lvl	66.5	0.0	7	-7.0
Receiver5	5	1	0.0	61.4	66	61.4	15	----	61.4	0.0	7	-7.0
Receiver6	6	1	0.0	71.0	66	71.0	15	Snd Lvl	71.0	0.0	7	-7.0
Receiver7	7	1	0.0	69.2	66	69.2	15	Snd Lvl	69.2	0.0	7	-7.0
Receiver8	8	1	0.0	68.4	66	68.4	15	Snd Lvl	68.4	0.0	7	-7.0
Receiver9	9	1	0.0	67.9	66	67.9	15	Snd Lvl	67.9	0.0	7	-7.0
Receiver25	25	1	0.0	59.2	99	59.2	15	----	59.2	0.0	7	-7.0
Receiver26	26	1	0.0	60.3	99	60.3	15	----	60.3	0.0	7	-7.0
Receiver27	27	1	0.0	61.2	99	61.2	15	----	61.2	0.0	7	-7.0
Receiver28	28	1	0.0	60.6	99	60.6	15	----	60.6	0.0	7	-7.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	13	0.0	0.0	0.0
All Impacted	5	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Metric Environmental, LLC
S. Raman
27 July 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17-0057
RUN: SR 46 Intersection - Future Build - No Bar
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	51.7	56.0	66	4.3	15	----	56.0	0.0	7	-7.0
Receiver2	2	1	60.8	64.9	66	4.1	15	----	64.9	0.0	7	-7.0
Receiver3	3	1	57.6	62.4	66	4.8	15	----	62.4	0.0	7	-7.0
Receiver4	4	1	66.5	63.6	66	-2.9	15	----	63.6	0.0	7	-7.0
Receiver5	5	1	61.4	56.0	66	-5.4	15	----	56.0	0.0	7	-7.0
Receiver6	6	1	71.0	54.6	66	-16.4	15	----	54.6	0.0	7	-7.0
Receiver7	7	1	69.2	59.2	66	-10.0	15	----	59.2	0.0	7	-7.0
Receiver8	8	1	68.4	70.3	66	1.9	15	Snd Lvl	70.3	0.0	7	-7.0
Receiver9	9	1	67.9	69.2	66	1.3	15	Snd Lvl	69.2	0.0	7	-7.0
Receiver25	25	1	59.2	64.8	99	5.6	15	----	64.8	0.0	7	-7.0
Receiver26	26	1	60.3	65.6	99	5.3	15	----	65.6	0.0	7	-7.0
Receiver27	27	1	61.2	66.8	99	5.6	15	----	66.8	0.0	7	-7.0
Receiver28	28	1	60.6	66.2	99	5.6	15	----	66.2	0.0	7	-7.0

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	13	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Metric Environmental, LLC
S. Raman
5 June 2018
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 17-0057
RUN: SR 46 Intersection - Future Build - Barrier
BARRIER DESIGN: Case 2: Rec 7 8 9
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Noise Reduction Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver9	9	1	67.9	69.2	66	1.3	15	Snd Lvl	62.2	7.0	7	0.0
Receiver8	8	1	68.4	70.3	66	1.9	15	Snd Lvl	63.2	7.1	7	0.1
Receiver7	7	1	69.2	59.2	66	-10.0	15	----	58.6	0.6	7	-6.4

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	0.6	4.9	7.1
All Impacted	2	7.0	7.0	7.1
All that meet NR Goal	1	7.1	7.1	7.1

Metric Environmental, LLC **5 June 2018**
S. Raman **TNM 2.5**

RESULTS: BARRIER DESCRIPTIONS
PROJECT/CONTRACT: **17-0057**
RUN: **SR 46 Intersection - Future Build - Barrier**
BARRIER DESIGN: **Case 2: Rec 7 8 9**

Barriers

Name	**Type**	**Heights along Barrier**			**Length**	**If Wall**	**If Berm**			**Cost**
		Min	**Avg**	**Max**		**Area**	**Volume**	**Top Width**	**Run:Rise**	
		ft	ft	ft	ft	sq ft	cu yd	ft	ft:ft	$
Barrier3	W	6.00	9.28	13.00	823	7636				229079
									Total Cost:	229079

FEDERAL TRANSIT ASSOCIATION (FTA) RAILROAD NOISE CALCULATIONS

Rail Vehicles Noise Exposure at 50 feet:

$$L_{eqC}(h) = SEL_{ref} + 10 * \log(N_{cars}) + 20 * \log\left(\frac{S}{50}\right) + 10 * \log(V) - 35.6$$

L_{eqC} = 56.76 dBA

SEL_{ref} = 85 dBA (from FTA Transit Noise and Vibration Impact Assessment, Table 5-1)

N_{cars} = 37 cars

S = 20 miles per hour

V = 0.92 trains per hour

Transit Warning Horns Noise Exposure at 50 feet:

$$L_{eqC}(h) = SEL_{ref} - 10 * \log\left(\frac{S}{50}\right) + 10 * \log(V) - 35.6$$

L_{eqC} = 74.04 dBA

SEL_{ref} = 110 dBA (from FTA Transit Noise and Vibration Impact Assessment, Table 5-1)

S = 20 miles per hour

V = 0.92 trains per hour

Adjustment factor for distances greater than 50 feet from the Railroad (from FTA Transit Noise and Vibration Impact Assessment):

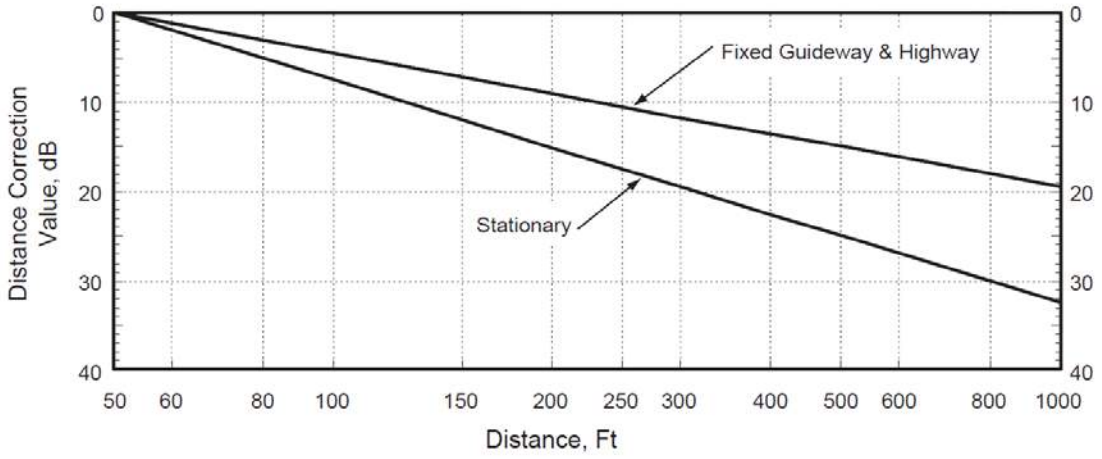


Figure 5-2. Curves for Estimating Exposure vs. Distance in General Noise Assessment

Distance Adjusted Rail/Horn Noise Levels (at distances greater than 50 feet):

$$Distance\ Adjusted\ L_{eqC}(h) = L_{eqC}(h) - Distance\ Correction\ Value$$

Conversion of Noise Levels to Energy:

$$Energy\ Level = 10^{Noise\ Level\ (dBA)/10}$$

Calculation of Adjusted Noise Level:

$$Adjusted\ Noise\ Level\ (dBA) = 10 * \log(TNM\ Output\ Energy + Railroad\ Noise\ Energy + Horn\ Noise\ Energy)$$

Table 9: Predicted Noise Level Railroad Contribution Distributions

Receptor Number	Activity Category	NAC (dBA)	Dwelling Units	Distance from Railroad (ft)	Railroad Distance Adjustment Factor (dBA)	Noise Levels (dBA)								Noise Level Increase	Impacted (Yes/No)
						Existing TNM Output	Railroad Noise (Leq)	Horn Noise (Leq)	Adjusted Existing Output	Future TNM Output	Railroad Noise (Leq)	Horn Noise (Leq)	Adjusted Future TNM Output		
1	B/ Residential	67	1	2,500	N/A	51.7	21.76	39.04	51.9	56.0	21.76	39.04	56.1	+4.2	No
2	C/ Trail	67	1	2,600	N/A	60.8	20.76	38.04	60.8	64.9	20.76	38.04	64.9	+4.1	No
3	C/ Trail	67	1	2,100	N/A	57.6	25.76	43.04	57.8	62.4	25.76	43.04	62.5	+4.7	No
4	C/ Trail	67	1	1,600	N/A	66.5	30.76	48.04	66.6	63.6	30.76	48.04	63.7	-2.8	No
5	C/ Trail	67	1	1,000	20	61.4	36.76	54.04	62.1	56.0	36.76	54.04	58.2	-4.0	No
6	C/ Trail	67	1	500	15	71.0	41.76	59.04	71.3	54.6	41.76	59.04	60.4	-10.8	No
7	C/ Trail	67	1	<50	0	69.2	56.76	74.04	75.3	59.2	56.76	74.04	74.3	-1.1	**Yes**
8	C/ Trail	67	1	275	12	68.4	44.76	62.04	69.3	70.3	44.76	62.04	70.9	+1.6	**Yes**
9	C/ Trail	67	1	300	13	67.9	43.76	61.04	68.7	69.2	43.76	61.04	69.8	+1.1	**Yes**
10	F/ Commercial	N/A	1	<50	0	59.2	56.76	74.04	74.3	64.8	56.76	74.04	74.6	+0.3	N/A
11	F/ Commercial	N/A	1	100	5	60.3	51.76	69.04	69.7	65.6	51.76	69.04	70.7	+1.1	N/A
12	F/ Industrial	N/A	1	150	7	61.2	49.76	67.04	68.1	66.8	49.76	67.04	70.0	+1.9	N/A
13	F/ Industrial	N/A	1	200	9	60.6	47.76	65.04	66.4	66.2	47.76	65.04	68.7	+2.3	N/A

APPENDIX D

AGENCY CORRESPONDENCE

6971 Hillsdale Court
Indianapolis, IN 46250
(317) 400-1633
Fax: (855) 808-8227
www.metricenv.com

Phone Memo

Topic:	S.R. 46 Interchange Intersection Improvements - Development
Date & Time:	February 14; 10:00 AM
Attendees:	Samir Raman, Metric Environmental Danny Hollander, Bartholomew County Highway – County Engineer

Samir contacted Mr. Hollander to discuss any permitted planned development along the alignment of the proposed S.R. 46 Interchange Intersection Improvements project. Mr. Hollander stated that there is no development currently planned for this area, and no permits are filed for any parcels within the project area.

6971 Hillsdale Court
Indianapolis, IN 46250
(317) 400-1633
Fax: (855) 808-8227
www.metricenv.com

Phone Memo

Topic:	S.R. 46 Interchange Intersection Improvements - Development
Date & Time:	February 14, 2018; 11:00 AM
Attendees:	Samir Raman, Metric Environmental Jason Hester Greater Columbus Indiana Economic Development Corporation – President

Samir contacted Mr. Hester to discuss any permitted planned development along the alignment of the proposed S.R. 46 Interchange Intersection Improvements project. Mr. Hester stated that there is no development currently planned for this area, and no permits are filed for any parcels within the project area.

6971 Hillsdale Court
Indianapolis, IN 46250
(317) 400-1633
Fax: (855) 808-8227
www.metricenv.com

Phone Memo

Topic:	S.R. 46 Interchange Intersection Improvements - Development
Date & Time:	February 14; 11:30 AM
Attendees:	Samir Raman, Metric Environmental Tom Finke, Bartholomew County Surveyor – Head of Hydrology

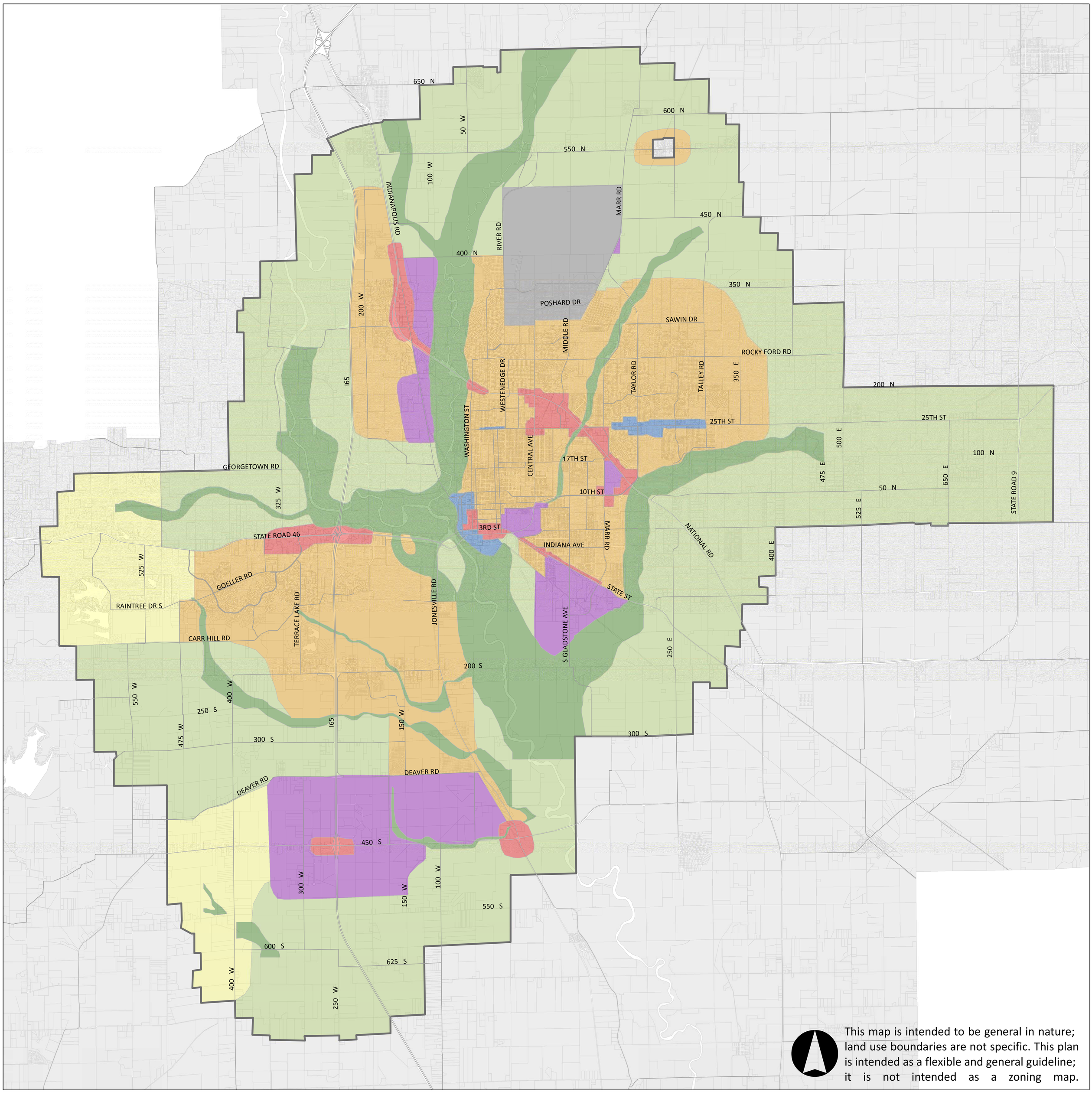
Samir contacted Mr. Finke to discuss any permitted planned development along the alignment of the S.R. 46 Interchange Intersection Improvements project. Mr. Finke stated that there is no development currently planned for this area, and no permits are filed for any parcels within the project area.

6971 Hillsdale Court
Indianapolis, IN 46250
(317) 400-1633
Fax: (855) 808-8227
www.metricenv.com

Phone Memo

Topic:	S.R. 46 Interchange Intersection Improvements - Development
Date & Time:	September 8, 2017; 9:00 AM
Attendees:	Samir Raman, Metric Environmental Jorge Morales, Bartholomew County Redevelopment Commission – President

Samir contacted Mr. Morales to discuss any permitted planned development along the alignment of the proposed S.R. 46 Interchange Intersection Improvements project. Mr. Morales stated that there is no development currently planned for this area, and no permits are filed for any parcels within the project area.



Future Land Use Map

City of Columbus Comprehensive Plan

- **Agriculture**
- **Commercial**
- **Estate/Cluster Residential**
- **Floodway/Sensitive Area**
- **Industrial**
- **Mixed Use**
- **Residential**
- **Special Use**
- **Columbus Jurisdiction**

APPENDIX E

CALIBRATION LOGS/ FIELD LOGS AND SOUND LEVEL METER OUTPUTS

S.R. 46 INTERCHANGE INTERSECTION IMPROVEMENTS
COLUMBUS, BARTHOLOMEW COUNTY, INDIANA
NOISE IMPACT ANALYSIS

Location #1
Receptor Description: Southeast quadrant of the intersection of S.R. 46 and S.R. 11 intersection.
Major Noise Source: Traffic on S.R. 46 and S.R. 11
Land Use Category: Agricultural

Field Engineers: Samir Raman
Date: February 13, 2018
Start Time: 16:19
End Time: 16:34
Weather: 40 degrees, sunny/cloudy, and <15 mph wind

Decibel Reading: 60.9 dB

Ambient Speed: 25
Posted Speed: 25
Number of Lanes: 1
Lane Width: 12'

Traffic Count: S.R. 11

	SB	NB
Cars	22	147
Heavy Trucks	0	3

Summary

File Name on Meter	LxT_Data.004
File Name on PC	SLM_0004864_LxT_Data_004.00.ldbin
Serial Number	0004864
Model	SoundExpert® LxT
Firmware Version	2.302
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2018-02-13 05:03:04
Stop	2018-02-13 05:18:17
Duration	00:15:13.7
Run Time	00:15:13.7
Pause	00:00:00.0
Pre Calibration	2018-02-07 15:35:52
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	144.0 dB

	A	**C**	**Z**	
Under Range Peak	100.2	97.2	**102.2**	dB
Under Range Limit	**49.2**	47.2	55.2	dB
Noise Floor	36.1	36.7	44.3	dB

Results

LAeq	60.9	dB	
LAE	90.5	dB	
EA	124.945	µPa²h	
LZpeak (max)	2018-02-13 05:03:07	99.7	dB
LASmax	2018-02-13 05:12:55	71.1	dB
LASmin	2018-02-13 05:07:13	50.2	dB
SEA	-99.9	dB	

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**	
	70.9	-99.9	60.9	70.9	-99.9	-99.9	60.9	dB

LCeq	74.0	dB
LAeq	60.9	dB
LCeq - LAeq	13.1	dB
LAleq	61.6	dB
LAeq	60.9	dB
LAleq - LAeq	0.7	dB

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	60.9		74.0			
LS(max)	71.1	2018/02/13 5:12:55				
LS(min)	50.2	2018/02/13 5:07:13				
LPeak(max)					99.7	2018/02/13 5:03:07

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Statistics

LAS5.00	65.3	dB
LAS10.00	63.8	dB
LAS33.30	60.5	dB
LAS50.00	59.1	dB
LAS66.60	58.1	dB
LAS90.00	55.6	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**

Direct	2017-03-22 09:59:00	-28.7
Direct	2017-03-22 09:56:42	-28.3
PRMLxT1	2018-02-07 15:35:52	-50.2
PRMLxT1	2018-02-07 14:58:22	-50.7
PRMLxT1	2018-02-06 15:05:15	-51.0
PRMLxT1	2018-02-06 15:02:30	-98.7
PRMLxT1	2018-02-06 14:29:23	-101.9
PRMLxT1	2018-01-16 13:26:06	-101.8
PRMLxT1	2018-01-16 13:25:44	-101.9
PRMLxT1	2018-01-16 13:24:38	-101.9
PRMLxT1	2018-01-16 13:19:53	-101.8
PRMLxT1	2018-01-16 13:19:30	-101.8
PRMLxT1	2017-12-28 13:31:07	-49.6
PRMLxT1L	2017-07-27 14:41:12	-27.9
PRMLxT1L	2017-02-24 11:17:15	-28.4

S.R. 46 INTERCHANGE INTERSECTION IMPROVEMENTS
COLUMBUS, BARTHOLOMEW COUNTY, INDIANA
NOISE IMPACT ANALYSIS

Location #2
Receptor Description: Northwest quadrant of the intersection of S.R. 46 and S.R. 11 intersection along Columbus People Trail.
Major Noise Source: Traffic on S.R. 46 and S.R. 11
Land Use Category: Pedestrian Trail

Field Engineers: Samir Raman
Date: February 13, 2018
Start Time: 16:43
End Time: 16:58
Weather: 40 degrees, sunny/cloudy, and <15 mph wind

Decibel Reading: 71.9 dB

Ambient Speed: 40
Posted Speed: 40
Number of Lanes: 3
Lane Width: 12'

Traffic Count: S.R. 46

	WB
Cars	515
Heavy Trucks	9

Summary

File Name on Meter	LxT_Data.007
File Name on PC	SLM_0004864_LxT_Data_007.00.ldbin
Serial Number	0004864
Model	SoundExpert® LxT
Firmware Version	2.302
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2018-02-13 05:26:22
Stop	2018-02-13 05:41:24
Duration	00:15:02.3
Run Time	00:15:02.3
Pause	00:00:00.0
Pre Calibration	2018-02-07 15:35:52
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	144.0 dB

	A	**C**	**Z**	
Under Range Peak	100.2	97.2	**102.2**	dB
Under Range Limit	**49.2**	47.2	55.2	dB
Noise Floor	36.1	36.7	44.3	dB

Results

LAeq	71.9 dB		
LAE	101.4 dB		
EA	1.548 mPa²h		
LZpeak (max)	2018-02-13 05:28:55	105.3 dB	
LASmax	2018-02-13 05:35:08	82.5 dB	
LASmin	2018-02-13 05:32:04	59.6 dB	
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LZpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LZpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LZpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**	
	81.9	-99.9	71.9	81.9	-99.9	-99.9	71.9	dB

LCeq	80.5 dB	
LAeq	71.9 dB	
LCeq - LAeq	8.6 dB	
LAleq	72.6 dB	
LAeq	71.9 dB	
LAleq - LAeq	0.7 dB	

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	71.9		80.5			
LS(max)	82.5	2018/02/13 5:35:08				
LS(min)	59.6	2018/02/13 5:32:04				
LPeak(max)					105.3	2018/02/13 5:28:55

# Overloads	0
Overload Duration	0.0 s
# OBA Overloads	0
OBA Overload Duration	0.0 s

Statistics

LAS5.00	75.0 dB
LAS10.00	74.1 dB
LAS33.30	72.3 dB
LAS50.00	71.2 dB
LAS66.60	70.0 dB
LAS90.00	67.6 dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**

Direct	2017-03-22 09:59:00	-28.7
Direct	2017-03-22 09:56:42	-28.3
PRMLxT1	2018-02-07 15:35:52	-50.2
PRMLxT1	2018-02-07 14:58:22	-50.7
PRMLxT1	2018-02-06 15:05:15	-51.0
PRMLxT1	2018-02-06 15:02:30	-98.7
PRMLxT1	2018-02-06 14:29:23	-101.9
PRMLxT1	2018-01-16 13:26:06	-101.8
PRMLxT1	2018-01-16 13:25:44	-101.9
PRMLxT1	2018-01-16 13:24:38	-101.9
PRMLxT1	2018-01-16 13:19:53	-101.8
PRMLxT1	2018-01-16 13:19:30	-101.8
PRMLxT1	2017-12-28 13:31:07	-49.6
PRMLxT1L	2017-07-27 14:41:12	-27.9
PRMLxT1L	2017-02-24 11:17:15	-28.4

S.R. 46 INTERCHANGE INTERSECTION IMPROVEMENTS
COLUMBUS, BARTHOLOMEW COUNTY, INDIANA
NOISE IMPACT ANALYSIS

Location #3
Receptor Description: Northwest quadrant of the intersection of S.R. 46 and S.R. 11.
Major Noise Source: Traffic on S.R. 46 and S.R. 11
Land Use Category: Agricultural

Field Engineers: Samir Raman
Date: February 13, 2018
Start Time: 17:02
End Time: 17:17
Weather: 40 degrees, sunny/cloudy, and <15 mph wind

Decibel Reading: 69.3 dB

Ambient Speed: 40
Posted Speed: 40
Number of Lanes: 3
Lane Width: 12'

Traffic Count: S.R. 46

	EB
Cars	430
Heavy Trucks	14

Summary

File Name on Meter	LxT_Data.010
File Name on PC	SLM_0004864_LxT_Data_010.00.ldbin
Serial Number	0004864
Model	SoundExpert® LxT
Firmware Version	2.302
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2018-02-13 05:44:32
Stop	2018-02-13 06:00:16
Duration	00:15:44.6
Run Time	00:15:44.6
Pause	00:00:00.0
Pre Calibration	2018-02-07 15:35:52
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	144.0 dB

	A	**C**	**Z**	
Under Range Peak	100.2	97.2	**102.2**	dB
Under Range Limit	**49.2**	47.2	55.2	dB
Noise Floor	36.1	36.7	44.3	dB

Results

LAeq	69.3 dB		
LAE	99.0 dB		
EA	886.308 µPa²h		
LZpeak (max)	2018-02-13 06:00:12	102.0 dB	
LASmax	2018-02-13 06:00:12	86.6 dB	
LASmin	2018-02-13 05:54:15	58.1 dB	
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	1	3.1 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LZpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LZpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LZpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**	
	79.3	-99.9	69.3	79.3	-99.9	-99.9	69.3	dB

LCeq	76.3 dB	
LAeq	69.3 dB	
LCeq - LAeq	7.0 dB	
LAleq	70.0 dB	
LAeq	69.3 dB	
LAleq - LAeq	0.7 dB	

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	69.3		76.3			
LS(max)	86.6	2018/02/13 6:00:12				
LS(min)	58.1	2018/02/13 5:54:15				
LPeak(max)					102.0	2018/02/13 6:00:12

# Overloads	0
Overload Duration	0.0 s
# OBA Overloads	0
OBA Overload Duration	0.0 s

Statistics

LAS5.00	71.2 dB
LAS10.00	70.5 dB
LAS33.30	69.0 dB
LAS50.00	68.3 dB
LAS66.60	66.8 dB
LAS90.00	64.4 dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**

Direct	2017-03-22 09:59:00	-28.7
Direct	2017-03-22 09:56:42	-28.3
PRMLxT1	2018-02-07 15:35:52	-50.2
PRMLxT1	2018-02-07 14:58:22	-50.7
PRMLxT1	2018-02-06 15:05:15	-51.0
PRMLxT1	2018-02-06 15:02:30	-98.7
PRMLxT1	2018-02-06 14:29:23	-101.9
PRMLxT1	2018-01-16 13:26:06	-101.8
PRMLxT1	2018-01-16 13:25:44	-101.9
PRMLxT1	2018-01-16 13:24:38	-101.9
PRMLxT1	2018-01-16 13:19:53	-101.8
PRMLxT1	2018-01-16 13:19:30	-101.8
PRMLxT1	2017-12-28 13:31:07	-49.6
PRMLxT1L	2017-07-27 14:41:12	-27.9
PRMLxT1L	2017-02-24 11:17:15	-28.4

S.R. 46 INTERCHANGE INTERSECTION IMPROVEMENTS
COLUMBUS, BARTHOLOMEW COUNTY, INDIANA
NOISE IMPACT ANALYSIS

Location #4
Receptor Description: Southwest quadrant of the intersection of S.R. 46 and S.R. 11.
Major Noise Source: Traffic on S.R. 46 and S.R. 11
Land Use Category: Agricultural

Field Engineers: Samir Raman
Date: February 13, 2018
Start Time: 17:20
End Time: 17:35
Weather: 40 degrees, sunny/cloudy, and <15 mph wind

Decibel Reading: 65.7 dB

Ambient Speed: N/A
Posted Speed: N/A
Number of Lanes: N/A
Lane Width: N/A

Summary

File Name on Meter	LxT_Data.013
File Name on PC	SLM_0004864_LxT_Data_013.00.ldbin
Serial Number	0004864
Model	SoundExpert® LxT
Firmware Version	2.302
User	
Location	
Job Description	
Note	

Measurement

Description	
Start	2018-02-13 06:03:27
Stop	2018-02-13 06:18:29
Duration	00:15:02.0
Run Time	00:15:02.0
Pause	00:00:00.0
Pre Calibration	2018-02-07 15:35:52
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	144.0 dB

	A	**C**	**Z**	
Under Range Peak	100.2	97.2	**102.2**	dB
Under Range Limit	**49.2**	47.2	55.2	dB
Noise Floor	36.1	36.7	44.3	dB

Results

LAeq	65.7 dB		
LAE	95.2 dB		
EA	369.796 µPa²h		
LZpeak (max)	2018-02-13 06:05:50	99.2 dB	
LASmax	2018-02-13 06:05:05	73.6 dB	
LASmin	2018-02-13 06:13:59	55.8 dB	
SEA	-99.9 dB		
LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LAS > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LZpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LZpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s	
LZpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s	

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**	
	75.7	-99.9	65.7	75.7	-99.9	-99.9	65.7	dB

LCeq	75.4 dB	
LAeq	65.7 dB	
LCeq - LAeq	9.7 dB	
LAleq	66.4 dB	
LAeq	65.7 dB	
LAleq - LAeq	0.7 dB	

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	65.7		75.4			
LS(max)	73.6	2018/02/13 6:05:05				
LS(min)	55.8	2018/02/13 6:13:59				
LPeak(max)					99.2	2018/02/13 6:05:50

# Overloads	0
Overload Duration	0.0 s
# OBA Overloads	0
OBA Overload Duration	0.0 s

Statistics

LAS5.00	68.6 dB
LAS10.00	68.2 dB
LAS33.30	66.0 dB
LAS50.00	64.8 dB
LAS66.60	63.8 dB
LAS90.00	61.9 dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**

Direct	2017-03-22 09:59:00	-28.7
Direct	2017-03-22 09:56:42	-28.3
PRMLxT1	2018-02-07 15:35:52	-50.2
PRMLxT1	2018-02-07 14:58:22	-50.7
PRMLxT1	2018-02-06 15:05:15	-51.0
PRMLxT1	2018-02-06 15:02:30	-98.7
PRMLxT1	2018-02-06 14:29:23	-101.9
PRMLxT1	2018-01-16 13:26:06	-101.8
PRMLxT1	2018-01-16 13:25:44	-101.9
PRMLxT1	2018-01-16 13:24:38	-101.9
PRMLxT1	2018-01-16 13:19:53	-101.8
PRMLxT1	2018-01-16 13:19:30	-101.8
PRMLxT1	2017-12-28 13:31:07	-49.6
PRMLxT1L	2017-07-27 14:41:12	-27.9
PRMLxT1L	2017-02-24 11:17:15	-28.4

Certificate of Calibration and Conformance

This document certifies that the instrument referenced below meets published specifications per Procedure PRD-P263; ANSI S1.4-1983 (R 2006) Type 1; S1.4A-1985; S1.43-1997 Type 1; S1.11-2004 Octave Band Class 0; S1.25-1991; IEC 61672-2002 Class 1; 60651-2001 Type 1; 60804-2000 Type 1; 61260-2001 Class 0; 61252-2002.

Manufacturer:	Larson Davis	Temperature:	70.5	°F
Model Number:	LxT1-SE		21.39	°C
Serial Number:	4864	Rel. Humidity:	50.8	%
Customer:	TMS Rental	Pressure:	993.1	mbars
Description:	Sound Level Meter		993.1	hPa
Note:	As Found/As Left: In Tolerance			

Upon receipt for testing, this instrument was found to be:

Within the stated tolerance of the manufacturer's specification.

Calibration Date: 10/11/2017 Calibration Due:

Calibration Standards Used:

Manufacturer	Model	Serial Number	Cal Due
Stanford Research Systems	DS360	123270	4/25/2018

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at The Modal Shop and/or Larson Davis Corporate Headquarters. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. Calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of The Modal Shop.

Technician: Adam Magee Signature:

THE MODAL SHOP
A PCB GROUP CO.

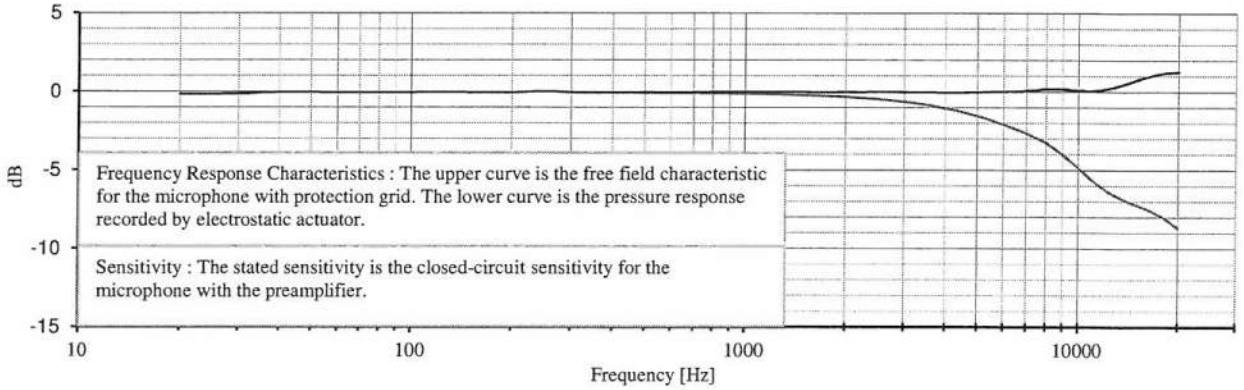
3149 East Kemper Road
Cincinnati, OH. 45241
Phone: (513) 351-9919
(800) 860-4867
www.modalshop.com

THE MODAL SHOP INC.
A PCB GROUP CO.

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

~Certificate of Calibration~

Manufacturer:	PCB	PCB	**Customer:**	TMS Rental	
Model Number:	377B02	426E01	**Address:**		
Serial Number:	146481	17122			
Asset ID:			**Calibration Date:**	Nov 02, 2017 14:27:09	
Description:	Free-Field Microphone with Preamplifier		**Due Date:**		
Sensitivity:	**250 Hz**	**1 kHz**	**Temperature:**	74 (23)	°F (°C)
	-26.31	-26.45 dB re. 1V/Pa	**Humidity:**	53	%
	48.38	47.57 mV/Pa	**Ambient Pressure:**	995.2	mbar
Cal. Results:	In Tolerance		**Polarization Voltage:**	0	VDC



Traceability: The calibration is traceable through A1633.

Notes:
Calibration results relate only to the items calibrated.
This certificate may not be reproduced, except in full, without written permission.
This calibration is performed in compliance with ISO 9001, ISO 17025 and ANSI Z540.
Measurement uncertainty (250 Hz sensitivity calibration) at 95% confidence level: 0.30 dB.
Calibrated per procedure PRD-P204.

User Note: As Found / As Left: In Tolerance.

Frequency Response with reference to level at 250 Hz

Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)	Frequency (Hz)	Upper (dB)
20	-0.18	**630**	-0.06	**4500**	-0.05		
25	-0.18	**800**	-0.03	**5000**	-0.04		
31.5	-0.14	**1000**	-0.02	**5600**	-0.01		
40	-0.05	**1120**	-0.02	**6300**	0.02		
50	-0.04	**1250**	-0.02	**7100**	0.07		
63	-0.06	**1400**	-0.02	**8000**	0.17		
80	-0.05	**1600**	-0.04	**9000**	0.16		
100	-0.05	**1800**	-0.04	**10000**	0.08		
125	-0.03	**2000**	-0.03	**11200**	0.07		
160	-0.06	**2240**	-0.03	**12500**	0.24		
200	-0.06	**2500**	-0.03	**14000**	0.55		
250	0.00	**2800**	-0.03	**16000**	0.95		
315	-0.06	**3150**	-0.03	**18000**	1.18		
400	-0.07	**3550**	-0.05	**20000**	1.26		
500	-0.05	**4000**	-0.06				

Technician: Ed Devlin

Approval: Edward A. Devlin

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	2/16/2017	2/16/2018

ACCREDITED
Calibration Lab
CALIBRATION CERT 2649.01

THE MODAL SHOP INC.
A PCB GROUP CO.

~Calibration Certificate~

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

Manufacturer:	Larson Davis	Asset ID:	
Model:	CAL200	Calibration Date:	Apr 20, 2017 12:43:17
Serial Number:	11085	Due Date:	
Description:	Acoustic Calibrator	Technician:	Ed Devlin
Customer:	TMS Rental	Approval:	

Calibration Results:

	Temperature:	24 °C (75 °F)
Measured SPL : 93.91 dB re. 20µPa	Humidity:	42.00%
Measured Frequency : 1,000.00 Hz	Pressure:	993.9 mbar

Upon receipt for calibration, the instrument was found to be:
WITHIN the stated tolerance of the manufacturer's specification.

Note: **As Found / As Left: In Tolerance.**

Measurement uncertainty at 95% confidence level: 0.25 dB

The subject instrument was calibrated to the indicated specification using standards stated below or to accepted values of natural physical constants. This document certifies that the instrument met the following specification

This calibration is traceable through : 683/284413-14

Notes:
The calibration was performed under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. Unless otherwise noted, the reported value is both "as found" and "as left" data. Calibration results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	9/20/2016	9/20/2017

THE MODAL SHOP INC.
A PCB GROUP CO.

~Calibration Certificate~

3149 East Kemper Rd.
Cincinnati, OH 45241
Ph : 513-351-9919
Fax: 513-458-2172
www.modalshop.com

Manufacturer:	Larson Davis	Asset ID:	
Model:	CAL200	Calibration Date:	Apr 20, 2017 12:50:20
Serial Number:	11085	Due Date:	
Description:	Acoustic Calibrator	Technician:	Ed Devlin
Customer:	TMS Rental	Approval:	Edward A. Devlin

Calibration Results:

	Temperature:	24 °C (75 °F)
Measured SPL : 113.90 dB re. 20µPa	Humidity:	42.00%
Measured Frequency : 1,000.00 Hz	Pressure:	993.9 mbar

Upon receipt for calibration, the instrument was found to be:
WITHIN the stated tolerance of the manufacturer's specification.

Note: **As Found / As Left: In Tolerance.**

Measurement uncertainty at 95% confidence level: 0.25 dB

The subject instrument was calibrated to the indicated specification using standards stated below or to accepted values of natural physical constants. This document certifies that the instrument met the following specification

This calibration is traceable through : 683/284413-14

Notes:
The calibration was performed under operating procedures intended to implement the requirements of ISO 9001, ISO 17025 and ANSI Z540. Unless otherwise noted, the reported value is both "as found" and "as left" data. Calibration results relate only to the items calibrated. This certificate may not be reproduced, except in full, without written permission.

Reference Equipment Used:

Manuf.	*Model*	*Serial*	*Cal. Date*	*Due Date*
GRAS	40AG	9542	9/20/2016	9/20/2017

APPENDIX F

TABLE 10 – TRAFFIC VOLUME DATA

Table 10: Traffic Volume Data

Roadway	PM Peak (Trucks %)		
	Existing Conditions (2017)	Future No-Build Conditions (2041)	Future Build Conditions (2041)
SR 46 WB (through intersection)	1992 (1%)	2193 (1%)	2193 (4%)
SR 46 WB to SR 11 SB	0 (0%)	0 (0%)	689 (4%)
SR 46 WB to SR 46 EB	3 (0%)	3 (0%)	N/A
SR 46 EB (through intersection)	1300 (3%)	1431 (3%)	1431 (4%)
SR 46 EB to SR 11 SB	158 (4%)	174 (4%)	174 (3%)
SR 11 NB to SR 46 WB	89 (4%)	98 (4%)	98 (3%)
SR 11 NB to SR 46 EB	601 (2%)	662 (2%)	665 (4%)

From:	Stettler, Devin
To:	Toombs, Aaron
Cc:	Oliphant, Mike
Subject:	FW: Des No. 1700139, SR 46 Interchange Intersection Improvement Project, Bartholomew County, Indiana (Noise Report)
Date:	Tuesday, August 28, 2018 2:30:21 PM
Attachments:	image001.png image002.png image003.png image004.png

Aaron,

The Noise Analysis has been approved….

This approval email will need to be included in the appendix of the CE.

Thanks,

Devin

From: Nick Batta <nbatta@cmtengr.com>
Sent: Tuesday, August 28, 2018 2:21 PM
To: Stettler, Devin <DevinS@ucindy.com>
Subject: FW: Des No. 1700139, SR 46 Interchange Intersection Improvement Project, Bartholomew County, Indiana (Noise Report)

NICK BATTA | **Crawford, Murphy & Tilly** | w 317.492.9162 | m 317.409.0665
Project Manager

From: Miller, Brandon <BraMiller1@indot.IN.gov>
Sent: Tuesday, August 14, 2018 2:59 PM
To: Nick Batta <nbatta@cmtengr.com>
Cc: Bales, Ronald <rbales@indot.IN.gov>; Prince, Greg <gprince@indot.IN.gov>
Subject: Des No. 1700139, SR 46 Interchange Intersection Improvement Project, Bartholomew County, Indiana (Noise Report)

A traffic noise analysis report was completed by Metric Environmental in July 2018 to evaluate potential traffic noise impacts for the proposed interchange intersection improvement project in Bartholomew County, Indiana. Traffic noise was evaluated at all receptors within 500 feet of edge of pavement within the study area. Traffic noise levels for the existing (2017) and projected (2041) traffic volumes for the build alternative.

This report evaluated potential noise impacts for the proposed improvements for the interchange intersection improvement project in compliance with the Federal Highway Administration's (FHWA) Procedures for Abatement

of Highway Traffic Noise and Construction Noise as presented in the Code of Federal Regulations, Title 23 Part 772 (23 CFR 772) and the Indiana Department of Transportation (INDOT) *Traffic Noise Analysis Procedure* (2017).

Existing modeled (2017) peak hour noise levels ranged from 51.9 to 75.3 dB(A). A nearby railroad was included in the noise level evaluation for both the existing model and the design year model. Predicted design year (2041) noise levels would approach or exceed the Noise Abatement Criteria (NAC) at three (3) receptors, resulting in the need to evaluate noise abatement. Noise abatement was analyzed, however no barrier met both the feasibility and reasonableness criterion established by the INDOT *Traffic Noise Analysis Procedure* (2017).

Based on the studies thus far accomplished, the State of Indiana has not identified any locations where noise abatement is likely. A re-evaluation of the noise analysis will occur during final design. If during final design it has been determined that conditions have changed such that noise abatement is feasible and reasonable, the abatement measures might be provided. The final decision on the installation of any abatement measure(s) will be made upon the completion of the project's final design and the public involvement process.

This email will serve as INDOT's approval of the traffic noise analysis report for the interchange intersection improvement project. (Des 1700139)

Brandon Miller
NEPA Team Lead
INDOT Environmental Services
100 N. Senate Ave., Rm. 642
Indianapolis, IN 46204
Office: (317) 234-5108
Email: bramiller1@indot.in.gov

Appendix J

Environmental Justice

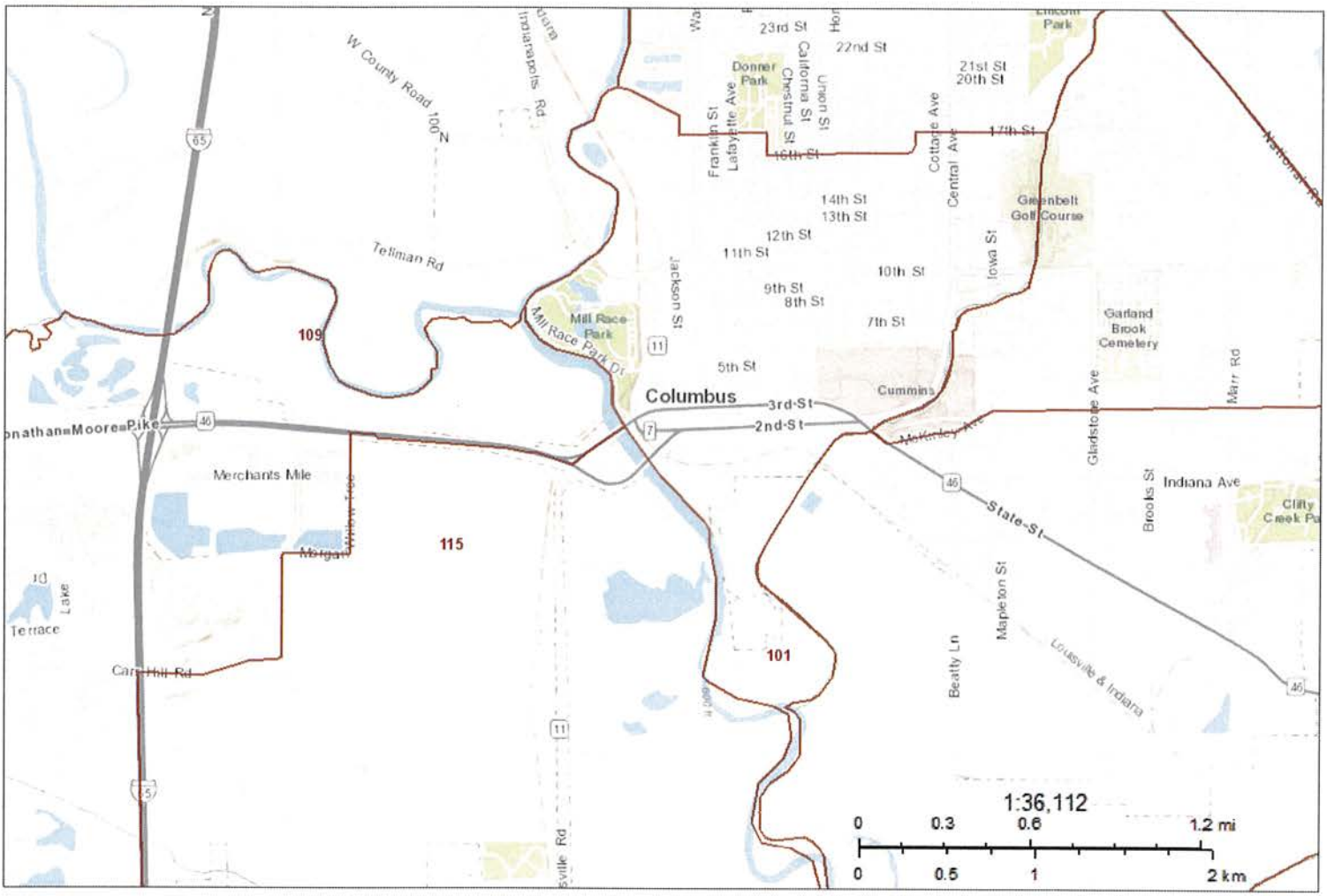
Des. No.: 1700139: SR 46 Grade Separation over Louisville & Indiana Railroad

Environmental Justice Data Analysis

Comparison of City of Columbus to Census Tracts 115 and 109

	COC City of Columbus	AC1 Census Tract 115	AC2 Census Tract 109
LOW-INCOME POPULATION EJ ANALYSIS			
Population for whom poverty status is determined: Total	45516	8844	5979
Population for whom poverty status is determined: Income in 2011 below poverty level	5429	1213	177
Percent Low-Income	**11.9%**	**13.7%**	**3.0%**
125 Percent of COC	**14.9%**		
Population of EJ Concern		**No**	**No**
MINORITY POPULATION EJ ANALYSIS			
Total population: Total	46474	8890	6036
Total population: Not Hispanic or Latino	43818	8059	5843
Total population: Not Hispanic or Latino; White alone	36982	7140	4587
Total population: Not Hispanic or Latino; Black or African American alone	1293	80	113
Total population: Not Hispanic or Latino; American Indian and Alaska Native alone	125	0	0
Total population: Not Hispanic or Latino; Asian alone	4424	589	1041
Total population: Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	62	0	0
Total population: Not Hispanic or Latino; Some other race alone	93	0	0
Total population: Not Hispanic or Latino; Two or more races	839	250	102
Total population: Two races including Some other race	60	0	41
Total population: Two races excluding Some other race	779	250	61
Total population: Hispanic or Latino	2656	831	193
Total population: Hispanic or Latino; White alone	1128	404	165
Total population: Hispanic or Latino; Black or African American alone	0	0	0
Total population: Hispanic or Latino; American Indian and Alaska Native alone	0	0	0
Total population: Hispanic or Latino; Asian alone	0	0	0
Total population: Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone	0	0	0
Total population: Hispanic or Latino; Some other race alone	1405	356	28
Total population: Hispanic or Latino; Two or more races	123	71	0
Total population: Two races including Some other race	85	48	0
Total population: Two races excluding Some other race	38	23	0
Number Non-white/minority	**9492**	**1750**	**1449**
Percent Non-white/minority	**20.4%**	**19.7%**	**24.0%**
125 Percent of COC	**25.5%**		
Population of EJ Concern		**No**	**No**

Source: 2016 US Census Bureau



Legend

Your Selections
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Selection Results
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Boundaries
No Legend

B03002

HISPANIC OR LATINO ORIGIN BY RACE

Universe: Total population
2012-2016 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Tell us what you think. Provide feedback to help make American Community Survey data more useful for you.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

	Census Tract 109, Bartholomew County, Indiana		Census Tract 115, Bartholomew County, Indiana		Columbus city, Indiana
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Total:	6,036	+/-410	8,890	+/-616	46,474
Not Hispanic or Latino:	5,843	+/-429	8,059	+/-626	43,818
White alone	4,587	+/-364	7,140	+/-646	36,982
Black or African American alone	113	+/-76	80	+/-119	1,293
American Indian and Alaska Native alone	0	+/-16	0	+/-16	125
Asian alone	1,041	+/-313	589	+/-303	4,424
Native Hawaiian and Other Pacific Islander alone	0	+/-16	0	+/-16	62
Some other race alone	0	+/-16	0	+/-16	93
Two or more races:	102	+/-83	250	+/-159	839
Two races including Some other race	41	+/-58	0	+/-16	60
Two races excluding Some other race, and three or more races	61	+/-55	250	+/-159	779
Hispanic or Latino:	193	+/-136	831	+/-333	2,656
White alone	165	+/-127	404	+/-257	1,128
Black or African American alone	0	+/-16	0	+/-16	0
American Indian and Alaska Native alone	0	+/-16	0	+/-16	0
Asian alone	0	+/-16	0	+/-16	0
Native Hawaiian and Other Pacific Islander alone	0	+/-16	0	+/-16	0
Some other race alone	28	+/-45	356	+/-312	1,405
Two or more races:	0	+/-16	71	+/-68	123
Two races including Some other race	0	+/-16	48	+/-53	85
Two races excluding Some other race, and three or more races	0	+/-16	23	+/-31	38

	Columbus city, Indiana
	Margin of Error
Total:	+/-460
Not Hispanic or Latino:	+/-597
White alone	+/-668
Black or African American alone	+/-256
American Indian and Alaska Native alone	+/-108
Asian alone	+/-192
Native Hawaiian and Other Pacific Islander alone	+/-86
Some other race alone	+/-109
Two or more races:	+/-261
Two races including Some other race	+/-53
Two races excluding Some other race, and three or more races	+/-260
Hispanic or Latino:	+/-448
White alone	+/-373
Black or African American alone	+/-24
American Indian and Alaska Native alone	+/-24
Asian alone	+/-24
Native Hawaiian and Other Pacific Islander alone	+/-24
Some other race alone	+/-480
Two or more races:	+/-78
Two races including Some other race	+/-65
Two races excluding Some other race, and three or more races	+/-36

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

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Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
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6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

B17001

POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE

Universe: Population for whom poverty status is determined
2012-2016 American Community Survey 5-Year Estimates

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Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

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Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

	Census Tract 109, Bartholomew County, Indiana		Census Tract 115, Bartholomew County, Indiana		Columbus city, Indiana
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Total:	5,979	+/-403	8,844	+/-616	45,516
Income in the past 12 months below poverty level:	177	+/-86	1,213	+/-501	5,429
Male:	53	+/-50	610	+/-297	2,159
Under 5 years	0	+/-16	93	+/-97	310
5 years	0	+/-16	0	+/-16	108
6 to 11 years	0	+/-16	85	+/-85	232
12 to 14 years	0	+/-16	37	+/-39	119
15 years	0	+/-16	0	+/-16	66
16 and 17 years	0	+/-16	20	+/-32	27
18 to 24 years	35	+/-39	49	+/-56	309
25 to 34 years	18	+/-29	71	+/-74	230
35 to 44 years	0	+/-16	50	+/-44	267
45 to 54 years	0	+/-16	79	+/-86	139
55 to 64 years	0	+/-16	29	+/-42	236
65 to 74 years	0	+/-16	64	+/-63	59
75 years and over	0	+/-16	33	+/-36	57
Female:	124	+/-71	603	+/-267	3,270
Under 5 years	0	+/-16	13	+/-22	233
5 years	0	+/-16	0	+/-16	13
6 to 11 years	0	+/-16	120	+/-110	471
12 to 14 years	0	+/-16	0	+/-16	91
15 years	0	+/-16	0	+/-16	30
16 and 17 years	11	+/-17	27	+/-41	42
18 to 24 years	46	+/-47	114	+/-87	502
25 to 34 years	25	+/-29	75	+/-76	474
35 to 44 years	0	+/-16	48	+/-43	403
45 to 54 years	22	+/-35	88	+/-108	370
55 to 64 years	12	+/-20	58	+/-52	225
65 to 74 years	8	+/-12	38	+/-46	202
75 years and over	0	+/-16	22	+/-29	214
Income in the past 12 months at or above poverty level:	5,802	+/-404	7,631	+/-566	40,087
Male:	2,917	+/-264	3,755	+/-314	20,155

	Census Tract 109, Bartholomew County, Indiana		Census Tract 115, Bartholomew County, Indiana		Columbus city, Indiana
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Under 5 years	128	+/-68	169	+/-98	1,333
5 years	40	+/-38	0	+/-16	212
6 to 11 years	278	+/-81	262	+/-118	1,516
12 to 14 years	155	+/-72	151	+/-96	691
15 years	21	+/-26	74	+/-54	291
16 and 17 years	60	+/-44	105	+/-77	475
18 to 24 years	175	+/-75	426	+/-165	1,893
25 to 34 years	549	+/-137	530	+/-204	3,606
35 to 44 years	423	+/-103	614	+/-153	2,650
45 to 54 years	349	+/-78	523	+/-128	2,778
55 to 64 years	487	+/-94	512	+/-132	2,112
65 to 74 years	167	+/-62	279	+/-84	1,566
75 years and over	85	+/-46	110	+/-61	1,032
Female:	2,885	+/-237	3,876	+/-372	19,932
Under 5 years	145	+/-74	274	+/-127	1,426
5 years	26	+/-28	81	+/-65	197
6 to 11 years	257	+/-95	203	+/-89	1,427
12 to 14 years	110	+/-84	148	+/-73	757
15 years	75	+/-52	76	+/-70	315
16 and 17 years	71	+/-48	132	+/-95	543
18 to 24 years	200	+/-94	169	+/-108	1,397
25 to 34 years	390	+/-118	495	+/-152	2,846
35 to 44 years	530	+/-117	707	+/-167	2,843
45 to 54 years	300	+/-87	428	+/-115	2,452
55 to 64 years	387	+/-66	676	+/-162	2,515
65 to 74 years	225	+/-81	278	+/-79	1,605
75 years and over	169	+/-71	209	+/-103	1,609

	Columbus city, Indiana
	Margin of Error
Total:	+/-476
Income in the past 12 months below poverty level:	+/-799
Male:	+/-413
Under 5 years	+/-134
5 years	+/-76
6 to 11 years	+/-117
12 to 14 years	+/-76
15 years	+/-60
16 and 17 years	+/-33
18 to 24 years	+/-129
25 to 34 years	+/-96
35 to 44 years	+/-119
45 to 54 years	+/-72
55 to 64 years	+/-100
65 to 74 years	+/-50
75 years and over	+/-44
Female:	+/-547
Under 5 years	+/-112
5 years	+/-21
6 to 11 years	+/-198
12 to 14 years	+/-71
15 years	+/-33
16 and 17 years	+/-36
18 to 24 years	+/-161
25 to 34 years	+/-140
35 to 44 years	+/-135
45 to 54 years	+/-150
55 to 64 years	+/-89
65 to 74 years	+/-116
75 years and over	+/-119
Income in the past 12 months at or above poverty level:	+/-931
Male:	+/-549
Under 5 years	+/-167
5 years	+/-83
6 to 11 years	+/-167
12 to 14 years	+/-187
15 years	+/-118
16 and 17 years	+/-120
18 to 24 years	+/-281
25 to 34 years	+/-255
35 to 44 years	+/-201
45 to 54 years	+/-213
55 to 64 years	+/-181
65 to 74 years	+/-158
75 years and over	+/-126
Female:	+/-619
Under 5 years	+/-200
5 years	+/-87
6 to 11 years	+/-228
12 to 14 years	+/-227
15 years	+/-114
16 and 17 years	+/-133
18 to 24 years	+/-226
25 to 34 years	+/-222
35 to 44 years	+/-275
45 to 54 years	+/-209
55 to 64 years	+/-241
65 to 74 years	+/-173

	Columbus city, Indiana
	Margin of Error
75 years and over	+/-176

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Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

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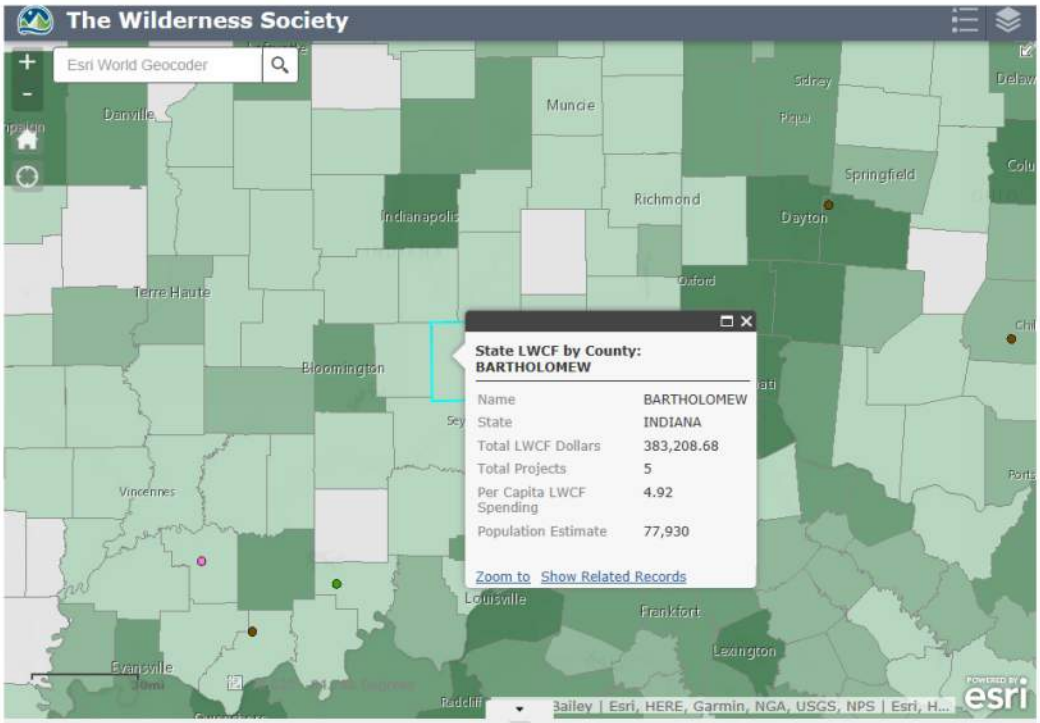
Appendix K

Additional Information

The Land and Water Conservation Fund Grant Listings were retrived from https://www.lwcfcoalition.com/tools/ on September 19, 2018.

MAP OF LWCF FUNDING THROUGH FEDERAL LAND MANAGEMENT AGENCIES AND STATE & LOCAL ASSISTANCE PROGRAM.



Options Zoom to Clear Selection Refresh

LWCF Federal Projects | State LWCF by County | lwcf.sde.LWCF_ALL_STATE_PROJECTS_FULL

objectid	State	County	Grant ID Element	Type	Grant Element Title	Grant Sponsor	Fiscal Year	Amount
51387	Indiana	BARTHOLOMEW	398	C	D/HARRISON RIDGE PARK	COLUMBUS PARK BOARD	1981	87,490.47
78924	Indiana	BARTHOLOMEW	269	D	CLIFTY PARK DEV	COLUMBUS PARK BOARD	1977	88,376.89
78961	Indiana	Bartholomew	399	C	D/ANDERSON FALLS NATURE PRESERVE	BARTHOLOMEW COUNTY PARK BOARD	1981	55,000
78964	Indiana	BARTHOLOMEW	412	D	HARRISON RIDGE PARK - PHASE II	COLUMBUS PARK BOARD	1983	9,174.47
78988	Indiana	BARTHOLOMEW	518	C	D/MCCULLOUGHS RUN PARK	COLUMBUS PARK BOARD	2000	143,166.85

5 features 0 selected

SR 46 Railroad Overpass and Intersection Improvement

Des. No. 1700139

City of Columbus
Bartholomew County, Indiana

Indiana Department of Transportation

Alternatives Analysis Report

Analysis Summary

October 2017

CMT
Engineers and Consultants

8790 Purdue Road
Indianapolis, IN 46268

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1.0 Introduction

This report documents the analysis and selection process for a proposed overpass of SR 46 at its crossing with the Louisville and Indiana Railroad Company, Inc. (L&I). In addition to the grade separation, an improvement is needed to the intersection of SR 46 and SR 11. This project is programmed by the Indiana Department of Transportation (INDOT), with funding support from the City of Columbus (City), Bartholomew County (County), Cummins Inc. and the L&I.

1.1 Project Description

The proposed project is located on the west side of Columbus, about 1.5 miles east of I-65, along SR 46. The current railroad crossing is at-grade with safety devices such as signaling lights and gates. Approximately 215 feet east of the railroad crossing is the SR 46/SR 11 signalized intersection.

The L&I and CSX Transportation, Inc. (CSX) entered into an agreement for joint use of the tracks. By doing so, the daily volume of trains is anticipated to increase from eight per day to 22 per day, along with increasing in average length (5,100 feet to 7,500 feet)[1]. These anticipated delays will cause significant queues along SR 46 and inhibit emergency access.

With or without the increase train traffic, the SR 46 and SR 11 signalized intersection is nearing its capacity. Significant queues are frequent, particularly for eastbound traffic entering the city, and southbound traffic exiting the downtown toward SR 11.

The proposed project will analyze 8 alternatives (including the No-build or Do Nothing alternative) that will seek to improve mobility and safety at the SR 46 railroad crossing and intersection with SR 11. ***Figure 1*** shows the project area.

[1] Huebschman, Ryan, "Railroad Impact Study for Columbus, Indiana", July 2016.

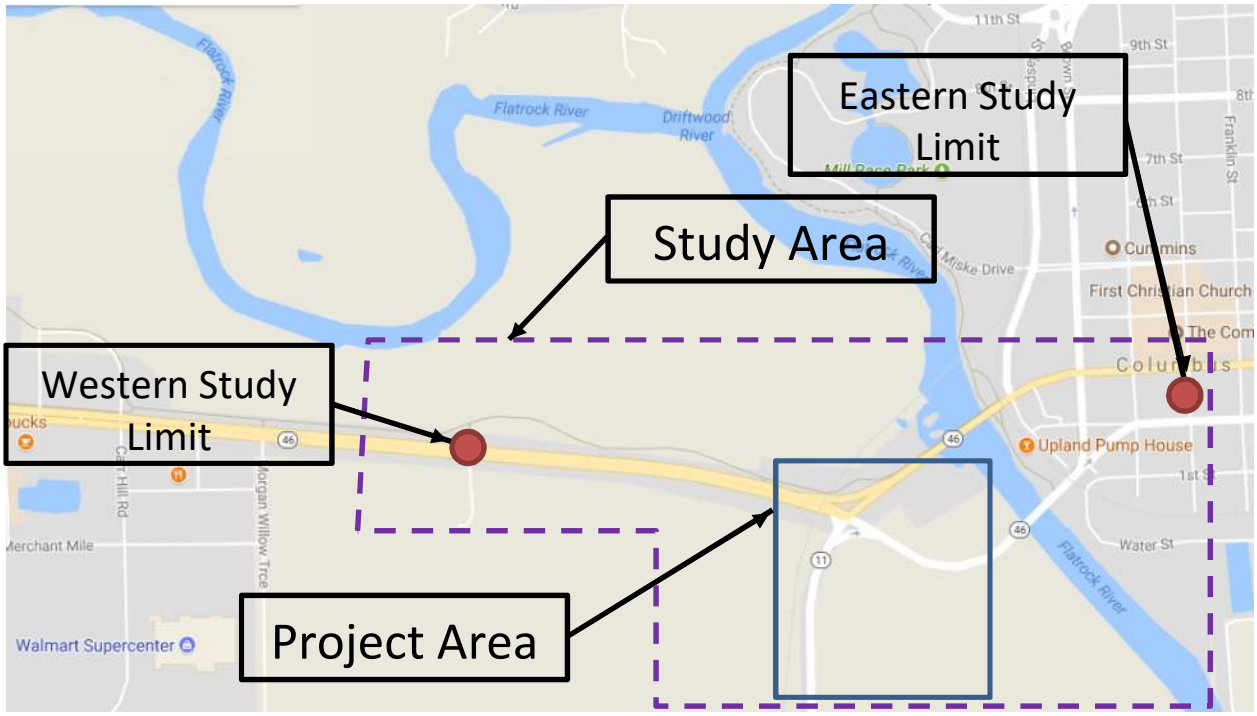


Figure 1 - Project Location

1.2 Existing Conditions

1.2.1 Roadways

The project area begins along SR 46 east of the intersection with Morgan Willow Trace and extends into the downtown area ending at Washington Street. The study area also included intersecting streets that may be impacted by certain alternatives. *Table 1* summarizes existing roadway information within the study area.

Table 1 - Existing Facility Information

Facility	Functional Classification	No. of Primary Lanes	2017 ADT	Speed Limit
SR 46 (West of SR 11)	Principal Arterial	4	29,573	40 mph
SR 46 (2nd Street)	Principal Arterial	3	22,504	30 mph
SR 46 (3rd Street)	Principal Arterial	3	17,094	30 mph
SR 11	Minor Arterial	2	14,470	40 mph
2nd Street	Minor Arterial	2	2,084	30 mph
Lindsey Street	Minor Arterial	3	9,572	30 mph
Brown Street	Minor Arterial	3	8,895	30 mph
Jackson Street	Local Road	2	408	20 mph
Washington Street	Major Collector	2	3,995	30 mph

1.2.2 Intersections

The primary intersection to be impacted is SR 46 at SR 11. It is a four-legged with signal control. The northbound approach is single lane with a channelized right turn lane. The eastbound approach consists of two through lanes eastbound with a dedicated right turn lane and three westbound lanes. The westbound approach has three through travel lanes in the eastbound direction. The southbound approach consists of one southbound through travel lane and a dedicated left turn lane, as well as two channelized right turn lanes that become westbound SR 46.

1.3 Purpose and Need

The Louisville & Indiana Railroad crosses SR 46 just west of the intersection with SR 11. The rail line is anticipated to see an increase of trains from an average of 8 per day to 22 per day with each train's length increased from an average of 5,100' to 7,500'). This increase in train traffic was estimated to cause daily vehicular delays of nearly 96 vehicles-hours[1]. There are few crossings of the East Fork White River to the east of the SR 46 / SR 11 intersection, making SR 46 an essential emergency services route across the City of Columbus.

The need for the project is further supplemented by the congestion that exists at the current SR 46/SR 11 at-grade signalized intersection. By the year 2041, the current intersection layout is anticipated to levels-of-service of D in the AM peak and E in the PM peak (a LOS of C is the minimum acceptable for suburban environments). In addition to the driver delays, the congestion has led to a history of vehicle collisions throughout the corridor. The index of crash frequency is more than six standard deviations from the average to be expected given the intersection setting and traffic volumes (more than three deviations in terms of crash severity).

The purpose of the proposed project is to increase operational efficiency and traffic safety by relieving congestion caused by the railroad crossing and current SR 46/SR 11 intersection layout.

1.4 Alternatives

A number of possible alternatives have been developed for analysis based on their ability to meet the defined purpose and need of project. Eight alternatives will be initially evaluated for their ability to meet the purpose of the project. The evaluation criteria will include network traffic analyses, environmental impact reviews, right-of-way requirements and relative cost estimates. The eight identified alternatives include:

- No-Build
- Traditional Intersection
- Parclo – Folded Diamond
- Parclo – Reroute Through Downtown
- Roundabout
- Modified Single-Point Urban Interchange (SPUI)
- Modified Diverging Diamond Interchange (DDI)
- Jughandle Intersection

These alternatives are further described in ***Section 2.2***.

2.0 Selection of Preferred Alternative

2.1 Methodology

Through discussion with INDOT and the City of Columbus, seven preliminary build alternatives and a no-build alternative were developed. An evaluation matrix is being constructed to compare the alternatives based on operations, environmental impacts, pedestrian access, supporting economic enhancement and cost.

The extent of the analysis will attempt to encompass the impacts of the proposed alternatives on the surrounding road network, as congestion on SR 46 could also impact local street operations. A map of the proposed study area and intersections is provided in ***Figure 2***. Analysis of SR 46 will extend from east of Morgan Willow Trace to the Jackson Street/SR 46 intersections. Analysis of the local road network will extend from Lindsey Street on the west to Washington Street on the east.

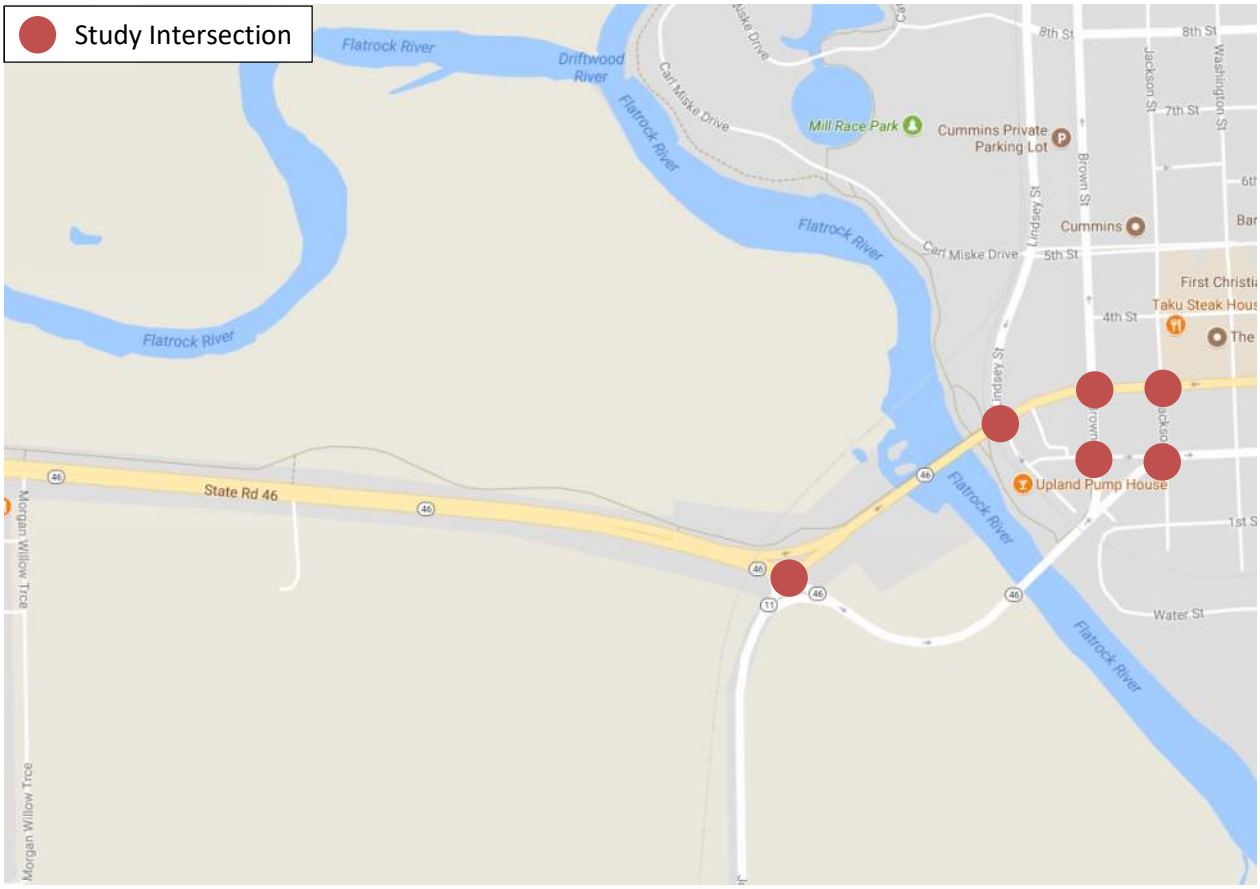


Figure 2 - Study Area Intersections

The analyses include the existing conditions based upon counts conducted in 2016 and 2017. Future analyses will include the construction open-to-traffic year (2021) and design year (2041). For each analysis year, the morning (AM) and evening (PM) peak hours will be analyzed.

2.1.1 Traffic Data and Forecasts

Traffic data used for the study was compiled from multiple sources. Roadway AADTs were available on INDOT's Traffic Count Database System (TCDS) website. The volumes were from 2016 and 2017 counts, so they were recently conducted.

Intersection turning movement counts were taken one weekday during a 3-hour period around both the AM and PM peak hours for each study intersection in ***Figure 2*** except for the intersection of SR 46 and SR 11. The turning movement counts for the SR 46 and SR 11 intersection had been conducted in a previous study in 2016. INDOT growth factors were used to adjust and annualize all volumes.

An origin-destination (O-D) matrix was developed using the existing road network and traffic counts. The O-D matrix was developed for use in reassigning traffic for the various

alternatives to estimate operational changes with the differing geometries. The O-D matrix was developed in two stages: downtown Columbus and the SR 46 / SR 11 intersection. The reason it was developed in two stages was because the downtown network would not be changing configuration with the different alternatives. Therefore, the downtown network was developed using specific origin and destination locations, and the SR 46 / SR 11 intersection origin-destination routes were created using the movement percentages for each approach. Together, one O-D matrix was created for the entire study area.

2.1.2 Safety Analysis

Historical crash data was compiled from several sources to analyze existing surface roads in the build and no-build scenarios (see RoadHAT analysis of the existing intersection in ***Appendix E***). The number of conflict points for each alternative was used to show representative safety improvements that could be compared across all alternatives. If representative crash reduction factors existed for the particular option, those were also noted.

2.1.3 Operational Analysis

A comprehensive operational analysis was conducted for the study area. An initial model to analyze signalized and unsignalized intersections was created using Synchro (Version 10.0.1.26) software. The Synchro model was then exported to create a microsimulation model of the entire study area using VISSIM (version 9.009). The purpose of this model was to analyze the study area as a whole in order to capture effects of mainline changes on local traffic conditions. By developing this secondary model, each element in the network would be analyzed for its impacts on the rest of the network. Results are presented to compare each alternative's performance against the others and to confirm that the preferred alternative will operate efficiently.

2.2 Preliminary Alternatives

Seven preliminary build alternatives and a no-build alternative were identified for evaluation in this report. They are briefly discussed below. Advantages and disadvantages for each alternative include generic factors as well as site-specific advantages and disadvantages based upon initial review of geometric, environmental and traffic impacts. A plan view of each build alternative may be found in ***Appendix A***.

2.2.1 No-Build

The No-Build Alternative includes all existing roads for the 2017, 2021 and 2041 scenarios, but with no geometric improvements. This alternative will serve as a baseline for comparison for build alternatives.

Advantages:

- No right-of-way needed.
- No earthwork required.

Disadvantages:

- Long queues back up into downtown Columbus during the peak periods.
- Close proximity of the railroad crossing exacerbates congestion, heightening the potential for accidents.
- Increased rail traffic beginning in 2018 will compound congestion problems at the SR 46 / SR 11 intersection.
- Congestion slows emergency services responses, school busses, and city transit on one of the few crossings of the East Fork White River in Columbus.

2.2.2 Traditional Intersection

This alternative grade-separates SR 46 over the railroad and maintains the existing geometric layout of the intersection with SR 11. Along with the same number of auxiliary lanes as today; dual southbound through lanes and dual northbound left turn lanes were added at the intersection to add capacity at the intersection. The intersection is signalized.

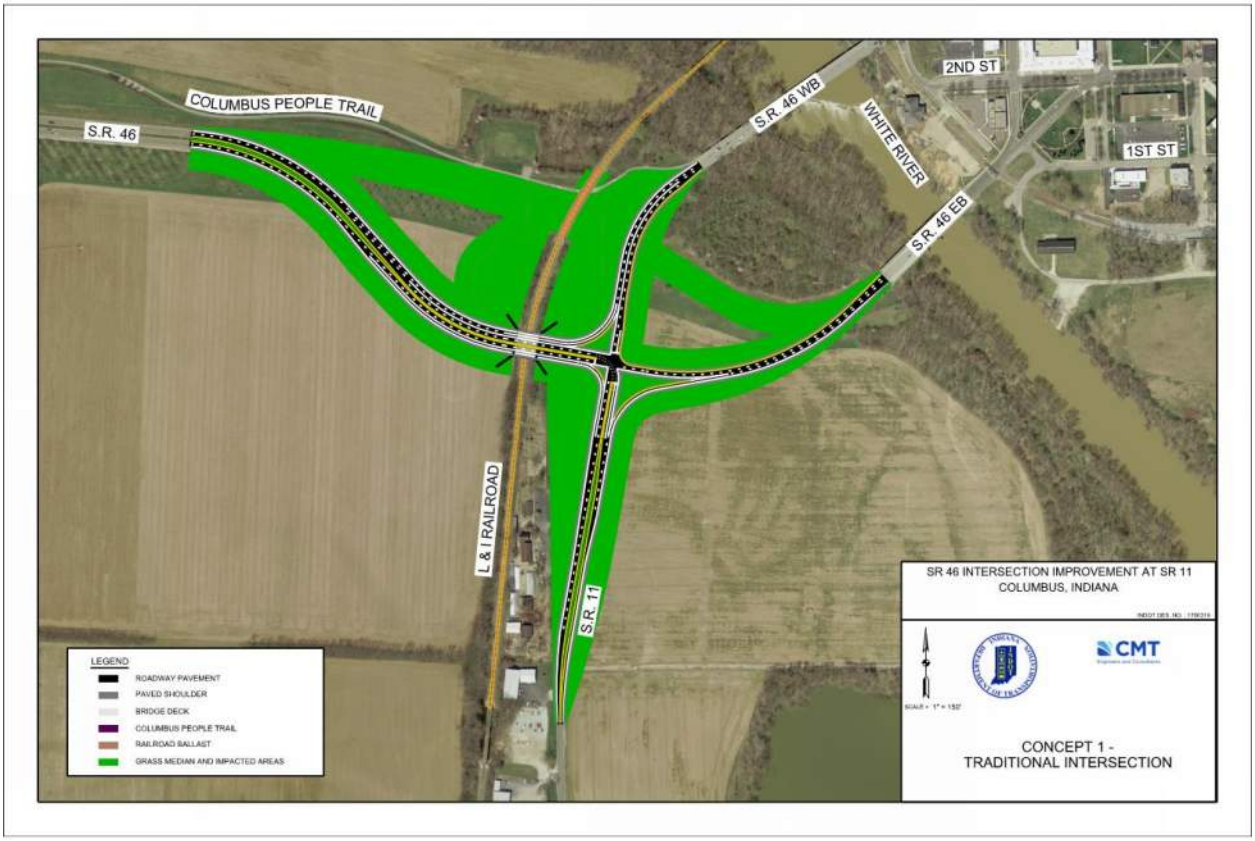
Advantages:

- Eliminates roadway conflict with the railroad.
- Provides familiarity for motorists by maintaining the intersection configuration.
- Smaller right of way footprint than other alternatives.
- Increases the eastbound weaving zone

Disadvantages:

- Three-phase signal is still required at the intersection.
- Significant fill required to elevate the intersection.
- Only a red-light phase would calm the speeds going toward the downtown.

Figure 3 - Traditional Intersection



2.2.3 Parclo – Folded Diamond

This alternative grade-separates SR 46 over the railroad and provides free-flow operations for SR 46 traffic. SR 11 southbound traffic would pass underneath SR 46 free-flowing. Cloverleaf ramps would be provided for northbound SR 11 to westbound SR 46 and eastbound SR 46 to southbound SR 11. The intersection of SR 11 and the eastbound SR 46 off-ramp would be stop-controlled, but could be changed to a roundabout.

Advantages:

- SR 46 would have free-flowing operations.
- Southbound SR 11 would be free-flow, relieving some congestion downtown.
- Eliminates multiple conflict points for high-volume movements.

Disadvantages:

- Larger right of way impact.
- Does not provide any traffic calming entering downtown Columbus.
- Creates a weaving issuing for traffic going towards downtown

Figure 4 – Parclo – Folded Diamond

2.2.4 Parclo – Reroute Through Downtown

This alternative grade-separates SR 46 over the railroad and provides free-flow operations for SR 46 traffic. SR 11 southbound traffic would pass underneath SR 46 free-flowing. Traffic going northbound wishing to go westbound and traffic going eastbound wishing to go southbound, would need to proceed east on SR 46 to Brown Street, then following Brown Street to 3rd Street back to westbound SR 46. These two movement will use downtown Columbus to make U-turn movements.

Advantages:

- SR 46 would have free-flowing operations.
- Southbound SR 11 would be free-flow, relieving some congestion downtown.
- Requires comparatively less pavement than other options.
- Eliminates multiple conflict points for high-volume movements.

Disadvantages:

- Larger right of way impact.
- Does not provide any traffic calming entering downtown Columbus.
- Creates a weaving issuing for traffic going towards downtown.
- Creates extra drive time by forcing certain movements though the downtown grid.

Figure 5 – Parclo – Reroute Through Downtown

2.2.5 Roundabout

This alternative grade-separates SR 46 over the railroad and westbound SR 46 to southbound SR 11. Westbound SR 46 and northbound SR 11 to eastbound SR 46 traffic bypasses the roundabout. All other movements utilize a partial dual-lane roundabout.

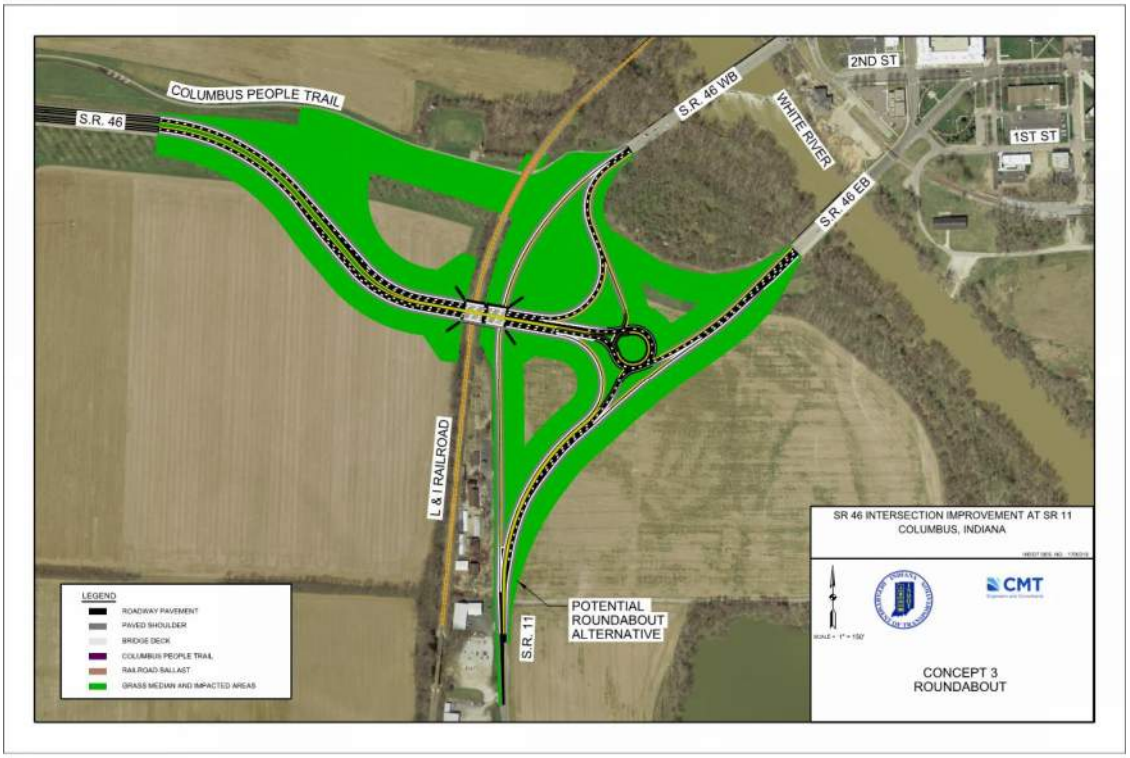
Advantages:

- Provides speed calming for traffic going towards the downtown.
- Creates space for gateway aesthetics
- Will help weaving movements for vehicles entering the downtown.

Disadvantages:

- Requires a relatively larger right of way footprint and pavement than some of the other options.
- The railroad bridge will need to overpass southbound SR 11 too, where other options that is not needed.
- Metering of eastbound SR 46 traffic may be needed to provide adequate gaps for northbound SR 11 to westbound SR 46 traffic.
- Eastbound traffic may be entering roundabout at higher speeds.

Figure 6 – Roundabout



2.2.6 Modified SPUI

This alternative grade-separates SR 46 over the railroad and westbound SR 46 to southbound SR 11. The intersection of SR 11 and SR 46 is signalized in a two-phase configuration. Eastbound SR 46 to southbound SR 11 and northbound SR 11 to eastbound SR 46 have channelized free-flow movements.

Advantages:

- Requires a tighter right of way footprint than other options.
- Requires relatively less pavement than other options.
- Utilizes a two-phase signal, improving signal operations.
- Full SPUI interchange nearby at I-65.
- Improves eastbound weaving area

Disadvantages:

- Traffic movements may be unexpected to those not accustomed to the intersection.
- Traffic calming would only occur with red phases at the signal.
- Longer bridge required to span railroad and southbound SR 11.

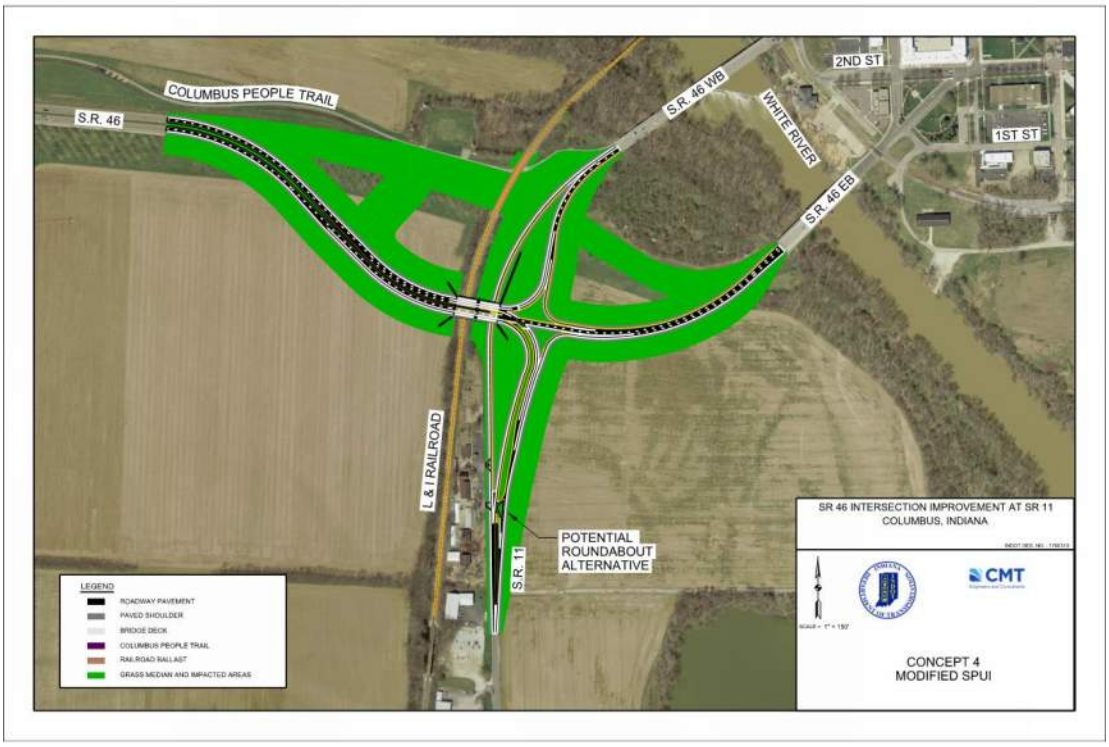


Figure 7 – Modified SPUI

2.2.7 Modified DDI

This alternative grade-separates SR 46 over the railroad. The majority of the intersection would be in a DDI configuration, utilizing two cross-overs to allow free-flow left turns. Both cross-overs would be signalized. Eastbound SR 46 to southbound SR 11 would have a channelized free-flow movement.

Advantages:

- Presents opportunities for speed control for eastbound traffic.
- Provides the fewest conflict points between traffic movements.

Disadvantages:

- Requires a larger bridge over the railroad.
- Complicated layout may require some education of the traveling public.
- Adds two signals on westbound SR 46, which is currently free-flowing.
- High volume of through traffic, which is less efficient at DDIs than other configurations.

Figure 8 - Modified DDI

2.2.8 Jughandle Intersection

This alternative grade-separates SR 46 over the railroad. SR 46 and SR 11 would intersect at a signalized at-grade intersection. Left turns would be prohibited at the intersection. Traffic traveling northbound wishing to go westbound or southbound wishing to go eastbound would utilize loop roadways in the southwest and northeast corners of the intersection. This would allow the intersection to operate in a two-phase configuration. Westbound SR 46 through traffic and northbound SR 11 to eastbound SR 46 traffic would bypass the intersection through channelized turn lanes.

Advantages:

- Intersection would utilize a two-phase signal, improving signal operations.

Disadvantages:

- Larger environmental impacts than other options.
- Traffic calming for eastbound vehicles would only occur with a red signal phase.
- Would require some education of the traveling public to understand how to use the intersection.

Figure 9 – Jughandle Intersection

2.3 Preliminary Alternatives

Enhanced corridor mobility and safety were two main aspects of the project purpose and need. To make sure those goals are met, safety and operational analyses were conducted for each of the alternatives. Conflict point analysis used for the safety analyses. Synchro and VISSIM software was utilized to conduct the operational analyses.

2.3.1 Initial Screening

The INDOT *Intersection Decision Guide*'s preliminary screening questions were used to determine if any of the alternatives should be removed from the analysis (see ***Appendix C***). The results from using the screening questions may be found in ***Table 2***.

Table 2 - Intersection Design Guide Preliminary Screening

Alternative Configuration	Initial Screening Questions				Remarks
	Q1	Q2	Q3	Q4	
No Build	No				Close proximity of at-grade railroad crossing with additional rail traffic increases delays.
Traditional Intersection	Yes	Yes	Yes	Yes	
Parclo - Folded Diamond	Yes	Yes	Yes	Yes	
Parclo - Reroute Through Downtown	Yes	Yes	Yes	Yes	
Roundabout Intersection	Yes	Yes	Yes	Yes	
Modified SPUI	Yes	Yes	Yes	Yes	
Modified DDI	Yes	No	Yes	No	Due to the high volume of through traffic, the performance of the DDI is not anticipated to match the other options (Q2). Also, the amount of conflicts and merges in the southeast quadrant may post other safety concerns (Q4)
Jughandle Intersection	Yes	Yes	Yes	Yes	

2.3.2 Safety Analysis

A safety analysis was conducted to evaluate the proposed alternatives' effects on safety along the existing and proposed SR 46 and SR 11 corridors. This analysis included a review of historic crashes as well as a comparison of the alternatives for safety performance (see ***Appendix E)***.

2.3.2.1 Existing Crash History

Historic crash data were reviewed at the intersection of SR 46 and SR 11. The crash data were provided by INDOT for the time period of January 2014 to December 2016, 38 crashes were reported within the study area. A breakdown of the crashes by type and location is provided in ***Table 3***. No fatalities were reported in the study area during the time period being analyzed.

Table 3 - Crash Severity Summary January 2014 - December 2016

Location	Off-Road			Rear-End			Side Swipe			Right Angle / Turning			Other / Unknown			Total
	PD	PI	F	PD	PI	F	PD	PI	F	PD	PI	F	PD	PI	F	
2014	0	0	0	7	4	0	0	0	0	0	0	0	0	0	0	**11**
2015	1	0	0	8	4	0	0	0	0	0	0	0	0	1	0	**14**
2016	0	0	0	8	1	0	1	0	0	1	2	0	0	0	0	**13**
Total	**1**	**0**	**0**	**23**	**9**	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**0**	**1**	**0**	**38**
Percentage	**2.6%**			**84.2%**			**2.6%**			**8%**			**2.6%**			**100%**

PD = Property Damage
PI = Personal Injury
F = Fatality

The index of crash frequency over the study period was calculated to be 6.90 and the index of crash cost to be 3.19. Both values are indicative of an intersection crash rate higher than anticipated, even with the relatively high traffic volumes.

The predominant type of crash was rear end at 84%. Based on the primary cause reported for these crashes, some analysis can be made on the crashed that were observed. Rear-end crashes commonly can be caused by congested traffic. The recurring primary factor in these crashes was “following too closely”.

An analysis of the identified causes of crashes confirms that traffic congestion is the root cause of a majority of crashes in the study area. Eighty-four percent of crashes reported are due to vehicles following too closely or drivers being distracted. These causes often lead to rear-end crashes.

2.3.2.2 Conflict Points Analysis

Due to the nonstandard geometry of many of the alternatives, the HSM methodology was determined to be inappropriate for conducting a safety analysis. Instead, the improvements to conflict points for each alternative was calculated and may be found in ***Table 4*** along with a primary crash reduction factor (if one exists).

Table 4 – Conflict Points Comparisons

			Conflict Points				Primary Crash Reduction Factor
			Diverging	Merging	Crossing	Total	
Alternative	0	No-Build	4	4	6	14	0%
	1	Traditional Intersection	4	6	3	13	31%
	2	Parclo - Folded Diamond	5	4	3	12	57%
	2x	Parclo - Reroute Through Downtown	4	5	2	11	57%
	3	Roundabout Intersection	6	5	2	13	63%
	4	Modified SPUI	4	4	2	10	Unk.
	5	Modified DDI	4	3	2	9	Unk.
	6	Jughandle Intersection	4	4	6	14	Unk.

As seen in *Table 4*, most of the alternatives will produce a net decrease in total conflict points compared to the No-Build alternative. No alternatives have a net increase in conflict.

The more important value to compare from a safety perspective is the number of crossing conflict points, as crashes occurring from crossing conflicts tend to be more severe in nature. Five alternatives reduce these conflicts from 6 to 2 or 3, a significant improvement over the no-build. Option 2 and 2X not only reduce the crossing conflicts, but the ones that remain are at the eastbound ramp junction, where lower traffic volumes exist relative the crossing points involving mainline SR 46 found in other options.

2.3.3 Operational Analysis

A detailed operational analysis was conducted for all build and no-build alternatives (see *Appendix D)*. The analyses were done to assess the impacts to both the mainline and local street networks. Traffic volumes for the operational analyses were obtained using INDOT TCDS count stations and intersection counts in the study area conducted by members of the project team and a previous study. The traffic volumes and turning counts were adjusted using the 2016 INDOT adjustment factors[2] for the corresponding weekday in July and August. The INDOT TCDS count stations showed little to no growth in recent traffic history, while local government agencies indicated they used 2.0%. Per recommendation from CMT, INDOT agreed to use an area growth rate of 0.25% per year to be conservative. The adjusted AADTs for the study area roadways may be seen in *Table 5*.

[2] http://www.in.gov/indot/files/2016%20INDOT%20Adjustment%20Factors.pdf

Table 5 - Traffic Information Summary

Street	2017 AADT	2041 AADT
SR 46 (West of SR 11)	29,573	32,547
SR 46 (2nd Street)	22,504	24,767
SR 46 (3rd Street)	16,824	18,515
SR 11	14,470	15,925
2nd Street	2,084	2,293
Lindsey Street	9,572	10,534
Brown Street	8,895	9,789
Jackson Street	408	450
Washington Street	3,995	4,397

Analysis Procedure

The existing roadway network was first laid out using Synchro. Models were created with existing and future traffic volumes. Synchro was used first in order to better model signal timings for the existing traffic signals within the study area. Any alternatives developed requiring additional traffic signals were also modeled in Synchro to create appropriate signal timing plans. Once the existing conditions Synchro model was completed, it was exported so that it could be imported into VISSIM.

VISSIM was used to analyze each alternative so that the effect of individual elements to the model could be analyzed. Highway Capacity Manual (HCM) 2010 default values were used for modeling traffic behavior. An origin-destination (O-D) matrix was created for the mainline network for both AM and PM traffic volumes. This was done so that vehicle routing was more easily adjusted to how traffic patterns would change with each alternative. Once the VISSIM models were prepared, queue length and delay results were compiled in output files for use in comparing the alternatives.

Analysis Results

From meetings with state and local officials, congestion had been identified as an issue in the study area. The existing conditions were modeled to confirm visual observations and to make sure no other congestion or capacity issues were noticed that had not been previously brought up. The results of the current conditions analysis are presented in *Table 6*.

Table 6 – 2017 SR 46 / SR 11 Existing Conditions

Criteria	AM	PM
Intersection LOS	C	E
Intersection Delay (sec/veh)	33.64	56.37

The results in *Table 6* confirm that congestion is present within the study area, particularly during the PM peak. The morning peak hour operates at an acceptable level-of-service (LOS), but the evening peak hour operates far less efficiently at LOS E. A queue forms north of Jonathan Moore Pike for southbound SR 11. Significant queues for eastbound SR 46 traffic do form during the morning peak, but they dissipate within the peak hour, as reflected by the acceptable LOS.

Along with corridor travel times, intersection performance was analyzed as another mobility measure of effectiveness. The performance criteria set forth in the HCM 2010 for signalized, unsignalized and roundabout intersections were used to analyze intersection delay and provide a level-of-service (LOS) for the results of the VISSIM analyses. The mainline LOS and delay for each alternative is shown in *Table 7*.

Table 7 – 2041 Level Of Service Summary

			Intersection					
			Jackson St. / 2nd St. (SR 46 EB)	Jackson St. / 3rd St. (SR 46 WB)	Brown St. / 3rd St. (SR 46 WB)	Brown St. / 2nd St. (SR 46 EB)	Lindsey St. / 3rd St. (SR 46 WB)	SR 46 / SR 11
Alternative	2017 Existing	AM	B	A	B	A	A	C
		PM	B	E	D	A	F	E
	2041 No Build	AM	B	B	B	A	A	D
		PM	B	F	E	A	F	E
	2041 Traditional	AM	B	A	B	A	A	C
		PM	B	B	A	B	B	C
	2041 Parclo	AM	B	A	B	A	A	B
		PM	B	B	A	B	B	B[3]
	2041 Parclo - Reroute	AM	B	A	B	A	A	A
		PM	B	B	B	B	B	A
	2041 Roundabout	AM	B	A	B	A	A	A
		PM	B	B	A	B	B	A
	2041 Modified SPUI	AM	B	B	B	A	A	A
		PM	B	B	A	B	B	A
	2041 Jughandle	AM	B	B	B	A	A	B
		PM	B	B	A	B	B	B

[3] Will require either a traffic signal or roundabout.

The intersection performance results in *Table 7* show that if no alignment, capacity or intersection control changes are implemented, congestion issues will worsen as traffic volumes increase. The No Build scenario shows degrading operations upstream of the SR 46 / SR 11 intersection as traffic and rail volumes increase. All proposed alternatives will operate at acceptable LOSs for both peak hours.

For the Parclo alternative, where the eastbound off-ramp intersects SR 11, an unsignalized intersection would produce a LOS of F. If signalized or a single-lane roundabout installed, the LOS improves to B.

2.4 Environmental Consideration

The project will have an impact on the floodplain. Impacts from construction will be assessed in the NEPA phase and final hydraulics studies. A copy of the draft *Red Flag Investigation* is included in *Appendix B*.

2.4.1 Waterways

The project area is adjacent to numerous waterways (Driftwood River, Flat Rock River, East Fork of the White River, and Haw Creek). Currently, the White River runs along the east side of the project area in a north-south direction beginning north of the 3rd Street bridge and continuing south of the second street bridge. All of the project area is located within the flood plain. Two floodways exist in the project area, one that coincides with the White River and another that is created by overflow from the Driftwood River that runs to the southeast. The table below summarizes the acreages of expected construction activity for each option:

Table 8 – Floodplain / Floodway Impacts

Option	Floodplain Acres	Floodway Acres	Estimate of Fill (cys)
1	51.6	21.9	674,500
2	66.7	31.7	603,300
2X	66.7	31.7	460,800
3	59.5	25.1	519,200
4	51.4	22.6	565,600
5	69.1	38.4	870,600
6	60.5	24.2	966,000

2.4.2 Hazardous Materials

A *Red Flag Investigation* was conducted to determine potential impacts to the project including the potential for contaminated soil. One site that will need further study is the Old Columbus City Landfill. It is located along the western river banks and south of eastbound SR 46. This former superfund site was deemed ready for reuse in 2012 and recent inspections have found it comply and functioning properly. The site's Environmental Restrictive Covenant will require IDEM approval for any construction activity.

A second site of note is a registered leaking underground storage tank at the former gas station in the northwest corner of SR 46/SR 11.

2.5 Municipal Amenities

Supporting opportunities for gateway enhancement is one of the project purpose and need objectives.

2.5.1 Aesthetics

The existing SR 46 corridor has a tree grove planted along the south side of the highway that would be impacted by all of the build alternatives. All of the build alternatives will provide green space areas that could be utilized by the City of Columbus for beautification/enhancement to varying degree, such as utilizing a grassy median along SR 46 west of the railroad overpass, the in-field areas of the interchange, and using the old SR 46 areas for additional tree mitigation.

2.5.2 Pedestrian Access

The existing Columbus People Trail would remain as is. The new bridge over the railroad and SR 11 could be designed to allow for a future trail connection to the south.

2.5.3 Riverfront Access

The city is developing a Master Plan of the east and west banks of the White River. Providing access to the west bank can be considered as part of the preferred alterative as it continues into design.

2.6 Cost & Right of Way

Conceptual construction cost estimates and estimated necessary right of way acquisition for each alternative were developed. A summary of the conceptual costs may be seen in ***Table 9***. The total project costs include construction, utility, right of way, mitigation, design and inspection costs.

Table 9 - Conceptual Cost Estimate

Project Costs	0	1	2	2X	3	4	5	6
	No Build	Traditional Int.	Parclo – Folded Diamond	Parclo – Reroute Thru Downtown	Round-about	Mod. SPUI	Mod. DDI	Jug-handle
Right of Way (acre)	0	28	42	42	35	30	45	36
Construction Cost (in millions)	$ -	$ 16.4	$ 18.0	$ 14.2	$ 18.1	$ 15.2	$ 21.7	$ 20.9
Total Project Cost (in millions)	$ -	$ 21.9	$ 23.9	$ 20.1	$ 23.8	$ 20.7	$ 27.7	$ 26.6

The no-build alternative has the best performance for this criterion because there is no cost associated with this alternative, but it does not meet the project's purpose and need. After the no-build, Alternative 2x has the next lowest cost of $20.1 million, which is approximately $600,00 less than the next least expensive alternative (Alternative 4) and over $7 million less than the most expensive alternative (Alternative 5). All of the alternatives are below the $30 million programmed for the project. It should be noted none of the cost estimates include architectural or aesthetic enhancements.

3.0 Preferred Alternative Selection

When comparing one alterative with another, the five primary factors that provide differentiation is improvements to the eastbound SR 46 weaving area, driver expectancy, speed control, floodway impacts and construction cost.

Table 10 – Comparison of Options

	Options[4]						
Factors	**1**	**2**	**2X**	**3**	**4**	**5**	**6**
Improvements to Eastbound Weave							
Driver Expectancy							
Speed Control							
Fill Impacts in the Floodplain	5	4	1	2	3	6	7
Construction Cost	3	5	1	4	2	7	6

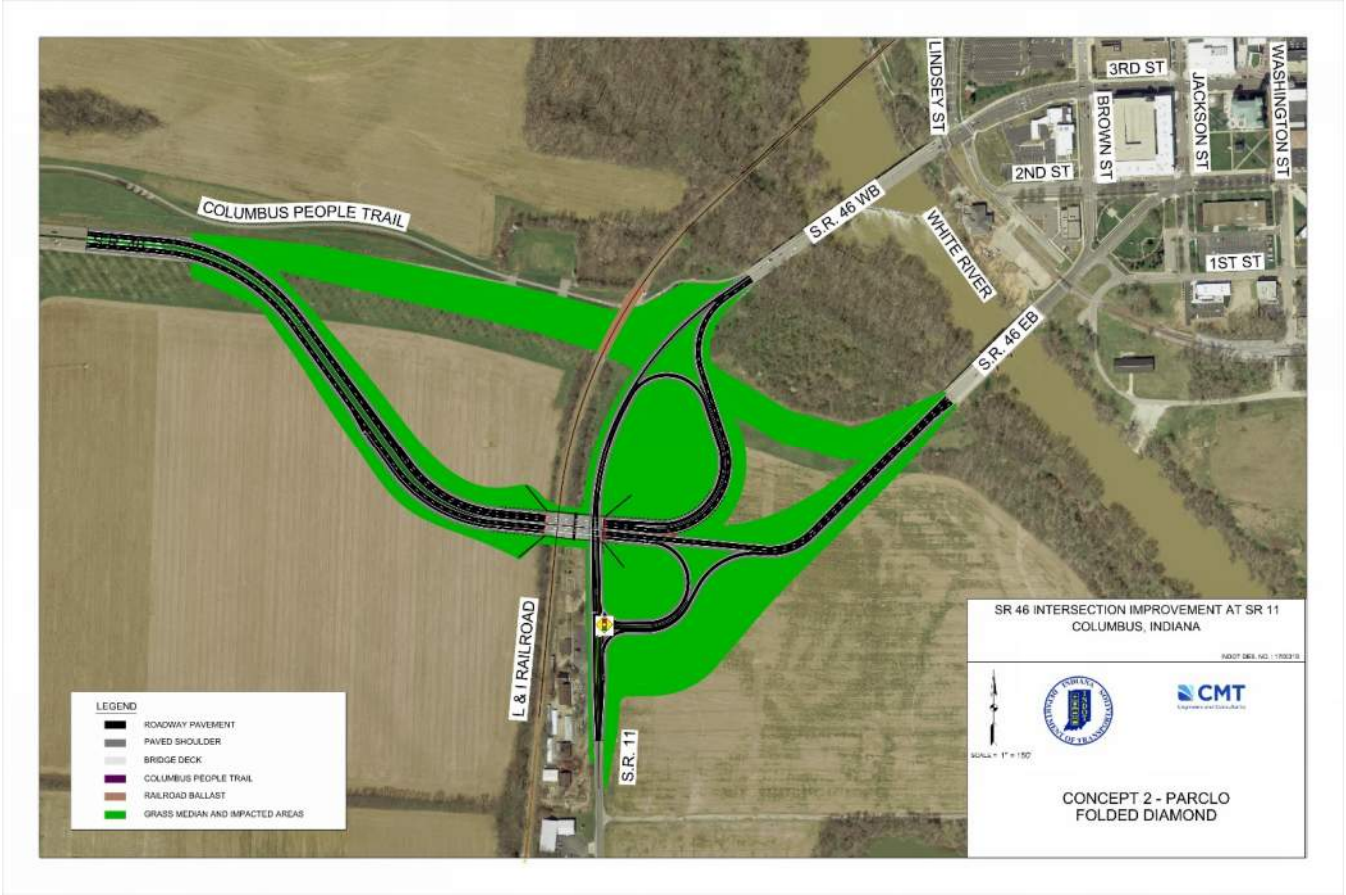
Although Options 2X ranks well in some of the categories, it was strongly opposed by the City since it would re-route so much SR 46/SR 11 traffic through their downtown grid. Options 5 and 6 were eliminated either due to their relatively higher construction costs, impacts within the floodplain and/or the confusion to drivers that may be imposed.

Although Options 1 and 4 offer a relatively lower construction cost estimate, they provide very little improvements in speed control and weaving areas. Options 3 and 4 introduce new safety concerns. For the roundabout, eastbound traffic could still enter the circle at higher than desirable speeds, especially for a multi-lane version. For Option 4, sight distance can be a concern having a traffic signal so close to the bridge overpass.

Refinements were made to Option 2, as shown in the image below, to make improvements from the original version. The eastbound horizontal curves could be designed to provide some speed control entering downtown by having a progressively lower design speed (50 mph at the west end of the project, 40 mph just west of the bridge, and then 30 mph between the bridge and river crossing). By realigning the northbound-to-eastbound ramp to also comply with 30 mph, it will better control its speed as well as improve the weaving area. Finally, the loop ramps were redrawn to use a 25 mph design speed, condensed the overall footprint of the interchange. Therefore, this refined version of Option 2 was selected as the preferred alternative for further study.

[4] Shading Legend = Green is beneficial, yellow is neutral and red is costly. The numbers represent the ranking (beneficial to costly).

Figure 10 – Refined Option 2 (Preferred Alternative)



4.0 Concurrence

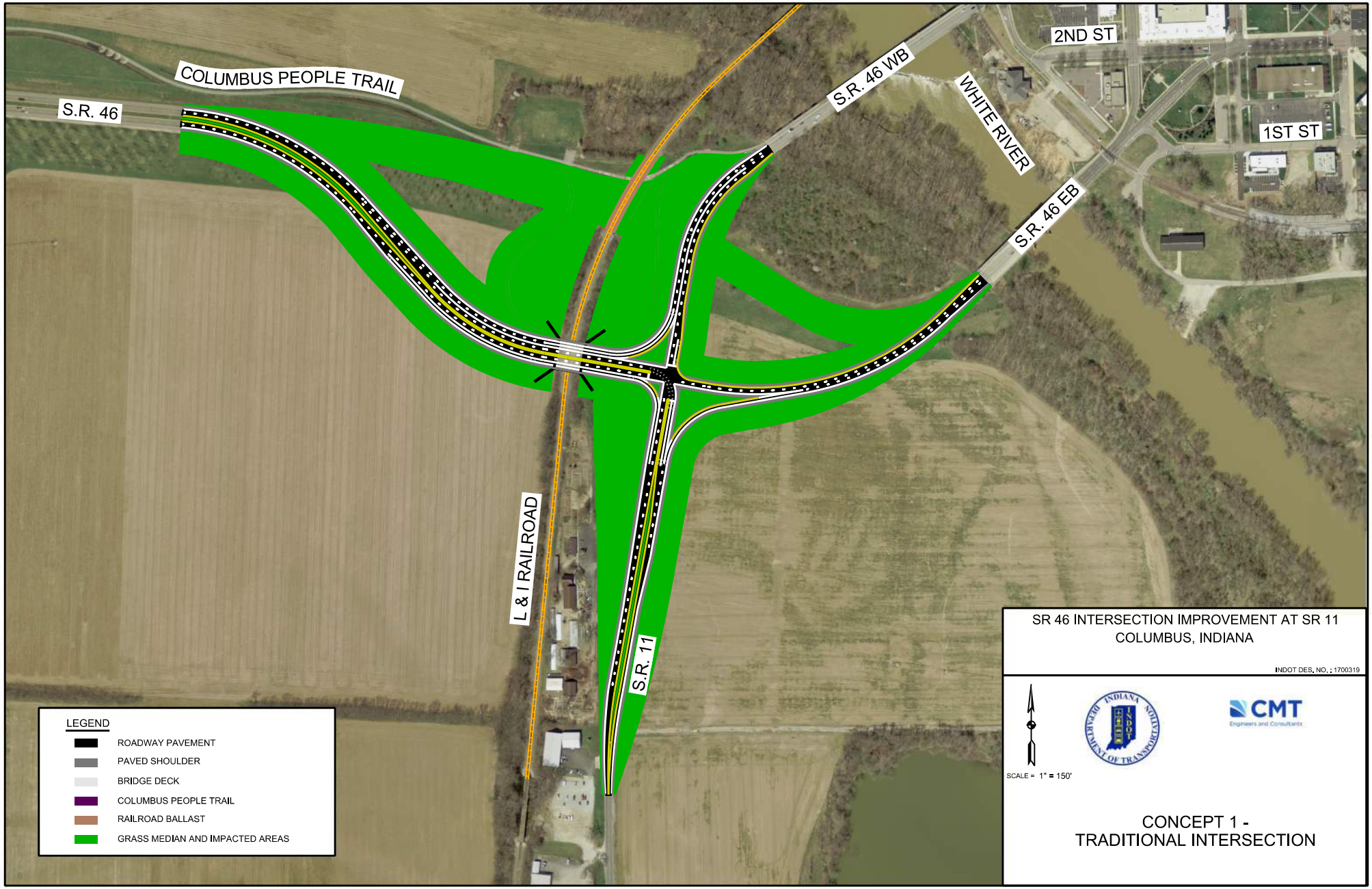
Prepared By:
Nick Batta, PE
Crawford, Murphy & Tilly, Inc.

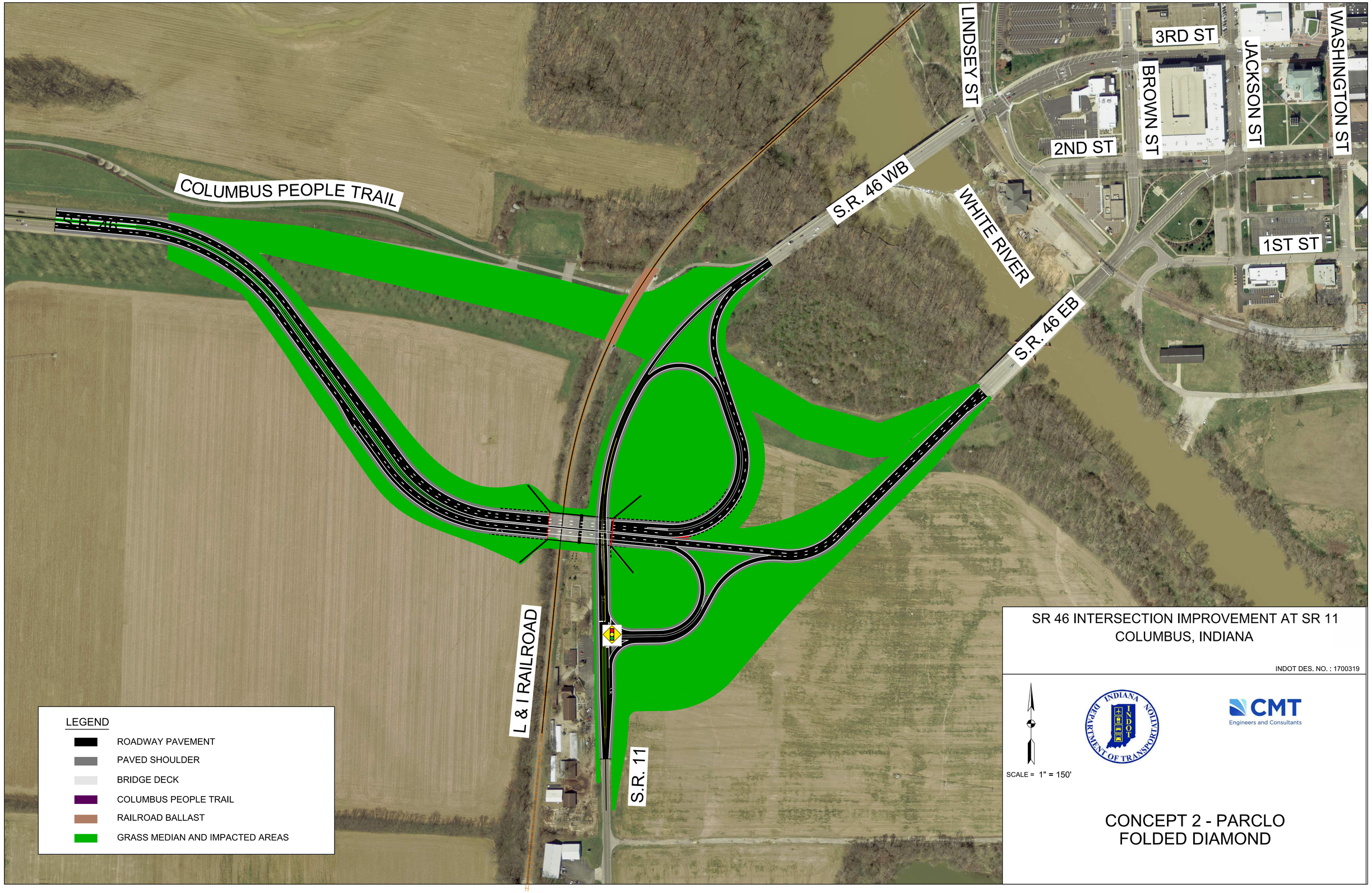
Design QA/QC Review:
Adam Burns, PE
Crawford, Murphy & Tilly, Inc.

Project Management Concurrence:
Joe Bell, PE
INDOT Seymour District

Joseph Bell 11/8/17

Technical Services Concurrence:
Jason Lowther, PE
INDOT Seymour District


COLUMBUS PEOPLE TRAIL
S.R. 46
S.R. 46 WB
WHITE RIVER
2ND ST
1ST ST
S.R. 46 EB
L & I RAILROAD
S.R. 11
LEGEND
ROADWAY PAVEMENT
PAVED SHOULDER
BRIDGE DECK
COLUMBUS PEOPLE TRAIL
RAILROAD BALLAST
GRASS MEDIAN AND IMPACTED AREAS
SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
INDOT DES. NO. : 1700319
SCALE = 1" = 150'
CMT
Engineers and Consultants
CONCEPT 1 -
TRADITIONAL INTERSECTION



SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA

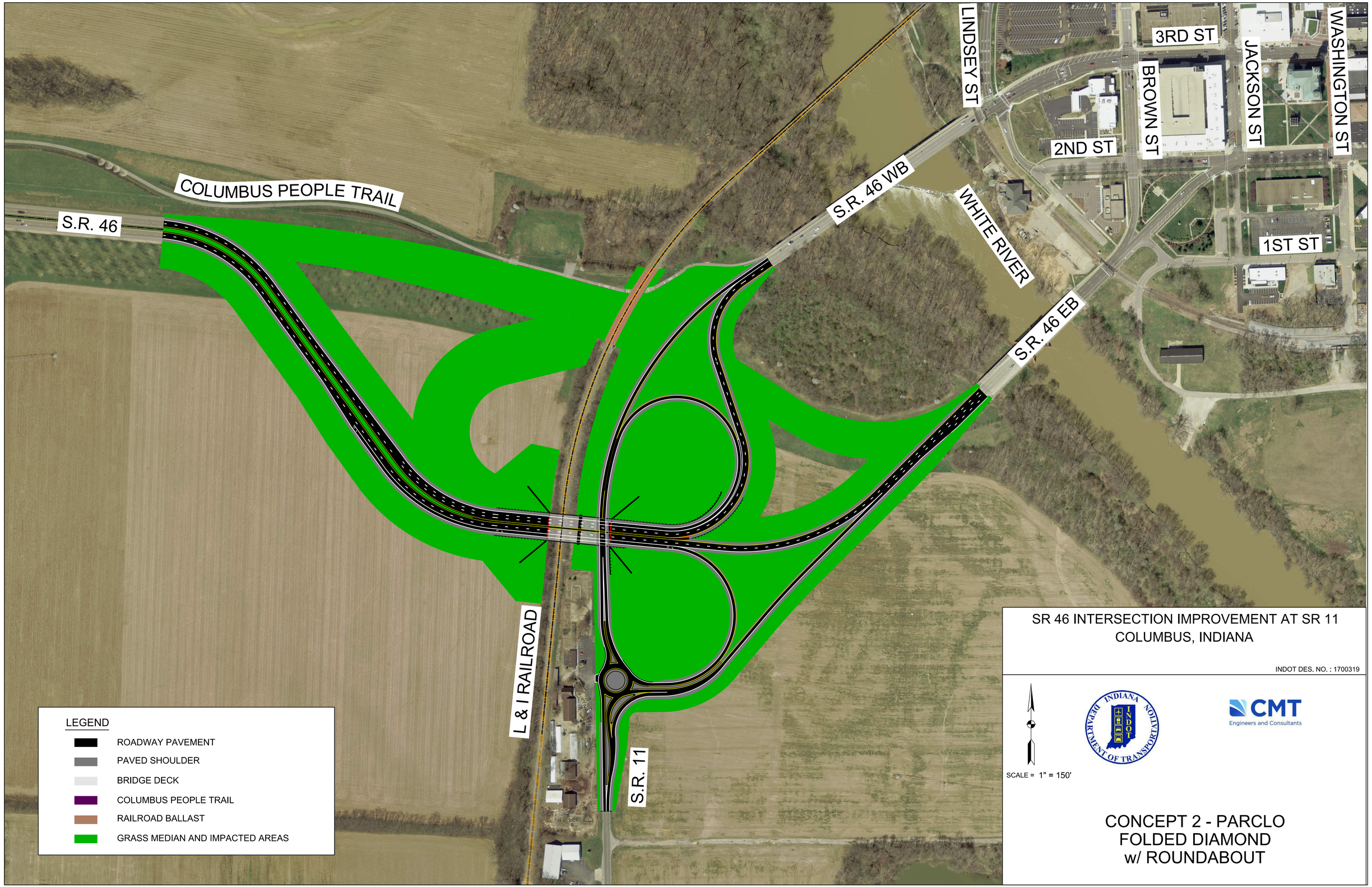
INDOT DES. NO. : 1700319

SCALE = 1" = 150'

INDIANA DEPARTMENT OF TRANSPORTATION
INDOT

CMT
Engineers and Consultants

CONCEPT 2 - PARCLO FOLDED DIAMOND



SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA

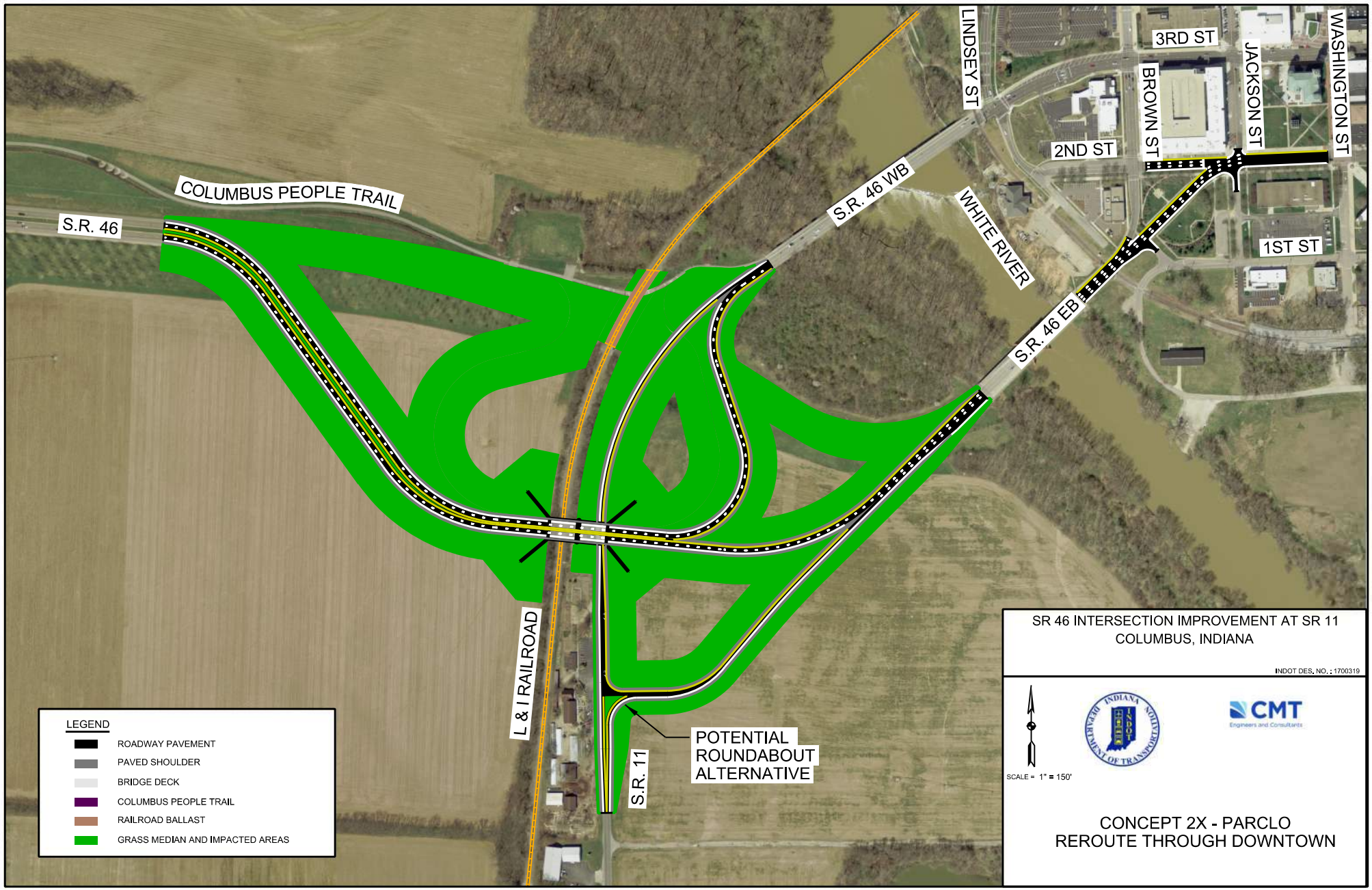
INDOT DES. NO. : 1700319

SCALE = 1" = 150'

INDIANA DEPARTMENT OF TRANSPORTATION
INDOT

CMT
Engineers and Consultants

CONCEPT 2 - PARCLO FOLDED DIAMOND w/ ROUNDABOUT


COLUMBUS PEOPLE TRAIL
S.R. 46
LINDSEY ST
S.R. 46 WB
WHITE RIVER
3RD ST
BROWN ST
JACKSON ST
WASHINGTON ST
2ND ST
1ST ST
S.R. 46 EB
L & I RAILROAD
S.R. 11
POTENTIAL ROUNDABOUT ALTERNATIVE
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SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
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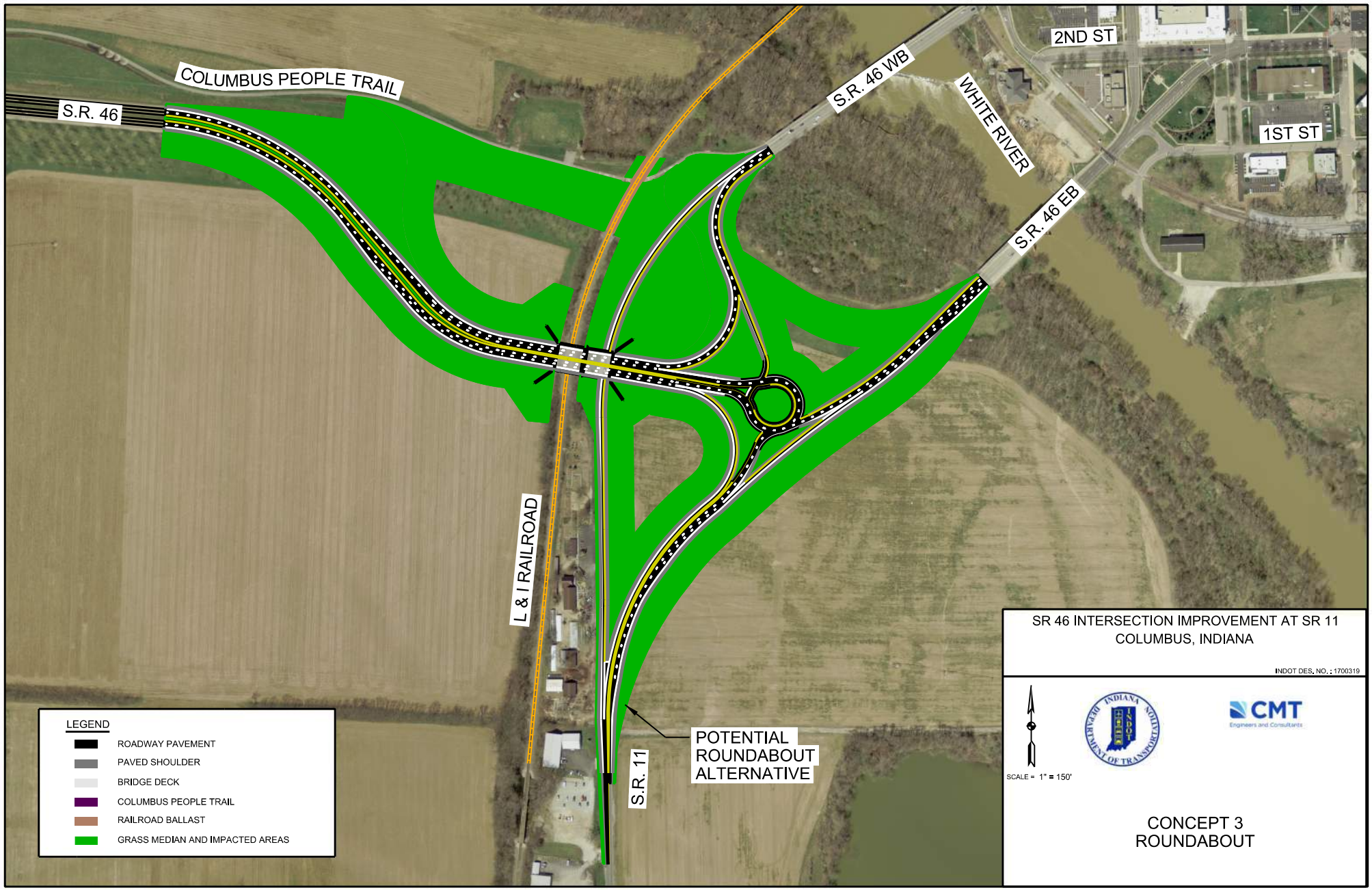
SCALE = 1" = 150'
CMT
Engineers and Consultants
CONCEPT 2X - PARCLO
REROUTE THROUGH DOWNTOWN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S.R. 46
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WHITE RIVER
2ND ST
1ST ST
S.R. 46 EB
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S.R. 11
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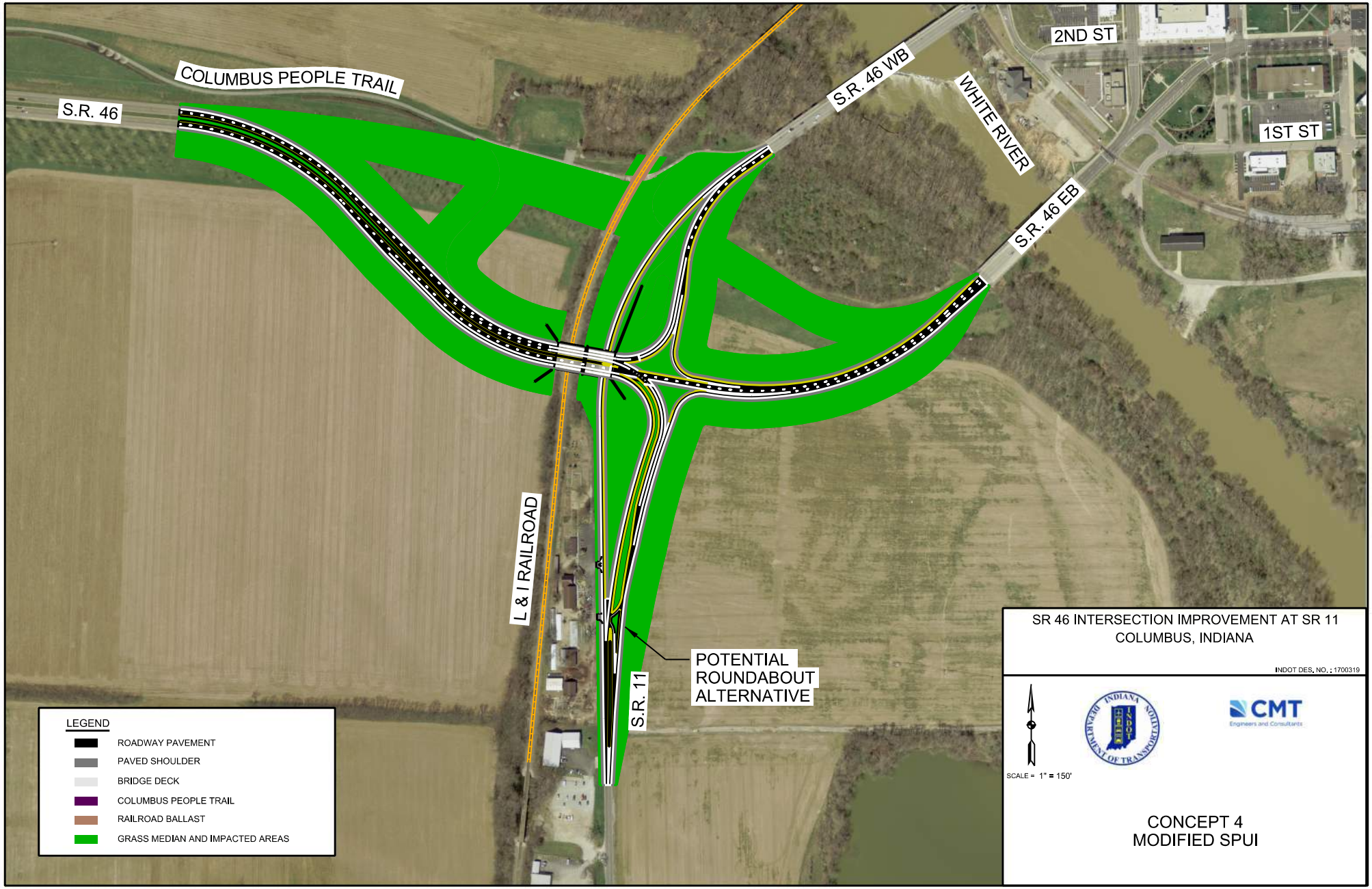
SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
INDOT DES. NO. : 1700319
SCALE = 1" = 150'
CMT
Engineers and Consultants
CONCEPT 3
ROUNDABOUT


COLUMBUS PEOPLE TRAIL
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S.R. 46 WB
WHITE RIVER
2ND ST
1ST ST
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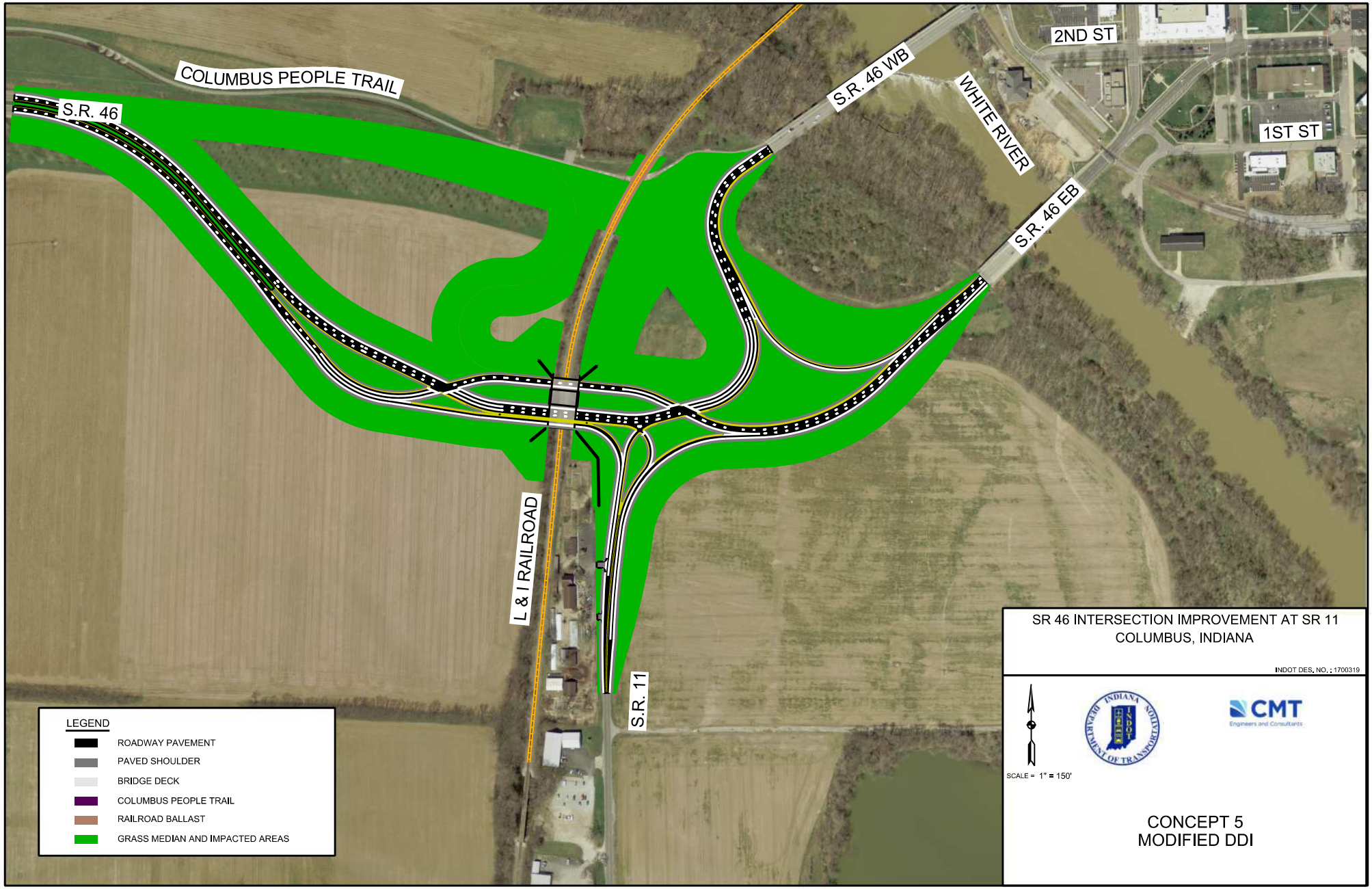
L & I RAILROAD
S.R. 11
POTENTIAL ROUNDABOUT ALTERNATIVE
LEGEND
ROADWAY PAVEMENT
PAVED SHOULDER
BRIDGE DECK
COLUMBUS PEOPLE TRAIL
RAILROAD BALLAST
GRASS MEDIAN AND IMPACTED AREAS
SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
INDOT DES. NO. : 1700319
SCALE = 1" = 150'
CMT
Engineers and Consultants
CONCEPT 4
MODIFIED SPUI


COLUMBUS PEOPLE TRAIL
S.R. 46
S.R. 46 WB
WHITE RIVER
2ND ST
1ST ST
S.R. 46 EB
L & I RAILROAD
S.R. 11
LEGEND
ROADWAY PAVEMENT
PAVED SHOULDER
BRIDGE DECK
COLUMBUS PEOPLE TRAIL
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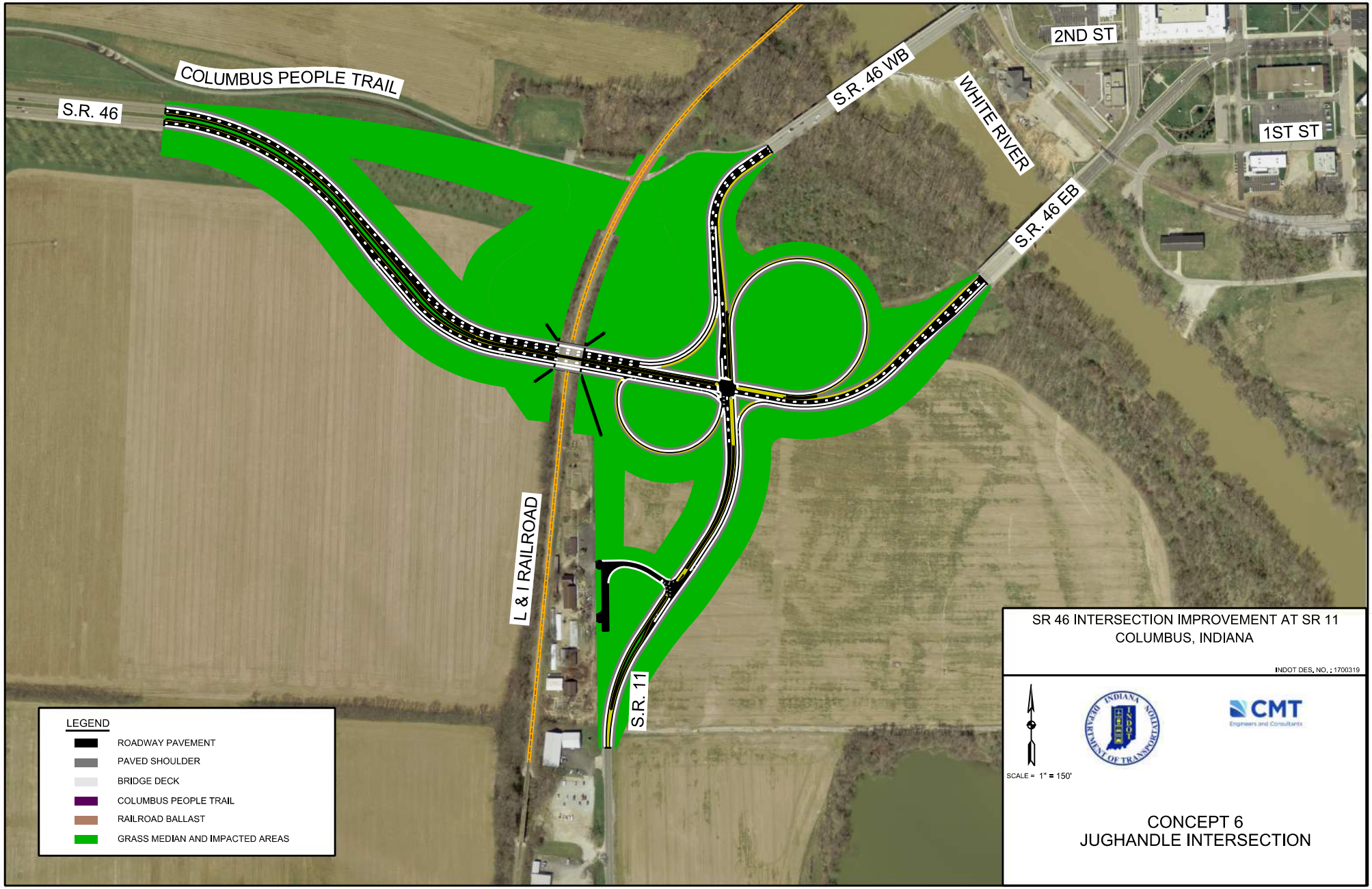
GRASS MEDIAN AND IMPACTED AREAS
SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
INDOT DES. NO. : 1700319
SCALE = 1" = 150'
CMT
Engineers and Consultants
CONCEPT 5
MODIFIED DDI


COLUMBUS PEOPLE TRAIL
S.R. 46
S.R. 46 WB
WHITE RIVER
2ND ST
1ST ST
S.R. 46 EB
L & I RAILROAD
S.R. 11
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COLUMBUS PEOPLE TRAIL
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SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
INDOT DES. NO. : 1700319
SCALE = 1" = 150'
CMT
Engineers and Consultants
CONCEPT 6
JUGHANDLE INTERSECTION

Appendix B

Environmental Resources

- Red Flag Investigation

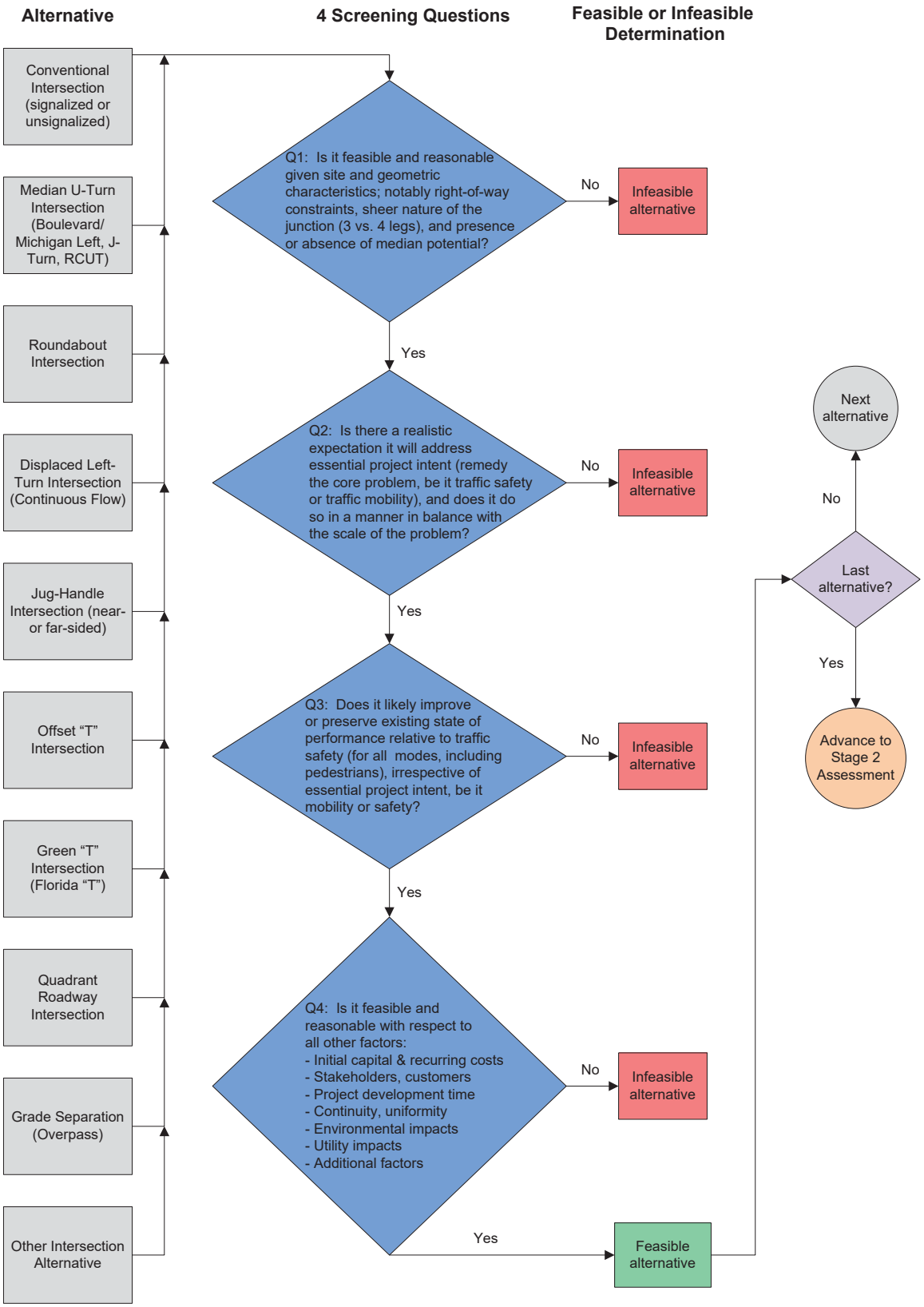
PLEASE REFER TO APPENDIX E, PAGES E-1 TO E-15 FOR A COPY OF THE RED FLAG INVESTIGATION

Appendix C

Supporting Documents

- INDOT Intersection Decision Guide Initial Screening Questions

Stage 1: Initial, Feasibility Screening



Appendix D

Capacity Analysis

- 2017 Existing Conditions
- 2041 No Build
- 2041 Alternative 1 – Traditional Intersection
- 2041 Alternative 2 – Parclo – Folded Diamond
- 2041 Alternative 2x – Parclo – Reroute Through Downtown
- 2041 Alternative 3 – Roundabout
- 2041 Alternative 4 – Modified SPUI
- 2041 Alternative 5 – Modified DDI
- 2041 Alternative 6 – Jughandle Intersection

Intersection Level-Of-Service																
Intersection	2017 Existing		2041 No Build		2041 Alternative 1		2041 Alternative 2		2041 Alternative 2X		2041 Alternative 3		2041 Alternative 4		2041 Alternative 6	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Jackson St. / 2nd St. (SR 46 EB)	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Jackson St. / 3rd St. (SR 46 WB)	A	E	B	F	A	B	A	B	A	B	A	B	B	B	B	B
Brown St. / 3rd St. (SR 46 WB)	B	D	B	E	B	A	B	A	B	B	B	A	B	A	B	A
Brown St. / 2nd St. (SR 46 EB)	A	A	A	A	A	B	A	B	A	B	A	B	A	B	A	B
Lindsey St. / 3rd St. (SR 46 WB)	A	F	A	F	A	B	A	B	A	B	A	B	A	B	A	B
SR 46 / SR 11	C	E	D	E	C	C	B	F	A	A	A	A	A	A	B	B

Intersection Delay (s/veh)																
Intersection	2017 Existing		2041 No Build		2041 Alternative 1		2041 Alternative 2		2041 Alternative 2X		2041 Alternative 3		2041 Alternative 4		2041 Alternative 6	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Jackson St. / 2nd St.	11.57	18.19	12.11	18.72	11.69	18.17	10.84	17.95	10.85	17.92	10.82	17.79	12.12	18.11	12.34	18.57
Jackson St. / 3rd St.	9.88	71.43	10.28	111.92	10.00	12.88	9.89	12.93	9.90	12.94	9.91	12.86	10.31	12.87	10.34	12.85
Brown St. / 3rd St.	11.66	45.99	12.07	59.78	11.98	9.48	11.25	9.06	11.99	13.51	11.25	9.10	11.89	9.04	12.08	9.15
Brown St. / 2nd St.	3.39	6.11	3.43	6.26	7.94	10.63	6.94	10.22	7.17	11.24	7.03	10.10	7.62	10.28	7.65	10.47
Lindsey St. 3rd St.	7.21	133.74	7.48	153.26	7.56	13.39	7.20	13.63	8.46	16.64	7.22	13.48	7.55	13.47	7.53	13.55
SR 46 / SR 11	33.64	56.37	44.40	59.41	23.82	24.77	12.42	160.49	0.00	2.11	3.39	3.23	3.57	4.75	13.97	16.78

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* SIMRUN: SimRun, Simulation run (Number of simulation run)
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* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

																Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption				
*																				
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION				
AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.52	30.84	6	6		4	51.65	51.65	43.16	0.97	8.697	1.692	2.016	0.124				
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.58	31.68	0	0							0	0	0	0				
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	5.5	56.32	14	14		4	52.91	52.91	47.39	1	18.535	3.606	4.296	0.265	1408.12				
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	5.55	56.54	6	6		5	59.58	59.58	52.49	0.94	7.834	1.524	1.816	0.112		54.16	D		
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	78.56	987.48	59	59		1	8.6	8.6	4.04	0.35	39.404	7.667	9.132	0.564				
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	78.41	987.05	1869	1869		1	8.26	8.26	4.22	0.37	1190.96	231.718	276.016	17.038	15957.37				
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	78.74	988	1	1		2	12.03	12.03	6.14	0.63	1.055	0.205	0.245	0.015		8.27	A		
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	19.18	97.1	4	4		4	43.02	43.02	36.17	0.81	3.737	0.727	0.866	0.053				
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	21.41	97.03	163	163		4	42.44	42.44	36.24	0.85	175.228	34.093	40.611	2.507	7201.58				
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	20.59	97.56	2	2		4	55.89	55.89	49.04	0.97	2.041	0.397	0.473	0.029		42.61	D		
AVG	900-4500	1	31.1	988	2124	2124		2	11.56	11.56	7.31	0.41	1462.343	284.519	338.912	20.921				11.57	B
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	5.34	76.78	10	10		2	18.81	18.81	14.24	0.69	6.993	1.361	1.621	0.1				
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5	5.32	76.63	59	59		2	17.43	17.43	12.13	0.6	42.815	8.33	9.923	0.613				
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	1.46	49.67	17	17		2	16.87	16.87	11.73	0.55	12.679	2.467	2.939	0.181	1452.01				
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	1.53	51.58	23	23		1	5.95	5.95	1.21	0.8	14.193	2.761	3.289	0.203		14.67	B		
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0	18.32	150.26	3	3		2	10.46	10.46	6.44	0.52	1.927	0.375	0.447	0.028				
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	19.39	150.28	882	882		1	9.59	9.59	5.14	0.42	492.285	95.781	114.092	7.043	8986.38				
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5	19.23	150.71	62	62		1	8.01	8.01	3.53	0.53	38.762	7.542	8.983	0.555		9.49	A		
AVG	900-4500	2	9.02	150.71	1056	1056		2	10.05	10.05	5.53	0.45	608.346	118.362	140.99	8.703				9.88	A
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	46.51	207.35	14	14		3	22.56	22.56	17.65	0.67	11.651	2.267	2.7	0.167	19215.84				
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	46.51	207.35	900	900		3	21	21	15.25	0.66	714.158	138.949	165.513	10.217		21.02	C		
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	1.94	58.7	643	643		1	1.14	1.14	0.44	0.03	172.87	33.634	40.064	2.473	1125.48				
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	1.33	59.77	186	186		1	2.11	2.11	0.17	0.13	54.549	10.613	12.642	0.78		1.36	A		
AVG	900-4500	3	16.59	207.35	1744	1744		2	11.67	11.67	8.19	0.37	925.316	180.033	214.451	13.238				11.66	B
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.9	8.85	151.87	109	109		1	3.64	3.64	0.34	0.31	50.796	9.883	11.772	0.727					
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@126.3	9.71	151.48	15	15		1	6.07	6.07	2.74	0.3	8.225	1.6	1.906	0.118	4608.85				
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	9.91	151.68	892	892		1	4.62	4.62	1.58	0.22	406.305	79.052	94.165	5.813		4.54	A		
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	18.17	133.2	131	131		3	29.08	29.08	21.08	0.79	122.611	23.856	28.416	1.754	3867.38				
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	18	133.17	2	2		3	28.95	28.95	22.38	0.88	1.532	0.298	0.355	0.022		29.08	C		
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3	0.03	25.66	0	0							0	0	0	0	72.41				
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.8	0.17	26	13	13		1	5.57	5.57	0.31	0.97	7.07	1.375	1.638	0.101		5.57	A		

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* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSION	EMISSION	EMISSION	FUELCONSUMPTION					
AVG	900-4500		4	9.26	155.3	1162	1162		1	7.34	7.34	3.69	0.3	605.841	117.875	140.409	8.667			3.39	A
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3		12.64	127.79	463	463		1	7.17	7.17	2.09	0.82	425.181	82.725	98.54	6.083	5233.39			
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2		11.27	127.53	152	152		2	12.59	12.59	6.51	0.47	141.976	27.623	32.904	2.031		8.51	A	
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3		9.32	102.15	636	636		1	5.96	5.96	3.04	0.12	261.333	50.846	60.566	3.739	3902.08			
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2		8.74	103.38	17	17		1	6.56	6.56	3.5	0.14	7.011	1.364	1.625	0.1		5.98	A	
AVG	900-4500		5	10.49	128.95	1267	1267		1	7.2	7.2	3.11	0.41	826.273	160.763	191.497	11.821			7.21	A
AVG	900-4500	6-3: SR 46@679.8-29: SR11@186.2		473.59	1479.91	18	18		1	9.01	9.01	6.8	0.24	11.612	2.259	2.691	0.166	53899.58			
AVG	900-4500	6-3: SR 46@679.8-38: SR 46 EB@65.3		473.59	1479.91	1933	1933		3	27.8	27.8	22.24	0.62	2039.646	396.841	472.708	29.179		27.63	C	
AVG	900-4500	6-4: SR 46 WB@18.6-29: SR11@186.2		153.81	588.38	427	427		5	57.6	57.6	47.35	1.01	816.586	158.878	189.252	11.682	24595.2			
AVG	900-4500	6-4: SR 46 WB@18.6-38: SR 46 EB@65.3		134.49	573.64	0	0							0	0	0	0		57.60	E	
AVG	900-4500	6-30: CSX RR@1568.5-30: CSX RR@1768.1		0	0	1	1		2	18.35	18.35	10.22	0.95	0.788	0.153	0.183	0.011				
AVG	900-4500	6-31: SB FF@162.6-31: SB FF@546.9		24.29	448.03	680	680		2	10.6	10.6	9.56	0.08	370.09	72.006	85.772	5.295				
AVG	900-4500	6-35: SR11@518.2-32: SR 46@175.7		15.6	114.7	50	50		5	64.52	64.52	58.38	0.97	91.729	17.847	21.259	1.312	3226			
AVG	900-4500	6-35: SR11@518.2-37: SR 11 NBR@191.9		0	0	1024	1024		1	0.47	0.47	0	0	332.96	64.782	77.167	4.763		64.52	E	
AVG	900-4500		6	114.54	1479.91	4133	4133		3	21.63	21.63	17.59	0.42	3655.49	711.225	847.195	52.296			33.64	C

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*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.76	37.54	9	9		4	44.11	44.11	36.23	0.87	10.367	2.017	2.403	0.148					
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.85	38.38	3	3		2	13.03	13.03	6.43	1.15	2.293	0.446	0.531	0.033					
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	18.93	124.7	71	71		4	46.77	46.77	40.76	0.93	83.502	16.246	19.352	1.195	3955.43				
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	19.02	124.92	4	4		4	49.67	49.67	42.2	0.94	4.515	0.879	1.047	0.065		45.46	D		
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	45.48	470.68	4	4		2	18.33	18.33	12.73	0.53	2.95	0.574	0.684	0.042					
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	45.33	470.25	1212	1212		2	11.26	11.26	7.08	0.42	852.175	165.802	197.5	12.191	13720.44				
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	45.67	471.2	0	0							0	0	0	0		11.28	B		
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	31.83	152.47	13	13		4	39.59	39.59	33.54	0.8	13.16	2.56	3.05	0.188					
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	31.84	152.39	277	277		4	38.63	38.63	33.07	0.82	268.2	52.182	62.158	3.837	11278.04				
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	29.08	152.93	1	1		5	62.86	62.86	56.79	1	0.682	0.133	0.158	0.01		38.76	D		
AVG	900-4500	1	27.08	471.2	1592	1592		2	18.14	18.14	13.58	0.52	1261.658	245.473	292.401	18.049				18.19	B
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	2.52	60.56	5	5		3	29.51	29.51	22.49	1.27	5.138	1	1.191	0.074					
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5	2.51	60.41	20	20		3	21.65	21.65	16.54	0.68	15.036	2.925	3.485	0.215					
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	28.32	243.67	73	73		3	33.27	33.27	22.41	1.09	84.969	16.532	19.692	1.216	6907.93				
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	29.01	245.58	118	118		4	34.29	34.29	24.1	1.84	162.145	31.547	37.579	2.32		32.74	C		
AVG	900-4500	2-24: SR 46 WB@528.6-11: Jackson St@97.0	362.57	737.67	2	2		3	40.57	40.57	27.25	1.75	4.312	0.839	0.999	0.062					
AVG	900-4500	2-24: SR 46 WB@528.6-20: SR 46 WB@9.3	362.86	737.7	1475	1475		5	77.21	77.21	52.05	3.15	3729.685	725.661	864.391	53.357	117166.38				
AVG	900-4500	2-24: SR 46 WB@528.6-25: Jackson St@122.5	363.24	738.32	43	43		5	74.43	74.43	50.24	2.98	108.532	21.116	25.153	1.553		77.08	E		
AVG	900-4500	2	147.51	738.32	1737	1737		5	71.49	71.49	48.28	2.93	4105.483	798.778	951.485	58.734				71.43	E
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	52	232.8	118	118		4	36.35	36.35	27.23	1.48	150.925	29.365	34.978	2.159	21965.34				
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	52	232.8	683	683		3	25.88	25.88	18.58	1.42	774.267	150.644	179.444	11.077		27.42	C		
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	191.54	422.6	1366	1366		5	60.42	60.42	41.44	2.68	2806.526	546.048	650.44	40.151	83479.87				
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	191.47	423.66	127	127		1	7.45	7.45	2.99	0.67	71.352	13.883	16.537	1.021		55.91	E		
AVG	900-4500	3	145	423.66	2293	2293		4	45.79	45.79	31.64	2.12	3824.488	744.106	886.362	54.714				45.99	D
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.9	8.29	147.87	4	4		1	2.95	2.95	0.33	0.35	1.966	0.383	0.456	0.028					
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@126.3	9.13	147.48	15	15		1	7.43	7.43	3.67	0.37	8.608	1.675	1.995	0.123	3920.4				
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	9.17	147.67	665	665		1	5.71	5.71	2.36	0.27	328.124	63.841	76.046	4.694		5.73	A		
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	25.98	179.69	165	165		3	27.81	27.81	19.63	0.78	151.768	29.529	35.174	2.171	5294.4				
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	25.75	179.66	25	25		3	28.23	28.23	21.3	0.84	23.403	4.553	5.424	0.335		27.87	C		
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3	1.01	59.36	2	2		3	29.59	29.59	24.79	0.96	1.456	0.283	0.338	0.021	666.18				

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* PTV Vissim:9.00 [09]
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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
* VEHDELAY(ALL): VehDelay(All), Vehicle delay (average) (All) (Delay of all vehicles. The delay of a vehicle in leaving a travel time measurement is obtained by subtracting the theoretical (ideal) travel time from the actual travel time. The theoretical travel time is the travel time which could be achieved if there were no other vel
* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
* STOPS(ALL): Stops(All), Stops (All) (Number of vehicle stops per vehicle without stops at PT stops and in parking lots)
* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

																Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption				
*																				
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION				
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.8	1.88	59.7	100	100		1	6.07	6.07	0.66	0.97	54.231	10.551	12.569	0.776		6.53	A	
AVG	900-4500		4	11.6	183.63	976	976	2	10.1	10.1	5.63	0.44	588.781	114.555	136.456	8.423				6.11	A
AVG	900-4500	5-5: Lindsey St@1102.3-1: SR 46 WB@29.3		962.9	1323.2	716	716	6	209.85	209.85	147.73	7.9	5955.94	1158.81	1380.347	85.207	173846.08			
AVG	900-4500	5-5: Lindsey St@1102.3-18: Lindsey St@41.2		962.51	1322.94	124	124	6	190.27	190.27	145.05	4.59	926.084	180.182	214.629	13.249		206.96	F	
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3		631.57	945.22	1428	1428	6	91.01	91.01	67.35	2.85	4741.077	922.441	1098.79	67.827	130952.4			
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2		632.63	946.45	12	12	6	82.51	82.51	62.44	2.51	27.014	5.256	6.261	0.386		90.94	F	
AVG	900-4500		5	797.4	1323.2	2279	2279	6	133.41	133.41	96.57	4.53	11585.55	2254.126	2685.062	165.745				133.74	F
AVG	900-4500	6-3: SR 46@679.8-29: SR11@186.2		145.55	1234.94	150	150	2	14.6	14.6	10.9	0.4	121.087	23.559	28.063	1.732	39649.6			
AVG	900-4500	6-3: SR 46@679.8-38: SR 46 EB@65.3		145.55	1234.94	1319	1319	3	28.4	28.4	22.68	0.62	1404.806	273.324	325.577	20.097		26.99	C	
AVG	900-4500	6-4: SR 46 WB@18.6-29: SR11@186.2		1276.58	1514.74	507	507	6	139.83	139.83	123.11	1.62	1753.702	341.207	406.437	25.089	71151.85			
AVG	900-4500	6-4: SR 46 WB@18.6-38: SR 46 EB@65.3		1261.87	1500	2	2	6	129.02	129.02	114.44	1.58	7.557	1.47	1.751	0.108		139.79	F	
AVG	900-4500	6-30: CSX RR@1568.5-30: CSX RR@1768.1		0	0	1	1	2	16.9	16.9	8.77	0.95	0.761	0.148	0.176	0.011				
AVG	900-4500	6-31: SB FF@162.6-31: SB FF@546.9		354.32	1123.44	1623	1623	1	8.01	8.01	6.68	0.04	786.113	152.949	182.189	11.246				
AVG	900-4500	6-35: SR11@518.2-32: SR 46@175.7		27.56	158.2	87	87	5	65.1	65.1	58.38	0.98	160.515	31.23	37.201	2.296	5663.7			
AVG	900-4500	6-35: SR11@518.2-37: SR 11 NBR@191.9		0	0	602	602	1	0.23	0.23	0	0	193.839	37.714	44.924	2.773		65.10	E	
AVG	900-4500		6	437.98	1602.29	4291	4291	3	30.19	30.19	25.65	0.43	4425.343	861.011	1025.616	63.31				56.37	E

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* Table: Node Results
*
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* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
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* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions(	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.59	31.61	8	8		4	47.71	47.71	39.46	0.9	9.783	1.904	2.267	0.14					
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.65	32.46	0	0							0	0	0	0					
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	5.64	55.21	16	16		4	47.19	47.19	41.7	0.98	19.411	3.777	4.499	0.278	1501.07				
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	5.69	55.42	7	7		4	52.05	52.05	44.71	0.95	8.885	1.729	2.059	0.127		48.42	D		
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	69.81	808.22	0	0							0	0	0	0					
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	69.66	807.79	2107	2107		1	8.5	8.5	4.14	0.36	1421.007	276.476	329.332	20.329	17909.5				
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	69.99	808.74	0	0							0	0	0	0		8.50	A		
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	20.47	94.11	4	4		4	41.58	41.58	34.44	0.89	4.442	0.864	1.029	0.064					
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	23.11	94.03	176	176		4	42.36	42.36	36.06	0.85	189.314	36.834	43.875	2.708	7689.26				
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	22.7	94.57	2	2		3	33.79	33.79	28.35	0.71	1.772	0.345	0.411	0.025		42.25	D		
AVG	900-4500		1 29.03	808.74	2319	2319		2	11.67	11.67	7.14	0.41	1683.629	327.573	390.197	24.086				11.69	B
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	0.98	37.55	1	1		1	4.81	4.81	1.6	0.43	0.255	0.05	0.059	0.004					
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5	0.97	37.4	11	11		2	19.44	19.44	14.56	0.66	8.058	1.568	1.868	0.115					
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	1.88	60.11	19	19		2	18.17	18.17	12.48	0.59	15.046	2.927	3.487	0.215	739.77				
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	1.95	62.02	26	26		1	6.95	6.95	2.15	0.87	16.664	3.242	3.862	0.238		13.21	B		
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0	21.21	162.31	4	4		2	8.47	8.47	4.94	0.36	2.189	0.426	0.507	0.031					
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	21.99	162.32	970	970		2	9.9	9.9	5.23	0.43	548.831	106.783	127.197	7.852	10228.49				
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5	21.9	162.76	67	67		1	8.83	8.83	4.03	0.55	43.342	8.433	10.045	0.62		9.83	A		
AVG	900-4500		2 9.1	162.76	1097	1097		2	10.01	10.01	5.31	0.46	634.391	123.429	147.026	9.076				10.00	A
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	49.71	221.09	16	16		3	26.77	26.77	21.04	0.79	16.741	3.257	3.88	0.24	21710.27				
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	49.71	221.09	983	983		3	21.65	21.65	15.21	0.65	880.814	171.374	204.137	12.601		21.73	C		
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	1.59	70.3	700	700		1	0.85	0.85	0.24	0.02	182.668	35.541	42.335	2.613	1074.08				
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	1.53	71.36	203	203		1	2.36	2.36	0.21	0.14	61.167	11.901	14.176	0.875		1.19	A		
AVG	900-4500		3 17.61	221.09	1902	1902		2	11.98	11.98	8.15	0.36	1052.035	204.688	243.819	15.051				11.98	B
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.9	10.01	161.32	121	121		1	3.73	3.73	0.48	0.31	60.606	11.792	14.046	0.867					
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@126.3	11.01	161.18	17	17		1	3.96	3.96	1.27	0.22	8.35	1.625	1.935	0.119	5918.45				
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	11.27	161.38	980	980		1	5.51	5.51	1.65	0.23	481.014	93.588	111.48	6.881		5.29	A		
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	19.63	138.2	144	144		3	28.41	28.41	20.56	0.77	132.691	25.817	30.752	1.898	4136.02				
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	19.47	138.17	2	2		3	22.49	22.49	15.73	0.86	1.5	0.292	0.348	0.021		28.33	C		
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3	0.04	27.24	0	0							0	0	0	0	76.05				
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.8	0.18	27.58	13	13		1	5.85	5.85	0.42	0.96	7.116	1.385	1.649	0.102		5.85	A		

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
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* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions(	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500		4 10.23	166.71	1276	1276		1	7.93	7.93	3.68	0.3	711.742	138.479	164.953	10.182				7.94	A
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3	15.22	129.18	510	510		1	7.93	7.93	2.45	0.84	480.683	93.524	111.403	6.877	6182.94				
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2	13.86	128.92	168	168		2	12.73	12.73	6.5	0.47	157.633	30.67	36.533	2.255		9.12	A		
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3	10.09	114.44	693	693		1	6.04	6.04	3.09	0.12	286.705	55.782	66.447	4.102	4321.95				
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2	9.5	115.67	19	19		1	7.17	7.17	4.12	0.17	8.445	1.643	1.957	0.121		6.07	A		
AVG	900-4500		5 12.17	132.32	1390	1390		1	7.57	7.57	3.28	0.43	925.393	180.048	214.469	13.239				7.56	A
AVG	900-4500	6-7@911.8-32@155.1	357.78	1189.03	2116	2116		3	22.67	22.67	13.14	0.86	2541.601	494.503	589.04	36.361	47983.52				
AVG	900-4500	6-7@911.8-33@122.2	239.53	1016.95	20	20		1	0.69	0.69	0.18	0.01	7.658	1.49	1.775	0.11		22.46	C		
AVG	900-4500	6-31@110.7-4@40.0	0	0	747	747		1	0.22	0.22	0.01	0	195.242	37.987	45.249	2.793	1917.85				
AVG	900-4500	6-34@15.8-4@40.0	8.93	67.18	55	55		3	34.87	34.87	29.22	0.93	76.593	14.902	17.751	1.096		34.87	C		
AVG	900-4500	6-10002@79.5-33@122.2	40.09	178.3	462	462		3	28.74	28.74	19.71	0.79	589.673	114.729	136.662	8.436	13277.88				
AVG	900-4500	6-10002@79.5-10004@55.3	35.29	180.56	0	0							0	0	0	0		28.74	C		
AVG	900-4500		6 113.6	1189.34	3399	3399		2	18.66	18.66	11.35	0.66	3412.221	663.894	790.815	48.816				23.82	C

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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
* VEHDELAY(ALL): VehDelay(All), Vehicle delay (average) (All) (Delay of all vehicles. The delay of a vehicle in leaving a travel time measurement is obtained by subtracting the theoretical (ideal) travel time from the actual travel time. The theoretical travel time is the travel time which
* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
* STOPS(ALL): Stops(All), Stops (All) (Number of vehicle stops per vehicle without stops at PT stops and in parking lots)
* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movemen	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMEN	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	1-10: Jacks	1.74	36.05	9	9		4	39.72	39.72	32.18	0.8	10.587	2.06	2.454	0.151					
AVG	900-4500	1-10: Jacks	1.83	36.89	3	3		2	10.71	10.71	4.47	1.22	2.68	0.521	0.621	0.038					
AVG	900-4500	1-11: Jacks	20.62	143	81	81		4	44.9	44.9	38.88	0.92	92.896	18.074	21.529	1.329	4228.87				
AVG	900-4500	1-11: Jacks	20.73	143.22	4	4		4	50.59	50.59	42.67	0.95	5.213	1.014	1.208	0.075		43.60	D		
AVG	900-4500	1-13: SR 46	47.94	445.84	0	0							0	0	0	0					
AVG	900-4500	1-13: SR 46	47.78	445.41	1334	1334		2	11.42	11.42	6.77	0.41	992.659	193.135	230.058	14.201	15234.28				
AVG	900-4500	1-13: SR 46	48.14	446.36	0	0							0	0	0	0		11.42	B		
AVG	900-4500	1-63: 2nd S	33.39	171.39	14	14		4	41.67	41.67	35.53	0.85	14.255	2.774	3.304	0.204					
AVG	900-4500	1-63: 2nd S	33.46	171.31	296	296		4	39.11	39.11	33.3	0.84	290.412	56.504	67.306	4.155	12193.64				
AVG	900-4500	1-63: 2nd S	30.79	171.85	1	1		3	33.7	33.7	27.78	1	0.484	0.094	0.112	0.007		39.21	D		
AVG	900-4500	1	28.64	446.36	1742	1742		2	18.17	18.17	13.22	0.51	1451.705	282.449	336.447	20.768				18.17	B
AVG	900-4500	2-22: Jacks	1.97	54.21	4	4		2	17.88	17.88	13.54	0.92	3.368	0.655	0.781	0.048					
AVG	900-4500	2-22: Jacks	1.96	54.06	19	19		3	19.18	19.18	14.66	0.65	12.837	2.498	2.975	0.184					
AVG	900-4500	2-23: Jacks	13.22	158.56	82	82		2	19.8	19.8	11.95	0.75	70.286	13.675	16.29	1.006	3822.09				
AVG	900-4500	2-23: Jacks	13.76	160.47	133	133		2	13.79	13.79	6.5	1.26	117.22	22.807	27.167	1.677		16.33	B		
AVG	900-4500	2-24: SR 46	48.12	260.7	3	3		2	14.6	14.6	9.1	0.74	2.093	0.407	0.485	0.03					
AVG	900-4500	2-24: SR 46	48.49	260.71	1792	1792		2	12.48	12.48	6.28	0.55	1155.848	224.886	267.879	16.536	23010.12				
AVG	900-4500	2-24: SR 46	48.52	261.15	52	52		2	11.58	11.58	5.47	0.61	36.464	7.095	8.451	0.522		12.46	B		
AVG	900-4500	2	23.73	261.15	2084	2084		2	12.91	12.91	6.59	0.61	1398.207	272.04	324.048	20.003				12.88	B
AVG	900-4500	3-19: Brow	50.65	229.03	126	126		3	26.75	26.75	20.79	0.8	123.134	23.957	28.537	1.762	21628.74				
AVG	900-4500	3-19: Brow	50.65	229.03	741	741		3	24.64	24.64	17.71	0.71	684.546	133.188	158.65	9.793		24.95	C		

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movemen	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMEN	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	3-21: SR 46	7.27	123.24	1679	1679		1	2.14	2.14	0.74	0.05	490.83	95.498	113.755	7.022	3974.36				
AVG	900-4500	3-21: SR 46	6.98	116.54	155	155		1	2.46	2.46	0.27	0.18	49.304	9.593	11.427	0.705		2.17	A		
AVG	900-4500	3	21.63	229.03	2700	2700		1	9.49	9.49	6.31	0.28	1269.401	246.979	294.196	18.16				9.48	A
AVG	900-4500	4-14: Brow	9.41	152.93	5	5		1	5.75	5.75	2.1	0.51	3.065	0.596	0.71	0.044					
AVG	900-4500	4-14: Brow	10.35	152.54	17	17		1	6.87	6.87	3.64	0.32	10.105	1.966	2.342	0.145	4759.16				
AVG	900-4500	4-14: Brow	10.41	152.73	737	737		1	6.26	6.26	2.34	0.27	389.926	75.865	90.369	5.578		6.27	A		
AVG	900-4500	4-15: 2nd S	29.68	209.58	182	182		3	28.33	28.33	19.95	0.8	169.871	33.051	39.369	2.43	5950.4				
AVG	900-4500	4-15: 2nd S	29.57	209.54	27	27		3	29.42	29.42	22.37	0.85	25.619	4.985	5.938	0.367		28.47	C		
AVG	900-4500	4-62: 2nd S	1.01	63.53	2	2		3	28.5	28.5	23.92	0.93	1.454	0.283	0.337	0.021	662				
AVG	900-4500	4-62: 2nd S	1.88	63.86	100	100		1	6.05	6.05	0.73	0.95	54.034	10.513	12.523	0.773		6.49	A		
AVG	900-4500	4	13.19	210.76	1070	1070		2	10.6	10.6	5.73	0.44	688.214	133.901	159.5	9.846				10.63	B
AVG	900-4500	5-5: Lindse	60.19	304.08	1062	1062		3	20.02	20.02	9.5	1.07	1342.038	261.112	311.03	19.199	24005.2				
AVG	900-4500	5-5: Lindse	58.48	303.82	181	181		2	15.16	15.16	7.82	0.52	185.848	36.159	43.072	2.659		19.31	B		
AVG	900-4500	5-6: SR 46	38.19	320.35	1783	1783		1	9.28	9.28	4.29	0.28	1001.982	194.949	232.219	14.335	16717.99				
AVG	900-4500	5-6: SR 46	38.18	321.59	15	15		2	11.45	11.45	6.47	0.39	8.689	1.69	2.014	0.124		9.30	A		
AVG	900-4500	5	48.76	336.35	3041	3041		2	13.4	13.4	6.33	0.57	2535.268	493.271	587.573	36.27				13.39	B
AVG	900-4500	6-7@911.8	86.05	540.17	1432	1432		2	18.02	18.02	11.89	0.56	1344.852	261.659	311.682	19.24	25940.76				
AVG	900-4500	6-7@911.8	12.12	324.72	166	166		1	0.82	0.82	0.07	0.01	64.336	12.517	14.911	0.92		16.23	B		
AVG	900-4500	6-31@110	0	0	2177	2177		1	1.99	1.99	0.17	0.06	703.304	136.837	162.998	10.062	4735.68				
AVG	900-4500	6-34@15.8	19.81	85.54	96	96		4	49.33	49.33	42.97	0.96	154.34	30.029	35.77	2.208		49.33	D		
AVG	900-4500	6-10002@	87.92	512.45	678	678		4	41.37	41.37	31.29	0.9	1037.898	201.937	240.543	14.848	28147.5				
AVG	900-4500	6-10002@	86.96	514.72	3	3		3	32.88	32.88	21.97	0.95	3.824	0.744	0.886	0.055		41.33	D		
AVG	900-4500	6	48.81	574.74	4552	4552		2	13.89	13.89	9.42	0.36	3316.451	645.261	768.619	47.446				24.77	C

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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
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* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
* VEHDELAY(ALL): VehDelay(All), Vehicle delay (average) (All) (Delay of all vehicles. The delay of a vehicle in leaving a travel time measurement is obtained by subtracting the theoretical (ideal) travel time from the actual travel time. The theoretical travel time is the travel time which could be achieved if there were no other vehicles and/or
* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
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* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
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*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSION	EMISSION	EMISSION	FUELCONSUMPTION					
AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.52	30.84	6	6		4	51.66	51.66	43.16	0.97	8.697	1.692	2.016	0.124					
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.58	31.68	0	0							0	0	0	0					
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	5.46	56.32	14	14		4	52.91	52.91	47.39	1	18.535	3.606	4.296	0.265	1402.36				
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	5.51	56.54	6	6		5	58.61	58.61	51.53	0.93	7.662	1.491	1.776	0.11		53.94	D		
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	48.69	504.37	59	59		1	8.5	8.5	3.82	0.37	39.171	7.621	9.078	0.56					
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	48.55	503.94	1858	1858		1	7.39	7.39	3.55	0.34	1133.086	220.457	262.604	16.21	14242.57				
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	48.86	504.89	1	1		2	10.45	10.45	4.65	0.54	1.062	0.207	0.246	0.015		7.43	A		
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	18.93	91.35	4	4		4	47.26	47.26	40.37	0.88	4.109	0.799	0.952	0.059					
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	21.65	91.28	164	164		4	42.61	42.61	36.4	0.85	176.157	34.274	40.826	2.52	7266.18				
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	20.82	91.81	2	2		4	44.55	44.55	38.23	0.91	1.82	0.354	0.422	0.026		42.74	D		
AVG	900-4500	1	22.16	504.89	2113	2113		2	10.82	10.82	6.74	0.39	1406.074	273.571	325.871	20.116				10.84	B
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	5.22	72.54	10	10		2	15.93	15.93	12.02	0.65	6.583	1.281	1.526	0.094					
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5	5.2	72.39	59	59		2	17.28	17.28	11.96	0.59	42.789	8.325	9.917	0.612					
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	1.46	49.67	17	17		2	16.87	16.87	11.73	0.55	12.679	2.467	2.939	0.181	1443.16				
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	1.53	51.58	23	23		1	5.95	5.95	1.22	0.8	14.195	2.762	3.29	0.203		14.58	B		
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0	18.34	149.22	3	3		2	10.46	10.46	6.42	0.49	1.891	0.368	0.438	0.027					
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	19.39	149.23	882	882		1	9.6	9.6	5.14	0.42	492.294	95.782	114.094	7.043	8995.2				
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5	19.24	149.66	62	62		1	8.01	8.01	3.53	0.53	38.795	7.548	8.991	0.555		9.50	A		
AVG	900-4500	2	8.99	149.66	1055	1055		2	10.03	10.03	5.51	0.45	607.939	118.283	140.896	8.697				9.89	A
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	44.72	188.77	14	14		3	23.23	23.23	18.24	0.7	11.496	2.237	2.664	0.164	18440.02				
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	44.72	188.77	895	895		3	20.24	20.24	14.61	0.65	696.23	135.461	161.358	9.96		20.29	C		
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	1.86	61.12	643	643		1	1.12	1.12	0.42	0.03	172.655	33.592	40.014	2.47	1114.48				
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	1.3	62.19	186	186		1	2.12	2.12	0.15	0.13	54.816	10.665	12.704	0.784		1.34	A		
AVG	900-4500	3	15.96	188.77	1738	1738		2	11.25	11.25	7.84	0.36	907.817	176.628	210.395	12.987				11.25	B
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.9	7.88	132.13	109	109		1	3.17	3.17	0.29	0.3	49.676	9.665	11.513	0.711					
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@126.3	8.73	131.74	16	16		1	4.07	4.07	1.59	0.23	7.19	1.399	1.666	0.103	4108.89				
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	8.94	131.93	889	889		1	4.16	4.16	1.53	0.2	392.42	76.351	90.947	5.614		4.05	A		
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	18.14	133.2	131	131		3	29.02	29.02	21.04	0.79	122.472	23.829	28.384	1.752	3859.52				
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	17.97	133.17	2	2		3	28.95	28.95	22.38	0.88	1.531	0.298	0.355	0.022		29.02	C		
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3	0.04	26.84	0	0							0	0	0	0	75.01				
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.8	0.17	27.18	13	13		1	5.77	5.77	0.29	0.96	7.09	1.379	1.643	0.101		5.77	A		
AVG	900-4500	4	8.84	144.98	1159	1159		1	6.92	6.92	3.62	0.29	589.912	114.775	136.718	8.439				6.94	A

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement		QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																						
$MOVEME	TIMEINT	MOVEMENT		QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSION	EMISSION	EMISSION	FUELCONSUMPTION					
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3		12.77	128.31	463	463		1	7.19	7.19	2.08	0.82	425.392	82.766	98.589	6.086	5253.29				
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2		11.34	128.05	152	152		2	12.66	12.66	6.53	0.47	142.838	27.791	33.104	2.043		8.54	A		
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3		9.37	102.4	636	636		1	5.91	5.91	3.04	0.12	260.856	50.753	60.456	3.732	3868.92				
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2		8.85	103.63	17	17		1	6.48	6.48	3.56	0.16	7.113	1.384	1.648	0.102		5.92	A		
AVG	900-4500		5	10.58	128.31	1267	1267		1	7.19	7.19	3.11	0.42	826.789	160.863	191.616	11.828				7.20	A
AVG	900-4500	6-35: SR11@6.5-32: SR11@66.6		0	0	49	49		1	0.68	0.68	0.06	0.01	19.55	3.804	4.531	0.28	2593.32				
AVG	900-4500	6-35: SR11@6.5-67: SR11@88.1		0	0	1024	1024		1	2.5	2.5	0.05	0.02	430.178	83.697	99.698	6.154		2.42	A		
AVG	900-4500	6-43: SR 46 to SR 11@826.9-2: SR11@244.2		0.87	34.34	18	18		2	12.42	12.42	7.07	1.09	19.373	3.769	4.49	0.277	223.56				
AVG	900-4500	6-43: SR 46 to SR 11@826.9-32: SR11@66.6		0.14	37.22	0	0							0	0	0	0		12.42	B	12.42	B
AVG	900-4500	6-64: SR11@10.6-2: SR11@244.2		0	0	425	425		1	0.2	0.2	0	0	150.979	29.375	34.991	2.16	85				
AVG	900-4500	6-64: SR11@10.6-67: SR11@88.1		0	0	0	0							0	0	0	0		0.20	A		
AVG	900-4500		6	0.2	45.54	1516	1516		1	1.91	1.91	0.12	0.03	620.724	120.77	143.859	8.88					

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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
* VEHDELAY(ALL): VehDelay(All), Vehicle delay (average) (All) (Delay of all vehicles. The delay of a vehicle in leaving a travel time measurement is obtained by subtracting the theoretical (ideal) travel time from the actual travel time. The theoretical travel time is the travel time which could be achieved if there were no
* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
* STOPS(ALL): Stops(All), Stops (All) (Number of vehicle stops per vehicle without stops at PT stops and in parking lots)
* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.74	36.05	9	9	4	39.73	39.73	32.17	0.8	10.587	2.06	2.454	0.151						
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.83	36.89	3	3	2	10.63	10.63	4.36	1.23	2.672	0.52	0.619	0.038						
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	20.65	142.95	81	81	4	44.97	44.97	38.95	0.92	92.986	18.092	21.55	1.33	4234.71					
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	20.76	143.16	4	4	4	50.67	50.67	42.76	0.95	5.218	1.015	1.209	0.075			43.66	D		
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	47.28	366.83	4	4	2	11.59	11.59	6.21	0.49	2.788	0.542	0.646	0.04						
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	47.1	366.4	1328	1328	2	11.1	11.1	6.78	0.43	936.409	182.191	217.022	13.396	14787.16					
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	47.49	367.35	0	0						0	0	0	0			11.10	B		
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	33.3	167.42	14	14	4	41.68	41.68	35.52	0.86	14.284	2.779	3.31	0.204						
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	33.4	167.34	296	296	4	39.1	39.1	33.28	0.84	290.402	56.502	67.303	4.155	12190.82					
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	30.68	167.88	1	1	3	33.7	33.7	27.78	1	0.484	0.094	0.112	0.007			39.20	D		
AVG	900-4500	1	28.42	367.35	1739	1739	2	17.94	17.94	13.24	0.53	1381.845	268.857	320.256	19.769					17.95	B
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	2.28	56.13	6	6	2	17.81	17.81	13.29	0.93	4.616	0.898	1.07	0.066						
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5	2.27	55.98	21	21	2	18.96	18.96	14.34	0.65	14.667	2.854	3.399	0.21						
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	13.37	164.11	82	82	2	19.94	19.94	12.05	0.75	70.538	13.724	16.348	1.009	3883.27					
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	13.91	166.02	133	133	2	13.91	13.91	6.61	1.28	118.052	22.969	27.36	1.689			16.45	B		
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0	48.58	266.65	3	3	2	14.25	14.25	9.01	0.65	1.98	0.385	0.459	0.028						
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	48.96	266.67	1792	1792	2	12.53	12.53	6.31	0.55	1158.347	225.372	268.458	16.571	23102.31					
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5	49.01	267.1	52	52	2	11.65	11.65	5.52	0.61	36.529	7.107	8.466	0.523			12.51	B		
AVG	900-4500	2	24.03	267.1	2087	2087	2	12.98	12.98	6.64	0.61	1404.762	273.316	325.567	20.097					12.93	B
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	50.24	193.28	127	127	3	26.33	26.33	20.59	0.8	111.049	21.606	25.737	1.589	20578.51					
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	50.24	193.28	740	740	3	23.29	23.29	17.19	0.71	605.746	117.856	140.388	8.666			23.74	C		
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	7.07	116.4	1680	1680	1	2.1	2.1	0.72	0.05	489.73	95.284	113.5	7.006	3904.65					
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	6.86	113.86	155	155	1	2.43	2.43	0.26	0.19	49.642	9.659	11.505	0.71			2.13	A		
AVG	900-4500	3	21.39	195.61	2701	2701	1	9.07	9.07	6.15	0.27	1237.485	240.77	286.799	17.704					9.06	A
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.	8.89	115.21	5	5	1	3.37	3.37	0.25	0.32	2.255	0.439	0.523	0.032						
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@12	10.08	114.82	17	17	1	6.43	6.43	3.34	0.37	9.544	1.857	2.212	0.137	4328.72					
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	10.14	115.02	736	736	1	5.71	5.71	2.56	0.27	366.579	71.323	84.958	5.244			5.71	A		
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	29.68	209.58	182	182	3	28.33	28.33	19.94	0.8	170.039	33.083	39.408	2.433	5951.21					

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions'	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA'	STOPDELA'	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	29.58	209.54	27	27		3	29.45	29.45	22.34	0.85	25.588	4.979	5.93	0.366		28.47	C		
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@1	1.01	64.8	2	2		3	28.49	28.49	23.91	0.93	1.454	0.283	0.337	0.021	649.98				
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.	1.87	65.14	100	100		1	5.93	5.93	0.65	0.93	53.622	10.433	12.427	0.767		6.37	A		
AVG	900-4500	4	13.04	209.58	1069	1069		2	10.2	10.2	5.87	0.44	647.802	126.039	150.134	9.268				10.22	B
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3	62.34	307.26	1062	1062		3	20.56	20.56	9.86	1.07	1351.834	263.018	313.3	19.34	24621.14				
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2	60.55	307	182	182		2	15.31	15.31	7.79	0.55	191.574	37.273	44.399	2.741		19.79	B		
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3	38.59	326.27	1784	1784		1	9.35	9.35	4.39	0.28	1005.338	195.602	232.997	14.383	16855.3				
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2	38.71	327.5	15	15		2	11.66	11.66	6.6	0.38	8.732	1.699	2.024	0.125		9.37	A		
AVG	900-4500	5	50.05	360.93	3043	3043		2	13.64	13.64	6.52	0.57	2546.881	495.53	590.264	36.436				13.63	B
AVG	900-4500	6-35: SR11@6.5-32: SR11@66.6	0	0	96	96		1	0.11	0.11	0	0	36.617	7.124	8.486	0.524	812.79				
AVG	900-4500	6-35: SR11@6.5-67: SR11@88.1	0	0	663	663		1	1.21	1.21	0	0	259.996	50.586	60.257	3.72		1.07	A		
AVG	900-4500	6-43: SR 46 to SR 11@826.9-2: SR11@244.2	171.58	424.86	163	163		6	160.49	160.49	105.04	8.11	1042.864	202.903	241.694	14.919	26159.87				
AVG	900-4500	6-43: SR 46 to SR 11@826.9-32: SR11@66.6	186.32	443.53	0	0							0	0	0	0		160.49	F	160.49	F
AVG	900-4500	6-64: SR11@10.6-2: SR11@244.2	0	0	671	671		1	0.46	0.46	0	0	241.207	46.93	55.902	3.451	308.66				
AVG	900-4500	6-64: SR11@10.6-67: SR11@88.1	0	1.91	3	3		1	2.3	2.3	0.1	0.04	1.011	0.197	0.234	0.014		0.46	A		
AVG	900-4500	6	71.58	443.53	1595	1595		3	16.97	16.97	10.64	0.82	1671.367	325.187	387.355	23.911					

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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
* VEHDELAY(ALL): VehDelay(All), Vehicle delay (average) (All) (Delay of all vehicles. The delay of a vehicle in leaving a travel time measurement is obtained by subtracting the theoretical (ideal) travel time from the actual travel time. The theoretical travel time is the travel time which could be achieved if there were no othe
* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
* STOPS(ALL): Stops(All), Stops (All) (Number of vehicle stops per vehicle without stops at PT stops and in parking lots)
* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions'	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.52	30.84	6	6	4	51.66	51.66	43.16	0.97	8.697	1.692	2.016	0.124						
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.58	31.68	0	0						0	0	0	0						
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	5.46	56.32	14	14	4	52.91	52.91	47.39	1	18.535	3.606	4.296	0.265	1402.36					
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	5.51	56.54	6	6	5	58.61	58.61	51.53	0.93	7.662	1.491	1.776	0.11		53.94	D			
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	49.09	591.96	59	59	1	8.29	8.29	3.66	0.36	39.586	7.702	9.174	0.566						
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	48.95	591.53	1858	1858	1	7.41	7.41	3.41	0.33	1142.898	222.366	264.878	16.35	14266.56					
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	49.26	592.48	1	1	2	9.67	9.67	4.59	0.54	1.125	0.219	0.261	0.016		7.44	A			
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	18.69	86.79	4	4	4	45.48	45.48	38.77	0.85	3.959	0.77	0.917	0.057						
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	21.51	86.79	164	164	4	42.74	42.74	36.53	0.85	176.23	34.288	40.843	2.521	7275.22					
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	20.63	87.32	2	2	4	41.97	41.97	35.68	0.94	1.836	0.357	0.425	0.026		42.80	D			
AVG	900-4500	1	22.22	592.48	2114	2114	2	10.84	10.84	6.61	0.38	1421.275	276.529	329.394	20.333				10.85	B	
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	5.19	73	10	10	2	17.09	17.09	13.2	0.65	7.199	1.401	1.668	0.103						
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5	5.17	72.85	59	59	2	17.45	17.45	11.98	0.6	44.562	8.67	10.328	0.638						
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	1.46	49.67	17	17	2	16.87	16.87	11.73	0.55	12.679	2.467	2.939	0.181	1453.42					
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	1.53	51.58	23	23	1	5.96	5.96	1.22	0.8	14.235	2.77	3.299	0.204		14.68	B			
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0	18.37	149.22	3	3	2	10.46	10.46	6.41	0.49	1.891	0.368	0.438	0.027						
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	19.42	149.23	882	882	1	9.59	9.59	5.14	0.42	492.126	95.75	114.055	7.04	8989.48					
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5	19.26	149.66	62	62	1	8.06	8.06	3.56	0.53	38.66	7.522	8.96	0.553		9.49	A			
AVG	900-4500	2	8.99	149.66	1055	1055	2	10.06	10.06	5.53	0.45	609.067	118.502	141.157	8.713				9.90	A	
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	50.55	194.42	83	83	3	23.83	23.83	18.48	0.72	75.504	14.69	17.499	1.08	20569.89					
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	50.55	194.42	896	896	3	20.75	20.75	14.78	0.65	730.641	142.156	169.333	10.453		21.01	C			
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	1.86	62.21	643	643	1	1.12	1.12	0.41	0.03	172.586	33.579	39.998	2.469	1116.34					
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	1.32	63.2	186	186	1	2.13	2.13	0.16	0.14	55.312	10.762	12.819	0.791		1.35	A			
AVG	900-4500	3	17.91	194.42	1808	1808	2	11.99	11.99	8.33	0.38	986.103	191.86	228.539	14.107				11.99	B	
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.9	8.91	141.37	109	109	1	3.23	3.23	0.29	0.3	50.855	9.895	11.786	0.728						
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@126.3	10.04	140.98	16	16	1	5.12	5.12	2.28	0.28	7.983	1.553	1.85	0.114	4869.53					
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	10.24	141.18	958	958	1	4.63	4.63	1.56	0.21	435.907	84.812	101.026	6.236		4.50	A			
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	18.14	133.2	131	131	3	29.03	29.03	21.04	0.79	122.475	23.829	28.385	1.752	3860.79					
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	17.96	133.17	2	2	3	28.93	28.93	22.38	0.88	1.531	0.298	0.355	0.022		29.03	C			

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions'	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3	0.04	26.89	0	0							0	0	0	0	70.2				
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.8	0.17	27.23	13	13		1	5.4	5.4	0.3	0.92	6.976	1.357	1.617	0.1		5.40	A		
AVG	900-4500	4	9.36	151.75	1228	1228		1	7.15	7.15	3.54	0.29	639.17	124.359	148.134	9.144				7.17	A
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3	12.95	126.57	463	463		1	7.4	7.4	2.25	0.83	429.7	83.604	99.587	6.147	5350.52				
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2	11.45	125.93	152	152		2	12.66	12.66	6.5	0.47	143.018	27.826	33.146	2.046		8.70	A		
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3	15.4	133.58	703	703		1	8.27	8.27	4.37	0.24	367.85	71.57	85.253	5.263	5945.05				
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2	15.48	134.81	17	17		1	7.72	7.72	3.71	0.28	8.18	1.591	1.896	0.117		8.26	A		
AVG	900-4500	5	13.82	137.85	1335	1335		1	8.46	8.46	3.87	0.47	942.154	183.309	218.353	13.479				8.46	A
AVG	900-4500	6-35: SR11@6.5-67: SR11@88.1	0	1.93	1073	1073		1	3.14	3.14	0.07	0.04	468.363	91.126	108.548	6.7					
AVG	900-4500	6-64: SR11@10.6-2: SR11@244.2	0	0	443	443		1	0.34	0.34	0	0	158.539	30.846	36.743	2.268					
AVG	900-4500	6-64: SR11@10.6-67: SR11@88.1	0	0	0	0							0	0	0	0	0				
AVG	900-4500	6	0	1.93	1516	1516		1	2.33	2.33	0.05	0.03	627.439	122.077	145.415	8.976		0.00	A	0.00	A

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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
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* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS ‘A’, 6 to LOS ‘F’.)
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* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
* STOPS(ALL): Stops(All), Stops (All) (Number of vehicle stops per vehicle without stops at PT stops and in parking lots)
* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions'	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.74	36.05	9	9	4	39.72	39.72	32.18	0.8	10.587	2.06	2.454	0.151						
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.83	36.89	3	3	2	10.3	10.3	3.76	1.25	2.687	0.523	0.623	0.038						
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	20.57	142.98	81	81	4	44.89	44.89	38.88	0.92	92.889	18.073	21.528	1.329	4222.31					
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	20.68	143.2	4	4	4	49.46	49.46	41.61	0.94	5.058	0.984	1.172	0.072		43.53	D			
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	46.1	376	4	4	2	11.04	11.04	5.86	0.49	2.908	0.566	0.674	0.042						
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	45.92	375.57	1328	1328	2	11.11	11.11	6.57	0.42	950.286	184.891	220.238	13.595	14798.24					
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	46.31	376.52	0	0						0	0	0	0		11.11	B			
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	33.13	165.19	14	14	4	41.25	41.25	35.08	0.85	14.166	2.756	3.283	0.203						
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	33.21	165.11	296	296	4	38.92	38.92	33.11	0.84	289.202	56.268	67.025	4.137	12145.24					
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	30.49	165.65	1	1	4	47.42	47.42	41.04	1	0.665	0.129	0.154	0.01		39.05	D			
AVG	900-4500	1	28	376.52	1739	1739	2	17.91	17.91	13.04	0.52	1399.141	272.222	324.264	20.016				17.92	B	
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	2.26	54.21	6	6	2	17.84	17.84	13.43	0.92	4.585	0.892	1.063	0.066						
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5	2.24	54.06	21	21	2	18.96	18.96	14.33	0.65	14.766	2.873	3.422	0.211						
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	13.41	164.11	82	82	2	20	20	12.13	0.75	70.616	13.739	16.366	1.01	3897.5					
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	13.96	166.02	133	133	2	13.98	13.98	6.7	1.26	117.351	22.832	27.197	1.679		16.51	B			
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0	48.11	269.82	3	3	2	14.16	14.16	8.79	0.71	2.05	0.399	0.475	0.029						
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	48.5	269.83	1791	1791	2	12.53	12.53	6.27	0.55	1157.725	225.251	268.314	16.563	23088.99					
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5	48.55	270.27	52	52	2	11.64	11.64	5.51	0.59	36.299	7.062	8.413	0.519		12.51	B			
AVG	900-4500	2	23.87	270.27	2086	2086	2	12.98	12.98	6.62	0.61	1403.443	273.059	325.262	20.078				12.94	B	
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	111.49	389.11	392	392	4	40.36	40.36	31.02	1.1	507.54	98.749	117.627	7.261	35838.12					
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	111.49	389.11	740	740	3	27.05	27.05	19.77	0.78	688.703	133.997	159.614	9.853		31.66	C			
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	7.48	124.95	1680	1680	1	2.29	2.29	0.77	0.06	497.819	96.857	115.374	7.122	4245.55					
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	7.11	123.09	155	155	1	2.57	2.57	0.38	0.18	49.509	9.633	11.474	0.708		2.31	A			
AVG	900-4500	3	42.03	389.11	2967	2967	2	13.54	13.54	9.51	0.38	1673.683	325.638	387.892	23.944				13.51	B	
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.9	15.6	183.01	5	5	1	4.24	4.24	0.91	0.34	2.415	0.47	0.56	0.035						
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@126.3	17.78	182.62	17	17	1	8.6	8.6	4.61	0.47	11.044	2.149	2.56	0.158	8055.28					
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	17.85	182.82	1001	1001	1	7.88	7.88	3.37	0.33	562.98	109.536	130.476	8.054		7.87	A			
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	31.38	214.82	182	182	3	29.59	29.59	20.9	0.84	176.574	34.355	40.923	2.526	6255.32					
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	31.28	214.78	27	27	3	32.22	32.22	24.31	0.99	27.965	5.441	6.481	0.4		29.93	C			

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
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*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions(	Emissions	Emissions'	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
* $MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA'	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3	1.01	63.37	2	2		3	28.49	28.49	23.9	0.93	1.454	0.283	0.337	0.021	685.98				
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.8	1.88	63.71	100	100		1	6.29	6.29	0.85	0.96	54.544	10.612	12.641	0.78		6.73	A		
AVG	900-4500	4	16.68	221.44	1334	1334		2	11.22	11.22	6.02	0.46	861.64	167.644	199.693	12.327				11.24	B
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3	59.9	306.76	1062	1062		3	20.29	20.29	10.08	1.02	1317.29	256.297	305.295	18.845	24207				
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2	58.24	306.5	182	182		2	14.61	14.61	7.4	0.51	182.58	35.523	42.315	2.612		19.46	B		
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3	81.2	447.62	2043	2043		2	14.92	14.92	7.69	0.64	1756.389	341.729	407.06	25.127	30732.96				
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2	81.72	448.85	15	15		2	16.76	16.76	10.17	0.66	11.259	2.191	2.609	0.161		14.93	B		
AVG	900-4500	5	70.26	448.85	3301	3301		2	16.65	16.65	8.46	0.76	3270.71	636.361	758.019	46.791				16.64	B
AVG	900-4500	6-35: SR11@6.5-67: SR11@88.1	0	0	758	758		1	1.41	1.41	0.01	0	300.311	58.43	69.6	4.296					
AVG	900-4500	6-64: SR11@10.6-2: SR11@244.2	0	0	837	837		1	0.67	0.67	0	0	306.989	59.729	71.148	4.392					
AVG	900-4500	6-64: SR11@10.6-67: SR11@88.1	0	0	3	3		1	2.11	2.11	0	0	0.855	0.166	0.198	0.012	6.33				
AVG	900-4500	6	0	0	1598	1598		1	1.02	1.02	0	0	607.255	118.15	140.737	8.687		2.11	A	2.11	A

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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
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* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
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* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
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* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
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*
* SimRun TimeInt Movement QLen QLenMax Vehs(All) Pers(All) LOS(All) LOSVal(All VehDelay(PersDelay StopDelay Stops(All) Emissions(Emissions(Emissions' FuelConsumption
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$MOVEME TIMEINT MOVEMENT QLEN QLENMAX VEHS(ALL) PERS(ALL) LOS(ALL) LOSVAL(AL VEHDELAY PERSDELA' STOPDELA' STOPS(ALL EMISSIONS EMISSIONS EMISSIONS FUELCONSUMPTION

AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6		1.52	30.84	6	6		4	51.66	51.66	43.16	0.97	8.697	1.692	2.016	0.124		
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2		1.58	31.68	0	0						0	0	0	0			
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2		5.46	56.32	14	14	4	52.92	52.92	47.39	1	18.536	3.606	4.296	0.265	1402.5		
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3		5.51	56.54	6	6	5	58.61	58.61	51.53	0.93	7.662	1.491	1.776	0.11		53.94	D
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6		49.01	542.49	59	59	1	8.29	8.29	3.75	0.37	39.165	7.62	9.077	0.56			
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2		48.87	542.06	1859	1859	1	7.34	7.34	3.51	0.33	1130.605	219.975	262.029	16.175	14142.34		
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3		49.18	543.01	1	1	1	8.17	8.17	2.74	0.69	1.072	0.209	0.248	0.015		7.37	A
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6		18.94	96.12	4	4	4	47.51	47.51	40.57	0.85	4.075	0.793	0.944	0.058			
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2		21.83	96.04	164	164	4	42.98	42.98	36.73	0.85	177.127	34.463	41.051	2.534	7329.76		
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3		20.95	96.58	2	2	4	45.5	45.5	38.95	0.98	2.036	0.396	0.472	0.029		43.12	D
AVG	900-4500		1	22.29	543.01	2114	2114	2	10.8	10.8	6.73	0.38	1404.859	273.335	325.59	20.098			10.82 B
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3		5.28	72.87	10	10	2	14.97	14.97	11.16	0.59	6.303	1.226	1.461	0.09			
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5		5.26	72.72	59	59	2	17.73	17.73	12.4	0.6	43.364	8.437	10.05	0.62			
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0		1.46	49.67	17	17	2	16.87	16.87	11.73	0.55	12.679	2.467	2.938	0.181	1469.71		
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3		1.53	51.58	23	23	1	5.95	5.95	1.22	0.8	14.194	2.762	3.29	0.203		14.85	B
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0		18.32	149.22	3	3	2	10.46	10.46	6.42	0.49	1.891	0.368	0.438	0.027			
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3		19.38	149.23	882	882	1	9.59	9.59	5.14	0.42	492.022	95.73	114.031	7.039	8989.48		
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5		19.22	149.66	62	62	1	8.06	8.06	3.56	0.53	38.81	7.551	8.995	0.555		9.49	A
AVG	900-4500		2	9	149.66	1055	1055	2	10.05	10.05	5.53	0.45	608.054	118.305	140.922	8.699			9.91 A
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2		45.22	177.52	14	14	3	22.59	22.59	17.64	0.67	11.28	2.195	2.614	0.161	18431.06		
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2		45.22	177.52	895	895	3	20.24	20.24	14.64	0.64	695.314	135.283	161.146	9.947		20.28	C
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2		1.87	61.19	643	643	1	1.13	1.13	0.42	0.03	172.708	33.603	40.027	2.471	1124.63		
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2		1.3	62.22	186	186	1	2.14	2.14	0.17	0.14	55.443	10.787	12.849	0.793		1.36	A
AVG	900-4500		3	16.13	177.52	1738	1738	2	11.24	11.24	7.85	0.36	907.407	176.549	210.3	12.982			11.25 B
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.9		8.09	123.88	109	109	1	3.09	3.09	0.25	0.31	49.819	9.693	11.546	0.713			
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@126.3		8.99	123.49	16	16	1	4.82	4.82	2.15	0.29	7.826	1.523	1.814	0.112	4209.96		
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8		9.18	123.68	889	889	1	4.27	4.27	1.57	0.21	397.296	77.299	92.077	5.684		4.15	A
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9		18.14	133.2	131	131	3	29.04	29.04	21.04	0.79	122.51	23.836	28.393	1.753	3862.14		
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8		17.96	133.17	2	2	3	28.95	28.95	22.38	0.88	1.532	0.298	0.355	0.022		29.04	C
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3		0.03	25.72	0	0						0	0	0	0	72.15		

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions(	Emissions(	Emissions'	FuelConsumption						
*																						
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA'	STOPDELA'	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION						
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.8		0.17	26.06	13	13		1	5.55	5.55	0.32	0.92	6.993	1.361	1.621	0.1		5.55	A		
AVG	900-4500		4	8.94	140.54	1159	1159		1	7.01	7.01	3.66	0.29	595.242	115.812	137.953	8.516				7.03	A
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3		12.73	130.37	463	463		1	7.21	7.21	2.07	0.82	425.966	82.878	98.722	6.094	5267.11				
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2		11.32	130.11	152	152		2	12.69	12.69	6.55	0.47	143.095	27.841	33.164	2.047		8.56	A		
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3		9.46	101.55	636	636		1	5.92	5.92	3.03	0.12	261.297	50.839	60.558	3.738	3876.64				
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2		9	102.78	17	17		1	6.56	6.56	3.55	0.16	7.127	1.387	1.652	0.102		5.94	A		
AVG	900-4500		5	10.63	130.37	1267	1267		1	7.21	7.21	3.11	0.42	828.051	161.109	191.909	11.846				7.22	A
AVG	900-4500	6-4: SR 46 WB@92.1-32: SR 11 WB@22.1		0	0	0	0							0	0	0	0	0				
AVG	900-4500	6-4: SR 46 WB@92.1-10055@64.0		0	0	0	0							0	0	0	0		0.00	A		
AVG	900-4500	6-66: SR 11 NB@14.9-32: SR 11 WB@22.1		11.46	105.33	50	50		6	59.11	59.11	49.42	2.02	130.367	25.365	30.214	1.865	2955.5				
AVG	900-4500	6-66: SR 11 NB@14.9-10055@64.0		11.46	105.33	0	0							0	0	0	0		59.11	F		
AVG	900-4500	6-68: SR 46 EB@108.6-32: SR 11 WB@22.1		0.07	39.9	0	0							0	0	0	0	3734.5				
AVG	900-4500	6-68: SR 46 EB@108.6-10055@64.0		0.07	39.9	1925	1925		1	1.94	1.94	0.01	0	753.295	146.564	174.583	10.777		1.94	A		
AVG	900-4500		6	3.85	105.33	1975	1975		1	3.4	3.4	1.27	0.05	866.82	168.652	200.894	12.401				3.39	A

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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
* VEHDELAY(ALL): VehDelay(All), Vehicle delay (average) (All) (Delay of all vehicles. The delay of a vehicle in leaving a travel time measurement is obtained by subtracting the theoretical (ideal) travel time from the actual travel time. The theoretical travel time is the travel time which could be achieved if there were nc
* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
* STOPS(ALL): Stops(All), Stops (All) (Number of vehicle stops per vehicle without stops at PT stops and in parking lots)
* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*
* SimRun TimeInt Movement QLen QLenMax Vehs(All) Pers(All) LOS(All) LOSVal(All VehDelay(PersDelay StopDelay Stops(All) Emissions Emissions Emissions' FuelConsumption
*
$MOVEME TIMEINT MOVEMENT QLEN QLENMAX VEHS(ALL) PERS(ALL) LOS(ALL) LOSVAL(AL VEHDELAY PERSDELA STOPDELA STOPS(ALL EMISSIONS EMISSIONS EMISSIONS FUELCONSUMPTION

AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.74	36.05	9	9	4	39.73	39.73	32.18	0.8	10.587	2.06	2.454	0.151				
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.83	36.89	3	3	2	10.41	10.41	4.22	1.19	2.629	0.511	0.609	0.038				
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	20.6	143	81	81	4	44.93	44.93	38.92	0.92	93.015	18.097	21.557	1.331	4225.97			
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	20.71	143.22	4	4	4	49.46	49.46	41.6	0.94	5.058	0.984	1.172	0.072		43.57	D	
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	46.47	380.66	4	4	2	11.5	11.5	6.1	0.52	2.835	0.552	0.657	0.041				
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	46.3	380.23	1328	1328	2	10.9	10.9	6.63	0.42	930.474	181.036	215.646	13.312	14521.2			
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	46.68	381.17	0	0						0	0	0	0		10.90	B	
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	33.27	167.67	14	14	4	41.64	41.64	35.44	0.86	14.272	2.777	3.308	0.204				
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	33.35	167.6	296	296	4	39.08	39.08	33.27	0.84	290.162	56.455	67.248	4.151	12184.34			
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	30.61	168.13	1	1	3	33.7	33.7	27.78	1	0.484	0.094	0.112	0.007		39.18	D	
AVG	900-4500	1	28.16	381.17	1739	1739	2	17.77	17.77	13.11	0.53	1375.544	267.631	318.796	19.679				17.79 B
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	2.25	54.21	6	6	2	17.57	17.57	13.23	0.92	4.577	0.89	1.061	0.065				
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.	2.24	54.06	21	21	2	18.9	18.9	14.29	0.65	14.65	2.85	3.395	0.21				
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	13.28	158.81	82	82	2	19.85	19.85	11.98	0.74	70.165	13.652	16.261	1.004	3858.67			
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	13.83	160.72	133	133	2	13.79	13.79	6.49	1.27	117.5	22.861	27.232	1.681		16.35	B	
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0	47.96	266.82	3	3	2	14.52	14.52	8.96	0.68	2.024	0.394	0.469	0.029				
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	48.37	266.84	1792	1792	2	12.47	12.47	6.28	0.55	1156.34	224.982	267.993	16.543	22987.8			
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5	48.41	267.27	52	52	2	11.5	11.5	5.46	0.61	36.474	7.096	8.453	0.522		12.45	B	
AVG	900-4500	2	23.77	267.27	2087	2087	2	12.91	12.91	6.6	0.61	1401.768	272.733	324.873	20.054				12.86 B
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	50.24	191.2	126	126	3	26.03	26.03	20.26	0.79	109.883	21.379	25.466	1.572	20536.58			
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	50.24	191.2	740	740	3	23.32	23.32	17.2	0.71	607.611	118.219	140.82	8.693		23.71	C	
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	7.41	124.89	1680	1680	1	2.18	2.18	0.76	0.05	493.217	95.962	114.308	7.056	4042.15			
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	7.02	121.58	155	155	1	2.45	2.45	0.27	0.19	49.758	9.681	11.532	0.712		2.20	A	
AVG	900-4500	3	21.56	194.7	2702	2702	1	9.11	9.11	6.15	0.28	1241.735	241.597	287.784	17.764				9.10 A
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72	8.95	116.4	5	5	1	3.84	3.84	1.09	0.4	2.513	0.489	0.582	0.036				
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@12	10.08	119.92	17	17	1	6.64	6.64	3.46	0.37	9.53	1.854	2.209	0.136	4194.8			
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	10.14	120.11	736	736	1	5.52	5.52	2.44	0.27	361.419	70.319	83.762	5.171		5.53	A	
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	29.69	209.58	182	182	3	28.33	28.33	19.95	0.8	170.006	33.077	39.4	2.432	5950.94			

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption					
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	29.59	209.54	27	27		3	29.44	29.44	22.35	0.85	25.584	4.978	5.929	0.366		28.47	C		
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@1	1	64.85	2	2		3	28.49	28.49	23.91	0.93	1.454	0.283	0.337	0.021	650.98				
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@8C	1.87	65.18	100	100		1	5.94	5.94	0.66	0.93	53.697	10.447	12.445	0.768		6.38	A		
AVG	900-4500	4	13.05	209.58	1069	1069		2	10.07	10.07	5.79	0.44	643.585	125.218	149.157	9.207				10.10	B
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3	60.59	300.06	1062	1062		3	20.17	20.17	9.52	1.08	1350.527	262.764	312.998	19.321	24143.26				
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2	58.92	299.8	182	182		2	14.96	14.96	7.59	0.53	187.335	36.449	43.417	2.68		19.41	B		
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3	39.49	325.03	1783	1783		1	9.36	9.36	4.39	0.28	1007.228	195.97	233.435	14.41	16871.43				
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2	39.49	326.26	15	15		2	12.17	12.17	7.11	0.44	8.979	1.747	2.081	0.128		9.38	A		
AVG	900-4500	5	49.62	342.98	3042	3042		2	13.5	13.5	6.39	0.58	2544.997	495.164	589.828	36.409				13.48	B
AVG	900-4500	6-4: SR 46 WB@92.1-32: SR 11 WB@22.1	0	0	0	0							0	0	0	0	10.74				
AVG	900-4500	6-4: SR 46 WB@92.1-10055@64.0	0	0	3	3		1	3.58	3.58	0	0	1.222	0.238	0.283	0.017		3.58	A		
AVG	900-4500	6-66: SR 11 NB@14.9-32: SR 11 WB@22.1	10.09	119.4	96	96		4	28.81	28.81	20.45	1.62	182.337	35.476	42.258	2.609	2765.76				
AVG	900-4500	6-66: SR 11 NB@14.9-10055@64.0	10.09	119.4	0	0							0	0	0	0		28.81	D		
AVG	900-4500	6-68: SR 46 EB@108.6-32: SR 11 WB@22.1	0.22	60.44	0	0							0	0	0	0	2190.32				
AVG	900-4500	6-68: SR 46 EB@108.6-10055@64.0	0.22	60.44	1441	1441		1	1.52	1.52	0.01	0.01	556.901	108.353	129.067	7.967		1.52	A		
AVG	900-4500	6	3.44	119.4	1539	1539		1	3.22	3.22	1.28	0.11	715.575	139.225	165.841	10.237				3.23	A

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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
* VEHDELAY(ALL): VehDelay(All), Vehicle delay (average) (All) (Delay of all vehicles. The delay of a vehicle in leaving a travel time measurement is obtained by subtracting the theoretical (ideal) travel time from the actual travel time. The theoretical travel time is the travel time which could be achieved if there were no other vehic
* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
* STOPS(ALL): Stops(All), Stops (All) (Number of vehicle stops per vehicle without stops at PT stops and in parking lots)
* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

																Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption				
*																				
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION				
AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.59	31.61	8	8		4	47.73	47.73	39.46	0.9	9.785	1.904	2.268	0.14				
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.65	32.46	0	0						0	0	0	0					
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	5.64	55.21	16	16		4	47.22	47.22	41.72	0.98	19.419	3.778	4.501	0.278	1501.71				
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	5.69	55.42	7	7		4	52.05	52.05	44.71	0.95	8.884	1.729	2.059	0.127		48.44	D	
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	71.79	743.58	64	64		2	9.89	9.89	4.67	0.42	48.888	9.512	11.33	0.699				
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	71.63	743.15	2041	2041		1	8.94	8.94	4.19	0.36	1393.561	271.136	322.971	19.936	18889.34			
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	71.98	744.1	1	1		2	9.84	9.84	5.53	0.33	0.858	0.167	0.199	0.012		8.97	A	
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	20.52	93	4	4		4	48.15	48.15	40.59	0.97	4.929	0.959	1.142	0.071				
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	23.46	92.96	176	176		4	42.26	42.26	35.92	0.85	189.171	36.806	43.842	2.706	7715.34			
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	22.88	93.49	2	2		4	42.49	42.49	36.39	0.85	2.15	0.418	0.498	0.031		42.39	D	
AVG	900-4500	1	29.68	744.1	2319	2319		2	12.12	12.12	7.2	0.41	1706.561	332.035	395.512	24.414				12.12 B
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	6.2	83.43	11	11		2	18.78	18.78	14.17	0.73	9.667	1.881	2.24	0.138				
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5	6.17	83.28	65	65		2	18.66	18.66	12.8	0.6	53.034	10.318	12.291	0.759				
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	1.88	60.11	19	19		2	18.17	18.17	12.48	0.59	15.046	2.927	3.487	0.215	1738.05			
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	1.95	62.02	26	26		1	6.92	6.92	2.14	0.87	16.575	3.225	3.841	0.237		15.80	B	
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0	21.18	165.74	4	4		2	8.37	8.37	4.94	0.36	2.181	0.424	0.506	0.031				
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	21.98	165.75	970	970		2	9.91	9.91	5.24	0.44	549.526	106.918	127.358	7.862	10242.48			
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5	21.92	166.19	67	67		1	8.9	8.9	4.09	0.56	43.655	8.494	10.117	0.625		9.84	A	
AVG	900-4500	2	10.4	166.19	1162	1162		2	10.5	10.5	5.73	0.47	685.098	133.295	158.778	9.801				10.31 B
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	49.17	206.14	16	16		3	26.29	26.29	20.67	0.78	16.741	3.257	3.88	0.239	21437.18			
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	49.17	206.14	983	983		3	21.38	21.38	15.03	0.64	873.352	169.923	202.408	12.494		21.46	C	
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	2.13	64.83	707	707		1	1.13	1.13	0.39	0.02	189.426	36.855	43.901	2.71	1289.19			
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	1.56	65.22	206	206		1	2.38	2.38	0.21	0.15	63.056	12.268	14.614	0.902		1.41	A	
AVG	900-4500	3	17.62	206.14	1912	1912		2	11.9	11.9	8.08	0.36	1056.063	205.472	244.753	15.108				11.89 B
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.9	9.55	133.33	121	121		1	3.23	3.23	0.37	0.3	59.194	11.517	13.719	0.847				
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@126.3	10.48	132.94	17	17		1	5.89	5.89	2.81	0.34	9.921	1.93	2.299	0.142	5513.23			
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	10.71	133.14	979	979		1	5.13	5.13	1.6	0.22	468.917	91.234	108.676	6.708		4.94	A	
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	19.55	138.2	144	144		3	28.34	28.34	20.48	0.77	132.484	25.777	30.704	1.895	4126.02			
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	19.39	138.17	2	2		3	22.53	22.53	15.76	0.86	1.5	0.292	0.348	0.021		28.26	C	
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3	0.04	26.89	0	0							0	0	0	0	78			

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.8	0.17	27.23	13	13		1	6	6	0.52	0.97	7.162	1.394	1.66	0.102		6.00	A		
AVG	900-4500	4	9.98	144.91	1275	1275		1	7.61	7.61	3.64	0.3	700.077	136.209	162.249	10.015				7.62	A
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3	15.21	137.86	510	510		1	7.89	7.89	2.43	0.83	479.729	93.338	111.182	6.863	6169.26				
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2	13.91	137.6	168	168		2	12.77	12.77	6.53	0.47	158.482	30.835	36.73	2.267		9.10	A		
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3	10.24	112.32	700	700		1	6.05	6.05	3.07	0.12	289.102	56.249	67.002	4.136	4372.37				
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2	9.62	113.55	19	19		1	7.23	7.23	4.13	0.18	8.637	1.68	2.002	0.124		6.08	A		
AVG	900-4500	5	12.24	141.98	1397	1397		1	7.56	7.56	3.27	0.42	927.481	180.454	214.953	13.269				7.55	A
AVG	900-4500	6-2@919.3-2@1133.4	0	0	466	466	SBT	1	0.07	0.07	0	0	122.299	23.795	28.344	1.75					
AVG	900-4500	6-7@853.1-32@60.6	21.38	398.13	2116	2116	EBT	1	3.53	3.53	0.99	0.19	1019.571	198.371	236.295	14.586	7470.88				
AVG	900-4500	6-7@853.1-34@191.4	4.31	258.55	20	20	EBR	1	0.07	0.07	0.04	0	7.474	1.454	1.732	0.107		3.50	A		
AVG	900-4500	6-31@23.7-4@66.6	3.15	118.92	748	748	SBR	1	2.09	2.09	0.54	0.1	304.136	59.174	70.486	4.351	3028.52				
AVG	900-4500	6-37@22.6-4@66.6	6.65	58.31	55	55	NBL	3	26.64	26.64	21.25	0.88	56.042	10.904	12.988	0.802		3.77	A		
AVG	900-4500	6	7.1	398.13	3406	3406		1	3.09	3.09	1.08	0.16	1530.547	297.789	354.719	21.896				3.57	A

$VISION
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* Comment:
* Date:9/7/2017 1:33:42 PM
* PTV Vissim:9.00 [09]
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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
* VEHDELAY(ALL): VehDelay(All), Vehicle delay (average) (All) (Delay of all vehicles. The delay of a vehicle in leaving a travel time measurement is obtained by subtracting the theoretical (ideal) travel time from the actual travel time. The theoretical travel time is the travel time which could be achieved if there were no oth
* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
* STOPS(ALL): Stops(All), Stops (All) (Number of vehicle stops per vehicle without stops at PT stops and in parking lots)
* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*

* SimRun	TimeInt	Movement	QLen	QLenMax	Vehs(All)	Pers(All)	LOS(All)	LOSVal(All	VehDelay(	PersDelay	StopDelay	Stops(All)	Emissions	Emissions	Emissions'	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEME	TIMEINT	MOVEMENT	QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION					
AVG	900-4500	1-10: Jackson St@195.4-22: Jackson St@98.6	1.74	36.05	9	9	4	39.72	39.72	32.18	0.8	10.587	2.06	2.454	0.151						
AVG	900-4500	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.83	36.89	3	3	2	9.85	9.85	3.89	1.17	2.559	0.498	0.593	0.037						
AVG	900-4500	1-11: Jackson St@207.9-26: SR 46 EB@59.2	20.61	142.98	81	81	4	44.96	44.96	38.95	0.92	92.979	18.09	21.549	1.33	4226.51					
AVG	900-4500	1-11: Jackson St@207.9-39: Jackson St@96.3	20.71	143.19	4	4	4	49.43	49.43	41.58	0.94	5.056	0.984	1.172	0.072		43.57	D			
AVG	900-4500	1-13: SR 46 EB@181.2-22: Jackson St@98.6	44.83	376.99	4	4	2	11.06	11.06	5.85	0.48	2.95	0.574	0.684	0.042						
AVG	900-4500	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	44.66	376.56	1328	1328	2	11.32	11.32	6.48	0.41	993.802	193.358	230.323	14.217	15077.2					
AVG	900-4500	1-13: SR 46 EB@181.2-39: Jackson St@96.3	45.04	377.51	0	0						0	0	0	0		11.32	B			
AVG	900-4500	1-63: 2nd Street@36.4-22: Jackson St@98.6	33.36	167.38	14	14	4	41.77	41.77	35.59	0.86	14.306	2.783	3.316	0.205						
AVG	900-4500	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	33.48	167.31	296	296	4	39.17	39.17	33.35	0.84	290.69	56.558	67.37	4.159	12212.8					
AVG	900-4500	1-63: 2nd Street@36.4-39: Jackson St@96.3	30.82	167.84	1	1	3	33.7	33.7	27.78	1	0.484	0.094	0.112	0.007		39.27	D			
AVG	900-4500	1	27.71	377.51	1740	1740	2	18.11	18.11	13.02	0.52	1454.767	283.045	337.156	20.812				18.11	B	
AVG	900-4500	2-22: Jackson St@208.7-20: SR 46 WB@9.3	2.3	56.31	6	6	2	18.41	18.41	13.93	1	5.042	0.981	1.169	0.072						
AVG	900-4500	2-22: Jackson St@208.7-25: Jackson St@122.5	2.29	56.16	21	21	3	19.38	19.38	14.62	0.66	14.999	2.918	3.476	0.215						
AVG	900-4500	2-23: Jackson St@244.0-11: Jackson St@97.0	13.2	158.56	82	82	2	19.84	19.84	12	0.76	70.562	13.729	16.353	1.009	3850.64					
AVG	900-4500	2-23: Jackson St@244.0-20: SR 46 WB@9.3	13.74	160.47	133	133	2	13.66	13.66	6.36	1.27	117.128	22.789	27.145	1.676		16.32	B			
AVG	900-4500	2-24: SR 46 WB@224.6-11: Jackson St@97.0	48.28	271.37	3	3	2	13.93	13.93	8.71	0.74	2.074	0.404	0.481	0.03						
AVG	900-4500	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	48.68	271.38	1791	1791	2	12.49	12.49	6.29	0.56	1159.175	225.533	268.65	16.583	23003.66					
AVG	900-4500	2-24: SR 46 WB@224.6-25: Jackson St@122.5	48.75	271.82	52	52	2	11.39	11.39	5.25	0.61	36.371	7.076	8.429	0.52		12.46	B			
AVG	900-4500	2	23.87	271.82	2087	2087	2	12.92	12.92	6.61	0.61	1405.221	273.405	325.674	20.103				12.87	B	
AVG	900-4500	3-19: Brown St@251.5-6: SR 46 WB@47.2	48.67	194.54	126	126	3	25.72	25.72	20.07	0.77	119.74	23.297	27.751	1.713	20445.72					
AVG	900-4500	3-19: Brown St@251.5-9: Brown St@43.2	48.67	194.54	740	740	3	23.25	23.25	16.64	0.69	658.119	128.046	152.525	9.415		23.61	C			
AVG	900-4500	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	7.17	117.53	1680	1680	1	2.14	2.14	0.73	0.05	491.281	95.585	113.859	7.028	3965.65					
AVG	900-4500	3-21: SR 46 WB@74.5-9: Brown St@43.2	6.96	110.68	155	155	1	2.39	2.39	0.24	0.18	49.197	9.572	11.402	0.704		2.16	A			
AVG	900-4500	3	20.93	196.83	2700	2700	1	9.05	9.05	5.97	0.27	1243.206	241.883	288.125	17.785				9.04	A	
AVG	900-4500	4-14: Brown Street@91.0-12: 2nd Street@72.9	8.57	140.26	5	5	1	3.89	3.89	0.39	0.5	2.755	0.536	0.639	0.039						
AVG	900-4500	4-14: Brown Street@91.0-16: 2nd Street@126.3	9.47	139.87	17	17	1	5.65	5.65	3.14	0.33	9.7	1.887	2.248	0.139	4391.66					
AVG	900-4500	4-14: Brown Street@91.0-19: Brown St@80.8	9.53	140.06	736	736	1	5.81	5.81	2.33	0.26	377.811	73.508	87.561	5.405		5.79	A			
AVG	900-4500	4-15: 2nd Street@160.0-12: 2nd Street@72.9	29.65	209.58	182	182	3	28.3	28.3	19.92	0.8	169.917	33.06	39.38	2.431	5944.67					
AVG	900-4500	4-15: 2nd Street@160.0-19: Brown St@80.8	29.55	209.54	27	27	3	29.41	29.41	22.34	0.85	25.574	4.976	5.927	0.366		28.44	C			

* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
*
* SimRun TimeInt Movement QLen QLenMax Vehs(All) Pers(All) LOS(All) LOSVal(All VehDelay(PersDelay StopDelay Stops(All) Emissions Emissions Emissions' FuelConsumption
*

$MOVEME	TIMEINT	MOVEMENT		QLEN	QLENMAX	VEHS(ALL)	PERS(ALL)	LOS(ALL)	LOSVAL(AL	VEHDELAY	PERSDELA'	STOPDELA	STOPS(ALL	EMISSIONS	EMISSIONS	EMISSIONS	FUELCONSUMPTION	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
AVG	900-4500	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3		0.99	63.23	2	2		3	28.49	28.49	23.91	0.93	1.454	0.283	0.337	0.021	647.98				
AVG	900-4500	4-62: 2nd Street WB@10.1-19: Brown St@80.8		1.85	63.56	100	100		1	5.91	5.91	0.66	0.93	53.651	10.439	12.434	0.768		6.35	A		
AVG	900-4500		4	12.8	209.58	1069	1069		2	10.25	10.25	5.7	0.43	675.693	131.465	156.598	9.667				10.28	B
AVG	900-4500	5-5: Lindsey St@444.7-1: SR 46 WB@29.3		60.7	302.54	1062	1062		3	20.28	20.28	9.63	1.06	1338.378	260.4	310.182	19.147	24217.97				
AVG	900-4500	5-5: Lindsey St@444.7-18: Lindsey St@41.2		59.05	302.28	181	181		2	14.81	14.81	7.52	0.53	186.12	36.212	43.135	2.663		19.48	B		
AVG	900-4500	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3		37.75	313.92	1783	1783		1	9.3	9.3	4.34	0.27	998.396	194.252	231.388	14.283	16741.95				
AVG	900-4500	5-6: SR 46 WB@258.1-18: Lindsey St@41.2		37.73	315.15	15	15		2	10.67	10.67	5.73	0.41	8.597	1.673	1.993	0.123		9.31	A		
AVG	900-4500		5	48.81	343.06	3041	3041		2	13.49	13.49	6.39	0.56	2527.667	491.792	585.811	36.161				13.47	B
AVG	900-4500	6-2@919.3-2@1133.4		0	0	674	674	SBT	1	0.08	0.08	0	0	176.899	34.418	40.998	2.531					
AVG	900-4500	6-7@853.1-32@60.6		12.37	234.02	1440	1440	EBT	1	3.54	3.54	1.07	0.19	693.144	134.861	160.643	9.916	5112.54				
AVG	900-4500	6-7@853.1-34@191.4		0.46	94.43	166	166	EBR	1	0.09	0.09	0.02	0	62.833	12.225	14.562	0.899		3.18	A		
AVG	900-4500	6-31@23.7-4@66.6		28.42	419.71	2175	2175	SBR	1	4.77	4.77	1.36	0.24	1150.758	223.896	266.699	16.463	13321.95				
AVG	900-4500	6-37@22.6-4@66.6		12.71	78.07	96	96	NBL	3	30.7	30.7	25.19	0.86	102.771	19.996	23.818	1.47		5.87	A		
AVG	900-4500		6	10.79	421.26	4551	4551		1	4.06	4.06	1.52	0.19	2191.88	426.46	507.989	31.357				4.75	A

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* Comment:
* Date:9/7/2017 10:01:28 AM
* PTV Vissim:9.00 [09]
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* Table: Node Results
*
* SIMRUN: SimRun, Simulation run (Number of simulation run)
* TIMEINT: TimeInt, Time interval
* MOVEMENT: Movement, Movement
* QLEN: QLen, Queue length (Average queue length: In each time step, the current queue length is measured and the arithmetic mean is thus calculated per time interval.) [ft]
* QLENMAX: QLenMax, Queue length (maximum) (Queue length (maximum): In each time step, the current queue length is measured and the maximum is thus calculated per time interval.) [ft]
* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
* PERS(ALL): Pers(All), Persons (All) (Number of persons)
* LOS(ALL): LOS(All), Level of service (All) (Level-of-service (A..F) as computed by the associated LOS scheme.)
* LOSVAL(ALL): LOSVal(All), Level-of-service value (All) (Level-of-service as numerical value (1..6) as computed by the associated LOS scheme. Value 1 corresponds to LOS 'A', 6 to LOS 'F'.)
* VEHDELAY(ALL): VehDelay(All), Vehicle delay (average) (All) (Delay of all vehicles. The delay of a vehicle in leaving a travel time measurement is obtained by subtracting the theoretical (ideal) travel time from the actual travel time. The theoretical travel time is the travel time
* PERSDELAY(ALL): PersDelay(All), Person delay (average) (All) (Delay of all pedestrians in seconds without passenger service times at stops) [s]
* STOPDELAY(ALL): StopDelay(All), Stopped delay (average) (All) (Stopped delay per vehicle in seconds without stops at PT stops and in parking lots) [s]
* STOPS(ALL): Stops(All), Stops (All) (Number of vehicle stops per vehicle without stops at PT stops and in parking lots)
* EMISSIONSCO: EmissionsCO, Emissions CO (Quantity of carbon monoxide [grams])
* EMISSIONSNOX: EmissionsNOx, Emissions NOx (Quantity of nitrogen oxides [grams])
* EMISSIONSVOC: EmissionsVOC, Emissions volatile organic compounds (Quantity of volatile organic compounds [grams])
* FUELCONSUMPTION: FuelConsumption, Fuel consumption (Fuel consumption [US liquid gallon])
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* SimRu	TimeInt	Movement	QLen	QLenM	Vehs(Al	Pers(All	LOS(All)	LOSVal(	VehDel	PersDel	StopDe	Stops(A	Emissio	Emissio	Emissio	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEI	TIMEINT	MOVEMENT	QLEN	QLENM/	VEHS(AI	PERS(AL	LOS(ALL	LOSVALI	VEHDEL	PERSDEI	STOPDE	STOPS(A	EMISSIC	EMISSIC	EMISSIC	FUELCONSUMPTION					
AVG	900-450	1-10: Jackson St@195.4-22: Jackson St@98.6	1.59	31.61	8	8	4	47.74	47.74	39.46	0.9	9.786	1.904	2.268	0.14						
AVG	900-450	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.65	32.46	0	0						0	0	0	0						
AVG	900-450	1-11: Jackson St@207.9-26: SR 46 EB@59.2	5.64	55.21	16	16	4	47.21	47.21	41.71	0.98	19.415	3.778	4.5	0.278	1501.56					
AVG	900-450	1-11: Jackson St@207.9-39: Jackson St@96.3	5.69	55.42	7	7	4	52.04	52.04	44.71	0.95	8.884	1.728	2.059	0.127		48.44	D			
AVG	900-450	1-13: SR 46 EB@181.2-22: Jackson St@98.6	82.1	846.76	65	65	2	10.1	10.1	4.94	0.4	47.427	9.228	10.992	0.679						
AVG	900-450	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	81.93	846.33	2044	2044	1	9.19	9.19	4.38	0.37	1383.5	269.17	320.63	19.792	19454.81					
AVG	900-450	1-13: SR 46 EB@181.2-39: Jackson St@96.3	82.29	847.28	1	1	2	13.95	13.95	8.21	0.56	1.068	0.208	0.247	0.015		9.22	A			
AVG	900-450	1-63: 2nd Street@36.4-22: Jackson St@98.6	20.46	95.34	4	4	4	47.47	47.47	39.83	1	4.927	0.959	1.142	0.07						
AVG	900-450	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	22.96	95.27	176	176	4	42.16	42.16	35.88	0.85	188.57	36.689	43.704	2.698	7692.42					
AVG	900-450	1-63: 2nd Street@36.4-39: Jackson St@96.3	22.4	95.8	2	2	4	41.19	41.19	35.58	0.81	2.1	0.409	0.487	0.03		42.27	D			
AVG	900-450	1	32.67	847.28	2322	2322	2	12.34	12.34	7.37	0.42	1689.5	328.73	391.57	24.171				12.34	B	
AVG	900-450	2-22: Jackson St@208.7-20: SR 46 WB@9.3	6.25	78.36	11	11	2	17.74	17.74	13.11	0.75	9.15	1.78	2.121	0.131						
AVG	900-450	2-22: Jackson St@208.7-25: Jackson St@122	6.22	78.21	65	65	2	18.98	18.98	13.21	0.61	51.627	10.045	11.965	0.739						
AVG	900-450	2-23: Jackson St@244.0-11: Jackson St@97.6	1.88	60.11	19	19	2	18.17	18.17	12.48	0.59	15.046	2.927	3.487	0.215	1760.93					
AVG	900-450	2-23: Jackson St@244.0-20: SR 46 WB@9.3	1.95	62.02	26	26	1	7	7	2.19	0.88	16.68	3.245	3.866	0.239		16.01	B			
AVG	900-450	2-24: SR 46 WB@224.6-11: Jackson St@97.0	21.23	165.74	4	4	2	8.42	8.42	4.93	0.36	2.185	0.425	0.506	0.031						
AVG	900-450	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	22.03	165.75	970	970	2	9.91	9.91	5.23	0.44	549.55	106.92	127.36	7.862	10240.67					
AVG	900-450	2-24: SR 46 WB@224.6-25: Jackson St@122.	21.97	166.18	67	67	1	8.87	8.87	4.05	0.57	43.814	8.525	10.154	0.627		9.84	A			
AVG	900-450	2	10.44	166.18	1161	1161	2	10.5	10.5	5.73	0.47	684.6	133.2	158.66	9.794				10.34	B	
AVG	900-450	3-19: Brown St@251.5-6: SR 46 WB@47.2	50.53	214.22	16	16	3	24.98	24.98	19.44	0.78	15.52	3.02	3.597	0.222	21809.42					

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* SimRu	TimeInt	Movement	QLen	QLenM	Vehs(Al	Pers(All	LOS(All)	LOSVal(	VehDel	PersDel	StopDe	Stops(A	Emissio	Emissio	Emissio	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEI	TIMEINT	MOVEMENT	QLEN	QLENM/	VEHS(AL	PERS(AL	LOS(ALL	LOSVAL(	VEHDEL	PERSDEI	STOPDE	STOPS(A	EMISSIC	EMISSIC	EMISSIC	FUELCONSUMPTION					
AVG	900-450	3-19: Brown St@251.5-9: Brown St@43.2	50.53	214.22	983	983	3	21.78	21.78	15.48	0.66	854.74	166.3	198.09	12.228		21.83	C		
AVG	900-450	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	2.1	64.15	707	707	1	1.13	1.13	0.39	0.02	189.43	36.856	43.902	2.71	1280.95				
AVG	900-450	3-21: SR 46 WB@74.5-9: Brown St@43.2	1.57	65.22	206	206	1	2.34	2.34	0.18	0.14	62.173	12.097	14.409	0.889		1.40	A		
AVG	900-450	3	18.07	214.22	1912	1912	2	12.08	12.08	8.29	0.37	1054.3	205.13	244.35	15.083				12.08	B
AVG	900-450	4-14: Brown Street@91.0-12: 2nd Street@7	9.78	152.29	121	121	1	3.86	3.86	0.61	0.32	59.778	11.631	13.854	0.855					
AVG	900-450	4-14: Brown Street@91.0-16: 2nd Street@1	10.81	151.9	17	17	1	5.23	5.23	2.03	0.27	8.808	1.714	2.041	0.126	5544.17				
AVG	900-450	4-14: Brown Street@91.0-19: Brown St@80.	11.07	152.09	980	980	1	5.09	5.09	1.62	0.22	462.09	89.906	107.09	6.611		4.96	A		
AVG	900-450	4-15: 2nd Street@160.0-12: 2nd Street@72.	19.62	138.2	144	144	3	28.41	28.41	20.56	0.77	132.69	25.816	30.751	1.898	4136.16				
AVG	900-450	4-15: 2nd Street@160.0-19: Brown St@80.8	19.46	138.17	2	2	3	22.56	22.56	15.73	0.86	1.501	0.292	0.348	0.021		28.33	C		
AVG	900-450	4-62: 2nd Street WB@10.1-16: 2nd Street@	0.04	26.53	0	0						0	0	0	0	75.4				
AVG	900-450	4-62: 2nd Street WB@10.1-19: Brown St@8(	0.17	26.86	13	13	1	5.8	5.8	0.45	0.95	7.087	1.379	1.642	0.101		5.80	A		
AVG	900-450	4	10.14	159.33	1276	1276	1	7.64	7.64	3.67	0.3	688.83	134.02	159.64	9.854				7.65	A
AVG	900-450	5-5: Lindsey St@444.7-1: SR 46 WB@29.3	15.24	130.74	510	510	1	7.94	7.94	2.45	0.84	481.04	93.593	111.49	6.882	6188.04				
AVG	900-450	5-5: Lindsey St@444.7-18: Lindsey St@41.2	13.96	130.48	168	168	2	12.73	12.73	6.49	0.47	157.63	30.67	36.533	2.255		9.13	A		
AVG	900-450	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3	10.03	110.4	699	699	1	6	6	3.05	0.12	287.83	56.002	66.708	4.118	4332.51				
AVG	900-450	5-6: SR 46 WB@258.1-18: Lindsey St@41.2	9.47	111.63	19	19	1	7.29	7.29	4.11	0.17	8.585	1.67	1.99	0.123		6.03	A		
AVG	900-450	5	12.17	135.07	1397	1397	1	7.55	7.55	3.26	0.42	926.37	180.24	214.7	13.253				7.53	A
AVG	900-450	6-3@650.8-38@101.7	62.37	575.69	20	20	1	3.36	3.36	1.25	0.34	11.015	2.143	2.553	0.158	18901.68				
AVG	900-450	6-3@650.8-10007@32.1	64.6	576.3	2121	2121	1	8.88	8.88	3.95	0.4	1431.2	278.46	331.7	20.475		8.83	A		
AVG	900-450	6-43@1570.2-70@107.9	0	0	55	55	1	0.11	0.11	0	0	17.585	3.421	4.076	0.252	1800.7				
AVG	900-450	6-10049@29.5-43@111.0	8.63	88.53	55	55	3	32.63	32.63	25.76	0.77	63.824	12.418	14.792	0.913		16.37	B		
AVG	900-450	6-10053@3.7-36@73.4	50.19	228.92	0	0						0	0	0	0	17232.9				
AVG	900-450	6-10053@3.7-38@101.7	51.97	228.73	465	465	4	37.06	37.06	27.32	0.81	632.18	123	146.52	9.044		37.06	D		
AVG	900-450	6	39.63	576.3	2716	2716	2	13.97	13.97	8.29	0.47	2153.4	418.97	499.07	30.807				13.97	B

Analyst	GTB
Date	8/7/2017

Comments: Existing Conditions

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* Table: Node Results
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* SIMRUN: SimRun, Simulation run (Number of simulation run)
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* VEHS(ALL): Vehs(All), Vehicles (All) (Number of vehicles)
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* SimRu	TimeInt	Movement	QLen	QLenMa	Vehs(Al	Pers(All	LOS(All)	LOSVal(	VehDel	PersDel	StopDel	Stops(A	Emissio	Emissio	Emissio	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																					
$MOVEI	TIMEINT	MOVEMENT	QLEN	QLENMA	VEHS(AL	PERS(AL	LOS(ALL	LOSVAL(	VEHDEL	PERSDEI	STOPDE	STOPS(A	EMISSIC	EMISSIC	EMISSIC	FUELCONSUMPTION					
AVG	900-450	1-10: Jackson St@195.4-22: Jackson St@98.6	1.74	36.05	9	9	4	39.72	39.72	32.18	0.8	10.587	2.06	2.454	0.151						
AVG	900-450	1-10: Jackson St@195.4-26: SR 46 EB@59.2	1.83	36.89	3	3	1	9.28	9.28	3.11	1.15	2.496	0.486	0.578	0.036						
AVG	900-450	1-11: Jackson St@207.9-26: SR 46 EB@59.2	20.51	142.99	81	81	4	44.76	44.76	38.77	0.91	92.689	18.034	21.482	1.326	4208.32					
AVG	900-450	1-11: Jackson St@207.9-39: Jackson St@96.3	20.62	143.2	4	4	4	49.36	49.36	41.52	0.94	5.052	0.983	1.171	0.072		43.38	D			
AVG	900-450	1-13: SR 46 EB@181.2-22: Jackson St@98.6	49.54	416.74	4	4	2	13.93	13.93	8.08	0.52	3.265	0.635	0.757	0.047						
AVG	900-450	1-13: SR 46 EB@181.2-26: SR 46 EB@59.2	49.37	416.31	1328	1328	2	11.93	11.93	7.05	0.43	996.99	193.98	231.06	14.263	15898.76					
AVG	900-450	1-13: SR 46 EB@181.2-39: Jackson St@96.3	49.74	417.26	0	0						0	0	0	0		11.94	B			
AVG	900-450	1-63: 2nd Street@36.4-22: Jackson St@98.6	33.4	167.39	14	14	4	41.76	41.76	35.58	0.86	14.295	2.781	3.313	0.205						
AVG	900-450	1-63: 2nd Street@36.4-26: SR 46 EB@59.2	33.48	167.31	296	296	4	39.1	39.1	33.29	0.84	290.26	56.474	67.27	4.152	12191.94					
AVG	900-450	1-63: 2nd Street@36.4-39: Jackson St@96.3	30.79	167.85	1	1	3	33.7	33.7	27.78	1	0.484	0.094	0.112	0.007		39.20	D			
AVG	900-450		1 29.1	417.26	1739	1739	2	18.55	18.55	13.43	0.53	1451	282.31	336.28	20.758				18.57	B	
AVG	900-450	2-22: Jackson St@208.7-20: SR 46 WB@9.3	2.22	54.21	6	6	2	17.72	17.72	13.34	0.96	4.733	0.921	1.097	0.068						
AVG	900-450	2-22: Jackson St@208.7-25: Jackson St@122.5	2.21	54.06	21	21	2	18.47	18.47	13.92	0.63	14.518	2.825	3.365	0.208						
AVG	900-450	2-23: Jackson St@244.0-11: Jackson St@97.0	13.27	164.36	82	82	2	19.92	19.92	12.04	0.74	70.186	13.656	16.266	1.004	3847.4					
AVG	900-450	2-23: Jackson St@244.0-20: SR 46 WB@9.3	13.81	166.27	133	133	2	13.73	13.73	6.48	1.27	117.34	22.83	27.194	1.679		16.30	B			
AVG	900-450	2-24: SR 46 WB@224.6-11: Jackson St@97.0	47.85	258.35	3	3	2	14.64	14.64	9.21	0.65	1.988	0.387	0.461	0.028						
AVG	900-450	2-24: SR 46 WB@224.6-20: SR 46 WB@9.3	48.3	258.37	1792	1792	2	12.47	12.47	6.27	0.55	1155.3	224.77	267.74	16.527	22990.24					
AVG	900-450	2-24: SR 46 WB@224.6-25: Jackson St@122.5	48.34	258.8	52	52	2	11.54	11.54	5.46	0.59	36.346	7.072	8.424	0.52		12.45	B			
AVG	900-450		2 23.72	258.8	2088	2088	2	12.9	12.9	6.6	0.61	1400.3	272.45	324.54	20.033				12.85	B	
AVG	900-450	3-19: Brown St@251.5-6: SR 46 WB@47.2	50.12	206.13	126	126	3	25.93	25.93	20.25	0.78	116.35	22.638	26.966	1.665	20775.58					
AVG	900-450	3-19: Brown St@251.5-9: Brown St@43.2	50.12	206.13	740	740	3	23.66	23.66	17.1	0.7	648.76	126.22	150.36	9.281		23.99	C			
AVG	900-450	3-21: SR 46 WB@74.5-6: SR 46 WB@47.2	7.21	115.5	1680	1680	1	2.12	2.12	0.73	0.05	490.34	95.403	113.64	7.015	3935.15					

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*

* SimRu	TimeInt	Movement		QLen	QLenMa	Vehs(Al	Pers(All	LOS(All)	LOSVal(	VehDel	PersDel	StopDel	Stops(A	Emissio	Emissio	Emissio	FuelConsumption	Movement Delay	Approach Avg Delay (s)/veh	Approach LOS	Intersection Avg Delay (s)/veh	Intersection LOS
*																						
$MOVEI	TIMEINT	MOVEMENT		QLEN	QLENMA	VEHS(AL	PERS(AL	LOS(ALL	LOSVAL(	VEHDEL	PERSDEI	STOPDE	STOPS(A	EMISSIC	EMISSIC	EMISSIC	FUELCONSUMPTION					
AVG	900-450	3-21: SR 46 WB@74.5-9: Brown St@43.2		6.95	112.48	155	155		1	2.41	2.41	0.26	0.19	49.553	9.641	11.484	0.709		2.14	A		
AVG	900-450		3	21.43	208.13	2700	2700		1	9.15	9.15	6.1	0.27	1247.7	242.76	289.17	17.85				9.15	A
AVG	900-450	4-14: Brown Street@91.0-12: 2nd Street@72.9		9.39	133.02	5	5		1	3.29	3.29	0.26	0.34	2.547	0.495	0.59	0.036					
AVG	900-450	4-14: Brown Street@91.0-16: 2nd Street@126.3		10.28	132.63	17	17		1	6.62	6.62	3.33	0.41	10.246	1.994	2.375	0.147	4595.21				
AVG	900-450	4-14: Brown Street@91.0-19: Brown St@80.8		10.34	132.82	737	737		1	6.06	6.06	2.5	0.27	382.16	74.354	88.569	5.467		6.05	A		
AVG	900-450	4-15: 2nd Street@160.0-12: 2nd Street@72.9		29.73	209.58	182	182		3	28.38	28.38	19.99	0.8	170.17	33.109	39.439	2.434	5959.77				
AVG	900-450	4-15: 2nd Street@160.0-19: Brown St@80.8		29.62	209.54	27	27		3	29.43	29.43	22.34	0.85	25.581	4.977	5.929	0.366		28.52	C		
AVG	900-450	4-62: 2nd Street WB@10.1-16: 2nd Street@126.3		1	63.64	2	2		3	28.48	28.48	23.93	0.93	1.454	0.283	0.337	0.021	651.96				
AVG	900-450	4-62: 2nd Street WB@10.1-19: Brown St@80.8		1.87	63.97	100	100		1	5.95	5.95	0.67	0.93	53.726	10.453	12.451	0.769		6.39	A		
AVG	900-450		4	13.18	209.58	1070	1070		2	10.45	10.45	5.83	0.44	674.77	131.29	156.39	9.653				10.47	B
AVG	900-450	5-5: Lindsey St@444.7-1: SR 46 WB@29.3		60.92	299.28	1063	1063		3	20.45	20.45	9.71	1.1	1373.7	267.28	318.37	19.653	24512.03				
AVG	900-450	5-5: Lindsey St@444.7-18: Lindsey St@41.2		59.05	299.02	182	182		2	15.24	15.24	7.75	0.59	199.27	38.771	46.183	2.851		19.69	B		
AVG	900-450	5-6: SR 46 WB@258.1-1: SR 46 WB@29.3		38.59	308.49	1783	1783		1	9.27	9.27	4.3	0.28	1007.3	195.99	233.46	14.411	16699.26				
AVG	900-450	5-6: SR 46 WB@258.1-18: Lindsey St@41.2		38.7	309.73	15	15		1	11.39	11.39	6.2	0.37	8.487	1.651	1.967	0.121		9.29	A		
AVG	900-450		5	49.31	327.52	3042	3042		2	13.55	13.55	6.41	0.59	2580.3	502.02	598	36.913				13.55	B
AVG	900-450	6-3@650.8-38@101.7		32.37	337.28	165	165		1	5.57	5.57	2.06	0.52	117.06	22.776	27.13	1.675	13299.99				
AVG	900-450	6-3@650.8-10007@32.1		35.33	337.89	1443	1443		1	8.58	8.58	4.14	0.36	933.29	181.59	216.3	13.352		8.27	A		
AVG	900-450	6-43@1570.2-70@107.9		0	0	96	96		1	0.13	0.13	0	0	30.696	5.972	7.114	0.439	2824.32				
AVG	900-450	6-10049@29.5-43@111.0		13.54	122.41	96	96		3	29.29	29.29	22.6	0.74	104.51	20.334	24.222	1.495		14.71	B		
AVG	900-450	6-10053@3.7-36@73.4		74.99	386.12	3	3		3	36.34	36.34	24.64	0.84	3.579	0.696	0.829	0.051	25468.77				
AVG	900-450	6-10053@3.7-38@101.7		76.16	385.93	675	675		4	37.57	37.57	27.08	0.84	936.13	182.14	216.96	13.392		37.56	D		
AVG	900-450		6	38.73	394.17	2478	2478		2	16.8	16.8	10.84	0.5	2119.2	412.33	491.16	30.318				16.78	B

Appendix E

Conflict Point Analysis

- No Build Alternative
- Alternative 1 – Traditional Intersection
- Alternative 2 – Parclo – Folded Diamond
- Alternative 2x – Parclo – Reroute Through Downtown
- Alternative 3 – Roundabout
- Alternative 4 – Modified SPUI
- Alternative 5 – Modified DDI
- Alternative 6 – Jughandle Intersection

Index of Crash Frequency and Cost - Form F1

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Location	SR 46 at SR 11	
GIS		
Post		
Analyst	GTB	
Date	8/7/2017	

INPUT	
Road Facility Type	Urban local intersection
Major Road Average Annual Daily Traffic (veh/day)	29573
T-intersection indicator (1 if present, 0 otherwise)	0
Minor Road Average Annual Daily Traffic (veh/day)	14470
First Year with Crash Data (yyyy)	2013
Last Year with Crash Data (yyyy)	2016
Number of Crashes (crash/period)	
Fatal and Incapacitating Injury Crashes	1
Non-Incapacitating and Possible Injury Crashes	14
Property Damage Only Crashes	40
Route or Road Type	Local intersection
Average Crash Costs ($)	
Fatal and Incapacitating Injury Crashes	281200
Non-Incapacitating and Possible Injury Crashes	34500
Property Damage Only Crashes	6800
Crash Cost Year (yyyy)	2009
OUTPUT	
Expected Crash Frequency (crash/year)	
Fatal and Incapacitating Injury Crashes	0.003
Non-Incapacitating and Possible Injury Crashes	0.05
Property Damage Only Crashes	0.23
All Crashes	0.29
Index of Crash Frequency	**6.90**
Index of Crash Cost	**3.19**

Index of Crash Frequency and Cost - Form F1

Page 2/2

Location	SR 46 at SR 11	
GIS		
Post		

SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
ALTERNATIVE 0 - NO BUILD

INDOT DES. NO. : 1700319

SCALE = 1" = 50'

CMT Engineers and Consultants

- Diverging conflict point
- Merging conflict point
- Crossing conflict point

SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
ALTERNATIVE 1 - EXISTING GEOMETRY OVERPASS

INDOT DES. NO. : 1700319

SCALE = 1" = 100'

- Diverging conflict point
- Merging conflict point
- Crossing conflict point

SR 46 (Jonathan Moore Pike)

SR 46 Westbound (3rd Street)

SR 46 Eastbound (2nd Street)

SR 11 (Jonesville Road)

SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
ALTERNATIVE 2 - PARCLO FOLDED DIAMOND

INDOT DES. NO. : 1700319

SCALE = 1" = 100'

Engineers and Consultants

- Diverging conflict point
- Merging conflict point
- Crossing conflict point

SR 46 (Jonathan Moore Pike)

SR 46 Westbound (3rd Street)

SR 46 Eastbound (2nd Street)

SR 11 (Jonesville Road)

SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
ALTERNATIVE 2M - PARCLO TWO-PHASE

INDOT DES. NO. : 1700319

SCALE = 1" = 100'

- Diverging conflict point
- Merging conflict point
- Crossing conflict point

SR 46 (Jonathan Moore Pike)

SR 46 Westbound (3rd Street)

SR 46 Eastbound (2nd Street)
To Downtown, See Inset Below

SR 11 (Jonesville Road)

INSET

SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
ALTERNATIVE 3 - ROUNDABOUT

INDOT DES. NO. : 1700319

SCALE = 1" = 100'

CMT
Engineers and Consultants

- Diverging conflict point
- Merging conflict point
- Crossing conflict point

SR 46 (Jonathan Moore Pike)

SR 46 Westbound (3rd Street)

SR 46 Eastbound (2nd Street)

SR 11 (Jonesville Road)

SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
ALTERNATIVE 4 - MODIFIED SPUI

INDOT DES. NO. : 1700319

SCALE = 1" = 100'

CMT Engineers and Consultants

- Diverging conflict point
- Merging conflict point
- Crossing conflict point

SR 46 (Jonathan Moore Pike)

SR 46 Westbound (3rd Street)

SR 46 Eastbound (2nd Street)

SR 11 (Jonesville Road)

SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
ALTERNATIVE 5 - MODIFIED DDI

INDOT DES. NO. : 1700319

SCALE = 1" = 100'

CMT Engineers and Consultants

- Diverging conflict point
- Merging conflict point
- Crossing conflict point

SR 46 (Jonathan Moore Pike)

SR 46 Westbound (3rd Street)

SR 46 Eastbound (2nd Street)

SR 11 (Jonesville Road)

SR 46 INTERSECTION IMPROVEMENT AT SR 11
COLUMBUS, INDIANA
ALTERNATIVE 6 - JUGHANDLE

INDOT DES. NO. : 1700319

SCALE = 1" = 100'

CMT Engineers and Consultants

- Diverging conflict point
- Merging conflict point
- Crossing conflict point

SR 46 (Jonathan Moore Pike)

SR 46 Westbound (3rd Street)

SR 46 Eastbound (2nd Street)

SR 11 (Jonesville Road)